Design and Access Statement

6 Streatley Place, Hampstead, London NW3 1HP

Appendix 3 -
Sustainability Statement

ENERGY & SUSTAINABILITY STATEMENT

3715 – 6 STREATLEY PLACE, HAMPSTEAD

atelier ten

PROJECT INFORMATION

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SUSTAINABILITY STATEMENT

6 STREATLEY PLACE - 3715

EXECUTIVE SUMMARY

Atelier Ten have compiled this Energy and Sustainability Statement on behalf of Living Architecture for the proposed new development of 6 Streatley Place in Hampstead, Camden.

By adopting a sustainable approach in design, construction and operation, the proposed development of 6 Streatley Place aims to meet the requirements of national and local planning policies and exceed building regulations wherever feasible.

As confirmed by the London Borough of Camden planning officer Rob Tulloch in correspondence with Living Architecture, it has been agreed that the scheme will not need to be benchmarked using either Code for Sustainable Homes or BREEAM assessment schemes.

1.0 INTRODUCTION

Atelier Ten have compiled this Sustainability Statement on behalf of Living Architecture for the proposed new development of 6 Streatley Place in Hampstead, Camden. The scheme consists of the proposed development of one 3 bed dwelling.

The report initially outlines the planning policy requirements set at national and local planning levels. The overall sustainability strategy adopted for 6 Streatley Place is then discussed, along with how the development intends to comply with the relevant UK building regulations, and exceed these regulations where feasible.

The proposed development of 6 Streatley Place aims to apply a holistic approach to sustainability, ensuring passive measures to limit the overall environmental impact. This report highlights the sustainability strategies which are targeted for the proposed development to ensure that a low energy and low impact dwelling can be achieved.

Finally, the report addresses the key energy strategies that are proposed to reduce the regulated CO_2 emissions associated with the lifecycle of the proposed dwelling.

2.0 PLANNING POLICY CONTEXT

This section highlights the policies relevant to the proposed development site for 6 Streatley Place.

NATIONAL POLICY

The National Planning Policy Framework (NPPF) sets out the Governments overarching planning policies on the delivery of sustainable development through the planning system. It does not contain any specific tangible environmental sustainability and energy targets; however it does set the agenda for sustainable development at a regional and local level.

REGIONAL POLICY

The London Plan (LP) 2011 with Revised Early Minor Alterations (REMA) 2013 sets out the spatial development strategy for London.

It is the overall strategic plan for London, setting out an integrated economic, environmental, transport and social framework for the development of the capital until 2031. It forms part of the development plan for Greater London. London boroughs' local plans need to be in general conformity with the LP, and its policies guide decisions on planning applications by councils and the Mayor.

There are various policies within the London Plan which are proposed for major residential developments. Major Developments are classified in the London plan as developments where 10 or more dwellings are to be constructed (or if number not given, area is more than 0.5 hectares).

Since this is not the case for the proposed development at 6 Streatley Place, and upon reviewing the policy documentation, it is understood that there are no specific sustainability or energy targets.

LOCAL POLICY

The London Borough of Camden (LBC) Core Strategy (adopted 2010) with accompanying Development Policies (2010) is the main document in their Local Development Framework (LDF), the suite of documents which defines the borough's planning policy.

The documents reflect both the national and regional sustainable design objectives alongside Camden's own goals for sustainable construction within the borough.

Camden's key sustainability objectives outlined the Core Strategy are:

- Making Camden more sustainable and tackling climate change, in particular improving the environment performance of buildings, providing decentralised energy and heating networks, and reducing and managing water use;
- Promoting a more attractive environment through securing high quality places, conserving the local heritage, providing parks and open spaces, and encouraging biodiversity;
- Dealing with the local waste and increasing recycling.

The issues that these key sustainability objectives raise are addressed within the following policies:

- Core Strategy CS13 – Tackling climate change through promoting higher environmental standards.
- Core Strategy CS14 – Promoting high quality places and conserving the heritage.
- Core Strategy CS15 – Protecting and improving our parks and open spaces and encouraging biodiversity.
- Core Strategy CS18 – Dealing with our waste and encouraging recycling.
- Development Policy DP22 – Promoting sustainable design and construction.
- Development Policy DP23 – Water.

Camden has also developed a companion document to their sustainability framework called "Camden Policy Guide 3: Sustainability" (CPG 3), published in 2011. CPG 3 gives further guidance on how proposals are expected to meet the high level policy for development.

The Green Action for Change 2011- 2020 document replaced the Sustainability Plan - Delivering a Sustainable Camden (2008-2012). It focuses on the key environmental issues on which the Council and additional partners can have the biggest impact:

- Reducing Camden's carbon emissions;
- Adapting to climate change;
- Reducing, reusing and recycling waste;
- Enhancing biodiversity, improving green spaces and involvement in gardening and food growing.

SUMMARY OF PLANNING POLICY TARGETS

In line with the National, Regional and Local Planning Policies as well as correspondence from the London Borough of Camden planning officer Rob Tulloch, it has been agreed that no specific sustainability or energy targets need to be achieved. It is has been noted that the scheme must ensure sustainability has been considered a key part of the design process.

As part of the pre-planning process, the planning officer Rob Tulloch from LBC confirmed that no benchmarking assessment schemes such as CSH or BREEAM are required as conditions for planning for the proposed development of 6 Streatley Place.

3.0 SUSTAINABILITY STRATEGY

The proposed development of 6 Streatley Place wishes to adopt key sustainability principles as the basis of its design. This document will highlight the environmental strategies that are proposed to be used to demonstrate the measures taken to achieve a low impact building.

It is the ambition of the design team to adopt principles of sustainability assessment schemes as a way of ensuring a sustainable dwelling. Using this framework, the proposed development will strive to achieve a sustainable and low impact dwelling. By using elements of benchmarking assessment schemes framework that apply to a development of this scale and nature, the project will reduce the use of natural resources, limit the carbon intensity and minimise the overall environmental impact of the proposed development.

Below is a non-exhaustive list of the key measures that are being explored as part of the sustainability strategy for 6 Streatley Place:

Energy

- Improving performance of the building envelope above building regulations Part L1A 2013 required, highlighted in the table on the following page
- Energy efficient boiler system
- Mechanical ventilation with heat recovery during winter seasons
- Natural ventilation where appropriate during temperate seasons
- Maximising natural daylight
- Use energy efficient lighting fittings for internal and external lighting
- Use energy efficiency appliances
- Using an energy display devices in an easily accessible area of the dwelling

Water

- Use low flow fixtures, fittings and appliances
- Use water efficient landscaping techniques and strategies
- A surface water run-off and flood risk assessment has been undertaken to ensure mitigation measures are in place to reduce pressure on the local municipal sewerage system

Materials

- Low embodied energy materials will be specified where possible
- Use of timber as a low embodied energy primary construction material
- Non-toxic paints and finishes where possible
- Materials will be selected based on their overall environmental impact
- Materials and finishes will be responsibly sourced where possible
- Insulation will have a GWP of less than 5

Waste

- Appropriate and adequate storage for recyclable and non-recyclable waste will be provided
- Sustainable construction site waste management strategies will be proposed for site during construction

Health and Wellbeing

- All relevant Lifetime Homes Standards will be targeted

Management

- A dwelling user guide will be provided to ensure the occupants are familiar with the building systems and environmental strategies employed
- The appointed contractor will ensure pollution prevention methods are carried out in line with the considerate constructor's scheme requirements

Land Use and Ecology

- Encouraging biodiversity by integrating indigenous plant species into the landscaping around the site
- Building on a previously developed site which has been categorised as having a low ecological value
- Green roof to promote biodiversity

Although the design is currently at a preliminary stage, our aim is to pursue these strategies and create a low energy and low impact, sustainable development.

4.0 BUILDING REGULATION COMPLIANCE

With regards to Part L of UK Building Regulations - Conservation of Fuel and Power in New Dwellings Approved Document 1A 2013 - the proposed scheme is compliant with the requirements for building services and the building thermal envelope. A brief list of key assumptions for the proposed development can be seen below.

