

5015327 - Mulbury City, Goulden Street – Chimney Work Sequencing

Chimney Works Sequencing Note – Revision P1, 07th January 2021

The following note details a review of proposed works to existing chimney and highlights a high-level overview of the work sequencing.

EXISTING CHIMNEY

- Brickwork chimney approx. 4.9m x 2.5m on plan and 25.7m tall
- Existing foundation assumed to be constructed from brickwork, not extending behind the chimney footprint and be approx. 3 m deep (full details have been proven as far as practicable)
- Assumed to be founded on undisturbed natural clay
- Number of voids and flues are present within the stack and below ground. Full extent not known.

PROPOSED ARCHITECTURAL WORKS

- Light box lantern to the top, approx. 4.5m x 2.5m on plan and 5m tall
- Lantern to be permeable to allow wind load to pass through.

WORK SEQUENCING

OPEN LANTERN & BOTTOM CHIMNEY STACK STRENGTHENING & FOUNDATION STRENGTHENING

- Install continuous and real time vibration and movement monitoring to chimney, trigger levels to be as agreed with Ridge & Partners LLP.
- Should vibrations or movements exceed trigger levels, all works are to stop, the site is to be cleared, and engineer consulted, temporary stability restraint works are to be installed around the chimney to stabilise it during any further construction works on site. If trigger levels are not exceeded during construction, no temporary stability restraint works to chimney are required.
- Undertake temporary works as necessary.
- Undertake further investigation to chimney base and to chimney stack as necessary.
- Install new piles around the existing chimney base (designed and installed by specialist, refer to specialist's method statement).
- Install RC ring ground beam and RC pile caps around the chimney perimeter.
- Install steel braced frame.
- A 5m exclusion zone is to then be set up around the existing chimney. Zone to be fenced up. To protect the chimney during the main building piling and groundworks.
- Below steps to be completed at a later stage in site program.
- Carefully deconstruct top section of the chimney to allow for lantern base installation. Masonry removal to be undertaken under a supervision of masonry heritage specialists. Store and label removed masonry neatly on site. All metalwork and stonework to be repaired by specialist. Details of deconstruction to be confirmed by a high access site inspection.
- Install a new concrete plug to the chimney top. Concrete plug is to provide a base for the lantern structural framing and to stabilise the lantern, preventing overturning and uplift of the framing.
- Chimney top to be rebuilt and repaired by masonry heritage specialists around the new concrete plug to ensure the appearance of the rebuilt section matches the existing.
- Install the open lantern to the top.
- A 5m exclusion zone is to then be set up around the existing chimney. Zone to be fenced up. To protect the chimney during the remainder of the main building works.

Note: high level access to be provided either from mobile access platforms or from a self-supporting scaffolding (scaffolding not to be stabilised by the chimney stack).