3.0 Design Analysis & Proposal

3.13.0 Existing & Proposed Roof Plan

3.13.1 Demolition or Removal Work

No demolition or removal work is required at roof level.

3.13.2 Structural Alterations

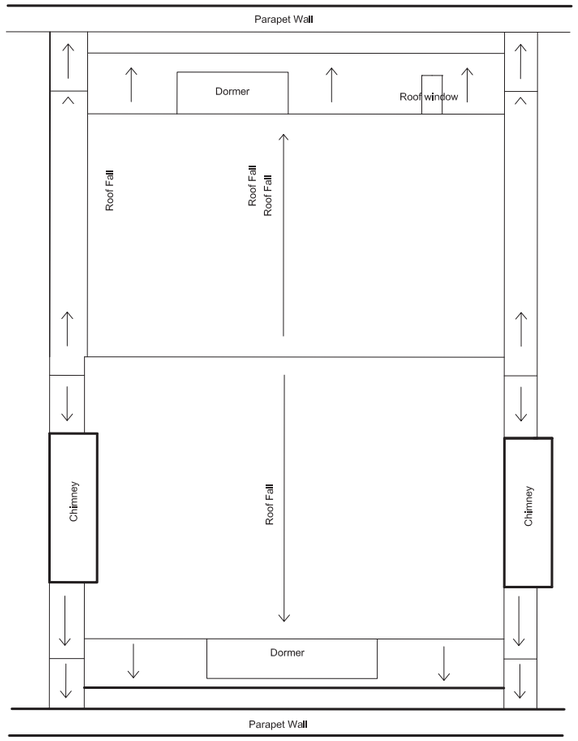
No structural alterations are proposed at this level.

3.13.3 Windows

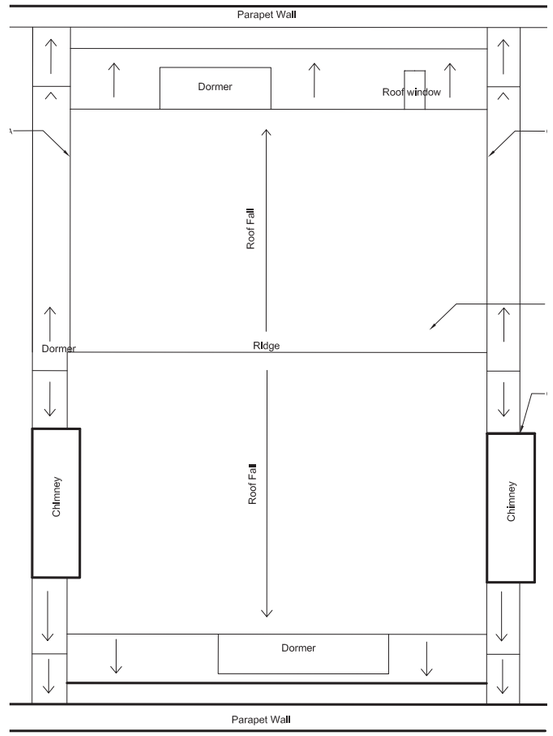
Existing roof and sash windows at mansard roof level to the front & rear will be repaired, repainted and fully overhauled. If a sash window has deteriorated beyond use, it will be replaced to match the original with single glazing. Roof windows to the rear mansards will be replaced with Velux roof windows recessed into slate to minimise projection above the top of the tiles.

3.13.4 Lead Flashing and Slate Roof

The existing roof is to be renewed. Existing sound tiles are to be re-used. Damaged tiles are to be replaced to match as close as possible. Lead flashings will be replaced and sealed to ensure a weather tight installation. Insulation to current Building Regulation standards will be installed above 3rd floor ceiling joists.



Existing Roof Plan



Proposed Roof Plan

3.0 Design Analysis & Proposal

3.14.0 Structural Analysis

AECOM
6-8 Greencoat Place
London
SW1P 1PL
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020 7798 5000 tel
020 7798 5001 fax

20 January 2015

Our Ref: GB/RAL/47069003/150120

Mr Peter Burroughs
Enterprise Director
UCLH Charity
5th Floor East
250 Euston Road
London
NW1 2PG

Dear Mr Burroughs

Ref: 68 Huntley Street, London, WC1

Further to your instruction and my visit to the property last Wednesday, I carried out a visual inspection of the structure to comment on the general condition and identify any defects that you should be aware of in relation to your purchase of the building.

I was joined by Brendan Timlin for my inspection and he kindly filled me in with some background information on the property and others in the terrace that you have recently carried out work to. I understand it is likely that you are intending to re-model the interior and upgrade the building as a whole, which I have also given consideration to in my comments.

Description:

The property is of the Georgian period and I understand dates from the end of the eighteenth century. It is one of a long terrace of small town houses built as individual family dwellings of 4 storeys, which includes a basement level and a top floor mansard. The frontage is on Huntley Street, whereas the rear backs on to a small ground level 'yard' area that is also accessed by a parallel row of properties and a cobbled mews lane beyond.