FABRIC PARAMETERS

Below is a summary of the indicative proposed fabric parameters proposed for 6 Streatley Place, subject to final detailing.

6 Streatley Place - Fabric Parameters		
Element	Proposed Values	ADL1A 2013 limiting values
Wall	0.10 W/m².K	0.30 W/m².K
Floor	0.10 W/m².K	0.25 W/m².K
Roof	0.10 W/m².K	0.20 W/m².K
Windows, roof windows, and pedestrian openings	0.8 - 1.1 W/m².K	2.00 W/m².K
Thermal Bridging	0.15 W/m.K	0.15 W/m.K

Note: Final values will be area weighted and may vary

An air permeability of 3m³/h/m², subject to final detailing, has been assumed for the planned development, which is a significant improvement over current regulations outlined in the Approved Document Part L1A 2013.

HEATING AND DOMESTIC HOT WATER

A condensing gas boiler with an efficiency of 92% has been assumed to provide space heating and domestic hot water. The dwelling is assumed to provide space heating through underfloor heating and radiators with time and temperature controls.

VENTILATION

Whole house balanced mechanical ventilation with heat recovery (MVHR) has been proposed. It assumed that the MVHR system will have a minimum heat recovery of at least 85% and a Specific Fan Power of less than 0.8 W/l/s. Final values will be dependent on the final specification and commissioning, which vary slightly.

It is assumed that all windows are openable to allow cross ventilation.

LIGHTING

It is assumed that all lighting is 100% energy efficient.

DEMONSTRATING COMPLIANCE

To comply with Part L of the building regulations as outlined in the Approved Document L1A, the as calculated Design Emission Rate (DER) must not exceed the Target Emission Rate (TER). An initial SAP calculation was performed, predicting a TER of 19.92kgCO_2/m².

