Site investigation works as approved by Louise Brown of Huntingdonshire District Council 12th November 2024

Site investigations conducted on Saturday 23rd November 2024 in accordance with drawing 22369_200 and Written scheme of investigation.

South (street fronting) elevation

Opening 1 – lower ground level

Build up consisted of:

1. Sandtex type masonry paint over
2. Previous painted surface over
3. Sand-cement based render top-coat over
4. Sand-cement based scratch-coat over
5. Expanded steel mesh fixed (with nails) into
6. Soft red brickwork with lime mortar

Comments: Render was easily removed from brickwork due to the presence of expanded mesh, with fixings nailed into soft lime mortar. No visible damage occurred to the face of the brickwork through the formation of the investigation window.

(Image 1, 2 and 3)

Opening 1 – above first floor level

Build up consisted of:

1. Sandtex type masonry paint over
2. Previous painted surface over
3. Sand-cement based render top-coat over
4. Sand-cement based scratch-coat over
5. Expanded (degraded) steel mesh over
6. Bituminous paper membrane (degraded) over
7. Soft red brickwork with lime mortar

Comments: Area exposed around significant cracking. Render fell apart with little effort, exposing degraded metal lath and degraded membrane. Visible brickwork appears in fair condition, however the base of the timber post exposed on the southern corner was considerably rotten/decayed was very friable.

(Video 1, image 4, 5 and 6)

Opening 2 – lower ground level

Build up consisted of:

1. Sandtex type masonry paint over
2. Previous painted surface over
3. Sand-cement based render top-coat over
4. Sand-cement based scratch-coat directly applied over
5. Soft red brickwork with lime mortar

Comments: Render was easily removed from brickwork due to the friable/dry nature of the render (evidenced by several areas of cracking), No visible damage occurred to the face of the brickwork through the formation of the investigation window.

(Image 7)

Opening 2 – above first floor level

Build up consisted of:

1. Sandtex type masonry paint over
2. Previous painted surface over
3. Sand-cement based render top-coat over
4. Sand-cement based scratch-coat over
5. Expanded (degraded) steel mesh over
6. Bituminous paper membrane on
7. Timber battens
8. Void to timber frame behind (original infilling between framing appeared intact)

Comments: Render was easily removed due to the presence of expanded mesh, with fixings nailed into hardwood timber battens. It was not possible to see how the timber battens were fixed to the timber frame, but it is assumed that this build up could be removed without disturbance/damage to the historic fabric behind.

(Video 2, Image 8 and 9)

West (side) elevation

Opening 3 – lower ground level

Build up consisted of:

1. Sandtex type masonry paint over
2. Previous painted surface over
3. Sand-cement based render top-coat over
4. Sand-cement based scratch-coat over
5. Expanded steel mesh fixed (with nails) into
6. Soft red brickwork with lime mortar

Comments: Render was very hard (clearly a different mix to the south elevation), and has been pushed through the expanded mesh to fully adhere to the brickwork behind. Damage was caused to the brickwork whilst forming this inspection window, and assuming that it is representative of the entire western ground floor build up, the removal of this render is likely to severely damage the brickwork beneath.

(Image 10 and 11)

Opening 3 – above first floor level

Build up consisted of:

1. Sandtex type masonry paint over
2. Previous painted surface over
3. Sand-cement based render top-coat over
4. Sand-cement based scratch-coat over
5. Expanded steel mesh over
6. Timber battens
7. Void to timber frame behind (original infilling between framing appeared intact)

Comments: Render was easily removed due to the presence of expanded mesh, with fixings nailed into hardwood timber battens. It was not possible to see how the timber battens were fixed to the timber frame, but it is assumed that this build up could be removed without disturbance/damage to the historic fabric behind.

(Video 3, Image 12, 13 and 14)

North (rear) elevation

Opening 4 – lower ground level

Build up consisted of:

1. Sandtex type masonry paint over
2. Sand-cement based render top-coat over
3. Sand-cement based scratch-coat (very thick – circa 40mm) directly applied to
4. Thermalite (or similar) blockwork

Comments: Render was very hard (clearly a different mix to the south elevation, possibly similar mix to the west elevation), and has been heavily applied. Thickness experienced may have been localized, but there is a significant bell-mouth drip detail at the base, with new engineered bricks below DPC set circa 25mm forward of the exposed blockwork, suggesting a uniformed thickness of between 35-45mm. This render should not be removed due to the thickness, the likely damage that would be caused to the substrate and the fact that it appears to have been applied to a modern Thermalite block, which is not so sensitive to water ingress.

(Image 15 and 16)

Opening 4 – above first floor level

Build up consisted of:

1. Sandtex type masonry paint over
2. Previous painted surface over
3. Lime render over
4. Split hardwood timber laths fixed to
5. Timber framing (appears to be a void between the framing rather than any historic infilling material)

Comments: Render was very dry and friable and had delaminated from the lathes across large expansive areas. Timber laths were dry and in good condition. Finished surface had the appearance of multiple different render materials (parts looking 'rough cast' / including stone, however when exposed/tested, it appears to have been a reaction with the paint creating the change in texture, rather than being a change in the contingency of the lime render. This may have been a result of damp conditions from the overhanging tree and it being on the norther elevation. A second opening was formed in the more 'textured' section to understand the consistency of the render.

(video 4, Image 17 and 18)

East (side) elevation

Existing opening (previous damage) – lower ground

Build up consisted of:

1. Sandtex type masonry paint over
2. Previous painted surface over
3. Sand-cement based render top-coat over
4. Sand-cement based scratch-coat over
5. Expanded steel mesh fixed (with nails) over
6. Bituminous paper membrane on

7. Modern 'common' brickwork with sand-cement mortar

Comments: Render was easily removed from brickwork due to the presence of expanded mesh, with fixings nailed into soft lime mortar and severe cracking with the render. No visible damage appears to have occurred to the face of the brickwork where the existing render has previously fallen off.

(Image 19 and 20)

Existing opening (previous damage) – first floor

Build up consisted of:

1. Sandtex type masonry paint over
2. Previous painted surface over
3. Sand-cement based render top-coat over
4. Sand-cement based scratch-coat over
5. Expanded galvanized mesh over
6. Bituminous paper membrane over
7. Timber frame behind (no infilling material between framing)

Comments: Render was easily removed due to the presence of expanded mesh and membrane. It is assumed that this build up could be removed without disturbance/damage to the historic fabric behind.

(Image 21)

Summary/Extract

South elevation (east end) ground floor = Sand-cement render on mesh over brickwork. Option to remove with minimal damage and replace with lime-based render on galvanized metal mesh. (optional woodwool/hemp insulation over substrate could remove need for metal mesh and would protect the masonry substrate from render application – subject to detailing)

South elevation (east end) first floor = Sand-cement render on mesh over brickwork. Option to remove with minimal damage and replace with lime-based render on galvanized metal mesh. (optional woodwool/hemp insulation over substrate could remove need for metal mesh and would protect the masonry substrate from render application – subject to detailing)

South elevation (west end) ground floor = Sand-cement render directly applied to brickwork. Option to remove with minimal damage and replace with lime-based render (optional woodwool/hemp insulation over substrate could protect the masonry substrate from render application – subject to detailing).

South elevation (west end) first floor = Sand-cement render on mesh on timber battens fixed to timber frame. Option to remove with minimal damage and replace with lime-based render on galvanized metal mesh. (optional woodwool/hemp insulation over substrate could remove need for metal mesh and would protect the timber substrate from render application and through maintaining existing void– subject to detailing).

West elevation ground floor = Sand-cement render on mesh over brickwork. This should not be removed due to a high level of potential damage to the brickwork below. Inspection panel to be made good with matching materials and finish.

West elevation first floor = Sand-cement render on mesh on timber battens fixed to timber frame. Option to remove with minimal damage and replace with lime-based render on

galvanized mesh / timber laths. (optional woodwool/hemp insulation over substrate could remove need for metal mesh and would protect the timber substrate from render application and through maintaining existing void– subject to detailing).

North elevation ground floor = Thick Sand-cement render on modern blockwork. This should not be removed due to the significant works required to remove the thick application, as well as there being little benefit in providing breathability to a modern block construction. Inspection panel to be made good with matching materials and finish.

North elevation first floor = Lime plaster on timber laths. Option to renew the lime render with new lime render over existing laths, given the significant levels of delamination already occurred and the distortion in the appearance of the render giving it a poor appearance. (optional woodwool/hemp insulation over substrate – subject to detailing).

East elevation ground floor = Sand-cement render on mesh over brickwork. Option to remove with minimal damage and replace with lime-based render on galvanized metal mesh. (optional woodwool/hemp insulation over substrate could remove need for metal mesh – subject to detailing)

East elevation first floor = Sand-cement render on mesh on timber battens fixed to timber frame. Option to remove with minimal damage and replace with lime-based render on galvanized metal mesh/ timber laths. (optional woodwool/hemp insulation over substrate could remove need for metal mesh and would protect the timber substrate from render application and through maintaining existing void– subject to detailing).

Detailing to consider with re-rendering and insulation –

1. Detailing around windows/openings / effect on reveal depth and window cheek linings
2. Detailing at eaves level (particularly if insulating) / effect on depth of overhang
3. Junction between lime render and cement render (option to insulate at first floor only could create a 'logical' step in the elevation, masking the join between the cement render and lime render, which is likely to be susceptible to cracking) – or potential use of pentice boards on gable ends – would this ever be acceptable on the 'long' elevations? Or lead work?
4. Cost implications
5. Timeline – Works should be completed in the correct season for the lime and to have any substrate exposed.