The construction is typically traditional for the period, being load-bearing brick front, rear, and party walls, with a cross spine wall towards the building centre that is constructed in brick up to the ground floor level, and braced timber stud load-bearing walls above. Wall foundations are most likely to be a spread, stepped brick footings. The basement floor is solid, but all other floors are timber joisted spanning front to back over the spine wall and on to the front and rear elevations. The roof is a mansard formation in timber, with slated elevations and a pitched centre section, with rainwater shed into parapet gutters on the front and rear elevations. All windows and doors in the front and rear elevations have gauged brick arches externally, and most likely, timber lintels internally.

Main access to the property is over a small arched bridge to the single front door on Huntley Street, with a second bridge and porch doors to the rear ground floor giving access to the basement flat and ground floor common parts and staircase. At basement level there are external doors leading to a small front open area accessing a metal escape stair and pavement vaults, while to the rear is a doorway leading to another small open area. The upper parts of the property are served internally via a timber staircase that sits in the rear of the building, adjacent to the right hand side party wall (No 66)

Condition and Observations:

Basement Level Accommodation

The internal walls and staircase arrangement have been re-modelled to provide a self-contained flat/maisonette that includes the ground floor above. Internal walls appear to be a combination of the original brick spine wall and various blockwork or timber stud walls, dividing up the area to provide appropriate living accommodation. The walls appear generally sound, movement and crack free, other than some very fine hairline plaster cracking and small vertical separating cracks where timber stud partitions are attached to main load-bearing masonry. These may be considered as insignificant.

Ceilings are generally level and crack free, and the solid floor appears sound and relatively level.

The internal access staircase is timber and appears sound and level.

Basement: External Front Area & Vaults

The brickwork enclosure walls are partly painted brickwork, and partly painted render. While appearing structurally sound with no significant movement, the paintwork is poor, there is general dampness and some of the render is missing and loose, particularly around the underside of the main entrance bridge above. A general clean down, minor repairs and redecoration would be advisable.

The concrete floor appears sound and laid to falls to direct rainwater to the open gullies. There is however a gathering of rubbish and moss growth that should be cleared to prevent the drains becoming blocked.

Access to the vaults proved difficult but I understand from Natalie Day they are in good, dry condition and commonly used for storage purposes. With this, and there being no signs of movement externally, it would suggest they are in sound structural condition.

The metal escape staircase and street level railings are both in reasonable structural condition, although there is some rusting in the staircase member connections, which would suggest an overhall and re-painting would be advisable.

Basement: External Rear Area

The brickwork enclosure walls are partly painted brickwork, and partly painted render. While appearing structurally sound with no significant movement, the paintwork is poor, there is general dampness and plant growth, and some of the render is missing and loose. A general clean down, minor repairs and redecoration would be advisable.

The porch and access bridge above is partially supported on small steel beams that are exposed, although have painted protection. There is clearly some old rusting and lamination of the steelwork that has been painted over, but more importantly there is more severe rusting and de-lamination of the beams where they enter their bearings in the brickwork. The bearings and steels should be physically investigated for condition and the beams may need strengthening or replacing.

The concrete floor appears sound and laid to falls to direct rainwater to the open gullies. There is however a gathering of rubbish and moss growth that should be cleared to prevent the drains becoming blocked.

3.0 Design Analysis & Proposal

3.14.0 Structural Analysis

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Ground Floor Private Accommodation

With the exception of the internal timber staircase and hallway modifications, this area is much in its original configuration and structure.

The timber floors feel reasonably firm and level, and appropriate for residential use.

All windows and doors are reasonably square showing no indication of significant movement.

Finishes are generally sound other than a small number of insignificant hairline cracks, although there is some damp staining in the rear room lobby ceiling, most likely to be a small leak from services above.

Ground Floor Common Parts

The timber floors feel reasonably firm and level, and appropriate for residential use.

Finishes are generally sound other than a small number of insignificant hairline cracks.

First Floor Private Accommodation

The timber floor to the front room is the longer span and is a little springy and rattles when jumped on. This is not uncommon in such properties and should not be of any great concern for normal domestic loading. The timber floor to the rear room is firmer because of its shorter span.

The floors in both rooms dip slightly to the central spine wall indicating minor deflection in the timber supporting wall below, possibly due to alterations in the wall openings below that have weakened the braced timber construction, or from alterations and minor settlement in the supporting masonry wall at basement level.

All windows and doors are reasonably square showing no indication of significant movement.

Finishes are generally sound other than a small number of insignificant hairline cracks.

Second Floor Private Accommodation

The timber floor to the front room is the longer span and is a little springy and rattles when jumped on. This is not uncommon in such properties and should not be of any great concern for normal domestic loading. The timber floor to the rear room is firmer because of its shorter span.

The floors in both rooms dip slightly to the central spine wall indicating minor deflection in the timber supporting wall below, possibly due to alterations in the wall openings below that have weakened the braced timber construction, or from alterations and minor settlement in the supporting masonry wall at basement level.

All windows and doors are reasonably square showing no indication of significant movement.

Finishes are generally sound other than a small number of insignificant hairline cracks.

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Third Floor Private Accommodation

The timber floor to the front room is the longer span and is a little springy and rattles when jumped on. This is not uncommon in such properties and should not be of any great concern for normal domestic loading. The timber floor to the rear room is firmer because of its shorter span.

The floors in both rooms dip slightly to the central spine wall indicating minor deflection in the timber supporting wall below, possibly due to alterations in the wall openings below that have weakened the braced timber construction, or from alterations and minor settlement in the supporting masonry wall at basement level.

All windows and doors are reasonably square showing no indication of significant movement.

In the rear room there is a damp problem where the mansard slope abuts the party wall, and a separation crack in the plaster between timber mansard structure and party wall. While unlikely to be serious, the flashings and general waterproofing details should be checked for effectiveness and repaired as necessary, to prevent damage to the timber structure and internal finishes.

Finishes are generally sound other than a small number of insignificant hairline cracks.

Externally both the front and rear parapets appear sound and relatively vertical, and the lead waterproofing working effectively.

Roof Construction and Loft Space

Access to the loft space was difficult and with various items and rubbish being stored in the loft, the structure was not fully visible. However, the timber construction appeared in sound and well-ventilated condition with no signs of roof spread or significant movement.

Externally the slated finish and lead flashings appeared in old but reasonable condition on the mansard slopes, and although the top pitched roof could not be viewed from close range, what could be seen from ground floor level appeared reasonable for its age.

Common Staircase

The common staircase leading to all floors felt firm and sound although at the upper levels it tips slightly away from the party wall towards the centre of the property. This is most likely from the effect of the spine wall dropping slightly at the upper levels, as it provides support to the staircase trimming beams, and should not be of concern.
At the top landing there is a damp problem where the mansard slope abuts the party wall, and a separation crack in the plaster between timber mansard structure and party wall. While unlikely to be serious, the flashings and general waterproofing details should be checked for effectiveness and repaired as necessary, to prevent damage to the timber structure and internal finishes.

Front Elevation

The fair-faced brickwork of the front elevation is in generally very good condition and vertical, with the one exception being some minor outward bulging around the sub sill panel between the 1st & 2nd floors of the LHS window. Otherwise the horizontal lines are good, the pointing appears sound, the windows and doors are square, and the gauged brick arches perfectly sound. The whole elevation is relatively free of any significant cracking or movement.

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Internal investigation of the relationship and tying in of the bulging brickwork and timber floor at 2nd floor level would be advisable.

Rear Elevation

The fair-faced brickwork of the front elevation is in generally good condition and vertical, with the one exception being some outward bulging around the sub sill panel between the 1st & 2nd floors and reveals above of the LHS window. Otherwise the horizontal lines are good, the pointing appears sound, the windows and doors are square, and the gauged brick arches perfectly sound. The whole elevation is relatively free of any significant cracking or movement.

Internal investigation of the relationship and tying in of the bulging brickwork and timber floor at 2nd and 3rd floor levels would be advisable.

Chimney Stacks

There is a single chimney stack serving the property towards the front and attached to the party wall with No. 70. A close up inspection was not possible but from ground floor level it appeared reasonably sound and vertical.

Rear Porch at Ground Floor and Bridge Link

Generally the brick construction appears sound and square with no sign of movement. However, as already noted there is a question mark over corroding support steelwork just below ground floor level that should be investigated.

Condition Summary and Principal Structural Defects:

1. The general structural condition of the property is very good for a building of this type and age, and with some minor investigation items and repair, will provide a sound investment.
2. The front area metal staircase has some rusting and laminating member connections requiring attention.
3. Small steel beams supporting the rear link and porch are rusting and laminating at their bearings into the brickwork supports.
4. The upper front floor room floors are springy with some bounce.
5. The upper floors dip towards the mid span support of the spine wall.
6. Dampness and cracking at the rear junctions of the mansard and both party walls.
7. Outward bulging in the front elevation brickwork at 1st to 2nd floor levels.
8. Outward bulging in the rear elevation brickwork at 1st to 2nd floor brickwork and above.

Recommendations:

1. The front area metal staircase requires stripping down and all connections mechanically scraped and brushed to remove all friable metal and rust. Repairs should be made and/or replacement parts installed, and the metalwork primed with a 2 pack epoxy paint and redecorated (Photo)
2. The existing steel beams supporting the rear ground floor bridge and porch should be stripped down and the bearings investigated for excessive corrosion to the bearing ends. Depending on the severity of the corrosion, either mechanically scrape and brush the beams to remove all friable metal and rust, and prime with a 2 pack epoxy paint and redecorate, or replace with appropriately designed beams treated against corrosion; repair bearings to masonry(Photo)
3. Investigate the upper floor front room joists and carry out a design check for adequacy. Strengthen with additional joist if necessary.

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4. Investigate causes for the dip in the upper floors towards the central spine wall. Check upper stud walls for cut brace members if past alterations to openings are suspected. Check basement brick spine wall for extent of original wall retained by previous alteration works. Consider installation of new support steelwork at 1st floor level between the party walls to reduce loading on the lower spine wall to prevent additional deflect of the floors in future.
5. Investigate dampness and waterproofing details at the junction of mansard and both party walls at 3rd floor level rear(Photos)
6. Investigate the relationship between the timber floor construction and front elevation brickwork in the vicinity of the outward bulge. If defective, add an internal tie arrangement(Photo)
7. Investigate the relationship between the timber floor construction and rear elevation brickwork in the vicinity of the outward bulge. If defective, add an internal tie arrangement(Photo)

I trust the foregoing information and comments are clear, but If I can offer any further explanation, please do not hesitate to contact me.

Yours sincerely
for **AECOM**

Richard Lambert
Associate Director, Buildings + Places (Structures)

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3.0 Design Analysis & Proposal

3.14.0 Structural Analysis

AECOM Buildings + Places (Structures)
6-8 Greencoat Place, London, SW1P 1PL

Job No: 47069003
Date: 20 January 2015

Recommendation Item 1

Basement front area metal escape stair & railings

Recommendation Item 2

Support steelwork for rear bridge and porch

Recommendation Item 5

Dampness and cracking at 3rd floor of mansard & party wall No. 66

AECOM Buildings + Places (Structures)
6-8 Greencoat Place, London, SW1P 1PL

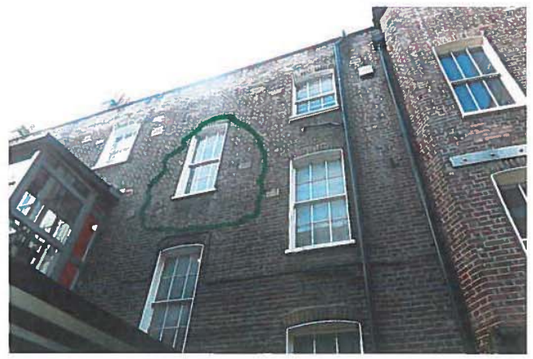
Job No: 47069003
Date: 20 January 2015

Recommendation Item 5

Dampness and cracking at 3rd floor of mansard & party wall No. 70

Recommendation Item 6

