

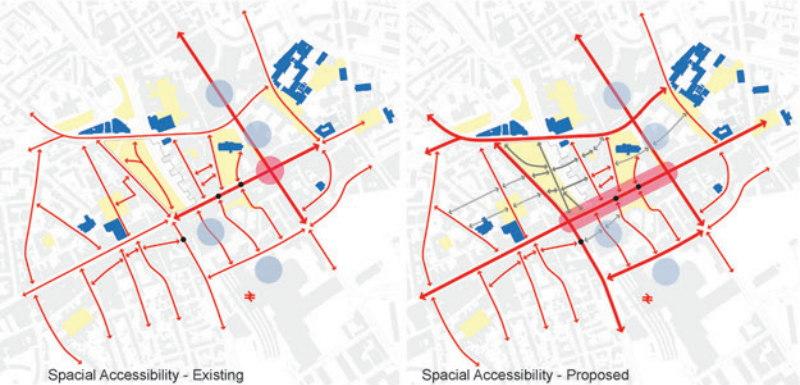
A NEW GARDEN



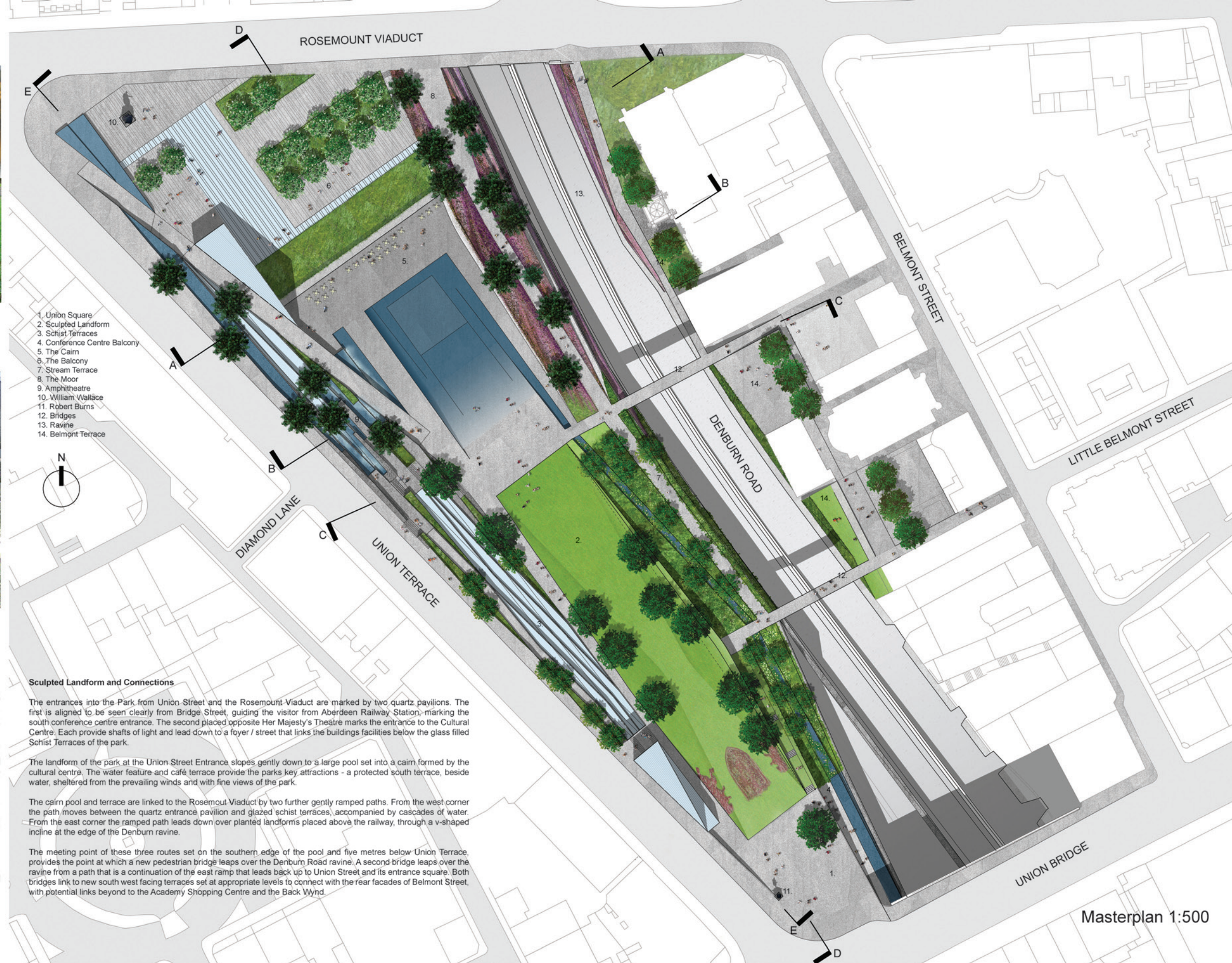
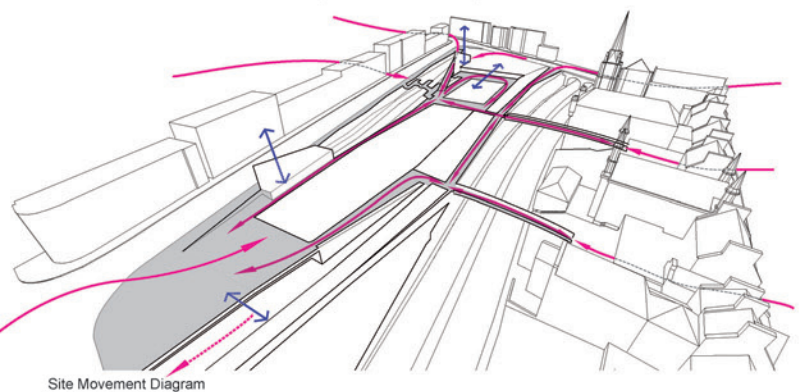
If one follows the course of the Rivers Dee and Don, they begin their journey in the Cairngorms, plunging over mountain ledges, gathering in pools, passing through semi natural Caledonian pine woods, birch woods and heather moors. They then pass through verdant meadows, alder and broadleaved woodlands before arriving at their confluence in Aberdeen and the North Sea. These habitats have provided the inspiration for our new park.



