23 Kelly Street

London

NW1 8PG

Design & Access Statement

OUT POST

Contents

OUT
POST

1.0 Introduction

This design proposal seeks to address issues with the maintenance, health + safety and thermal performance of No.23 Kelly Street.

The property is located on Kelly Street in central Kentish Town. The street is part of the Kelly Street Conservation Area - refer to Heritage Statement for full listing report. The property was recently bought by the current owners who wish to ensure the property is upgraded to align with Camden Council's declaration of a Climate Emergency and to ensure the long term viability of the property as their primary residence.

1.1 Climate Change + Thermal Performance

"It is expected that by 2030 emissions associated with heating and hot water from a gas boiler will account for 85% of a household's emissions. Reducing carbon emissions from heating our homes and buildings is the biggest challenge Camden faces in its journey to net zero...Household carbon emissions can be significantly reduced by improving the building fabric of homes and switching to low carbon heat technologies..."

- Camden Council Climate Fund

Camden Council has a clear climate agenda and concern for reducing carbon across the borough. This proposal seeks to cooperate with this agenda through reducing the energy demand for no.23 Kelly Street.

In addition to local council targets, the Government has set out a 'Ten Point Plan' for reducing carbon to meet net zero targets: C02 halved by 2025 and net zero by 2050. The plan stipulates the need to move away from gas boilers, and to make our buildings more energy efficient.

To reach these targets, any works being carried out on homes now must comply with future standards. The property owner of no.23 Kelly Street is aptly concerned with the climate crisis and wishes to upgrade the building fabric to significantly reduce its energy requirements, and to install a low carbon alternative to a gas boiler.

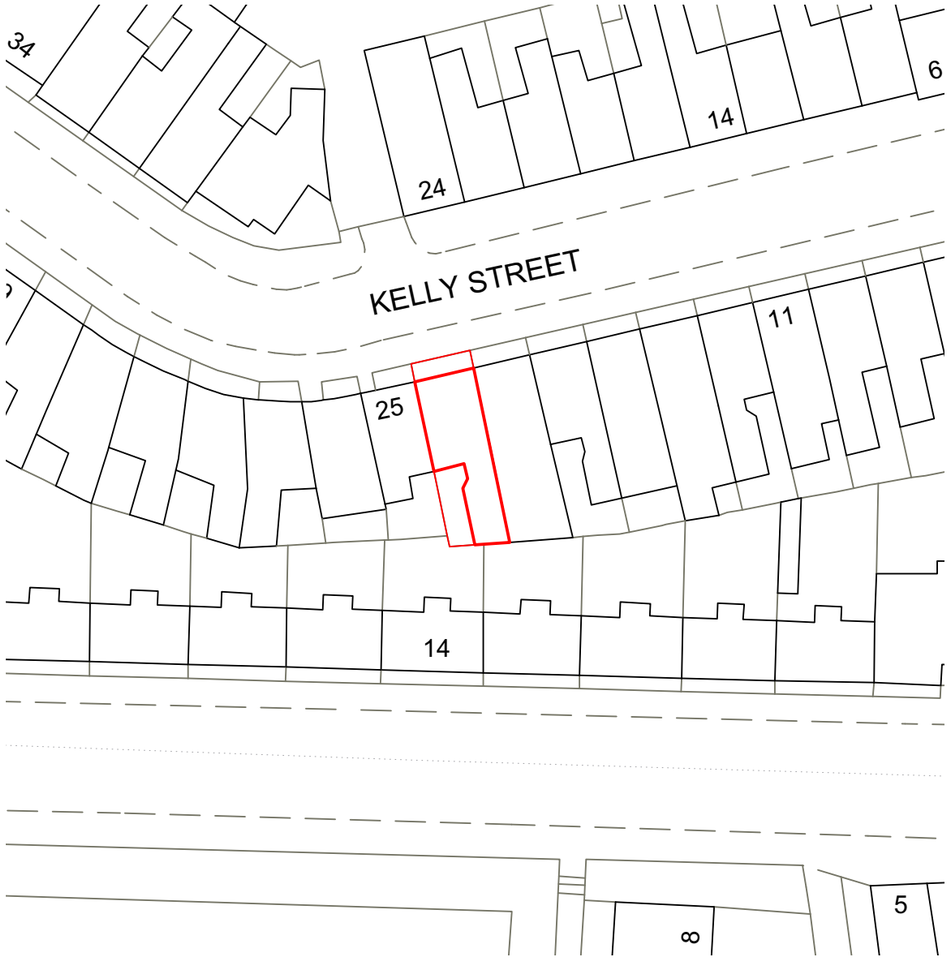


Figure 1A Site Location Plan

OUTPOST

1.0 Introduction

1.2 Maintenance + Preservation

As set out in the full survey of the property (see annex 5.1) there are various defects to the property which require attention. The property owners wish to inhabit the property as their primary family home and have a conscientious attitude towards the material fabric of the property. It is therefore of great importance that they be permitted to carry out essential maintenance to the property to preserve it both for themselves, and for future generations. Areas of particular note are the finishes to both the main butterfly roof and the flat roof to the rear which are listed in the full survey (annex 5.1) as a 'serious defect' and 'essential repair' respectively.

