JACKDAWS CASTLE

HIGHCLERE CASTLE

Scope of Works and Heritage Impact Assessment

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A classical, open, roofless temple constructed in about 1740 reusing the stone columns salvaged from the ruins of Berkley House in Piccadilly, London, which burnt down in 1733. Six columns support a dentiled pediment to east and west elevations with niches set in the walls either side of the pediment. Ball finials cap the pediment and the corners of the temple, and are spaced along each wall. Columns are of limestone, as are cornices, string-courses are run insitu render, otherwise walls are generally rendered. Much repair work was undertaken in the early part of the 20th century. Jackdaw's Castle has a spectacular site on a mound looking across the lawns to the east elevation of Highclere Castle.

Jackdaws Castle is Grade I Listed

Ground Level inspection 2021

There is significant cracking evident through the string course of the west elevation facing the castle, and small sections of the render have broken and fallen to the ground. The structure is a mixture of carved stone elements and stone columns with rendered insitu run profiled mouldings and rendered infill panels with faux ashlar lining. The building has been barriered off due to H&S concerns.

The section of render has been stored at the base of the structure below where it has fallen. This is the banded frieze directly above the colonnade to the western elevation (facing the castle). Cracking is noted to the remaining sections both to the underside between the columns and through the height of the rendered panel. The brickwork to the masonry wall beneath is evident, the render is approximately 30mm thick at its thinnest.

The stonework above is in good condition with no stress evident to the stone masonry. There is no evidence that rust jacking is taking place within the construction.

It appears that water is ingressing at the top of the string course above this level of render and finding its way between the render and the brick substrate. Freeze thaw action is forcing the two materials apart which is further exacerbated through differential movement in the fabric.

Generally, the render appears reasonably firm though some hollows are more than likely to be present. It would be beneficial to inspect the render at high level, particularly to ascertain any open voids or cracking along the top of the string course where water is currently ingressing.

The two smaller return elevations are in generally sound condition and there is some evidence of previous pointing repair to the same render frieze, again it would be beneficial to inspect these at level and consolidate open joints with discreet lime mortar repairs.

The render has been tested and has been found to be "Roman Cement" with a cementitious binder.

High Level Survey

A drone was used to obtain a high level view of the string course from above. Tower scaffold was also provided to enable inspection at level. This found a sizeable crack and outwards displacement of the string course of up to 40mm.

Outwards movement is most pronounced at the south-west corner where cracking continues through the height of the south return. This is visible in the attached Drone photos.

The most severe movement has resulted in two vertical cracks towards the south-west corner both showing signs of differential, outwards deflection.

The cracking continues along the full length of the string course to the west elevation. Similar cracking is not visible on the drone photographs to remaining elevations, however this will need to be verified off scaffold.

There are a number of localised open joints in the cornice to remaining elevations, where the sloped entablature meets the horizontal coping. Vegetation is growing in these joints – raking out deep consolidation and lime mortar repair is required.

The issue appears to be due to localised cracking at a weak point in two different renders. The flat frieze is a different mix of lime render fitted above the roman cement render of the weathering and string. These can be differentiated visually due to differences in colour. Water has ingressed through this cracking. The movement is due to expansion as the water freezes within this void.

The structural arrangement is not visible – it is unclear if there is an embedded iron beam which might be contributing to the damage. This to be investigated as part of the works with localised opening up to the plain render finish to the rear face.

Since the original LB application for repair of the string course, the condition of the render has deteriorated and a large section of profiled string has collapsed. This will now require repair in new 3 coat render work mixed and profiled to match.

Recommendations

A scheme of consolidation, pinning, repointing and repair to the cracked render should be undertaken to prolong the life of the structure and current finishes. Collapsed sections of string course will now require renewal in a 3 coat render mixed and profiled to match the original.

The existing render should be retained insitu and stabilised using stainless steel coach screw and washer mechanical fixings. These should be staggered across the string course and countersunk. The roman cement render will be filled using a matching mortar mix and the appearance unified. All cracking should be repointed in a matching mortar. Following repointing and tying of the render the void should be grouted to fill.

Discreet insitu mortar repairs should be built up to any fallen sections to match the original detailing. A panel of plain render should be opened up to the rear face to enable assessment of the support structure, lintel or relieving arch above the columns.

Due to the vulnerability of this junction a discreet lead weathering should be installed to prevent future cracking of the mortar repair and grouting.

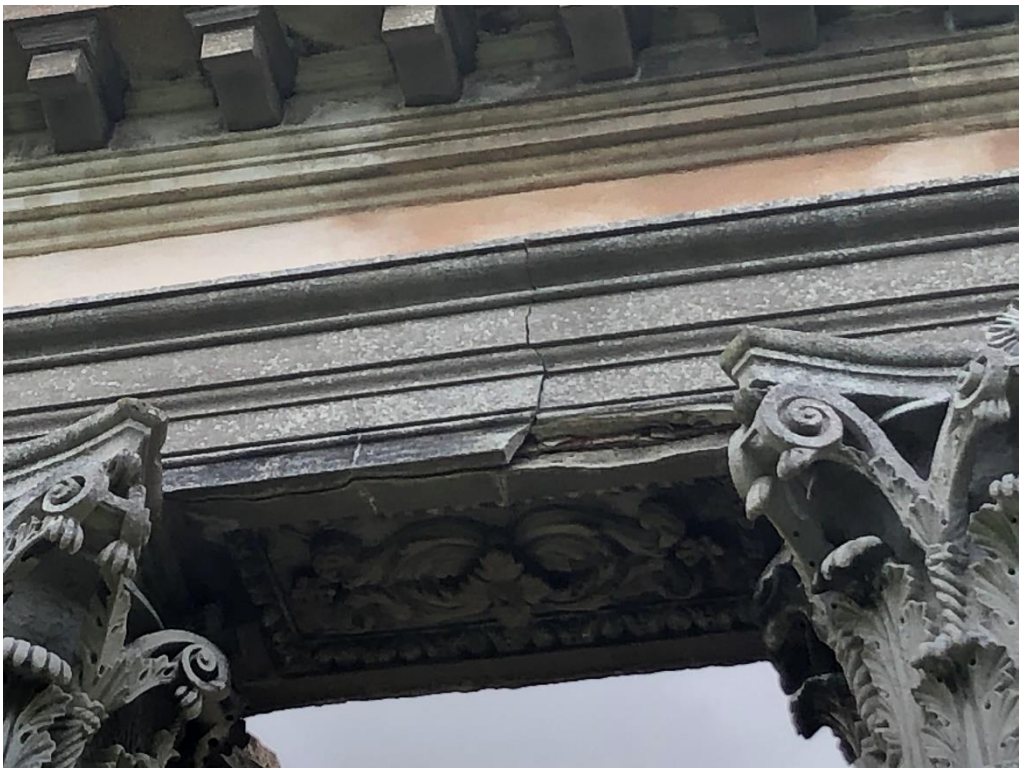
Heritage Impact Assessment

The works are generally like for like repair with compatible materials and have a negligible impact on the historic building.

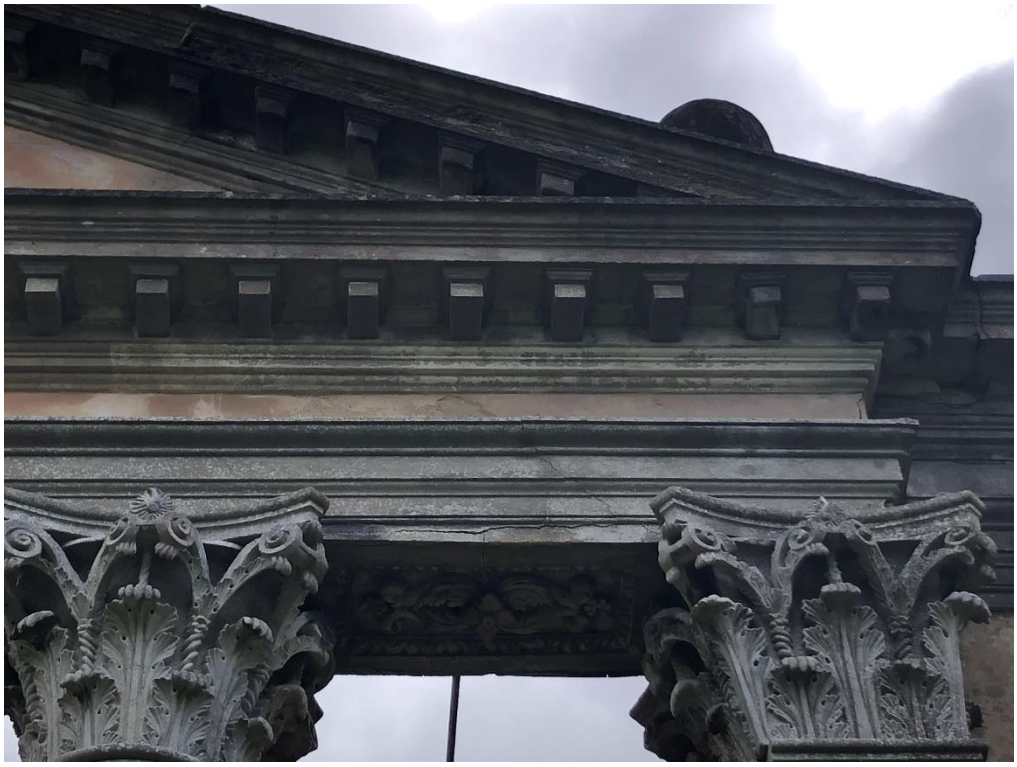
The intention to retain and consolidate existing renders makes sound conservation sense and will have a positive impact. The use of discreet countersunk stainless steels will lose minimal historic fabric. The repairs and new render sections will be toned and matched in with the adjacent renders to harmonise the visual appearance. This repair will have a negligible impact.

The filling of the cracked render to the weathering surface will leave a vulnerable junction susceptible to ongoing water ingress. The proposal to protect this repair with a discreet lead weathering will aid the long-term survival of the Roman cement render. From ground level the weathering will be largely invisible. This is deemed to have a minor impact on the historic structure.

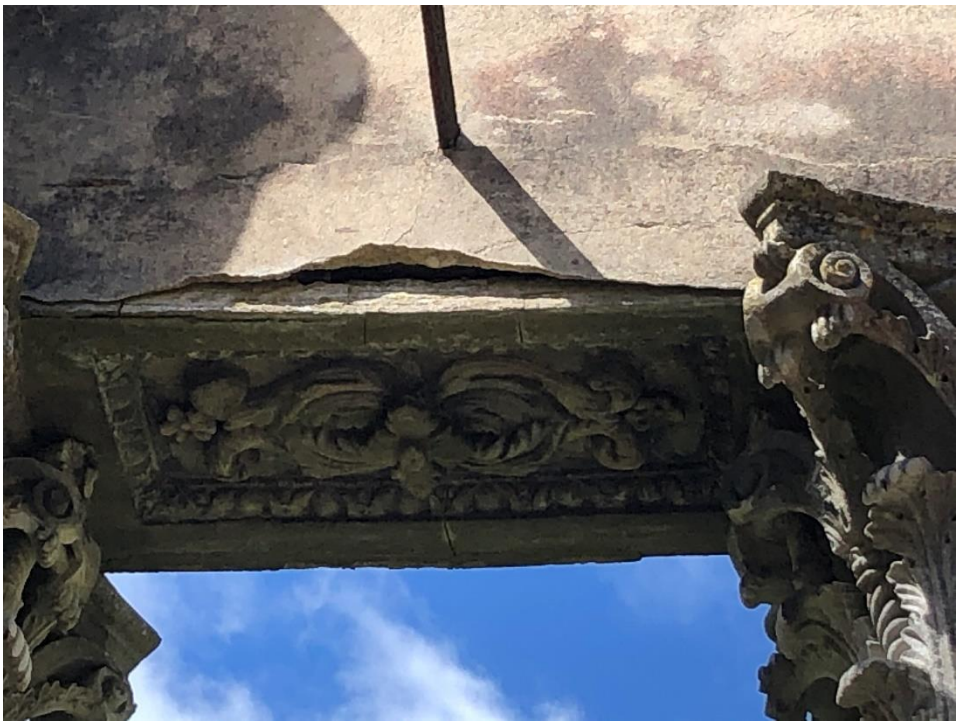
PHOTOGRAPHS



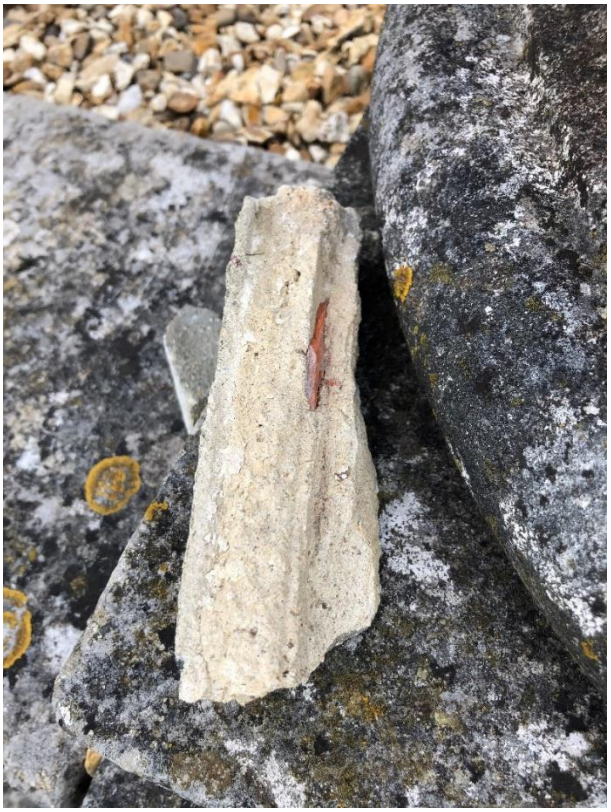
Fallen section of render, note cracking. Sound render above



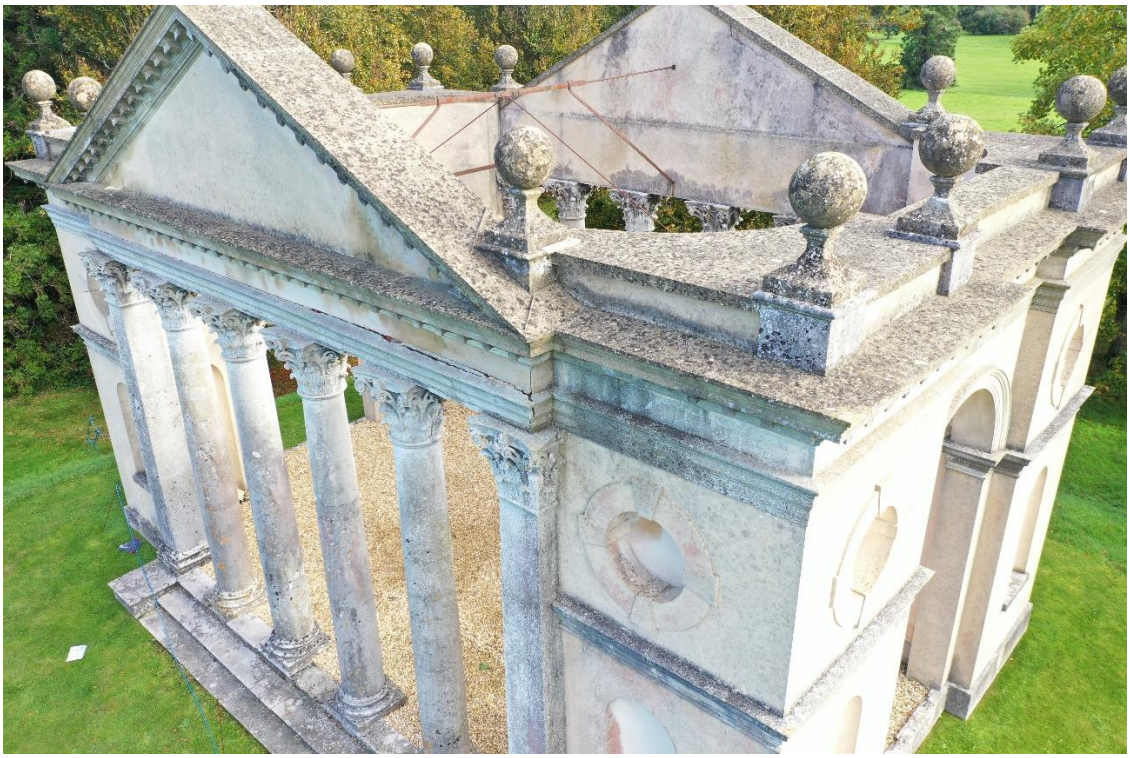
Adjacent cracking to render



Cracking to base of internal render lining



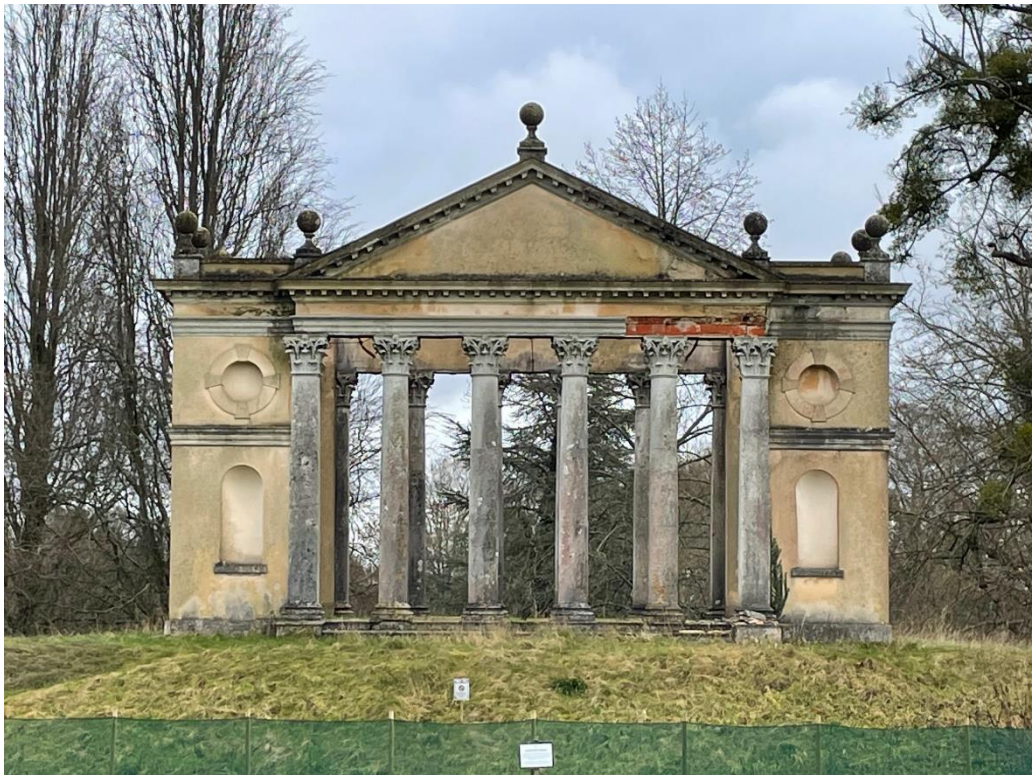
Fallen piece of render and brick substrate at ground level



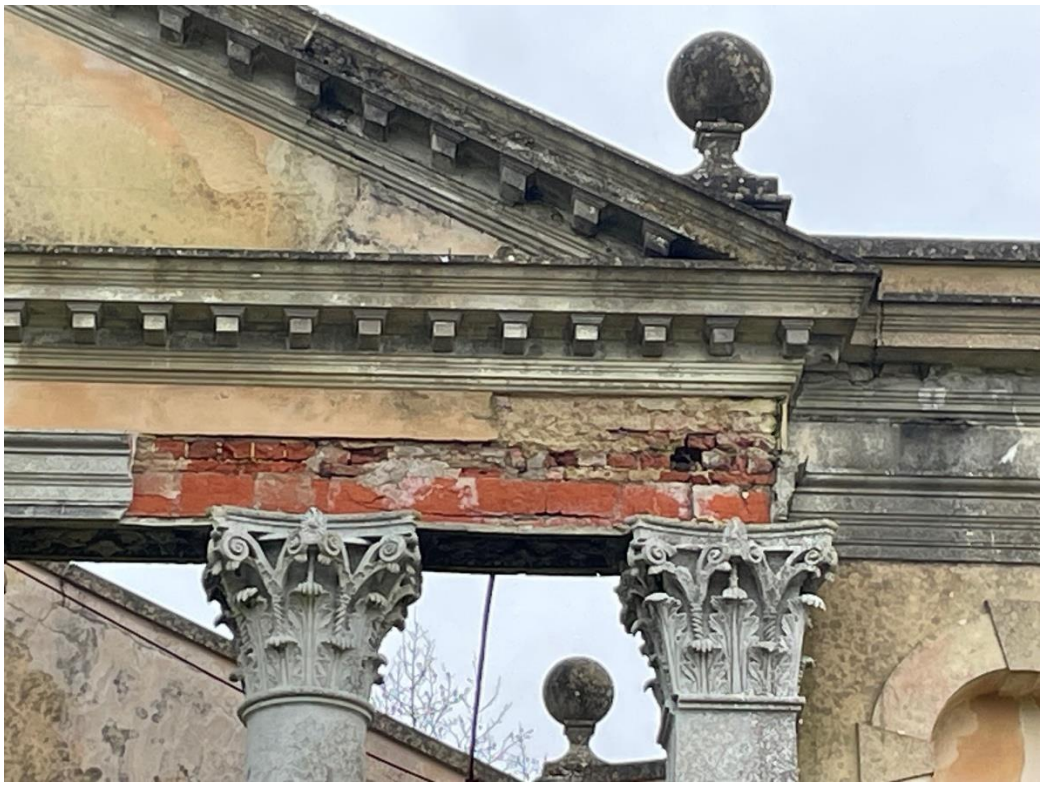
Full length crack above string course from south-west corner

Finer crack to north-west end of west string course – full length

Significant crack to SW corner and destabilised string course



General view December 2023 showing collapsed section of string



Close up of collapsed string and brick substrate