APPENDIX 5.3:
SUSTAINABILITY STATEMENT

Camden Lock Village
(Hawley Wharf)
Stanley Sidings Limited

Sustainability Statement
Waterman EED

September 2011

Camden Lock Village (Hawley Wharf)

Sustainability Statement

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Camden Lock Village (Hawley Wharf)

Sustainability Statement

Client Name: Stanley Sidings Limited
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This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2008 and BS EN ISO 14001: 2004)

Issue	Date	Prepared by	Checked by	Approved by
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Comments

Comments

Our Markets

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Disclaimer

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Appendices

A: Sustainability Appraisal Framework

1. Introduction

This Sustainability Statement has been prepared by Waterman Energy, Environment & Design Ltd (Waterman EED) on behalf of Stanley Sidings Limited (hereafter referred to as the 'Applicant') to accompany a hybrid planning application together with conservation area consent and listed building consent for the redevelopment of an approximately 2 hectares (ha) area of brownfield land, centred on National Grid Reference (NGR) 528891, 184250 (hereafter referred to as the 'Site'). As shown by Figure 1, the Site is located within the administrative boundary of London Borough of Camden (LBC), north London. The Site lies within the heart of Camden Town, an area which is known for its unique culture, eclectic character, and internationally renowned Camden Markets. The development proposals as described in the planning application forms (here after referred to as the 'Development') comprise of the following:

"Outline

School component: demolition of the existing buildings (excluding 1 Hawley Road) and the construction of a one form entry primary school and nursery with all matters reserved.

Detailed

Mixed use component: the demolition of existing buildings across the site, and the single storey shopfront extensions at 1-6 Chalk Farm Road (excluding 1 Hawley Road and the remaining structures at 1-6 Chalk Farm Road)) together with the removal of trees which are not subject to Tree Preservation Orders and and redevelopment to create a mixed use development comprising three new open spaces, eight new buildings to provide, employment, housing, retail, cinema, weekend and bank holiday farmers/produce market together with associated engineering works to create basements, plant and ancillary works, highways, public realm improvements, car and cycle parking and landscaping. Planning permission is also sought for a change of use from storage to an educational use at 1 Hawley Road.

Listed Building Consent

Listed building consent for the demolition of 1c Hawley Road together with internal and external alterations to 1 Hawley Road including ramped access into the lower ground floor.

Listed Building Consent for the partial demolition of the wall fronting the Regent's Canal and creation of steps onto the tow path."

The importance of sustainable development is highlighted by a number of Government strategies, with a growing acceptance of an imminent need to consider and tackle climate change. The main objective of sustainable development is the integration of economic, social and environmental issues, to ensure a better quality of life for people today, without compromising the needs of future generations. A key mechanism for delivering the principles of sustainable development within the UK lies within the national, regional and local planning system.

The purpose of this Sustainability Statement is to describe the approach taken by the Design Team to integrate and consider sustainability during the design process for the Development. This Sustainability Statement has been prepared following a desk-based review of all relevant national, regional and local planning policies and objectives. Key documents include The London Plan[1] and its Supplementary Planning Guidance "Sustainable Design and Construction"[2] and The London Borough of Camden, Core Strategy[3], Development Policies[4] and the Hawley Wharf Area Planning Framework[5]. A summary of all relevant planning policy guidance referred to in this assessment is included within Section 4 of this Report.

The Sustainability Statement presents the findings of a sustainability appraisal and design workshops undertaken to assess the extent to which the proposed Development accords with the principles of

sustainable development and any identified planning policy requirements. The sustainability appraisal was carried out by appraising the Development proposals against the planning policy identified following the desk based policy review and holding sustainability workshops with the design team. The findings of the appraisal are summarised in Section 5 of this Report, while the full appraisal is presented in Appendix A.

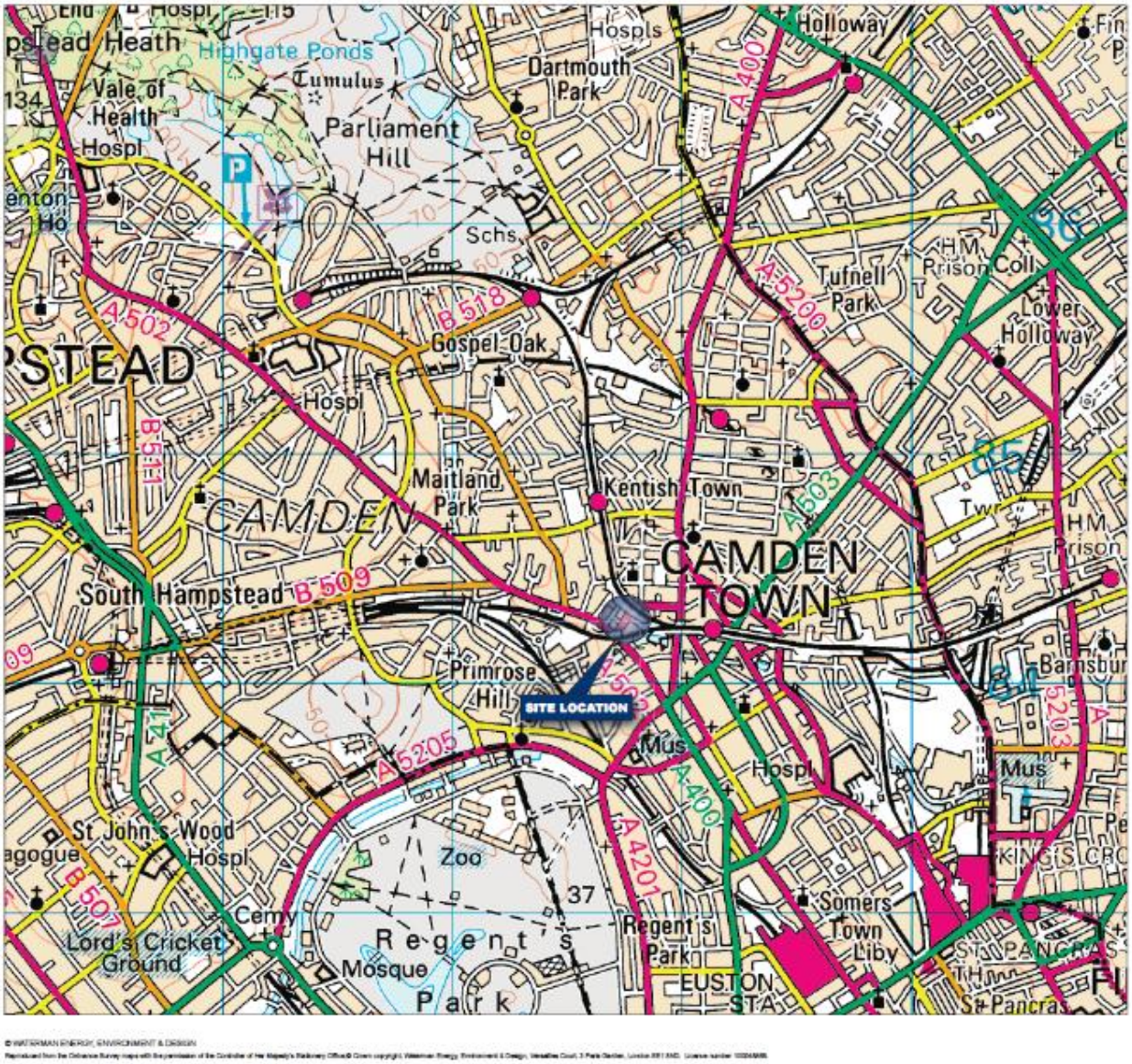
Finally, Section 6 outlines any future monitoring and implementation that may be required to support the delivery of the sustainability initiatives highlighted by this appraisal.

In addition to the sustainability appraisal, the Applicant is intending to undertake Code for Sustainable Homes (Code) and BREEAM assessments for the Development. The Applicant is seeking to achieve Code for Sustainable Homes (Code) 'Level 3' for the residential dwellings and BREEAM 'Very Good' ratings for the non-domestic elements of the Development. BREEAM and Code Pre-assessments have been undertaken by Grontmij to show a strategy for achieving the target ratings and these pre-assessment reports are appended to Energy Statement. The Energy Statement has also been prepared by Grontmij to accompany the planning application, it sets out a strategy for achieving the energy targets and carbon emission reductions for the Development. The Energy Statement is appended to the Environmental Statement.

2. Site and Surrounding Area

The Site is located within Camden Town, north London, within the administrative boundary of the London Borough of Camden (LBC), the location is shown in **Figure 1**.

Figure 1: Site Location

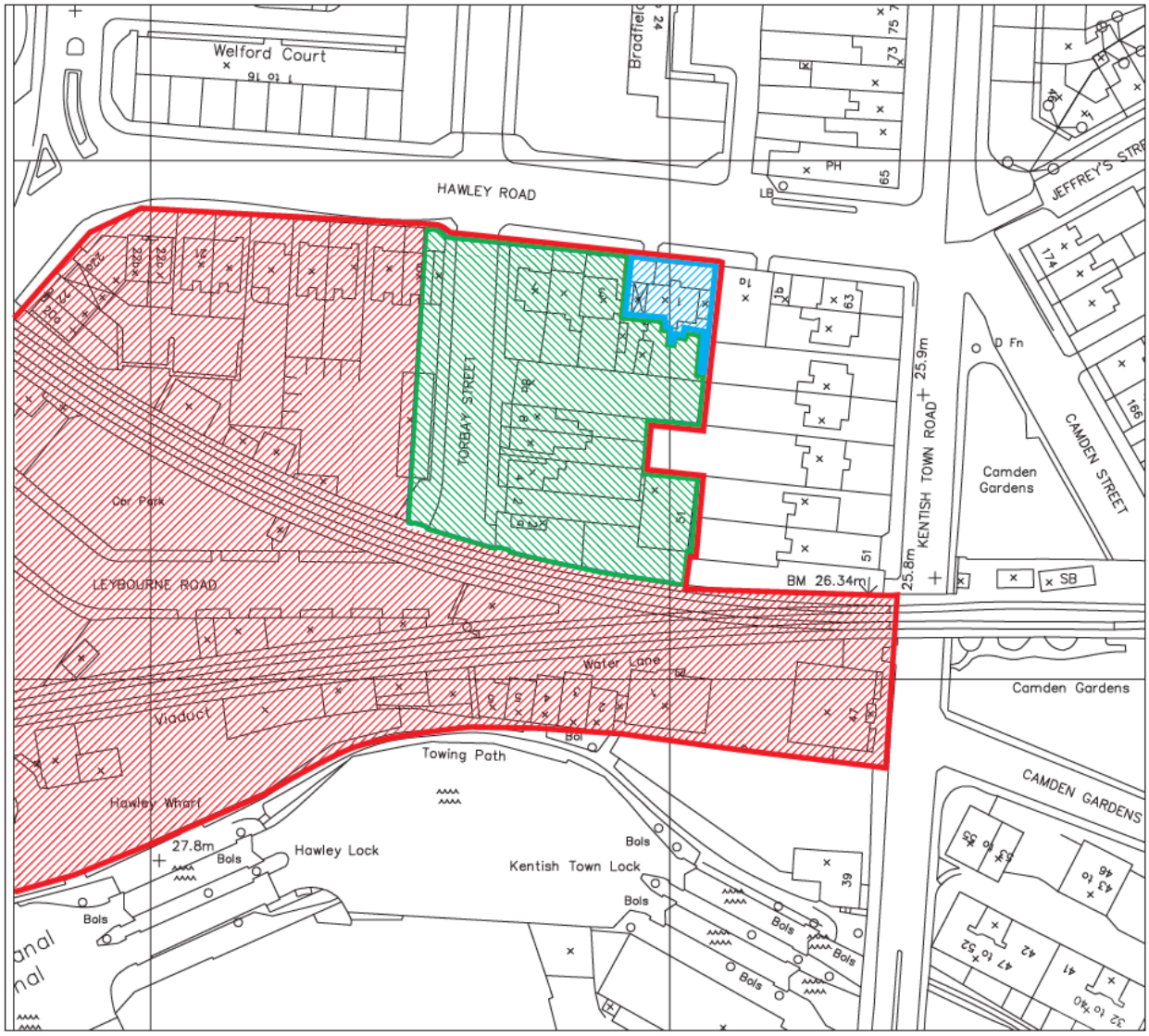


2.1 The Site

The Site is centred on National Grid Reference (NGR) 528891, 18425 and has an area of approximately 2 hectares (ha). Figure 2 shows the extent of the planning application boundary, the red hatched area indicates the Detailed Component of the Development, the green line indicates the Outline Component of the Development and the blue line indicates the listed building consent. The Site is bounded by:

- Hawley Road to the north;
- The rear of the properties along Kentish Town Road, and Kentish Town Road itself to the east;
- Hawley Wharf, Regent's Canal (including Hawley Lock) and towpath to the south; and
- Chalk Farm Road and Castlehaven Road to the west.

Figure 2: Planning Application Site Boundary



The Site is dominated by two predominantly brick, raised railway viaducts constructed in the mid-19th century, hereafter referred to as:

- The 'East-West Viaduct' which supports the London Overground Line connecting Camden Road Station (located approximately 250m to the east) to South Hampstead Station (located approximately 2.1km to the west); and
- The 'Northwest-East Viaduct' which supports the London Overground Line connecting Camden Road Station (located approximately 250m to the south) to Kentish Town West Station (located approximately 600m to the north).

For descriptive purposes the Site has been divided into Areas A, B, C and D as illustrated by Figure 3. The Site is almost entirely covered by built form comprising a variety of land uses, including:

- Retail provision in the form of retail, food and drink market stalls, adjacent to the canal within the southwest of the Site (Area A);
- Residential units predominantly located within the north and northeast of the Site, including the Grade II Listed Number 1 Hawley Road (Area B);
- Office provision within James Cameron House within the west of the Site (Area C), and in the east of the Site (Area D);
- Light and general Industrial uses such as vehicle repair and cleaning, located within the central portion of the Site within some of the existing viaduct's arches (Areas B and C);
- Car Parking (Area C) and vehicular access roads within the Site are:
  - Haven Street;
  - Leybourne Road;
  - Torbay Street; and
  - Water Lane.

Figure 3: Site Areas

2.2 Surrounding Area

Surrounding the Site

Significant landmarks in proximity to the Site that were measured from the Site boundary include:

- Regent's Canal located to the south of the Site (Area A and Area D), separated by the canalside towpath which varies in width from approximately 3.5m to 7.5m;
- Camden's Markets, of which there are five in close proximity to the Site (within 500m), namely Camden Market, Stables Market, Camden Market at Buck Street, Electric Market and Inverness Street Market, in addition to the Camden Lock Canal Market present on Site;
- Castlehaven Open Space approximately 155m to the northwest of the Site (Area C);
- Camden Gardens approximately 80m from the Site's eastern boundary (Area B);

- Camden Town London Underground Limited Station approximately 250m to the south of the Site (Area A and Area D);
- Camden Road London Overground Station approximately 250m to the west of the Site (Area C);
- The MTV Studios located approximately 70m to the south of the Site (Area A and Area D) beyond the Regent's Canal;
- Hawley Arms Public House immediately adjacent to the Site's northwestern boundary (Area C);
- The Grade II Listed Hampstead Road Bridge which traverses the Regent's Canal immediately adjacent to the southwest corner of the Site (Area A);
- The Grade II Listed Hampstead Road Lock approximately 40m to the southwest of the Site (Area A);
- The Grade II Listed Stanley Sidings located approximately 60m to the west of the Site (Area A);
- The Grade II Listed Roving Bridge over the Regent's Canal approximately 70m to the southwest of the Site (Area A);
- The Grade II* Listed Roundhouse, Chalk Farm Road approximately 610m to the northwest of the Site (Area C); and
- Regents Park and London Zoo approximately 1.2km to the southwest of the Site (Area A).

Transport and Access

The Site has extensive links to public transport. It is located within walking distance of three stations which provide frequent services to central London and other areas within the Transport for London (TfL) network. These services are provided at the following stations:

- The Northern Line London Underground Limited (LUL) service via Camden Town, Chalk Farm and Kentish Town Stations, which are located approximately 250m south (Area A and Area D), 600m northwest (Area C), and 1km northeast (Area B) of the Site respectively;
- Camden Road Station located approximately 250m to the east of the Site (Area B);
- Kentish Town West Station located approximately 600m to the north of the Site (Area B);
- Kentish Town Station located approximately 1km to the north of the Site (Area B); and
- London St Pancras and London Kings Cross domestic and international main line rail services located approximately 2km to the southeast of the Site (Area A).

In addition to mainline and LUL services there are 13 bus services within proximity of the Site. These provide access to a range of destinations throughout north and central London. Buses utilise on-street bus stops along Chalk Farm Road, Hawley Road, Camden Street and Kentish Town Road. Taxi services are also accessible from the Site via taxi ranks located on Camden High Street.

The Site is located within a busy area of Camden Town and is surrounded by a comprehensive highway network that provides vehicular access to the Site. This comprises:

- Castlehaven Road and Hawley Road running in a roughly east-west direction along the northern boundary of the Site (Area B and Area C);
- Kentish Town Road running north-south to the east of the Site (Area B); and
- Camden High Street / Chalk Farm Road running approximately north-south to the west of the Site (Area A).

As recognised in the Hawley Wharf Area Supplementary Planning Document[5], although there is an extensive pedestrian network surrounding the Site, including the Regent Canal's towpath which is designated a Metropolitan Walk, the quality of the pedestrian environment within the Site is currently

poor, and linkages from the east and west of the Site, and from the north towards the Regent's Canal are significantly compromised.

The towpath along the Regent's Canal is a shared cycle and pedestrian route, providing uninterrupted access from Little Venice (approximately 6km to the southwest of the Site) to Islington (approximately 4km to the east of the Site). In addition, cycle routes on Castlehaven Road, Hawley Road and Kentish Town Road surrounding the Site are part of the London Cycle Network (LCN).

Conservation, Built Heritage and Ecology

The southern portion of the Site (Area A and Area D) lies within the Regent's Canal Conservation Area. The character of this Conservation Area is largely derived from the presence of the Regent's Canal and tranquil space created by the surrounding townscape largely 'turning its back' on the Canal. In addition, within the vicinity of the Site, the character of the Conservation Area is influenced by the presence of Chalk Farm Road / Camden High Street, the railway viaducts and the wider market activities within Camden Town.

An Ecological Appraisal has been undertaken by Waterman EED, which confirms that the Site does not fall within the boundaries of any statutory or non-statutory designated sites for nature conservation. In addition, no protected or notable species were noted at the time of the survey, however the mature trees on Site have some local value and the trees within the conservation area are subject to tree preservation orders. The Regent's Canal is defined as a 'green corridor', however in this location the canal exhibits limited ecological value due to its highly engineered nature, lack of flora and fauna, together with the disturbance it receives from heavy public use.

Air Quality, Noise and Flood Risk

The Site is located within an Air Quality Management Area (AQMA) that covers the entire LBC administrative area.

The area surrounding the Site has high noise levels due to the existing traffic and rail infrastructure.

According to the Environment Agency Flood Zone Maps, the Site is considered to be at low risk of flooding (being within Flood Zone 1).

The Site does not contain any archaeological resources designated for national importance. However, the south of the Site (Area A and Area D) falls within the Canal Side Archaeological Priority Area (APA) designated by LBC.

3. Description of Proposed Development

3.1 Overall Description

The mix of uses proposed by the Development would be delivered through a combination of new build elements and the retention / refurbishment and / or modification of various existing structures and buildings within the Site and would:

- Provide eight new buildings;
- Retain and refurbish the existing arches within the elevated railway viaducts that bisect the Site;
- Retain, the Grade II Listed Number 1 Hawley Road;
- Retain, refurbish and reinstate the front facades of Numbers 1 to 6 Chalk Farm Road;
- Provide a new series of steps within the brick abutment of the Grade II Listed Hampstead Road Bridge;
- Provide a network of pedestrian routes throughout the Site; and
- Provide three key areas of public open space at ground level, and one at roof level within the Site together with private, shared private space and playspace.

The total amount of floorspace proposed by the Development is set out within Table 1.

Table 1: Proposed Floorspace

Land Use and Class	Proposed Floorspace Areas Gross External Area (GEA) (m^2)
Retail, *comprising*:	
Market Retail (A1)	6,274
Local Retail (A1)	630
Restaurant and Café (A3)	1,930
Hot Food Takeaway (A5)	785
Commercial, *comprising*	
Business (B1)	6,829
Business (B1c)	1,936
Industrial (B2)	381
Residential (C3)	22,038 (184 units)
Leisure (D2)	3,741
Education (D1)	1,931 (Maximum)
TOTAL Floor Area	**46,205**
Parking, *comprising:*	
Car Parking Spaces	18 (including 9 accessible spaces, 1 of which is located in the outline component of the Development)
Cycle Spaces	491
Landscaping and Open Space Provision (m^2), *comprising:*	
Public Open Space	2,811
Private Open Space	183
Shared Private Open Space	762
Playspace	163
Living Roofs	2,196
Educational outdoor amenity and supporting uses	2,900 (Minimum)

For descriptive purposes the Site and the Development proposals have been divided into Areas A, B, C and D. Accordingly, buildings within the Development are located as follows:

- Building A would be located within the southwest of the Site (Area A), to the north of the Regent's Canal and towpath, and to the south of the existing West-East Viaduct;
- The existing Numbers 1 to 6 Chalk Farm Road are located in the southwest of the Site (Area A), east of Chalk Farm Road and to the south of the existing West-East Viaduct;
- Numbers 7 / 8 Chalk Farm Road would be located within the southwest of the Site (Area A), to the west of Chalk Farm Road, and to the north of existing Numbers 1 to 6 Chalk Farm Road;
- Building W would be located within the north of the Site (Area B), to the north of the existing Northwest-East Viaduct;

- Building X would be located within the north of the Site (Area B), to the south of Hawley Road;
- The existing Grade II Listed Number 1 Hawley Road would remain in its current location, within the northeast of the Site (Area B) to the south of Hawley Road and to the west of Numbers 61 and 63 Kentish Town Road;
- S1 and S2 would be located to the south of Hawley Road and to the west of the Grade II Listed Number 1 Hawley Road, within the northeast of the Site (Area B);
- Building C1 would be located within the west of the Site (Area C), to the south of Castlehaven Road, and to the northwest of the Hawley Arms Public House;
- Building C2 would be located within the centre of the Site (Area C), to the southwest of the Northeast-West Viaduct and to the north of the East-West Viaduct;
- Building D would be located within the southeast of the Site (Area D) to the south of the area of convergence of the West-East and Northwest-East Viaducts, and to the west of Kentish Town Road; and
- The Arches are located beneath the exiting elevated Northwest - East Viaduct and East-West Viaduct which bisect the Site would be arranged as follows:
  - The South Arches, located beneath the existing East-West Viaduct within the centre and west of the Site (Area A);
  - The North Arches located beneath the existing Northeast-West Viaduct within the northwest of the Site (Area C); and
  - The East Arches located beneath the area of convergence of the East-West and Northwest-East Viaduct within the east of the Site (Area D).

3.2 Land Uses

The Development would provide a mix of uses, the amount and composition of which is described as follows.

Local and Market Retail/Restaurants and Cafe/Hot Food Take-away (Use Classes A1/ A3/A5)

In total, the Development would provide 9,619m^2 GEA of retail land uses. The majority (8,635m^2 GEA) of this retail land use would be associated with the new market provision, of which 6,274m^2 GEA of market retail floor space would be located within Building A, the South Arches and Numbers 1 to 8 Chalk Farm Road, together with 2,561m^2 GEA of café, restaurant and hot food take-away uses. An additional 154m^2 GEA café would be located within Building D.

In terms of local retail provision, 630m^2 GEA is proposed and would be located at Level 00 of Building C1.

Commercial Uses (Use Classes B1a/B1c/B2)

A total of 9,146m^2 GEA of commercial floor space would be provided by the Development within Buildings C2, the North Arches, the East Arches and Building D. The majority of this commercial floor space (5,434m^2 GEA) would be provided within Building C2, providing business uses (B1a/B1b).

381m^2 GEA of general industrial floor space (Class B2) would be located within the East Arches, whereas 1,936m^2 GEA of light industrial uses and workshops (Class B1c) would be located within the North and East Arches. Building D in total would provide 1,395m^2 GEA of business office space (Class B1).

Educational Uses (Use Class D1)

S1 and S2, together with the Grade II Listed Number 1 Hawley Road, would provide up to a maximum of 1,931m^2 GEA facilities for a one-form entry primary school and nursery. A minimum of 2,900m^2 of outdoor amenity and supporting uses would be provided. Outdoor amenity would comprise a Multi-Use Games Area at ground level, and a mixture of hard and soft playspace, habitat area and outdoor learning areas and at ground and roof level.

Leisure (Use Class D2)

3,451m^2 GEA of leisure land uses would be provided by the aforementioned three screen art house cinema, located within the double basement serving Buildings C1 and C2.

Residential Land Uses (Use Class C3)

The Development would provide a total of 22,038m^2 GEA of residential floor space. This would provide a total of 184 residential units within eight five of the Development's proposed Buildings.

3.3 Provision of Public Open Space and Private Amenity

Located within the north of the Site (Area B), a communal garden, referred to as the Western Garden Space would serve the residents of Buildings X and W. At Level 05, a roof garden area would serve the residents of Building C1, and at Level 03, a roof garden area would serve the residents of Building C2.

In addition, two areas of playspace (a total of 163m^2) for residents would be provided within the Western Garden Space (for residents of Buildings W and X) and at roof level within Building C2.

A total of 2 dedicated individual private gardens, and two terraces would be provided for the ground floor residential units of Buildings W and X. The above ground residential units within the Buildings W, X, C1, C2 and D would include an element of private outdoor space, either as private balconies or as winter gardens. Winter gardens would be provided within six of the residential units provided within Buildings W and X facing west; the remaining units within these and other Buildings would have balconies.

Public open space would be provided in three key areas at ground level, connected to one another through a series of pedestrian routes, and one vehicular route. The four areas are the:

- Canal Space;
- Arches Space; and
- Community Space.

The Canal Space would be located within the southwest of the Site (Area A) to the south of Building A (specifically between the western and eastern components of Building A), and adjacent to the north of the Regent's Canal tow path.

Situated where a number of pedestrian routes converge, and where the greatest quantity of pedestrian traffic is envisaged within the Site, the Canal Space would provide an area for visitors of the market to spill out onto and appreciate the Site's unique location adjacent to the Regent's Canal. Framed by the west and east components of Building A, the Canal Space has a strong physical definition.

The Arches Space would be located within the south of the Site (Area A and Area D), adjacent to the north of the bend in the Regent's Canal towpath, and to the west of Building D. Access would be available from the aforementioned southernmost pedestrian route, via the north-south route pedestrian route from Hawley Road, and the shared pedestrian and vehicular access route from Castlehaven Road to the northwest.

Towards its southern end, closest to the Regent's Canal tow path, it is envisaged that the Arches Space would provide an area for visitors to relax and linger, whilst providing a small spill out space for the canalside café proposed within the west of Building D. Extending northwards, the Arches Space would continue beneath the East-West Viaduct through two open arches of the South Arches. It is envisaged that the Arches Space would be more tranquil than the Canal Space.

The Community Space would be located within the centre of the Site (Area C), to the north of the East-West Viaduct, and between the east of Building C1 and the west and Building C2. The Community space would be utilised by local residents and workers, for instance during their lunch breaks in the week. It is envisaged that during the weekends and bank holidays, this space would be used to accommodate a farmers' market.

A communal roof terrace above Numbers 1 to 6 and 7 / 8 Chalk Farm Road would also provide a seating area for visitors to the market.

3.4 Description of Sustainable Features of the Development

3.4.1 Sustainable Buildings

The Applicant aims to achieve the following assessment ratings:

- Code for Sustainable Homes 'Level 4' rating for all residential units; and
- BREEAM 'Very Good' for the non-domestic elements of the Development, apart from the Village Market which is largely open air and would therefore not fall under the scope of the BREEAM criteria.

The Applicant would use reasonable endeavours, taking into account what is reasonably practicable, to achieve these target ratings. The final BREEAM ratings would be dependent on the future tenants and the fit-out standards they achieve.

Grontmij has undertaken a BREEAM Office, BREEAM Retail and BREEAM New Construction (School) Pre-Assessments for the Development to show the strategy for achieving the target ratings. The Code pre-assessment score for the Development is predicted as 68.06% (68% is required to achieve Level 4). The BREEAM Office pre-assessment score for the Development is targeted at 64.85% (55% is required to achieve a Very Good), the BREEAM retail score for the Development is targeted at 61.04% for the Site Area A restaurants (A3/A5 use) and 61.11% for the other retail uses and the BREEAM Ne Construction score for the schools is targeted at 55.95%.

It should be noted, that the pre-assessments outline a strategy for achieving the required targets, however the final score is dependant on the project performance through to completion.

3.4.2 Energy Strategy and Carbon Reductions

An Energy Statement has been prepared by Grontmij in accordance with the London Plan. The Development has been assessed using current Building Regulations Part L (2010) approved software for both domestic and non-domestic elements, based on the current energy the figures indicate that the combined carbon reduction emissions for the whole Development would be 32.5% less compared to Building Regulations Part L (2010) baseline figures.

The Energy Statement describes the energy demand assessment undertaken for the project and the proposed energy strategy proposed as a result. The energy strategy has followed the 'Lean', 'Clean' and 'Green' energy hierarchy by looking at passive design and energy efficiency measures, prior to the incorporation of low carbon and renewable technologies.

The Development would meet the mandatory credits relating to carbon reduction emissions in the Code and BREEAM through the inclusion of energy efficient services, low and zero carbon technologies and renewables to ensure a Code 'Level 3' for the residential units and a 'Very Good' rating for the non-domestic elements.

Lean Measures

The 'Lean' energy efficient measures listed below would be incorporated into the detailed design to reduce energy demand and therefore the CO_2 emissions associated with the Development:

- Building envelope optimisation;
- Exposed thermal mass;
- Low energy white goods;
- Low energy lighting and lighting control;
- Ventilation heat recovery;
- Low energy DC motors;
- High efficiency chillers;
- High energy efficient lifts;
- Low energy DC motors;
- Power factor correction; and
- Variable flow air and water plant.

The above measures should result in a reduction of the total CO_2 emissions of 6.1% when measured against the Building Regulations Part L (2010) baseline.

Clean Measures

A single energy centre is proposed serving the whole Development. A centralised biodiesel-fired Combined Cooling Heating and Power (CCHP) system is proposed which would supply power to the Development as well as heating and cooling using the waste heat. Both the heating and cooling systems will incorporate thermal storage to maximise the duty of the CCHP system and the heating will be designed to allow for future integration with a local district heating system. Analysis of the proposed gas fired CCHP indicates that this would achieve a reduction in cumulative CO_2 emissions by 12.8% when measured against the Building Regulations Part L (2010) baseline.

Green Measures

Photovoltaic panels (PV) are proposed for the Development and would be located on the roof of Building C2. Based on fully utilising the roof space, it is estimated that 250m^2 PV panels could reduce CO_2 emissions by approximately 0.8% when measured against the baseline emissions. Unlike most other forms of on-site renewables, PV would not have a detrimental effect upon the performance of the proposed 'Clean' solutions, i.e. the CCHP. Solar hot water heating was considered but would reduce heating demand on the CCHP and therefore would have a detrimental effect on the CCHP loading profile as there would be too much waste heat.

It is also proposed that the CCHP system would be fuelled by bio-fuel and would provide substantial CO_2 savings. The installation of the bio-diesel fuelled CCHP would reduce CO_2 emissions by 18.9% when measured against the baseline emissions.

The total savings of the above energy strategy would achieve 32.5% in CO_2 emission reductions compared to the baseline Building Regulations Part L (2010) compliant building.

3.4.3 Water Management

The Development includes a number of measures to reduce potable water demand and improve water conservation. These include water efficient sanitary ware such as spray taps and low flow showers in all elements of the scheme (including a commitment to achieve a design specification to achieve consumption of 105 litres per person a day for the residential dwellings). Other features such as sub-metering of water, leak detection and proximity infra-red sensors would be installed in the commercial elements of the Development.

In line with the London Plan essential standard, it is proposed to restrict surface water discharge from the Site to 50% of the existing rate (calculated at 221 litres per second l/s) and allow for the impact of 30% climate change. It has been calculated that approximately 661m^3 of storage would be required to achieve this.

It is an aspiration to also provide rainwater harvesting, which will be investigated at the further detailed design stage. This would further reduce water consumption from the Development.

It is proposed to discharge surface water from the Site through two new connections into the existing sewer to the north of the Site. Catchment 1 would drain Buildings C1 and C2, discharging into Castlehaven Road at 20 l/s. Catchment 2 would drain Buildings A, D and W before discharging into Hawley Road at 90 l/s. In order to achieve this 112m^3 of geo-cellular storage units (such as permavoid units) would be provided above the basement within Area C to sufficiently attenuate Catchment 1. Attenuation tanks sized at 38m^3 and 558m^3 would be located in the central amenity areas between the buildings within within Area B to serve Catchment 2.

Lined permeable paving would also be incorporated within the residential space within the north of the Site (Area B), and in the community space (Area C). Additionally, wildflower sedum roofs are also proposed on Buildings X, C1, C2 and D, measuring a combined area of 1,881m^2. This inclusion would provide 14m^3 of attenuation.

This strategy would provide a robust and sustainable drainage system which would restrict flows to half the existing rate, while providing minor ecological and amenity benefits, and would decrease flood risk at the Site and elsewhere.

3.4.4 Waste Management

A Servicing and Waste Management Strategy has been prepared as part of the planning application by Arup Ltd. Waste generation forecasts have been made according to the number of proposed residential units and the Net Internal Area of commercial elements of the Development in line with LBC and BS5906:2005 requirements.

Communal waste rooms would be provided for the residential elements of Areas B, C and D. The locations of the communal waste rooms are as follows:

- Area B – ground floor of Building X;
- Area C – basement of Area C; and
- Area D – basement of Area D.

Facilities management would ensure that either the bins are presented for collection or would arrange for the waste contractor to process the bins directly from the waste room.

Occupiers of the development would be encouraged to re-use and recycle waste materials where possible to reduce landfill.

Residents within Area B, C and D would dispose of co-mingled recyclables (paper, packaging, glass and cans) using 1,100 litre bins provided in the communal waste rooms. Each household would be provided with a kitchen caddy and compostable liners for collecting food scraps. Once full, caddy liners are sealed and taken by residents to the outdoor communal container (identified by a green food waste sticker). The container is emptied on a weekly basis by the council nominated waste contractor.

Waste generated by the commercial tenants, including the Canal Market in Area A, would be collected by the Facilities Management team using an electric vehicle towing one or two 1,100 litre bins. The electric vehicle would be stored in a central loading area overnight where a charging point for the vehicle would be located.

Non recoverable waste would be collected by the Facilities Management team and placed in a 10m^3 waste compactor located in a central service area in Area C. The compactor would be required to be replaced 2- 3 times a week (including during the weekend).

Tenants would be encouraged to re-use and recycle waste materials where possible to reduce landfill. All recoverable waste would also be collected by the Facilities Management team and taken to the waste room located in the basement of Area C. This waste room is sized to store two days waste generation.

The completed and operational Development is anticipated to generate approximately 9,861m^3 per annum of waste. This would equate to an increase of approximately 4,671m^3 from the existing estimated waste generation. This increase is inevitable due to the greater quantum of floor space proposed within the Development in comparison to the existing situation. Based on the facilities provided and the anticipated composition of waste, it is envisaged that up to 46% of residential waste generated could be recycled and up to 58% of commercial waste generated could be recycled. For the school, approximately 50% of the storage space would be for recyclable waste. However the collection strategy and collection frequency would be reviewed when the activities anticipated for the school have been confirmed in more detail.

3.4.5 Sustainable Transport

The Development would provide new links between Camden High Street and Kentish Town Road, the towpath and Castlehaven Road, and between the towpath and Hawley Road. These new links would generally improve walkability in the area and connect the Site with public transportation nodes including the bus stops on Chalk Farm Road, Hawley Road and Kentish Town Road. Footways in certain locations around the Development would be widened in order to enhance the local public realm and facilitate improved pedestrian accessibility. The towpath and canal environment would also benefit from the public realm improvements. The new east-west link between Camden High Street and Kentish Town Road would facilitate movement between the bus stops on Kentish Town Road and the bus stops on Chalk Farm Road.

Cycle parking for the residential and non-domestic elements of the Site would be provided in accordance with LBC and Transport for London (TfL) standards. In certain cases, the level of provision would also be in accordance with relevant best practice guidance, which is in excess of planning standards.

The residential units within Area B would have access to 91 cycle parking spaces within buildings W and X. A total of 206 cycle parking spaces would be provided within the basement of Area C and would be accessible via a lift for use by the residential units and commercial units. A total of 58 cycle parking spaces would be provided within the basement of Area D for use by the residential units and offices.

Cycle parking will be provided to the requisite standards within the Primary School boundary for use by both staff and pupils. The location, type and amount of parking will be developed alongside the school proposals.

A publicly accessible Cycle Station with 136 spaces would also be provided in the Development, located underneath the viaduct arches and easily accessible from Kentish Town Road for use by visitors and to serve the wider area. It is anticipated that wayfinding signs would be installed at suitable locations within the Site and the surrounding area to facilitate pedestrian and cyclist navigation.

Due to the Site's excellent PTAL, the Development would provide only a limited number of car parking spaces. In addition to the limited number of spaces, it is proposed that the Development is designated a 'car-capped' development, where residents that do not have a car parking space within the Development are prevented from purchasing residential parking permits for streets in the borough.

LBC requires disabled parking provision for 10% of units but LBC officers have advised that 5% would be acceptable, based on uptake in other new developments. As such 16 spaces would be located within the lower level (Level -02) of the combined basement within Building C1 and Building C2, of which seven would be for the mobility impaired. One mobility impaired space would serve the western part of Areas B and would be accessed from Hawley Road. An additional mobility impaired space would serve the school within the outline component of the Development. In total these nine accessible car parking spaces would serve the 184 residential units (5% provision).

Existing car parking within the Site, both private (i.e. within the boundary of existing businesses) and on-street would be removed by the Development. Therefore, there would be an overall reduction in the number of car parking spaces provided on the Site.

A series of Travel Plan Frameworks have been prepared for the Development to ensure a structured approach to help adapt travel behaviour through the use of the infrastructure, location and land use. Once the Development is occupied, a Travel Plan Co-ordinator(s) would be appointed to oversee the implementation and monitoring of the Travel Plans. The Travel Plans applied to the Development would aim to:

- Influence the travel behaviour of employees, residents and visitors;
- Encourage sustainable modes of travel such as public transport, cycling and walking through improvements; and
- Promote a healthy and sustainable lifestyle for those using the Development.

The Site specific objectives of the Travel Plan responds to the aims through linking the Development to the surrounding community by the strong promotion of walking, cycling and public transport. The Development would support these aims through:

- The location of the Site in an area of excellent public transport accessibility with a wide range of public transport facilities and excellent pedestrian environment;
- A Servicing and Waste Management Strategy which has been developed to manage vehicle movements to mitigate the effects on the surrounding area and centralised loading within the Site;
- A predominantly car free development which will reduce traffic flows around the site; and
- The application of an effective Travel Plan to the main elements of the Development which would support travel by sustainable modes.

3.4.6 Ecological Enhancements

Overall, the Development would have a positive effect on the ecological value of the Site and the surrounding area. The existing Site has a negligible ecological value and therefore there is an opportunity to enhance the ecology and biodiversity on site.

At roof level the Development proposes living and brown roofs within the following areas:

- Building C1: 636m^2 of wildflower sedum roof;
- Building C2: 469m^2 of wildflower sedum roof ;
- Building D: 590m^2 of wildflower sedum roof;
- Building W: 315m^2 of brown roof; and
- Building X: 186m^2 of wildflower sedum roof.

Additionally, to replace the eleven trees removed to facilitate the construction and appearance of the Development, a total of 15 new trees are proposed. Planting on the Site would introduce mature tree species where possible, together with a variety native species.

3.4.7 Community and Socio Economics

The completed Development would deliver a comprehensive mixed-use redevelopment. Of the 184 residential units proposed, the 8 units located at Level 00 and 01 within Building W would be intermediately rented, and 9 of the units located at Levels 00-03 within Building X would be social rented. The remaining 167 units would be privately rented.

The Applicant has committed to ensuring that all apartments would achieve the Lifetime Home Standard. These standards contain 16 criteria to ensure homes are suitable for a range of occupants including children and the elderly, and therefore would be suitable for occupants' changing circumstances. In addition, 10% of residential units have been designed for wheelchair needs. Of this 10%, the affordable units would be fully fitted out for wheelchair uses, for the market units these would be made adaptable for wheelchair needs.

The Development has been designed using Secure by Design principles, creating well lit routes through the Site which would open up the Site improving access and permeability. The routes through the Site have been designed to link to the existing street network and would have clear lines of sight without obstructions, which will would improve the safety of people using these routes. Some of the pedestrian routes through the Site will would be closed at night to reduce the opportunities for crime and ensure a sense of security for residents of the Development.

It is estimated that the existing Site supports 545 jobs. The Development would generate 1,298 jobs. This represents an increase of 753 jobs. In addition to the direct jobs the Development would also stimulate further indirect jobs via the "multiplier effects" of new businesses, residents and workers spending money locally.

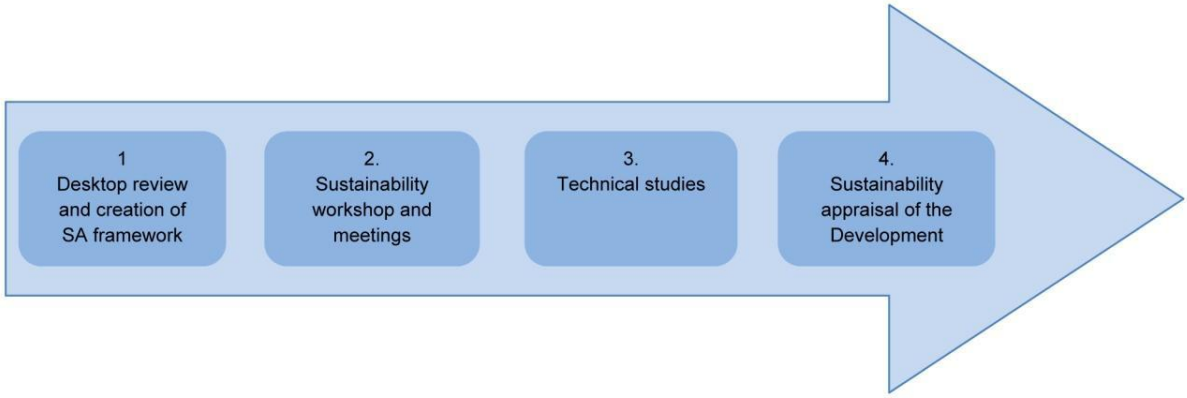
The Development would have an indirect effect on local spending generated by those working within the Development. As a result of the Development, there is expected to be a likely local spending by employees in the region of £994, 000 per year.

In addition to the above, the provision of the 184 residential units is expected to bring about associated spending by the new residential population. The average weekly household expenditure on goods and local services (excluding housing costs) is £240. The households living in the new dwellings in the Development would, therefore, be expected to account for approximately £2.3 million per year.

4. Approach to Sustainability

The importance of sustainable development is highlighted by a number of government strategies, with a growing acceptance of an imminent need to consider and tackle climate change. Many definitions of sustainable development exist, although the common objective for all is the integration of economic, social and environmental issues to ensure a better quality of life for people today, without compromising the needs of future generations. A key mechanism for delivering the principles of sustainable development within the UK lies within the planning system.

Sustainable development was considered throughout the design process. The approach for the proposed Development followed four key stages, which are illustrated below.



The following section summarises the activities undertaken during these four stages to ensure that sustainability principles were considered at each stage of the design process.

4.1 Stage 1 – Desktop Review and Creation of Sustainability Appraisal Framework

In order to ensure the delivery of a sustainable development, it was important to gain a clear understanding of any potential issues affecting the Site and any opportunities for improving the sustainability performance of the Development. It was also important to identify any current and emerging policy requirements that may relate to sustainability and the Site's location within LBC. To gain a detailed understanding of the guiding sustainability policy framework relevant to the Site, a desk-based review of all relevant national, regional and local planning policy was undertaken. The desk-based policy review enabled a checklist of key sustainability objectives and requirements (referred to as the Sustainability Appraisal Framework or SA Framework) to be identified against which the Development proposals could be appraised. A brief summary of the key documents that were reviewed as part of this process is included below.

4.1.1 Policy Review

National Planning Policy

The Government is committed to a planning system that creates sustainable communities and delivers sustainable development. Planning has a critical role in supporting the Government's objectives for sustainable development. Whilst sustainability issues are contained within various different Government

policies, the new and emerging Planning Policy Statements (PPS) are specifically designed to achieve a positive, proactive approach to help deliver sustainable development.

The national sustainability objectives are encompassed within PPS 1: Delivering Sustainable Development ; Planning and Climate Change - Supplement to PPS 1 ; PPS 9: Biodiversity and Geological Conservation , PPS 10: Planning for Sustainable Waste Management , PPS 22: Renewable Energy and PPS 25: Development and Flood Risk . The relevant objectives include:

- Reusing previously developed land to reduce the amount of undeveloped land required for new development;
- Promoting mixed-use developments;
- Encouraging high density urban development;
- Reducing car dependence by facilitating walking, cycling and public transport use;
- Providing access by public transport to work, education, health facilities, shopping, leisure and social services;
- Providing a range of employment, leisure and community facilities;
- Providing a range of dwelling types and tenures including affordable housing;
- Protecting and enhancing biodiversity;
- Using passive design and efficient technologies to reduce energy use;
- Incorporating low and zero carbon energy technologies;
- Ensuring that spatial development makes a full contribution to delivering the Government's Climate Change Programme and energy policies, and in doing so contribute to global sustainability;
- Ensuring access to open spaces; and
- Ensuring development is appropriately sited with regards to flood risk.

