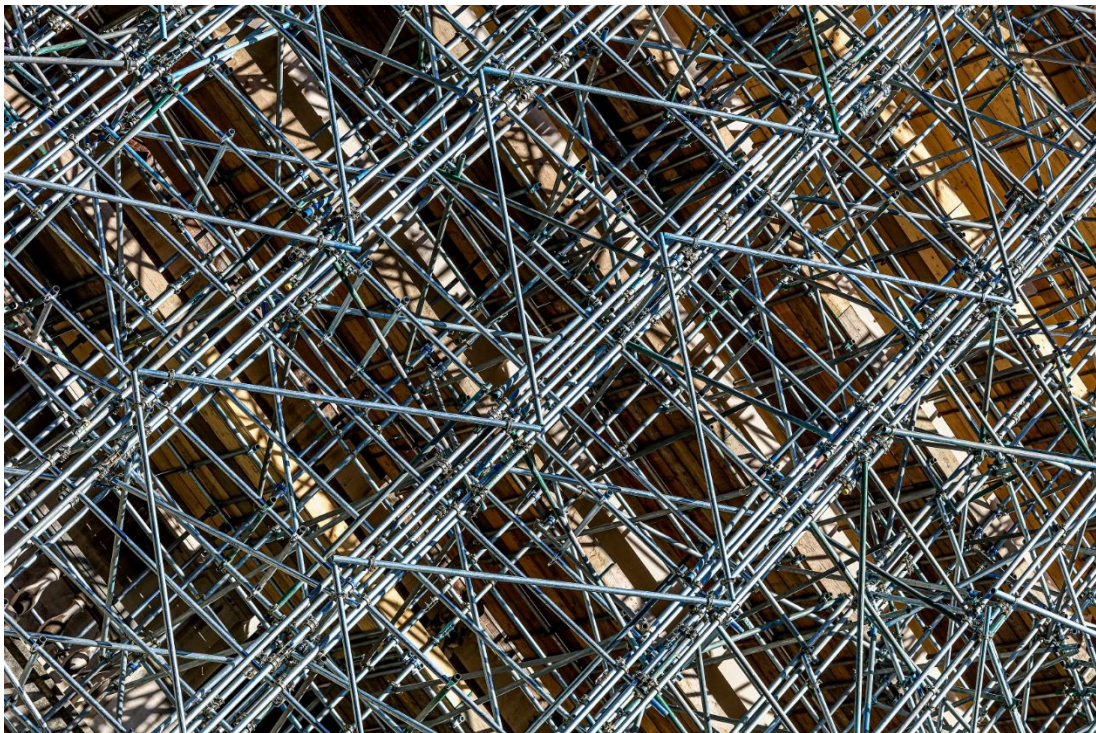


Queen's Tower - Project to Replace the Copper Roofing and Repair the Stonework



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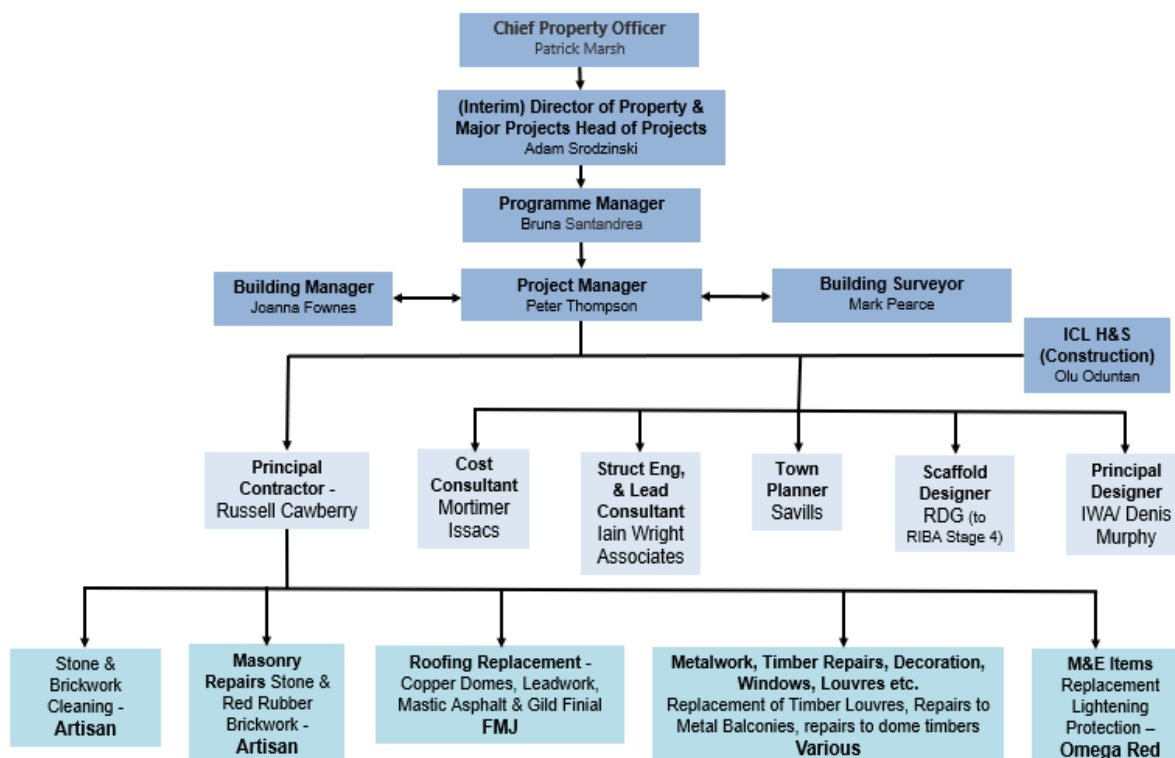
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Last Updated on 18 June 2024

