eight associates

Eight Associates
Ground Floor
57a Great Suffolk Street
London
SE1 0BB

+44 (0) 20 7043 0418

www.eightassociates.co.uk
info@eightassociates.co.uk

Planning Report
Sustainability Statement
6 Albert Terrace Mews

Document information

Prepared for:
Humphrey Kelsey
4 Primrose Hill Studios
Fitzroy Road
NW1 8TR
London

Date of current issue:
23/05/2018

Issue number: 1

Our reference:
3088 - 6 Albert Terrace Mews - Sustainability Statement - 1805-23rs.docx

Assessment information

Prepared by:
Rosalind Shirm

Quality assured by:
Chris Hocknell

Disclaimer

Contents

eight associates

Executive Summary
Sustainability Statement
6 Albert Terrace Mews

Executive summary

The proposed project comprises refurbishment works on the residential dwelling 6 Albert Terrace Mews, NW1 7TA. The development is situated in the London Borough of Camden.

This Sustainability Statement will be provided as evidence to the London Borough of Camden to demonstrate the development's holistic approach to sustainable design and construction. It summarises the contribution that the design will make to creating a more sustainable development, drawing on information provided by specialist consultants and design reports, and identifying key features intrinsic to achieving low carbon developments.

Key sustainability features within the development will include:

- The development will reduce total carbon emissions by 21.3% over Building Regulations.
- A water consumption target of 110 litres/person/day through the implementation of water efficiency measures.
- A sustainable materials procurement policy and an efficient waste strategy on site. This will target at least 85% of waste to be diverted from landfill.
- The inclusion of sustainable transport options such as safe cycle storage.
- Protection of ecology on site during construction and biodiversity enhancement measures.
- The implementation of health and wellbeing measures through design and operational procedures, including daylight, optimum indoor air quality and thermal comfort.

Key sustainability measures

In summary, the key measures incorporated to meet planning requirements and to achieve a low carbon development address the following key areas of sustainable design and construction:

- Energy and CO_2
- Adaptation to climate change
- Waste
- Water Efficiency
- Transport and connectivity
- Materials
- Health and wellbeing

eight associates

Introduction
Sustainability Statement
6 Albert Terrace Mews

Sustainability introduction	The design team has significant experience in delivering schemes that are considered highly sustainable, either through application of formal green building rating systems, such as BREEAM as well as applying benchmarks from standards such as Passivhaus Design, and adopting precedents from industry exemplar sustainable developments. The scheme will reflect the holistic nature of sustainable development to the London Borough of Camden. The development will provide high quality housing in an area of need, and will use local labour to boost employment. Health and wellbeing will be incorporated in the design by maximising daylighting, utilising healthy materials and contributing to the alleviation of fuel poverty in the region. The ecological value of the site will be maintained and protected. The development will enhance the ecological value of the site through measures such as native planting where feasible.
Description of development	The proposed project is for refurbishment works on the residential dwelling 6 Albert Terrace Mews, NW1 7TA. The development is situated in the London Borough of Camden. The aspiration for the scheme is to significantly improve the existing site and its immediate environment by providing an efficient and inclusive development, which meets the policy recommendations of the London Borough of Camden.

eight associates

Policy Context
Sustainability Statement
6 Albert Terrace Mews

National context: The 2008 Climate Change Act

The UK Government is committed to reducing the UK's carbon emissions by 80% over 1990 levels through the Climate Change Act 2008. Achieving truly sustainable design and construction and forwarding the green agenda within the construction industry across the UK is inherent to meeting these emission targets. This development aims to do both of these.

To help monitor carbon reductions and to plot progress being made for future plans and investments in the UK's low-carbon economy, intermediary targets have been established to ensure that the UK remains on course for meeting the 80% reduction by 2050.

Concurrent with reducing CO_2 emissions by 80% by 2050 is the European Climate Change Policy targets. It sets the objective of ensuring 20% of energy consumption is generated from renewable sources by 2020 whilst also reducing Europe's carbon footprint by 20%. Ensuring a fabric first approach with consideration to renewable energy production fits both the climate change act and the European Commission's 2020 targets for reducing greenhouse gas (GHG) emissions.

eight associates

Policy Context
Sustainability Statement
6 Albert Terrace Mews

Local context: Camden Local Plan 2017

The Camden Local Plan, published in July 2017, sets out the Council's planning policies. It responds to the Borough's unique characteristics and provides a comprehensive local policy framework to deliver Camden's future sustainable development. The Plan is supported by the supplementary planning document 'Camden Planning Guidance 3: Sustainability'.

The Camden Local Plan states a key strategic objective as 'investing in our communities to ensure sustainable neighbourhoods'. This is complimented by further objectives embedded in the Local Plan that define the sustainability vision of the council.

Chapter 8 'Sustainability and climate change' within the Camden Local Plan lists key sustainability objectives for the Borough. The following strategic objectives are relevant to this sustainability statement:

> 8.3 - Developments should reduce carbon dioxide emissions in line with the steps in the energy hierarchy. Developments should support this by ensuring the availability of sustainable transport options, optimising resource efficiency and encouraging sensitive energy use.
>
> 8.18 - All developments should optimise resource efficiency through waste and energy reduction, minimising materials required, opting for materials with low embodied carbon content and enabling low energy and water demands.
>
> 8.33 - All developments should adopt appropriate climate change adaptation measures such as green infrastructure and SuDS where feasible.
>
> 8.53 - Developments should incorporate water efficiency measures, consider the impact of development in areas prone to flooding and avoid harm to the water environment. Residential developments will be expected to meet the requirement of 110 litres per person per day including 5 litres for external water use. Refurbishments will be expected to meet BREEAM water efficiency credits.
>
> 8.84 - Construction should adopt sustainable design and construction methods including measures that minimise negative impacts on air quality.
>
> 8.90 - Developments should include facilities for the storage and collection of waste and recycling.

Further relevant sustainability objectives stated in the Camden Local Plan include the following:

> 4.84 - Developments should incorporate design principles that contribute to community safety and security.

eight associates

Policy Context
Sustainability Statement
6 Albert Terrace Mews

Camden Planning Guidance 3 Sustainability

The Camden Planning Guidance (CPG) 3 Sustainability issued in March 2018 supports the policies in the Camden Local Plan and forms a supplementary planning document (SPD) for planning decisions. The CPG and additional guidance it provides on interpretation of the Local Plan sustainability policies is considered in this sustainability statement.

4.3 - All buildings are expected to reduce their carbon emissions by making improvements to the existing building. As a guide, at least 10% of the project cost should be spent on the improvements.

8.0 - Waste reduction measures should be incorporated. Primarily, this should involve the re-use of buildings where feasible. All developments should aim for at least 10% of the total value of materials to be derived from recycled and reused sources. Materials used in construction should be sourced responsibly and ensure they are safe to health.

10.0 - All developments should incorporate green and brown roofs where feasible.

11.0 - All developments are required to prevent or mitigate against flooding and manage drainage and surface water, Developments should not increase the risk of flooding.