1.3 Health + Safety

The way in which we inhabit dwellings, and the building technology that allows us to do so, has changed significantly in the past 150 years (equal to the lifespan of no.23 Kelly Street). In properties of this age there are elements that no longer meet contemporary health and safety standards. At no.23 Kelly Street the key concerns are the glazing (which do not meet the standards outlined in Approved Document Q), the unstable chimney stack, the lack of balustrade to the existing terrace and the lack of mains linked fire detection system.

The following proposals seek to address risks to the health and safety of the current and future inhabitants of no.23 Kelly Street.

Figure 1B Kelly Street is a terraced street of 25 houses built in the mid 19th century. The *"brightly coloured stucco fronts, black cast iron railings, window guards and small front gardens"* are of 'special interest' as listed in the Kelly Street Conservation Area Appraisal (2011)

2.0 Existing Property

2.1 General Comments

The property has largely retained its original layout, with a narrow hall, two reception rooms downstairs and two bedrooms upstairs. A modern kitchen and bathroom have been added within a single storey flat-roof extension to the rear of the property.

"The property is constructed of solid brick elevations with a part render finish under an inverted (butterfly) roof which is covered with slates and has a central valley gutter running to the rear of the building. There is a single-storey rear extension which is constructed of cavity brick elevations under a timber-framed flat roof covered with mineral felt. Internally the floors are constructed in a mix of solid masonry and suspended timber and the internal walls and partitions of a mix of solid masonry and timber frames under a plasterboard & lath and plaster ceilings."

- 23 Kelly Street – Samuels Surveyors & Valuers (Surveyor's report)

2.2 Exterior

2.2.1 Front

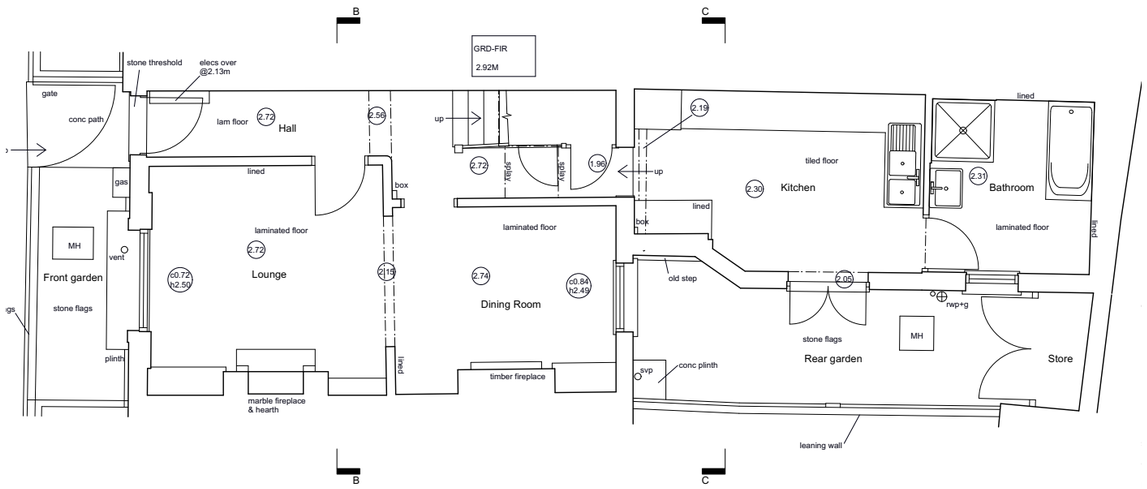
The front to the property appears largely as original with a characteristic coloured render front, replica black steel railings and decorative iron window bracket. There is evident cracking to the render and the metal railings have started to rust. Window sills are weathered and as a result have also started to crack.

2.2.2 Rear

The rear facade to the property is largely as original other than where the single storey extension adjoins the original building, and a door providing access to the flat roof of the extension. There is cracking to the window sills and some defective bricks.

2.2.3 Roof

The main roof is largely as original with a pitched timber frame and slate roof coverings. These are in a poor state of repair and in need of attention to prevent future leaks.



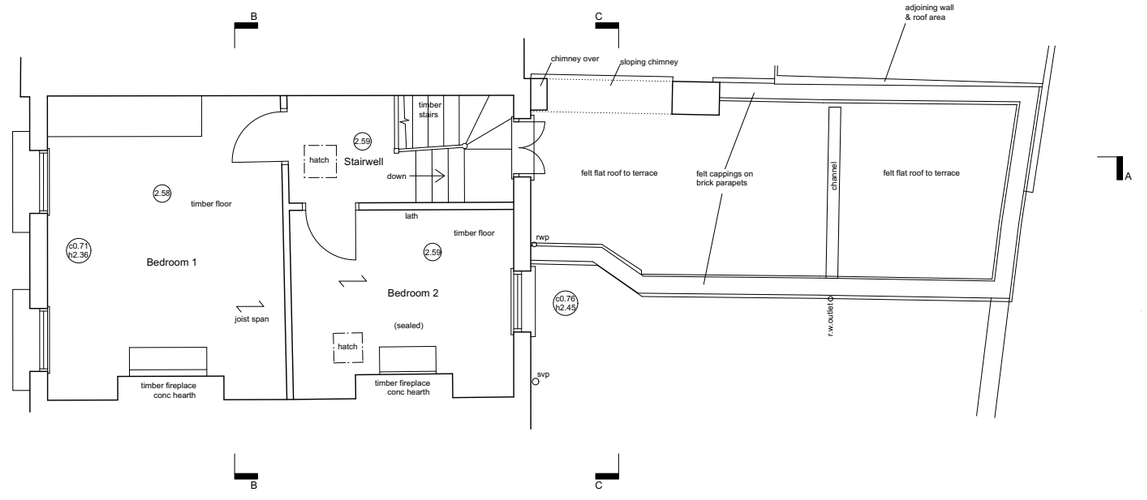


Figure 2A + B As Existing Ground Floor Plan, As Existing First Floor Plan

2.0 Existing Property

2.3 Interior - Ground Floor

2.3.1 Hall

The proportions, openings and coving/skirting appear to be largely original, or at the least, intended to match the existing. Modern timber floorboards have been laid, and a step down formed into the modern kitchen area.

2.3.2 Lounge / Dining Room

This is a typical front and rear living room as found in the majority of the houses on the street. The openings, coving/ skirting and fireplaces appear to be largely original, or at the least, intended to match the existing. Modern timber floorboards have been laid.

2.3.3 Kitchen / Bathroom

Accommodated in the flat roof extension to the property, the fixtures and fittings in the kitchen and bathroom appear relatively new, though the space is clearly poorly designed in regards to thermal comfort. Flooring throughout is insufficiently insulated and the walls are assumed uninsulated (or insufficiently insulated) cavity. The window/door are double glazed. The boiler is accommodated to the right on immediate entrance to the kitchen.

2.4 Interior - First Floor

2.4.1 Stairwell & Existing terrace

The proportions, stair and banister appear largely original. There is an existing door on to the flat roof existing terrace space that is shown on historic planning application 2006/4952/P. There are areas of damp on the external wall to the stairwell (see figure 2F).

Figure 2C Modern timber flooring in the hall

Figure 2D Original sash window in the lounge

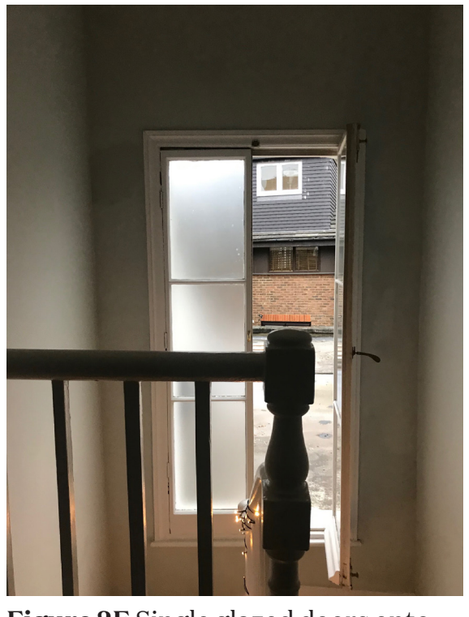


Figure 2E Single glazed doors onto flat roof area

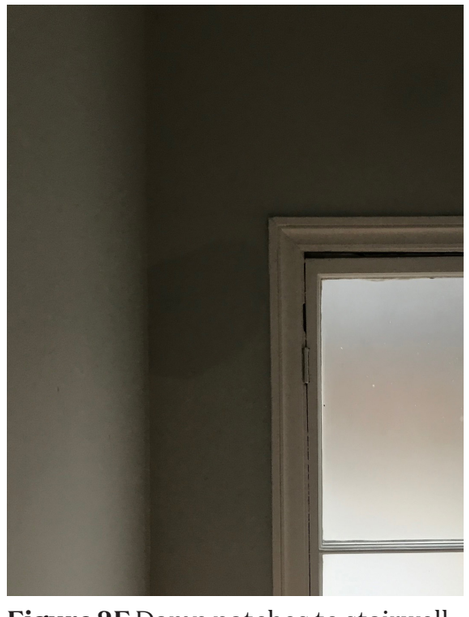


Figure 2F Damp patches to stairwell. Evidence of ill-fitting door-frame.

2.0 Existing Property

2.4.2 Bedrooms 1 + 2

The proportions, openings and coving/skirting appear to be largely original or, at the least, intended to match existing. The fireplace in bedroom 1 appears as original, but has been boarded up in bedroom 2. The floorboards to both rooms appear to be original but have been painted.

2.4.3 Flat Roof Area

The flat roof area appears largely as it was when constructed. Due to poor design there is evidence of standing water. The original chimney stack which now rests on the flat roof has been subject to cracking and as a result has become unstable and possibly unsafe. An engineer has been commissioned and their report is attached in the Appendix.

Figure 2G The flat roof area: evidence of standing water + unsafe chimney stack

Figure 2H Junction between existing rainwater goods + modern PVC addition

Figure 2I Cracked render and unstable bricks at base of chimney stack

OUT POST

3.0 Proposed Works

The proposed works will address areas in need of urgent maintenance alongside improvements to the thermal performance of the property.

3.1 Glazing Upgrade - Windows + Doors

We are proposing that the single glazed doors onto the flat roof, which are not historic, are to be replaced with a double glazed unit. Additionally we are proposing all historic windows to be draught proofed and repaired where required.

3.2 Floor Insulation

The underfloor area throughout the house is currently uninsulated. Being mindful of the original floorboards we are proposing to carefully take them up and put them aside. Natural wood fibre insulation would then be added into the floor zone and then the original floorboards re-installed.

3.0 Proposed Works

3.3 Replacement of Flat Roof

Due to an insufficient gradient to the flat roof, standing water has been allowed to accumulate on the roof surface. Though the full extent of damage caused by this is unknown, it can be assumed that there is at the least some damage to the flat roof build-up. Additionally, the existing build-up is not thermally efficient. As a newer portion of the property there is the opportunity here to significantly improve the thermal performance of the building envelope by implementing a new roof build-up of a much higher standard than the existing. The proposed roof system contains wood fibre insulation with a ventilated cavity – see figure 3A for typical flat roof detail. By implementing this build-up, the U-value could be improved from 0.52 W/(m2K) to 0.17 W/(m2K)*.

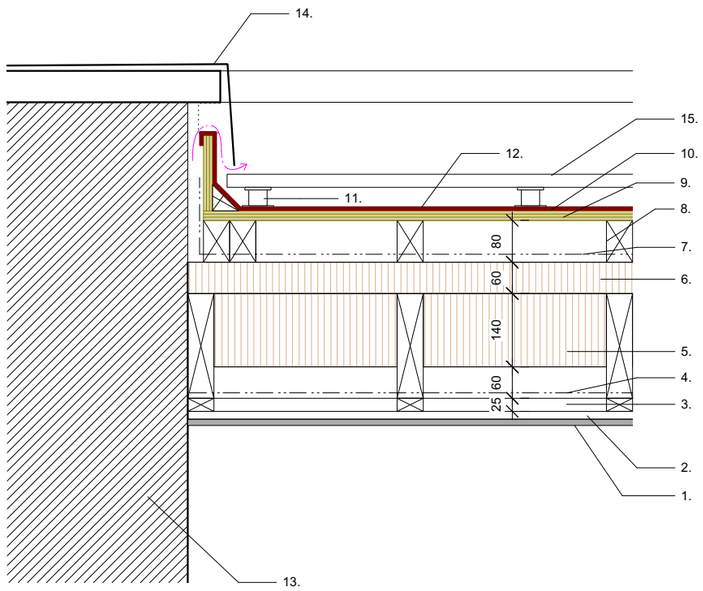
3.4 Repair of Chimney Stack

Frost damage has caused chipping and cracking to the chimney bricks which, over time, has caused the stack to become unstable. Our proposal is to make essential repairs to the chimney.

