

During 2019 it became clear that the temporary works designed by CDS and installed by Tower Demolition were not suitable for the purpose of carrying the Koko roof during replacement of the truss spanning the back of the dome area. The truss has been identified as being in critically poor condition, and as such this has resulted in an immediate safety concern which needed to be addressed by the contractor. It has been suggested that the temporary works cannot be safely replaced, and so remedial solutions have been installed which look to complement and ensure the safety of the temporary works currently in place. The remedials were developed by CDS, and where HTS have had the opportunity to comment they have been designed with consideration for the impact on the historic fabric.

HTS are aware of four main changes to the CDS design which permanently affect the existing structure, these are listed below.

1) Lateral restraint

CDS had not adequately addressed the lateral buckling forces imposed by the installed props. To justify the lateral load-path CDS proposed lateral fixings which included resin anchors into existing slabs and bolted connections into existing beams.

2) Foundation solution

The foundation solution had not been installed as agreed and realignment caused some props to clash with the basement bar. The new solution proposed by CDS included spreader beams on concrete pads connecting to the existing slab as well as additional resin anchors into the existing slab.

3) Concrete encasement

The HTS Category III check identified issues with the design of the connection through existing slabs at each floor level. To overcome these a concrete encasement detail was proposed around all spreader beams. This concrete encasement is cast directly against the existing slabs.

4) Further investigations

Further intrusive investigations have been carried including break-out and reinstatement of the basement slab to investigate the building foundations and core samples collected from suspended slabs.