eight associates

Energy and CO_2 Sustainability Statement

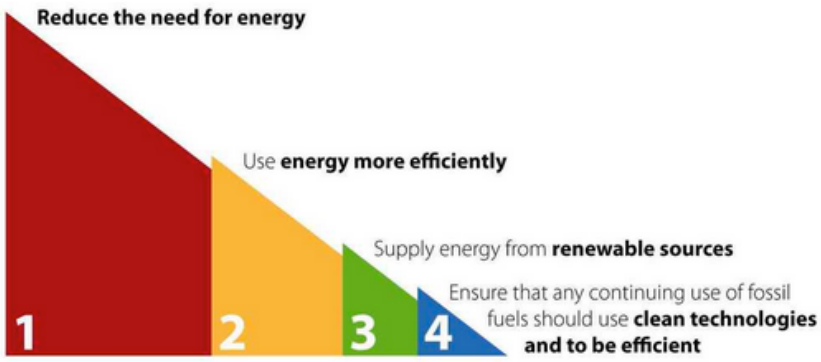
6 Albert Terrace Mews

Energy strategy

The Energy Modelling Report, issued in May 2018 by Eight Associates, summarises the energy strategy for 6 Albert Terrace Mews. In accordance with the Sustainable Design and Construction SPG, the scheme is required to achieve a 19% carbon reduction target (beyond Part L 2013). The development will reduce the total carbon emissions by 21.3% over Building Regulations. The following section is a summary of the findings in accordance with the energy hierarchy and policy requirements.

The energy hierarchy

The proposed scheme has followed the energy hierarchy that is illustrated below:



This methodology widely used in accordance with meeting the Sustainable Design and Construction Supplementary Planning Guidance (SPG), has been adopted for the scheme using a 'Lean', 'Clean', and Green' approach in addressing [Local Planning Authority]'s policy. A summary of the savings in carbon emissions are shown below:

GLA's Energy Hierarchy – Regulated Carbon Emissions				
	Baseline:	Be Lean:	Be Clean:	Be Green:
CO_2 emissions (Tonnes CO_2/yr)	3.74	2.94	-	-
CO_2 emissions saving (Tonnes CO_2/yr)	-	0.80	-	-
Saving from each stage (%)	-	21.3	-	-
Total CO_2 emissions saving (Tonnes CO_2/yr)	0.80			

21.3% of total carbon emissions savings over Part L 1B of the Building Regulations 2013 achieved.

eight associates

Energy and CO_2 Sustainability Statement
6 Albert Terrace Mews

Energy efficiency strategies

Energy efficiency measures that will be applied to 6 Albert Terrace Mews include:

- High insulation standards to reduce transfer of heat through the building fabric.
- Use of a gas boiler to provide heating for the development. Pipework will be fully insulated to minimise heat loss. The gas boiler will have a maximum efficiency of 89.5%.
- Envelope air tightness to reduce unnecessary air infiltration.
- Daylighting and well-planned floor layouts to reduce the need for artificial lighting.
- High efficacy lighting greater than 70lm/W.

Thermal comfort and overheating risk

To minimise energy loss, the building fabric performance will be designed to achieve a balance between retaining heat during winter and allowing the building to dissipate heat during the summer months. Further measures to reduce overheating and the need for cooling include:

- Energy efficient design to minimise internal heat generation. Energy efficient appliances and lighting will be specified.
- Direct solar gains will be controlled through specifying appropriate location, size and type of windows. A g-value of 0.55 is specified.
- Reduced air permeability rate and maximised insulation levels.
- Passive ventilation measures will include openable windows.

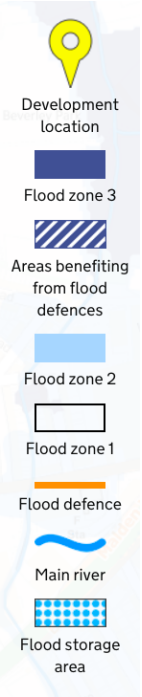
eight associates

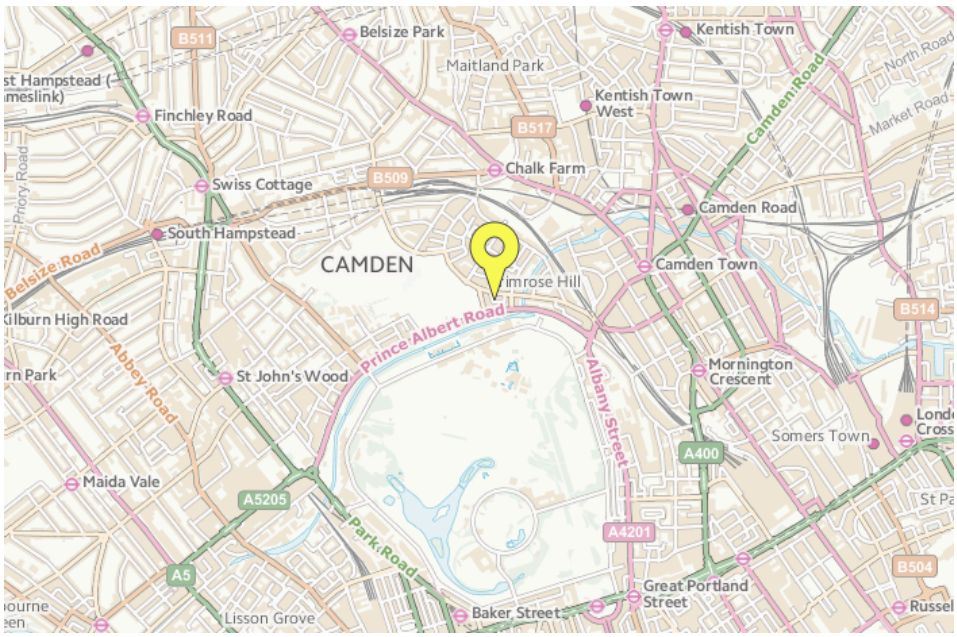
Adaptation to Climate Change

Sustainability Statement

6 Albert Terrace Mews

Climate change mitigation	The proposed development will utilise a gas boiler heating system and use natural ventilation. Passive design measures, including openable windows and nighttime cooling, are integrated into the design of the development. Mechanical ventilation using fans will remove heat from the building during summer months.
Flood risk and sustainable drainage	6 Albert Terrace Mews is located within Flood Zone 1 of the Environment Agency's Flood Map for Planning. This is defined as an area that has a low probability of flooding.
Flood map	Flood map to show the location of the development within Flood Zone 1:





eight associates

Waste
Sustainability Statement
6 Albert Terrace Mews

Construction waste management

Resource efficiency will be promoted through effective and appropriate management of demolition and construction site waste.

In line with the waste hierarchy, during the construction phase, the approach will be the following:

- Use reclaimed materials;
- Use materials with higher levels of recycled content; and
- Use new materials.

For any demolition, the following approach will be adopted:

- Prioritise the on site reuse of demolition materials;
- Adopt on site recycling and, where required, use off site recycling; and
- The least preferred option – disposal to landfill.

A site waste management plan will be developed which adopts best practice benchmarks for resource efficiency, details procedures and commitments to minimise non-hazardous and hazardous waste at the design stage and monitors/measures waste production on site. The plan will apply to the location of the building.

The site waste management plan will also include procedures and commitments to sort and divert waste from landfill through the following:

- Re-use on site;
- Salvage/reclaim for re-use off-site;
- Return to supplier via a 'take-back' scheme;
- Recovery and recycling using an approved waste management contractor; and
- Compost.

The project has committed to diverting at least 85% by volume (90% by weight) of non-hazardous non-demolition waste generated by the project to be diverted from landfill.

Operational waste

Dedicated internal and external waste storage and recycling facilities are proposed to encourage recycling. The storage space will provide inclusive access and usability. Camden Council offers a weekly food waste collection service, therefore compost waste bins will be provided.

eight associates

Construction Management Sustainability Statement 6 Albert Terrace Mews

Construction environmental management

Environmental impacts of the construction works will be mitigated as far as possible. This will include the incorporation of the following:

- Contractor following environmental management system processes (under ISO14001), including the development of a construction environmental management plan (CEMP) specific to the sites.
- Training and site induction of all site operatives.
- Monitoring of energy, water and transport to and from site during construction.
- Management of waste on site.
- Following best practice pollution guidance from the Environment Agency.
- Ensuring all site timber is responsibly sourced in line with the UK Government's Timber Procurement Policy.
- Vehicle emissions would be minimised through the use of catalytic converters and the regular maintenance of vehicle engines.
- Damping down of brick walls etc. during any building demolition.
- Regularly inspecting and wet suppressing materials / soil stockpiles where necessary (including wind shielding or completely enclosing, storing away from site boundaries, and restricted height of stockpiles).
- Appropriate orientating of material stockpiles.
- Providing wheel washing and wet suppressing during the loading of wagons vehicles.
- Covering vehicles carrying dry soil and other wastes.
- Shielding of dust-generating construction activities.
- Providing suitable site hoarding.
- Restricting vehicle speeds on haul roads and other unsurfaced areas of the site.
- Inspecting unsurfaced haulage routes, and wet suppressing should this be necessary (in times of prolonged dry periods).

Considerate constructors

The scheme will adopt the principles of the Considerate Constructors Scheme (CCS). The CCS scheme aims to recognise and encourage construction sites that are managed in an environmentally and socially considerate, responsible and accountable manner.

eight associates

Water Efficiency
Sustainability Statement
6 Albert Terrace Mews

Water conservation	The development will encourage sustainable water use in the operation of the building and its site. The design of the building will provide the means of reducing potable water consumption over the lifetime of the building and minimise losses from leakage. Water consumption will be reduced through the use of water efficient components for all specified water-consuming components (including low-flow showerheads and taps, dual flush toilets and low water consuming washing machines and dishwashers) and flow control devices that regulate the supply of water to each facility according to demand. The sanitary ware schedule will be designed to target water consumption of 110 litres per person per day.
Rainwater harvesting	The development will minimize potable water consumption by utilizing rainwater for irrigation. A water butt will be installed on site and will provide the water required for the soft landscaping areas within the development.

eight associates

Transport and Connectivity
Sustainability Statement
6 Albert Terrace Mews

Public transport	6 Albert Terrace Mews has a PTAL rating of 3. The development is within 160m of a bus stop servicing bus route 274. The development is situated less than 1km from both Camden Town Underground Station and Chalk Farm Underground Station. The site is well located and benefits from a range of sustainable travel options.
Cycling provision	Cycle storage is being provided within the development. The storage provided will be secure and covered. There are proposed and existing quietways servicing the Borough of Camden and include QW2, QW3 and QW12. The Cycle Superhighway route CS11 has been proposed and would service the London Borough of Camden.
Accessibility and security	Creating a secure but fully accessible development is a key part of the proposed development. To ensure this is achieved, the design team will look to adopt where feasible, the key principles of "Secured by Design" within all elements of the scheme. An Architectural Liaison Officer (ALO) or a Crime Prevention Design Advisor (CPDA) will be consulted at an early design stage to incorporate the principles of 'Secured by Design (SBD)' within the development's design and layout.

eight associates

Materials
Sustainability Statement
6 Albert Terrace Mews

Materials and waste introduction

Sustainable material sourcing and waste management will be considered throughout the life of the building to ensure the scheme's environmental footprint is minimised as far as possible. The scheme will also ensure low embodied carbon throughout the procurement, transport and construction of building materials, together with end of life emissions.

Materials selection and sourcing

The design team has confirmed that efforts will be made to reuse materials where feasible, and that where required, new materials will be responsibly sourced. New construction materials will be selected, where feasible, with a low environmental impact. In addition, the project will aim for new materials to come from a recycled or reused source, including a high-recycled content in steel. Minimum standards apply to new timber, which must be sourced in accordance with the UK Government's Timber Procurement Policy.

In addition, all timber will be FSC / PEFC certified, all concrete will be BES 6001 certified and any other material will be ISO 14001 certified for both key processes and supply chain / extraction processes where feasible to do so.

The Green Guide for Specification is a reference tool, providing guidance on the relative environmental impacts for a range of different building elemental specifications, based on Life Cycle Assessment and the Environmental Profile Methodology. The design team will reference the Green Guide to Specification to help specify materials with a low environmental impact, where feasible. The design will incorporate at least 5 build-up elements will be A-C rated on the Green Guide.

