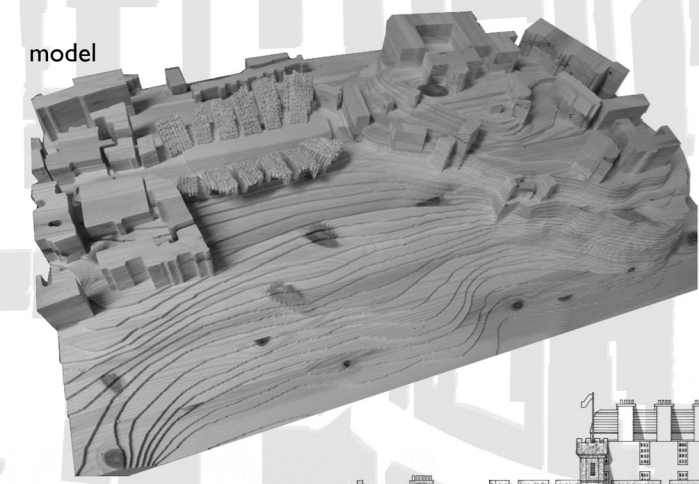




long section through Royal Mile, 1:1000



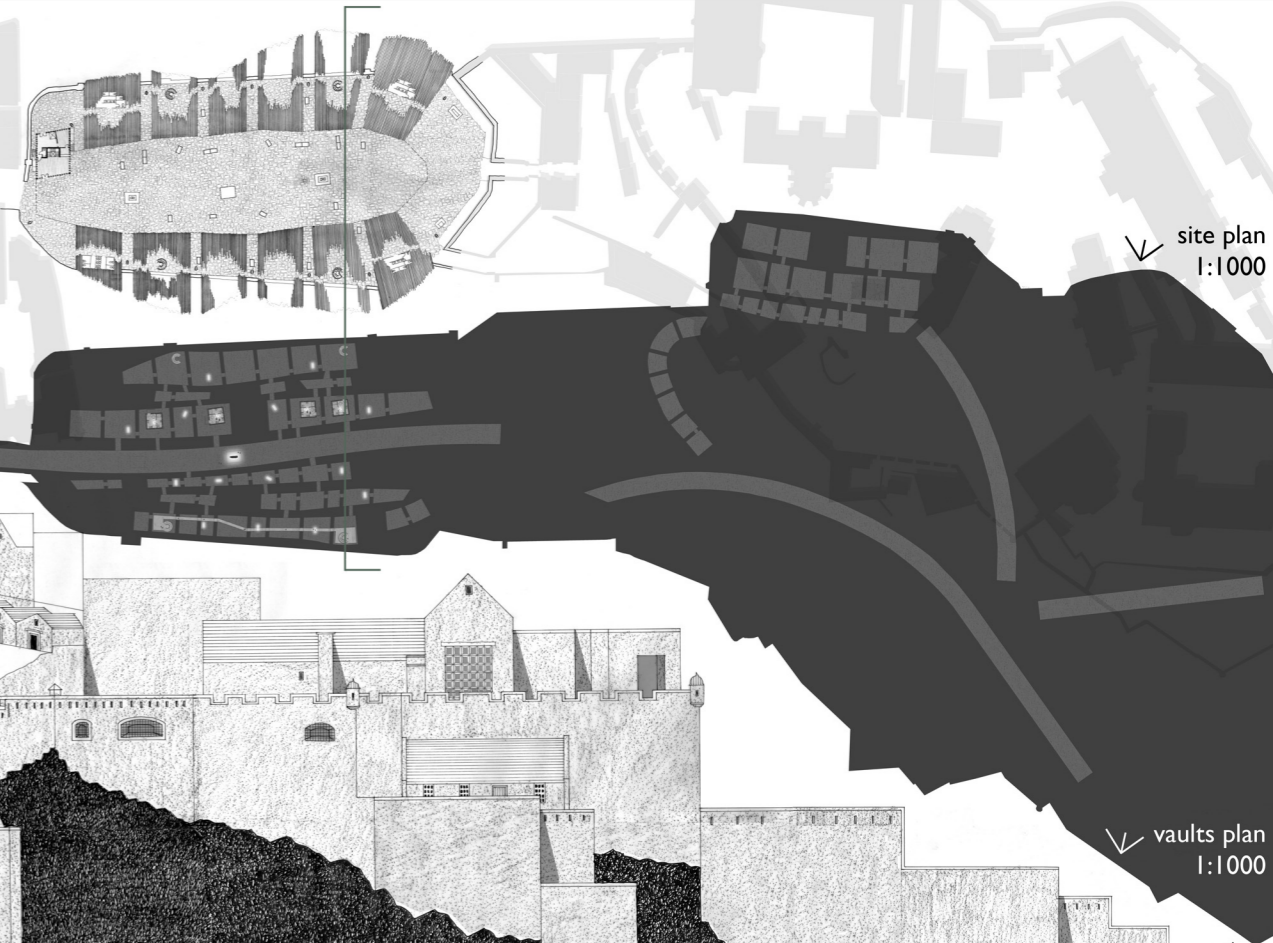
model

Edinburgh is known for its unique topography, views and history, and as such is a popular tourist destination in Scotland. One site that has all these characteristics is the Edinburgh Castle Esplanade which is home to the military tattoo. The military tattoo started in 1950 and attracts 217,000 people a year during a 3 week period in August. To accommodate this number temporary, unsightly scaffolding-like stands are put up in March before being taken down again in October. 6 months of every year the Esplanade prohibits movement, views and hides monuments. Dun Eiden's Permanent Grandstand Facility seeks to address these issues, and generate a more sustainable year long tourist income for Edinburgh (a market which currently generates approximately £170million and 9.7% of employment), especially given the current economic climate.

Dun Eiden achieves a sense of solidity through its construction allowing the scheme to site comfortably in such a powerful setting, yet it also enables permeability through the site and appreciation of the impressive views of

Edinburgh with hollows, pathways and sheltered spots carved out of the underside of the stands. The legendary secret vaults are also to be used for exhibition spaces, and 4 unique small changing room facilities.

Given the location, and the volume of tourists visiting this site, access was always of paramount importance, both at early design feasibility stages, and also at construction phases. The CDM Regulations enable constructions to be carried out efficiently and safely through early elimination of any potential risks at the design phase, a responsibility to be carried out by the designer to the best of their ability, as well as control any residual risks which may occur on site. For this investigation only, focus has been paid to the timber grandstand rather than the changing room pods in the vaults however those construction details have been included for your understanding.



site plan 1:1000

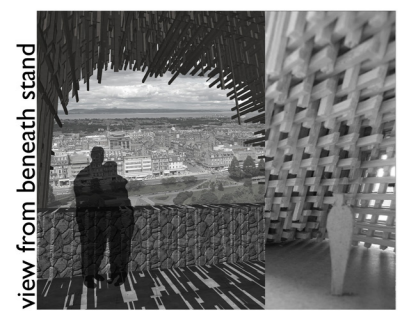
vaults plan 1:1000



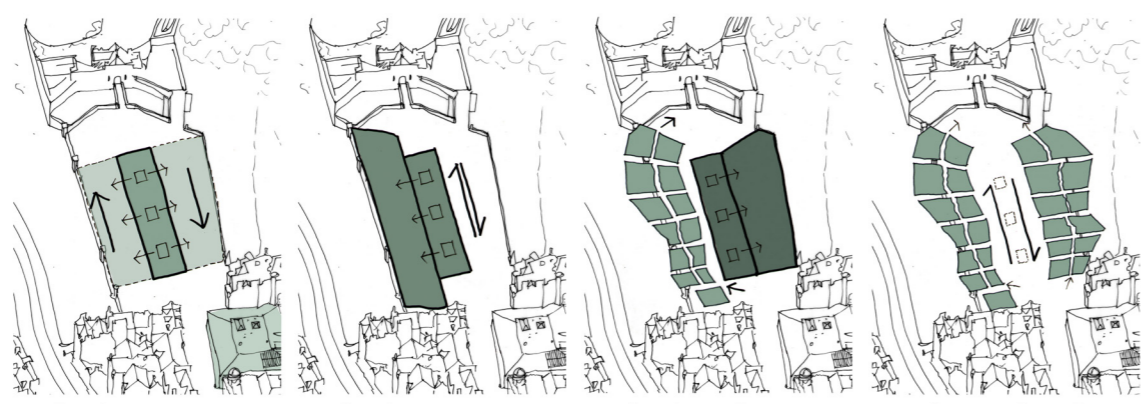
cross section, 1:250



access through stands



view from beneath stand

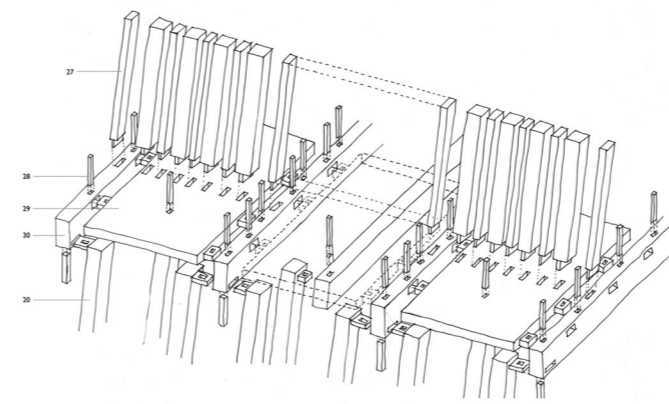


works phase one
The first phase will deal with all the underground works in the vaults. This will be done through the introduction of 3 large hydraulic activated lift platforms. This is done through reinstatement of the Castlehill Reservoir (highlighted). Access is retained all the way around the central sealed off core.

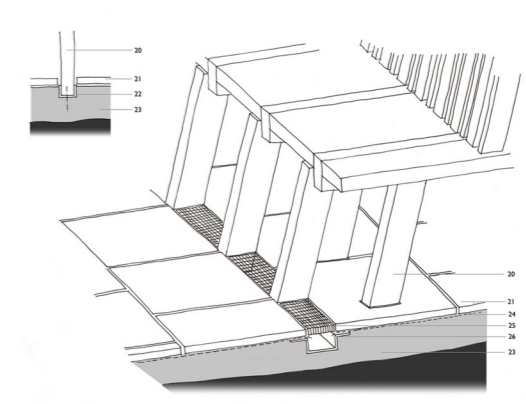
works phase two
The second phase enables the grandstands to the south of the site to be put up. The lift platforms in the central core will be utilised to ensure this is done safely. Construction of stands should be quick with the majority of this done off site. Access remains open to the north of the site.

works phase three
The third phase enables the construction of the grandstands to the north of the site. Again the central lift platforms will be used. Public can still access the Castle and southern periphery using the meandering walkways beneath the stands. Ticket office is also built and can provide further information.

completion of works
Fun Eiden is completed successfully and safely with access retained all the way around the periphery of the site, as well as the direct access and camera opportunities towards the Castle.



exploded axonometric of stand construction
The structural system for the stands is the main feature enabling areas to be carved out from beneath. The stands structure is simply 75 x 100mm air dried oak timber sections which are compacted together to form an extremely strong structural solution with the same properties as a space frame. By having a

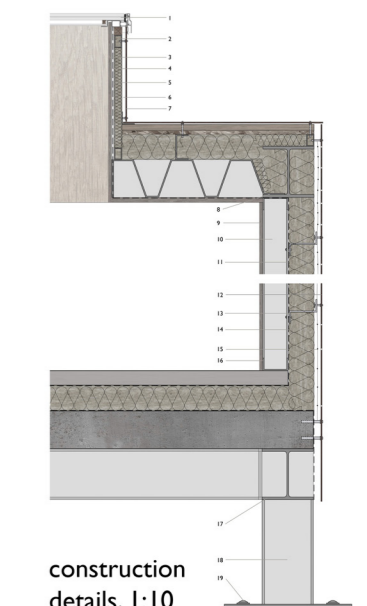


ground connection details
series of columns at either side of the stand fixed into the ground, the structure is effectively acting as a huge bridge.

Each of these timber sections are notched and pegged together in the traditional fashion, again generating much needed employment and showing off a

craftsmanship in a contemporary way. The seats are formed from 500 x 1000mm cross laminated plywood sheets which have the required notches and holes cut or added to them as necessary.

To compensate for the uneven terrain on the Esplanade level, a screed was laid



construction details, 1:10

enabling the stands to be appropriately fixed down to the ground, and also enabled drains to be incorporated ensuring the surface is as safe as possible.

Likewise in the vaults, the changing room pods were supported above the ground ensuring a safe, insulated environment.