Minor outward bulging in front elevation LHS 2nd floor

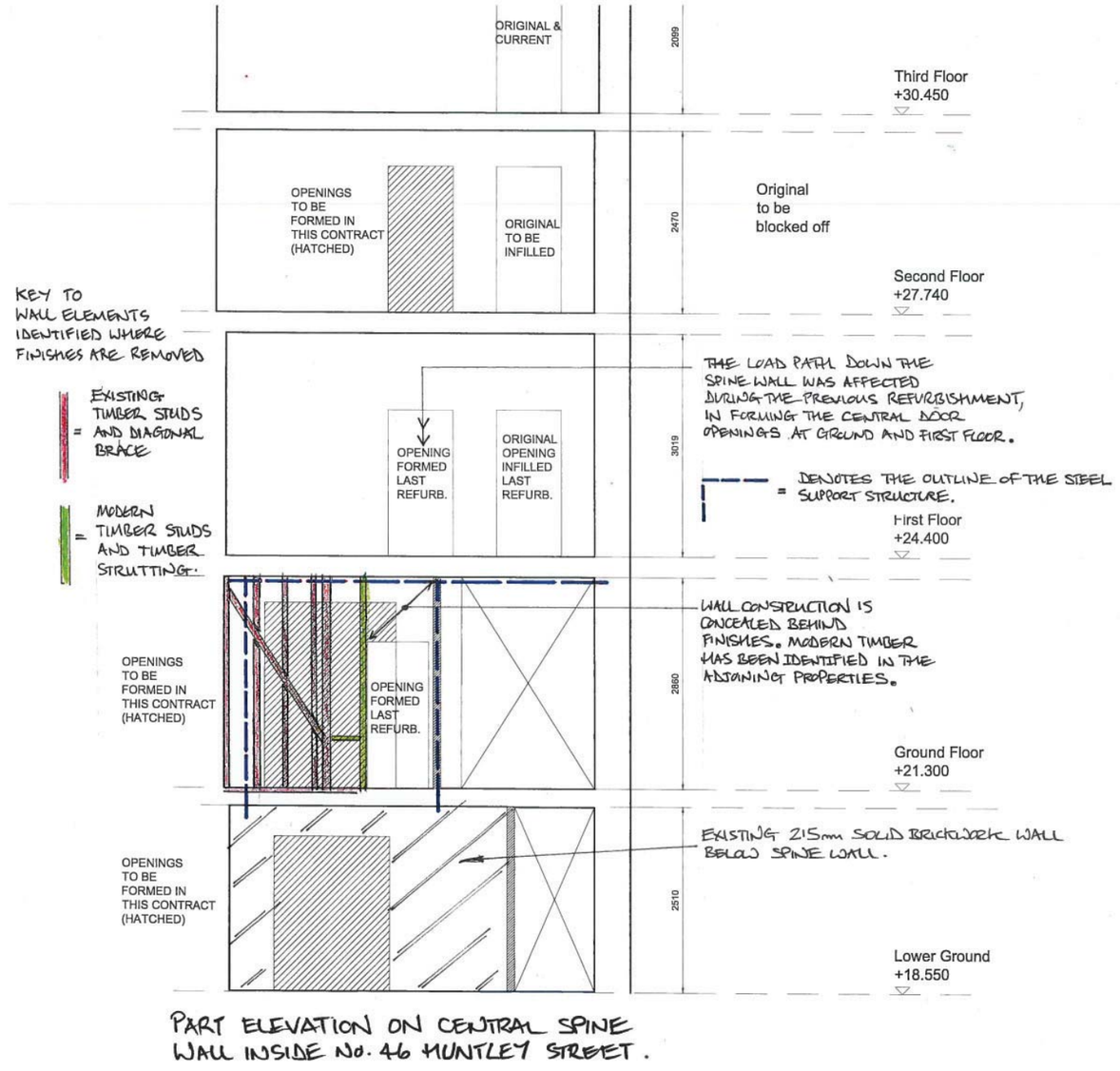


Recommendation Item 7

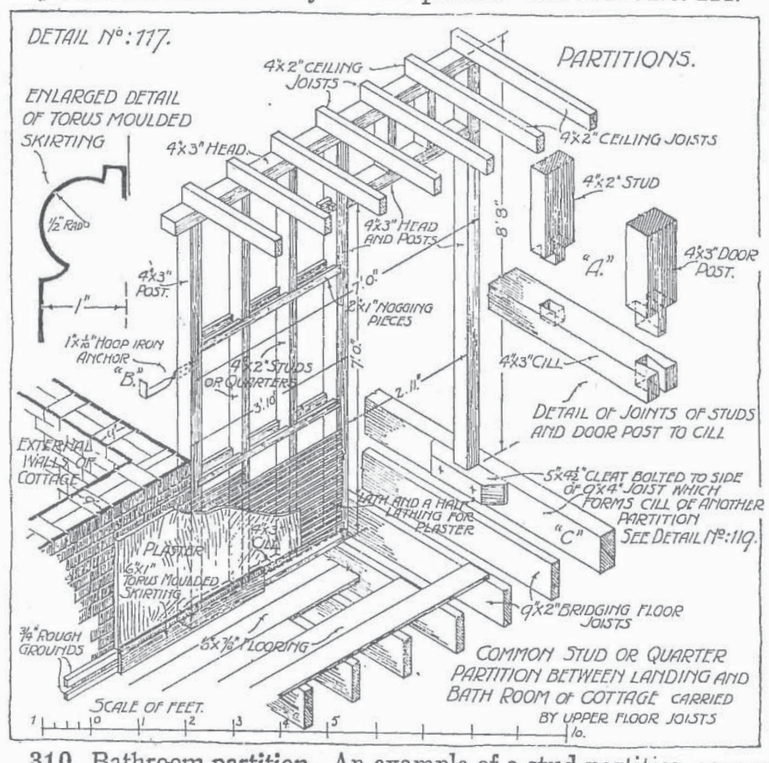
Outward bulging in rear elevation LHS 2nd – 3rd floor stair landing level.

3.0 Design Analysis & Proposal

3.14.0 Structural Analysis



PART ELEVATION ON CENTRAL SPINE WALL INSIDE No. 46 HUNTLEY STREET.



168 PERMANENT CARPENTRY [CH.

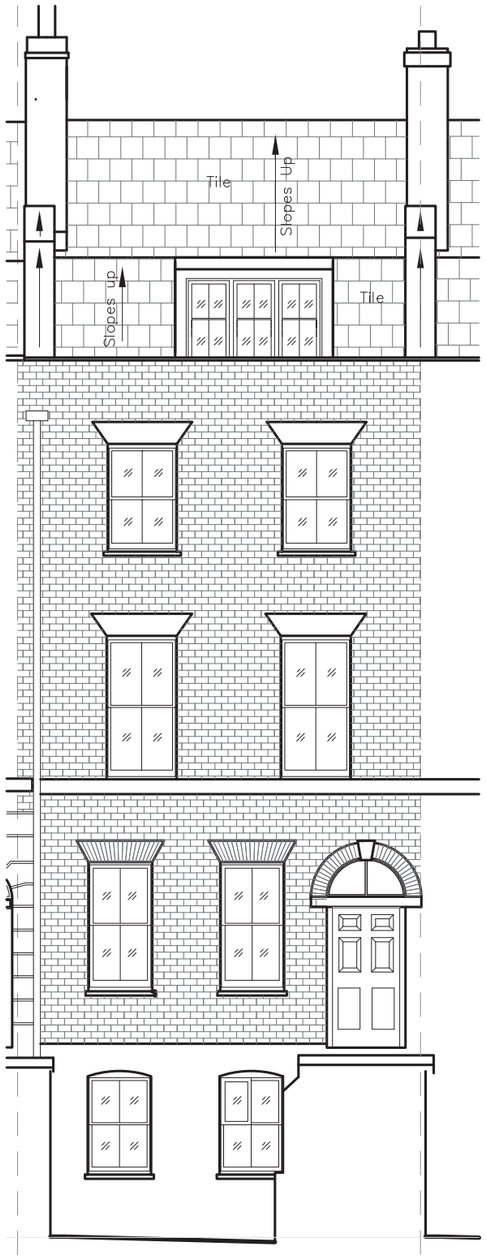
posts" are specially strong studs forming the sides of a doorway and affording a rigid groundwork to which door frames and finishings may be secured. "Head" and "cill" are pieces of varying size, laid across ceiling joists and floor respectively and must be thick enough to joint the studs satisfactorily thereto.

Members of partitions should not be of excessive width because they interfere with the "key" of the plaster.—See detail No. 114.

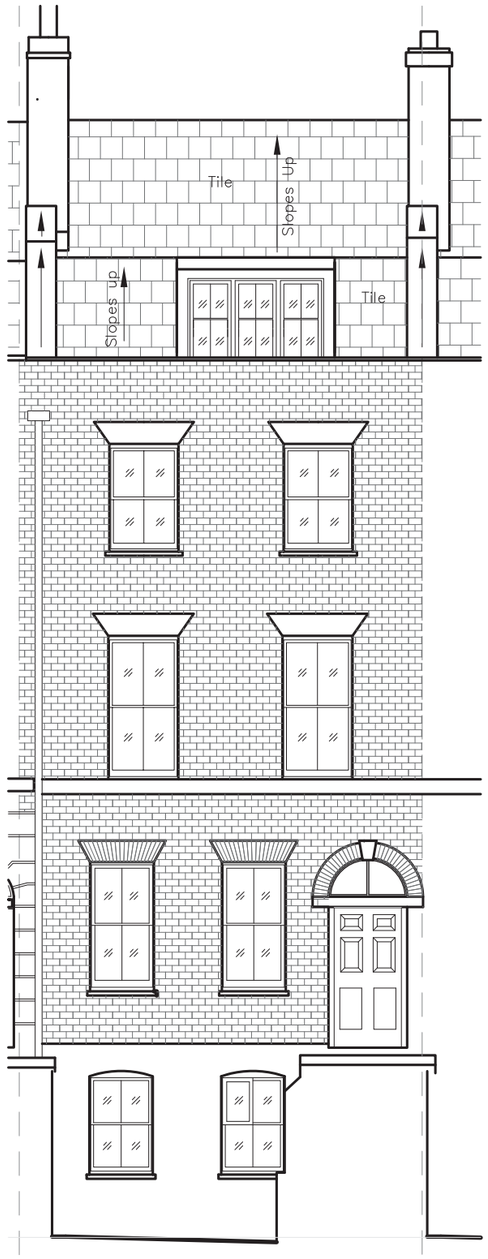
310. Bathroom partition. An example of a stud partition occurs in dividing the bathroom from the landing in cottage. No wall exists on the floor below which might have been carried upward for the purpose, hence timber is used.

On examination of the plan it will be seen that this partition is contiguous to another partition dividing the bathroom from the back bedroom and at right angles to it; see general plans of cottage. In connection with the larger partition (detail No. 119) a cill, 9″ × 4″, takes the place of a 9″ × 2″ floor joist as shown also at "C" in detail No. 117. This provides a suitable base for supporting the right-hand door post. A seating is formed by a 5″ × 4½″ cleat about 1′ 9″ long,

3.0 Design Analysis & Proposal



Existing Front Elevation of 68 Huntley Street

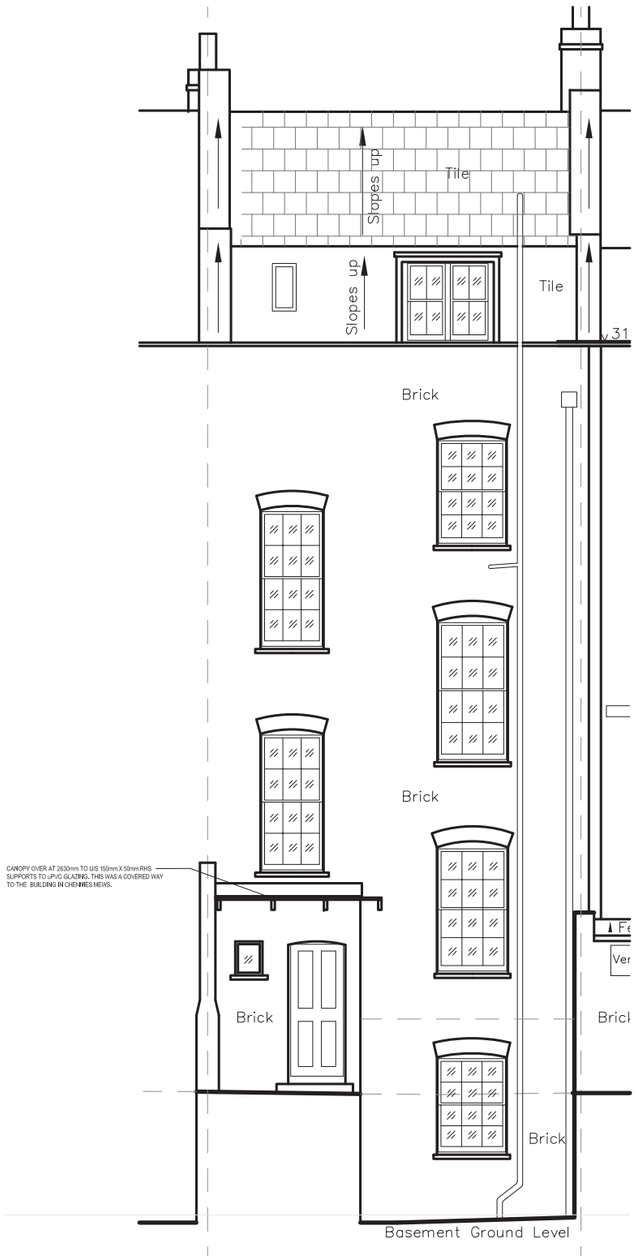


Proposed Front Elevation of 68 Huntley Street

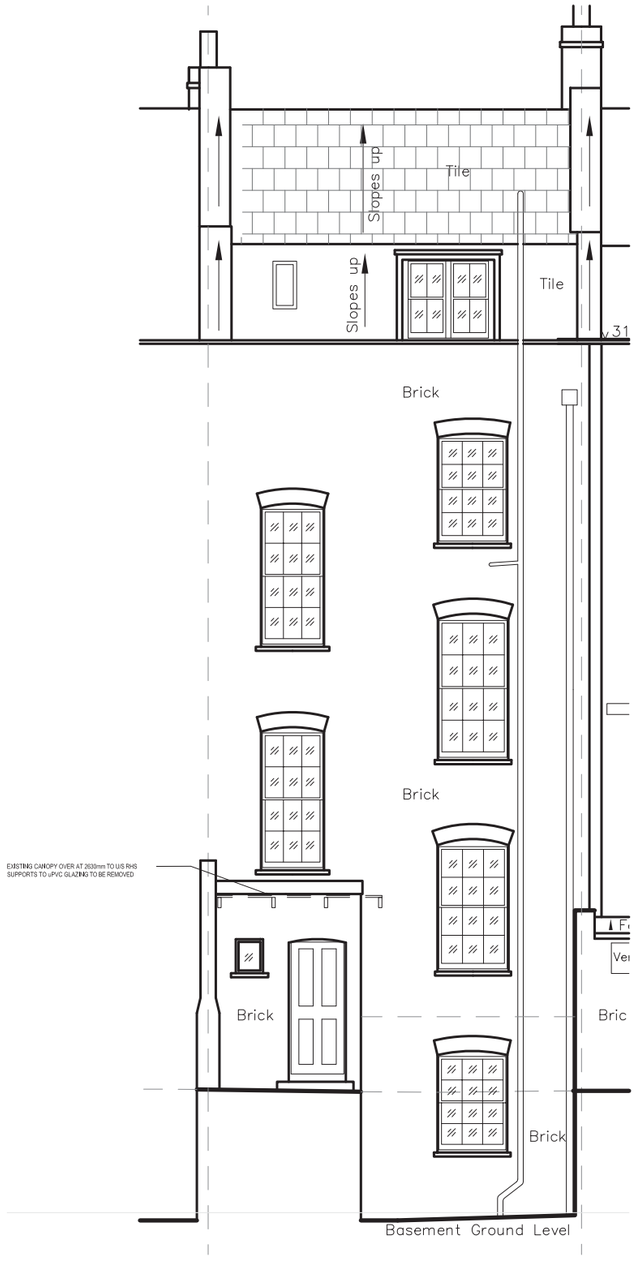
3.15.0 Existing & Proposed Front Elevation

Location	Required work
Brickwork	Brickwork where necessary will be carefully re-pointed & made good as existing No demolition or new works are proposed for the front elevation Damp proof course to basement area be assessed
Windows	Existing Sash windows will require to be repaired, repainted and overhauled. If windows need to be replaced these will require site measuring and made to fit existing openings and match existing windows incorporating single glazing. Sills will need to be repaired or replaced depending on existing condition.
Front Entrance Door	The front door to be overhauled and made good. Replacement ironmongery will be required. An access security system will be installed.
Rainwater Pipework	Any damage areas will be replaced as necessary and made good as existing and painted black on completion.

3.0 Design Analysis & Proposal



Existing Rear Elevation of 68 Huntley Street



Proposed Rear Elevation of 68 Huntley Street

3.16.0 Rear Elevations

Location	Required work
Brickwork	Brickwork where neccessary will be carefully re-pointed & made good as existing No demolition or new works are proposed for the rear elevation. Any making good of brickwork where required will match existing within the existing context of brick material and colour Damp proof course to basement area be assessed
Windows	Existing Sash windows will require to be repaired, repainted and overhauled. If windows need to be replaced these will require site measuring and made to fit existing openings and match existing windows incorporating single glazing. Sills will need to be repaired or replaced depending on existing condition.
External Doors	All external doors to be overhauled and made good. Replacement ironmongery will be required.

3.0 Design Analysis & Proposal

3.17.0 Existing & Proposed Services

3.17.1 The existing gas and electric services to meters in the front area will be retained. New gas and electric services will be taken from the meters to each flat to modern standards and regulations.

3.17.2 New energy efficient boilers will be installed in the new kitchen to replace the existing. New radiators with thermostatic valves will be installed to replace existing.

3.17.3 Pipework: All pipework will be copper sensitively introduced to ensure that no exposed, pipework is visible as far as possible.

3.17.4 The existing drainage outfall below basement slab to Huntley Street will be inspected, cleared and reused. A new above ground drainage stack will be provided in the same zone as the existing to take waste from newly fitted bathrooms and kitchens.

3.17.5 Ventilation: Independent mechanical ventilation systems are proposed to serve the kitchens, and bathrooms. All other areas will be naturally ventilated by opening windows.

3.17.6 Lighting: All rooms within the apartment will be illuminated using sympathetically integrated light fittings, to light levels as recommended by the CIBSE Lighting Guide. Emergency lighting will be provided to meet Building Regulations. Sensitive external lighting is proposed in the rear garden.

