



Plan showing landscaped playspace

6.4 Play Strategy

The play area is designed to be an informal play space within a planted and soft environment setting, and features a planted border to its perimeter to help soften the rectangular space. The play is laid out to encourage 'journeying', for different age ranges, and features a willow play tunnel with port holes, timber stepping stones, hollowed out log tunnels and a stone boulder circle.

All of the play pieces are formed using natural materials to help engage children more with the natural environment. A timber seat to the play space entrance links the space with the entrance to the affordable units, and provides a seating area for parents and carers.

Assessing child occupancy and playspace requirements

Number of Apartments

	Studio	1 bed	2 bed	3 bed	4 bed	5 bed	Total
Social rented/affordable	0	0	3	6	0	0	9
Intermediate	2	4	2	0	0	0	8
Market	6	14	27	13	0	0	60
Total	8	18	32	19	0	0	77

Proportion of children

	Number of children	%
Under 5	10	44%
5 to 11	8	35%
12+	5	21%
Total	23	100%

Playspace requirements

Camden play space requirements (sqm)	Total required	Total of Children's play space for the development
2.5sqm per child	57.5sqm	71.3sqm



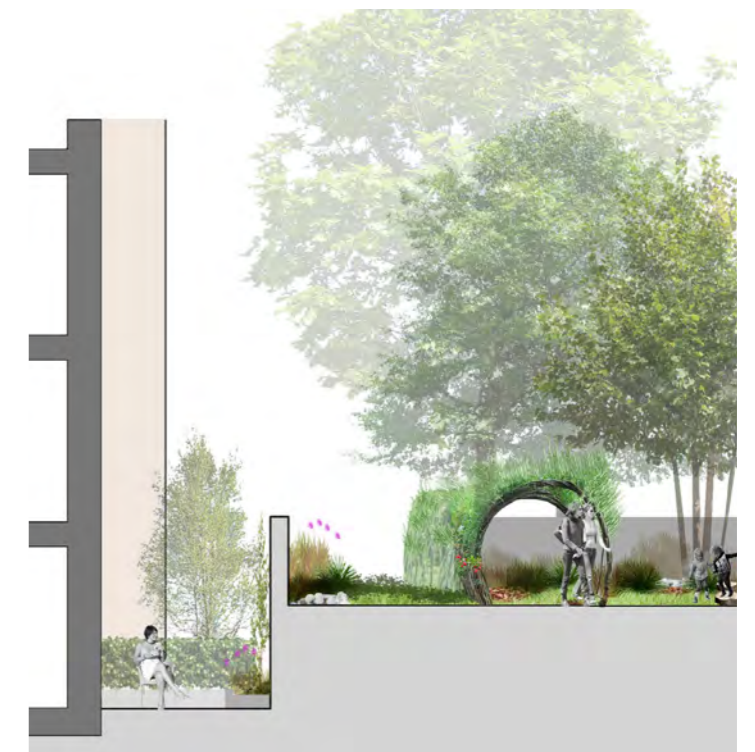
Section through landscaped courtyard and terraces

6.5 Landscaped Terrace and Garden Sections

The planting concept for the scheme has been designed to enhance the qualities that each of the different spaces provides. Together with a number of proposed trees, the majority of the planting is based on a shade tolerant mix, offering a mixture of shrub and herbaceous species that give year round interest.

The Sweet Gum feature tree in the inner courtyard is a somewhat 'exotic' looking tree with maple-like alternate, deeply-lobed green leaves which provide a striking display of crimson and purple in autumn. Inconspicuous greenish-yellow flowers are produced in May followed by spiky green seed cases in autumn. The tree reaches a height of 15-20m with a 10-12m spread.

Private town gardens to Level 0 will be surfaced with a warm coloured clay brick paver to compliment the brickwork elevation to the proposed building.



Section through gardens and amenity space

7.0 Building Envelope



Section through Landscaped Courtyard & Entrance Foyer



Polished stone facade to Inner Courtyard

7.1 Inner Courtyard Facade

The storey height stone bands to the main brick elevations wrap around onto the internal facades. A 900mm stonework vertical grid is introduced which defines both windows and solid elements. These solid elements consist of delicate panels of polished stonework.

The light coloured, polished stone facade of the inner courtyard bounces light around, creating a feeling of openness to this relatively constrained space. The polished facade is thematically linked to the adjacent Grade II listed Chalk Farm Station (which features an ox-blood red ceramic faïence).

Planted edges to terraces and a first floor courtyard featuring a semi-mature Sweet Gum Worplesdon tree, soften and enliven the spaces.



Polished stone panel cladding



Residential Entrance on Adelaide Road

7.2 Entrance

Chamfering and pleating the ground floor stonework on Adelaide Road, which leads residents and visitors to a generous glazed entrance door, simultaneously creates a grander scale and a greater level of detail in the main residential entrance.

The vertical rhythm of the entrance creates a strong contrast to the rest of the textured facade consisting of landscape format brickwork and stonework.



Light coloured Landscape format bricks



Chamfered reveal
towards east light

Steel windows.
Double or triple
glazed

Landscape format
brickwork with
raked horizontal
mortar joints

Residential Entrance Bay on Adelaide Road



Metal balustrade
to terrace

White stone
reveals and soffit
to inset balcony

Residential Bay on Adelaide Road



Corner Balconies and curved windows on gable end

7.3 Corner Balcony

The image demonstrates the slimness and elegance of the gable end of the Haverstock Hill block. The landscape format brickwork creates a textured facade that contrasts with the smooth stonework balcony and window linings.

Each balcony is to be accessed through slimline sliding glazed doors. Full height frameless curved glass creates a dramatic corner window that references the mansion block typology. The inner corner of the block features delicate stone-lined cuts with inset curved glass, which acts as an elegant counterpoint to the orthogonal brick grid.



Bronze metalwork and white stone



7.4 Street Facade

The street facades to Haverstock Hill and Adelaide Road are composed with a grid formed with high quality landscape brickwork. Solids and voids are arranged on a 2835mm horizontal grid. 1800mm wide brick piers alternate with double bays (3680mm) of either recessed balconies or coupled window bays. Windows to living rooms and bedrooms feature side openers and generously sized (2300mm(h) x 1490mm(w)) windows with low cills 550mm from internal floor levels.

Corner Balconies on street facade



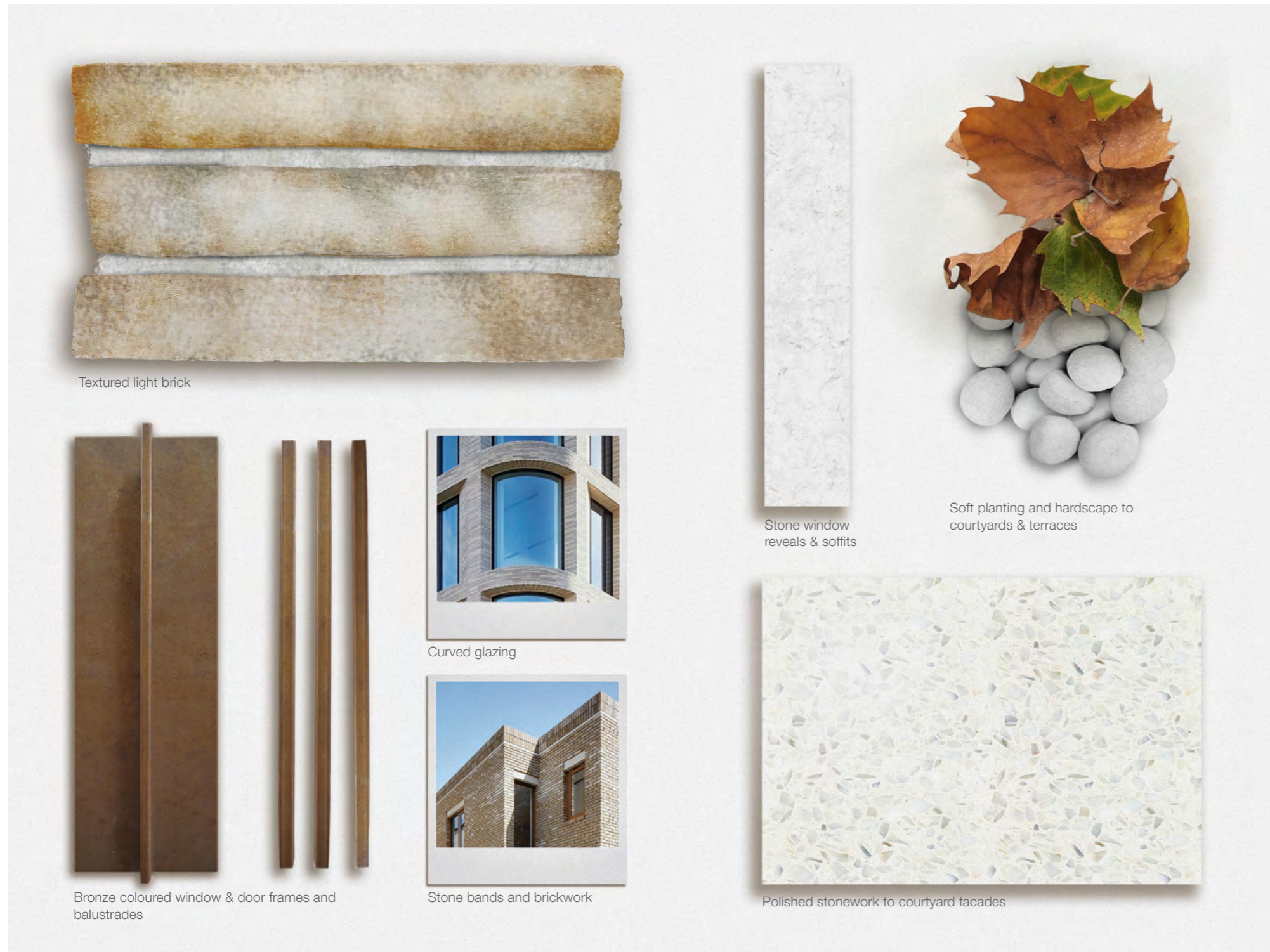
Bronze metalwork

7.5 Material Palette

The building's material palette of brick, stone, bronze and glass has been inspired by Camden's industrial brick buildings and local mansion blocks.

Light toned, textured brickwork is employed on the street facades. The distinctive landscape format, combined with raked horizontal joints creates a level of refinement and detail beyond the norm. Smooth white stone chamfered reveals to windows and balconies form a distinctive contrast with the rough brick very much in the character of the proposed mansion block typology. Frames to fenestration and balcony balustrades are in a rich dark bronze colour.

The polished stone of the central courtyard bounces light around this space and links thematically with the reflective faïence tiles of the neighbouring Grade II-listed Chalk Farm Station. Softening this area are sensitively designed areas of planting, trees and hardscape to courtyards and terraces.



Textured light brick



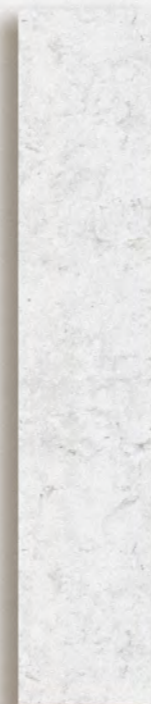
Bronze coloured window & door frames and balustrades



Curved glazing



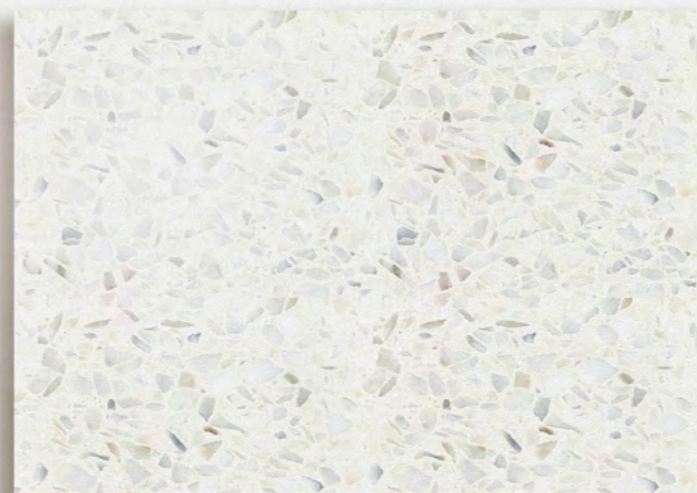
Stone bands and brickwork



Stone window reveals & soffits



Soft planting and hardscape to courtyards & terraces



Polished stonework to courtyard facades

8.0 Sustainability & Renewables

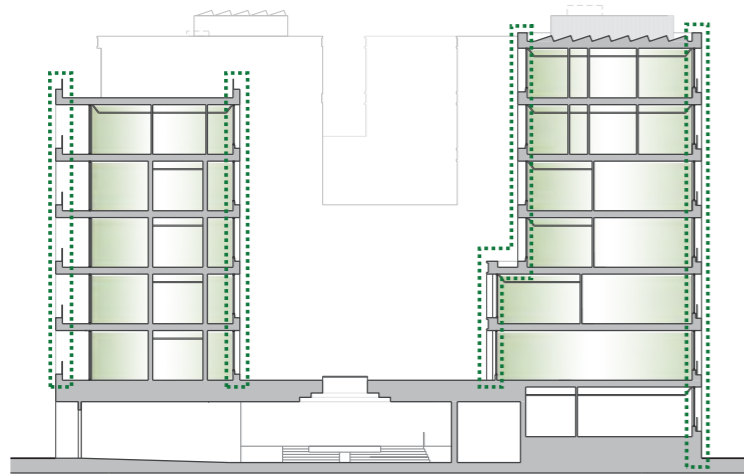
8.1 Key Sustainability Principles

The Energy Strategy for the scheme has been developed following the principles of the London Plan Energy Hierarchy: 'Be Lean', 'Be Clean' and 'Be Green' also detailed in Camden Planning Guidance CPG 3 – 'Sustainability'. The overriding objective in the formulation of the Energy Strategy for the scheme has been to maximise the viable reductions in total carbon dioxide emissions from the development within the framework of the energy hierarchy:

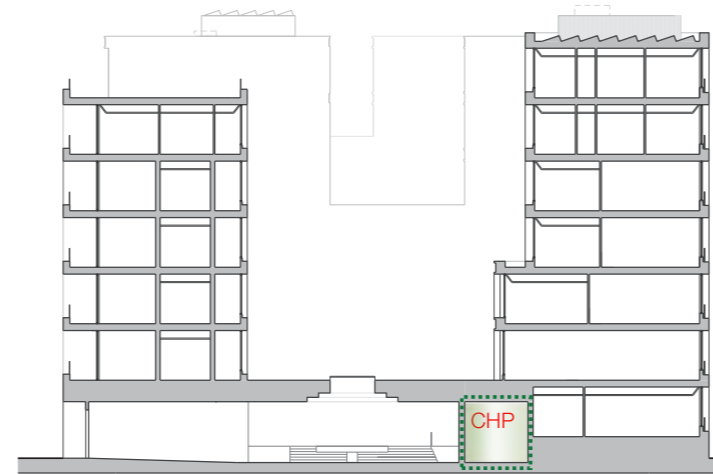
'Be Lean': The proposed energy strategy has, as its first priority, minimise energy consumption through the performance of the building envelope, facades and plant. The energy efficiency features proposed for the scheme include optimised thermal performance of the facade, low air permeability through a very high standard of construction. The development will meet or exceed all of the building fabric performance standards suggested within Camden guidance document CPG 3 and exceed the minimum requirements of Part L1A and L2A for fabric efficiency standards. The proposed energy conservation measures will reduce the regulated carbon dioxide emissions of the scheme in comparison to the 2013 Building Regulations compliant case by approximately 6.1%. The 'Be Lean' approach has also followed the cooling hierarchy sets out in London Plan Policy 5.9: 'Overheating and Cooling'.

'Be Clean': The use of Combined Heat and Power (CHP) has been assessed and it has been determined that due to the consistent base heating load throughout the year (hot water load), CHP would be suitable as the lead heat generator in combination with communal gas boiler sized to provide 70% of the heating demand of the scheme. The proposed CHP unit is expected to reduce carbon dioxide emissions in comparison to the 2013 Building Regulations compliant case by approximately 26.5% for the whole development. The opportunity for the proposed development to link into an existing or planned decentralised energy network has been reviewed but the London Heat Map tool indicates that there is no proposed decentralised heat network within proximity of the site. The scheme will however be future-proofed to ensure it can connect in the future to the Community Energy Scheme (space for heat exchangers, pipes routes, water based centralised heating system).

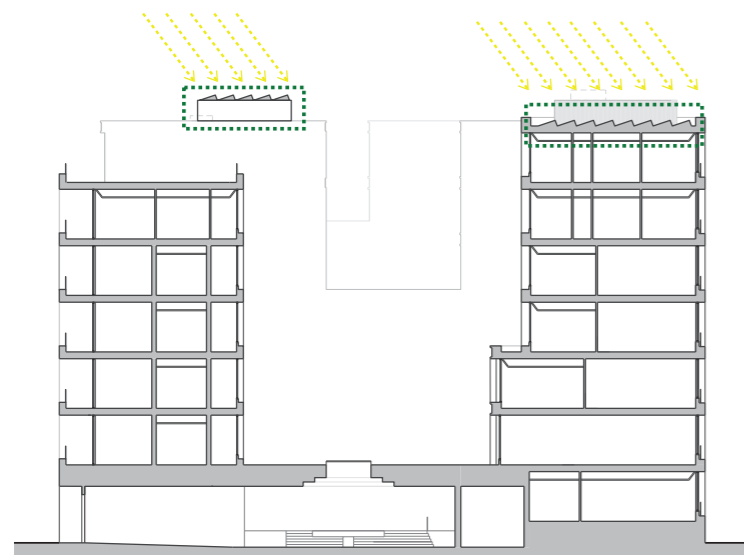
'Be Green': A feasibility study has been undertaken to establish the most suitable renewable technology for integration at the proposed development. Due to practical constraints, photovoltaics arrays on the flat roofs of the scheme located on tilted structure orientated South and South-West are considered as the most viable and practical option for the scheme. A 150 m² photovoltaic system mounted on the tilted south-orientated roof of the scheme, combined with the 'Be Lean' energy conservation measures and 'Be Clean' CHP system will provide a further 4.3% reduction in the CO₂ emissions over the Building Regulations compliant case.



1. BE LEAN



2. BE CLEAN



3. BE GREEN

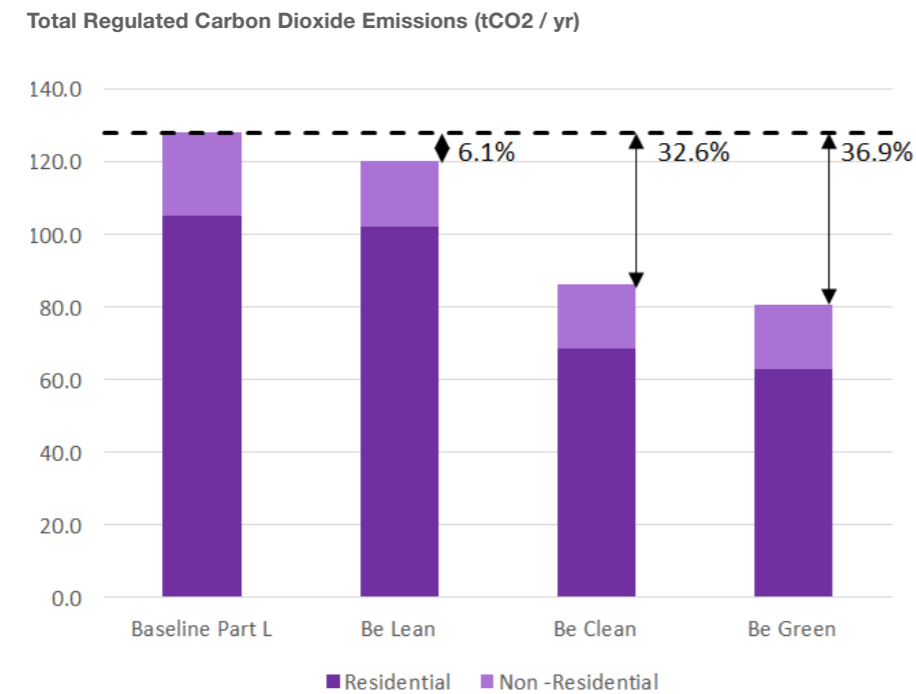


Carbon Dioxide Emissions after each stage of the Energy Hierarchy	Carbon Dioxide Emissions (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L2A:2013 - Building Regulations Compliant Development	127.97	451.07
Be Lean - After energy demand reduction	120.19	451.07
Be Clean - After CHP	86.29	451.07
Be Green - After PV	80.74	451.07

Proposed Energy Strategy - London Plan - Energy Hierarchy - Regulated and Unregulated CO₂ emissions

Regulated carbon dioxide savings from each stage of the Energy Hierarchy	Regulated Carbon Dioxide Savings	
	Tonnes CO ₂ per annum	%
'Be Lean' - Savings from energy demand reduction	7.8	6.1
'Be Clean' - Savings from CHP	33.9	26.5
'Be Green' - Savings from Renewable Energy	5.6	4.3
Total cumulative savings	47.2	36.9

Proposed Energy Strategy - London Plan - Energy Hierarchy - Regulated CO₂ emissions reductions



London Plan - Energy Hierarchy - Proposed Energy Strategy

8.2 Sustainability Overview & BREEAM

The proposed highly optimised energy strategy based on passive design, building fabric performance and building services systems and controls, and suitable Low and Zero Carbon (LZC) systems will allow the scheme to achieve an improvement over Part L1A: 2013 and Part L2A:2013 of approximately 36.9% exceeding the requirement of the London Plan (Policy 5.2: 'Minimising Carbon Dioxide Emissions') and of the London Borough of Camden Core Strategy (2010) (Policy CS13: 'Tackling climate change through promoting higher environmental standards') and London Borough of Camden Planning Guidance CPG 3 – Sustainability (2013). Please refer to Table 1 and Figure 1 below.

The energy strategy of the scheme has considered measures to adapt and mitigate effects of climate change, in particular through an optimised design minimising risk of overheating (compliant with the London Plan Cooling Hierarchy) and the specification of energy efficiency systems and LZC leading to significant CO₂ emission reductions compared to the baseline (47.2 tonnes of CO₂/yr).

The scheme is on target to achieve a BREEAM 'Excellent' rating for the retail units.

BROWN ROOFS, GREEN ROOFS AND GREEN WALLS / BIODIVERSITY AND LOCAL FOOD GROWING



- A Suitably Qualified Ecologist (SQE) has been appointed as part of the development to assess the current ecological value of the site and make recommendations for the protection and enhancement of the site and on-site actions during construction to protect features of ecological value;
- The existing site is almost entirely covered by the existing building with associated hardstanding and a small area of butterfly-bush located in the north west of the site. Due to its small size, this area is deemed to have low ecological value;
- The recommendations of the SQE will be implemented for the scheme and will lead to a positive change of ecological value for the site. Recommendations include: Good horticultural practice, provision of a green roofs, shrub planting, tree planting, provision of bird boxes and planting for bees.
- A wildflower and perennial green roof mat has been selected for the scheme by the landscape architect for the scheme for its high ecological value. It includes a ready established mixture of drought tolerant wildflowers, sedum, herbs and flowering perennials, all of which are suited to the growing conditions created on a green roof. The green roof proposed will provide biodiversity networks and allow continuity of green space within the London Borough of Camden. The green roof will also assist with sustainable drainage, overheating and air quality.
- The contractors will be required to minimise the ecological impact of construction activities and a five year landscape and habitat management plan will be produced for the scheme;
- Planting beds are fully planted with low maintenance herbaceous planting to present a cohesive planting scheme from the outset, yet there is an opportunity for residents to use these beds for food growing areas in the future.

ADAPTING TO CLIMATE CHANGE



- The development will incorporate a high standard of build fabric. The insulation will be superior to the requirements of the 2013 Part L1A Building Regulations and Part L2A Building Regulations;
- The dwellings design has been optimised to ensure they 'PASS' CIBSE TM 52/TM49 adaptive overheating criteria for current and future climate with blinds without comfort cooling;
- The incorporation of outdoor areas as part of the development is suitable for the increased demand associated with warmer weather. The landscaping areas and the green roof incorporated into the design would assist in the protection of the building from solar gains. The vegetation would also assist in cooling the building through evaporation;
- 100% of the lighting fitted internally will be energy efficient, reducing any excessive internal heat gains due to lighting;
- The peak rate of runoff over the development's lifetime, allowing for climate change, will be no greater for the developed site than it was for pre-development rate of run-off;
- The installation of a green/blue roofs will attenuate and treat rainwater and reduce the impact of rainfall on the drainage system;
- The proposed development will significantly reduce its demands on mains water supply through the use of water efficient fittings.

SUSTAINABLE USE OF MATERIALS



- The building materials will be selected and assessed against the BRE Green Guide to Specification, and the team will aim at specifying A+/A rated building elements where practically feasible;
- Where feasible, the building materials will be sourced from suppliers that participate in responsible sourcing schemes equivalent to BRE BES 6001 Responsible Sourcing Standard. Any timber used within the proposed development will be sustainably and responsibly sourced through the Forest Stewardship Certification (FSC) Chain of Custody Certification scheme;
- The use of locally sourced materials will be prioritised and all reinforced steel will be 100% recycled steel;
- The building will incorporate suitable durability & protection measures;
- The use of high VOC content paints, sealants and all ozone depleting materials including insulation will be avoided.

8.3 Sustainability Statement

The Sustainability Statement for Haverstock Hill development demonstrates that the design will holistically incorporate sustainable principles into the full range of sustainability aspects covered by BREEAM and the London Borough of Camden CPG 3:

WASTE



- The scheme will follow the waste hierarchy and will aim at having a minimum of 10% of the total value of the materials used within the construction of the proposed development derived from recycled and reused sources;
- On-site construction and operational waste will be sorted on-site into the relevant waste groups in order to improve the efficiency of the waste management process. Procedures and commitments to divert waste from landfill will be implemented;
- Waste generation will be minimised on site and a target of 3.4m³/100m² GIA has been set for the maximum amount of waste to be generated by the shell retail area construction activities. More than 80% of construction waste and 90% of demolition waste will be diverted from landfill.
- When in operation, the dwellings will be provided with internal and external waste and recyclable waste storage to encourage the appropriate management of materials. Information will be provided to residents on the kitchen and garden waste collection scheme;
- All dedicated storage will be clearly labelled to assist segregation, storage and collection of the recyclable waste streams; external space will be accessible to building occupants / facilities operators for the deposit of materials and collections by waste management contractors, and of a capacity appropriate to the development.

ENERGY



- The London Plan Energy hierarchy has been followed for the scheme. An optimised energy efficient design will minimise the energy demand of the development. In addition, the use of Low and Zero Carbon systems (LZC) in the form of a gas Combined Heat and Power (CHP) and Photovoltaics (PV) will reduce the CO₂ emissions of the scheme. The proposed highly optimised energy strategy will allow the scheme to achieve an improvement over Part L1A: 2013 and Part L2A:2013 of approximately 36.9% exceeding the requirement of the London Plan and of the London Borough of Camden Core Strategy (2010)) and London Borough of Camden Planning Guidance CPG 3 – 'Sustainability' (2015);
- Energy display devices, drying spaces, home office and energy labeled white goods provided in all flats;
- Secured and covered cycle storage for the residential scheme.

WATER EFFICIENCY / FLOOD RISK AND DRAINAGE



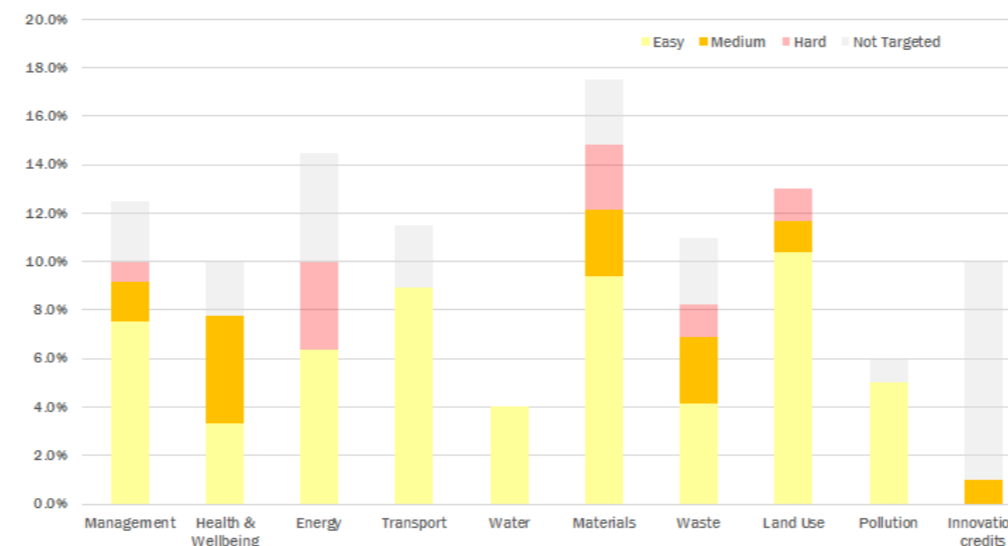
- Water efficient fittings for all residential units;
- Where feasible, the water meters within the apartments will be located for easy reading to encourage occupants of the apartments to monitor their water usage over time.
- For the retail areas, a water meter with a pulsed output will be provided for the mains water supply of the building and a major leak detection system will be installed.
- Most of the external landscaping and planting will be self-sufficient and rely on precipitation only following establishment. Irrigation will only be required at level 1 which is a sheltered space receiving less rainfall than other areas. For level 1 planting, a water efficient irrigation method based on drip-fed subsurface irrigation incorporating soil moisture sensors has been selected for the scheme.
- A Flood risk assessment (FRA) has been carried out for the scheme confirming the probability of flooding of the site is low and it is considered that the development of this site will not increase flood risk elsewhere;
- Flooding of property will not occur in the event of local drainage system failure;
- There will be no change in the amount of impermeable surfaces as a result of the re-development of the site. Attenuation up to and including 1 in 100 year plus 30% climate change storm even for the site will be provided and the discharge rate will be 50% of the current discharge rate. The attenuation will consist of underground modular storage units together with blue/green roofs and hydro-brake flow control units;
- The site is car-free, therefore with a low risk of watercourse pollution and an appropriate level of pollution prevention treatment is provided. Blue/Green roofs provide treatment for the water by filtration for all the rainfall on the roofs of the building, other treatment is provided by trapped gullies and catchpits.



BREEAM Pre-Assessment: 5-17 Haverstock Hill Retail Scheme (Excellent rating targeted)

8.4 BREEAM Pre-Assessment

The BREEAM New Construction pre-assessment shows a rating of 'Excellent' is robustly targeted for the flats of the scheme with a targeted score of 72.92% demonstrating it incorporates exemplary standards of sustainable and inclusive urban design and architecture. The BREEAM assessor and BREEAM Accredited Professional have been and will continue to form an integral part of the design team and a consistent point for reference, review and questions. Experience has proved that this approach offers the surest route to a successful BREEAM certification and holistic sustainable design.



BREEAM Pre-Assessment: 5-17 Haverstock Hill Retail Scheme - Score per category

9.0 Servicing & Security