

Artwork Concept

01

Introduction

BGPA brief: Engaging Children with Nature

The role of the BGPA Rio Tinto Naturescape learning centre serves as an interface between a student's existing knowledge of 'nature' and the experience the student will encounter when moving from the building to the surrounding naturescape.

The building's proposed planted roof adds 'green value' to its sustainable attributes and disguises its form when approached from the main entrance. Added to this, is an intended sense of mystery and intrigue when negotiating the pathway structure leading to the learning centre.

The artwork concept responds to the above conceptual imperative of mystery and intrigue by highlighting aspects of nature that are rarely visible (as in seeds), or invisible (as in root systems). The artworks proposed for the building are related works conceived in three parts. The first is comprised of a series of illuminated floor inserts in the plaza area and the learning centre. The second could be described as an animated, illuminated live metering column located inside the learning area. The third artwork will be located in the naturescape at a location yet to be determined. The proposal is to create an autonomous, solar powered work activated by infra-red sensors.

Concept

Floor Artwork

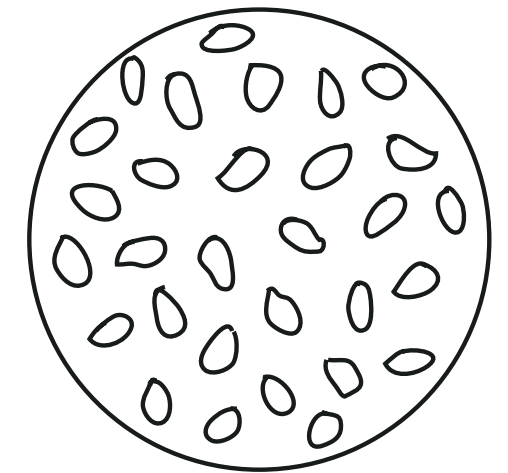
The series of nine floor works relate to the significance of a semi-underground building by highlighting selected species and root systems – normally an invisible and underground aspect of nature. Root systems of live plants are not usually visible in nature. In addition, seeds and their important role in the perpetuation of species, are often not easily accessible or visible. The floor artwork series attempts to make both these elements of nature visible in a non-didactic way and will draw attention to the patterns that can be created from these layered structures as well as emphasizing selected species individual particularities.

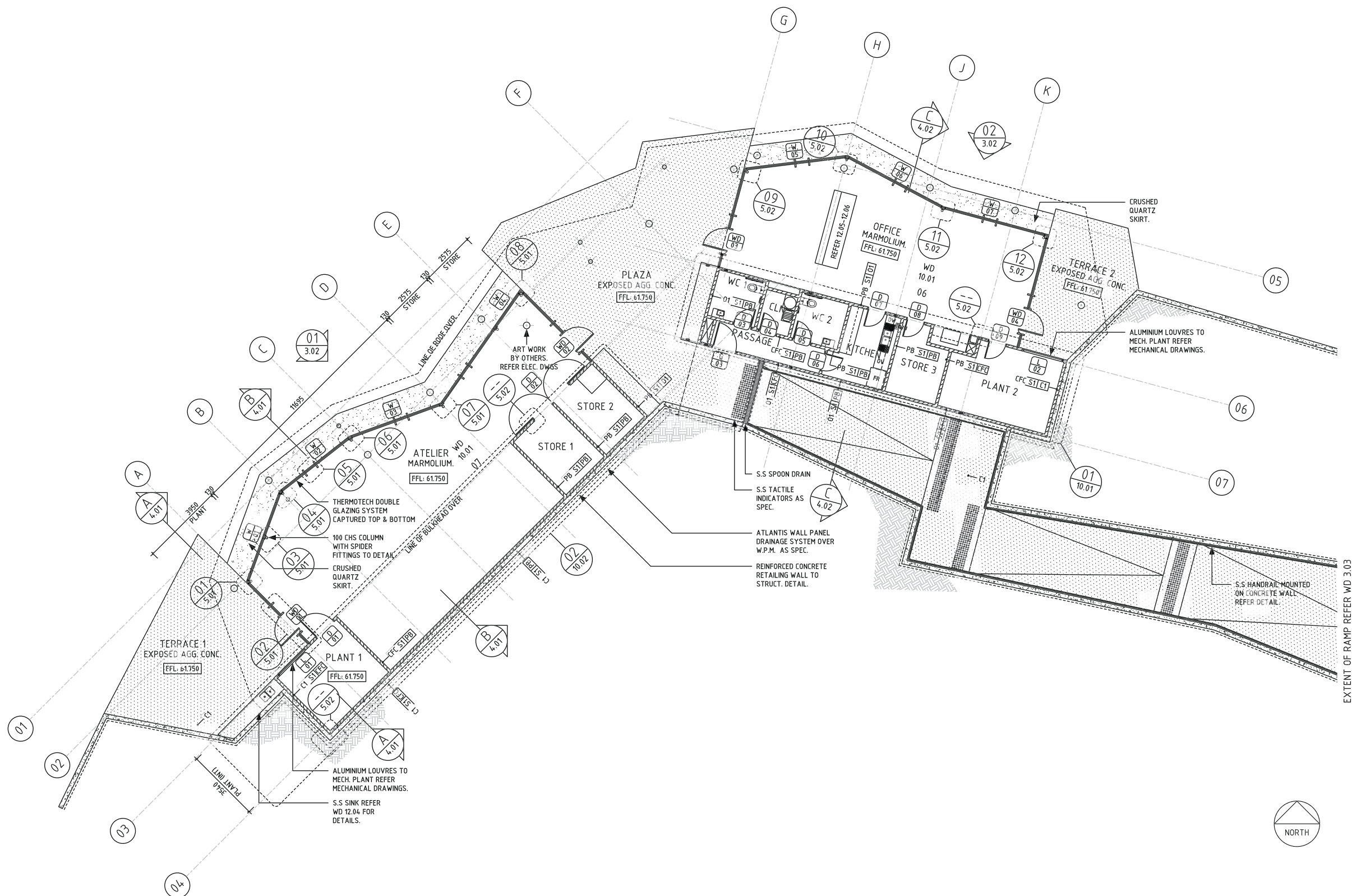
Through the back illumination of layered and printed glass, it is intended that the floor works become apertures into a magical underground world, functioning in both a day and night context.

Metering Column

This artwork is in response to the brief to create a work that meters an aspect of the buildings sustainable/green attributes. The starting point for this piece evolved from the root 'patterns' research for the floor work. After discovering the aerial root system of the Xanthorrhoea (Grass Tree) it seemed appropriate to create a contrasting work about above-ground root systems.

Again, the idea is visually interpreted in a non-didactic way by deconstructing the linear qualities of the Xanthorrhoea aerial root system and applying this imagery to a multi layered metering column. The column will translate live data from three sites: the solar array; the building's lighting consumption; and the building's heating/cooling consumption. This information will be translated into an illuminated and animated visual and sensorial experience.





WALL REFERENCES

CFC	- 13mm COMPRESSED FIBRE CEMENT
S1	- 100mm STUD WALL INSULATED AS SPEC.
PB	- 13mm PLASTERBOARD AS SPEC.
C1	- CAST CONCRETE RETAINING WALL
01	- OSB WALL LINING AS SPEC.

	STUD WALL WITH INSULATION TO SPEC
	S.S. TACTILE INDICATORS
	S.S. SPOON DRAIN
	EXPOSED AGG. CONCRETE
	CRUSHED GINGU QUARTZ

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ARCHITECTURAL
RIO TINTO NATURE SCAPE BUILDING
FLOOR PLAN



Artwork Locations

The configurations on this and the next page offer two options as discussed below.

The designs follow the line of the concrete slab, punctuating it at regular intervals. It was intended that the configurations follow a geometric path in relation to the building as a counterbalance to the organic nature of the artwork.

The designs also consider the location of the structural poles.

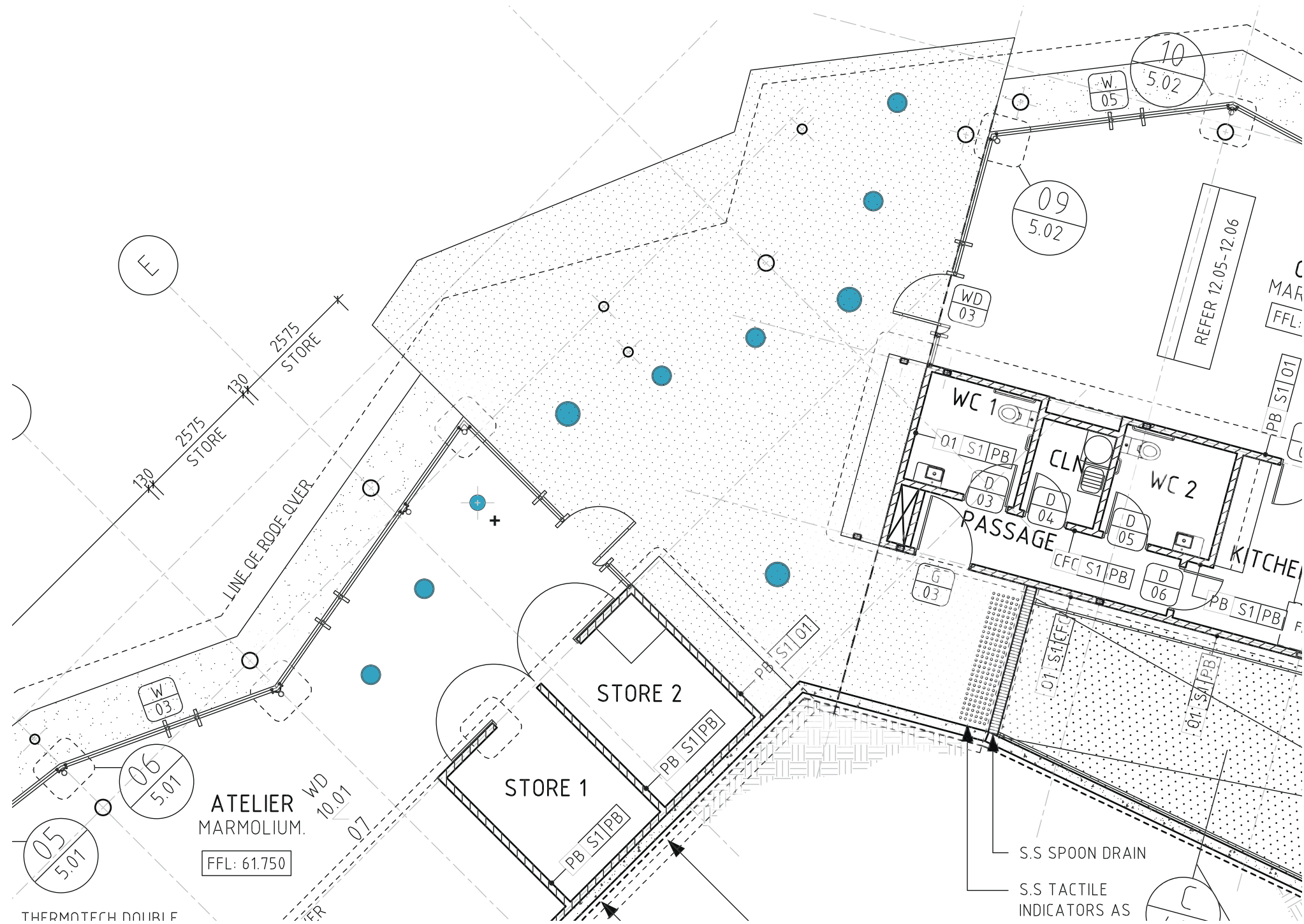
Ceiling sensors in the plaza area will be used for the activation of integrated floor works.

Configuration One

- Six floor inserts - within budget

The first artwork location drawing shows a series of six illuminated floor inserts – five in the plaza and one internal to the education lab. This configuration fits within the budget but limits the variety of root systems to showcase.

- + Light Metering Pole



Artwork Locations

Configuration Two

- Nine floor inserts - extra to budget

The second artwork location drawing shows a series of nine illuminated floor inserts - seven in the plaza, two internal to the education lab. This configuration would require funding for three additional to budget floor works but allows for a greater variety of root systems to be showcased and appears to fill the space comfortably.

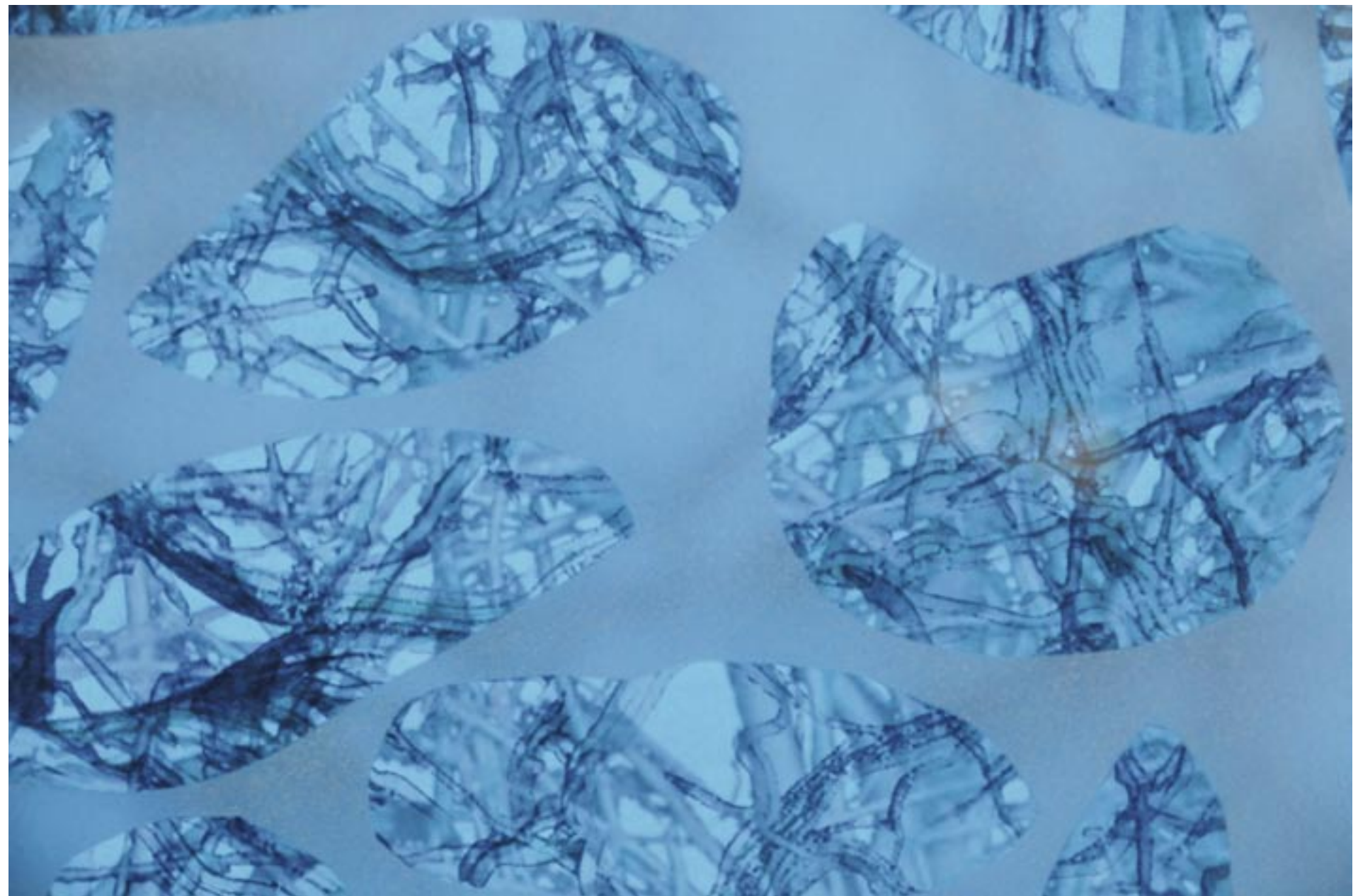
+ Light Metering Pole



5.1

5.1 Integrated Floor Work prototype

5.2 Detail view of Integrated Floor Work prototype: laminated printed glass with sandblasted top layer, back lit with Flatlight.



5.2

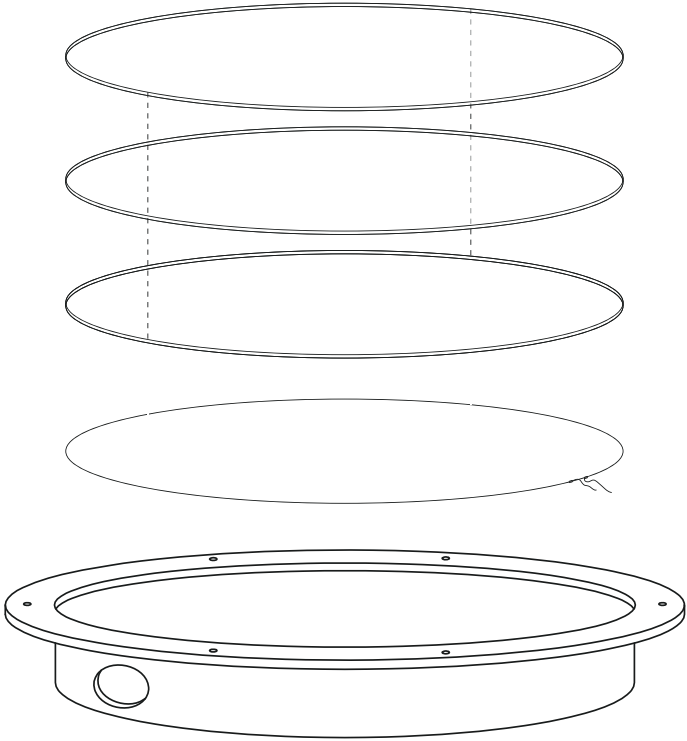
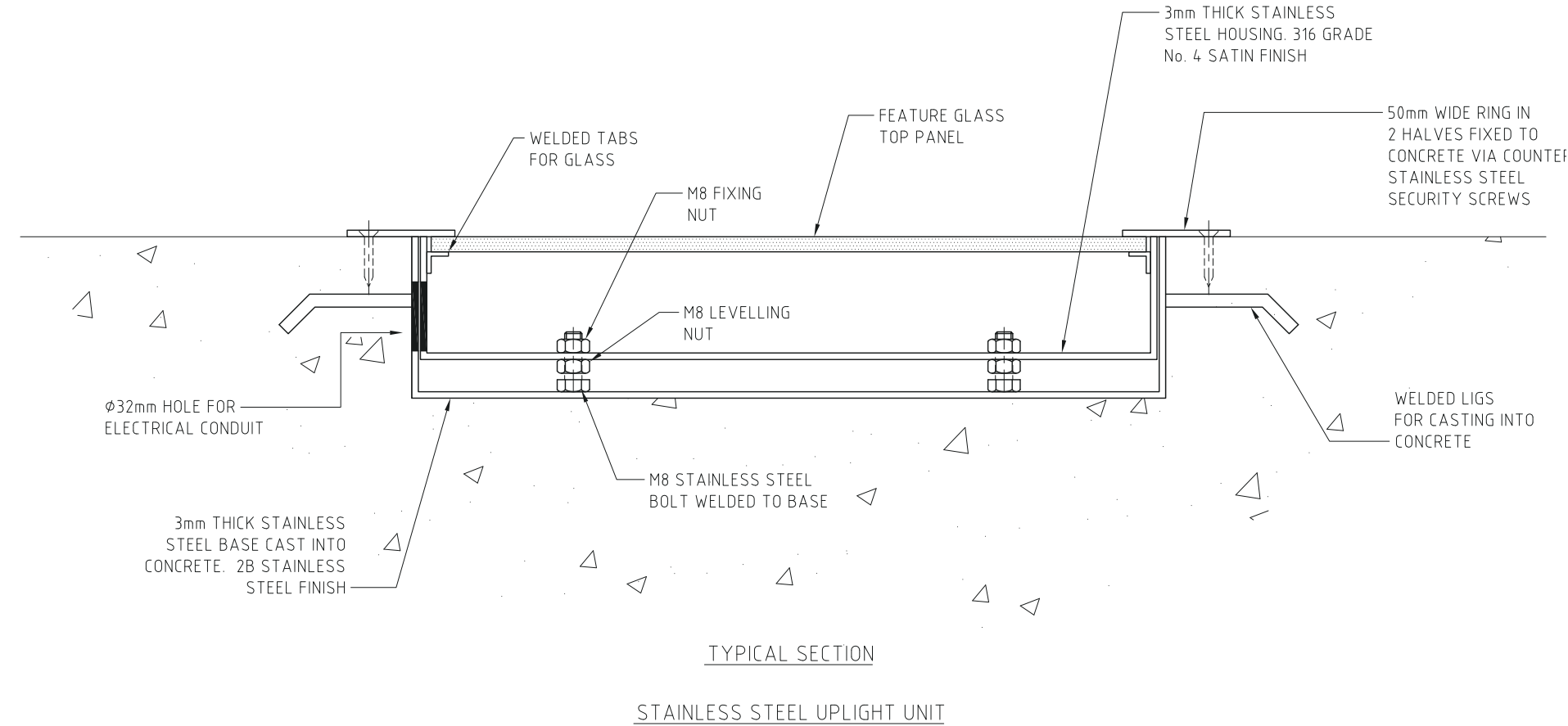
Floor Work Specifications

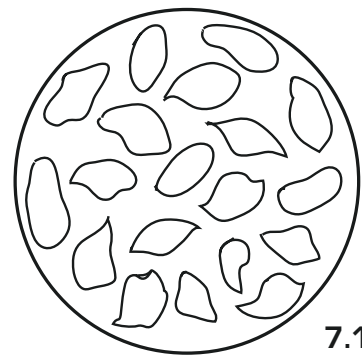
33 mm digitally printed and laminated and toughened glass in 3 layers inserted into concrete.

Top layer to be sandblasted with seed pattern of the species as a non slip-device. [See page 8]

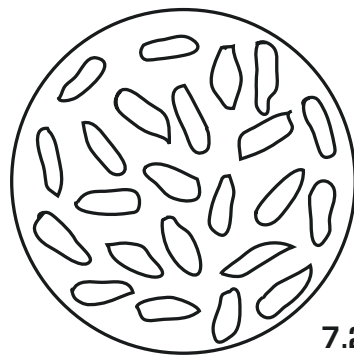
Sensor activated back lighting with electroluminescent [Flat Light] using coloured vinyl film.

Each floor piece will focus on the layering of one species root system.

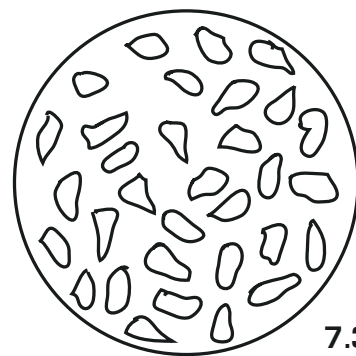




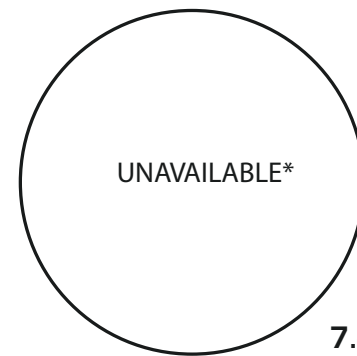
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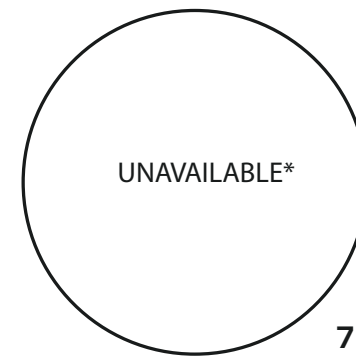
7.2



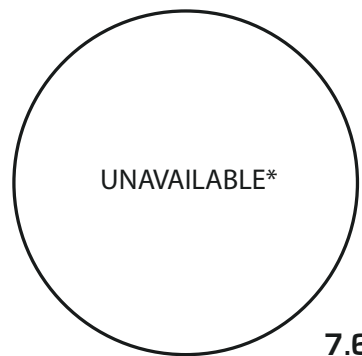
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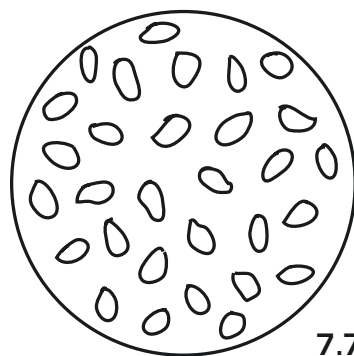
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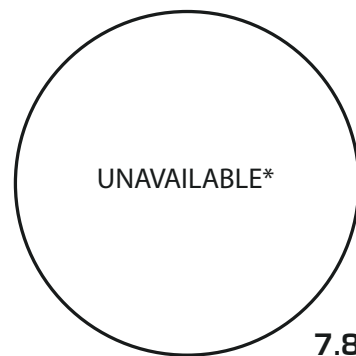
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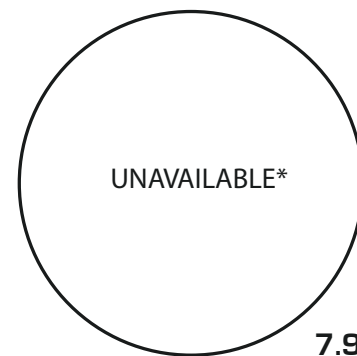
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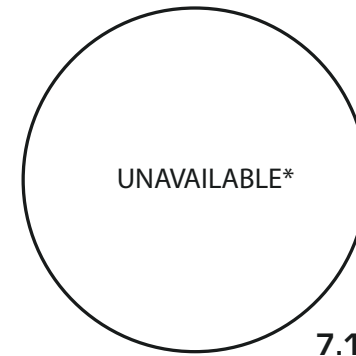
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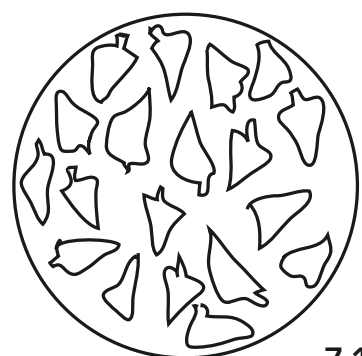
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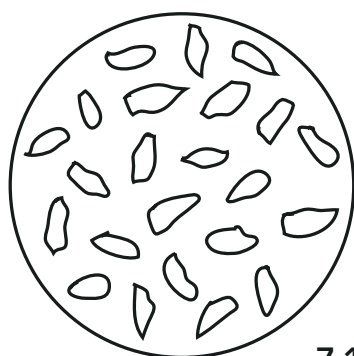
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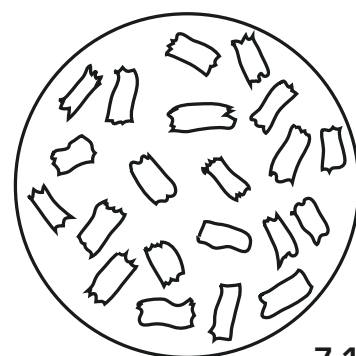
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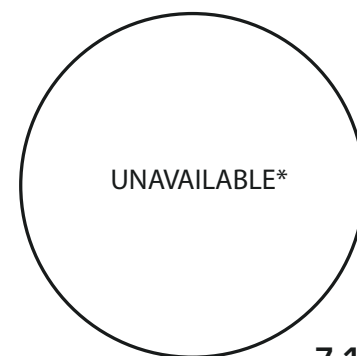
7.11



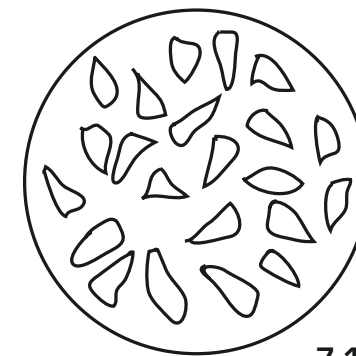
7.12



7.13



7.14



7.15

Seed Shape motifs for sand blasting as a non slip element within the Integrated Floor Work
7.1-14 Seed shapes from species with underground root systems
7.15 Seed shapes from the Xanthorrhoeaceae - aerial root system.

7.1. *Acacia chapmanii* subsp. *australis* (with leguminous roots)

7.2. *Adenanthos detmoldii* (proteoid roots)

7.3. Haemodoraceae, *Anigozanthos manglesii* (kangaroo paw)

7.4. Proteaceae, *Banksia ionthocarpa* (proteoid root)

7.5. *Dampiera* species

7.6. *Verticordia citrella*

7.7. Zamiaceae – *Macrozamia fraseri*

7.8. *Boronia heterophylla* (pink)

7.9. *Boronia megastigma* (brown)

7.10 Haemodoraceae, - *Conostylis stylidioides*

7.11. *Banksia coccinea* (proteoid roots)

7.12 *Lepidosperma gladiatum* (monocot)

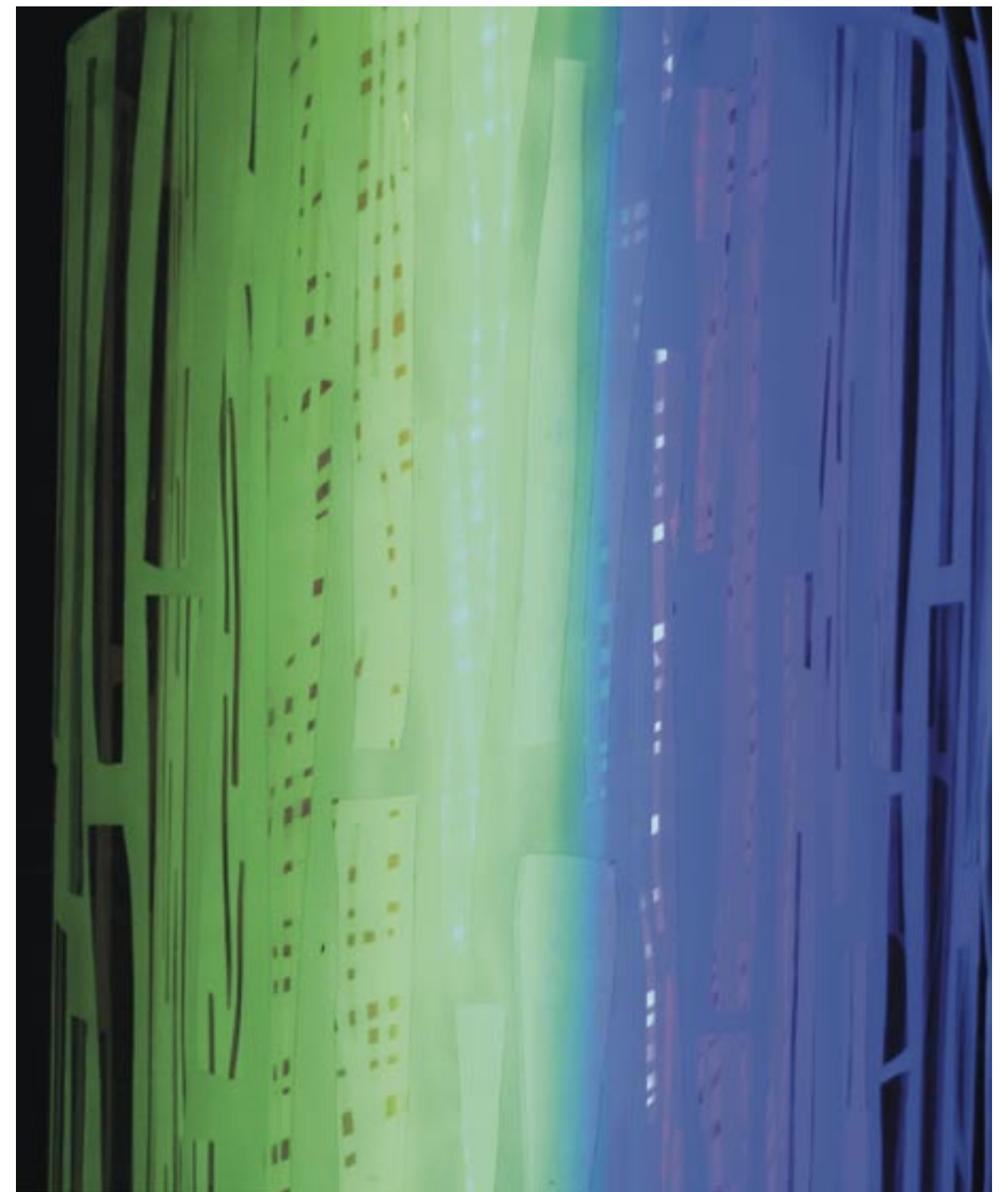
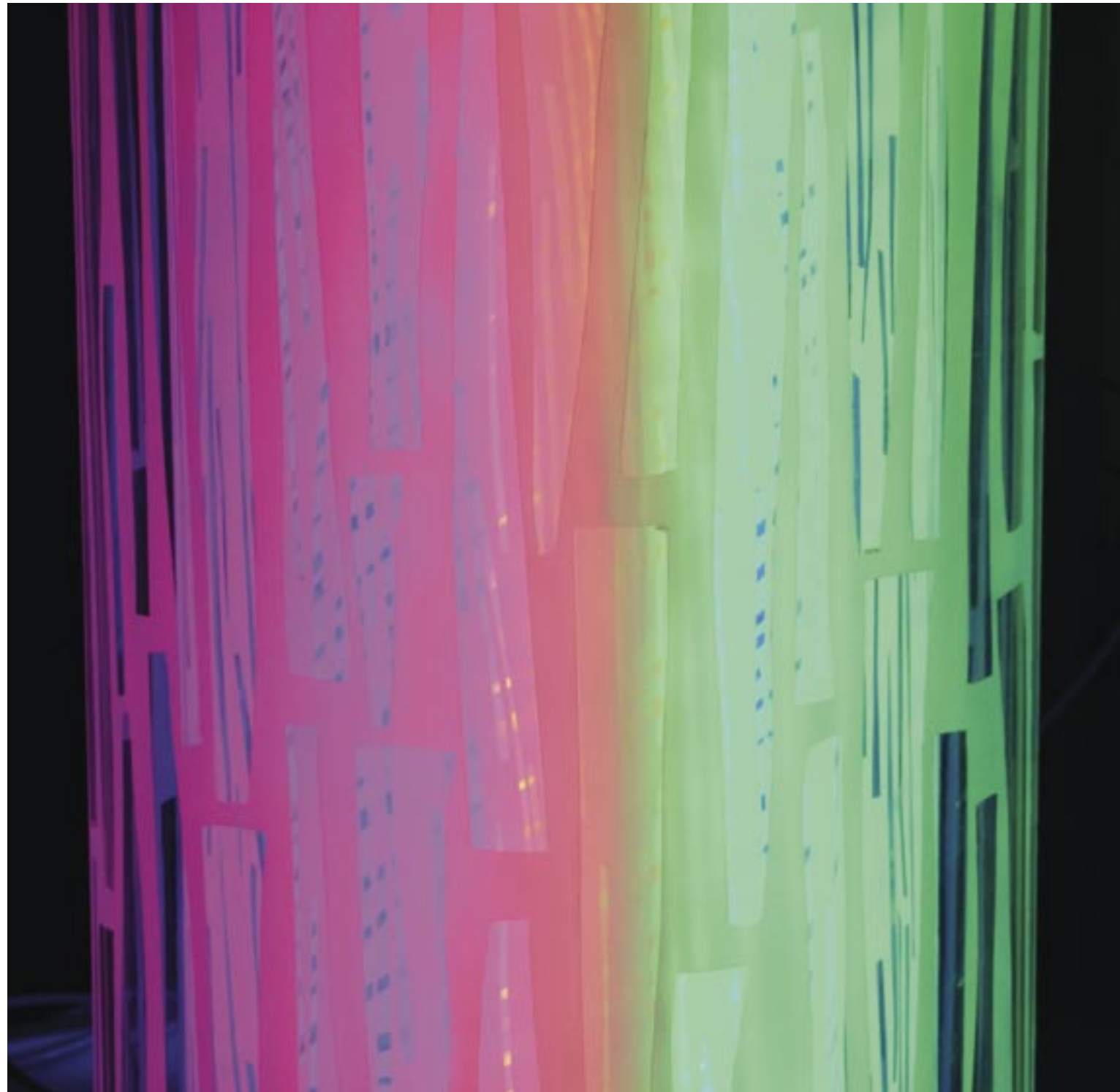
7.13. Goodeniaceae, – *Leschenaultia biloba*

7.14 *Scaevola platyphylla*

7.15. Xanthorrhoeaceae – *Xanthorrhoea preissii*, Grass tree - aerial roots

A selection of either six or nine of the listed species root systems will be used as the basis of the integrated floor works.

* A substitute pattern based on species root systems for species with unavailable seed samples .

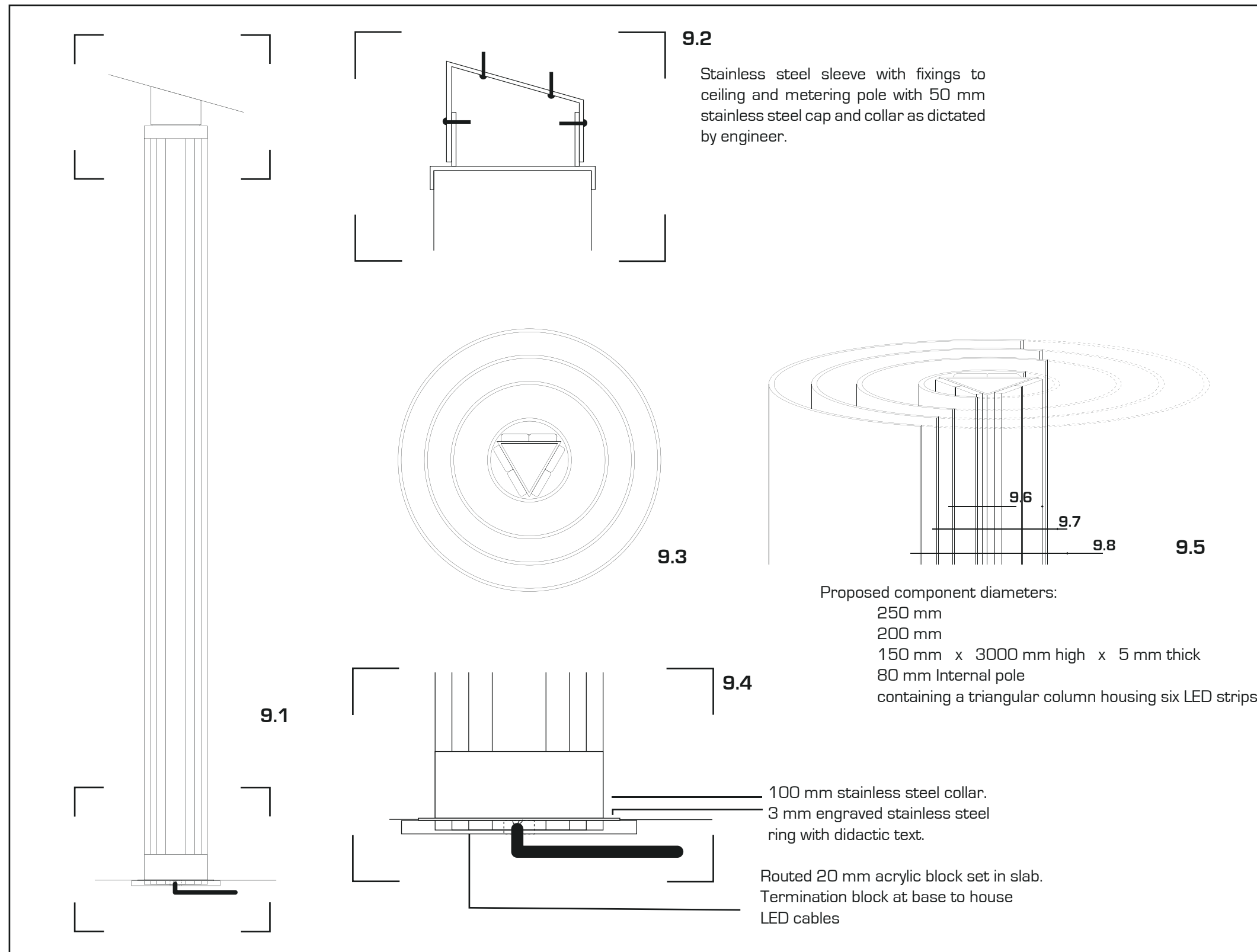


Live Data Metering Light Column Prototype

Using coloured LED's housed inside the core of the column, the pole will translate live data from three sites: the solar array; the building's lighting consumption; and the building's heating/cooling consumption.

Light Metering Pole Detail

09



The proposed light metering pole is constructed of concentric clear acrylic cylinders with a sandblasted pattern on each surface. Each outer surface will be etched with a deconstructed pattern of the aerial root system of the *Xanthorrhoea preissii* (grass tree). [See diagrams 9.6 - 9.8].

The central cylinder will be frosted without pattern to house the dynamic LED strip that will demonstrate the live metering of solar collection and power consumption in the building, by the vertical elevation of adjacent coloured sections in the pole. (See diagrams 9.3 and 9.5 for component views)

9.6

9.7

9.8

Donaldson + Warn Architects

Botanic Gardens And Parks Authority

Grady Brand for horticultural advice and assistance

Guy Tomlinson SKM

Ian Langlands and,

Charles Ho from Screen Tech

Gavin Parker from Sun Industries

Site Drawings supplied by Donaldson + Warn Architects

Floor Work drawings supplied by Sign Supplies

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