The unique qualities of the Denburn are understood by the proposal which responds to the primary issue of accessibility and movement across the site. Through the provision of clear, level routes to connect across the valley to the Belmont backs, the architectural setpiece of the becomes the backdrop to a new public space for Aberdeen. The project is not just about creating a new major, first class facility in the heart of the centre, but a major physical intervention has the potential to trigger a transformational process in the social- economic development of the centre as a whole.



Overall, a number of simple spatial moves come together to create a new set of spaces, which will make a contribution to bringing together key elements of the City Centre which are currently spatially segregated from each other: Union Street, Union Terrace Gardens, Golden Square area, Belmont Street area, Rosemount Viaduct and the cultural facilities located to the north of the site. New desire lines across the site are firmly anchored in the new transitions spaces and the surrounding street network, creating a powerful impulse for urban renewal and socio-economic development of Aberdeen City Centre.



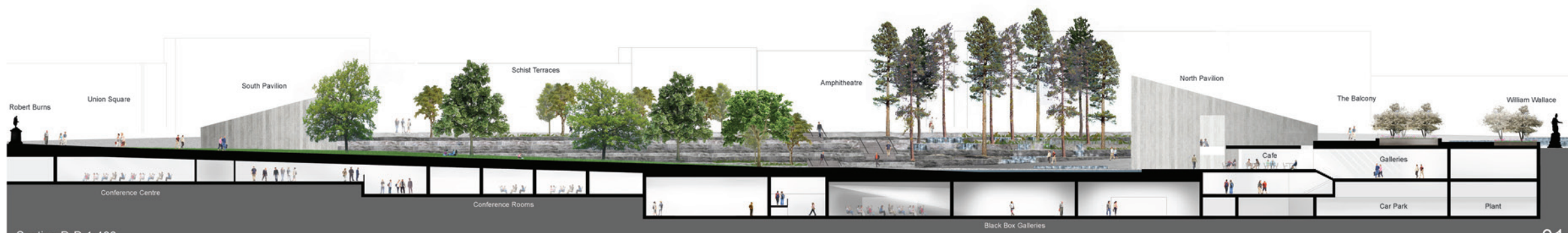
Sculpted Landform and Connections

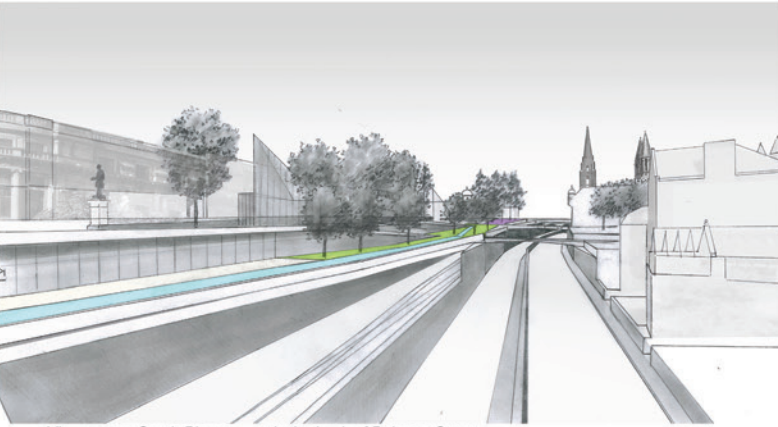
The entrances into the Park from Union Street and the Rosemount Viaduct are marked by two quartz pavilions. The first is aligned to be seen clearly from Bridge Street, guiding the visitor from Aberdeen Railway Station, marking the south conference centre entrance. The second placed opposite Her Majesty's Theatre marks the entrance to the Cultural Centre. Each provide shafts of light and lead down to a foyer / street that links the buildings facilities below the glass filled Schist Terraces of the park.

The landform of the park at the Union Street Entrance slopes gently down to a large pool set into a cairn formed by the cultural centre. The water feature and café terrace provide the parks key attractions - a protected south terrace, beside water, sheltered from the prevailing winds and with fine views of the park.

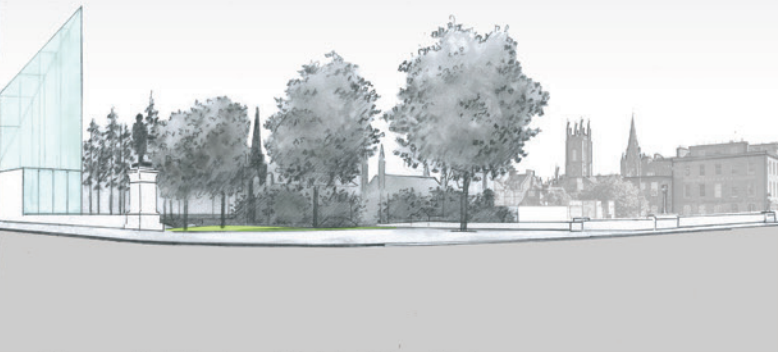
The cairn pool and terrace are linked to the Rosemount Viaduct by two further gently ramped paths. From the west corner the path moves between the quartz entrance pavilion and glazed schist terraces, accompanied by cascades of water. From the east corner the ramped path leads down over planted landforms placed above the railway, through a v-shaped incline at the edge of the Denburn ravine.

The meeting point of these three routes set on the southern edge of the pool and five metres below Union Terrace, provides the point at which a new pedestrian bridge leaps over the Denburn Road ravine. A second bridge leaps over the ravine from a path that is a continuation of the east ramp that leads back up to Union Street and its entrance square. Both bridges link to new south west facing terraces set at appropriate levels to connect with the rear facades of Belmont Street, with potential links beyond to the Academy Shopping Centre and the Back Wynd.

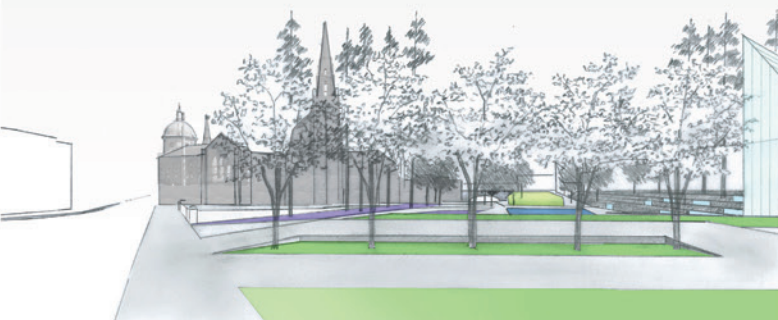




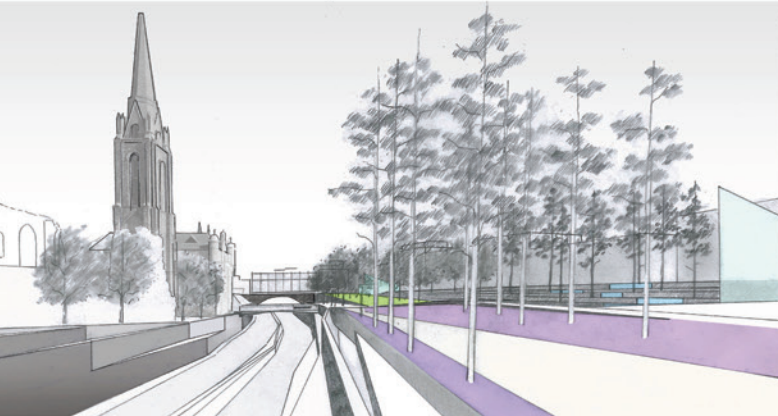
View across South Plaza towards the back of Belmont Street



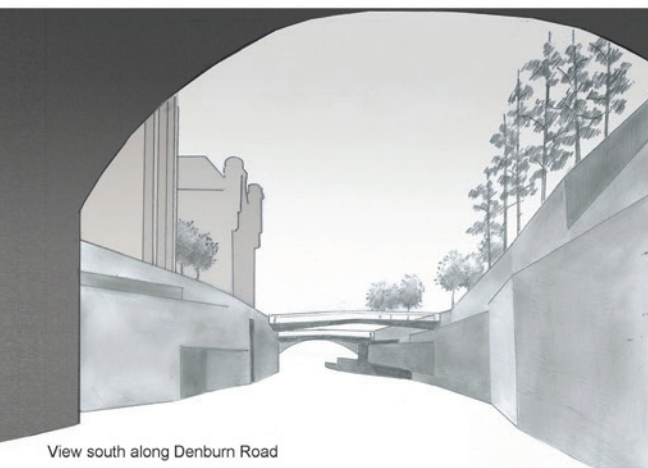
View across South Plaza towards the back of Belmont Street



View across North Plaza towards the Triple Kirks



View South towards Union Bridge and the Triple Kirks



View south along Denburn Road



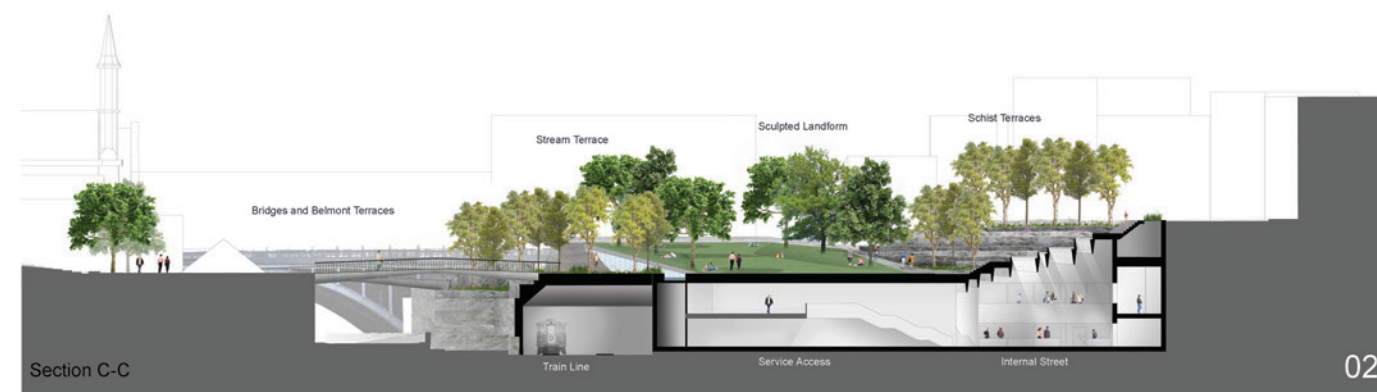
View across water feature towards Union Terrace



The Ravine and the Bridges

Illustrations from the 19th century show the Denburn valley, with the 'Three Kirks' and Belmont Street properties descending down to the valley, where simple single span bridges leap the river and Thomas Fletcher's 'Grand Arch' leaps the entire valley. The current experience of the valley is quite different. The Union Street bridge appears as a tunnel entrance for an urban motorway, yet with no sense of drama.

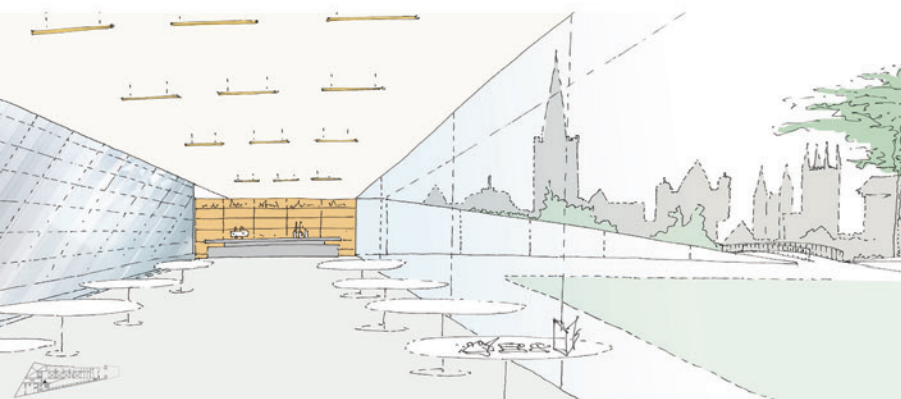
The Ravine creates a context much like driving through the centre of Central Park, New York. The Railway Tunnel on which the moor and stream garden are located tightens the valley to gorge like proportions allowing the two new pedestrian bridges to span elegantly over the road and retain clear views of the single arch of Union Bridge. The upper ledges of the granite facades detailed to appear as if hewn out of a mountain and will provide planting troughs on which plants will cling and can be viewed from above.



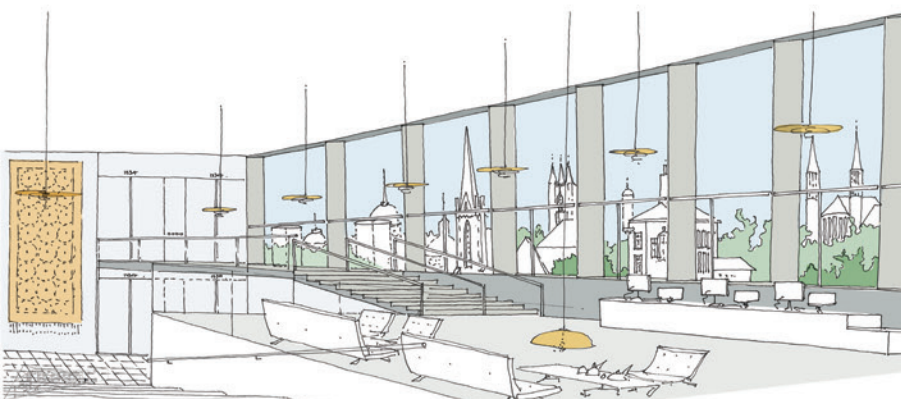
Section C-C



Section A-A



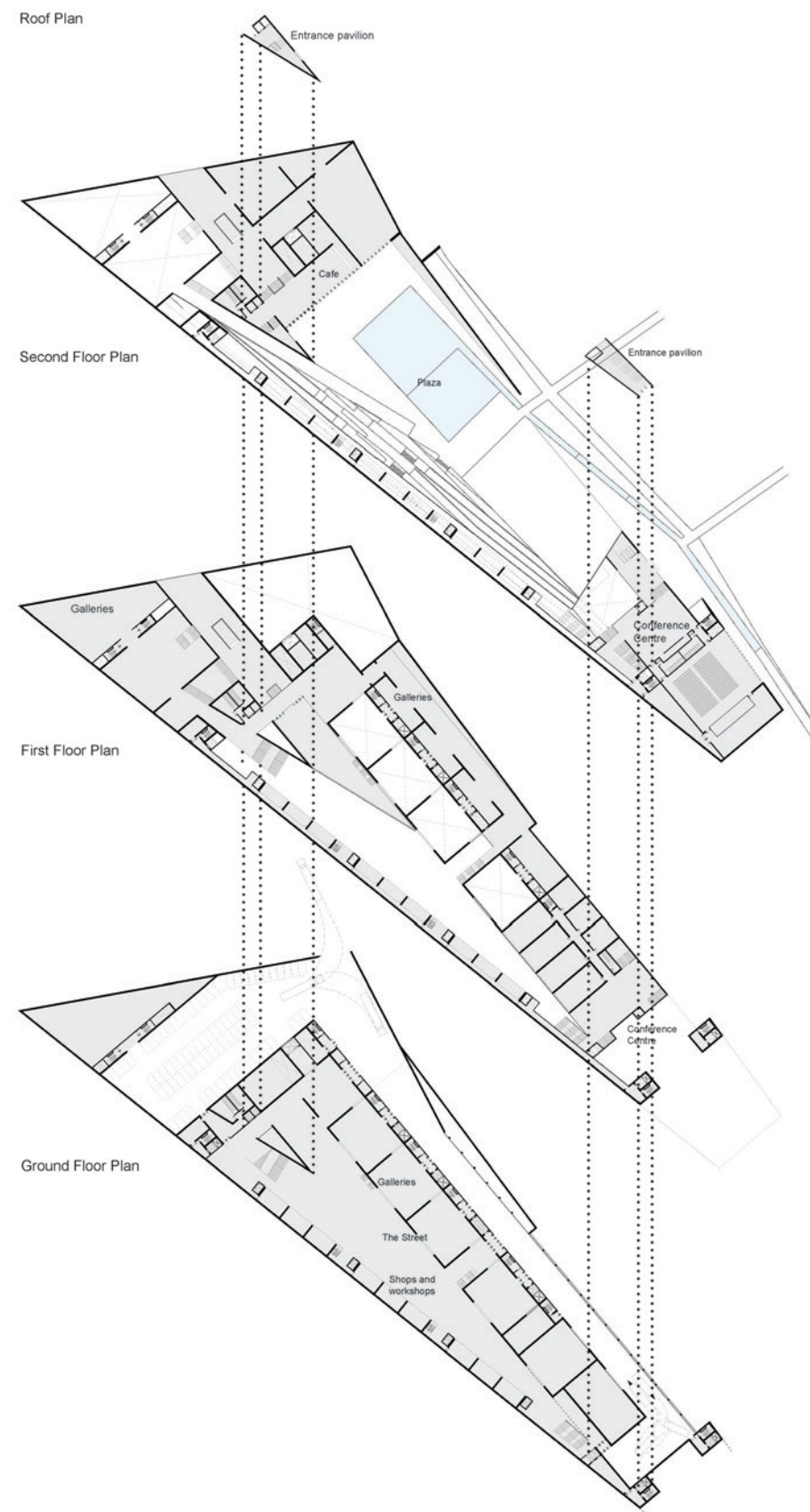
View from the Cafe looking out across the Plaza



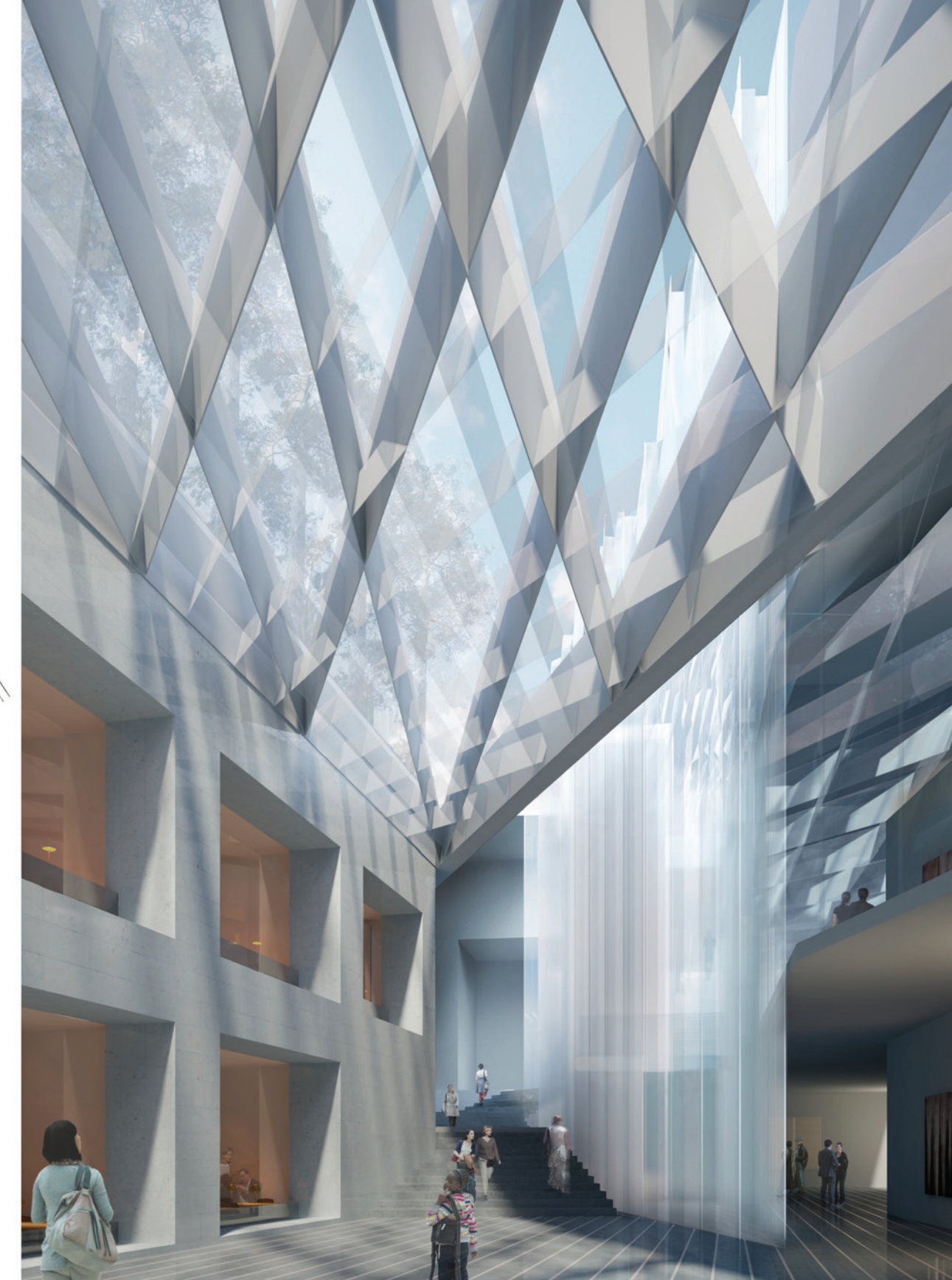
View from the Conference Centre foyer



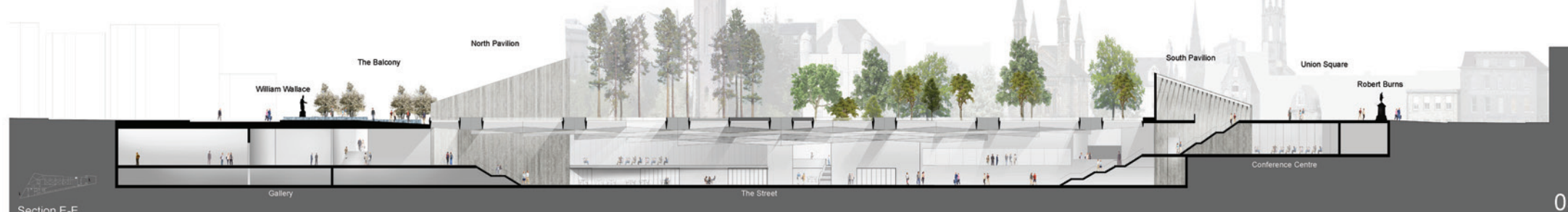
Section B-B

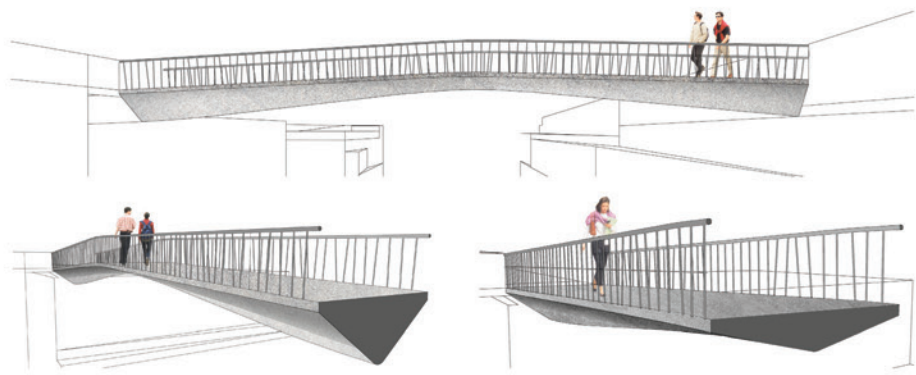


Section E-E



View from the Street looking North





There will be 2 footbridges that cross the Denburn Road dual carriageway from the railway enclosure to the back of Belmont Street. These footbridges will have a clear width of 3m and have a max slope of 1 in 20 in order to be DDA compliant. The footbridges will provide the much needed east-west connectivity and are slender, slightly arched structures complementing though not trying to compete with the arches of Rosemount Viaduct and Union Street Bridge.

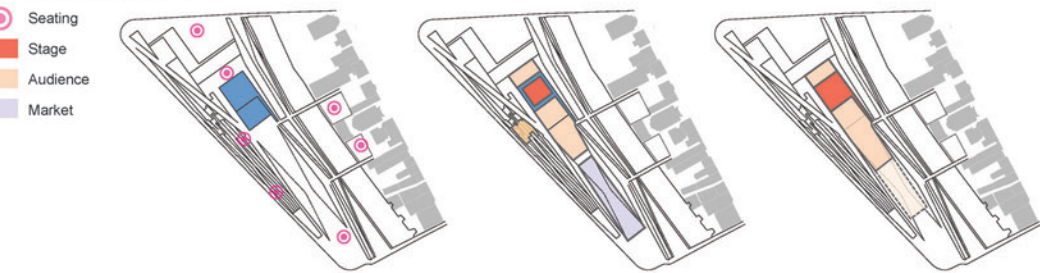
The bridges have a sculptural quality and uncommon slenderness due to their manufacture using ductal, an ultra-high strength concrete. The bridges will be formed of match cast segments which will be erected on a staging over the road, before being post tensioned together to form a very low rise arch, that only imposes vertical loads – the horizontal thrust being provided by the prestress. The high strength concrete allows the bridge to have no reinforcement which makes it practically maintenance free. The temporary staging can be constructed to allow single lines of traffic in each direction during construction.

The proposal has minimised cost and risk associated with construction over the road, by limiting this to 2 discrete bridges. These will have minimal effect on the foundations to the properties on Belmont Street, and to the Rosemount Viaduct and Union Street Bridge. There will also be no requirement for ventilation as there would have been if the road had been put into a tunnel, and there are no longer serious concerns attached to goods vehicles on fire. The proposal plans to gain additional park space and largely remove the unwelcome railway by enclosing it in a concrete box for the majority of its length. The box will be formed of reinforced concrete with insitu foundations and walls built with construction between train movements, and precast beams craned in during overnight possessions. The beams would then be made monolithic with the walls using an insitu concrete roof slab.

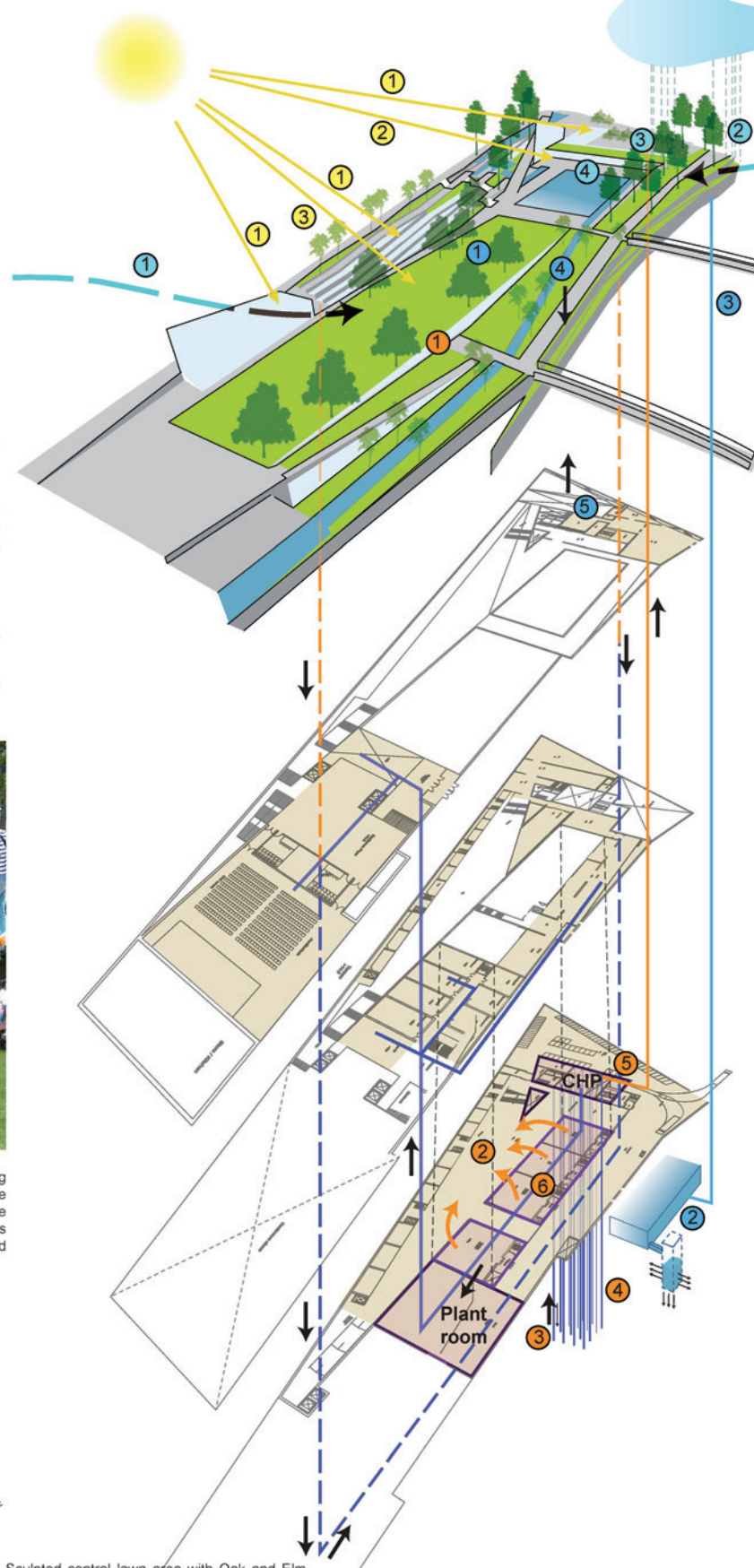


The project has been designed with a balance of hard and soft landscapes for the people of Aberdeen to enjoy through day and into the evening. Reusing energy that is generated in the building during the day, it will be possible to heat the terrace areas and slightly raise the temperature to ensure a more comfortable outdoor evening performance. In a city centre location it is vital to have public spaces that can accommodate a range of activities from more intimate gatherings to large concerts. The squares, terraces and lawns are designed to be robust enough for all form of activity. From crowded festivals and markets to more contemplative art installations, the range of spaces can be used independently or together depending on the scale. It is proposed that the water feature can partially or fully drained away to stage events, or add character to a special concert.

Key: Programme strategy



Pine forest with heather and juniper understory.



Sculpted central lawn area with Oak and Elm park trees; Meadow grasses on the Balcony.



Key: Environmental systems

DAYLIGHT
saves energy by reducing electricity demands and provides a connection to the outside, creating a more pleasant environment for visitors.

- 1 Natural light through triple glazed skylights
- 2 South-facing outdoor spaces and cafes
- 3 Raised garden surface increases access to sun

MICROCLIMATE
is improved to increase visitor comfort

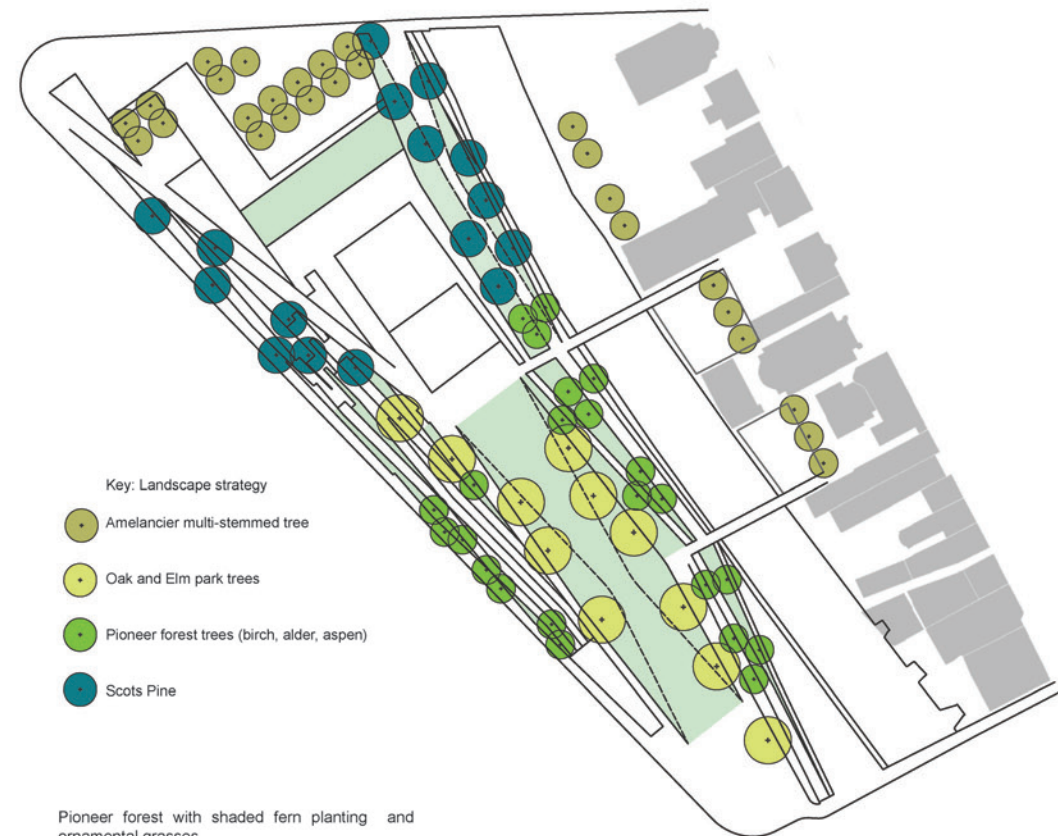
- 1 Union Terrace Buildings protect from SW prevailing winds
- 2 Planting on the east side mitigates effects of cold winds from the north-east
- 3 Public external areas de-iced in winter using heat stored during summer
- 4 Water features provide pleasurable visual and sound environment

HEAT and AIR CIRCULATION
needs are reduced through passive design

- 1 Building underground protects the perimeter from external conditions; low-energy cooling systems
- 2 Zero energy circulation space - "The Street"
- 3 Fresh air is pre-heated/cooled by ground heat exchange
- 4 Summer heat rejection provides thermal store for use on ground level surfaces
- 5 Biomass and heat rejection provide space heating and hot water
- 6 Floor supply displacement system reduces energy required to maintain gallery conditions

STORM WATER and WATER
managed to drain the site efficiently, attenuate discharge and re-use treated water

- 1 Planted areas act as a green roof to reduce run-off
- 2 Discharge water collected in 500m3 attenuation tank. Perforated discharge chamber allows water to infiltrate into the aquifer at a controlled rate
- 3 Rainfall is collected to re-use as greywater
- 4 Top-up for natural features from aquifer
- 5 Chlorination and storage for small scale re-circulation



Key: Landscape strategy

- 1 Amelancier multi-stemmed tree
- 2 Oak and Elm park trees
- 3 Pioneer forest trees (birch, alder, aspen)
- 4 Scots Pine

Pioneer forest with shaded fern planting and ornamental grasses.



The water feature moves across the park, bringing visitors on a journey reminiscent of the Aberdeenshire countryside.

A still reflecting pool in the north plaza marks the beginning of the journey, spilling over in a series of pools that cascade down the granite terraces, creating an event to be framed by planting and lit in the evening. The water collects in the large pool of the gallery plaza providing a focal point of activity, gathering and play.

This pool can be partially or completely drained away to create an event or exhibition space, surrounded by terraced seating. The water continues on its journey as a canal leading from the cultural centre along the landform to the entrance of the conference centre.

