

Bennetts Associates

Edinburgh Futures Institute

Transformation of a derelict
Category A Listed building into
a new focal point for Edinburgh



“The bringing together of the new and the old in such a spatially interesting way, creates an excellent piece of architecture which, combined with the University of Edinburgh’s programme for the building, will be a real asset to the City in the coming years.”

Chief Planning Officer and Head of Building Standards, City of Edinburgh Council





A place for the brightest minds to tackle some of the biggest challenges facing society in the future – in an Edinburgh landmark that reveals its past with wit and pride.

Project Details

Edinburgh Location	University of Edinburgh Client	21,000 m ² Area	£120 million Value	April 2024 Completion
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Carbon Data

362 kgCO ₂ e/m ² Upfront Carbon (A1-A5) Total	-31 kgCO ₂ e/m ² Sequestered Carbon	529 kgCO ₂ e/m ² UK NZCBS Limit	206 kWh/m ² GI _{Ayr} Operational Energy
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The University of Edinburgh is one of the oldest and most prestigious in the world. Founded in the 16th century, its urban campus occupies a prominent location in the city's UNESCO World Heritage site.

Twelve years after the nearby Royal Infirmary relocated to a suburban site, the Category A, vacated building was in poor condition following many years of dereliction and neglect. By purchasing the property in 2015, the University grasped the opportunity for significant expansion. This substantial and ambitious project, largely created within the retained Victorian surgical hospital, has markedly shifted the University's centre of gravity, established a dramatic and highly prominent focal point for the institution and created a new identity for one of Edinburgh's most admired historic buildings.

The building is a futures-focused space for learning, research and innovation, with the emphasis on multi-disciplinary activities, from digital technologies and creative industries to financial services and fintech. Apart from its educational functions, the Futures Institute now hosts the Edinburgh International Book Festival and numerous public events.

The project vision was to produce a state-of-the-art facility that is heavily tech enabled and supports agile and innovative working. With clear direction to bring modern best practices for workplace design and apply them to the commercial areas, the postgraduate research and teaching facilities. Support spaces were to provide flexible working, promote collaboration across diverse disciplines and have inherent adaptability so they could flex to future ways of working.

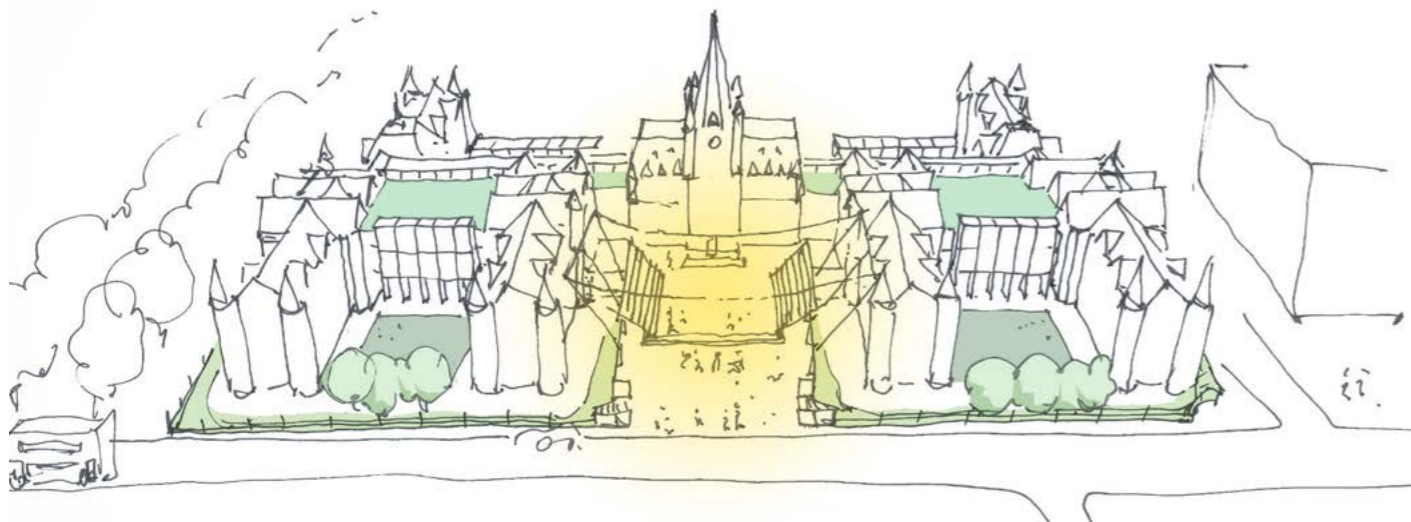
Also required was a high quality, flexible conference space for many diverse types of events such as dinners, lectures or performances. This space is intended to be available for use by the building's users as well as being open to external bookings and easily accessible.

Environmentally, the building adopts a robust, simple strategy of retaining as much of the existing fabric and character as possible, combined with natural ventilation (in all but the largest spaces), good acoustics, good daylight and thermal insulation to all external surfaces. Because of the existing tall floors, operational carbon is likely to be slightly more than conventional norms, but embodied carbon is verified as very low.



As a hospital, access was generally via the Accident & Emergency entrance at the east end of the building, with the original central main entrance behind railings and a small gatehouse building.

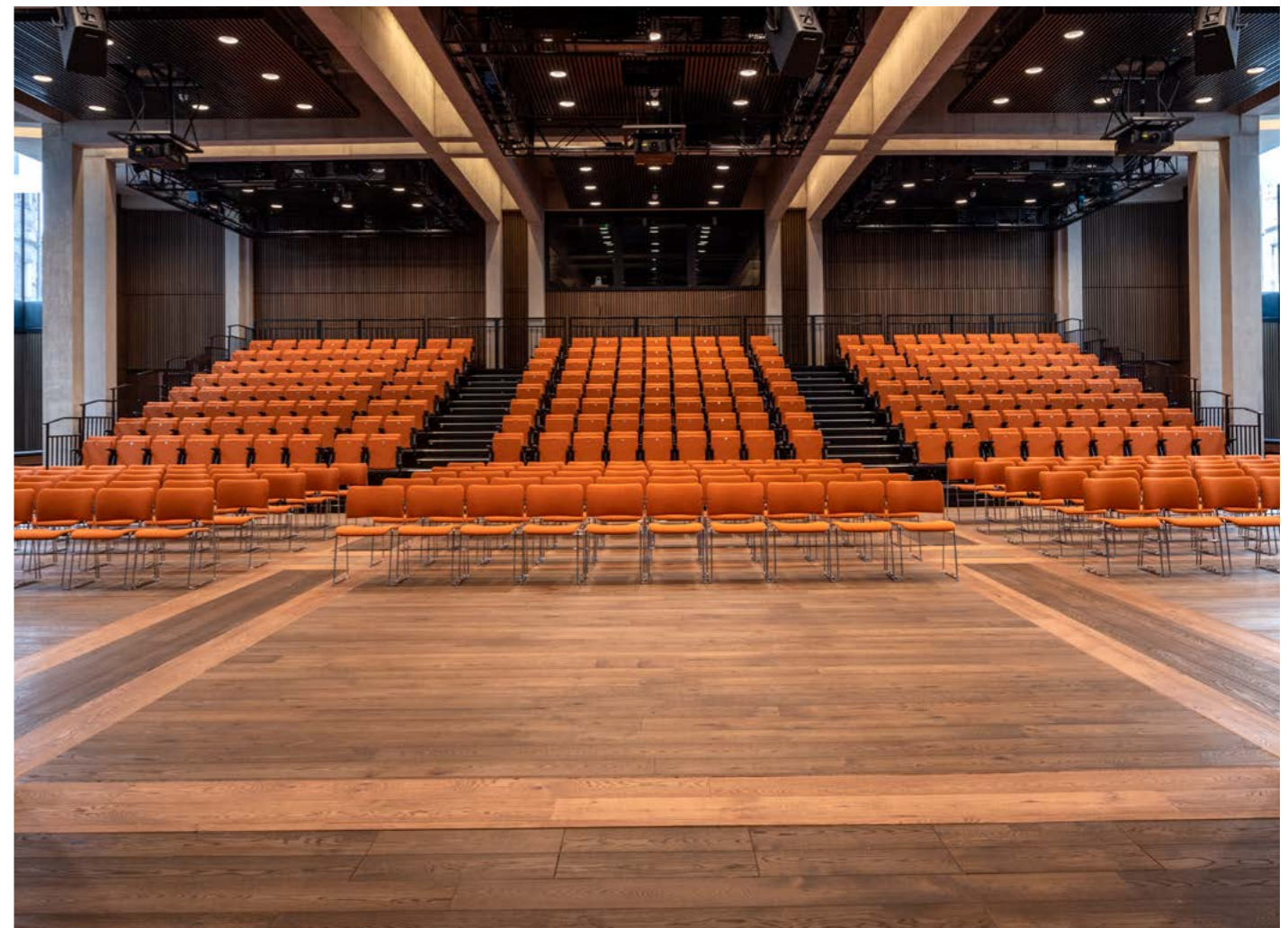
The gatehouse was removed and stored for resale or recycling to create an open and welcoming public square in front of the entrance. As well as framing a new place for events and performances and connecting the building to the city, the clock tower is now the focal point and celebrated.

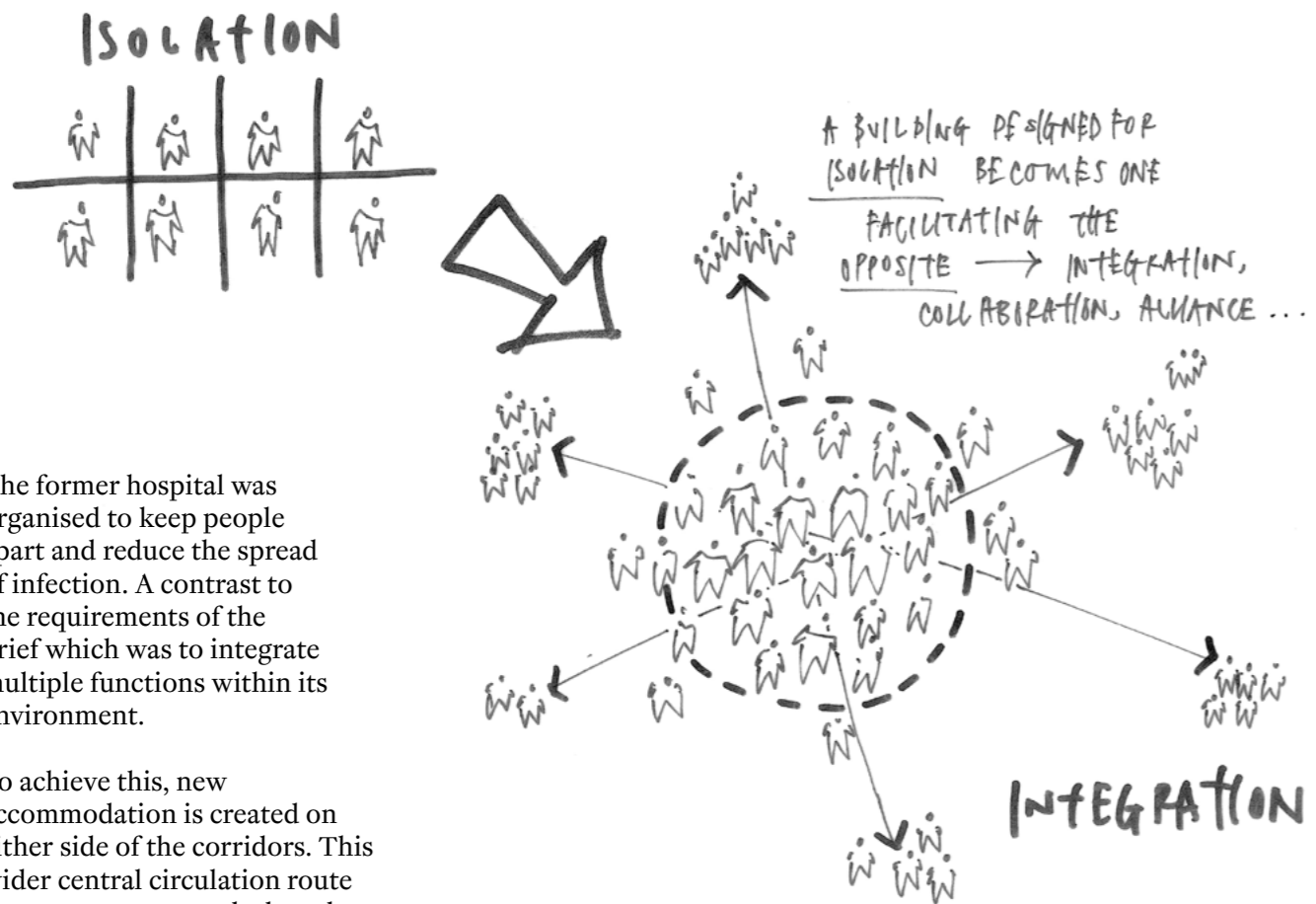




Below the square within the slope of the site, a 450-seat event space has been constructed, creating a new centre of gravity for the entire scheme.

Projecting 'light boxes' above enhance the external space, helping to demarcate the public square to the north, whilst direct, grade level openings connect through the thick clock tower walls to the south.





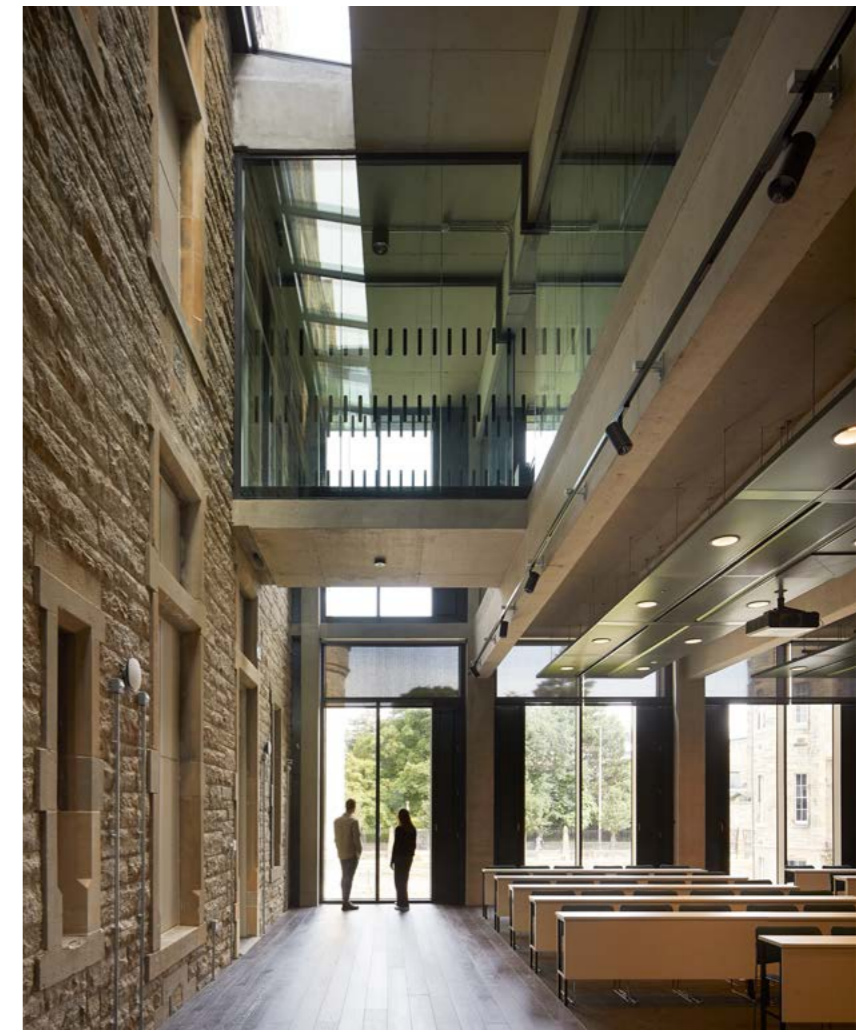
The former hospital was organised to keep people apart and reduce the spread of infection. A contrast to the requirements of the brief which was to integrate multiple functions within its environment.

To achieve this, new accommodation is created on either side of the corridors. This wider central circulation route becomes a connected, shared resource and animated space instead of a barrier.

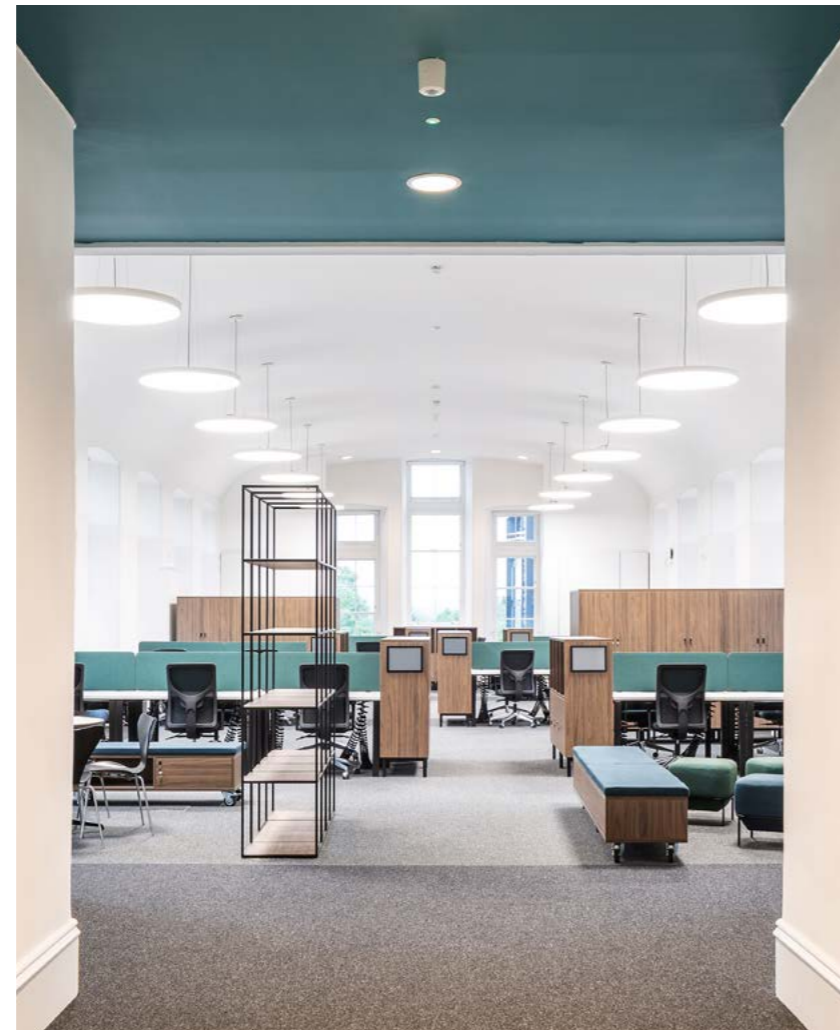


Two pavilion blocks added to the north side of the corridors are set back from the Lauriston Place frontage, with new stairs encouraging serendipitous connections and unexpected vistas.

Double height volumes connect with existing stone façades. Throughout are rich spaces carved out for teaching, workshops or quiet study.







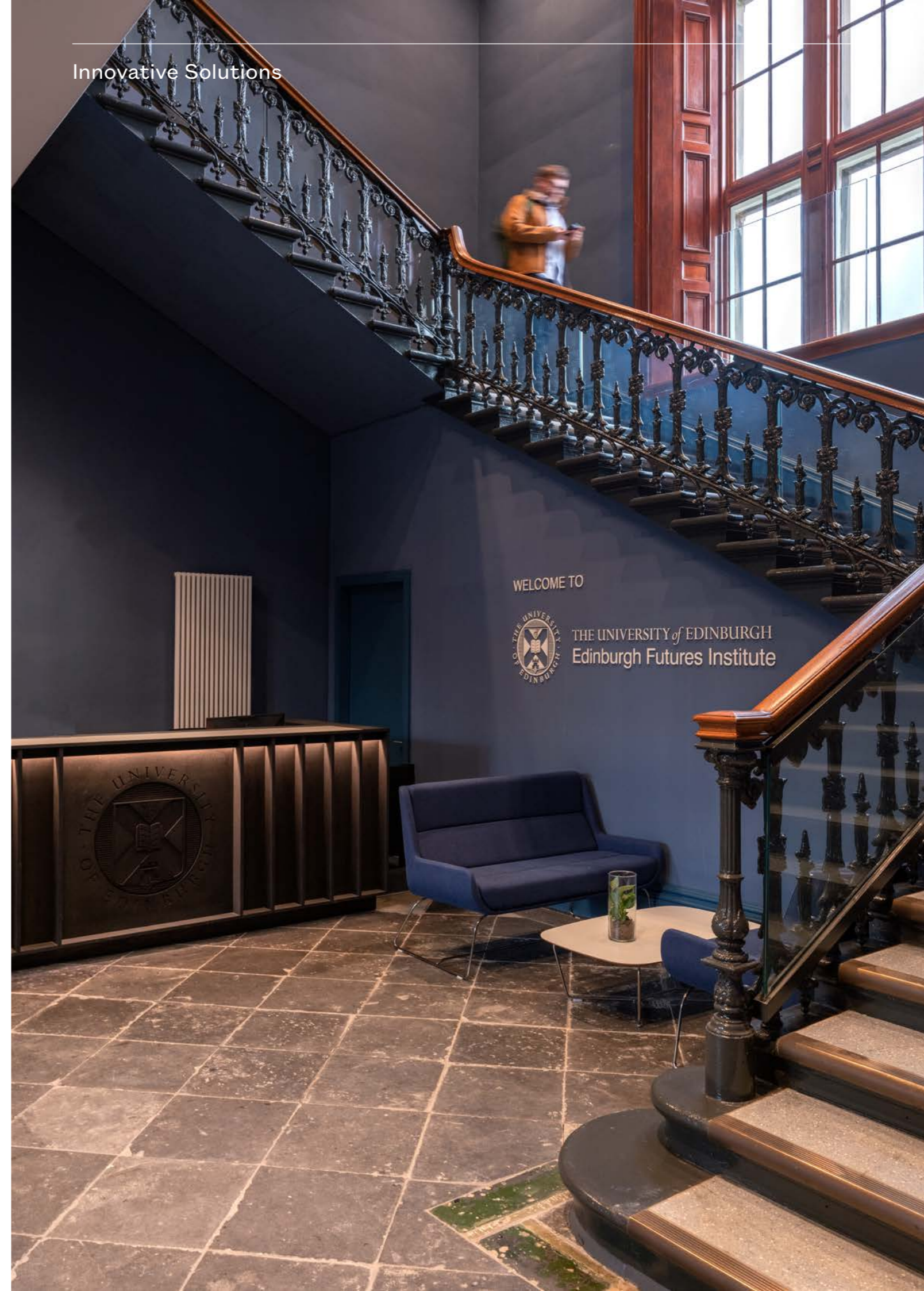
The 22 wards are restored to the elegant Nightingale proportions as simple white volumes to contrast with the corridors. They are used as a variety of flexible work and teaching spaces, including fusion' teaching with remote learning, in-person workshops and workplace functions.

Colour is used as an aid to orientation. In the corridors it combines with the textures of Caithness stone slabs, masonry walls and arched brick soffits.





Innovative Solutions



Innovative design solutions include:

- Selective demolition of original elements, to facilitate new uses.
- Developing the 'fusion' teaching model.
- Removing an inner skin of brickwork to allow space for thermal insulation without changing window reveal profiles in the stone wards.
- Using the existing building's planning grid (12ft, 3.6m) for new elements, to harmonise new structure layout with existing.
- Connecting to the University's heat network plant, to avoid large plantrooms at high level in the building.
- Avoiding replacement of ceilings and wall linings in the historic areas, following removal of dry-rot, to expose the underlying structures.
- Concealing of services at level 0 in a large underfloor trench.
- Redefining university functions to ensure compatible with the spaces available in the existing building, for example the 22 wards.
- Flipping a building designed for isolation into one supporting integration.
- Creating a fully publicly accessible building. returning a much-loved cultural asset to public use.





David Bryce's majestic original had many unsympathetic alterations over the years and the building was in decline. Part of the wider Quartermile redevelopment, the Edinburgh Futures Institute is its final and most distinctive element.

David Bryce's majestic original design in the 'Scotch Baronial' style envisaged the new surgical hospital in a rural setting. It was completed in 1879 and featured 22 Nightingale wards in six wings. These were connected by long corridors to minimise cross-contamination. Despite its 'castle-like' architectural form, it was remarkably functional and inventive, featuring a wind-driven ventilation system, good daylight and multi-level connections to adjacent buildings.

After the Royal Infirmary moved to a suburban location in 2003, the entire site was redeveloped for residential and commercial accommodation. A wider Quartermile masterplan by Foster and Partners used a combination of retained and new buildings. Located in the former surgical hospital, this was the last part to be completed and greatly adds to the development's diversity.

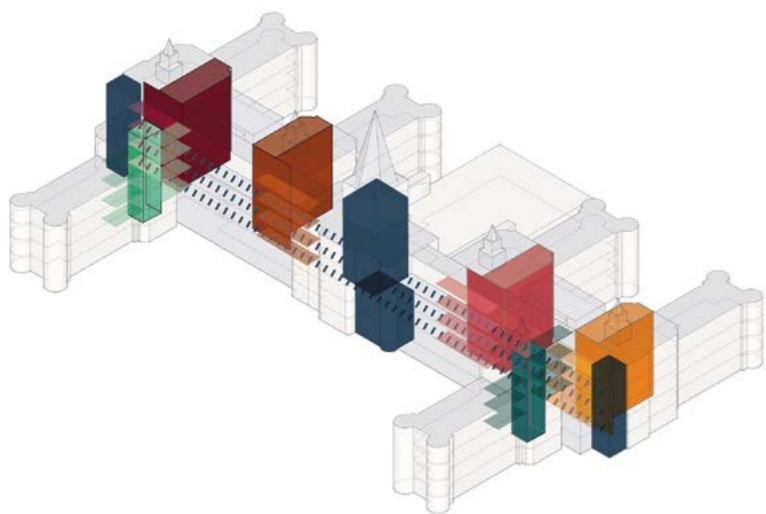
Over the years there were alterations to the building and when the NHS vacated in 2003, there were numerous unsympathetic extensions along with asbestos, dry rot and potential structural failure. The Category A listed building was in very poor condition and contained much of the hospital equipment.

The first step was to strip the building of these later accretions, so that the external and internal forms can once again be seen at their most impressive. This entailed removal of ugly roof extensions, internal mezzanine levels, suspended ceilings and services.

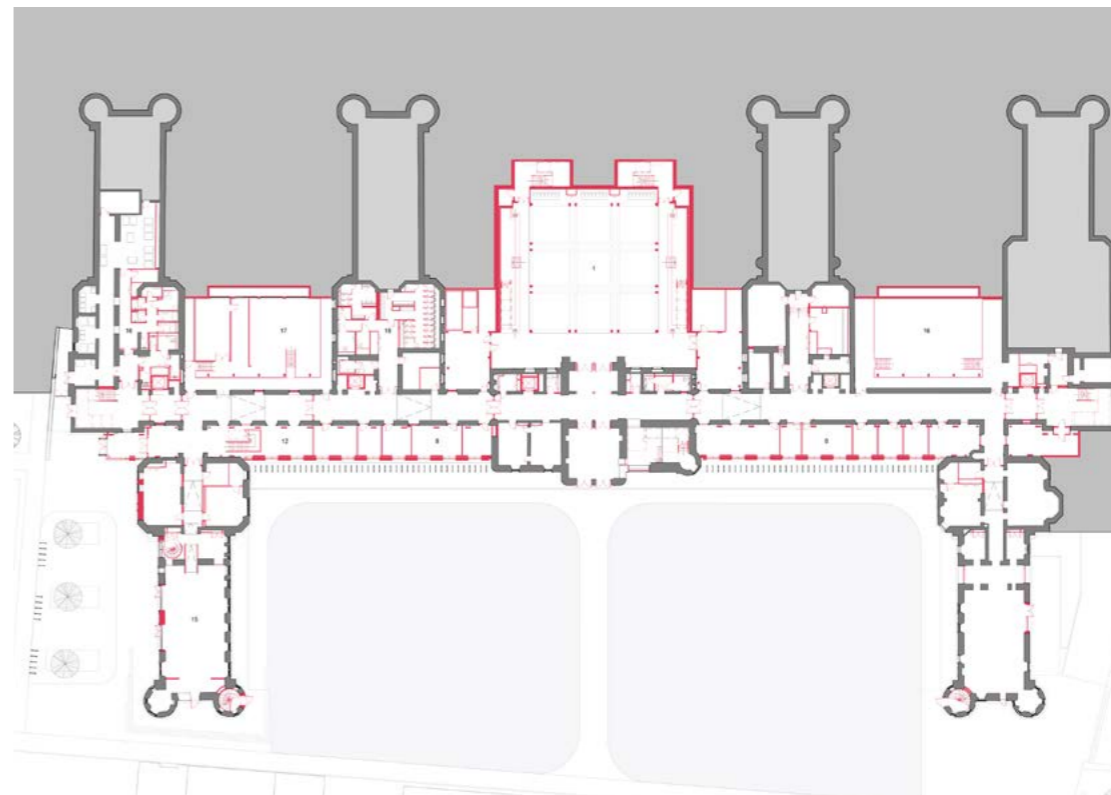
Unfortunately the dry rot had spread to ceiling voids, timber structures and even the lathe behind plastered walls, requiring replacement of more than 50% of the building's floors. Temporary works prevented collapse of the corridor's south elevation. The stripping out revealed large stone flags, stone walls and vaulted brickwork in the corridors which were restored.

As an example of creative adaptation, the design not only demonstrates that listed buildings can be changed without detriment to the original, but also that low carbon-re-use of an existing building can be stimulating and responsible.

Edinburgh Futures Institute contains a range of spatial experiences with proportions, materiality and variety that are unlike anything that could be achieved with an equivalent new build.

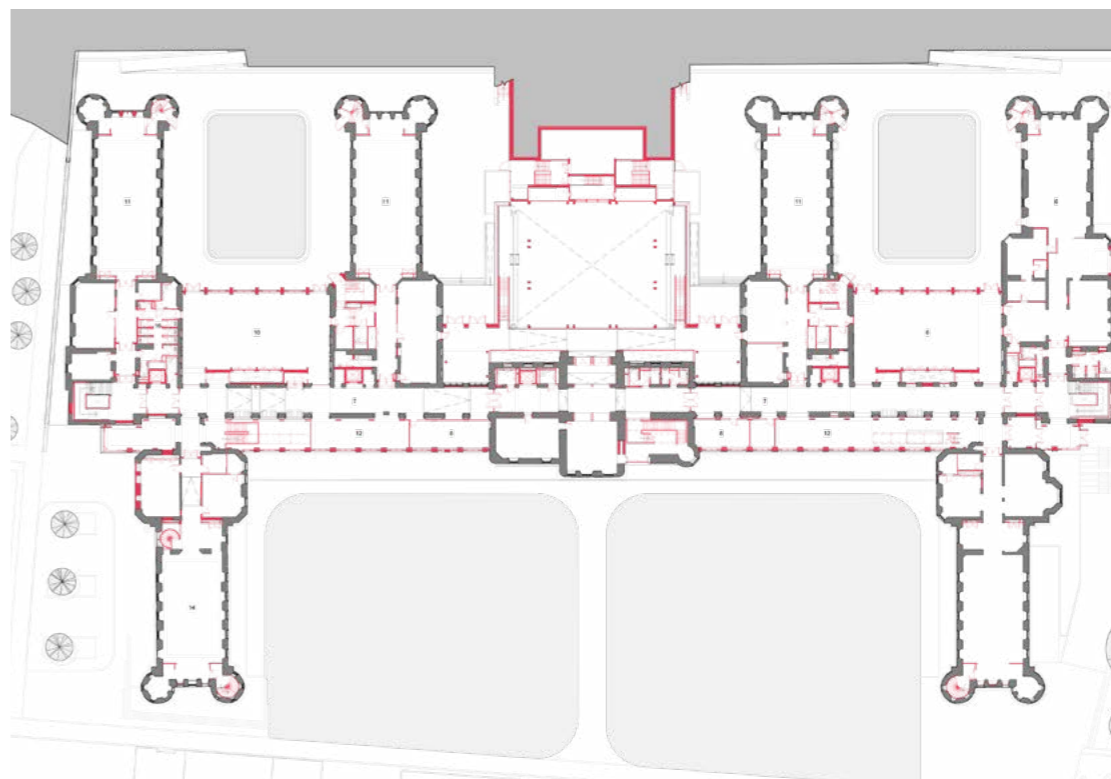


To enhance wayfinding and visual stimulus, each ward's vertical core has a different colour through five levels, with signage designed to suit. A dark grey-blue used for primary circulation and a back-drop to art installations.

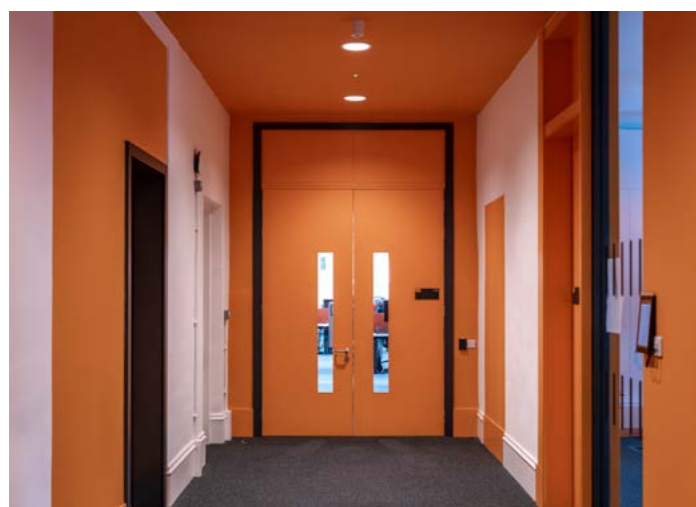
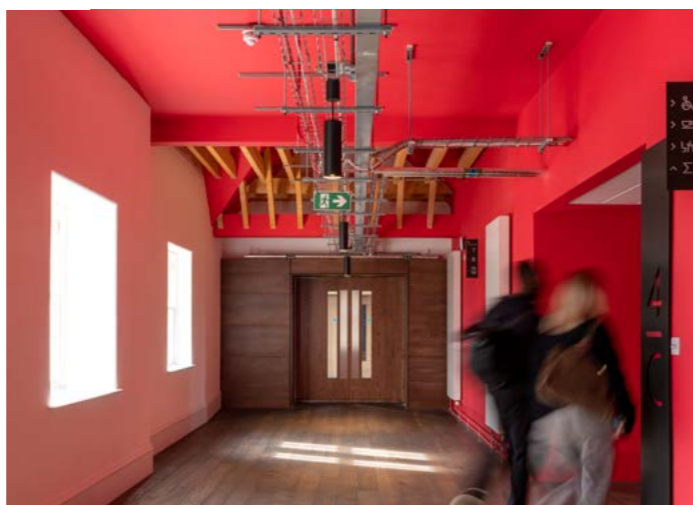
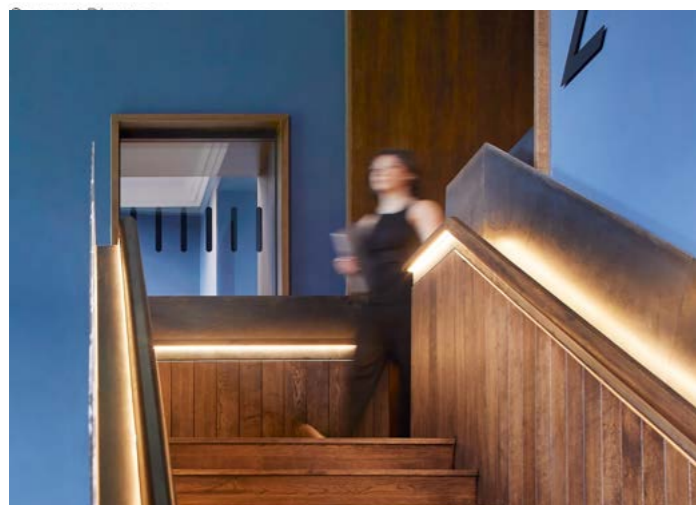


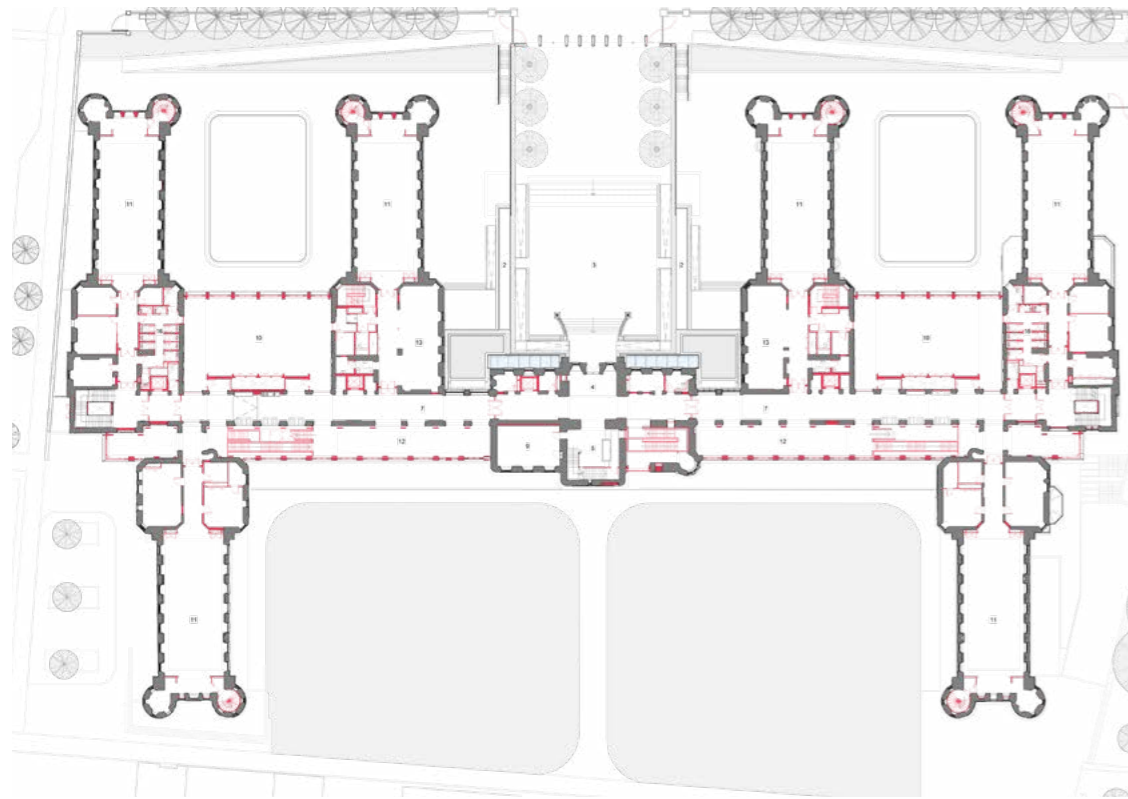
- Existing refurbished building
New construction
- Key
1. Event space
 2. Lightboxes
 3. Event square
 4. Main entrance
 5. Reception
 6. Cafe
 7. Main spine corridor
 8. Meeting rooms/offices
 9. Board room
 10. North extension - teaching/seminar
 11. Wing - Teaching space/office
 12. South extension - breakout/new stair
 13. Study
 14. Digital Maker Space
 15. Ideation Studio
 16. WCs/core
 17. Plant & ancillary space
 18. Clock room

Level 0 Plan



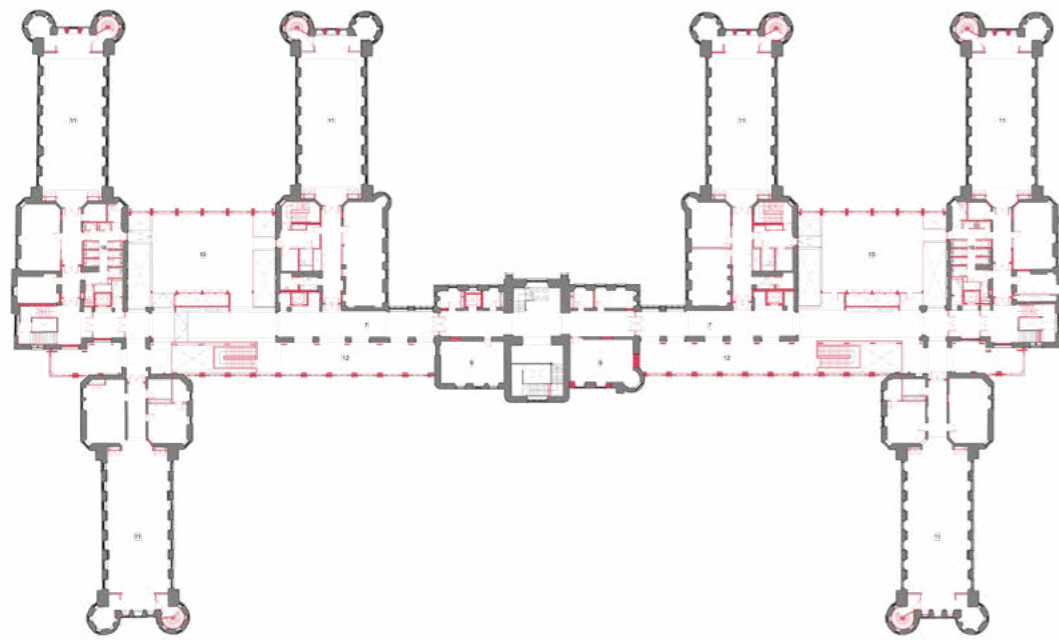
Level 1 Plan



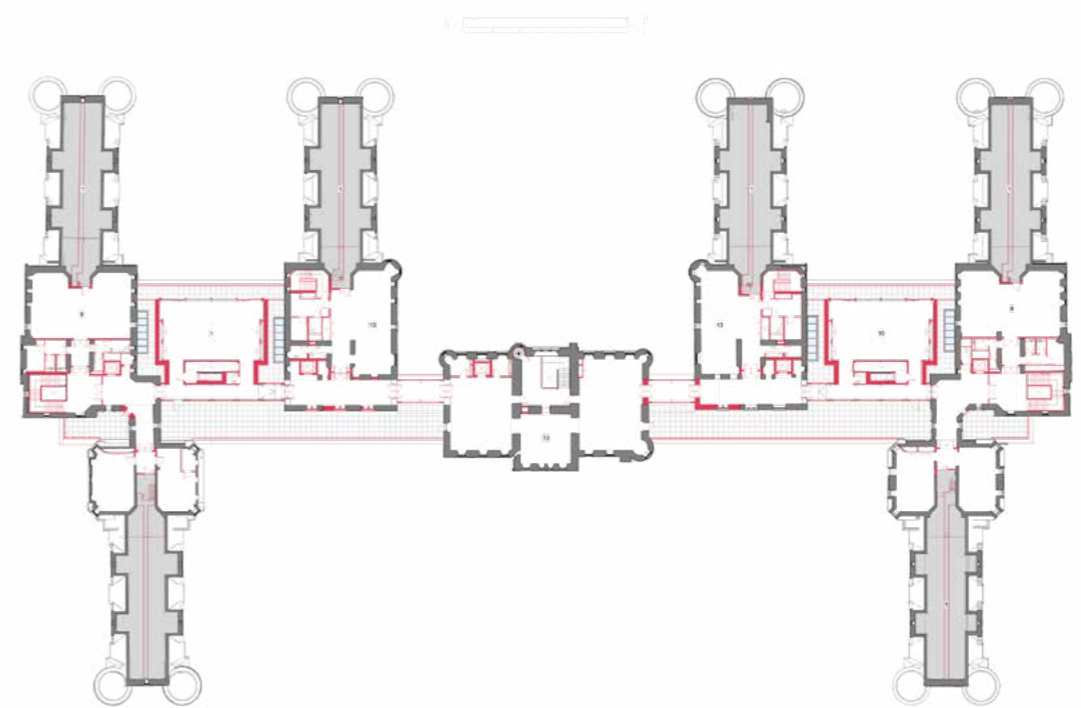


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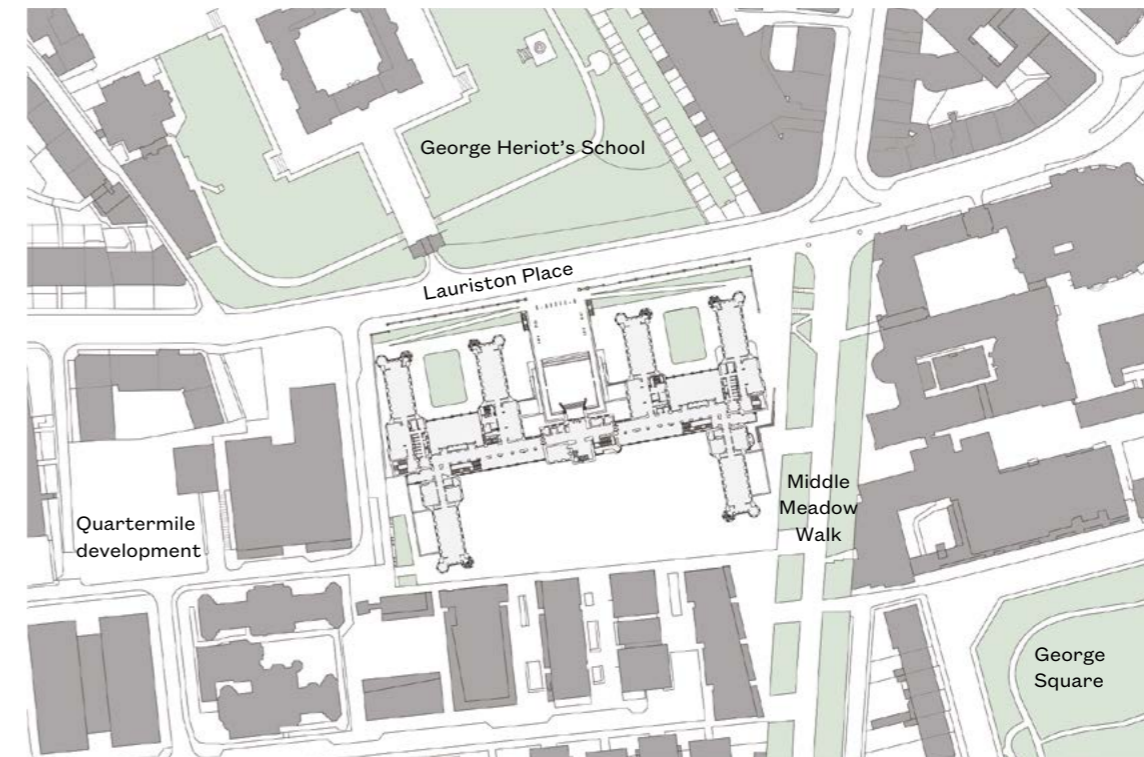
Level 2 Plan



Level 3 Plan



Level 5 Plan



Location Plan

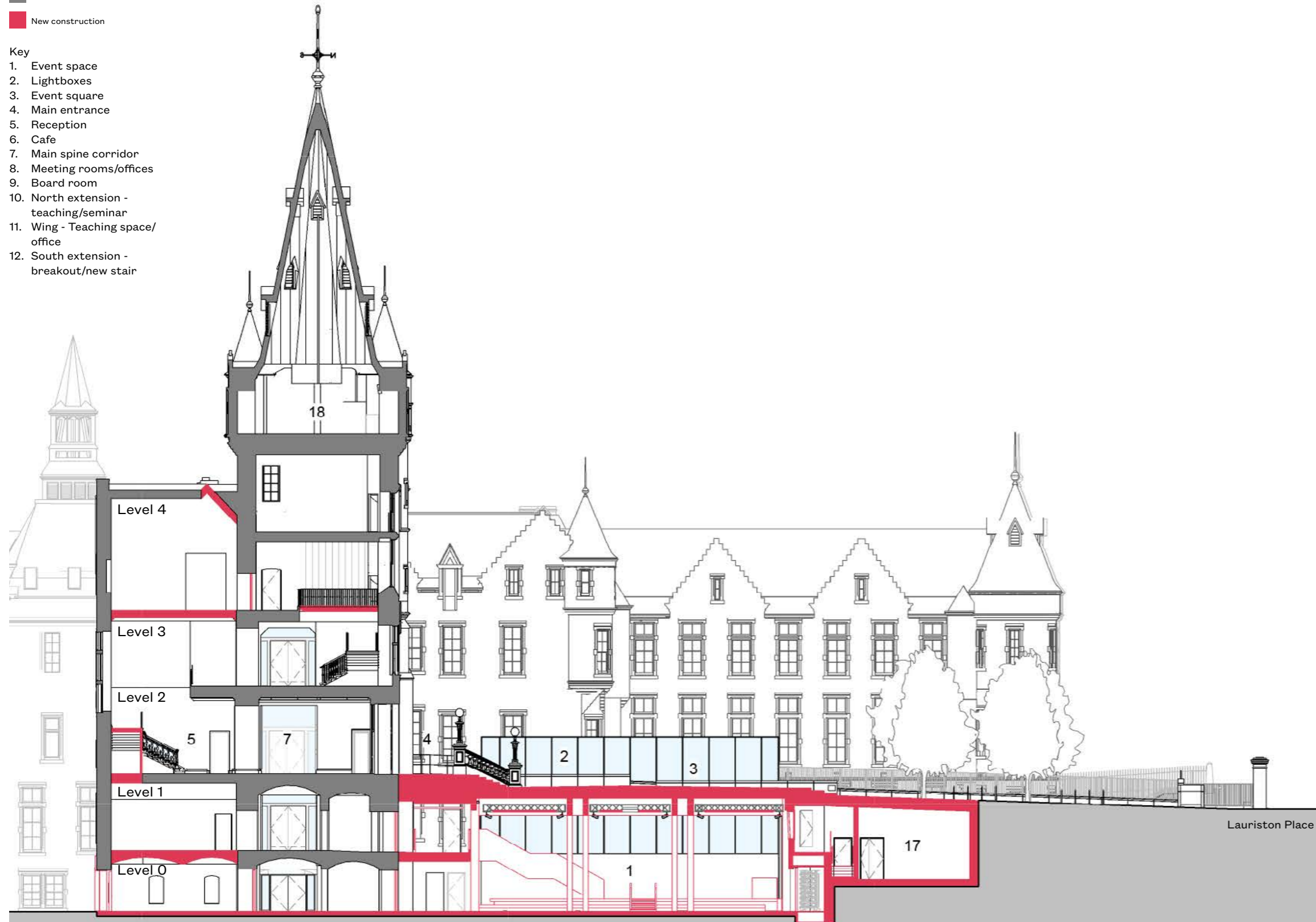
Section through clock tower, looking west

Existing refurbished building

New construction

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The main entrance at Level 2 is above the event space at Level 0. Ramps from Lauriston Place line the edges of the new public square, providing unimpeded access around the rebuilt steps.

Awards

- AJ (Architects Journal): Retrofit and Reuse Award
- AJ (Architects Journal): Retrofit and Reuse, Client of the Year Award
- BCO (British Council for Offices): National Award
- CECA (Scotland Civil Engineering Awards): Building Award
- Civic Trust Award
- Civic Trust Special Award: Retrofit and Reuse
- Education Estates Award: Refurbishment of the Year
- IStructE (Institution of Structural Engineers): Scottish Structural Awards, Best Category A Listed Building Refurbishment Project
- Learning Places Scotland: Refurbishment of the Year
- Prix Versailles
- RIAS (Royal Institute of Scottish Architects) Award
- RIAS/TCM Capital Innovation Award
- RIAS/Laurence McIntosh Award for Architectural Interiors
- RTPI (Royal Town Planning Institute) Award
- Scottish Property Award: Project of the Year (Public)

Project Team

Architect	Bennetts Associates
Conservation Architect	Consarc Design
Project Manager	Atkins Realis
Structural Engineer	Will Rudd Davidson
Services Engineer	Atkins Realis
Quantity Surveyor	Thomson Bethune
Landscape Architect	Ironside Farrar
Main Contractor	Balfour Beatty
Enabling Works Contractor	Sir Robert McAlpine
Fire Engineer	Atelier Ten

Image Credits

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