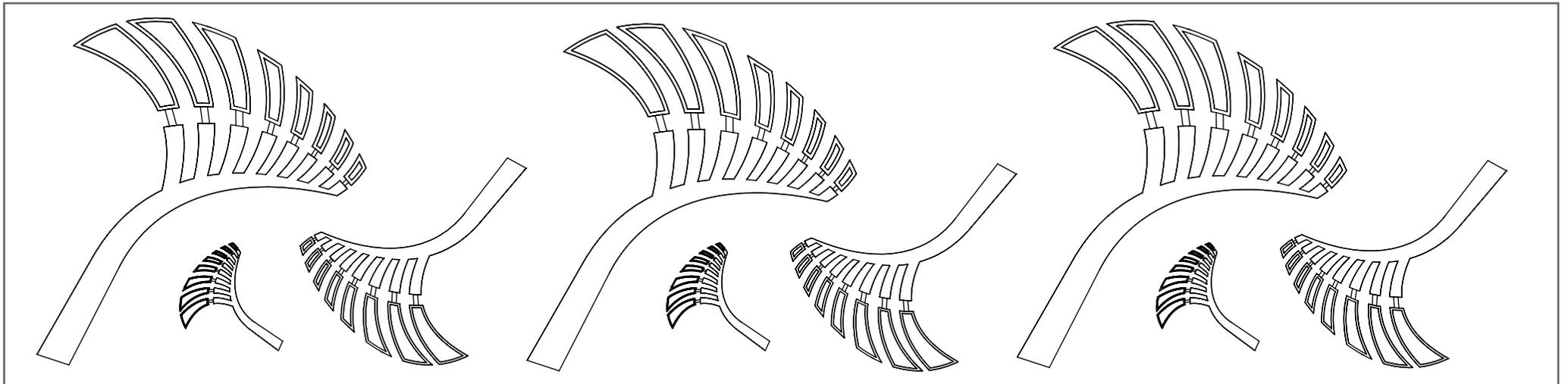


ALISTER YIAP

MONTARIO QUARTER THE ROUNDABOUT SCULPTURE



DESIGN DEVELOPMENT
19.07.2019



APPROACH

< EMERGE >

Referencing the curatorial theme of 'Heritage' where the artwork site borders, this concept takes on a historical mindset to regenerate the leafy green vegetated bushland which once was, by emerging from the ground. The sculpture also pays tribute to work of world recognised Orthopaedic Surgeon; Sir George Montario Bedbrook, for his research in spinal cord rehabilitation.

Using Sir George Bedbrook's research findings for rehabilitation of spinal injuries as design parameters, this artwork is in keeping with 'Open Space, Gardens, Light and Fresh Air', where the segmented sections on the top of the sculptures are reminiscent of vertebrae of the spine and the gentle curve the spinal cord.

The sculpture also takes form as a recognisable and refined representation of the State flower of Western Australia: *Anigozanthos manglesii*. Celebrating all things Western Australian, the Kangaroo Paw is both iconic and identifiable as our state flower, which makes this sculpture a powerful and memorable place marker.

The material selection has been carefully considered to exude natural beauty, where raw / bare materials are utilised. The weathering steel ages gracefully overtime and is in high contrasts with the galvanised tips which double as housing for LED light strips.

In line with my art practice a site-specific artwork has been developed with consideration to historical themes and contemporary approach to form and use of lighting and technology, where safety and practical solutions have been thought out during the concept development.

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< EMERGE >

< DAYLIGHT >





DESIGN

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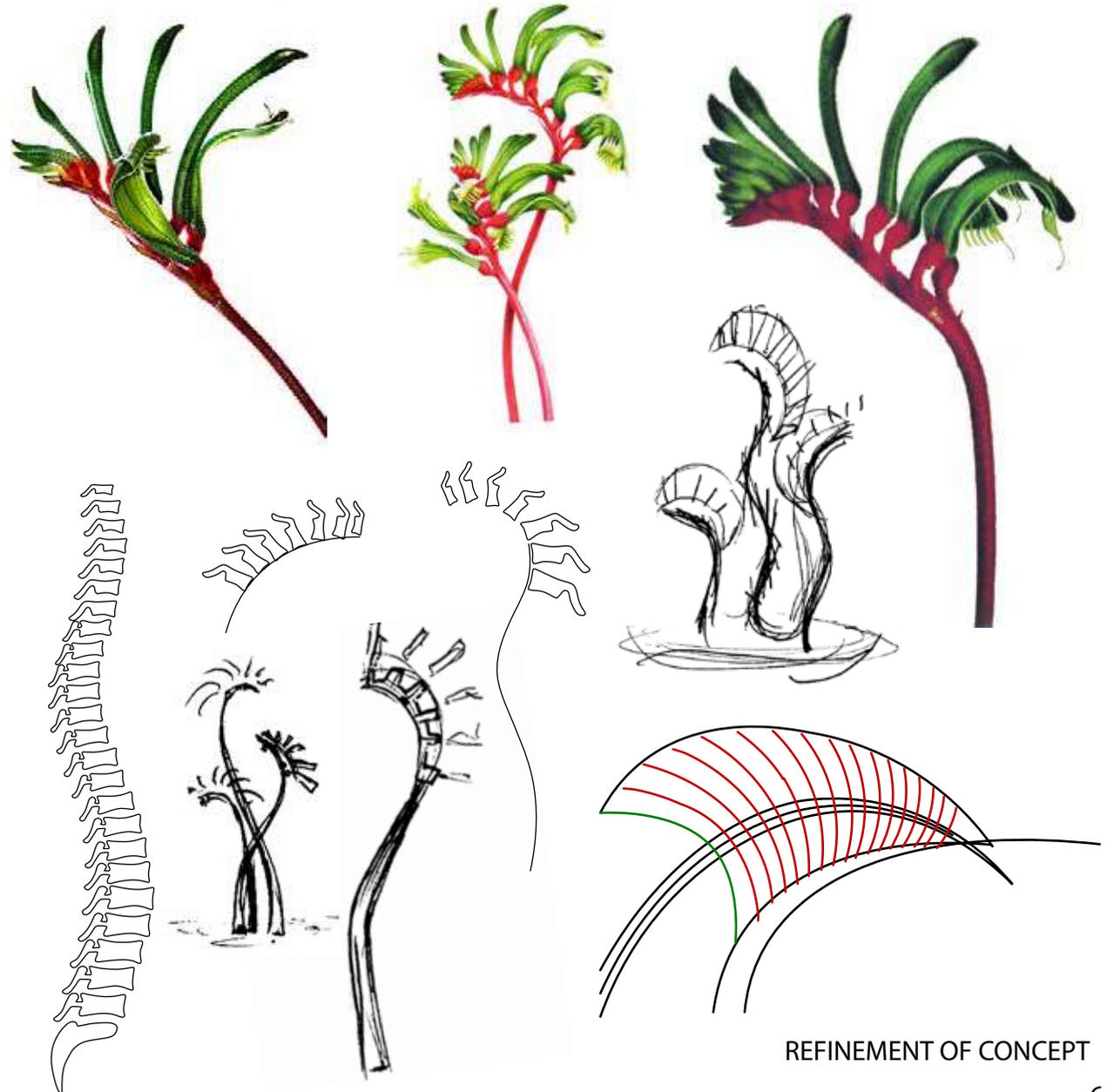
CONCEPT DEVELOPMENT

In recognition of Sir George Bedbrook's work in rehabilitating spinal injury patients, I started looking at spinal arrangements; specifically at the vertebrae and how they array along the curve of a spine.



Sir George Bedbrook

As the concept developed, the flow resembled likeness to a Kangaroo Paw. It's unique form and status as the state flower of WA made it an obvious design to further refine.



REFINEMENT OF CONCEPT

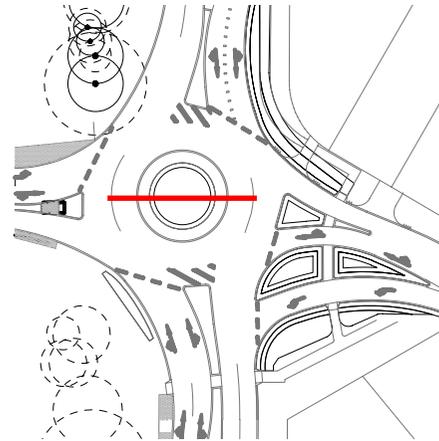


DESIGN cont.

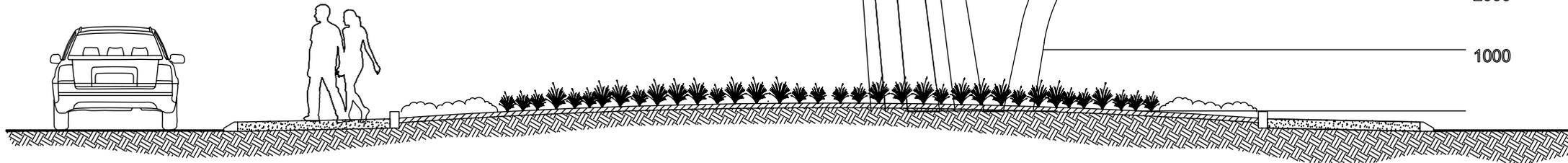
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DIMENSIONS

Height of sculptures stand shy of 8000 mm, where the three stems stagger in height for optimum views from each entrance to the roundabout.



PLAN VIEW



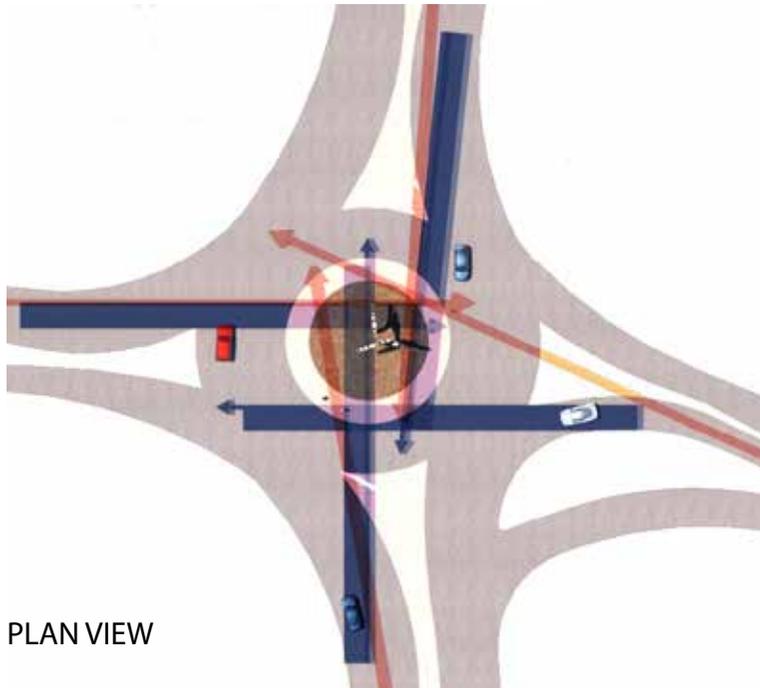
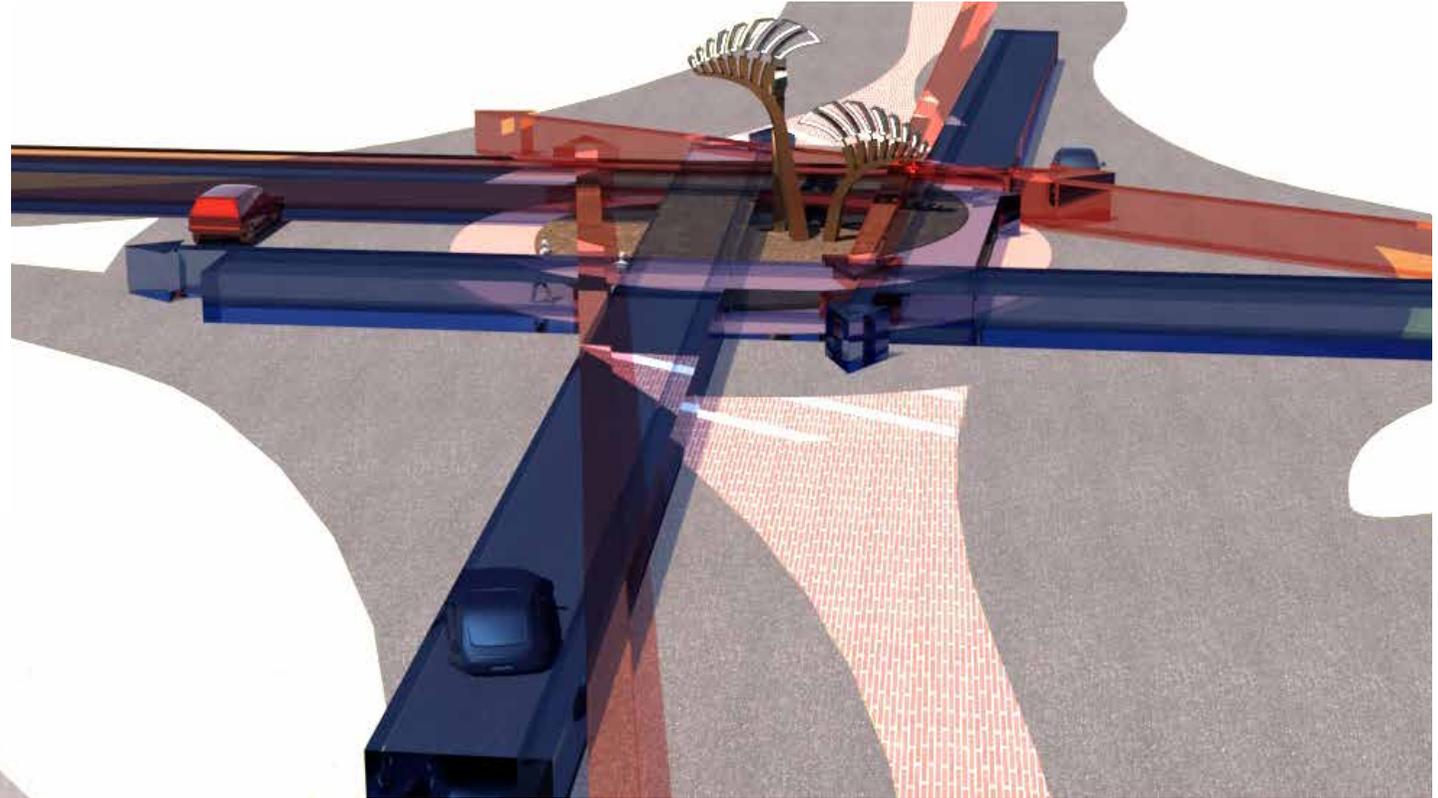
SECTION ELEVATION

DIMENSIONS SUGGESTIVE



ROAD SAFETY PLAN

Artwork fits within the roundabout, where orientation of the sculptures is crucial. I have carefully considered the placement to ensure the stems of the sculpture do not intersect with the projected impact lines provided from the road safety report.



PLAN VIEW

The curve in the stem allows the form to visually cover a larger area with reduced contact with the ground. The sculpture's individual 2D profile allows for minimal visible disruption as a vehicle moves into the roundabout, and the open tips of the design act as windows to see behind the sculpture upon approach.

Artwork designed under the suggested 8000 mm height and should the artwork collapse due to vehicle impact, it would fall within the roundabout providing the least hazard to traffic.



DESIGN cont.

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< EMERGE >

< DUSK / EVENING >



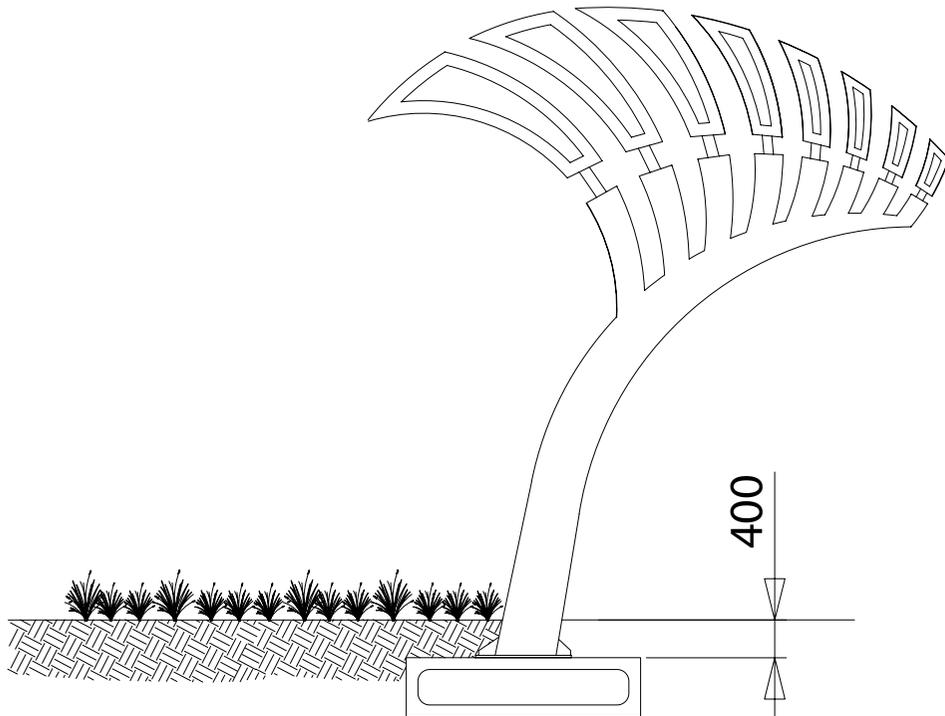


DESIGN cont.

FOOTINGS & INSTALLATION

Footings for the sculpture will have an estimated 3000 mm diameter due to the height of the sculpture. A depth equal to a minimum 400 mm below the finished ground level will provide adequate depth for plants to grow up to the sculptures.

Coordination will be required to ensure electrical conduits are in place prior to footings being installed and prior to commencing landscaping works.

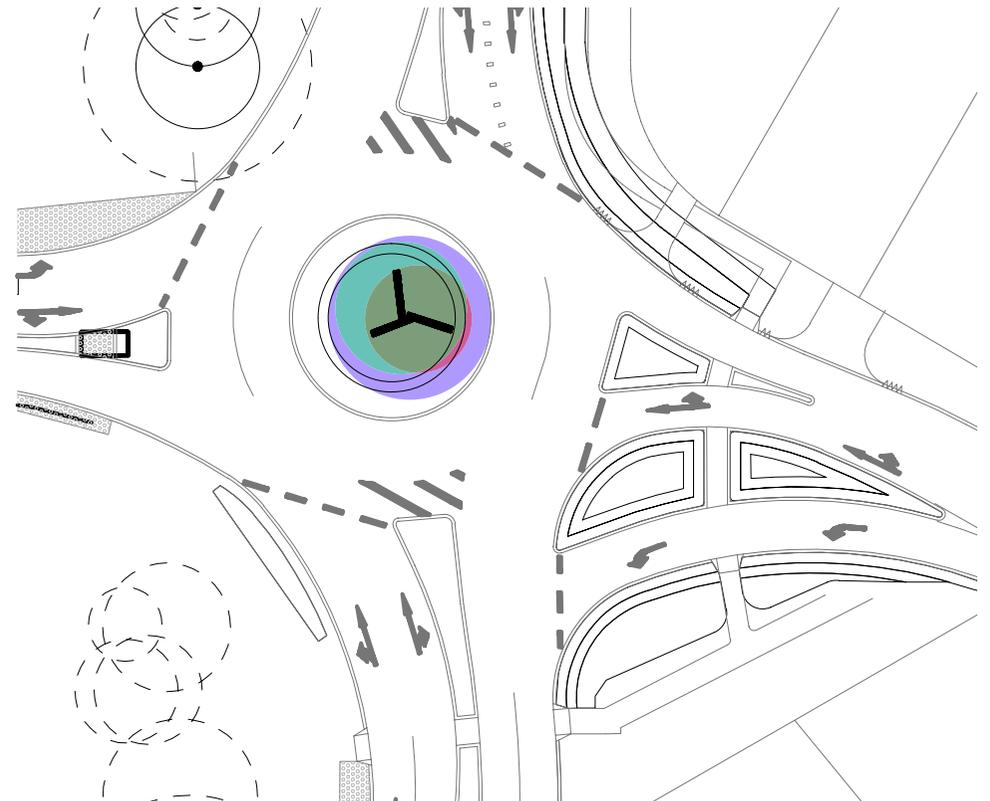


INDICATIVE FOOTING DETAIL

TRAFFIC CONSIDERATIONS

Height of the sculptures, placement and orientation have a danger zone which falls within the roundabout boundaries as indicated by the three coloured circles below.

Traffic Management has been considered during the installation of the sculptures and allowances included in the preliminary budget.





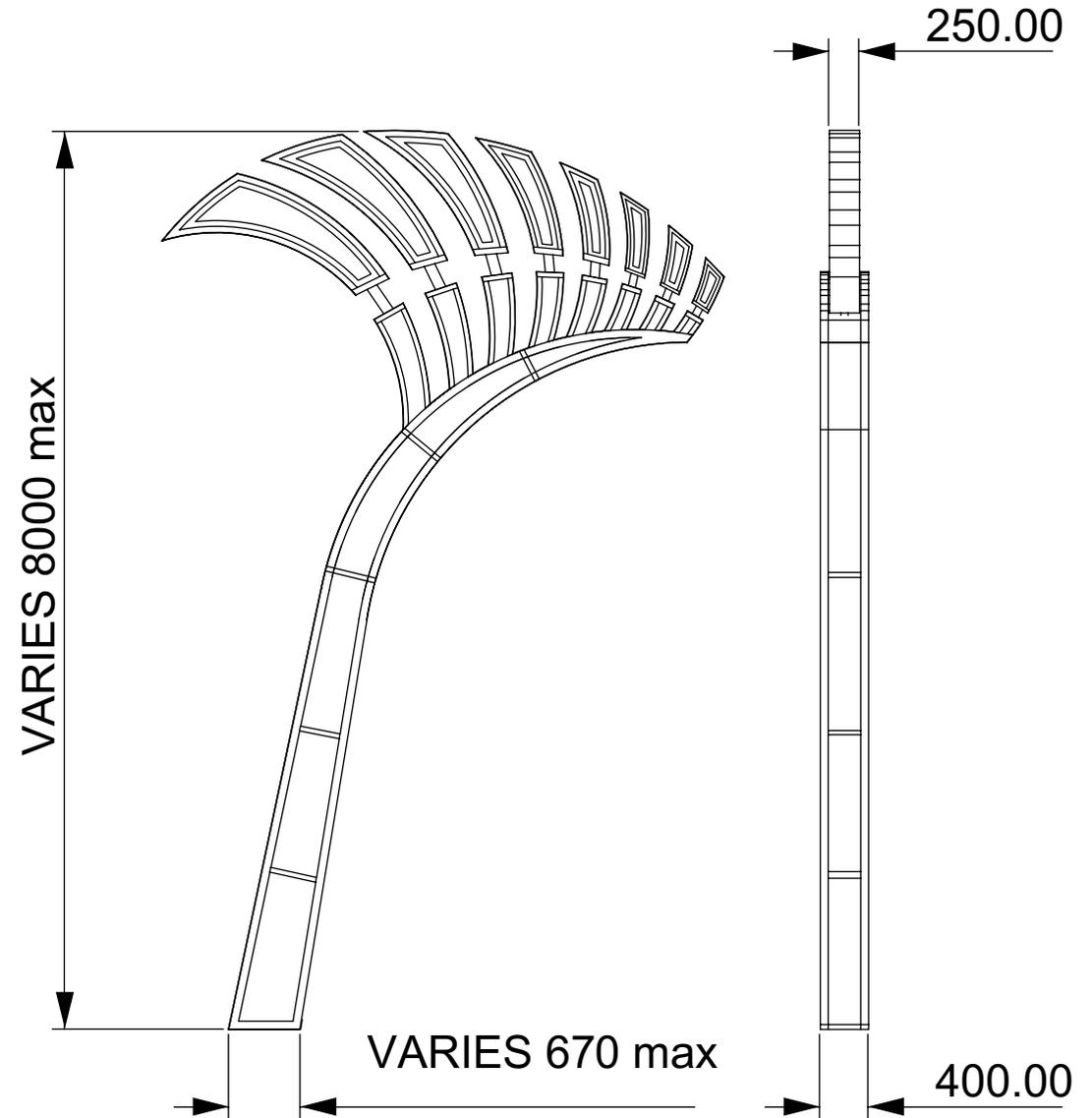
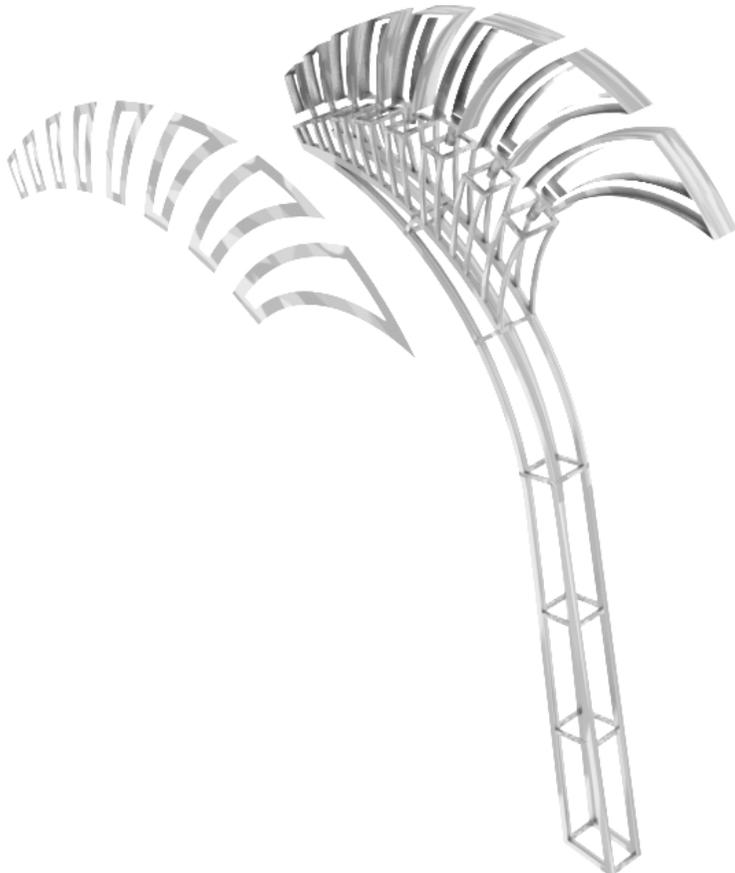
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INTERNAL SUPPORTS

During Design Development it was deemed an internal skeleton be required to support the sculpture's form

Steel supports will be rolled and welded before a 3 mm metal sheet skin is welded onto the framework.





DESIGN cont.

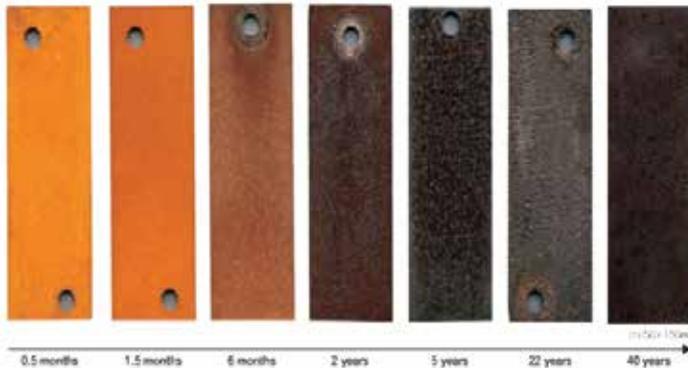
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COLOURS AND TEXTURES

The materials and their properties have been carefully considered for this artwork. As an exterior sculpture in the soft landscaping Corten Steel and Galvanized Steel are raw materials which require little to no maintenance. Initial rusting of the Corten will run off into the mulch meaning no staining on pavements or hard surfaces.

Secular Changes in Rust Appearance

In the initial stage of application, COR-TEN shows a yellowish appearance. This is followed by a gradual change in the color of the protective rust from brown to a stable dark brown after one to two years in general application environments. Afterwards, the coloration shows no clear change except perhaps to a deeper dark brown.

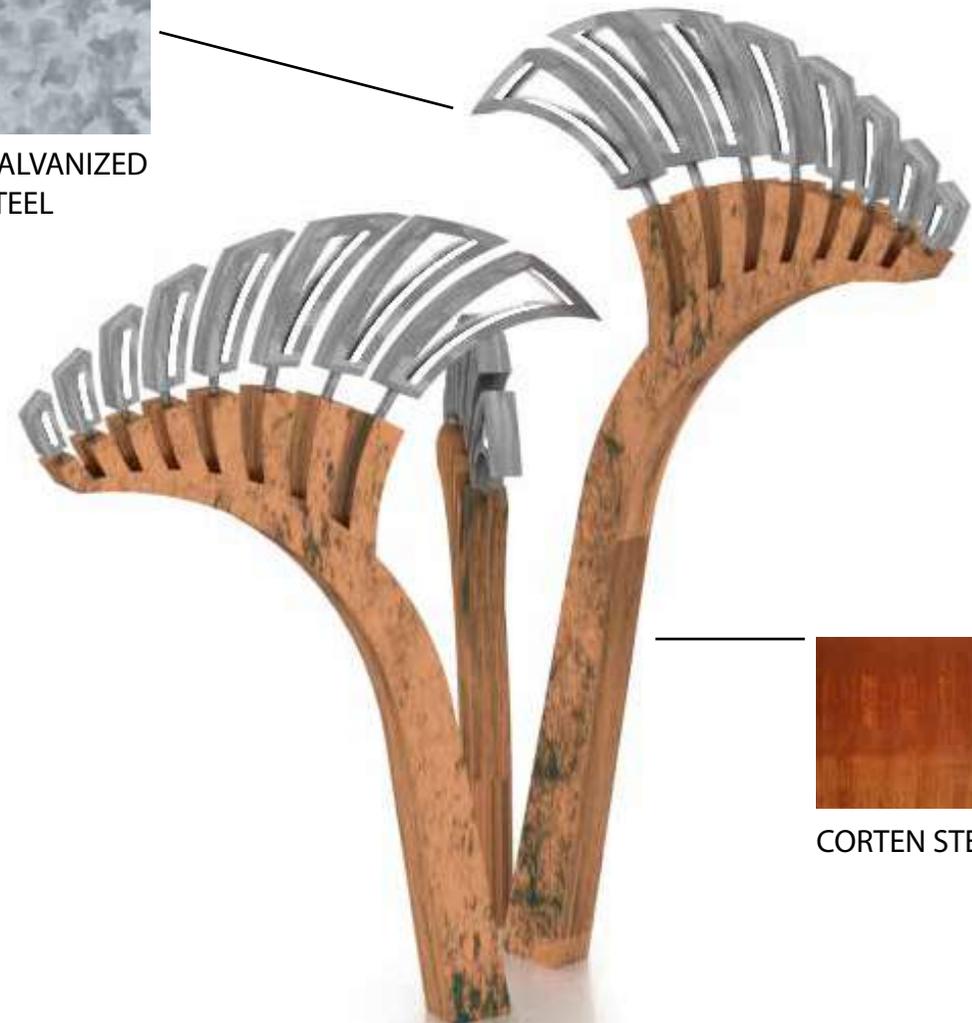


CHANGES OVER TIME

The stem element is made of Corten Steel which is formulated to rust to produce a protective coating for the steel itself. Over time the protective rust changes from orange/brown to a stable brown after a few years and a darker brown 40+ years on.



GALVANIZED
STEEL



CORTEN STEEL



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LED STRIP - LIGHTING

pureLED flextube - micro is a LED tube which will run along the inside of the frame of all tips. The lip on the inside of the boxed frames helps accent the window like forms. Lighting elements face inside reducing glare and distraction to drivers.

Fronds are bottomless to allow for drainage and prevent build up of debris inside the boxed forms.



ILLUMINATION AT NIGHT

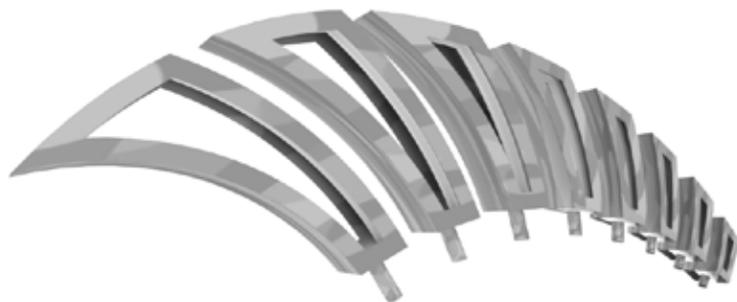
CORTEN STEEL

Also known as weathering steel (atmospheric corrosion-resistant steel) is a corrosion resistant material overcoming rust by the rusted surface itself. It is commonly used without painting or coatings. It's excellent material properties has economic advantages, where maintenance costs and future repainting costs are not required.

Corten Steel has a similar strength to structural steel, estimated thickness of plate is approx 5 - 6 mm plate. Corten is also weld-able and will likely be laser cut in sections and welded to create the boxed form of the sculpture.

GALVANIZED STEEL

Steel with a protective zinc coating - prevents rusting and prevents corrosive substances from reaching the underlying steel. Same material and finish as most lamp posts and public furniture prone to long exposure to external weather conditions. Used for the tips of the artwork, creating contrast and shelter / housing for LED strip lighting.



EXPLODED DETAILS



LASER CUT



CORTEN
STEEL

GALVANIZED
STEEL