Insulation specifications will eliminate hydrochlorofluorocarbons (HCFCs) and ozone depleting materials, wherever possible. All insulation specified will have a Global Warming Potential (GWP) of less than 5, and be responsibly sourced to have a low embodied impact.

Embodied carbon analysis

The development will utilise a number of opportunities to cut embodied carbon, as follows:

- The development will retain the historic fabric of the building where feasible.
- A materials efficiency strategy will be followed throughout the design, procurement and construction stages of the development, to ensure the scheme produces less waste on site. For example, adjustment of some sizes will be made to minimise offcuts of materials, and some bespoke materials will be developed off-site.
- Materials will be procured from the local area where possible, to reduce carbon through transportation.
- Materials and products with a higher recycled content will preferentially be procured where feasible, as these have a low embodied carbon.
- Consideration has been made to use timber as a low embodied carbon alternative to steel and concrete where possible.
- The design team has confirmed the Waste and Resources Action Programme (WRAP) guidance 'cutting embodied carbon in construction projects' will be followed.

eight associates

Health and Wellbeing
Sustainability Statement
6 Albert Terrace Mews

Occupant wellbeing	The development has been designed to ensure the wellbeing of occupants in terms of levels of fresh air, thermal comfort and reduction of overheating, access to natural light, and good lighting levels internally and externally. The building services strategy has been carefully considered in order to balance the need for energy-smart, low carbon technologies with the need for adequate and controllable ventilation, heating and cooling.
Internal air quality	The design team will specify only low volatile organic compounds (VOC) finishing products, including sealants and paints. All composite wood products will contain no added urea formaldehyde.
Daylight	The design has been developed to allow the use of daylight within the dwelling to be maximised as far as practical. The proposed windows are greater in size than the existing windows. The glass roof access box will allow for increased daylight levels within central areas of the building. The lighting strategy will include daylight sensors to optimise the use of natural sunlight.
Inclusive design	The principles of Lifetime Homes will be incorporated to achieve an inclusive built environment that enables users to maximise their individual abilities and enjoy safe and independent participation.

Land Use and Ecology
Sustainability Statement
6 Albert Terrace Mews

Protection of biodiversity	The design team is committed to help protect biodiversity on site and will implement the following measures: • Confirm that all relevant UK and EU legislation relating to protection and enhancement of ecology has been complied with during the design and construction process. • Ensure that any affected trees and shrubs are cleared out of bird breeding season (March-August). Alternatively, a SQE should check for the presence of active nests prior to the commencement of works. • Implement bat and bird protection in line with best practice. • Implement working methods in line with best practice to manage dust and water run-off. • During the construction phase a Biodiversity Champion will be appointed to monitor and limit environmentally detrimental activities. They will also train the workforce on the project to raise their awareness of environmental impacts during construction.
Ecological enhancement	Ecological enhancement measures will be made during the refurbishment. A green roof will be incorporated in the development. Native species will be selected for the green roof system to improve the natural biodiversity of the local area. Furthermore, with the implementation of precautionary working methods, it is considered that ecological receptors will not be adversely affected by the development

eight associates

Conclusion
Sustainability Statement
6 Albert Terrace Mews

Conclusion

This Sustainability Statement has responded to the London Borough of Camden's local planning policy requirements.

In summary the scheme will adopt the following sustainable features:

- Reduce energy consumption by targeting improved u values and airtightness. Low energy lighting will be specified.
- Minimise embodied carbon through efficient design, procurement of materials from a local source, or with a high-recycled content.
- Be of high build quality, surpassing the minimum Building Regulations for water using fittings.
- Ensure all materials are responsibly sourced and of low environmental impact.
- Implement a site waste management plan.
- Protect and enhance the ecological value where feasible.
- Utilise sustainable transport, including access to public transport and inclusion of cycle facilities.
- Follow best practice policies in terms of air, water and ground pollution and appoint a contractor who will register for the Considerate Constructors Scheme.
- Incorporate health and wellbeing measures through design and operational procedures, including daylight, optimum indoor air quality and thermal comfort.