Introduction

This document provides a summary of the progress on the project to refurbish the outside of the Queen’s Tower. The last update was in January 2024, and we aim to continue updating this information every three months to Dec 2025. The multi-disciplinary team and their roles are described in the diagram below:

PROJECT TEAM ORGANOGRAM



Background

Since its Victorian and Edwardian origins, the campus has undergone several waves of redevelopment - from its substantial post-war expansion to modern developments such as the Sir Alexander Fleming Building, the Main Entrance, and Imperial College Business School. These periods of growth have been essential in enabling the College to continue to grow and evolve.



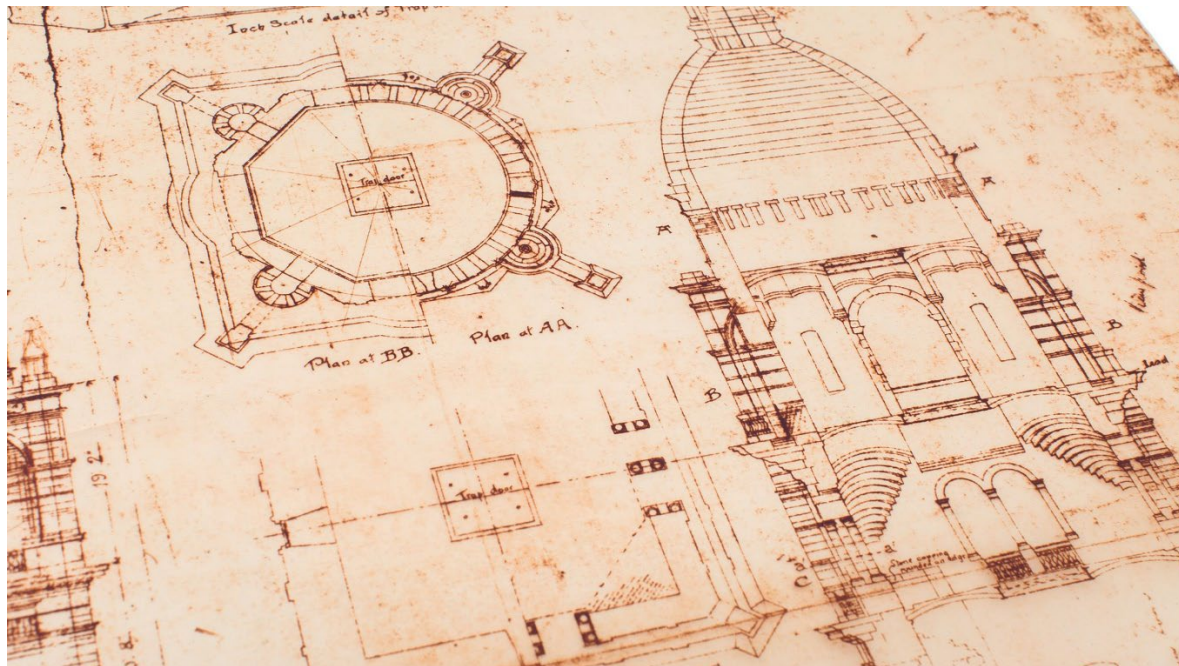
The Imperial Institute, the South Kensington Campus' forerunner – see image overpage where colour has subsequently been added.



