

Sustainable Design Statement

For

24 Upper Wimpole Street & 3 Clarkes Mews
London
W1G

On Behalf of:

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Revision P01

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1 Introduction

This sustainable design statement has been prepared by Lamorbey Associates in support of the application for planning permission and Listed Building Consent at the Site at 24 Upper Wimpole Street & 3 Clarkes Mews. The proposals are set out below and would involve demolition, redevelopment and extension to both properties to provide a new 3 bedroom dwelling and enlarged existing dwelling.

2 Site Description

The development address is 24 Upper Wimpole Street & 3 Clarkes Mews the properties are adjoining at the rear of each property.



3 Proposed Development

The proposed development comprises the demolition of the existing mews house at 3 Clarkes Mews and the provision of a replacement 3-bedroom home, a new connection

from 24 Upper Wimpole through to Clarkes Mews, a basement extension, and other associated works such as plantroom space to improve ventilation in the dwelling.

4 Planning Policy

This section identifies the relevant planning policies within Westminster's City Plan that have been considered:

- Policy 34B 'Green Infrastructure'
- Policy 36 'Energy'
- Policy 38D 'Design principles'

4.1 Policy 34 'Green Infrastructure'

Policy 34 'Green Infrastructure' states that the council will protect and enhance the city's green infrastructure to maximise its environmental, social and economic value. Section B of Policy 34 states that developments will, wherever possible, contribute to the greening of Westminster by incorporating trees, green walls, green roofs, rain gardens and other green features and spaces into the design of the scheme.

4.2 Policy 36 'Energy'

Policy 36 'Energy' states that the council will promote zero carbon development and expects all development to reduce on-site energy demand and maximise the use of low carbon energy sources to minimise the effects of climate change. Section B of Policy 36 states that all development proposals should follow the principles of the Mayor of London's energy hierarchy. Section E of Policy 36 states that all developments should be designed and operated to minimise the risk of internal overheating.

4.3 Policy 38 'Design principles'

Policy 38 'Design principles' states that new developments will incorporate exemplary standards of high quality, sustainable and inclusive urban design and architecture befitting Westminster's world-class status, environment and heritage and its diverse range of locally distinctive neighbourhoods. Section D of Policy 38 deals with the sustainable design and states that development will enable the extended lifetime of buildings and spaces and respond to the likely risks and consequences of climate change by incorporating principles of sustainable design, including:

1. use of high-quality durable materials and detail;
2. providing flexible, high quality floorspace;
3. optimising resource and water efficiency;
4. enabling the incorporation of, or connection to, future services or facilities; and
5. minimising the need for plant and machinery.
6. Reuse existing materials
7. Recycle to avoid landfill

5 Sustainable Design Considerations

The following section outlines the design considerations of the proposed development in line with the principals within the Westminster City Plan.

5.1 Policy 34 'Green Infrastructure'

The proposed roof terrace will have increased biophilia & planters totalling 27m² of local plants.

5.2 Policy 36 'Energy'

The proposed development will follow the principles of the Mayor of London's energy hierarchy to reduce carbon emissions. The following design principles will be used to improve the building energy performance:

- Building Fabric: New building elements will have u-values beyond the requirements in building regulations Part L1, reducing the building heat loss.
- Air Tightness: The air permeability of the proposed extension will target 3.5m³/(h.m²) at 50Pa, an improvement beyond building regulations Part L1 minimum in order to further reduce heat loss.
- Lighting: High efficiency LED lighting with a minimum of 90 lumens/watt will be used throughout the extension, occupancy and daylight sensing will be used to control the lighting to take advantage of the large amount of glazing and natural light.
- Ventilation: Mechanical ventilation (MVHR) will be provided with heat recovery to reduce heat loss; the specific fan power of the ventilation systems will be more efficient than building regulations Part L1 minimum requirements.

- Controls: The floor plan will be controlled by local time and temperature controls to maximise control of the space and reduce energy where not needed.
- G-Value to reduce solar gains: Solar gains will be reduced to the proposed extension using a glass with a lower G-Value to minimise overheating
- Heat Pump Technology - Heat Pump technology will be utilised to generate hot water in the new dwelling
- Gas Free – The new dwelling will be Gas free, with an all electric strategy that as the grid decarbonises reduces ongoing carbon emissions.
- PV Panels The new dwelling will be complete with on site PV Generation on the 3 Clarkes Mews enhancing Zero Carbon generation to charge car & general electrical usage.
- Nighttime cooling – 24 Upper Wimpole Street proposed atrium to introduce passive cooling via the stack effect ventilation of the lower floors.

5.3 Policy 38 ‘Design principles’

Reuse and Recycle where possible

The proposed new dwelling will look to minimise any waste going to landfill & look to reuse and recycle materials where possible. Two areas have been identified for reuse on site which are the brickwork, roof slate tiles and existing steel on site subject to structural investigation to confirm their suitability for reuse.

Waste materials will be pushed to avoid landfill the contractor will be encouraged to recycle all waste where possible.

Use of high-quality durable materials and detail

The proposed new dwelling will use high quality brickwork with insulated panels for new external walls giving very low u-value. The new third floor level (within the roof space) will include high levels of insulation re-using existing slate roof tiles.

The roof of the infill extension will be a warm flat roof construction using high performance insulation. The new structural glass roof above kitchen and internal courtyard will include higher specification glazing and specialist coatings with improved thermal values compared to the existing glazed roof. It will also allow for more openable areas to allow for natural cross ventilation.

Provide high quality dwelling

Flexible high quality floorspace is provided through new 3 Clarkes Mews dwelling & providing modern enhancements like EV Charger & PV onsite Generation.

Optimising resource and water efficiency

The proposed extension & new dwelling will look to optimise water efficiency improving on Part G Water Efficiency figures. The new dwelling will utilise "A" rated appliances for white goods such as washing machines & dishwashers to reduce water consumption. We will look to utilise low water usage sanitaryware fittings on the refurbishment for all bathrooms & W.C's.

Enabling the incorporation of, or connection to, future services or facilities

As the existing building has no provision for connection to future or shared services, the proposed extension would not be able to connect to future services without significant alterations such as a local heat network.

Minimising the need for plant and machinery

The heating and cooling to the new floorspace will be served by a ground source heat pump or similar, reducing the amount of new plant required. Ventilation will be provided by a single MVHR located within the proposed floor plan for 3 Clarkes Mews .We are looking to utilise an exhaust air heat pump which minimises external plant whilst only requiring two penetrations to exhaust and intake air, this would provide heating and hot water to the Clarkes Mews property.

6 Summary and Conclusion

This sustainable design statement has been prepared in support of the planning application for the downward extension of 24 Upper Wimpole Street & New Dwelling at 3 Clarke Mews to provide an modern dwelling whilst retaining the heritage features.

In summary, the key sustainability features of the proposals, in line with the principles outlined in the Westminster City Plan include:

- Use of high quality, durable materials.
- Use of low carbon heating & hot water systems, avoiding the requirement for fossil fuels.
- Passive design measures to reduce solar gain.
- Enhanced building services and fabric to reduce regulated energy consumption.
- The specification of low water usage fixtures & appliances to limit water consumption.
- Provision of high-quality city greening through the implementation of planters at roof terrace
- Reuse existing materials to reduce embodied carbon emissions
- Recycle materials to avoid landfill