3.5 Works to Main Roof

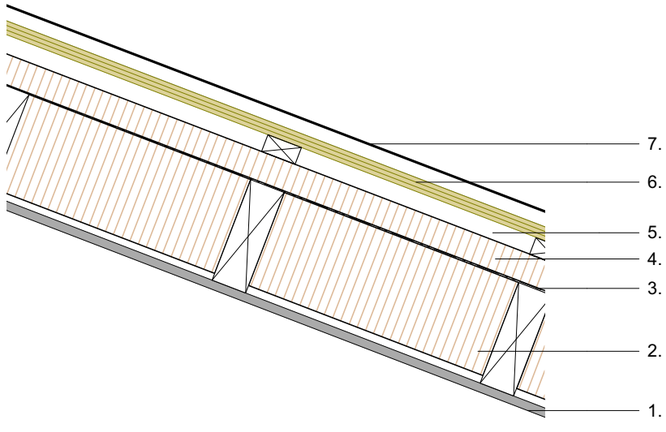
The insulation to the roof spaces is currently inadequate in line with Approved Document L. The proposed works would replace the existing insulation with wood fibre/sheeps wool insulation to a sufficient thickness (see Figure 3B) and provide appropriate venting using tiled ventilators. By implementing this build-up, the U-value could be improved from 0.44 W/(m2K) to 0.19 W/(m2K)*. New slate tiles in line with existing are proposed to replace the existing roof.

*Existing U-value figures are approximate as the exact build up of the existing roof is unknown but assumed to be a small layer of loose lay loft insulation.



1. Internal lime plaster system
2. Woodwool board
3. Service void
4. Airtightness membrane
5. STEICO flex between existing joists
6. STEICO special dry
7. STECIO breather membrane
8. Battens for ventilation
9. Plywood deck
10. Waterproof covering
11. Pedestals
12. Roof finish
13. Existing masonry wall
14. Capping piece
15. New floor finish to terrace

Figure 3A Typical flat roof detail



1. Internal lime plaster system
2. STEICO flex between rafters
3. LBD 0.02 retrofit membrane
4. STEICO universal
5. New counter batten
6. Tile batten
7. Slate roof tiles

Figure 3B Typical pitched roof detail

3.0 Proposed Works

3.6 New Rainwater Goods

Existing rainwater pipes are PVC and in a poor state – almost definitely contributing to the standing water on the flat roof. Currently, rainwater from the main roof drains onto the flat roof. The proposals would redirect the rainwater pipe from the main roof so that each roof has dedicated drainage and there is less risk of them becoming over capacity.

We are proposing to replace the existing PVC hoppers and downpipes with heritage-style black aluminium alternatives in keeping with the heritage of the property and area. These are also a more sustainable option with a life expectancy of 50 years, plus recyclable at end of life.

3.7 Improved Access to Roof space

The property lacks sufficient storage space and it is the client's wish to utilise the roof space as storage. In order to make this a practical reality, the existing access hatches require enlarging as they currently allow only limited access. The proposed hatch is insulated and would provide much safer access to the roof space. There would be no adverse effects to any historic features in either the hall or bedroom 2.

Figure 3C Black aluminium rainwater downpipes. By Alutec: https://www.marleyalutec.co.uk/

3.0 Proposed Works

3.8 Energy - Air Source Heat Pump + Solar Panels

In line with the property owner's energy efficiency aspirations, we are proposing to replace the existing gas boiler with an air source heat pump system (ASHP). A specialist renewable energy consultant has provided a preliminary design for the system. Due to the size of the property they have specified a 5KW heat pump which is the smallest available, and relatively unobtrusive spatially and acoustically - see Figure 3F. The ASHP would be located to the rear of the property and would not be visible from any highway.

The air source heat pump would be installed in conjunction with solar panels to the roof to provide a holistic energy solution. A precedent has already been set for solar panels on the butterfly roof by no.7 Kelly Street.

The proposed ASHP has been indicated on the following drawings: (GA)_100 - As Proposed Ground Floor Plan + (GA)_201 - As Proposed Rear + Side Elevations.

The projection of the solar panels from the roof is provided on drawing (GA)_301 - As Proposed Section BB.

The system design would be carried forwards by MSC certified installer and, subject to their input, would be located in the rear garden as indicated on drawing (GA)_100 - As Proposed Ground Floor Plan.

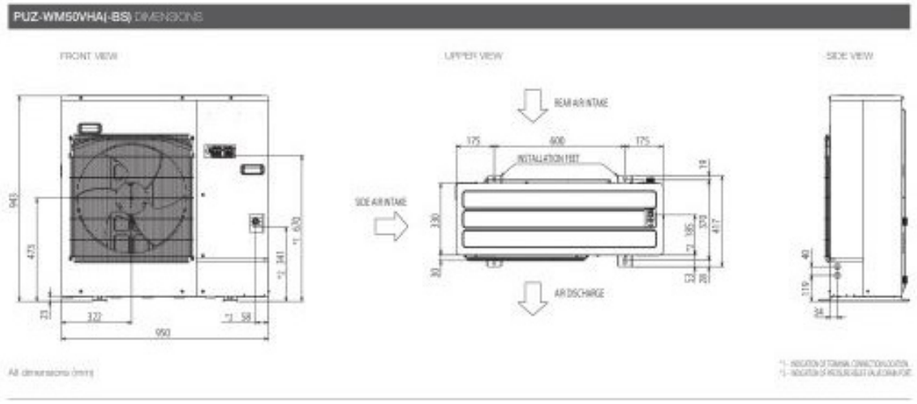


Figure 3F Dimensions of proposed heat pump.

Figure 3G Appearance of proposed heat pump.

By Mitsubishi: https://les.mitsubishielectric.co.uk/products/heating/domestic/outdoor/ecodan-r32-ultra-quiet-puz-monobloc-air-source-heat-pump-2

OUT POST

3.0 Proposed Works

3.9 Existing Roof Terrace Safety / Balustrade

The property has an existing roof terrace that has been in use since the single storey extension was built. The planning application 2006/4952/P shows the historic use of this complete roof as a terrace.

A number of properties on Kelly Street including nos. 21 and 37 have balustrades to the flat roof rear extensions. Given that there are already doors in place to access the roof at no.23, and many neighbouring properties make use of rear flat roof areas as habitable space, it is unreasonable to expect that the residents of no.23 Kelly Street would not do the same. It is however a risk to the safety of the residents not to allow a balustrade to be installed, and this should be of high priority.

The ability to use the complete terrace increases the risk of overlooking to neighbouring properties. The residents are conscious of the properties to the rear of their own (Castle Street) and also their two neighbouring properties. They have therefore stipulated that the portion of accessible roof area be limited so that they are not overlooking these properties. Refer to drawing (GA)_101 - As Proposed First Floor Plan for extent of proposed terrace.

Figure 3H Existing masonry wall to terrace of no.21 Kelly Street

Figure 3I Precedent balustrade style as implemented on the renovation of a heritage property

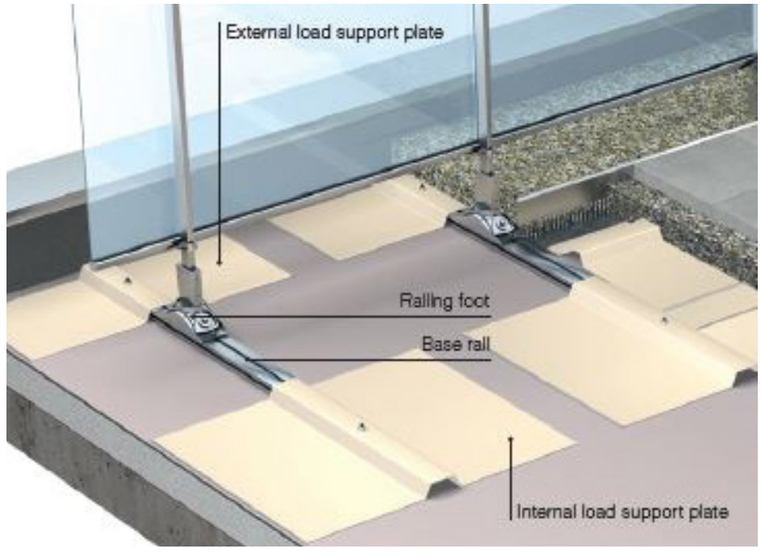


Figure 3J Example base detail for self-supporting balustrade detail. N.b. Proposed balustrade will be a bespoke system with traditional iron railings.

OUT
POST

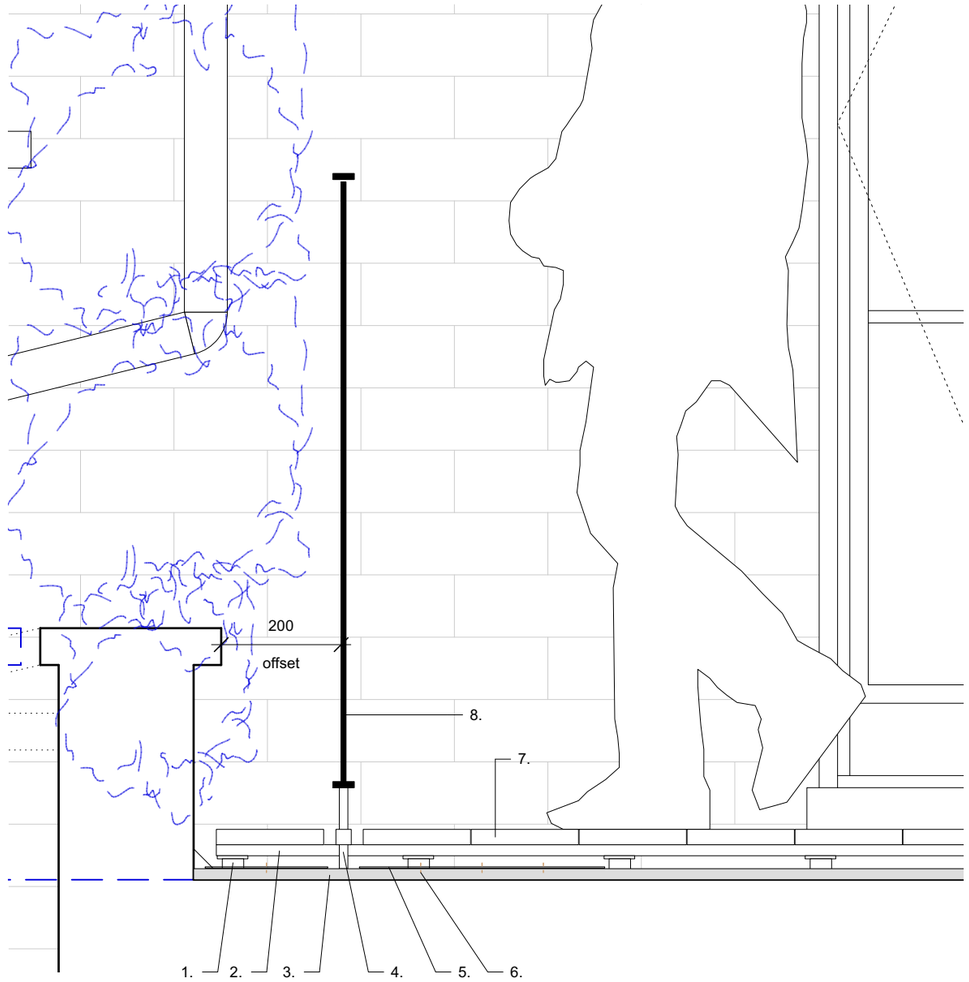
3.0 Proposed Works

3.9 Existing Roof Terrace Safety / Balustrade (cont.)

The proposed balustrade to the roof terrace is set back to the narrower width of the terrace and a permanent non-movable planter is proposed with planting such as bamboo to help create additional privacy - refer to drawings (GA)_101 As Proposed First Floor Plan and (GA)_201 As Proposed Rear + Side Elevations. The proposed balustrades are to the rear of the property (therefore not visible from the street) and would be installed onto the flat roof extension to the property which is not original historic fabric.

The proposed balustrades would be fixed using a removable, self-supporting system (refer to figure 3J + 3K) allowing for them to be removed in future with no impact on the fabric of the building.

In light of the above it is our professional recommendation that these would not damage the character of the property nor the wider conservation area and are designed to regularize and improve the impact of the existing terrace on neighbouring properties and the health and safety of the residents of 23 Kelly Street.



1 Proposed Balustrade Fixing (indicative only)
Scale: 1:10

1. Pedestals
2. Plywood deck to support floor finish
3. Base rail
4. Railing foot
5. Load support plate
6. Load support plate fixings (into base rail)
7. New floor finish to terrace
8. Slim iron heritage-style balustrade

Figure 3K As proposed balustrade system - indicative only

OUTPOST

3.0 Proposed Works

4.0 Accessibility

3.10 Green Roof

In line with The London Plan (2021) and their own sustainability aspirations, the property owner is keen to contribute to *"spaces and buildings that maximise opportunities for urban greening"*. As a home owner in central London with limited outdoors space, one method for 'urban greening' is to implement a green roof. A green roof in this location would be an excellent use of the space and would both contribute to the property owner's enjoyment of the space, as well as the surrounding residents who would no doubt gain pleasure from more green around their homes. This is in addition to the biodiversity and urban cooling benefits it would accomplish. Further to the London Plan, it is noted that the Kentish Town Neighbourhood Plan *"supports the protection and encouragement or areas of biodiverse habitat...promoting the use of green roofs and green walls"*.