3.17.7 Smoke detectors: As per Building regulations requirements and will be sensitively located and concealed.

3.17.8 Small Power: Electrical small power will be distributed throughout the premises with socket outlets sensitively integrated with the building's fabric.

3.17.9 Miscellaneous: The following additional services are proposed:

3.17.10 Television Aerial: A new aerial is to be provided with television points to each flat;

3.17.11 Telephone points: Points are proposed within all living rooms and bedrooms;

3.17.12 Entrance call system: A video security access system will be provided from each flat to the main entrance door.

4.0 Summary & Conclusion

4.0.0 Summary

4.0.1 This heritage statement / Listed Building Consent assessment highlights the existing characteristics of the surrounding area and characteristics. The historical analysis and heritage assessment has informed the design proposal to provide a new sensitive adaptive use for Huntley St properties.

4.0.2 The main architectural merit of this section of Huntley Street sitting among adjacent buildings of various styles and heights is the contribution of each existing terrace houses of 46 - 68 Huntley St. that provides a constant three storey with mansard uniform terraced block. The buildings represent modest Mid-Georgian housing of the original Bedford estate. They do not represent exceptional or unique examples of dwellings of their age or character.

Proposed Works

4.0.3 Listed Building Consent is sought for the following works:

Stripping out of the existing three flats;

Flat 1 - 2 Bed maisonette (Basement and Ground floor).

Flat 2 x Studio (First floor) and

Flat 3 - 2 Bed maisonette (Second and Third floor).

4.0.4 The flats are to be refurbished and modernised to current standards, regulations and expectation, with an additional ensuite bathroom added at basement and third floor levels. No external alterations are proposed to the elevations.

Internal Alterations

4.0.5 Various options and plans were assessed to cause the minimal impact on the existing fabric of the building, but create modern desirable flats, requiring only routine maintenance for the next 20 years .

4.0.6 Structural alterations have been carried out at Ground floor level to provide an interconnection between the Kitchen & Living Room considered desirable by modern residents and apartment planners. Steelwork which has been installed will be concealed within spine wall and the floor zones and will not have a visual impact. New partition and doors at ground floor will be added. This will not effect any special features of interest associated with the buildings fabric. The opening will be sympathetic to the overall structure, character and plan form.

4.0.7 Floor levels are inclined to dip to the centre between the party walls, inconsistent with the span of floor joists in one length from front masonry wall to the rear masonry wall. This is considered to be long term settlement of parts of the structure, although not active. The structural proposals at Ground and 1st floor levels will assist to prevent further movement.

Restoration and Repair

4.0.8 The conversion to flats pre 1980's, introducing a bathroom to the centre of the property and demolition of the rear chimney breast, removal of fire places, etc would have distroyed a number of original features of the property.

4.0.9 Lath and plasterwork was cracked where ceiling sagged and a number had previously been removed or covered with a layer of plasterboard. This also affected cornices, some or all of which were not original, at ground and first floor level. Initial attempts to remove paintwork to restore cornices were unsuccessful and it is proposed to replace them with fibrous plaster cornices to match as close as possible.

4.0.10 New gas, electric and water services will be required to bring this property up to current standards and regulations. New wiring and plumbing will be handled sensitively and will not impact upon any features of interest or the buildings' plan form.

Disabled Access

4.0.11 Due to the site location and entrance it is not possible to gain disabled access into this building without removing the front steps of this property and replacing with a stair lift. The height and entrance will be to steep for a ramp access. No access is possible from the rear.

4.1.0 Conclusion

4.1.1 The proposed works have incorporated a sensitive designed approach to the building balancing the historic appearance with the requirements of modern living conditions, making best endeavours to address its historic, site characteristics and architectural features.

4.1.2 This proposal represents the best solution for this property in context with the majority of the houses on Huntley Street which have 3 flats within each property.

4.2 Further Application Requirements

4.2.0 Further Application Requirements:

1 Affordable housing Statement – not required

2 Air quality assessment – not required, the proposal does not have an adverse effect.

3 Biodiversity survey and report – not required proposal does not have any biodiversity impact.

4 Daylight/Sunlight assessment: - All windows are well lit and already have residential use. Therefore no further calculations are required. There is no external construction proposed, therefore no danger of overshadowing any neighbours.

5 Economic statement: Not applicable.

6 Environmental Statement: An EIA is not required.

7 Town Centre uses: Not applicable

8 Flood risk assessment: Site is not within the Flood risk Zones 2&3.

9 Foul sewage and utilities assessment: The proposed application will use the existing infrastructure system.

10 Heritage Statement. See Section 2 & 3.

11 Land contamination assessment: Not applicable.

12 Landscaping details: Not applicable no external works.

13 Lighting assessment: Not required.

14 Noise impact assessment: This is already a building with residential use. No noisy plant is proposed. No changes to the noise impact proposed.

15 Open space assessment: Not applicable.

16 Parking Provision: No parking is provided as per the existing building.

17 Photographs: See heritage statement.

18 Planning obligations: Not applicable.

19 Planning Statement. See listed building consent form and heritage statement.

20 Waste - No increase in waste by existing users. Minimal waste will be produced.

21 Statement of community involvement: Not applicable.

22 Structural Survey: minimal structural alteration are required to support existing walls.

23 Transport assessment: No transport assessment required.

24 Travel plan: Not required.

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