Recent and emerging planning policy and guidance places a strong emphasis on sustainability, particularly in relation to climate change. This relates both to reducing emissions and stabilising climate change (mitigation), as well as taking into account the unavoidable consequences (adaptation). In particular, the supplement to PPS 1: 'Planning and Climate Change' provides guidance on how climate change needs to be addressed spatially in all Local Development Frameworks. This includes setting specific policies for the provision of low carbon and renewable sources of energy and requiring high standards of environmental performance of new dwellings using the 'Code for Sustainable Homes'.

The Supplement to PPS 1: Planning and Climate Change encourages the delivery of sustainable buildings and development which includes the following:

- Secure the highest viable resource, energy efficiency and reduction in emissions;
- Secure the fullest possible use of sustainable transport for moving freight, public transport, cycling and walking, which overall reduces the need to travel, especially by car;
- Minimise vulnerability and provide resilience to climate change, in ways that are consistent with social cohesion and inclusion;
- Conserve and enhance biodiversity, recognising that the distribution of habitats and species will be affected by climate change; and

- Encourage competitiveness and technological innovation in mitigating and adapting to climate change, and responding to the concerns of business.

PPS 3: 'Housing' also promotes sustainable design and recommends using appraisals as well as design codes to improve the quality of new developments. In addition, 'Building a Greener Future' sets key targets for moving towards zero carbon housing developments, which include the following:

- 2010 - 25% improvement in the energy/carbon performance set in Part L of 2006 building regulations;
- 2013 - 44% improvement over Part L; and
- 2016 - Zero carbon development.

There is currently a consultation on a Planning Policy Statement: Planning for a Low Carbon Future in a Changing Climate, the consultation seeks views on the proposal to combine and update the existing Planning and Climate Change - Supplement to PPS 1 and PPS 22: Renewable Energy into one document. The PPS would build from current approaches and reflect the latest legislative and policy context. It would be a supplement to Planning Policy Statement 1: Delivering Sustainable Development (PPS1) and consultation is due to end in June 2011.

Planning Policy Statement (PPS) 13: 'Transport' seeks to link planning and transport strategies to encourage new development that promotes sustainable transport choices and reduces car dependence, and the guide emphasises the need to maximise the use of the most accessible sites.

Draft National Planning Framework, July 2011

The Draft National Planning Policy Framework sets out the Government's economic, environmental and social planning policies for England. Taken together, these policies articulate the Government's vision of sustainable development, which should be interpreted and applied locally to meet local aspirations. It states:

"For the planning system delivering sustainable development means:

- *planning for prosperity (an economic role) – use the planning system to build a strong, responsive and competitive economy, by ensuring that sufficient land of the right type, and in the right places, is available to allow growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure*
- *planning for people (a social role) – use the planning system to promote strong, vibrant and healthy communities, by providing an increased supply of housing to meet the needs of present and future generations; and by creating a good quality built environment, with accessible local services that reflect the community's needs and supports its health and well-being; and*
- *planning for places (an environmental role) – use the planning system to protect and enhance our natural, built and historic environment, to use natural resources prudently and to mitigate and adapt to climate change, including moving to a low-carbon economy".*

Regional Planning Policy

The Spatial Development Strategy for Greater London (The London Plan), July 2011

The London Plan[1] represents the Mayor's policies for development in London. The Plan looks forward to 2031 and sets out the Mayor's vision for the sustainable development of London over this plan period. In particular, six detailed objectives, embodying the concept of sustainable development underpin the Mayor's vision. In particular, these are to ensure that London is:

- A city that meets the challenges of economic and population growth in ways that ensure a sustainable, good and improvement quality of life for all Londoners;
- An internationally competitive and successful city, with a strong and diverse economy and an entrepreneurial spirit that benefit all Londoners and all parts of London;
- A city of diverse, strong, secure and accessible neighbourhoods to which Londoners feel attached;
- A city that delights the senses and takes care over its buildings and streets;
- A city that becomes a world leader in improving the environment locally and globally, taking the lead in tackling climate change, reducing pollution, developing a low carbon economy and consuming fewer resources and using them more effectively; and
- A city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities with an efficient and effective transport system.

New developments are required to meet the highest standards of sustainable design and construction under Chapter 5 and include London's response to climate change, including underlying issues of resource management. The policies cover climate change mitigation and adaptation, waste, aggregates, contaminated land and hazardous substances. It contains a number of policies directly related to energy and sustainability. In particular, Policy 5.3 states that the highest standards of sustainable design should be sought, including measures to:

- Minimise carbon dioxide emissions across the site, including the building and services (such as heating and cooling systems);
- Avoid internal overheating and contributing to the urban heat island effect;
- Efficient use of natural resources (including water), including making the most of natural systems both within and around buildings;
- Minimise pollution (including noise, air and urban run-off);
- Minimise the generation of waste and maximising reuse or recycling;
- Avoid impacts from natural hazards (including flooding);
- Ensure developments are comfortable and secure for users, including avoiding the creation of adverse local climatic conditions;
- Secure sustainable procurement of materials, using local supplies where feasible; and
- Promote and protect biodiversity and green infrastructure.

With respect to minimising carbon dioxide Policy 5.2 of the Plan requires the following in terms of carbon reductions:

All non-domestic properties to meet the following carbon dioxide emissions targets:

- 2010 – 2013 25 % improvement on 2010 Building Regulations;
- 2013 – 2016 40 % improvement on 2010 Building Regulations;
- 2016 – 2019 as per Building Regulations requirements; and
- 2019 – 2031 zero carbon.

All residential properties to meet the following carbon dioxide emissions targets:

- 2010 – 2013 25 % improvement on 2010 Building Regulations;
- 2013 – 2016 40 % improvement on 2010 Building Regulations; and
- 2016 – 2031 zero carbon.

The London Plan - Sustainable Design and Construction, Supplementary Planning Guidance, 2006

The Sustainable Design and Construction Supplementary Planning Guidance document (SPG)[2] was adopted in May 2006. The SPG provides specific guidance for achieving the highest standards of sustainable design and construction. In particular, the SPG notes the importance of sustainable design and construction in achieving targets set for energy use. The SPG also highlights that buildings are responsible for 80% of London's carbon dioxide emissions. The guidance sets out the 'essential standards' that all developments referable to the Mayor must achieve, which includes a target of 10% reduction in carbon emissions through the use of on-site renewables. It also provides the Mayor's 'preferred standards', which are based upon current industry best practice.

The Mayor's Energy Strategy, 2004

'Green Light to Clean Power'[6] was published in February 2004 and sets out the Mayor's proposal for changing the way energy is supplied and used within London over the next 10 years and beyond. The Strategy defines the 'energy hierarchy' to help guide decisions about which energy measures are appropriate in particular circumstances and ensure that London's energy needs are met in the most efficient way. In order to meet the requirements of the Plan, an energy assessment for a development must be undertaken which includes an energy demand assessment and demonstrate how this energy hierarchy has been adhered to.

Action Today to Protect Tomorrow: The Mayor's Climate Change Action Plan, 2007

The Mayor's Climate Change Action Plan 'Action Today to Protect Tomorrow'[7] was published in February 2007. The purpose of the strategy is to set out an agenda for London to cut its CO_2 emissions by focusing on actions that deliver the most significant carbon dioxide savings at lowest cost. It summarises the origin of CO_2 emissions within London and the projected growth in emissions. The Mayor will report annually on progress made towards targets for emissions reduction set out in the Plan.

Connecting with London's Nature: The Mayor's Biodiversity Strategy, 2002

The Mayor's Biodiversity Strategy[8] was published in July 2002 and sets out proposals for promoting and protecting biodiversity in London, including ensuring that there is no overall loss of wildlife habitats in London, and that more open space is created and made accessible to all Londoners.

Cleaning the Air: The Mayor's draft Air Quality Strategy, 2009

The Mayor's draft Air Quality Strategy[9] was consulted upon between October and November 2009. This strategy sets out actions to improve London's air quality and includes measures aimed at reducing emissions from transport, homes, offices and new developments. This includes making new developments 'air quality neutral' by making use of the existing planning system to ensure no new development has a negative impact on air quality in London. Energy efficiency schemes are encouraged; in particular buildings should have the opportunity to be retrofitted to make them more energy efficient. The Mayor's draft Air Quality Strategy also sets out measures to improve the public realm, including planting street vegetation.

Rethinking Rubbish in London: The Mayor's Municipal Waste Strategy, 2003

The Mayor's municipal waste strategy 'Rethinking Rubbish in London'[10] was published in September 2003 and contains policies to manage London's municipal waste through to 2020 in accordance with the 'Waste Hierarchy' and sets out proposals to implement these policies. Many of the existing proposals for implementation are now out of date or have been met. As such, the municipal waste strategy is currently being updated and will be re-published to provide new and revised policies and proposals for waste management until 2020.

Making Waste Work in London: The Mayor's Draft Business Waste Management Strategy, 2008

The Mayor's Draft Business Waste Management Strategy[11] published in February 2008 refers to commercial, industrial, construction, demolition, excavation and hazardous waste produced by businesses operating in the public, private, voluntary and community sector and sets out proposals for dealing with this waste, which makes up three quarters (13.8 million tonnes) of London's waste overall. It focuses on ensuring that businesses use resources productively and that the economic opportunities for reprocessing and managing waste within London are maximised.

The draft strategy was published for formal public consultation in February 2008, but has not been published in its final form to date.

The Mayors Draft Water Strategy, 2009

The draft Water Strategy[12] published in August 2009 examines how water resources could be used more effectively and how problems related to flooding could be reduced. It sets out proposals for water efficiency targets. The minimum requirements is for all new dwelling to achieve an average water usage of 110 litres per person per day (l/p/d) and to be 100% metered. The preferred target is to achieve an average water usage of 70 l/p/d and reuse of greywater for all non-potable uses. In addition, the document states where possible all new homes should meet the highest level of the Code for Sustainable Homes for water consumption. It also states that the Mayor will encourage green roofs, rainwater harvesting, grey water recycling and sustainable drainage through planning policies in his new London Plan.

Local Policy

LBC Local Development Framework: Core Strategy and Development Policies, Adopted November 2010

The Local Development Framework, sets out the LBC's planning strategy for managing growth and development in the future, including where new homes, jobs and infrastructure will be located. The Core Strategy[3], which was adopted in November 2010, is part of the LBC Local Development Framework. The document outlines the overriding planning strategy for the Borough. Section 3 of the Core Strategy focuses on reducing the environmental impact and achieving sustainable development, it includes strategic policies on:

- Making LBC more sustainable and tackling climate change, in particular improving the environmental performance of buildings, providing decentralised energy and heating networks, and reducing and managing our water use;
- Promoting sustainable travel;
- Promoting a more attractive local environment through securing high quality places, conserving our heritage, providing parks and open spaces, and encouraging biodiversity;
- Improving health and well-being;
- Making Camden a safer place while retaining its vibrancy; and
- Dealing with our waste and increasing recycling.

The LBC Development Policies[4] were also adopted in November 2010 and form part of the LBC Local Development Framework, it sets out detailed planning policies that are used when determining applications for planning permission in the borough to achieve the vision and objectives of the Core Strategy. The main policies relating to sustainable design and construction are DP22 Sustainable Design and Construction and DP23 Water. DP22 requires developments to incorporate sustainability by:

- expecting new build housing to meet Code Level 3 by 2010 and Code Level 4 by 2013 and encouraging Code Level 6 (zero carbon) by 2016; and
- expecting non-domestic developments of 500sqm of floorspace or above to achieve "very good" in BREEAM assessments and "excellent" from 2016 and encouraging zero carbon from 2019.

LBC Supplementary Guidance 3 – Sustainability, Adopted April 2011

This planning guidance supports the policies in the LDF and is consistent with the Core Strategy and the Development Policies, and forms a Supplementary Planning Document (SPD) which is an additional "material consideration" in planning decisions. This guidance provides information on ways to achieve carbon reductions and more sustainable developments, it states that:

"Developments are strongly encouraged to meet the following standards in accordance with DP22 – Promoting sustainable design and construction:

Code for Sustainable Homes:

2010-2012	*Level 3*
2013 -2015	*Level 4*
2016+	*Level 6 'zero carbon'*

Minimum standard for categories (% of un-weighted credits)

Energy 50%, Water 50%, Materials 50%

BREEAM

2010-2012	*'Very Good'*
2013+	*'Excellent'*

Minimum standard for categories (% of un-weighted credits)

Energy 60%, Water 60%, Materials 40%"

Hawley Wharf Area Planning Framework, Supplementary Planning Document, 2009

The Supplementary Planning Document has been prepared to provide a coherent framework for future development. The document states that:

"Any development in the Hawley Wharf area would be expected to display sound environmental standards and contribute to wider sustainability objectives. In particular it is noted that the environmental impacts of new development can be reduced through:

- *high standards of energy efficiency and appropriate use of renewable energy;*
- *reduced carbon emissions from buildings, and use of low-carbon technologies;*
- *the most efficient use of resources and water;*
- *the use of decentralised energy supply systems;*
- *the re-use and most efficient use of land and buildings;*

- *patterns of growth that reduce the need to travel by car; and*
- *buildings that are adaptable to changing needs.*

The Council currently expects a rating of 'very good' or 'excellent' as well as a specified performance in the categories of Energy, Water and Materials, meaning the relevant developments are to achieve at least 60% of the credits in Energy and Water and 40% of the credits in Materials".

4.2 Stage 2: Sustainability Workshop

A series of Sustainability Workshops with the Design Team were co-ordinated and facilitated by Waterman EED and Grontmij, who undertook the Code for Sustainable Homes and BREEAM pre-assessments. The objective of the sustainability workshop was to explore potential design options in order to maximise the schemes contribution to sustainable development within the constraints of the Site.

The sustainability workshops were attended by members of the following:

- Make
- AHMM
- Stanley Sidings Ltd.
- Grontmij (building services engineers); and
- Waterman Energy, Environment and Design (environmental and sustainability consultants).

4.3 Stage 3 - Technical Studies

Code for Sustainable Homes Assessment

The Department for Communities and Local Government (DCLG) with the support from the BRE has developed a mandatory, standard environmental assessment method for dwellings known as the Code. The Code assesses the environmental impact of a dwelling against a range of issues. Credits are awarded under a range of environmental headings, where the dwelling achieves a benchmark performance. The Code seeks to bring about reductions in the environmental impact of dwellings as well as providing greater regulatory certainty for the homebuilding industry.

The method addresses the impacts of a building on the global, local and indoor environments across a range of issues, grouped under the headings of:

- Energy and CO_2;
- Water;
- Materials;
- Surface Water Run-off;
- Waste;
- Pollution;
- Health and Wellbeing;
- Management; and
- Ecology.

A dwelling is given a score to indicate its overall environmental performance. This is referred to as the 'Code rating' which is expressed in Levels 1 to 6. The rating achieved depends on the total score awarded and the mandatory standards for each level being met. Minimum mandatory standards are

required to achieve a 'Level 1' rating, below which a Code rating is regarded as unclassified. A commitment has been made to achieve a Code 'Level 3' for the residential element of the project. A Code pre-assessment estimation has also been undertaken by Grontmij to identify how 'Level 3' could be achieved at the detailed design stage.

BREEAM Pre-Assessments

The Building Research Establishment (BRE) has developed a methodology for assessing the environmental impact associated with buildings referred to as BREEAM.

BREEAM assesses the environmental impact of a building against a range of issues, and credits are awarded where the building achieves a benchmark performance. A building is given a score to indicate its overall environmental performance. This is referred to as the 'BREEAM rating' which is expressed as 'Pass', 'Good', 'Very Good' 'Excellent' or 'Outstanding' depending on the total score awarded.

The Applicant is committed to achieving a 'Very Good' BREEAM rating for the office elements of the Development and BREEAM 'Very Good' for the commercial elements of the Development, excluding the market spaces within the arches as these would be largely open air. In order to ensure that these ratings could be achieved once the detailed scheme design has been finalised, Grontmij has undertaken BREEAM pre-assessments for the commercial retail and office components of the Development. The pre-assessment estimator provides an indication of the likely BREEAM rating for the project, as well as highlighting areas where improvements can be made, if necessary. The full BREEAM assessments would be undertaken at the detailed design stage, with interim certification achieved at the end of RIBA Stage E.

The BREEAM and CSH pre-assessments are included as appendices in the Energy Statement.

Energy Statement

The London Plan states that new developments should seek to achieve a reduction in CO_2 emissions by following the energy hierarchy of be 'Lean, be 'Clean', be 'Green'. Grontmij were therefore appointed by the Applicant to advise on how to reduce the energy demand and carbon emission of the Development and to prepare an Energy Statement to accompany the planning application.

The Energy Statement:

- Provides an assessment of likely energy demand of the Development;
- Describes the proposed energy efficiency measures incorporated into the building design;
- Describes the feasibility of various renewable and low carbon energy technologies and sets out the proposed strategy for the Development;
- Reports on the overall carbon savings which the proposals would deliver.

The Energy Statement was undertaken by Grontmij and is submitted with the planning application as a separate document.

4.4 Stage 4 - Sustainability Appraisal of the Development

Sustainability Appraisal Framework

As a result of the policy review a Sustainability Appraisal Framework (SA Framework) was devised primarily based on the checklist of measures outlined in the Mayor's 'Sustainable Design and Construction' SPG. As such, the SA Framework is set out under the following eight headline themes:

- Re-use of land and buildings;
- Maximise use of natural systems;

- Conserve energy, water and other resources;
- Reduce noise, pollution, flooding and microclimatic effects;
- Ensure developments are comfortable and secure for users;
- Conserve and enhance the natural environment and biodiversity;
- Promoting sustainable waste behaviour; and
- Sustainable construction.

Relevant policies covered by LBC's adopted Core Strategy and Development Policies and the supplementary guidance were added to the SA Framework to support and enhance the main headline issues listed above. Additional sections on transport and socio economics were also included, as they are important sustainability issues not explicitly covered within the Mayor's Sustainable Design and Construction SPG.

Once the scheme had been fixed for the purposes of the planning application a full 'sustainability appraisal' of the proposed Development was undertaken against the SA Framework to determine the extent to which the proposals comply with relevant planning policy identified during the policy review undertaken in Stage 1. The results of this process are summarised in Section 5 of this report, while the full appraisal is included as Appendix A.

The tables included in Appendix A detail site-specific initiatives which have been committed to by the Applicant, thereby indicating (against the SA Framework) how the proposed Development complies with the Mayor's essential and preferred standards as set out in the 'Sustainable Design and Construction SPG', and the requirements of LBC planning policies.

5. Summary of Sustainability Appraisal Results

5.1 Reuse of Land and Buildings

The UK Government has made the sustainable reuse of land and buildings a strong policy aim in its sustainable development strategies with the key concept being to treat land as a precious resource that must be used in the most efficient way possible, reusing land and empty property within the urban area in preference to seeking new land outside and avoiding urban sprawl. The initiatives by which the Development will reuse land and buildings are summarised below.

- The Site is situated wholly on previously developed land;
- The Development comprises the redevelopment of a mixed use site that is currently underutilised and therefore provides an opportunity to maximise the efficiency of the Site;
- Appropriate to the Development, buildings and structures within the conservation area would be renovated and restored;
- The Grade II Listed Number 1 Hawley Road is an existing premise and would be retained and converted from storage to educational use;
- The historic facades of the existing Numbers 1 to 6 Chalk Farm Road would be restored, and a new building at Number 7/8 built;
- The other existing buildings and structures on the Site are not fit for purpose and would require significant upgrading as such they would be removed;
- The Development would include wild flower sedum and brown roofs as well as PV panels on areas of roof space; and
- The Development provides a variety of public open spaces, as well as improved permeability and connectivity.

5.2 Maximise the Use of Natural Systems

Passive solar design and natural ventilation should be used to minimise resource use and maximise the comfort of users over the lifetime of a development. The main climatic influences on internal comfort are solar heat and air flow. Buildings should also be designed and orientated in a way that minimises heating needs and maximises natural daylight. The Development has been designed to address these issues as summarised below:

- The fenestration for each of the buildings would be designed to reduce unwanted solar gains in summer and, where possible, to allow natural ventilation to be used;
- Whole-house ventilation units with heat recovery would allow ventilation to be provided to the dwellings;
- Cooling would be provided as part of the centralised plant;
- All the residential units within the Development have been designed to meet the Lifetimes Homes standard thereby providing accessible and adaptable accommodation;
- Flexibility would also be incorporated within the commercial elements of the Development to allow for a future change in use;
- The Site is located in an area with a low probability of flooding (Flood Zone 1). The Development would incorporate a sustainable drainage strategy to reduce future risk of flooding; and
- Brown and wild flower sedum roofs would be provided throughout the Development helping to reduce the urban heat island effect.

5.3 Conserve Energy, Water and Other Resources

Excessive energy consumption is a global issue, not only because of the limited availability of finite resources such as coal and oil which are traditionally used to create energy, but also because of the polluting nature of these substances. As such, it is important that the Development incorporates measures to promote energy efficiency, the use of 'clean' energy and the use of renewable technologies in line with the energy hierarchy, thereby limiting the level rate of carbon dioxide. Water is becoming an increasingly scarce resource, particularly in the South-East of England, and with demand increasing as population numbers increase. Subsequently, measures need to be taken to reduce the overall demand for water consumption through the promotion of efficient resource wherever practicably possible.

- Grontmij has undertaken an Energy Demand Assessment, which indicates the baseline regulated energy demand for the Development is 6,277,807kWh/year which equates to 2,388 tonnes of CO_2 emissions per year.
- The Development would include the following energy efficient measures which would result in a CO_2 emissions reduction of 6.1%:
  - Building envelope optimisation and an air tightness of 3m3/hr/m2 at 50 Pa;
  - Exposed thermal mass;
  - Low energy white goods;
  - Low energy lighting and lighting control;
  - Ventilation heat recovery;
  - Low energy DC motors;
  - High efficiency chillers;
  - High energy efficient lifts;
  - Low energy DC motors;
  - Power factor correction; and
  - Variable flow air and water plant.
- The Development would also include a centralised biofuel-fired CCHP system which would result in a reduction in CO_2 emissions across the entire development of approximately 22.6% as compared to the 'Lean' baseline;
- All external lighting would be specified as energy efficient and designed in accordance with Institute Lighting Engineers Guidance;
- The overall CO_2 reduction for the Development would be 32.5% compared to the Part L baseline.
- The decision to refurbish the current buildings in the conservation area, as opposed to constructing new buildings would result in a saving of embodied carbon;
- The Design Team would specify that all on-site timber, and structural timber would be 100% FSC sourced;
- The Design Team and Applicant are committed to specifying insulation with a low embodied impact;
- The Design Team would seek to use locally sourced materials where feasible;
- The residential element of the Development would achieve an average water use of 105 litres per person per day and the non-domestic units would specify water efficient sanitary ware where feasible in order to achieve the available BREEAM credits; and
- It is an aspiration to provide rainwater harvesting, which will be investigated at a further detailed design stage.

5.4 Reduce Noise, Pollution, Flooding and Microclimatic Effects

In order to provide a design sensitive to the needs of its users and the surrounding area, developments should follow the principles of good design to optimise use and performance as well as ensure integration into the context of the local environment with regard to noise, pollution and localised flooding as well as microclimate impacts. The following measures have been incorporated into the Development:

- A noise assessment has been undertaken as part of the Environmental Impact Assessment. The positioning of plant and internal building layouts have been specifically designed to minimise noise pollution and the design team are committed to ensuring the suitability of the site for residential and educational use;
- Proposed noise mitigation measures include additional insulation, and the provision of standard double glazed windows;
- An air quality assessment has been undertaken for the Development and concluded that the completed Development is predicted to have a negligible to long-term local effect of moderate beneficial significance on air quality at existing sensitive receptors;
- The Environment Agency flood risk maps show that the Site is located in a low flood risk zone (Flood Zone 1);
- In line with the London Plan essential standard, it is proposed to restrict surface water discharge from the Site to 50% of the existing rate (calculated at 221 litres per second l/s) and allow for the impact of 30% climate change;
- An assessment of wind conditions has been undertaken as part of the EIA and compares the proposed wind conditions with the Lawson Comfort Criteria; and
- The results were that the effects of the wind on the Development were largely negligible. However some mitigation measures would be needed on the upper amenity levels, the mitigation measures include screens and planting so that the wind conditions would be suitable for the intended use of sitting.

5.5 Community Needs, User Comfort and Safety

Sustainability encompasses social issues and new developments should be inclusive and accessible to all, as well as helping to alleviate other social problems such as crime. In urban areas it is recognised that development sites will be located in close proximity to neighbours and other existing users. It is therefore important to consider the amenity of these existing users. All developments should aim to enhance the amenity of the existing area wherever possible. Further adequate amenity space should be provided for occupiers of offices. Developments should not adversely affect the capacity of community, education, sports and health services and adequate provision should be made for new residential populations.

- There would be occupant controlled lighting and thermal zoning in the residential and commercial elements of the Development;
- The design team have committed to seeking a secured by design certificate;
- Positioning of plant would be carefully considered to allow for easy maintenance and end of life removal;
- The Development would meet the principles of inclusive design and would adopt the principles of SPG 'Accessible London: Achieving an Inclusive Environment';
- 10% of the affordable residential dwellings would be wheelchair accessible and all dwellings would comply with Lifetime Homes Standards; and
- The Development would be fully e-enabled.

5.6 Conserve and Enhance the Natural Environment and Biodiversity

Biodiversity and green space are vital to maintaining the UK's ecological resources not just in fertilising crops, purifying water, preventing soil erosion (and associated CO_2 emissions) but also for aesthetical enjoyment and possible human health benefits. The initiatives which have been proposed to maintain and improve the ecological value of the Site are summarised below.

- The existing Site is of low ecological value; and as such any ecological enhancements will be of benefit to local species;
- The Development proposals include 1,881m^2 of wildflower sedum roof and 315m^2 of brown roof, which would include a range of native plant species in order to increase biodiversity;
- Inclusion of specific plant species suitable for local BAP species to use as foraging areas and provide habitat to support a range of other local species; and
- Inclusion of bat and bird boxes where feasible.

5.7 Promoting Sustainable Waste Behaviour

The waste hierarchy as outlined in the national waste strategy presents the most sustainable approach to waste management; with reducing waste generation being the most sustainable option, and disposal (e.g. to a landfill site) as the least sustainable option. Developments should demonstrate accordance with the waste hierarchy both during construction and during operation. The initiatives which have been proposed to reduce the volume of waste going to landfill are summarised below.

- The main contractor would be required to produce a comprehensive Site Waste Management Plan (SWMP);
- The Development would consider the use of pre-fabricated elements and modular components at the detailed design stages;
- The Development would use materials with a recycled content where practical and feasible;
- Based on the facilities provided and the anticipated composition of waste, it is envisaged that up to 58% of commercial waste generated could be recycled;
- It is envisaged that up to 46% of residential waste generated could be recycled; and
- Future residents would be provided with information on the waste management system and the accepted materials to be placed in each type of bin.

5.8 Sustainable Construction

Sustainable construction practices are designed to minimise waste creation, reduce energy and water usage, prevent pollution and minimise nuisance during construction. These aspirations are principally achieved through design, lean construction, monitoring and reporting using targets and benchmarking.

The Development has taken into consideration the principles of sustainable design and construction as summarised below:

- An Environmental Management Plan (EMP) will be developed and implemented and will monitor noise, dust and vibration caused by the construction of the proposed Development to ensure that disturbance and pollution is minimised;
- A Site Waste Management Plan (SWMP) would be created in order to minimise waste creation, ensure that materials are separated into operate waste streams in order to maximise the reuse, recycling of waste and minimise waste going to landfill;
- The Design Team are committed to taking appropriate measures to reduce the risk of statutory nuisance to neighbouring properties. The implementation of an EMP would act to ensure these measures were adhered to;
- In addition, the main contractor would be required to sign up to Considerate Constructors Scheme and achieve a score of at least 32; and
- The Development would not affect any protected species, however all legislation would be complied with during construction.

5.9 Transport

Congestion and transport related pollution and carbon emissions are key issues which all new development should try to address. All development projects should aim to maximise accessibility by alternative modes of transport to the car, and preferably make non car modes the most desirable option. Developments also need to consider accessibility for pedestrians and cyclists. The Site is in a highly accessible location for public transport and the following commitments have been made to promote sustainable transport modes:

- The PTAL for the Site is 6 which means the site has the highest level of access to public transport;
- The Development would provide new links to improve walkability in the area and connect the Site with public transportation nodes;
- Cycle parking for the residential, commercial and retail elements of the Site would be installed in accordance with LBC and TfL standards. A publicly accessible Cycle Station would also be provided with 136 spaces in the Development for use by visitors and to serve the wider area, providing a total of 419 spaces;
- The Development would provide only a limited number of car parking spaces;
- In addition to the limited number of spaces, it is proposed that the Development is designated a 'car-capped' development, where residents that do not have a car parking space within the Development are prevented from purchasing residential parking permits for streets in the borough;
- A series of Travel Plan Frameworks have been prepared for the Development to ensure a structured approach to help adapt travel behaviour through the use of the infrastructure, location and land use; and
- There would be an appointment of a travel plan co-ordinator once the Development is occupied.

5.10 Socio-Economics

Sustainable developments not only mitigate environmental issues but also create economic vitality and engage with, and provide positive economic benefits to, the local community.

The Development proposals would provide employment and economic benefits to the local community and businesses, including the following:

- The Development would deliver a mix of residential, commercial, retail, hotel, community and leisure uses which would have a number of positive socio-economic impacts on the opportunity area and wider district;
- The Development would provide 17 affordable units.
- The Development would provide an increase of 494 jobs and generate a local spend by the employees of approximately £652,500 per year.
- The provision of the residential units on Site is likely to generate spending by residents of approximately £2.3 million.
- The Development is proposed to provide four new areas of public space.
- Children's playspace, both formal and informal would be provided within these areas throughout the Development.

6. Implementation

As can be seen from Section 5 and Appendix A, the Development accords with the majority of the sustainability objectives set out in regional and local planning policy. In addition, a commitment has been made to achieve a high level of sustainable design under the BREEAM and Code assessments.

In order to deliver a sustainable development, the key initiatives and commitments highlighted in this statement would need to be implemented. Implementation needs to be monitored and reviewed during the detailed design, demolition and construction and eventually in the operational phases of the Development.

6.1 Detailed Design

The actions required to support the delivery of sustainability commitments at further detailed design stages of the Development include:

- The Applicant has made a commitment to achieve a BREEAM rating of 'Very Good' and Code 'Level 4'. During RIBA design stage E a formal BREEAM assessment and Code assessment would be undertaken;
- Design stage SAP calculations and EPC assessments would be undertaken to ensure that the design is in line with the Energy Strategy;
- The 16 design criteria set out in the Lifetime Homes Standards would be incorporated into the detailed design of the residential units; and
- Ongoing consultation would be undertaken with the local police crime prevention design advisor to ensure that principles of Secured by Design are incorporated into the proposals.

6.2 Demolition and Construction

Initiatives that would be delivered in order to support the implementation of the Development and promote sustainability throughout the demolition and construction phase include:

- Preparation and implementation of a Code of Construction Practice (CoCP) in line with LBC requirements including monitoring and reporting requirements;
- Preparation and implementation of a SWMP, including waste minimisation and recycling targets;
- Registration and accordance with the CCS to achieve a minimum score of 32;
- Adhering to the Institution of Civil Engineers (ICE) Demolition Protocol; and
- Tender specification documents requiring compliance with the CoCP, SWMP and BREEAM/ Code requirements as well as including responsible material sourcing commitments.

6.3 Operational Management

On completion of construction of the Development, a post construction review would be undertaken as part of the BREEAM and Code requirements. The post construction review would ensure that the BREEAM and Code commitments have been implemented. The full BREEAM and Code certificates would only be awarded once the post construction review is completed. A Travel Plan would be adopted to ensure sustainable transport options are encouraged and building users would be provided with information on how to use the Development and the surrounding location in a sustainable way.

References

[1] Greater London Authority, 2011: The London Plan Spatial Development Strategy for Greater London

[2] Greater London Authority, 2006: Sustainable Design and Construction: Supplementary Planning Guidance, GLA, London.

[3] The London Borough of Camden, 2010: Core Strategy, Camden, London.

[4] The London Borough of Camden, 2010: Development Plan Policies, Camden, London.

[5] The London Borough of Camden, 2009: Hawley Wharf Area Supplementary Planning Document, February 2009.

[6] Greater London Authority (GLA), 2004: *Green Light to Clean Power: The Mayor's Energy Strategy.* GLA, London.

[7] Greater London Authority (GLA), 2007: Action Today to Protect Tomorrow: The Mayor's Climate Change Action Plan.

[8] Greater London Authority (GLA), 2002: Connecting with London's Nature: The Mayor's Biodiversity Strategy. GLA, London.

[9] Greater London Authority (GLA), 2009: Clearing the Air: the Mayors Draft Air Quality. GLA, London.

[10] Greater London Authority (GLA), 2003: Rethinking Rubbish in London: The Mayor's Municipal Waste Strategy. GLA, London.

[11] Greater London Authority (GLA), 2010: The Mayor's Draft Municipal Waste Management Strategy. GLA, London.

[12] Greater London Authority (GLA), 2009: Draft Water Strategy. GLA, London.

Appendix 1

Sustainability Appraisal Framework

The tables included in Appendix A detail site-specific initiatives which have been committed to by the Applicant, thereby indicating (against the SA Framework) how the proposed Development complies with the Mayor's essential and preferred standards as set out in the 'Sustainable Design and Construction SPG', and the requirements of LBHF's sustainability policy.

The following criteria were used in the appraisal:

Sustainability Appraisal Criteria	
✓	Meets or exceeds essential London plan policy requirements
✓✓	Meets or exceeds preferred London plan policy requirements
✓✓✓	Meets or exceeds local policy
X	Does not meet or exceed essential London plan policy requirements
XX	Does not meet or exceed preferred London plan policy requirements
XXX	Does not meet or exceed local policy requirements
-	Relevant policy is not available

Reuse Land and Buildings

Table 1: Reuse Land and Buildings

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
Land 2.1.2	100% of development on previously developed land, unless very special circumstances can be demonstrated.	-	-	LBC covers approximately 11 square miles in inner London, it is a highly built up area with a mix of uses and many local centres as well as significant areas of open space. There is therefore no local policy for the development of brownfield land because there is little to no opportunity to build on anything other than previously developed land. The Development would therefore be entirely on previously developed land. This consists of two raised railway viaducts which span the Site from East to West and Northwest-East. Area A is predominantly used as temporary market space, Area B consists on residential properties on Torbay Street and Hawley Road, as well as areas of refuse storage, car parking and hard landscaping. Area B comprises a mix of offices, residential dwellings, light industrial uses and car parking. Area D comprises a private access road and office buildings.	✓ - -
	Development density should be maximised based on local context (Policy 4B.7) design principles (Policy 4B.1) open space provision (Policy	-	**CS1 – Distribution of growth**: expecting high density development in Central London, town centres and other locations	The Core Strategy states that there is 'Limited Land' in the borough. The Council wants to encourage developments with high densities in the most accessible parts of the borough, one of which is Camden Town and the Hawley Wharf	✓ - ✓✓✓

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
	3D.10) and public transport capacity (Policy 3D.10). Residential development will be assessed on the Matrix of sustainable Residential Density in the London Plan (Table 4B.1).		well served by public transport.	area. The development Site has a Public Transport Accessibility Level (PTAL) rating of 6 (with 1a being the lowest accessibility and 6b being the highest) and thus has excellent accessibility. This Site can be attributed to the location of numerous bus stops within 640m walking distance of the Site. In addition, there are two Underground stations, one 320m to the south, and one 640m to the north. There is also a London Overground station located approximately 450m from the Development. The Development comprises the redevelopment of a mixed use site that is currently underutilised and therefore provides an opportunity to maximise the efficiency of the Site. Area A has evolved organically and therefore the existing use of space as a temporary market is not efficient. The Development will aim to maximise this area whilst retaining the character and use of the market.	
Buildings 2.1.3	Existing buildings are reused where practicable, where the density of development and residential amenity is optimised and where the building conforms or has the potential to meet the standards for energy, materials, water and biodiversity conservation set			1 Hawley Road is an existing commercial premise and would be retained and converted to provide two residential dwellings. The main structure of 1-8 Chalk Farm Road would also be retained. The other existing buildings on the Site are not fit for purpose and would require significant upgrading in order to meet current regulations. It would be unlikely that the re-use of the existing buildings would meet the sustainable design	✓ - - -

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
	out in this SPG.			standards set out in the SPG particularly in terms of energy efficiency.	
	Encourage major developments to incorporate living roofs and walls where feasible (London Plan, 2008 (4A.3)).	Existing roof space is reused where practicable to create new outdoor spaces and enhance biodiversity alongside the integration of renewable energy (section 2.3.2).	**DP22 – Promoting sustainable design and construction:** The Council will require development to incorporate sustainable design and construction measures. Schemes must incorporate green or brown roofs and green walls wherever suitable. **CPG Renewable Energy:** Encourages the use of PV on top of a green or brown roof.	The Development would include green and brown roofs as well as PV panels on areas of roof space. At roof level the Development proposes living roofs within the following areas: • Building C1: 636m2 of wildflower sedum roof; • Building C2: 469m2 of wildflower sedum roof; • Building D: 590m2 of wildflower sedum roof; • Building W: 315m2 of brown roof; and • Building X: 186m2 of wildflower sedum roof. A total of 250m^2 of PV panels would be provided to serve the Development.	✓ ✓✓ ✓✓✓
Location and Urban Design 2.2.2.	All development to follow the principles of good design set out in London Plan Policy 4B.1.		**DP24 – Securing high quality design:** The Council will require all developments, including alterations and extensions to existing buildings, to be of the highest standard of design and will expect developments to consider: a) character, setting, context and the form and scale of neighbouring buildings; b) the character and	The proposals for the Site reflect the Hawley Wharf Area Planning Framework. The Development provides a variety of public open spaces, as well as improved permeability and connectivity. Buildings within the conservation area would be renovated and restored. The Development has been designed around an understanding of routes and spaces. The Development would provide four district areas each with a distinct character with high standards of design, sustainability and quality. The design principles are set out in the Design and Access Statement.	✓ - ✓✓✓

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
			proportions of the existing building, where alterations and extensions are proposed; c) the quality of materials to be used; d) the provision of visually interesting frontages at street level; e) the appropriate location for building services equipment; f) existing natural features, such as topography and trees; g) the provision of appropriate hard and soft landscaping including boundary treatments; h) the provision of appropriate amenity space; and i) accessibility. **CS14 – Promoting high quality places and conserving our heritage:** requiring development of the highest standard of design that respects local context and character.		

Maximise Use of Natural Systems

Table 2: Maximise Use of Natural Systems

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
Location and Urban Design 2.2.2	Minimise the need for and use of mechanical ventilation, heating and cooling systems.		**DPD 22 – Promoting sustainable design and construction:** Schemes must demonstrate how natural ventilation has been incorporated into the design. Where mechanical ventilation is required due to poor environmental conditions we will expect developments to incorporate high standards of energy efficient design.	The fenestration for each of the buildings would be designed to reduce unwanted solar gains in summer and, where possible, to allow natural ventilation to be used. However, due to the location of the building near to main roads and in the centre of Camden Town (noise and air pollution), a full natural system is not possible. Whole-house ventilation units' with heat recovery would allow ventilation to be provided to the dwellings without the need for heating or cooling of the incoming air. These individual dwelling units would be provided with bypasses to minimise the impact of an increased system resistance when heat recovery is not required. Cooling would be provided as part of the centralised plant. These would allow the CCHP to run at maximum duty as often as possible. The Area B dwellings and much of Area A would not be provided with mechanical space cooling. Heat recovery on the outside air would be provided to all feasible main air handling units within the Development. A minimum	✓ - ✓✓✓

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
				thermal effectiveness of 60% will be specified to heat recovery systems. Low energy DC motors would also be used. Both of these systems result in considerable reductions in energy use from the mechanical ventilation systems.	
Adapting to Climate Change 2.2.3	Buildings provide for flexibility of uses during their projected operational lives.		**DP24 Securing high quality design:** New development should be fit for purpose and can accommodate future flexibility of use.	All the residential units within the Development have been designed to meet the Lifetimes Homes standard thereby providing accessible and adaptable accommodation for everyone, from young families to older people and individuals with a temporary or permanent physical impairment. The residential properties would also have flexible floor plates which could be converted into alternative end-uses (such as a hotel) if necessary. In addition, flexibility would also be incorporated within the commercial elements of the Development to allow for a future change in use. Therefore, buildings within the Development would have a large degree of flexibility during their operational lives.	✓ - ✓✓✓
	Buildings adapt to and mitigate for the effects of the urban heat island and the expected increases in hot dry summers and wet mild winters.		**DP22 – Promoting sustainable design and construction:** The Council will require development to be resilient to climate change by ensuring schemes include	The Site is located in an area with a low probability of flooding (Flood Zone 1). The Development would incorporate a sustainable drainage strategy that would include the installation of permeable paving, attenuation tanks and sedum roofs. This strategy would provide a robust and	✓ - ✓✓✓

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
			appropriate climate change adaptation measures, such as: f) summer shading and planting; g) limiting run-off; h) reducing water consumption; i) reducing air pollution; and j) not locating vulnerable uses in basements in flood-prone areas.	sustainable drainage system which would restrict flows to half the existing rate, while providing minor ecological and amenity benefits, and would decrease flood risk at the Site and elsewhere. Green, sedum and brown roofs would be provided throughout the Development helping to reduce the urban heat island effect. The fenestration for each of the buildings would be designed to reduce unwanted solar gains in summer and, where possible, to allow natural ventilation to be used. The glazing would be a high performance solar control to reduce solar gains, whilst permitting daylight to enter. The buildings in Area A would have an exposed concrete soffit. This exposed thermal mass absorbs heat during the day, which is then re-emitted from the structure through the night. Effectively this would act to dampen fluctuations in temperature within the building and increases the buildings response time to heat gains & losses.	
Adapting to Climate Change 2.2.3 (Cont)	Design in facilities for bicycles and electric cars.		**DP17 – Walking, cycling and public transport:** The Council will promote walking, cycling and public transport use. Development should make suitable provision for pedestrians, cyclists and public transport and, where appropriate, will	Cycle parking for the residential, commercial and retail elements of the Site would be provided in accordance with LBC and TfL standards. In certain cases, the level of provision would also be in accordance with relevant best practice guidance, which is in excess of planning standards. Cycle parking spaces for residents and employees would be sheltered and secure. Facilities would be	✓ - ✓✓✓

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
			also be required to provide for interchanging between different modes of transport. **CS11 Promoting sustainable and efficient travel:** promotes the use of low emission vehicles, including through expanding the availability of electric charging points. The Council will encourage the provision of electric vehicle charging spaces in new developments, including for electric pool cars or electric car-club cars.	provided at basement and accessed via lifts. Spaces within each area would be provided in a combination of Sheffield stands and accessible double stacking systems. There would be a total of 91 spaces in Area B, 206 spaces in Area C and 58 in Area D. A publicly accessible Cycle Station with 136 spaces would also be provided in the Development for use by visitors and to serve the wider area. It is anticipated that way finding signs would be installed at suitable locations within the Site and the surrounding area to facilitate pedestrian and cyclist navigation Electrical charging points would be implemented for the on-site facilities management vehicles.	

Conserve Energy, Water and Other Resources

Table 3: Conserve Energy, Water and Other Resources

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
Energy 2.3.2	Carry out an energy demand assessment.		**CPG: Section 2 The Energy Hierarchy:** Calculate the baseline energy demand of the development and the corresponding carbon dioxide emissions arising from the development. You should clearly show the methodology used.	Grontmij has undertaken an Energy Demand Assessment which forms part of the Energy Strategy submitted with the planning application. The baseline regulated energy demand is 6,277,807kWh/year which equates to 2,388 tonnes CO_2 emissions per year.	✓ - ✓✓✓
	Maximise use of energy efficiency techniques. Minimise energy use, including passive solar design, natural ventilation and vegetation on buildings (London Plan, 2008).		**CPG Section 2 The Energy Hierarchy:** All new developments are to be designed to minimise carbon dioxide emissions by being as energy efficient as is feasible and viable. **CS13 Tackling climate change:** minimising carbon emissions from the redevelopment, construction and occupation of buildings by implementing, in order, all of the elements of the following energy hierarchy, ensuring developments use less energy.	The Development would include the following energy efficient measures and these are detailed in the Energy Strategy which is submitted as part of the application: • Building envelope optimisation; • Exposed thermal mass; • Low energy white goods; • Low energy lighting and lighting control; • Ventilation heat recovery; • Low energy DC motors; • High efficiency chillers; • High energy efficient lifts; • Low energy DC motors;	✓ - ✓✓✓

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
				• Power factor correction; and • Variable flow air and water plant. The combination of these passive measures and highly efficient systems would result in a CO_2 emissions reduction of 6.1%.	
	Major commercial and residential developments to demonstrate that consideration has been given to the following ranking method for heating and where necessary cooling systems: - Passive design - Solar water heating; then - Combined heat and power for heating and cooling (i.e. trigeneration), preferably fuelled by renewables; then - Community heating; then - Heat pumps; and then - Gas condensing boilers.	All developments to demonstrate that consideration has been given to the following ranking method for heating systems: and should incorporate the highest feasible of the following options: - Solar water heating; then - Combined heat and power / trigeneration, preferably fuelled by renewables; then - Community heating. New developments should always be connected to existing community heating networks preferably fuelled by renewables where feasible.	**DP22 – Promoting sustainable design and construction –** encouraged to use Passivhaus measures. **CPG Energy Efficiency:** All new developments are to be designed to minimise carbon dioxide emissions by being as energy efficient as is feasible and viable. Passivhaus is encouraged. Developments should achieve 50% of the Code un-weighted credits in the Energy category. Developments will be expected to achieve 60% of the un-weighted credits in the Energy category of their BREEAM assessment. **CS13 Tackling Climate Change:** ensuring developments use less energy, making use of energy from efficient sources, such as the decentralised energy networks; generating	Passive design techniques included within the scheme include: high efficiency chillers, energy efficient and zoned lighting, high performance glazing improved insulation and an air tightness of $3m^3/hr/m^2$ at 50 Pa. The Development would also include a centralised CCHP system is proposed for Camden Lock Village. It will supply power to the development as well as heating & cooling using the waste heat. Both the heating & cooling systems will incorporate thermal storage to maximise the duty of the CCHP unit and the heating will be designed to allow for future integration with a local district heating system. The CCHP system is predicted to result in a reduction in CO_2 emissions across the entire development of approximately 7.1% as compared to the 'Lean' baseline, the CCHP is bio fuel fired and this would result in a further reduction of 22.6% in carbon emissions.	✓ ✓✓ ✓✓✓

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
			renewable energy on-site.		
Energy 2.3.2 (Cont)	Wherever on site outdoor lighting is proposed as part of a development it should be energy efficient, minimising light lost to sky.	Wherever outdoor lighting or other electrically powered street furniture is proposed, it should be solar powered and minimise light lost to the sky.	-	All external lighting would be specified as energy efficient and designed in accordance with Institute Lighting Engineers Guidance notes for the reduction of obtrusive light, 2005 and linked to daylight sensors.	✓ XX -
		Lighting and heating controls should enable services to operate efficiently under different loadings and allow for localised control.	-	Where possible, lighting would be controlled by movement and daylight sensors to ensure they dim or switch off when possible. In particular, this system of control would be used in the public areas of all four Site areas.	- ✓✓ -
	Carbon emissions from the total energy needs (heat, cooling and power) of the development should be reduced by at least 20% by the on-site generation of renewable energy.	Major developments should be zero carbon emission developments (ZEDs).	**CS13 Tackling climate change through promoting higher environmental standards:** the Council will expect developments to achieve a reduction in carbon dioxide emissions of 20% from on-site renewable energy generation (which can include sources of site-related decentralised renewable energy) unless it can be demonstrated that such provision is not feasible.	The Development has been designed to follow the energy hierarchy as set out in the London Plan. The integration of biofuel fired CCHP and PV cell panels is proposed. This would result in a CO_2 reduction of 32.5% for the Development. It has been calculated that the savings from biofuel fired CHP and PV panels would be 22.6%.	✓ X ✓✓✓
		Major developments should make a contribution to London's hydrogen economy through the adoption of hydrogen and/or fuel cell	-	Grontmij have undertaken a renewable energy feasibility study and concluded that the use of a hydrogen fuel cell was not the most appropriate or cost effective renewable energy source for the	- X -

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
		technologies and infrastructure.		Development.	
Materials 2.3.3		No material of high embodied energy to be used (as defined by the summary ratings in the Green Guide to Specification) unless a compelling whole life energy or technical case for its use exists.	**DP22 Promoting sustainable design and construction:** Consider the choice of materials, including – responsible sourcing, re-use and recycled content	The decision to refurbish the current buildings in the conservation area, as opposed to constructing new buildings would result in a saving of embodied carbon. Where new materials are specified, highly rated Green Guide materials would be used wherever possible.	- ✓✓ ✓✓✓
	Specify 50% timber and timber products from a Forest Stewardship Council (FSC) source with the balance from a known temperate source.	Specify 90% structural timber from a FSC source with the balance from a temperate source.	-	The Design Team would specify that all on-site timber, and structural timber would be 100% FSC sourced. The appointed main contractor would be required to have an environmental materials policy, used for sourcing of construction materials to be utilised on-Site.	✓ ✓✓ -
		No peat or natural weathered limestone should be used in buildings or landscaping.	-	The Design Team are committed to not using peat or natural limestone within the development.	- ✓✓ -
	Insulation materials containing substances known to contribute to stratospheric ozone depletion or with the potential to contribute to global warming must not be used.	All insulation materials used should be from natural materials.	**DP22 Promoting sustainable design and construction:** Consider the choice of materials, including – responsible sourcing, re-use and recycled content	The Design Team and Applicant are committed to specifying insulation with a low embodied impact, relative to its thermal properties, determined by the Green Guide to Specification.	✓ XX ✓
		Before demolition, appraisal of maximising recycling of materials by use of ICE's London Remade Demolition Protocol.	-	The design team are committed to ensuring that prior to any demolition works, an appraisal would be undertaken to establish the maximum amount of demolition material that can be recycled, using ICE's Remade Demolition Protocol. The contractor would	- ✓✓ -

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
				also be required to prepare and implement a SWMP, which would consider opportunities for materials reuse and recycling.	
	30% of materials by mass used in the development to be sourced from within 35 miles of site.	50% of materials by mass to be sourced from within 35 miles of site.	**DP22 Promoting sustainable design and construction:** Consider the choice of materials, including – responsible sourcing, re-use and recycled content	The Design Team would seek to use locally sourced materials where feasible.	X XX ✓✓✓
	Minimise use of new aggregates		**DP22 Promoting sustainable design and construction:** Consider the choice of materials, including – responsible sourcing, re-use and recycled content	The Design Team would seek to use recycled aggregates where possible.	✓ - ✓✓✓
		10% total value of materials used to be derived from recycled and reused materials.	**CP3 Sustainability:** All developments should aim for at least 10% of the total value of materials used to be derived from recycled and reused sources. This should relate to the WRAP Quick Wins assessments or equivalent. Major developments are anticipated to be able to achieve 15-20% of the total value of materials used to be derived from recycled and reused sources.	The design team would seek to source recycled materials where feasible, however they are unable to commit to a figure at this juncture as the potential for utilising recycled materials in the area at the time of construction is currently unknown.	- XX XXX

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
Water 2.3.4	Residential developments to achieve average water use in new dwellings of less than 40m^3 /bedspace/year (approximately 110 litres / head/day).	Residential developments to achieve average water use in new dwellings of less than 25m^3 / bedspace / year (approximately 70 litres/head/day).	**DP23 Water:** The Council will require developments to reduce their water consumption, the pressure on the combined sewer network and the risk of flooding by: a) incorporating water efficient features and equipment and capturing, retaining and re-using surface water and grey water on-site. **CPG3 Sustainability:** The Council will expect all developments to be designed to be water efficient by minimising water use and maximising the re-use of water. Code achieve 50% of credits and BREEAM achieve 60% of credits. **CS13 – Tackling climate change:** Make Camden a water efficient borough by making sure development incorporates efficient water and foul water infrastructure.	In line with the requirements of the Code, the residential element of the Development would achieve an average water use of 105 litres per person per day or less. This would be achieved through the specification of low water use sanitary fittings, and the provision of low water use appliances. The opportunity for including rainwater recycling is an aspiration for the Development and will be considered in the further detailed design stages. The non-domestic units would specify water efficient sanitary ware where feasible in order to achieve the available BREEAM credits.	✓ XX ✓✓✓
	100% metering of property (non-domestic).		-	The mains water supply to each building would be metered with a pulsed water meter.	✓ - -

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
		Use of grey water for all non-potable uses.	**CPG3 Sustainability:** The Council will require developments over 10 units or 1000sqm and/or intense water use developments, such as hotels, hostels, student housing etc. to include a grey water harvesting system. If such a system is not feasible or practical, applicants must demonstrate to the Council's satisfaction that this is the case.	It is an aspiration to provide rainwater harvesting, which will be investigated at the further detailed design stage. This would further reduce water consumption from the Development.	- XX XXX

Reduce noise, pollution, flooding and microclimatic effects

Table 4: Noise, Pollution, Flooding and Microclimatic Effects

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
Noise 2.4.2	Demonstrate that any 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.	For residential development achieve BS 8233:1999 (Table 5) 'good' standards for external to internal noise and improve on Building Regulations (2003) Part E for internal sound transmission standards by 5dB.	**DP28 Noise and Vibration:** The Council will seek to ensure that noise and vibration is controlled and managed and will not grant planning permission for: a) development likely to generate noise pollution; or b) development sensitive to noise in locations with noise pollution, unless appropriate attenuation measures are provided. Development that exceeds Camden's Noise and Vibration Thresholds will not be permitted. The Council will only grant permission for plant or machinery if it can be operated without cause harm to amenity and does not exceed our noise thresholds.	A noise assessment has been undertaken as part of the EIA. The positioning of plant and internal building layouts have been specifically designed to minimise noise pollution. The design team are committed to ensuring the noise generated from the Development would be equivalent or less than the background noise level. The design team are committed to ensuring the suitability of the site for residential use. Wherever possible, sensitive rooms, such as living rooms and bedrooms, have been orientated away from the primary noise sources in the area located within of the proposed Development. However, where sensitive rooms are orientated towards the high level rail line Northeast-West Viaduct, the East-West Viaduct, Kentish Town Road and Hawley Road a detailed façade design exercise has been undertaken to ensure that the required internal noise levels as provided in BS 8233 are met. Proposed measures include additional insulation, and the provision of standard double glazed windows.	✓ ✓✓ ✓✓✓

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
Air Pollution 2.4.3	All new gas boilers should produce low levels of NOx.	Low emission developments that are designed to minimise the air quality impact of plant, vehicles and other sources over the lifetime of the development.	**DP32 – Air quality and Camden's Clear Zone** The Council will require air quality assessments where development could potentially cause significant harm to air quality. Mitigation measures will be expected in developments that are located in areas of poor air quality. The Council will also only grant planning permission for development in the Clear Zone region that significantly increases travel demand where it considers that appropriate measures to minimise the transport impact of development are incorporated. We will use planning conditions and legal agreements to secure Clear Zone measures to avoid, remedy or mitigate the impacts of development schemes in the Central London Area.	An air quality assessment has been undertaken for the Development and concluded that the completed Development is predicted to have a negligible to long-term local effect of moderate beneficial significance on air quality at existing sensitive receptors. All new gas boilers would produce low levels of NOx.	✓ ✓ XXX
	Take measures to reduce and mitigate exposure to air pollution.		**DP32 – Air quality and Camden's Clear Zone** The Council will require air quality assessments where	The Applicant is committed to using contractors signed up to the Considerate Contractors Scheme (CCS) to enhance the management of Site operations during	✓ XX ✓✓✓

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
			development could potentially cause significant harm to air quality. Mitigation measures will be expected in developments that are located in areas of poor air quality. The Council will also only grant planning permission for development in the Clear Zone region that significantly increases travel demand where it considers that appropriate measures to minimise the transport impact of development are incorporated. We will use planning conditions and legal agreements to secure Clear Zone measures to avoid, remedy or mitigate the impacts of development schemes in the Central London Area. **CS16 – Improving Camden's health and well-being:** recognise the impact of poor air quality on health and implement Camden's Air Quality Action Plan.	construction works and reduce as far as possible the release of odour, fumes and the release of other substances that may affect air quality. The Applicant would require the main contractor to prepared and implement and EMP which would include routine environmental management controls, which would be applied throughout the demolition and construction works at the Site. A range of mitigation measures would be developed with reference to the BRE's guidance 'Controlling Particles, vapour and Noise from Construction Sites' and the GLA 'Control of Dust and Emissions from Construction and Demolition, Best Practice Guidance'. An air quality study undertaken by Waterman EED has concluded that the Development would have no impact on air quality.	

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
Water Pollution and Flooding 2.4.4	Use Sustainable Urban Drainage (SUDS) measures, wherever practical.	Full application of SUDS so site does not contribute to run-off out of site.	**DP23 – Water:** The Council will require developments to reduce the pressure on the combined sewer network and the risk of flooding by: limiting the amount and rate of run-off and waste water entering the combined storm water and sewer network through sustainable urban drainage methods to reduce the risk of flooding; and reducing the pressure placed on the combined storm water and sewer network from foul water and surface water run-off. **CS13:** requiring development to avoid harm to the water environment, water quality or drainage systems and prevents or mitigates local surface water and downstream flooding, especially in areas up-hill from, and in, areas known to be at risk from surface water flooding.	The Environment Agency flood risk maps show that the Site is located in a low flood risk zone (Flood Zone 1). In line with the London Plan essential standard, it is proposed to restrict surface water discharge from the Site to 50% of the existing rate (calculated at 221 litres per second l/s) and allow for the impact of 30% climate change. It is proposed to discharge surface water from the Site through two new connections into the existing sewer to the north of the Site. Catchment 1 would drain Buildings C1 and C2, discharging into Castlehaven Road at 20 l/s. Catchment 2 would drain Buildings A, D and W before discharging into Hawley Road at 90 l/s. 112m^3 of geo-cellular storage units (such as permavoid units) would be provided above the basement within Buildings C1 and C2 to sufficiently attenuate Catchment 1. Attenuation tanks sized at 38m^3 and 558m^3 would be located in the central amenity areas to serve Catchment 2. Lined permeable paving would also be incorporated within the residential space within the north of the Site (Area B), and in the community space. Additionally, wildflower sedum roofs are also proposed on Buildings X, C1, C2 and D, measuring a combined area of 1,881m^2. This inclusion would provide 14m^3 of attenuation. This strategy would provide a robust and sustainable drainage system which would	✓ XX ✓✓✓

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
				restrict flows to half the existing rate, while providing minor ecological and amenity benefits, and would decrease flood risk at the Site and elsewhere.	
	Achieve 50% attenuation of the undeveloped site's surface water runoff at peak times.	Achieve 100% attenuation of the undeveloped site's surface water runoff at peak times.	**DP26 – Managing the impact** The Council will protect the quality of life of occupiers and neighbours by only granting permission for development that does not cause harm to amenity. The factors we will consider include: g) the inclusion of appropriate attenuation measures.	In line with the London Plan essential standard, it is proposed to restrict surface water discharge from the Site to 50% of the existing rate (calculated at 221 litres per second l/s) and allow for the impact of 30% climate change. It has been calculated that approximately 661m^3 of storage would be required to achieve this as described above.	✓ XX ✓✓✓
Microclimate 2.4.5	Mitigate any negative impact on the microclimate of existing surrounding public realm and buildings to meet the Lawson criteria for wind comfort and safety.		**DP26 – Managing the impact** The Council will protect the quality of life of occupiers and neighbours by only granting permission for development that does not cause harm to amenity. The factors we will consider include: f) microclimate;	An assessment of wind conditions has been undertaken as part of the EIA and compares the proposed wind conditions with the Lawson comfort criteria. The results were that the effects of the wind on the Development were largely negligible. However some mitigation measures would be needed on the upper amenity levels, the mitigation measures included screens and planting so that the wind conditions would be suitable for the intended use of sitting.	✓ - ✓✓✓

Community Needs, User Comfort and Security

Table 5: Community Needs, User Comfort and Security

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
Indoor Comfort 2.5.2	Inert and low emission finishes, construction materials, carpets and furnishings should be used wherever practical.		-	Finishing materials such as wood panels, glued laminates, carpets, suspended ceiling tiles, flooring adhesives, wall coverings, paints and varnishes would be specified to be low in VOC's in line with best practice.	✓ - -
		Design buildings for indoor comfort of users.	-	The residential element of the Development includes balconies in the majority of the units for private amenity space. There would also be occupant controlled lighting and thermal zoning in the residential and commercial elements of the Development. The design team have also committed to seeking a secured by design certificate.	- ✓ -
	All plant and machinery should be accessible for easy maintenance.		-	Positioning of plant would be carefully considered to allow for easy maintenance and end of life removal.	✓ - -
Designing Inclusive Environment 2.5.3	All developments should meet the principles of inclusive design, adopting the principles of SPG 'Accessible London: Achieving an Inclusive Environment'.			The Development would meet the principles of inclusive design and would adopt the principles of SPG 'Accessible London: Achieving an Inclusive Environment'.	✓ - -

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
	All residential development should meet Lifetime Home standards and 10% should meet wheelchair accessibility standards (Policy 3A.4).	All residential development should be designed to meet wheelchair accessibility standards or be easily adaptable to meet wheelchair standards.	**DP6 – Lifetime homes and wheelchair access:** All housing development should meet lifetime homes standards. 10% of homes developed should either meet wheelchair housing standards, or be easily adapted to meet them.	The design of the residential units has taken into consideration various recommendations including the following: – Approved Document Part M – BS 8300: 2009+A1: 2010 – The London Plan and London Plan Supplementary Planning Guidance (SPG) – Lifetime Homes 10% of the affordable residential dwellings would be wheelchair accessible and all dwellings would comply with Lifetime Homes Standards. A compliancy check has been undertaken to ensure that the dwellings meet the requirements.	X XX ✓✓✓
		Developments should be fully e-enabled.	-	The Development would be fully e-enabled.	- ✓ -
Secure Design 2.5.4	Developments should incorporate principles of 'Secured by Design'. Ensure developments are comfortable and secure for users (London Plan 2008 Policy 4A.3) Design buildings for indoor comfort of users.		-	The Design Team have contacted a Crime Prevention Design Advisor and a number of workshops were held in order to ensure that the Development meets the Secure by Design principles. The Development includes: CCTV coverage and monitoring. Regular security patrols. Activated lights or motion-activated audible alarms which go off when people enter a doorway. It is envisaged that the commercial development	✓ - -

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
				would have manned reception desks. Main entrance doors will be fitted with an audio visual verification access control system, with electronic lock release and entry phones linked to the flats The public space in Area B has been designed to ensure that it is overlooked by residential properties at ground and first floor.	

Conserve and Enhance the Natural Environment and Biodiversity

Table 6: Natural Environment and Biodiversity

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
Open Space 2.6.2	No net loss of publicly accessible open space. Create appropriate new open, green, publicly accessible spaces where these can redress identified areas of deficiency of public open space.	Net gain of publicly accessible open space.	**DP31 – Provision of, and improvements to, open space and outdoor sport and recreation facilities:** the Council will only grant planning permission for development that is likely to lead to an increased use of public open space where an appropriate contribution to the supply of open space is made. Priority will be given to the provision of publicly accessible open space. **CS15:** tackle deficiencies and under-provision and meet increased demand for open space.	The Development would result in a considerable gain in public accessible space. Three key areas of public open space would be provided within the Site: Canal Space; Arches Space; and Community Space.	✓ ✓✓ ✓✓✓
Natural environment and biodiversity	No net loss of biodiversity and access to nature on the development site.	Net gain of biodiversity on the development site, through one or more of the following: -Create, restore or	**CS15:** The Council will protect and improve sites of nature conservation and biodiversity, in particular	An Ecological Report undertaken by Waterman EED confirms that the Site has low ecological value. A number of ecological enhancement measures have been incorporated into the	✓ ✓✓ ✓✓✓

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
2.6.3		balance wildlife habitat on site. -Incorporate vegetation into built structures e.g. Green roofs, green walls, balconies or terraces. - Incorporate appropriate nesting boxes and roosting structures.	habitats and biodiversity identified in the Camden and London Biodiversity Plans.	design of the Development. Such measures include: The provision of additional landscape planting areas and associated habitat to include nature shrub and perennial species, providing additional bird habitat; The planting of 15 new trees within the Site, providing additional bird habitat; The provision of 315m^2 of brown roofs providing additional habitat for terrestrial invertebrates, which in turn, would provide foraging habitat suitable for birds; and The provision of 1,881m^2 of wildflower sedum roofs, again providing habitat for invertebrates and birds.	

Promoting Sustainable Waste Behaviour

Table 7: Sustainable Waste

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
Waste 2.7.2	Minimise, reuse and recycle demolition waste on site where practical.		**CPG3 Sustainability:** Use the waste hierarchy and use the WRAP quick wins assessment, BRE SmartWaste.	The main contractor would be required to produce a comprehensive Site Waste Management Plan (SWMP). The implementation of a mandatory SWMP would ensure that waste is managed in accordance with relevant legislation and ensure, where feasible, that waste is reused or recycled and opportunities for using recycled and reused materials are identified.	✓ - ✓✓✓
		Use prefabricated and standardised modulation components to minimise waste. If this is not feasible use low waste fabrication techniques.		The Development would consider the use of pre-fabricated elements and modular components at the detailed design stages.	- XX -
	Specify use of reused or recycled construction materials.		**CPG3 Sustainability:** Encourages use of reused and recycled materials.	The Development would use materials with a recycled content where practical and feasible.	✓ - ✓✓✓

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
		Provide facilities to recycle 70% of commercial and industrial waste by 2020.		Based on the facilities provided and the anticipated composition of waste, it is envisaged that up to 58% of commercial waste generated could be recycled.	- XX -
	Provide facilities to recycle or compost at least 25% of household waste by means of separated dedicated storage space. By 2010 this should rise to 35% (Policy 4A.21).	Provide facilities to recycle or compost at least 35% of household waste. By 2015 this should rise to 60%.		It is envisaged that up to 46% of residential waste generated could be recycled. Future residents would be provided with information on the waste management system and the accepted materials to be placed in each type of bin. All communal bins would be clearly colour coded to minimise any contamination of segregated waste.	✓ ✓✓ -
		Incorporation of, or access, to new waste recovery facilities (anaerobic, digestive, pyrolysis / gasification) especially to provide a renewable source of energy e.g. methane or hydrogen.		The Site has been deemed inappropriate for such a facility due to its central location within Camden Town and proximity to residential dwellings.	- XX -

Sustainable Construction

Table 8: Sustainable Construction

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
Part 3	Reduce waste during construction and demolition phases and sort waste streams on-site where practical. Reduce the risk of statutory nuisance to neighbouring properties as much as possible through site management.		**CPG3 Sustainability:** Follow the waste hierarchy and use tools such as SmartWaste and WRAP Quick Wins to increase recycling and reuse. **DP22 – Promoting sustainable design and construction:** The possibility of sensitively altering or retro-fitting buildings should always be strongly considered before demolition is proposed. All proposals for demolition and reconstruction should be fully justified in terms of the use of resources and energy, and the energy and water efficiency of the existing and proposed buildings. Where the demolition of a building cannot be avoided we will expect either the re-use of materials on-site or the salvage of appropriate materials to enable their re-use off-site. Where materials cannot be salvaged whole and where aggregate is	A Site Waste Management Plan (SWMP) would be created in order to minimise waste creation, ensure that materials are separated into operate waste streams in order to maximise the reuse, recycling of waste and minimise waste going to landfill. The Design Team are committed to taking appropriate measures to reduce the risk of statutory nuisance to neighbouring properties. The implementation of an EMP would act to ensure these measures were adhered to. In addition, the main contractor would be required to sign up to CCS and achieve a score of at least 32. The CCS includes a number of measures designed to minimise disturbance to neighbours.	✓ - ✓✓✓

SPG Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
			required on-site, this demolished material should be crushed on-site for re-use, with measures taken to minimise dust and noise.		
	All developers should consider and comply with the Mayor and Association of London Governments (ALG's) London Best Practice Guidance (BPG) on the control of dust and emissions during construction and demolition.	All contractors should be required by tender requirements to sign up to the Mayor and ALG's London BPG on the control of dust and emissions during construction and demolition.	**DP26 – Managing the impact of development on occupiers and neighbours:** Consider impact of odour, fumes and dust.	The main contractor would be required to sign up to CCS and achieve a score of at least 32. The CCS includes a number of measures designed to minimise disturbance to neighbours. In addition, the main contractor would be obliged to comply with best practice dust and emissions minimisation, prevention of water course pollution, monitoring and target setting of site operations activities such energy and water use.	✓ ✓✓ ✓✓✓
	Comply with protected species legislation.		**CPG3 Sustainability:** It is the applicant's responsibility to ensure that any activity on a site complies with the appropriate wildlife legislation.	The proposed Development would not affect any protected species, however all legislation would be complied with during construction.	✓ - ✓✓✓
	All developers should sign up to the relevant Considerate Constructor Scheme or, in the City of London, to the Considerate Contractors scheme.	All contractors should be required by tender requirements to sign up to the relevant Considerate Constructor Scheme or, in the City of London, to the Considerate Contractors scheme.	**DP26 – Managing the impact of development on occupiers and neighbours:** We will expect developers to sign up to the Considerate Constructors Scheme.	The main contractor would be required to sign up to CCS and achieve a score of at least 32. The CCS includes a number of measures designed to minimise disturbance to neighbours.	✓ ✓✓ ✓✓✓

Promoting More Sustainable Transport Modes

Table 9: Transport

Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
Green Travel Plan	Transport aspects are not included within the Mayor's SPG.		**DP16 – The transport implications of development:** Travel plans will be expected on developments if the impacts on transport are considered significant.	A series of Travel Plan Frameworks have been prepared for the Development to ensure a structured approach to help adapt travel behaviour through the use of the infrastructure, location and land use. The Site specific objectives of the Travel Plan responds to the aims through linking the Development to the surrounding community by the strong promotion of walking, cycling and public transport.	- - ✓✓✓
Encourage more cycling, walking and use of public transport.	Transport aspects are not included within the Mayor's SPG.		**DP17 – Walking, cycling and public transport:** The Council will promote walking, cycling and public transport use. Development should make suitable provision for pedestrians, cyclists and public transport. **CS11:** continue to improve facilities for cyclists, including increasing the availability of cycle parking, helping to deliver the London Cycle Hire	The Development would provide new links between Camden High Street and Kentish Town Road, the towpath and Castlehaven Road, and between the towpath and Hawley Road. These new links would generally improve walkability in the area and connect the Site with public transportation nodes. Cycle parking for the residential, commercial and retail elements of the Site would be provided in accordance with LBC and TfL standards. Cycle parking spaces for residents and employees would be sheltered and secure. Facilities would be provided at basement level. A total of 491 spaces would be available for residents, employees and visitors.	- - ✓✓✓

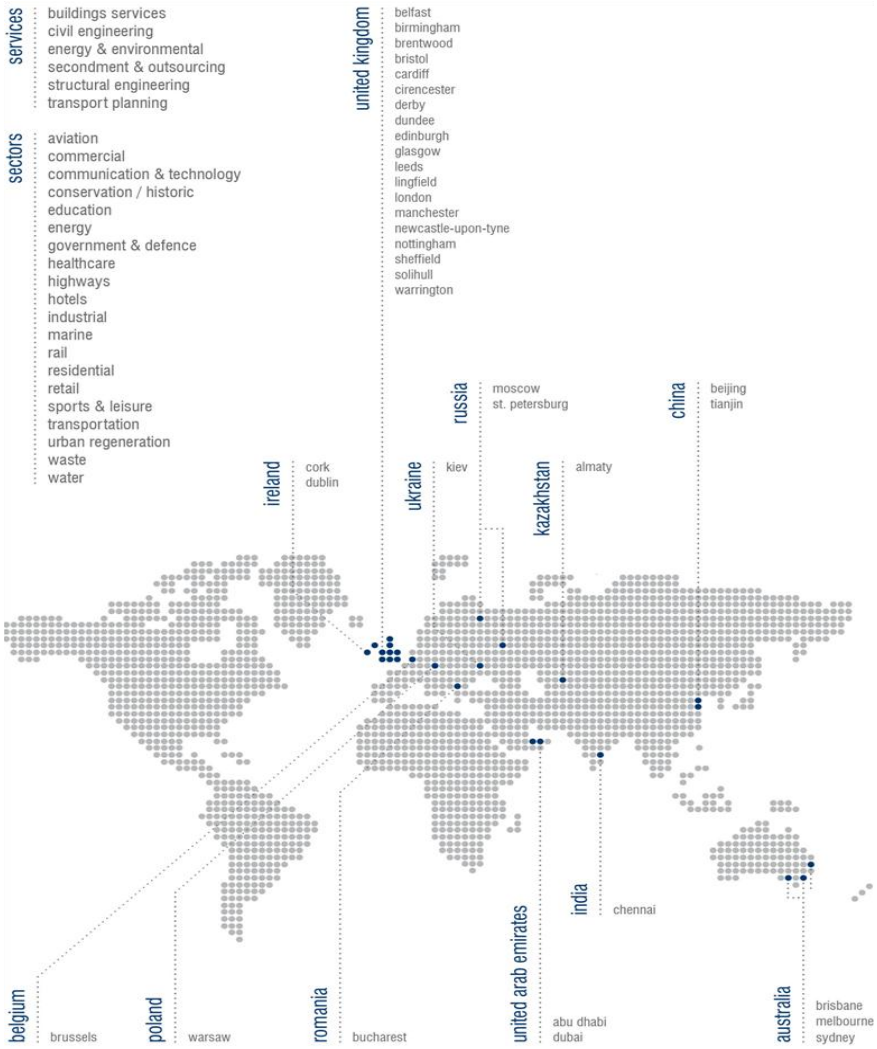
Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
			Scheme, and enhancing cycle links.	It is anticipated that wayfinding signs would be installed at suitable locations within the Site and the surrounding area to facilitate pedestrian and cyclist navigation. The area around the Site is well served by designated cycle routes, both those that are part of the wider London Cycle Network, and other routes, on and off road.	
Public Transport and Road Network	Transport aspects are not included within the Mayor's SPG.		**DP17 – Walking, cycling and public transport:** The Council will promote walking, cycling and public transport use. Provision may include bus stops, shelters, passenger seating and waiting areas, signage and timetable information. **CS11:** The Council will protect existing and proposed transport infrastructure (including routes for walking, cycling and public transport, interchange points, depots and storage facilities) against removal or severance.	A traffic assessment undertaken by Arup concludes that the Development would have no impact on local traffic. The Site's close proximity to public transport services means that the Site's Public Transport Accessibility Level (PTAL) rating is 6 (with 1a being the lowest accessibility and 6b being the highest) and thus is rated as 'excellent'. The Site is located within walking distance of three stations which provide frequent services to central London and other areas within the Transport for London (TfL) network. The Site also has a very good bus service, with 13 bus services within proximity of the Site to destinations in central and north London. The Development would provide only a limited number of car parking spaces. In addition to the limited number of spaces, it is proposed that the Development is designated a 'car-capped' development, where residents that do not have a car parking space within the Development are prevented from purchasing residential parking permits for	- - ✓✓✓

Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
				streets in the borough.	

Employment and Socio-Economics

Table 9: Socio Economics

Initiative	Mayor's Essential Standard	Mayor's Preferred Standard	LBC LDF: Adopted Core Strategy (CS), Development Policies (DP) and Sustainability CPG3 (CPG)	Commentary	Compliance
Encourage the creation of employment.	Employment aspects are not included within the Mayor's SPG.		**DP10 – Helping and promoting small and independent shops:** The Council will encourage the provision of small shop premises suitable for small and independent businesses. **CS8:** Promoting a successful and inclusive Camden economy.	The Development would provide 17 affordable units. The Development would provide an increase of 753 jobs and generate a local spend by the employees of approximately £994, 000 per year. The provision of the residential units on Site is likely to generate spending by residents of approximately £2.3 million.	- - ✓✓✓


services
buildings services
civil engineering
energy & environmental
secondment & outsourcing
structural engineering
transport planning
sectors
aviation
commercial
communication & technology
conservation / historic
education
energy
government & defence
healthcare
highways
hotels
industrial
marine
rail
residential
retail
sports & leisure
transportation
urban regeneration
waste
water
united kingdom
belfast
birmingham
brentwood
bristol
cardiff
cirencester
derby
dundee
edinburgh
glasgow
leeds
lingfield
london
manchester
newcastle-upon-tyne
nottingham
sheffield
solihull
warrington
russia
moscow
st. petersburg
china
beijing
tianjin
ireland
cork
dublin
ukraine
kiev
kazakhstan
almaty
india
chennai
belgium
brussels
poland
warsaw
romania
bucharest
united arab emirates
abu dhabi
dubai
australia
brisbane
melbourne
sydney