

Cross Hill House

West Adderbury

Oxfordshire

OX17 3EG

Extent of Remedial Repairs and Maintenance
Requiring Listed Building Consent

Design, Access and Heritage Statement

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Associates

EXTENT OF REMEDIAL WORK – GENERAL

With scaffolding now erected to the main elements of Cross Hill House, a detailed analysis of necessary remedial work has been undertaken and following some consultation with the Conservation Officer, Emma Harrison, by project managers CMS Group, it is apparent that a Listed Building Application is necessary for the more extensive items. This document forms part of that application and seeks to describe the reasons for and methodology of the principal areas of repair. These areas are as follows:

- Stonework (inc. rebuilding of chimney stacks)
- Re-covering of roof slopes
- Replacement of defective rainwater goods
- The taking up and re-laying of the Kitchen floor

In support of this description of works, the application is supplemented with a detailed Specification of Workmanship and Materials covering all the conservation type works: i.e., not including the replacement of the modern concrete floor to the Kitchen. Further documentation from the selected specialised stonework contractor, APS Masonry Ltd and the Structural Engineers BTA Structural Design Ltd is also included.

STONEMASONRY

Attached is a Visual Condition Report prepared by APS Masonry Ltd. This is to be read in conjunction with the report by Structural Engineers, BTA Structural Design Ltd.

Chimneys



This image shows the 4 chimney stacks to the main house, taken from the south east corner.

Upon close inspection it would appear that the chimneys have been the subject of a fair amount of rebuilding and repair over the life of the building. 2 chimneys are in relatively original condition and 2 have been rebuilt at some time in the past. The original chimneys at the south west and north east corners have flue “barrels” constructed in a light shade of Cotswold stone to match the stonework used as architectural emphasis on the south elevation. Here the Cotswold stone is used for the pilasters, cornice/coping, band courses and central door case.



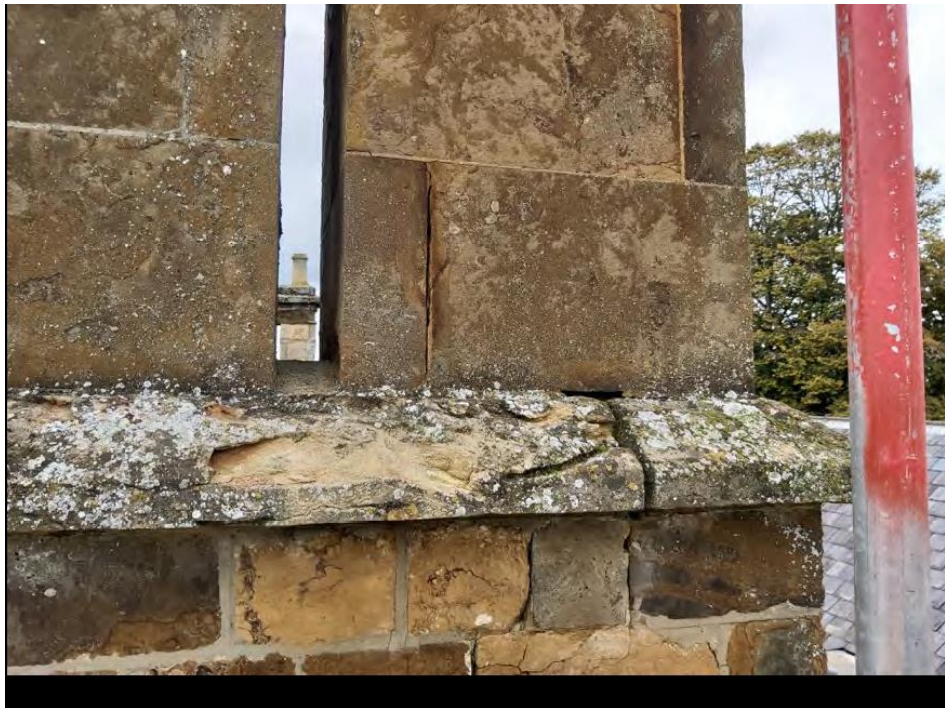
South elevation showing use of light-coloured Cotswold stone as an architectural design feature. The same stone is used in the barrels of the SW and NE chimneys.

Chimneys at the south east and north west corners have barrels constructed in the honey-coloured Horton stone used for general masonry to in all other construction of Cross Hill House. Extensive use of cement-based renders and pointing has been utilised in the past, presumably, to cover-up weathered and decayed stone. Unfortunately, the use of cement has contributed to the further deterioration of original stonework and will likely cause further damage when stone is dismantled for the necessary repairs. – see images below.

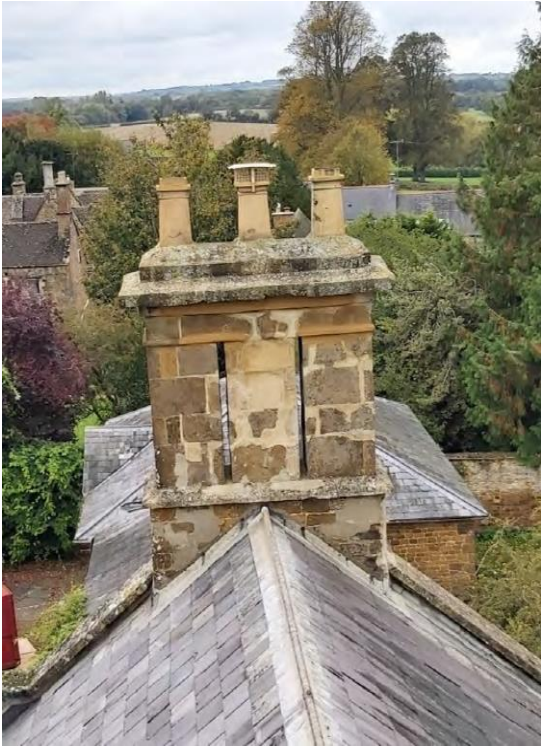
South West Chimney



South East Chimney



North West Chimney



North East Chimney



It will be noted from the structural engineers report that 3 of the chimney stacks are in such poor condition that they will be taken down to, at least, roof level in order to safely replace and repair the extensive damage to the stonework. The stacks in question are the NW, the NE and the SW. It is also apparent that some of the ashlar stonework beneath the lower drip course of each stack is in poor condition and will require some attention. The full extent of repair to all 3 stacks and the stone below can not be fully ascertained until the stacks have been carefully taken down as described in the Specification of Workmanship and Materials. Details of all repairs will be at the decision of the Historic Buildings Specialist, and confirmed as required with the Conservation Officer.

As it is apparent that the original design of all 4 of the chimneys allowed for the individual flue barrels to be constructed in Cotswold stone rather than the local Horton stone, it is proposed that appropriately selected Cotswold stone be used for all 3 sets of barrels. Where possible, original stone will be retained, however, given its condition, it is thought unlikely that much will be re-useable.

It appears that the SE stack has been rebuilt at some time in the mid to second half of the 20th century. The material used is all from this date, with no original material remaining. Whilst this stack is relatively structurally sound, it is proposed that it be taken down to the lower drip course to replace the barrels in the correct Cotswold stone thus restoring the original architectural composition to the building. The use of Cotswold stone was a vitally important aspect of the original design and as no historic fabric will be lost in this process, it is considered a worthwhile operation and of overall benefit to the conservation of the historical design.

South Elevation

The south elevation has suffered from a general delamination of facing stonework from the main body of the backing structure. Please refer to the Structural Engineers report where the defects and their remedy are described in detail.

It is apparent that whilst the majority of the delamination is historic, there is some ongoing outward movement of the stone and thus a need to stabilise the situation and prevent any potential for further damage. The Engineer describes a regime of careful and sensitive tying of the facing ashlar to its backing using thin stainless steel twisted bar set within the joints in the ashlar. There will therefore be minimal disturbance of stone and a need for minimal repointing.

Currently the gap between the facing stone and the recessed sash windows has been filled with large cement-based mortar fillets. Cracking and the failure of the cement fillets are typical and suggest the continuation of the problem - see images below.



Cracked and failed cement fillets between south sash windows and facing ashlar stonework

It is proposed that matching Horton stone fillets be used to replace all the cement where gaps exceed 25mm, laid in lime putty mortar and pinned to existing stone with stainless steel rods and or straps, so as not to disturb the facing stone. Where the gap is beneath 25mm, it shall be filled with the mortar mix as specified for rubble stone (see Specification of Workmanship and Materials), i.e., mortar to match existing but with added aggregate.

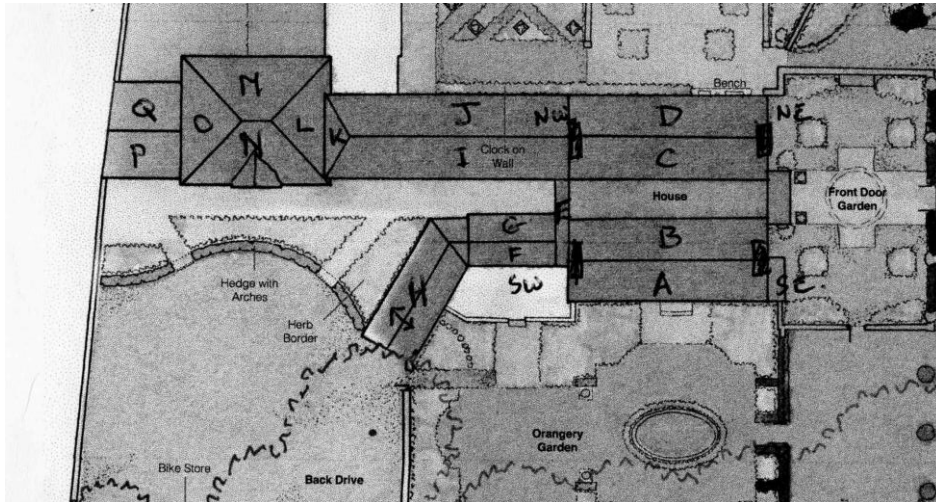
Ashlar stonework to all elevations inc. cornice and copings

The selected specialist stonework contractor APS Masonry Ltd, has provided a Masonry Visual Survey and preliminary Schedule of Masonry Repairs. These 2 documents form part of this application.

It will be noted from the photographs that much of the ashlar facing has over time suffered from frost damage causing the face of the stone to delaminate. The process has been further exacerbated by past use of cement mortar for repointing and providing a weather edge or even a full covering over the damaged stone. The general principle of conservation and repair of this facing stonework will be as follows:

- With the use of hand tools only, existing cement mortar and render is to be carefully removed from all existing stonework. If the removal of the cement takes too much stone with it then work will stop and actions will be reviewed. It may be preferable to leave some cement mortar than to cause excessive damage to historic stonework.
- After removal of cement mortar, carefully remove loose and friable stone from the face of stone, back to a sound surface. If left in place loose stone could fall from the stone in future and be an extreme hazard.
- Using the approved/agreed mortar, form a weathered edge at the lower joint to prevent surface water from tracking back into the wall.
- Only where existing pointing is defective and has potential to allow surface water to penetrate into stonework below, carefully rake out the joint to a depth of 15-18mm and repoint in the approved mortar. Leave mortar slightly recessed from the face of the stone where arrises are worn or flush where arrises are still square.
- Only where weathering of existing stone is so extensive that the original stone can no longer be self-supported or the loss of the face exceed 50% of the original thickness, will the stone be replaced.
- All decisions on the extent of replacement and extent of repointing will be agreed with the Historic Building Consultant and the Conservation Officer if required.
- All conservation work will be the minimum necessary to preserve the integrity of original stonework and prevent further deterioration through weathering. Wholesale repointing and repair will be avoided at all cost.

ROOFING



Roof Plan identifying roof slopes

Note: North at the top of the image

Roof slopes needing re-covering

Roof Slope A



Roof slope A has a number of slipped slates and past repairs suggesting that the securing nails have reached the end of their useful life. This roof slope needs to be slipped and re-covered. The slates on this slope are larger than usual and there will inevitably be a need to source additional matching slates. If possible, second-hand slates will be sourced from reputable reclamation yards, however if none can be found then new welsh slate, cut to the correct size will be obtained. The Historic Building Consultant will ensure that any replacement slate will accurately match existing.

Roof slopes B,C & D

These slopes are in relatively sound condition and will only require minor attention. No re-covering needed.

Roof slopes I, J & K



Roof slope I (left) and J (right)

Both these roof slopes appear to be relatively sound, however there are a large number of tangles present indicating that slates have started to slip. Permission is sought to strip and re-cover both these slopes as it is more economical to undertake this work now, rather than in the future. It also makes sense to re-cover the hip K at the same time.

Roof slopes L, M, N and O

These 4 hipped slopes are in sound condition and will only require minor attention. No re-covering needed.

Roof slopes P & Q



Roof slopes P (left) and Q (right)

The structural engineer's report details the structural problems with this roof and the proposed method to remedy the defects. In general, the whole roof has dropped causing spread at the eaves. The ridge has followed the roof down leaving the distinct "dip". The entire roof needs to be stripped, the structure raised onto a new ridge beam and rafters repaired at eaves. The covering will then be re-laid with all new leadwork.

Roof slope E

This lean-to slope is in sound condition and will only require minor attention. No re-covering needed.

Roof slope F

This Cotswold stone slated slope is in sound condition and will only require minor attention. No re-covering needed.

Roof slope G



Roof slope G

The slates on this north facing slope have started to slip and there are a number of broken and split slates. This slope will need to be re-covered. Extreme care will need to be taken to lift the stone ridge so that it can be reinstated. Any damaged stone will be replaced in matching stone and all ridge pieces laid in lime mortar.

Roof slope H

This lean-to slope is in sound condition and will only require minor attention. No re-covering needed. The extensive growth of moss needs to be carefully removed.

Leadwork

Most leadwork is in sound condition, however the rolled ridges and hips throughout are in a poor state of repair.

Where ridges are un-affected by re-covering work, the lead will be re-secured and patch welded to seal previous fixing holes. Where possible, original lead ridge pieces will be re-fitted in accordance with Lead Sheet Association recommendation and patch welded as needed.

Many of the lead rolled hips, particularly to the smaller roofs, have slipped downwards where their fixings have failed. The lead is generally sound and can be re-used after patch repairing.

RAINWATER GOODS

All existing rainwater goods are cast iron. Most are in good condition, however where downpipes, junctions or other details are damaged, they will be replaced with matching cast iron sections. The gutter serving Roof Slope D will need to be replaced due to sever corrosion to the rear edge. The replacement guttering will be half round to match existing and of the same width. Where possible, existing brackets will be re-used, supplemented with matching brackets as necessary. See photos below.





KITCHEN FLOOR



The existing Kitchen floor covering is a modern thin, rectangular limestone laid on a thin bed adhesive on concrete, as shown above. The concrete base averages about 4 inches (100mm) thick and in turn is laid on rubble hardcore, directly over the soil below. There is no damp-proof membrane and no insulation. It is estimated that this floor construction probably dates from the 1950's although the limestone covering is probably more recent.

This application seeks consent to break-up the entire 1950's construction and remove all material from site. The sub-soil will then be excavated to allow for a new floor construction

incorporating insulation to current Building Regulation standards and underfloor heating set within a screed. It will then be topped with new English limestone flagstones.

Trial excavations have been undertaken at 5 locations around the perimeter of the room to ascertain the depth of wall footings and to ensure that proposed excavations do not undercut those footings. At all 5 locations, projecting stone footings were found at an average depth of approx. 800mm below ground level and approx. 900mm below floor level. The overall depth of the new floor structure, including the flagstone finish is 530mm. The excavation will therefore cause no detrimental effect to the foundations and the integrity of the structure. See details below:

