

weston hall • weston on trent
discharge of planning condition 9:
confirmation of chimney structure repairs and interventions



weston hall

30 August 2019

PR:A

PETER ROGAN
+ ASSOCIATES LIMITED

ARCHITECTS +
HISTORIC
BUILDINGS •
CONSULTANTS

WESTON HALL
WESTON ON TRENT

RE-ROOFING, STRUCTURAL REPAIRS & ASSOCIATED
WORK

**discharge of Planning condition 9:
confirmation of chimney structure repairs and interventions**

Revision	Date	amendments
----------	------	------------

First draft for comments	30/08/2018	
--------------------------	------------	--

C O N T E N T S

A	Introduction
B	Justifications and cross referenced material
C	Site photographs

A I N T R O D U C T I O N

- I.0 This document provides information relating to the confirmed scope of chimney repairs and interventions proposed at Weston Hall, following on site discussions on the 29/08/19 between Alan Staley of ASBC, Jamie Mayers of Peter Rogan & Associates and James Bate, the Conservation Officer for South Derbyshire District Council. The scope of the chimney repairs was discussed as work progressed with representatives from Historic England and Liz Knight, the previous Conservation Officer of SDDC.

B CONFIRMATION OF WORKS

2.0 Justification of works and repair/intervention types

2.1 chimney rebuilding

repair type/references: rebuilding the 2 south most chimneys over the conservatories (chimneys 5 and 6) and flues 2-4 of chimney 4 from the stone springing point up using existing bricks, new hand made bricks to match the existing and bedding/repointing hydraulic lime mortar, the remaining chimneys (chimneys 1,2,3,4) had patch repointing to the most severely weathered pointing and limited re building of the top portions of the flues in the worst condition. Otherwise chimney tops were re capped and flaunched in hydraulic lime mortar. New short cannon-top chimney pots were installed to the heads of live flues to match the existing chimney pots, which were not in a suitable condition to be re used. In addition new air bricks have been installed into the internal faces of the chimneys to allow better ventilation of the flues and stacks generally.

justifications: re building was limited to the upper, brick built portions of the chimneys, which given their arrangement and the type of brick used in their construction are unlikely to be original fabric. Although it is supposition the original chimneys may have been intended to be 'spiral pattern' as at more lavish houses of the era – though it is uncertain if the dwindling funds of the original construction would have allowed such chimneys to be constructed – the existing construction as found left no evidence of such chimneys, with evidence only of more recent construction of the upper stages of the chimneys in a different brick stock from the level of the highest stone string course.

The only chimneys to be re built in their whole upper stages were chimneys 5 and 6, as the chimneys had previously been rebuilt to a reduced width and pieces of slate used to try and support an inner skin of brick on edge - the decay of the slate coupled with a lack of bearing depth overall meant that the whole of both chimneys was unstable. Given these chimneys are directly over the main south facing entrance of the venue below structural movement or collapse could have been catastrophic, and as it stood was a deeply unsatisfactory condition for high level masonry to be in. By rebuilding to the original (or at least earlier dimension) the bearing problem has been removed.

Several of the flues were found to be in a much poorer state than anticipated due to both poor initial construction (with slates being used as make-do 'lintels' to support the upper stages of the chimneys, with weathering and decay causing the slates to delaminate and fall apart) as well as sulphate attack on the bricks lining the chimney flue and external weathering of the mortar and brick faces causing the effective structural width of the chimneys to be reduced beyond a safe minimum.

Both before the start of works on site and during the course of the works and investigative cleaning/CCTV surveys there have been numerous falls of rubble and whole bricks down the chimney flues, indicating a very poor state of construction and stability of the chimneys, which was confirmed on opening up by the contractors at roof level. As the state of the chimneys was revealed on opening up the decision was made to re build as the current structural state of the chimneys was unacceptable.

3.0 Cross referring information

Please refer to the following information submitted with this application:

- ASBC Ltd schedule of works and variations: "ASBC Weston Hall Pay-App 06 redacted.pdf"
- Peter Rogan & Associates 'contract issue' drawings

Site photographs of the typical repairs undertaken

Typical state of the worst case flues – minimal constructional thickness and generally poor original construction





Installation of new air bricks to the rear of the rebuilt upper portion of chimney 6 – rebuilt from the level of the stone string course seen below.