OSBORNE EDWARDS
CONSULTING STRUCTURAL ENGINEERS
39-41 NORTH ROAD
LONDON
N7 9DP
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FRONT GARDEN

45A BROADHURST GARDENS

LONDON

NW6

15312/JO

MAY 2016

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REGISTERED IN ENGLAND 4173590

INTRODUCTION

The front garden at 45A Broadhurst Gardens is to be upgraded. This will include:

- A new retaining wall to the lightwell infront of the lower ground floor flat.
- A new replacement brick boundary wall along the back edge of the public footpath and the boundary with No 47 Broadhurst Gardens.
- New steel stairs between the entrance path/garden and the front door to the lower ground floor flat.

The main consideration in the two new walls is the presence of a mature Lime tree adjacent to the footpath. This tree has a Tree Preservation Order placed on it.

Both the existing retaining wall and the front and side boundary walls are influenced by the Lime tree and have all moved and/or cracked.

The existing stair to the Lower ground floor flat is showing signs of wear and tear and the treads also appear to be differing heights.

PROPOSALS

a) NEW RETAINING WALL TO LIGHTWELL.

The existing retaining wall appears to be at least 1 brick thick (225mm) brick wall. The existing height is 1250mm and BRE guidelines suggest the wall should thicken out about 900mm below ground level but this hasn't been verified.

To improve the appearance and to minimise the likelihood of ongoing damage from the tree we recommend the existing wall be removed and replace with a concrete wall with brick facing.

A sketch for the retaining is shown in Appendix A along with a method statement for construction of the wall that protects the tree roots.

b) NEW FRONT AND SIDE BOUNDARY WALL.

The front garden wall has a vertical crack directly in front of the tree. This appears to show upwards and outwards movement. Basel growth may be pressing on the rear face of the wall and causing outwards movement. Upwards movement may ether be from root growth beneath the wall or from soil heave. It is more likely to be the former.

The boundary wall between 45 and 47 has been re-built or repaired in the past. Part of the brick wall has been rebuilt off a lintel bridging over the base of the trunk tree this has now been pushed out by 50 to 75mm and has fractured vertically, moving both the brickwork and the lintel.

It is a requirement, as set out in the pre application, that walls of a similar height and appearance will be required for planning permission to be given. Tree roots will need to be exposed for the placement of new foundations to be agreed with the Planning Officer.

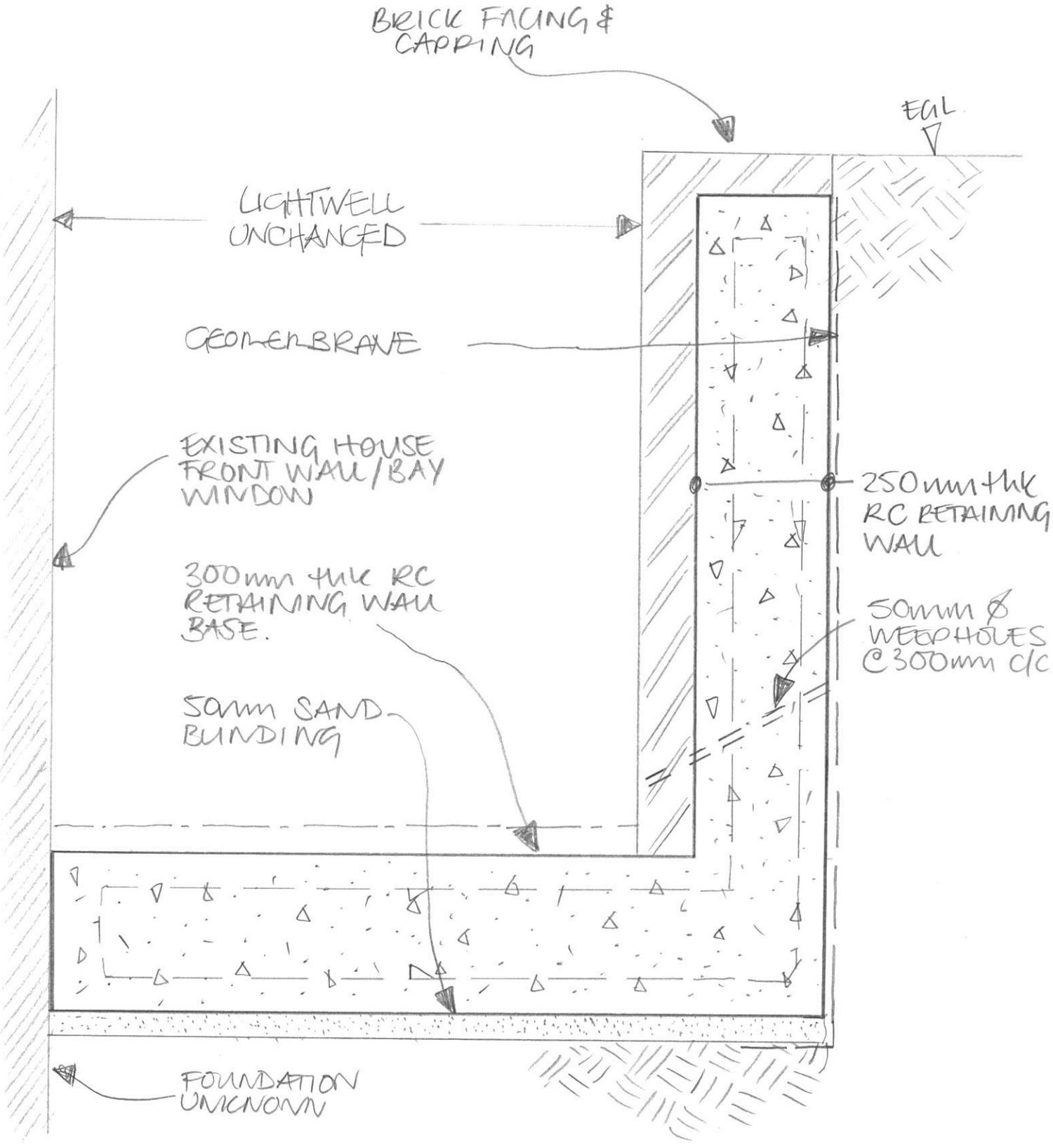
A sketch showing the two new walls is attached in Appendix B along with a method statement for the construction.

c) STAIRS TO LOWER GROUND.

Existing stone steps exist. These appear to be supported on a stub wall constructed alongside the boundary wall and the stones do not appear to be set into the wall. A new steel stair is proposed and this will be designed and supplied by others. A method statement is attached for the removal of the existing stair whilst ensuring the boundary wall remains stable.

Appendix A

RETAINING WALL TO LIGHTWELL



Osborne Edwards Ltd CONSULTING STRUCTURAL ENGINEERS OMNIBUS BUSINESS CENTRE 39/41 NORTH ROAD LONDON N7 9DP TELEPHONE 020 7226 2444	PROJECT TITLE 45A BROADHURST GARDENS		JOB NO 15213
	DRG TITLE RETAINING WALL SECTION		DRG NO RW-01A
	SCALE @ 1:10	DATE DEC 2015	REV P1

METHOD STATEMENT: RETAINING WALL TO LIGHTWELL.

1.0 Plan the program for the demolition of the wall. Organise a meeting with the Tree Officer on the day of, or day after this and alert the Arboriculturalist of the dates so they are able to carry out any work required to the tree roots without delay.

2.0 Carefully remove the existing brick retaining wall and its foundation without disturbing the soil behind the wall or any tree roots.

3.0 Provide temporary ply boarding, propping and sheeting to make sure the soil remains stable and the soil does not dry out.

4.0 Meet the Tree Officer on site to agree any root pruning or additional protection measure in readiness for the construction of the new wall.

5.0 Carry out any necessary work on the tree roots.

6.0 Excavate to the required depth for the base of the wall and the kicker. Lay sand blinding. Cast the base and kicker.

7.0 Shutter in front of the wall. Place a geomembrane against the exposed soil to minimise the effect of concrete leaching into the soil and cast the wall.

8.0 Add facing bricks and surfacing.

Appendix B

FRONT AND SIDE GARDEN WALLS

KEY

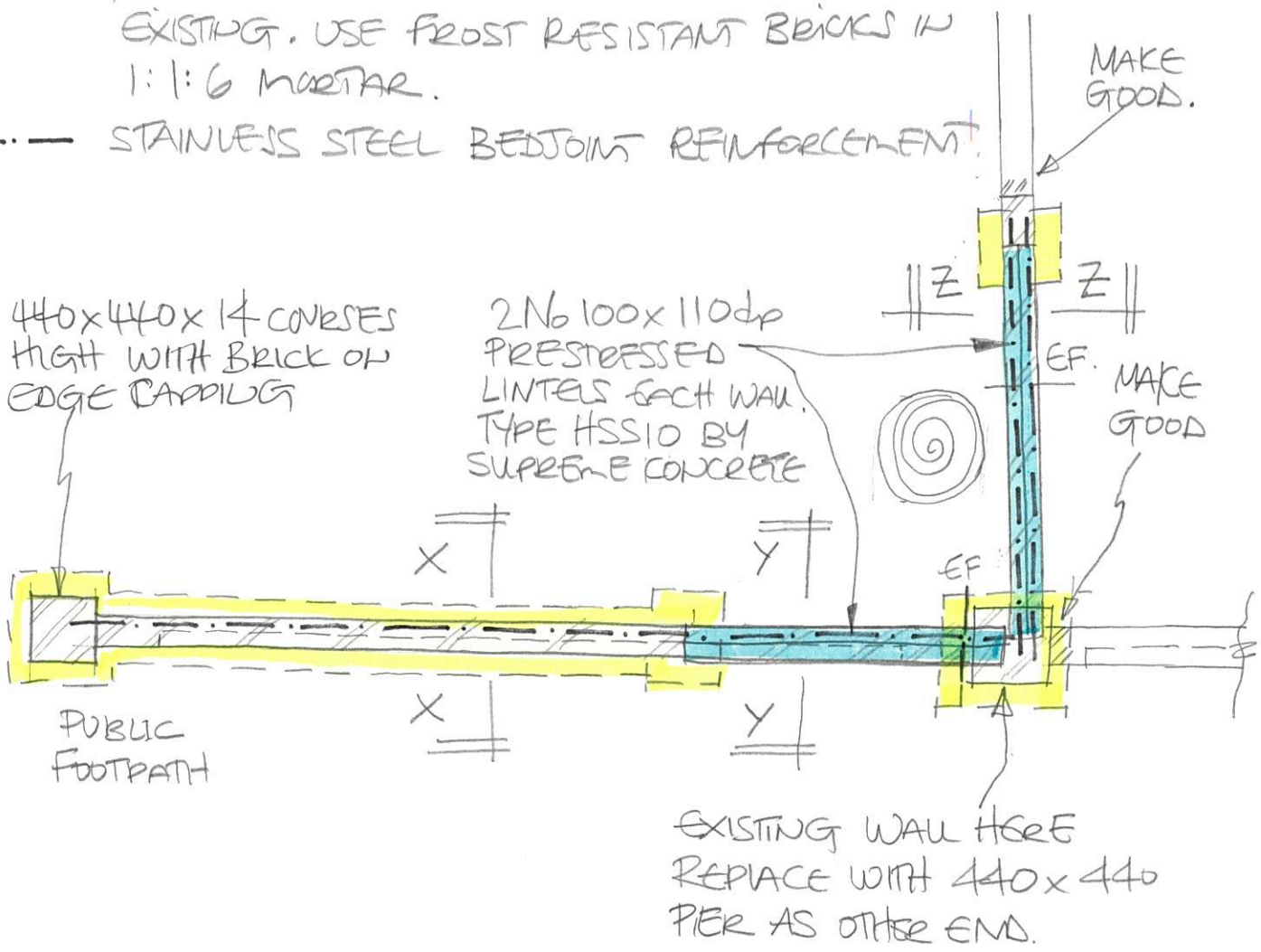
EF : LOCATION OF EXISTING FRACTURE

: MASS CONCRETE FOUNDATION

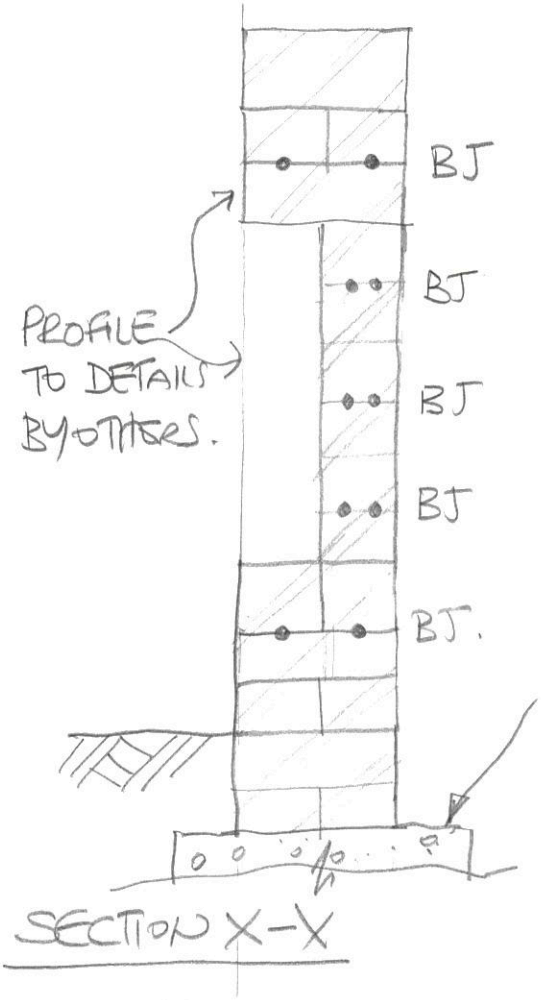
: PRESTRESSED LINTELS MAX 2.0m SPAN.

MAKE GOOD : TOOTH & BOND NEW BRICKWORK INTO EXISTING. USE FROST RESISTANT BRICKS IN 1:1:6 MORTAR.

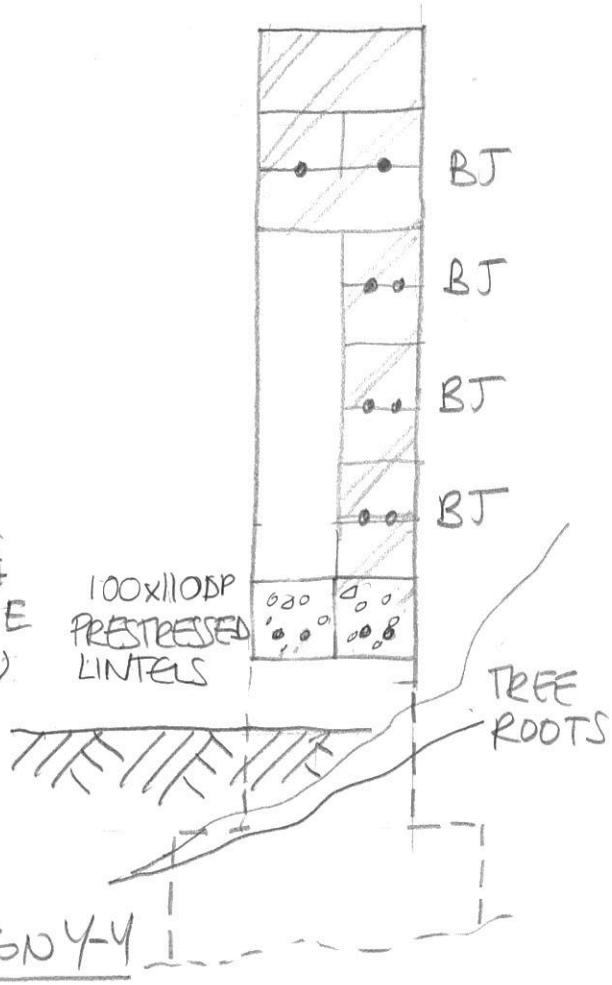
—·— STAINLESS STEEL BEDJOINT REINFORCEMENT.



Osborne Edwards Ltd CONSULTING STRUCTURAL ENGINEERS OMNIBUS BUSINESS CENTRE 39/41 NORTH ROAD LONDON N7 9DP TELEPHONE 020 7226 2444	PROJECT TITLE 45A BROADHURST GARDENS		JOB NO 15213
	DRG TITLE PLAN. GARDEN WALLS.		DRG NO GW-01
	SCALE 1:50	DATE MAY '16	REV

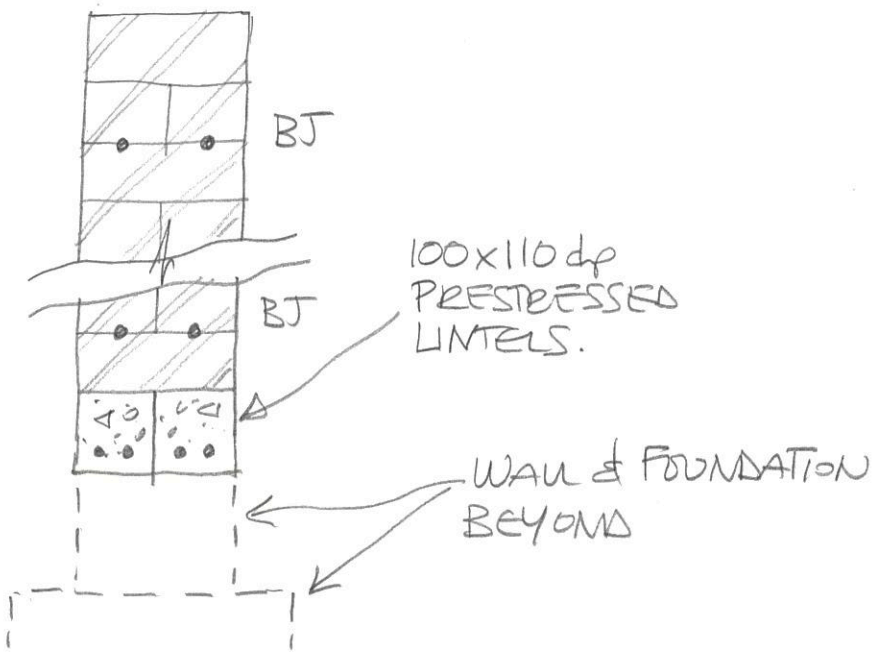


SECTION X-X



SECTION Y-Y

BJ DENOTES BEDJOINT REINFORCEMENT BY BRC.
TO BE STAINLESS STEEL AND TO SUIT WALL WIDTH



SECTION Z-Z.

Osborne Edwards Ltd CONSULTING STRUCTURAL ENGINEERS OMNIBUS BUSINESS CENTRE 39/41 NORTH ROAD LONDON N7 9DP TELEPHONE 020 7226 2444	PROJECT TITLE 45A BROADHURST GARDENS		JOB NO 15213
	DRG TITLE SECTION X-X, Y-Y, Z-Z		DRG NO GW-02
	SCALE NTS	DATE MAY '16	REV

METHOD STATEMENT: FRONT AND SIDE GARDEN WALLS

1.0 Plan the program for the demolition of the two walls. Organise a meeting with the Tree Officer on the day of, or day after this and alert the Arboriculturalist of the dates so they are able to carry out any work required to the tree roots without delay.

2.0 Carefully remove walls and foundations without disturbing the tree roots. This will be the whole length of the existing brick wall at the front of the property and an agreed length of the wall between 45 and 47.

3.0 Cover with sheeting to make sure the soil and any exposed tree roots do not dry out.

4.0 Meet the Tree Officer on site to agree any root pruning or additional protection measure in readiness for the construction of the new wall. Also agree the size and location of any new foundations.

5.0 Carry out any necessary work on the tree roots to make space for the foundations and agree the method of construction depending upon what is found.

6.0 Form the bases in either brick or concrete.

7.0 Build up to a level suitable for placement of concrete lintels.

8.0 Construct brick walls to the required height and appearance with bed joint reinforcement as specified on the drawings..

Appendix C

STAIR TO LOWER GROUND

METHOD STATEMENT: STAIR TO LOWER GROUND FLOOR

1.0 Provide temporary access to the Lower Ground floor flat and temporary guarding where the stairs are removed.

2.0 Starting from the top remove carefully remove each step. At the same time or prior to the work, provide temporary support to the existing masonry wall.

If it is found the steps are built into the adjoining wall alert the structural engineer immediately.

3.0 Remove any supporting walls beneath the existing steps.

4.0 Excavate a new foundation at the base of the new steel stair in an agreed location.

5.0 Install the new steel stairs.