

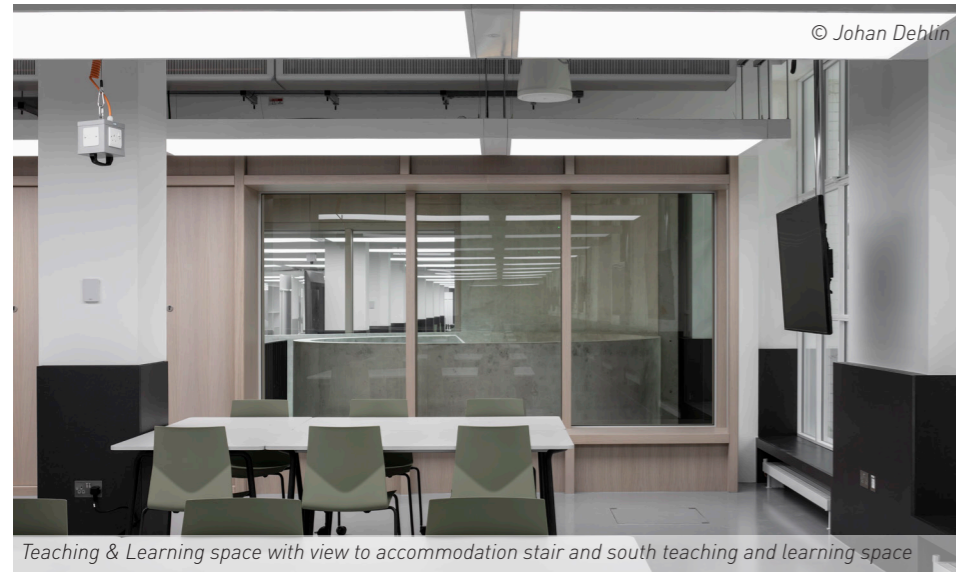
Quadrangle Building, King's College London

Hall McKnight

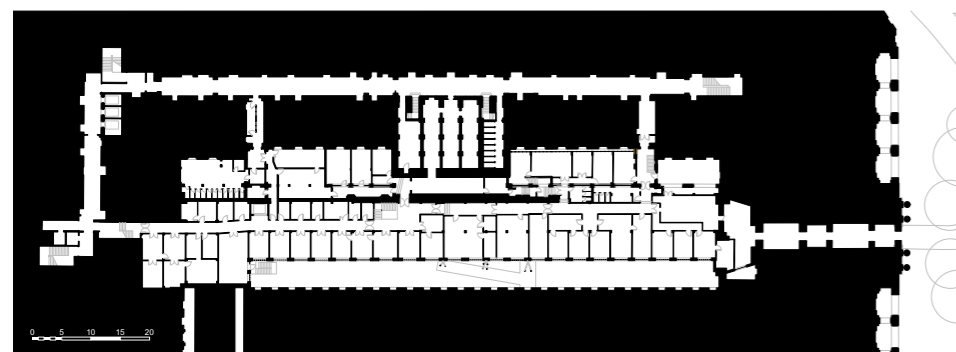
Category A - Built Heritage - 06A001196

'Building space in central London on the iconic Strand Campus at King's to house a modern engineering department whose goal is to lead in innovative education and research is a unique and challenging proposition. Placing this in a near-derelict structure with changes in level, arrays of pillars and at the heart of a busy campus appeared to be an impossibility! As clients, we sought open, flowing spaces where our 250 students could move freely between maker spaces and design and build areas and research spaces that were flexible and well-served. Thanks to Hall McKnight, we now have these spaces, and they exceed our brief. The collaborative relationship based on constructive questioning of the design on our part and of expectations of our wants and needs from Hall McKnight have resulted in an extraordinary space that overcomes the constraints of the original structure to deliver exactly what we need. Our students are thriving in the space, using it for formal teaching and informal activities, our staff can engage easily with students in these spaces and our research labs are now facilitating world-class research across a range of diverse topics from bioprocessing to batteries.'

Professor Barbara Shollock,
Head of Department of Engineering, King's College London



Throughout the project the approach has been to upgrade the existing fabric to produce a building which is sustainable in its energy use and flexible / adaptable to future changes in teaching and learning requirements through the use of robust materials and flexible services and layouts. Within a very constrained site, the building has achieved a SKA 'Gold' rating. The existing fabric is fragile, and complex technical issues have been resolved to accomplish improvements in the thermal performance. We expect post occupancy monitoring to demonstrate a 70% reduction in the energy demand compared to the original building. Based on GIA, the project achieves around 180kg/CO2e/m2 embodied carbon, a third of a very high performing new build comparator.



View from teaching & learning / group work space with maker space in lightwell behind existing brick arches



Photograph of the historic arches and vaults following WWII bomb damage, prior to the construction of the Quadrangle building in 1950s.



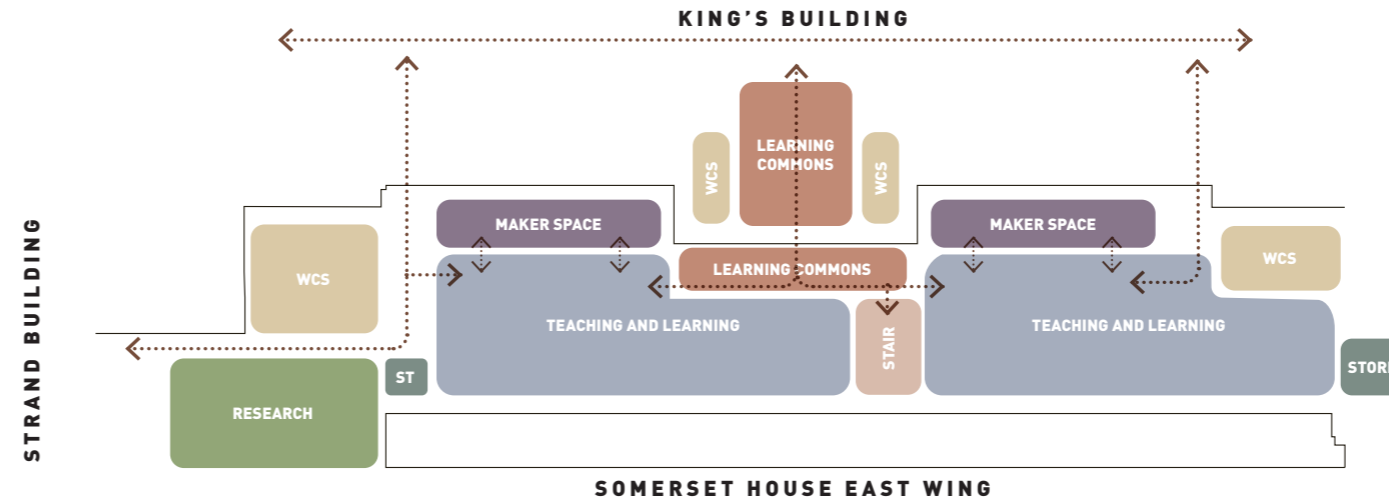
Arches were concealed and covered in plaster and tiling.

The new project interprets and reveals the nature of the original campus architecture - bringing students into direct contact with the physical fabric of the history of the site. The material of the early campus becomes as an aspect of the day to day existence of the students.

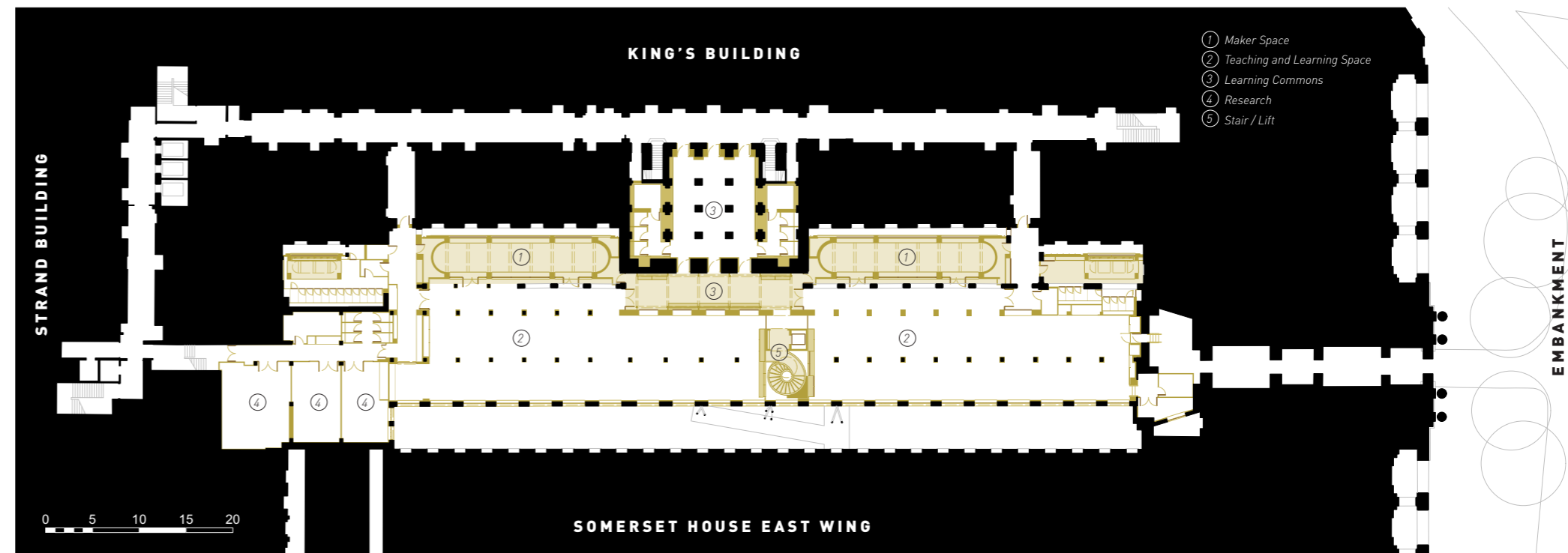


Photograph illustrating the retention of the arches, with balustrade above removed to facilitate the construction of the lightwell structures and allow for the waterproofing and insulation of the existing deck structure.

The floor plan diagrams on this page and the next page illustrate the simple approach to the internal layouts. Large flexible teaching and learning spaces are located on either side of the main circulation and learning commons areas.



Diagrammatic layout of Basement 1



Proposed Basement 1 Floor Plan