The Imperial Institute, the South Kensington Campus' forerunner

The tower clad in stonework is shown in the middle of these photographs is the Queen's Tower, and the two smaller brick towers at the east and west wings of the Imperial Institute building.

The Queen's Tower, which can be seen from across London, has become an internationally recognised symbol for Imperial College London.



The Tower has its roots in Imperial's predecessor, the Imperial Institute, which was built to mark Queen Victoria's Golden Jubilee in 1887. The Imperial Institute was designed by T E Collcutt in the neo-renaissance style. The building was 700 feet long and stretched from Unwin Road to Wells Way.

In the 1960's it was determined that the Imperial Institute was not adaptable for the requirements of modern science and technology. The main Institute buildings were therefore demolished to make way for Imperial College London's expansion. The then-modern buildings that replaced them were designed to deliver world-class science, directly serving Harold Wilson's promise to utilise the 'white heat of the technological revolution'.

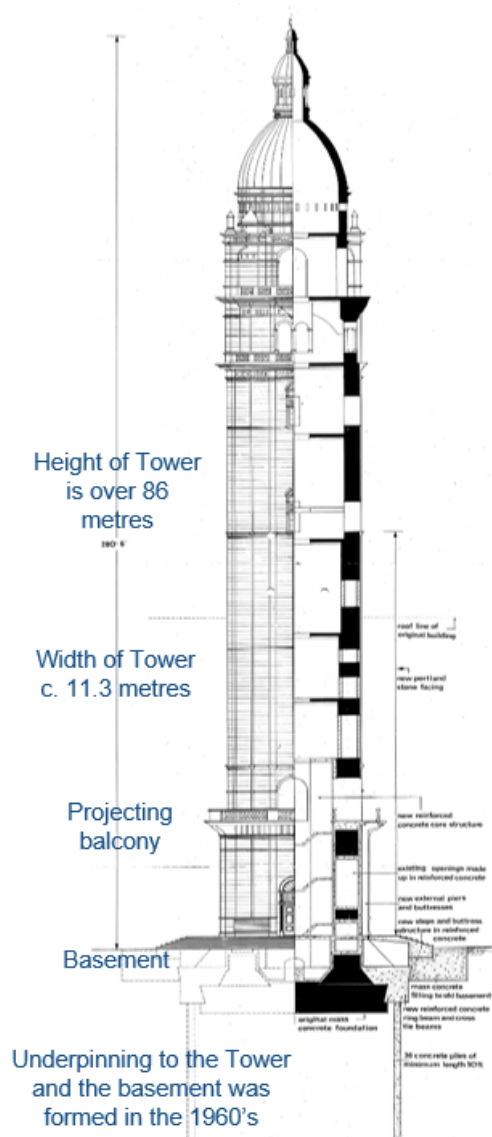
However there was opposition to the demolition, led by the Poet Laureate and great supporter of Victoriana, John Betjeman. As a compromise, it was decided to retain the central tower. Since then, the Queen's Tower has been in the custody of Imperial College London.

Imperial College London has begun the essential restoration programme on the Queen's Tower, which will include replacing the copper on the tower's domes, as well as replacing the louvres around the bells, and cleaning and repairing the stone and brickwork.

Other works include replacing the copper roof, repairing gutters, rainwater pipes, the flat roofs, lead flashings and the lightening protection. The image and bullet points below provide a fuller description of the works to refurbish the tower .

Scope of the project

The bullet points next to the part elevation part section below describe the proposed elements of the work.



- Regild the finial
- Replace the copper roofing to the main and cupola domes
- Repair the stonework and replace weathered red rubber brickwork
- Replace and repair the asphalt flat roofs, handrails & replace lead flashings
- Repair windows and replace timber louvres
- Clean stonework before undertaking masonry repair
- Erect scaffolding to all levels, as designed by RDG Engineering (TW) Ltd
- Take the scaffolding load down to the existing foundations in the basement
- Insert props in the basement to transfer the load
- Dismantle the temporary works and repair the stone and concrete paving

Timeline for the building works

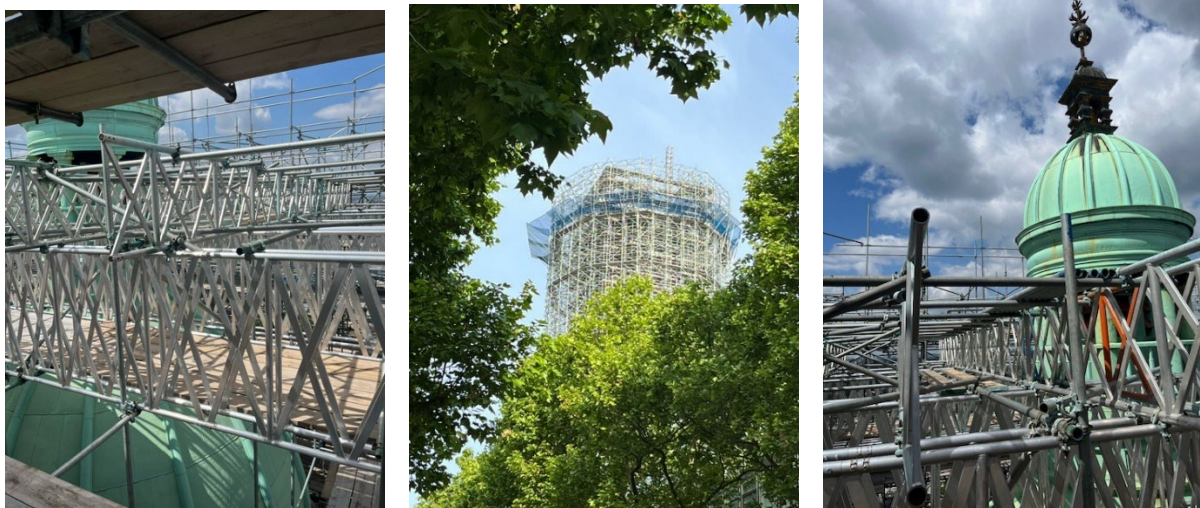
Eighteen months between April 2021 and October 2022 was spent preparing for the construction works, undertaking surveys, obtaining listed building consent and engaging contractors. The works commenced on site in October 2022 and the key dates for the building works are:

- Protect the stone steps and erect scaffolding – Oct 2022 to April 2024
- Detail stone and copper surveys once there is full access – May 2024
- Remove the existing copper and inspect the timbers – May 2024 to July 2024
- Stone cleaning and repairs – May 2024 to Oct 2024
- Replace copper dome – May 2024 to May 2025
- Dismantle scaffolding and repair stone steps – June 2025 to January 2026.

We are working with the building contractor to bring these dates forward where possible. The scaffolding has been paused on two occasions while we ensure the design and installation of the buttressing to the scaffolding is fully resolved and safe. During the recent pause there were numerous stone and brickwork inspections from the part-erected scaffolding. In particular, detail investigations were progressed for the some of the stonework repairs undertaken in the 1960's. The programme above will be updated following the reissue of contract programme by the principal building contractor.

In August 2023, the supplier to the scaffolding contractor ceased trading. To overcome this, an alternative way of stabilising the scaffolding has been developed. The 40 steel anchors have been installed around the base of the scaffolding and these are being attached to fully stabilise the structure. The scaffolding work recommenced in February 2024 and is due to complete on 1st July 2024. See recent progress photos below:





The completed work

The key elements of the project that have been completed are:

- Erected scaffolding to circa 95% of the height of the tower
- Installed 40 steel anchors around the base of the tower. Undertaken detailed surveys of tower where access allows, incl using photographs taken from a drone
- Relocated floodlights from the balcony to the outer scaffolding
- Prepared the foundations and installed over 100 props in the basement
- Established the hoardings and loading area
- Procured main contractor and purchased the new copper roofing
- Obtained the licence for the works from the Royal Commission for the Exhibition of 1851
- Submitted and obtained listed building consent.

The upcoming work

The next steps are:

- Further detail surveys of the tower once the scaffolding has been erected
- Replace the copper on the domes at the top
- Clean and undertake the masonry repairs
- Replace the timber louvres
- Dismantle the scaffolding, repair the existing stone steps and remove the hoarding.

Video

This link is to an earlier YouTube video of the scaffolding while it was being erected between 24th October 2022 to 19th April 2023: <https://www.youtube.com/watch?v=IxUz3ZsqEBA>.

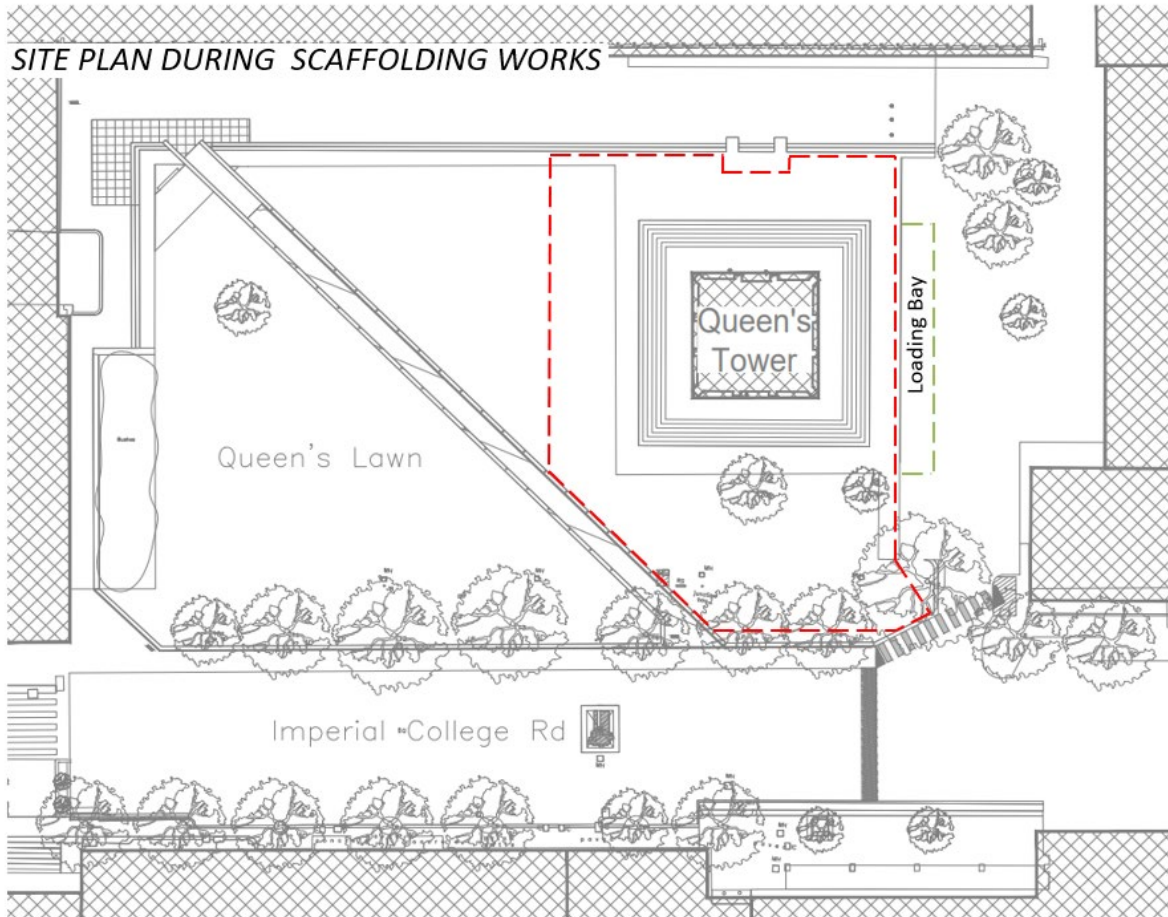
An updated video will be prepared and uploaded.

Contact details

The main point of contact is: Peter Thompson peter.thompson@imperial.ac.uk 07738 219 955.

Appendix 1 – Location plan and hoardings:

The Queen's Tower is located in the Queen's Lawn at the heart of our South Kensington campus. The site safety hoardings are indicated by the red dashed line below.



Appendix 2 – Photos of some of the stone feature seen from the scaffolding:



These four cherubs seen close-up from the scaffolding. Although they are in poor light levels, the two pairs of cherubs may be seen playing different musical instruments. These features are indicative of the stone cleaning and repairs required to parts of the tower.

Appendix 3 – Progress photos, below on 13th Jan, over page on 30 March 2023:

