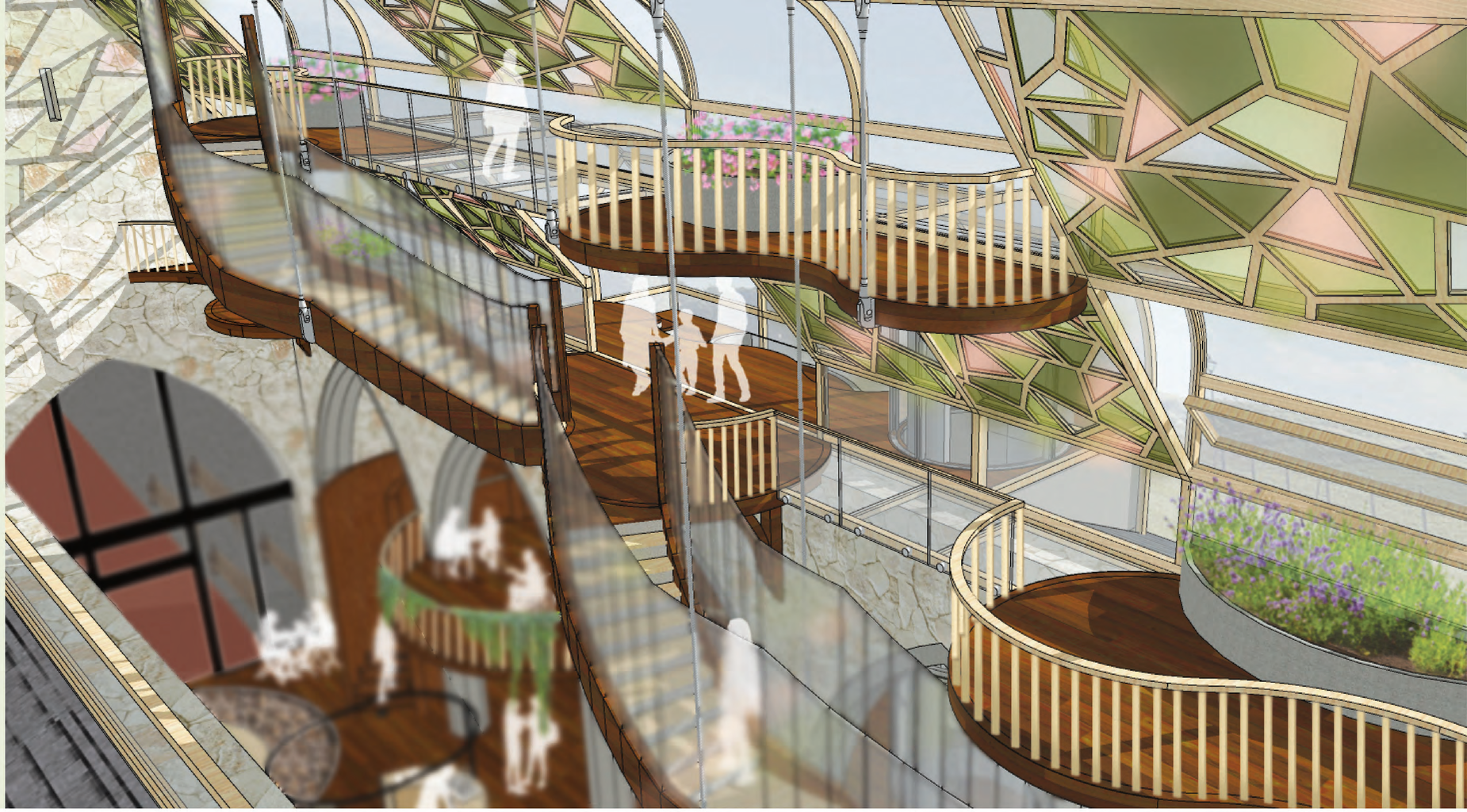
CANOPY CONNECTIONS

'How can we push the boundaries of a roof?'

In the age of rapid urbanization and industrialization, heritage sites are at risk of demolition and neglect. To tackle the growing issue of heritage loss, **heritage sites such as Royal Garrison Church requires our attention and protection, now more than ever.** Canopy Connections is a unique experience designed to restore the roof of Royal Garrison Church through adaptive reuse, fully maximising the space within the building with minimal alterations to the existing structure.

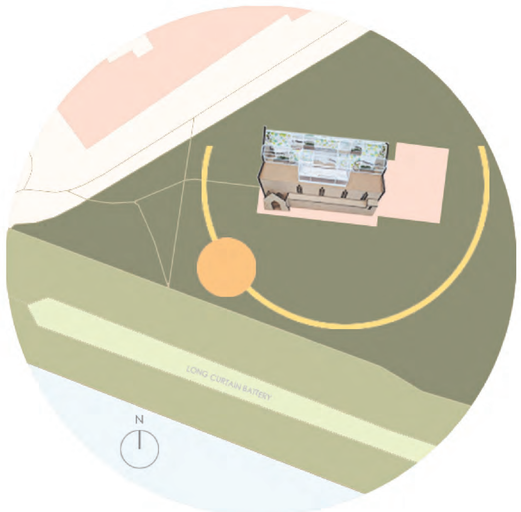
Canopy Connections takes its visitors through a journey of different heights, and different sights within the roof of Royal Garrison Church. It embodies the idea that beauty lies within the journey itself, offering a space of personal reflection and connection to the rich history of Royal Garrison Church.



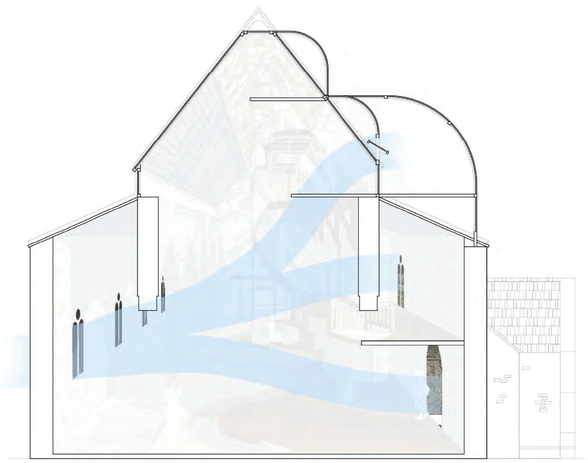
'What happened here...?'

Royal Garrison Church, Portsmouth, was bombed in 1941, the nave remains roofless to this day, and serves as an event space for the ongoing church services in the chancel.

Site Map



Ventilation & Air Flow



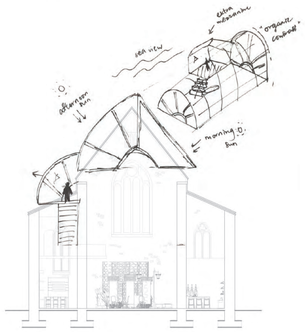
Concept Collage

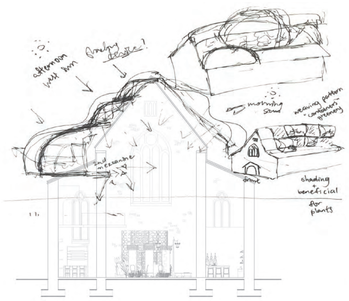
The highest level surpasses the height of the hill by Long Curtain Battery, exposing the user to the sea views of Old Portsmouth Beach.

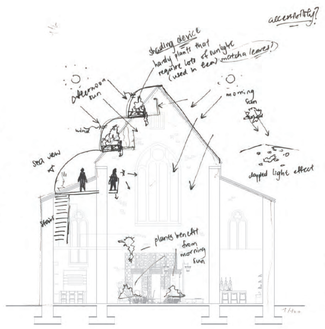
Major Lookout as a space of rest to forster community spirit.

Development Sketches by hand

Precedent 1
Arched Window, Brooking Collection, Whitchurch
This piece inspired the organic roof shape constraint to create a dramatic contrast to the church's geometrical shape.





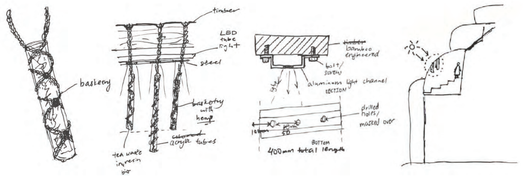


Short Section 1:75

0 1m 5 10

Repurposing Tea Waste

Afternoon tea culture was brought into England through marriage between King Charles II and Princess Catherine of Braganza in this very church. Tea waste is suspended in bio resin, encased in colored acrylic tubes, and wrapped in traditional basketry where light is transmitted to reveal the texture of various tea leaves and flowers.

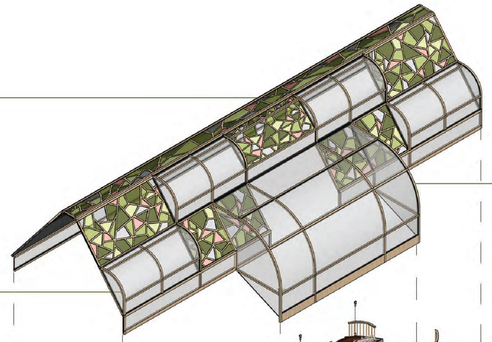


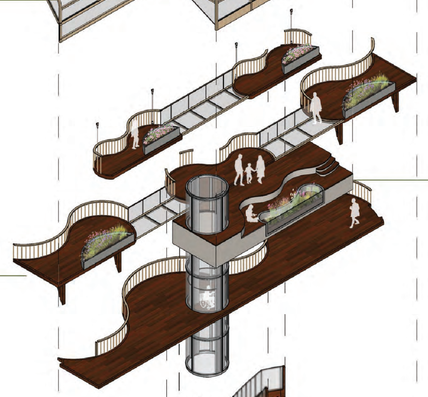
structural engineered bamboo

Precedent 3
Crystal Palace by Joseph Paxton
The arched glass roof expands the user's view to the sky.

timber, lavender, roses, 33mm toughened glass

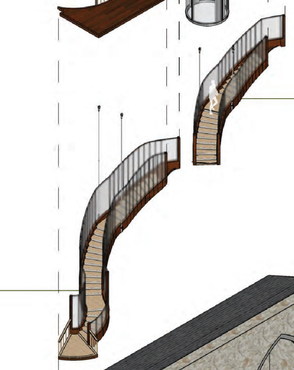
stainless steel tension cables, bamboo planks, hempcrete infill



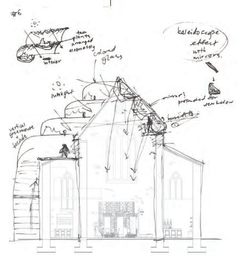


hempcrete infill

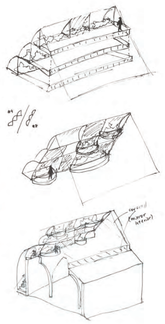
frosted glass creates visual suspense



Precedent 2
C42: Citroën Showroom, Paris
Facade was extended to the roof, creating a dramatic visual contrast to the existing buildings. Colored glass adds character to the facade as sunlight streams through and artificial light streams out.



Sketch: Facade Extension
Experimenting with facade extension through sketching has opened the conversation of accessibility to the upper levels.



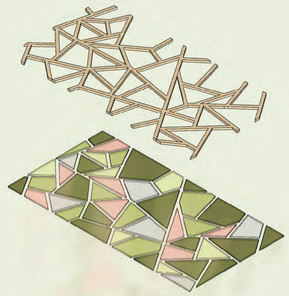
Study Model: Roof
Accesibility ties directly to the overall shape and structure of the mezzanine levels. Resolving this issue was the most challenging part of the design. Upon analysis of multiple options, the journey to the top was moved the the interior.

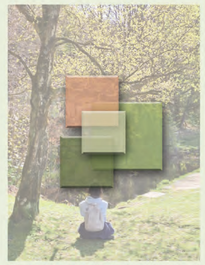
Final Physical Model: Versatility
The ground floor was originally designed as a tea house, serving and educating visitors on the different cultures of tea around the globe. Canopy Connections is designed to complement the space below, but remains as a versatile design that can complement any type of social space that occurs on the ground floor.

Final Physical Model: The Journey
Having the journey to the top situated in the interior not only resolves the issue of accessibility, but also provides interesting views to both the interior and the surrounding site of the church.

'Why Colored Glass?'

Colored glass resemble the stained glass windows that once lined the nave of the church. Lead, an extremely harmful material to human health and the environment, is used in the production of traditional stained glass to connect pieces together. As an alternative, colored/tinted glass is pre-cut and connected with a structural engineered bamboo frame to form an elaborate mosaic pattern.

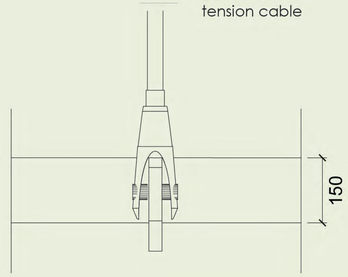


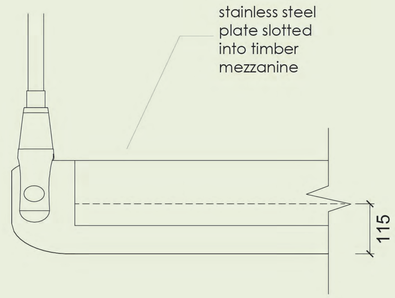


Color palette extracted from photo taken by author in Cromford during the Spring season

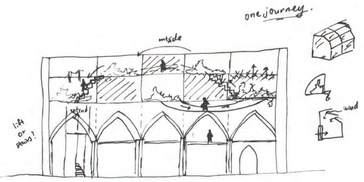
Daylight is filtered through the colored glass into soft colorful glows. This mimics light that comes through trees during the spring season, signifying rebirth in a new form after the damage from the air raids.

Detail Drawings





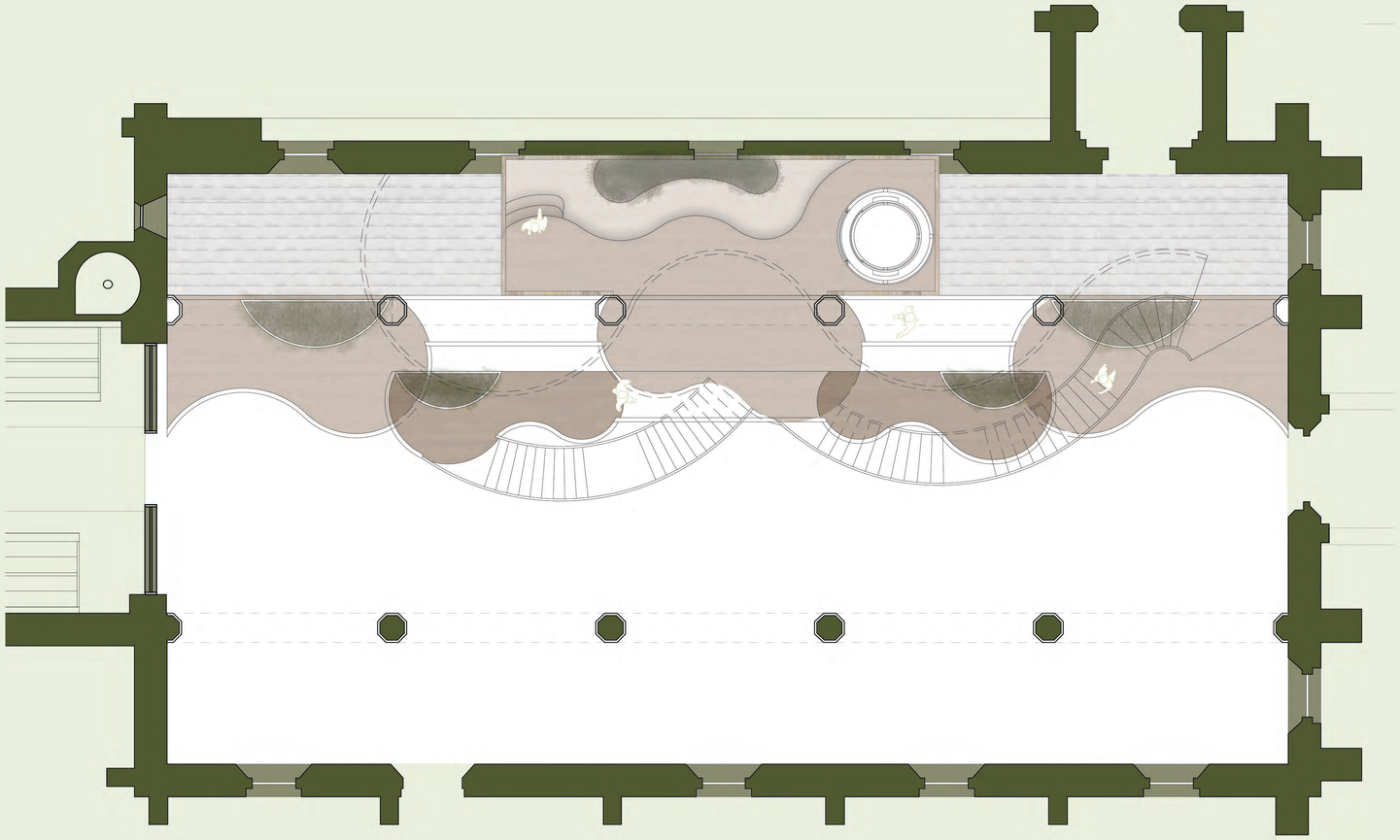
Long Section 1:100



Precedent 2:
Pompidou Centre, Paris
Connection between levels in a glass tube of stairs, makes travelling between levels an experience itself, providing interesting views.

11 SUSTAINABLE CITIES AND COMMUNITIES

Sustainable Development Goals (SDG)
Target 11.4 "strengthen efforts to protect and safeguard the world's cultural and natural heritage".



Floor Plan 1:100

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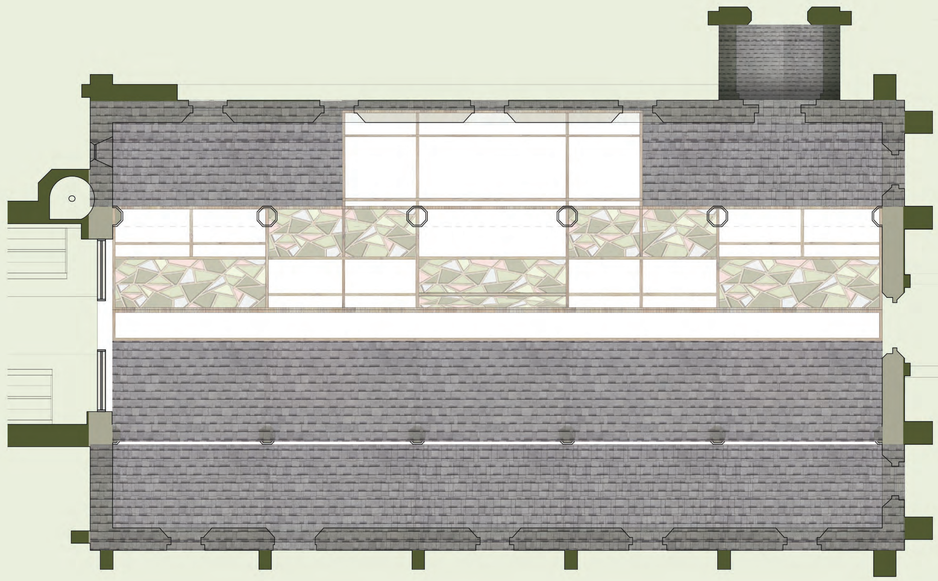

Roof Plan 1: 150

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