

DESIGN / CONSERVATION / HISTORIC INTERIORS

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The Cloisters, Barrington Road, Letchworth Garden City, Hertfordshire, SG6 3TH

Tower Chimney



1.0 Purpose

The purpose of this application is for the recording and temporary removal of the unstable tower chimney at the Cloisters, Letchworth.

2.0 Why?

The Cloisters is a Grade II* listed building of outstanding architectural significance. The Cloisters is on the Heritage at Risk Register as a priority A building. A building as immediate risk of further rapid deterioration or loss of fabric.

In December 2021, a high-level inspection was undertaken using a cherry picker to assess concerns raised over the condition of the tower following a condition survey undertaken earlier that year. Attending the survey was CARE accredited structural engineer Clive Dawson and conservation accredited architect James Mackintosh.

The result of the inspection was that the Structural Engineer considered that the condition of the Tower was dangerous and that the tower should be temporarily dismantled to the lower string course for safety reasons.

Specific issues were:

- The mid feathers of tiling and brickwork were loose to the top of the chimney
- Lightning conductor fixings are decaying and causing the chimney to jack
- The corbelled head to the chimney is loose and moving away from the stack
- Significant loss of pointing

See photographs below



Tiling and brickwork loose to the top of the chimney.



Loose corbel head and jacking caused by lightning conductor.



Significant loss of pointing

3.0 Pre-application consultation

Following the high-level inspection, a meeting was held on site 16th December with conservation officer Mark Simmonds and Historic England Architect Domenico D'Alessandro on 16th December to look at the tower with a follow up meeting by zoom on 17th December to discuss options available.

Options considered were:

- 1. Leave the stack in place and cordon off the ground to protect members of the public
- 2. Construct a scaffold around the chimney to act as protection
- 3. Remove the chimney using a mobile elevated working platform
- 4. Construct a scaffold around the chimney record the chimney through a 3d laser survey and carefully dismantle the chimney

Option 1 is due to be implemented by the end of January 2022

The design team advised that it would not be safe to carry out the removal of the chimney from a mobile elevated platform (Option 3) as the construction of the chimney is unusual – the bonding between the tile

quoins and brickwork is not clear and there is a high risk that the chimney will collapse on being dismantled.

The preferred approach was to construct a scaffold, which will allow the chimney to be accurately recorded on all elevations using a 3d laser scanner. The access scaffold will provide a platform to carefully dismantle the chimney allowing its construction to be recorded as it is taken down.

A further inspection was made by Historic England's structural engineer, Alasdair Massie with a drone on 7th January. The result of the survey was a consensus that the chimney required removal.

4.0 Proposals

The proposed works therefore include the construction of a scaffolding to provide access to the tower to enable the tower to be dismantled.

Prior to dismantling the chimney will be recorded using a 3d laser scanner to produce a 3d computer model of the chimney and using digital photography to provide a 1:1 detail drawing of the tower.

Following recording, the tower will be carefully dismantled, course by course, to understand how the structure of the chimney is tied together. This process will be recorded by digital photography and annotated with sketches to explain the detailed construction. This will allow the rebuild of the chimney on a like for like basis in the future.

Due to the unknown condition of the structure of the chimney, this application requests for permission for the dismantling of the chimney down to the lower string course (see drawings). However, during the dismantling process, should the structural engineer consider the existing structure secure and stable then works will be limited in order to save as much historic fabric as possible.

An application for funding is currently underway to provide funds for the scaffolding and dismantling the chimney through the Historic England Repair Grants at Risk. The intention is that this will provide funds to allow the chimney to be dismantled by the end of 2022 and provide time for the Lawrence Cloister's Trust time to raise funds for repair.

4.0 Summary

The Cloisters is a Grade II* listed building of outstanding architectural significance. The Cloisters has been on the Heritage at Risk Register since October 2013. The Heritage at Risk Assessment is that the condition is 'very bad' and a priority A building.

Priority A - Immediate risk of further rapid deterioration or loss of fabric.

Whilst the works will cause harm to the listed building, they are necessary to protect the historic structure from collapse and deterioration, as there will be an unavoidable delay in the final repairs being carried out due to funding. The works will allow the structure to be properly recorded and full 1:1 size scale drawings of the chimney to be re-produced and its construction to be recorded whilst carefully dismantling. Such information would not be possible to record carrying out the work in any other way.

We therefore consider that the proposals are in the long-term interest of the Cloisters and will allow the chimneys to be re-constructed on a like for like basis when funding becomes available.