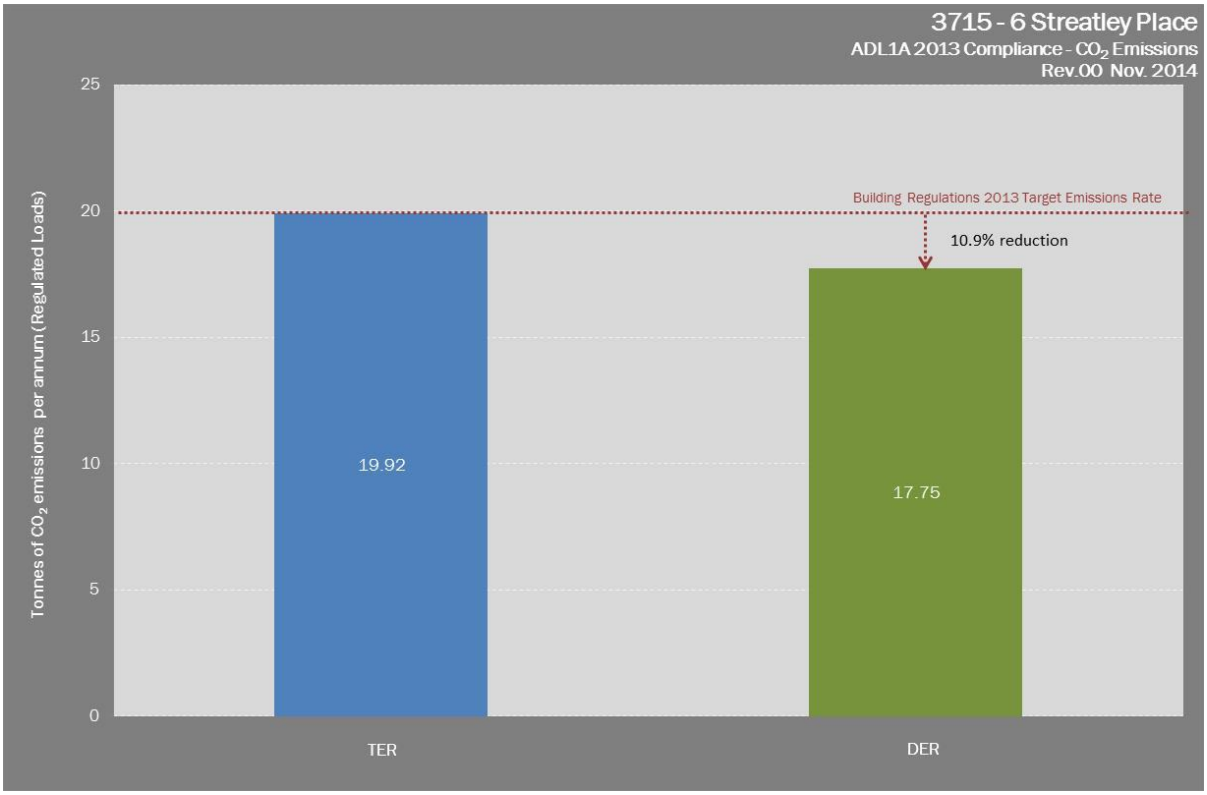

Figure 1 – Part L1A 2013 Compliance

The Dwelling Emission Rate (DER) for the proposed development is 17.75kgCO_2/m^2, showing an improvement of approximately 11% over the Target Emission Rate (TER).

The proposed dwelling also achieves the Target Fabric Energy Efficiency (TFEE) required by ADL1A 2103. The TFEE for the proposed dwelling is 79.6 W/m^2K, and the proposed Dwelling Fabric Energy Efficiency (DFEE) is 64.5 W/m^2K.

While the final SAP rating may vary slightly as the design is further detailed, it indicates that this development will significantly reduce carbon emissions compared to a minimum regulatory compliant building on site.

5.0 SUMMARY AND CONCLUSIONS

It is believed that the proposed development has been designed to limit the environmental impact of a development of this size and scale, and meets the current planning policy requirements.

It is targeted that the dwelling will meet all relevant requirements of Lifetime Homes Standard.

The proposed development is currently targeting a 11% reduction in CO_2 emissions over ADL1A 2013 while adopting a low energy strategy.

As confirmed by the London Borough of Camden planning officer Rob Tulloch in correspondence with Living Architecture, it has been agreed that the scheme will not need to be benchmarked using either Code for Sustainable Homes or BREEAM assessment schemes.

Proposed Fabric Parameters

SAP: PROJECT DATABASE

November 2014/ Rev. 01

Proposed Fabric Parameters - 6 Streatley Place	
Description	**Specification**
Building Envelope	
No. of exposed sides	4
Wall U-value	0.10 W/(m^2.K)
Window-to-wall ratio	9-57%
Orientation	North West
Window & Rooflight U-values	0.8 - 1.1 W/(m^2.K)
Glazing g-value	0.4 - 0.6
Frame type	Wood
Frame factor	0.8
Roof U-Value	0.10 W/(m2.K)
Floor U-Value	0.10 W/(m2.K)
Thermal Bridging (y-Value)	0.15 W/(m.K)
Design air permeability	3m^3/(h.m^2) @ 50Pa
Building Services	
Ventilation	
Mechanical ventilation	Balanced with heat recovery
Heat recovery efficinecy	85%
SFP	0.80W/l/s
Ducting type	Rigid
Duct insulation	Yes
Space Heating	
Heating system	Centralized heating with radiators or underfloor heating
Heating emitter	Underfloor heating, pipes in screed above insulation
Heating controls	Programmer, room thermostat & TRVs
Heating fuel	Mains gas
Heating efficiency	92%
Pumpd in heated space	No
Boiler interlock	Yes
Fuel burning type	N/A
Flue type	Room-sealed
Fan-flued	Yes
Cooling	
Cooling system	N/A
Energy label class	N/A
EER	N/A
Compressor control	N/A
SEER	N/A
Cooled area	N/A
DHW Heating	
DHW System	From main heating system
Cylinder volume	N/A
Insulation type	N/A
Insulation thickness	N/A
Cylinder in heated space	Yes
Cylinderstat	Yes
Primary pipework insulated	Yes
Water heating timed separately	Yes
Lighting	
Low energy lights	100% of fixed light outlets