4.0 Accessibility

The outlined proposals will have no adverse affect on the accessibility of the property.

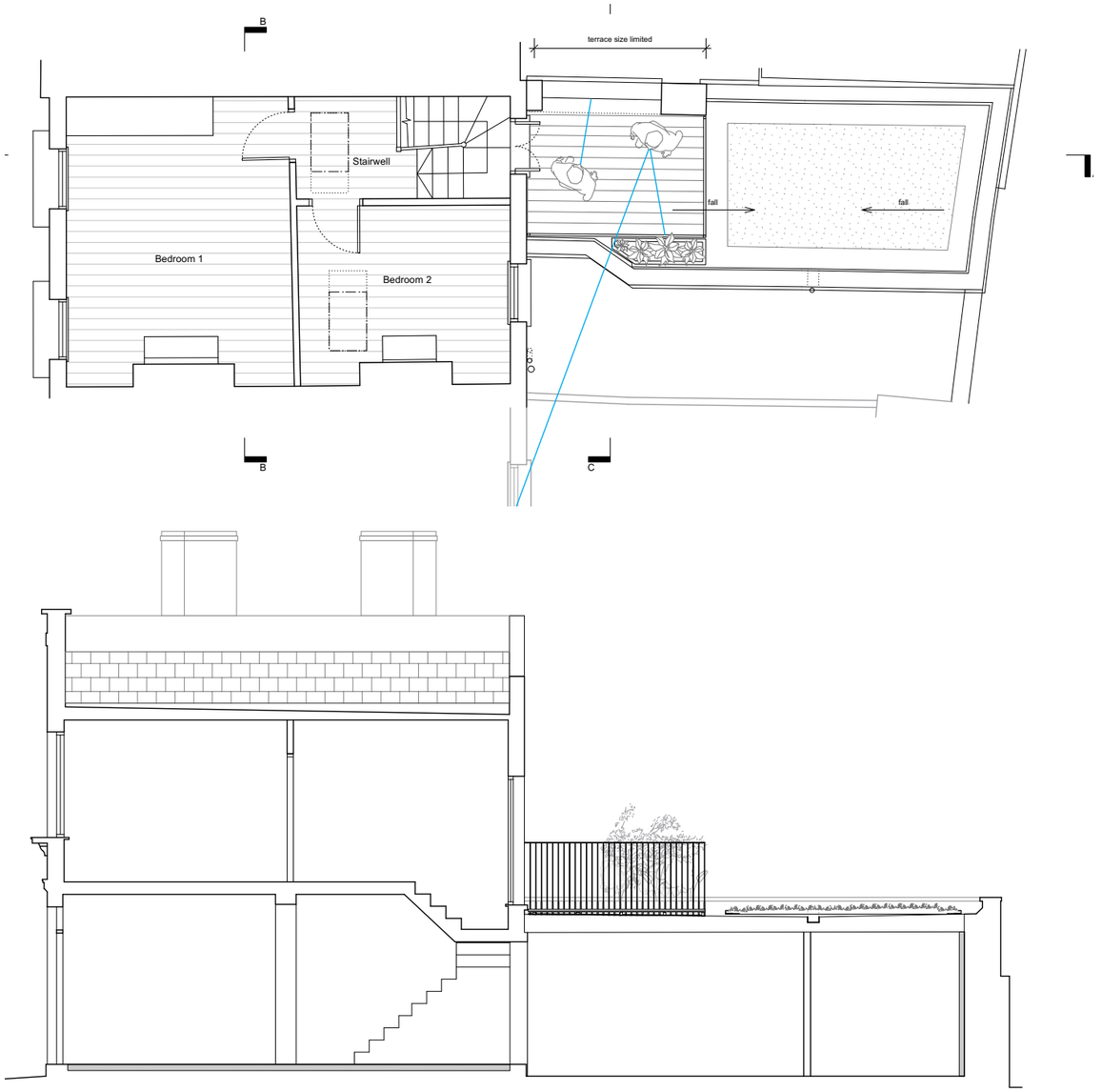


Figure 3R+ S As Proposed First Floor Plan, As Proposed Section AA - Proposed location of green roof

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Thank you.

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