

**Damaged Structures
(within the attached outbuilding)
Method Statement & Justification for Replacement**

15/01/25

Sussex Lodge

Sussex Lane

Spencers Wood

RG7 1BY

1. Introduction

This Method Statement provides a summary and explanation of the methods and sequencing of activities associated with the re-building/replacement of existing fabric.

2. Scope of Works

The replacement of numerous areas of brickwork or timber that are damaged, unstable or require adjusting in order to be structurally sound or facilitate the installation of new windows.

The areas affected are within the attached outbuilding:

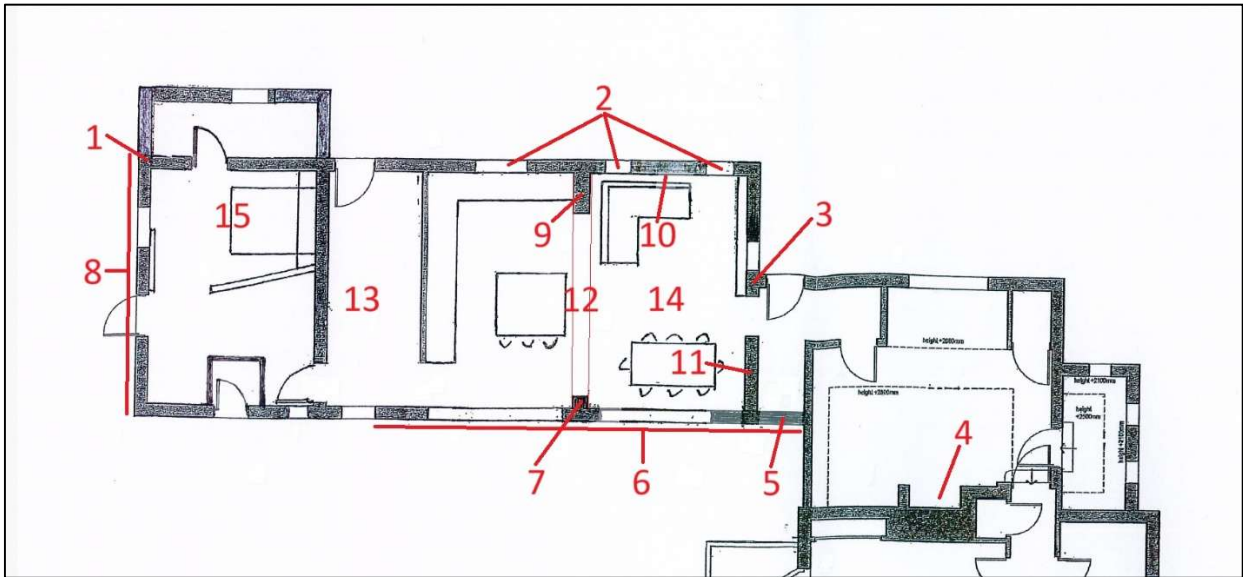


Fig.1.

2.2 Enabling Works, Hoarding and Gates

All necessary precautions will be taken to protect existing materials being retained and re-used.

3. Construction Sequence & Method Statement

STABLE – SOUTH WEST CORNER (Fig.1 No.1)

The south western corner of the stable has been exposed by the demolition of the lean-to, (as approved by previous permissions 223175 and 223176).

The corner brickwork appears to have been patched in when the lean-to was in place and is not structurally tied to the southern or eastern elevations at all, leaving a large gap and daylight visible through the wall, from ground level up to the roof. This section of corner brickwork has now been stitched back in to the existing southern and western elevation to ensure structural integrity and weather proofing.

WINDOWS ON WESTERN ELEVATION (Fig.1 No.2)

Previous permissions (223175/223176) approved three windows to the western elevation. Upon installation of these openings, it was apparent that the outbuilding has suffered from historic settlement around the north-west corner, resulting in the brickwork leading up to this corner dropping and being off-level. Example below.



It has therefore been impossible for the proposed window openings to be positioned in the brickwork as previously approved, ie level with each other and tight to the underside of the dog tooth eaves detail.



To work with the existing structure, each opening has been lowered from the dogtooth to ensure they can go in level without impacting the dog-tooth; level with the other new windows; and level with the existing window on the north elevation, resulting in varying degrees of gap between the window head and the underside of the dogtooth brick detail above.

INTERNAL PIER BY SIDE DOOR (Fig.1 No.3)

The brickwork pier to the south of the side door supports three lintels: one for the exterior door; one for the window; and one for the opening in the internal wall.

Considering the role that this pier plays within the structure of the building, the unstable and poor-quality nature of the existing brickwork was not suitable and it was necessary to rebuild the pier to ensure it was sufficient to support the weight of the roof.

CHIMNEY BREAST (Fig.1 No.4)

The chimney breast to the eastern side of the outbuilding is in a poor state of repair.

The original construction appears to have been completed at different times, with different sections of brickwork of poor quality. There is no physical connection to the flank wall of the house and the top courses of brickwork are now un-bonded and loose. Much of the brickwork has been repaired, patched, damaged or filled.

The proposal is to carefully dismantle the chimney breast, and re-build it with the existing bricks, following the current pattern of brickwork.

In doing so the structure will be stabilized and the chimney prepared for the installation of a log burner flue. The brickwork itself will be left un-plastered and exposed, to be appreciated by the occupants of the house.





EXTERNAL DOOR (Fig.1 No.5)

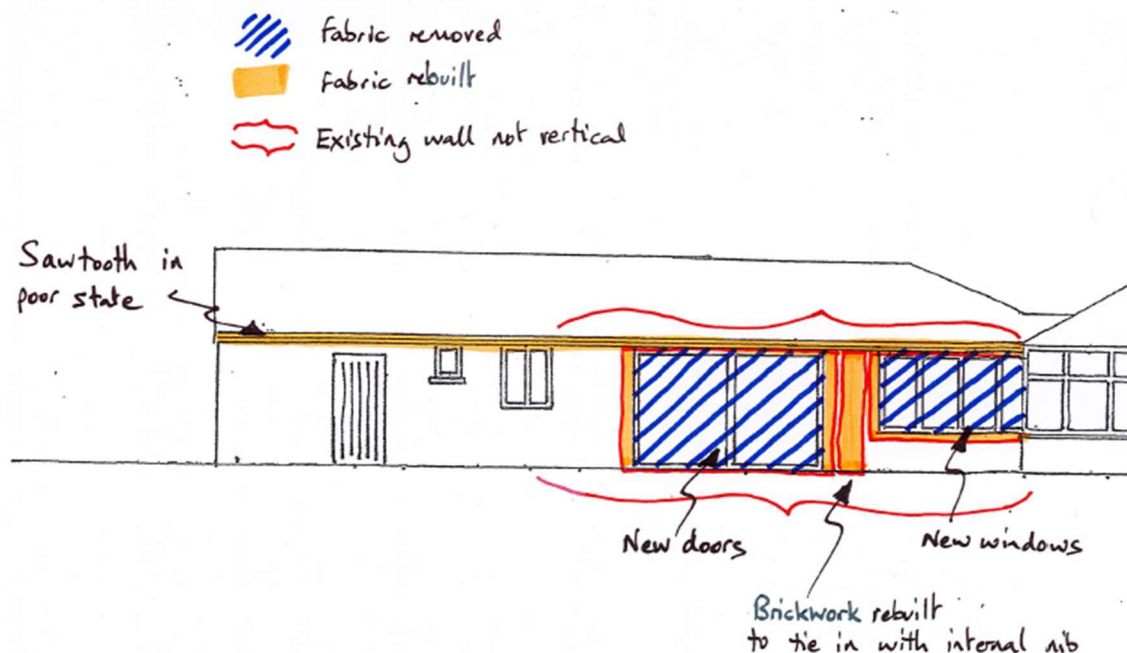


The external door on the east elevation was beyond the point of repair.

With a small hallway on the inside and a covered store area on the outside, the doorway itself is positioned such that if replaced with a new door and the doorway used, it would render the areas either side of it useless. Instead, the preferred option was to brick up the doorway and allow the proper use of the external store area, and for the proposed insulation to continue across this area internally.

EXTERNAL WALL ON EASTERN ELEVATION (Fig.1 No.6)

The east elevation to the outbuilding has proved to be more damaged than originally thought. In addition to the new openings for the window and glass doors (approved by applications 223175 & 223176), there were large areas where repairs/re-instatement were required, which would leave a relatively small area of fully untouched original brickwork.



There is a significant amount of work involved to preserve the outbuilding as habitable space and the worst outcome would be to complete the works only to discover the bit-by-bit approach of repairs has resulted in elements failing in the short to medium term.

With this in mind the end finish and structural integrity would benefit significantly from approaching the whole wall in one go rather than a patchwork of repairs amounting to somewhere in the region of 90% of the original wall being affected.

The section of wall was carefully dismantled brick by brick and stacked for re-use, before re-building with the same brick bond and combination of burnt and non-burnt headers.

Examples of original brickwork



The works required were:

A - Saw-tooth band - most of the saw-tooth band was in poor condition and required replacing





B - Cracks internally and externally - areas of diagonal cracking, significant vegetation/root damage, making good historic repairs



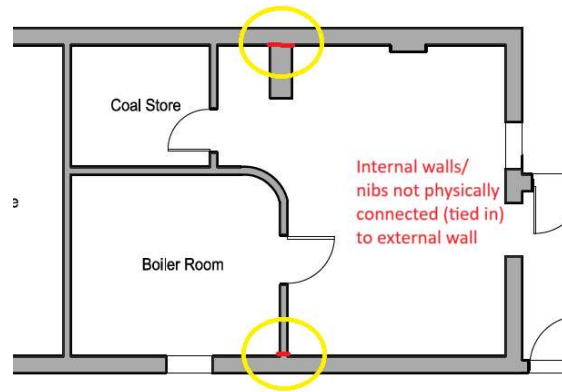


C - Blown bricks - to be replaced/turned

D – Large sections of wall were off vertical - These needed to be re-built vertical for structural integrity, especially due to the level of structural loadings being applied, but also to allow the vertical installation of windows.



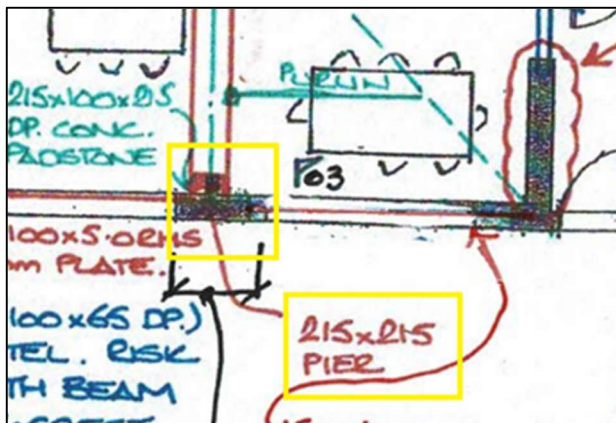
E - Tie in structural piers - None of the internal wall nibs that were shown to be retained in approvals 223175 & 223176 were tied into the external wall. The nibs would have remained as structurally unsound stack of bricks with nothing preventing their collapse.



For structural stability these would have been too weak if left and therefore the associated areas of external wall needed to be re-built to tie in to the nibs, to create suitably cohesive piers. This was especially so for the nib/pier on the eastern elevation that is required to support the lintels over the two new openings.

INTERNAL NIB WALL ON EASTERN ELEVATION (Fig.1 No.7)

In addition to needing to be tied-in to the external wall, this nib also needed to be enlarged to meet the requirements of the structural engineer.



Rather than just building it larger, it has replicated the form of the nib to the western side ie narrowing at the top.



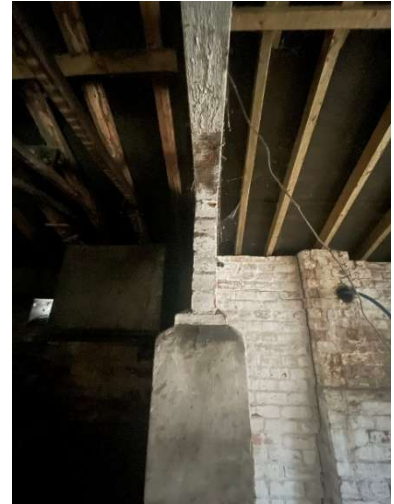
SOUTHERN GABLE END (Fig.1 No.8)

The render to the gable end had blown in many areas and the structural timbers rotten. This gable has been rebuilt and the area of render proposed to be replaced with horizontal lap boarding to be consistent with other proposed boarding.



INTERNAL NIB WALL ON WESTERN ELEVATION (Fig.1 No.9)

The existing nib, although looking substantial, lacked any bonding between the three brickwork 'skins' that the base of the nib was made up of, and lacked any form of foundation, as well as being undermined by rodent activity. In addition, the top single skin section of brickwork was off vertical.



With this nib needed to be the structural support for the beam and roof above, it was re-built, allowing for a fully bonded pier at the base and although still narrower at the top, an increase to 9" brickwork providing a better support for the beam.



SECOND 'SKIN' OF BRICKWORK TO WESTERN INTERNAL ELEVATION (Fig.1 No.10)

The additional internal skin of brickwork to part of the western elevation appears to serve a limited purpose with no evidence of its origins. The brickwork itself had significant diagonal and vertical cracking, as well as no tie-in to the external wall, rendering it unsafe.

This damaged brickwork has been removed and it is deemed unnecessary to replace it.



SEPARATING WALL TO NORTHERN END (Fig.1 No.11)

This internal wall showed significant settlement with the floor dropping and the wall coming away from wallplate by some margin.

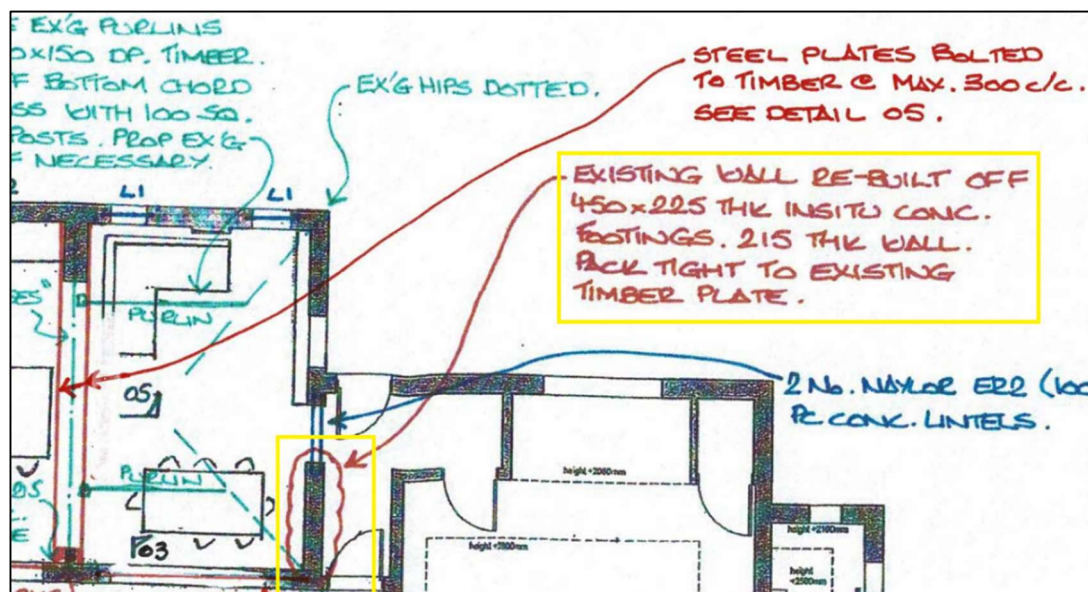
In the vertical plane there was a significant bow to the brickwork and large diagonal cracks.

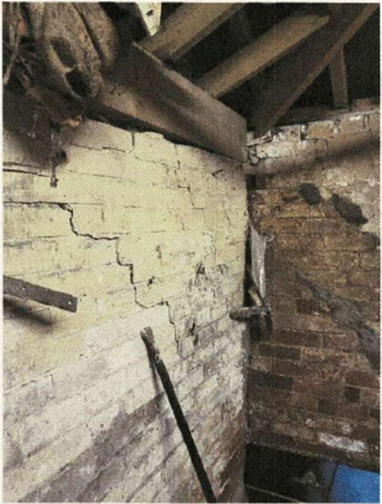
Much like many of the other internal dividing walls there was no tie to the eastern external wall.

The wall was unsafe and had to be dismantled. It is proposed to be re-built using bricks recovered from it and elsewhere and finished as un-plastered facing brickwork.



The modern softwood timber beam spanning the wall and doorway will be replaced with an oak beam to be left exposed.

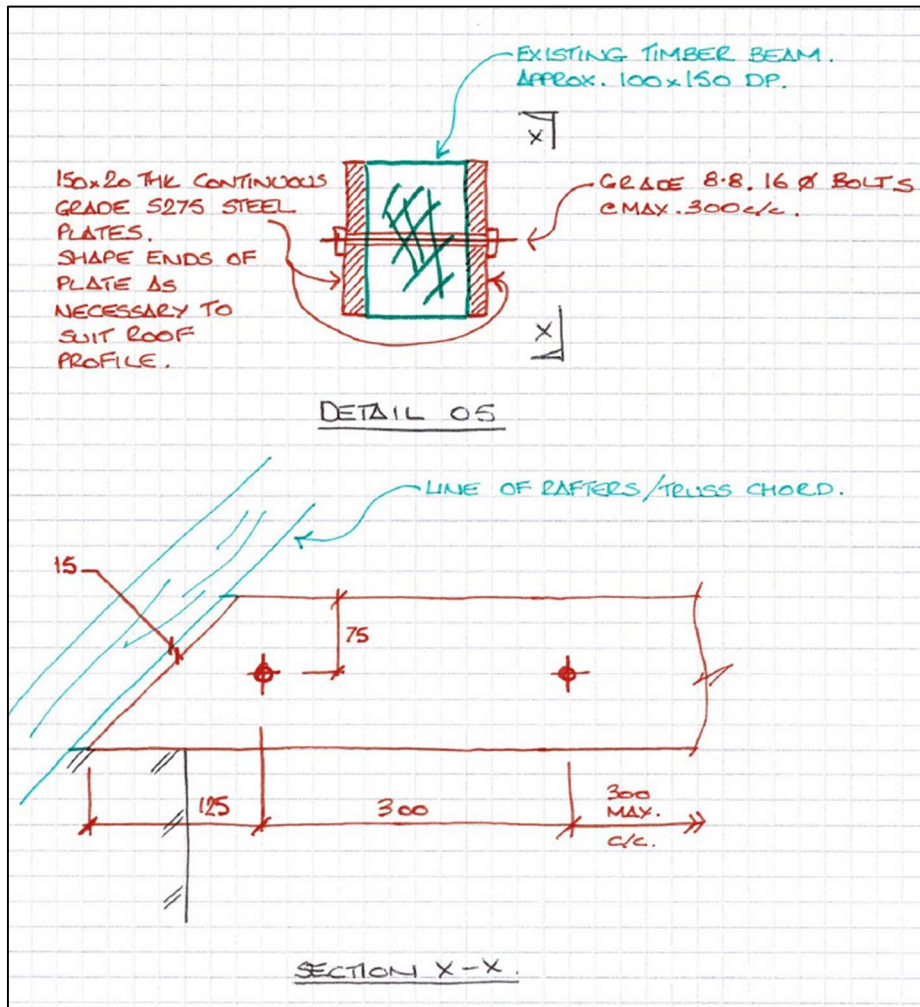


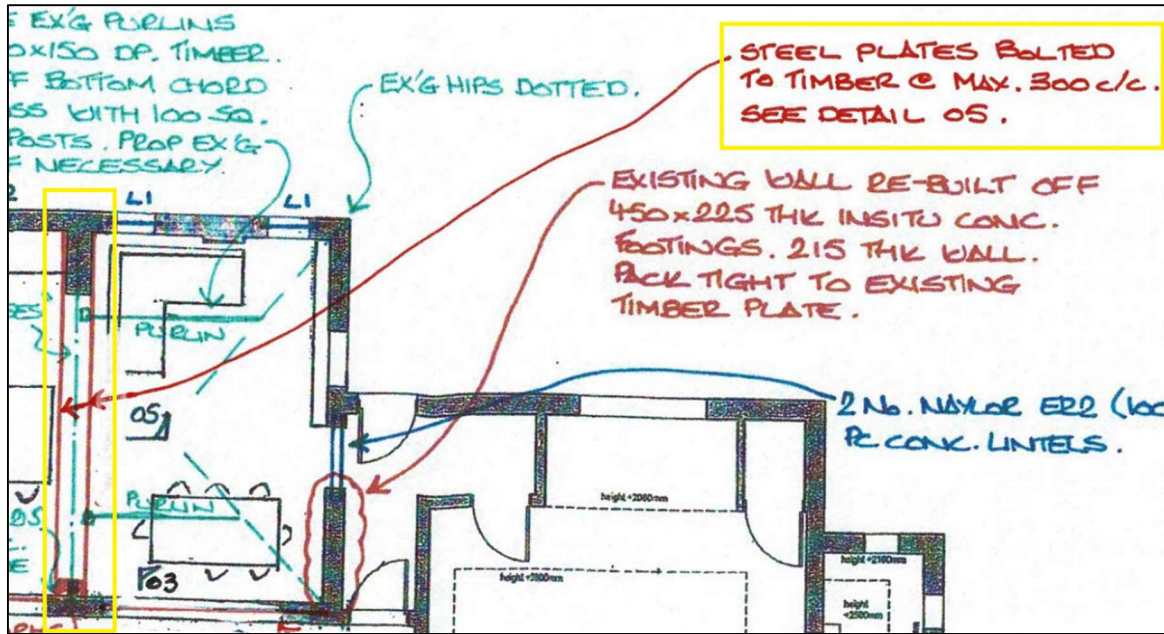


Views showing settled floor and wall. Note cracking, gap beneath wallplate, bow/bulge in wall, significant floor settlement, lack of tie to front wall.

FLITCH PLATES TO TIMBER BEAM (Fig.1 No.12)

The existing timber beam spanning from east to west is fundamental to the roof structure, however its structural integrity cannot be guaranteed. The structural engineer requires steel flitch plates to be bolted either side of this beam to provide the necessary supports, as per the below design drawings. These plates will need to be bolted through the timber beam every 300mm.





ROTTEN RAFTERS AND WALL PLATES (Fig.1 No.13)

Photos below provide an example of the state of the roof timbers, with significant rot to the rafter feet and wall plates.

The rotten sections have been cut out as required and braced with new timbers bolted in their place to reinforce the roof structure





RAFTERS TO MIDDLE SECTION (Fig.1 No.14)

All roof timbers to the middle section of the outbuilding appear to have been replaced some time ago (certainly prior to the current owner's purchase in 2021), presumably due to significant rot to the original timbers and potentially a collapsed roof.

This area has generally been left untouched as there has been no rot to the modern timber, however some reinforcement has now taken place to ensure the longevity and stability of the roof structure.



RAFTER ADJUSTMENT FOR POSSIBLE FUTURE ROOFLIGHTS (Fig.1 No.13/14)

There has been some misunderstanding relating to previous discussions with the Conservation Officer about the possibility of introducing conservation rooflights into the roof of the outbuilding.

Proposals for two rooflights on each of the east and west roof elevations were discussed and the response was very positive, confirming it would create a great space. During the lifetime of previous applications 223175 and 223176 it was however deemed that the kitchen area would have sufficient light without rooflights, so it was requested they be removed from the application for the moment.

With approved works to the roof continuing, and repairs underway, the rafters were adjusted in readiness for the possibility of future rooflights. Two of these rooflights are within the area of roof that has previously been replaced, therefore only modern timbers were affected. The two to the south have been positioned carefully having considered the impact on the existing roof. Where the rotten base of the rafters could already not be retained, a further meter of a single rafter has been removed, up to the purlin.

These works have kept any impact on the historic fabric to a minimum and have been created in such a way that they would make possible future installation (subject to all necessary consents) significantly simpler and less disruptive to both the fabric of the building and to its occupants, should future consent be granted.

ROOF SLATES (Fig.1 No.15)

The general repairs to the roof have taken place with some slates removed and left off at the south-western corner (above the stable) awaiting a decision to this application.

Previous approvals permitted the lean-to extension to the south western corner of the stable, however it is now apparent that the internal height, dictated by the roof line as approved, will not be sufficient to use the room. The ceiling would be only 2m at the highest point, reducing to just 1.45m at the outside wall. To overcome this, the current proposal makes a slight amendment to the previous approval, to slightly raise the eaves height of the extension and raise the point where the extension roof and the existing roof join.

GENERAL RE-POINTING AND BRICKWORK REPAIRS

All areas of cement mortar are to be raked out and re-pointed with lime mortar mix to match as closely as possible with original mortar.

A test panel will be built for LPA approval.

There are also a number of bricks/ areas of brickwork within the existing external walls of the outbuilding that require replacement.

As required, bricks will be carefully removed from the relevant section of wall and replaced with either the same brick turned around, or bricks salvaged from elsewhere within the property during the renovation works.

Examples of brickwork repairs that are required:



