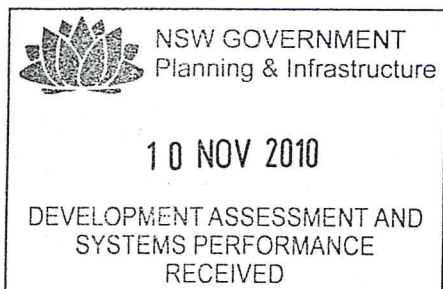


5 .Seating

- **Bench type 1A:** Standard bench + backrest - 3 seats:
timber slats + steel frame
- **Bench type 1B:** Standard double sided bench + backrest -
2 seats: timber slats + steel frame
- **Bench type 2:** Custom precast concrete seat wall to MCA
Square and promenade
- **Bench type 3** Custom precast concrete bench to Lookout
and MCA forecourt
- **Bench type 4** Custom precast concrete bench to Market
Wharf



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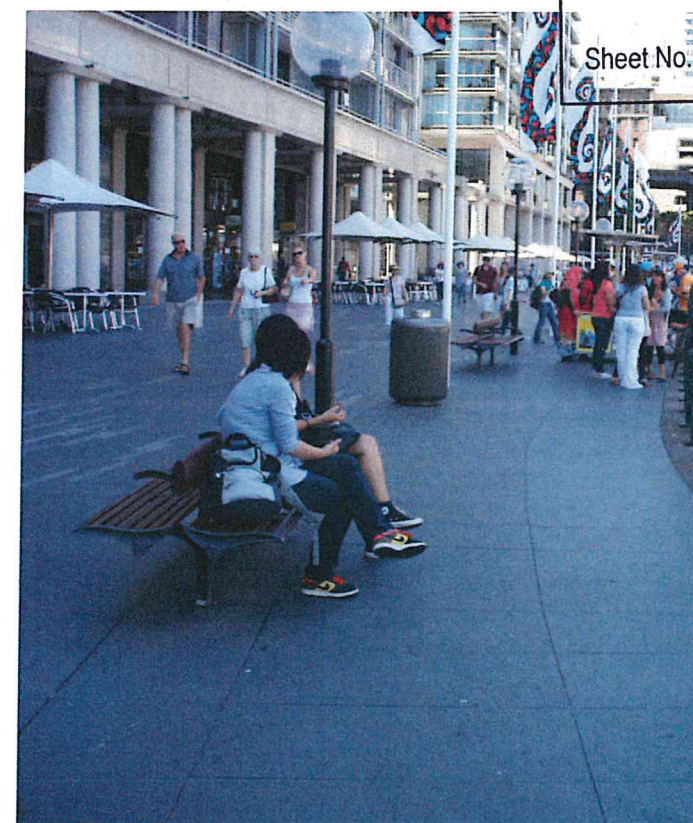
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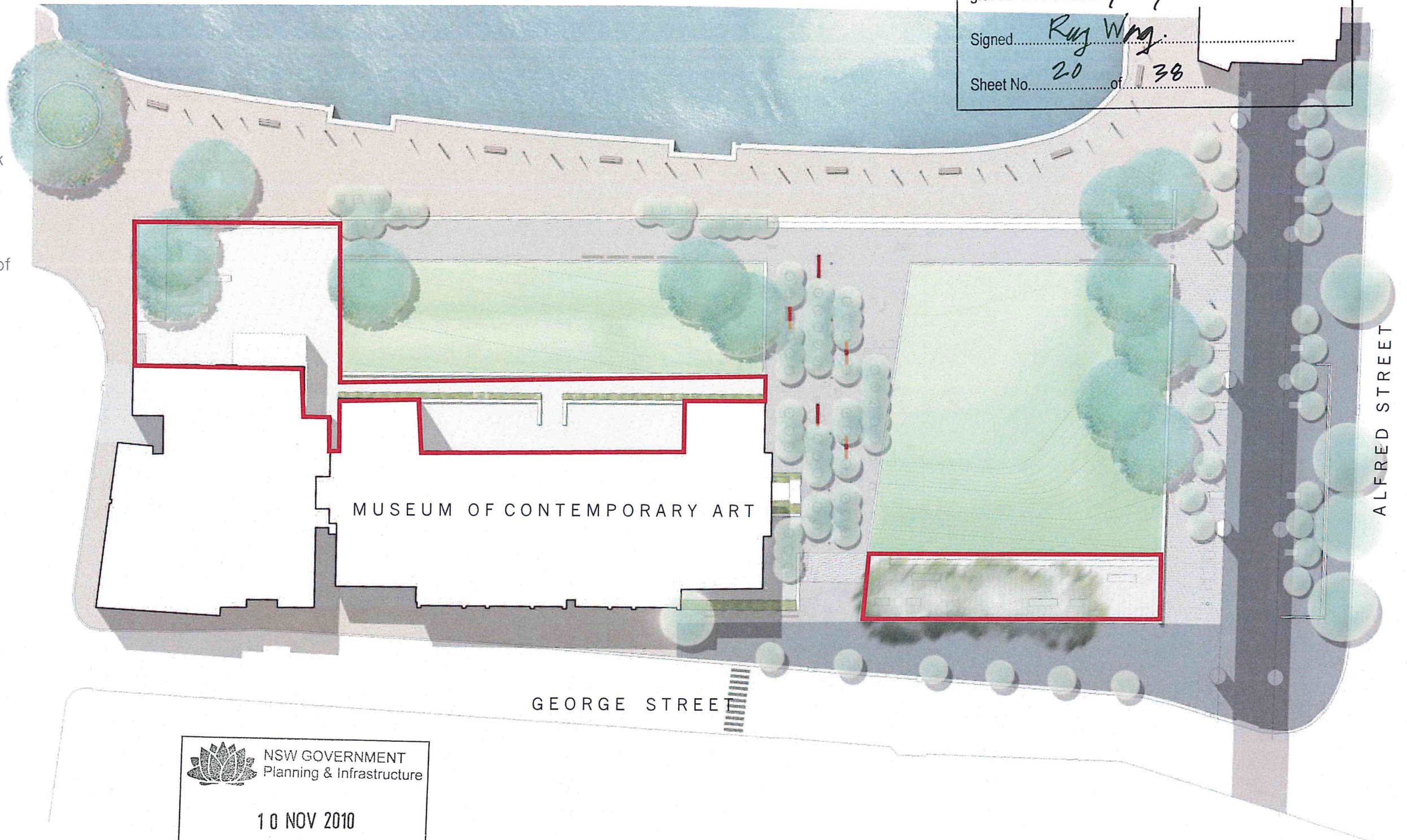
Signed Ray Wang

Sheet No. 19 of 38



PRINCIPLES

1. Create a simplified and unified park space
2. Create clear and generous pedestrian links to the rocks, George St and Alfred Street
3. Create a square/ forecourt at the MCA
4. Retain and locate landmark trees to preserve views and to provide shade
5. Create generous provision of informal and formal seating
6. Create a unified and coherent ground plane



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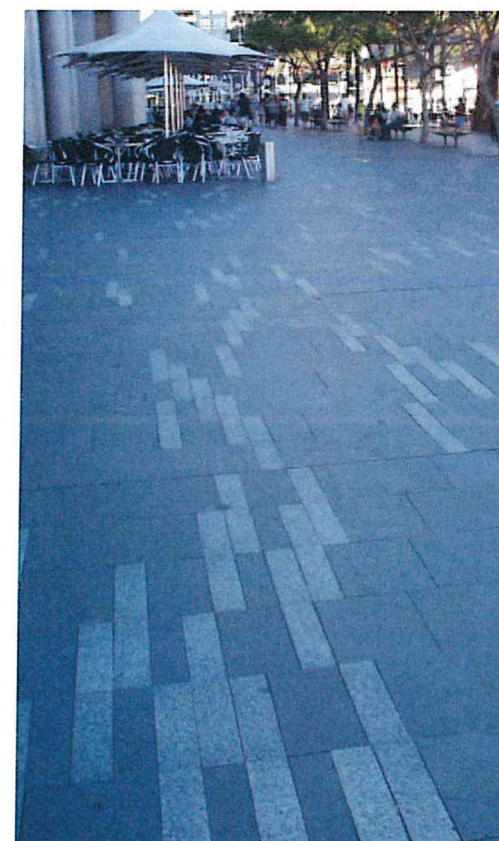
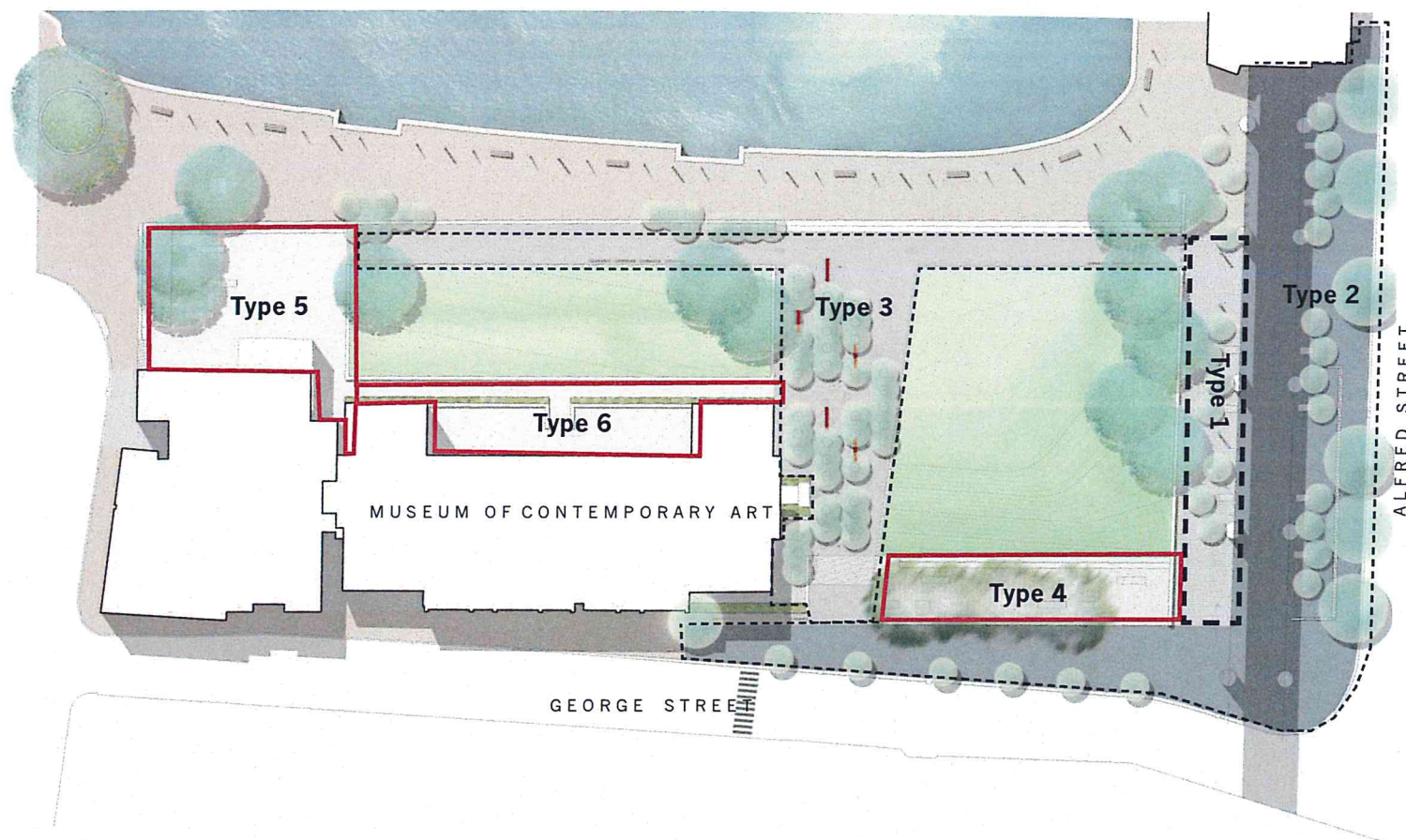
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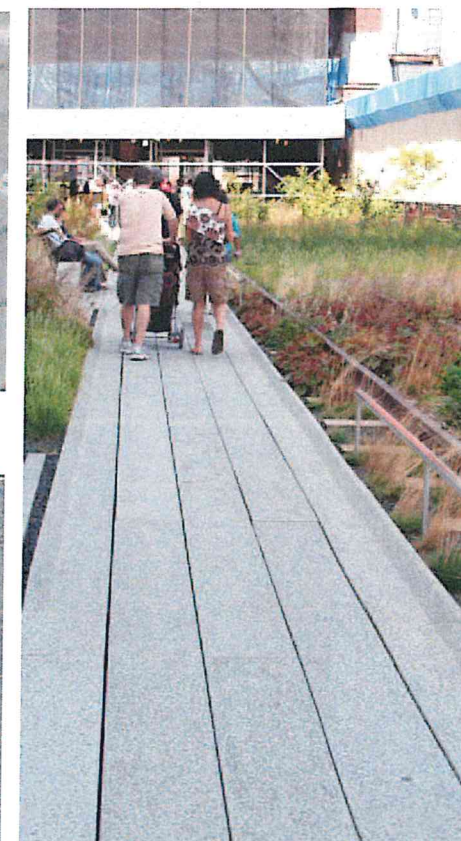
Type 1: Granite paving



Type 4: Lookout : Precast concrete units



Type 3: Market Wharf



Type 4: Lookout : example of Precast concrete units Highline project, New York

6 . Paving

Type 1: Granite paving: 70% Dark grey and 30% Light grey. 925, 570, 295 x 425mm wide dark grey units. 170 x 425mm wide Light grey units

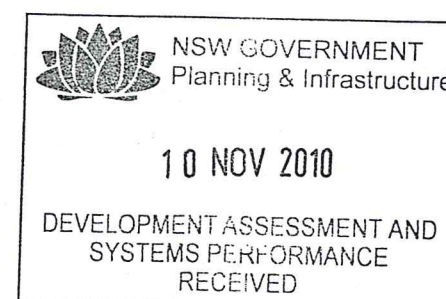
Type 2: Asphalt paving on George Street, Alfred St underpass


Type 3: Market Wharf : Granite units 150 x 150 wide dark grey units.

Type 4: Lookout : Precast concrete units - 250mm wide x 1000/ 2000 mm length off white in suspended steel frame: inset laminated glass panels with lighting under

Type 5: MCA Square: Precast concrete surfacing with sandblasted finish

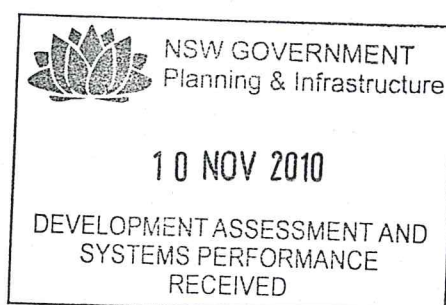
Type 6: MCA Terrace: In situ concrete paving with sandblasted finish




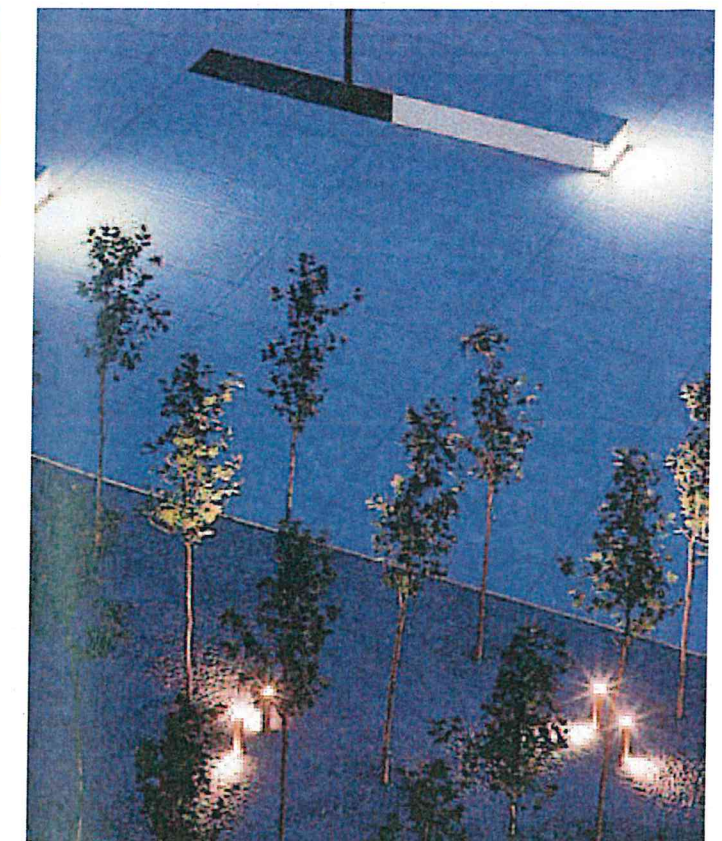
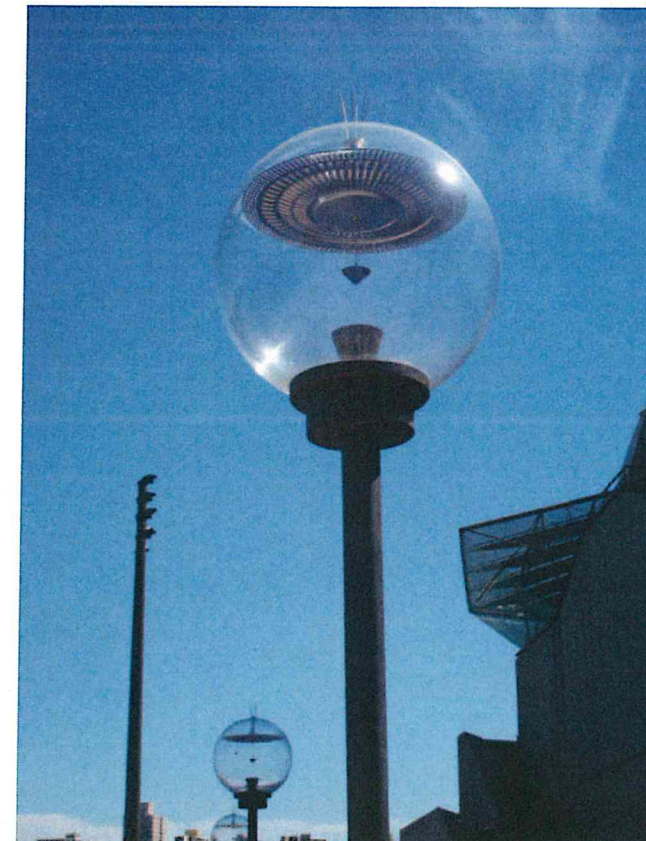
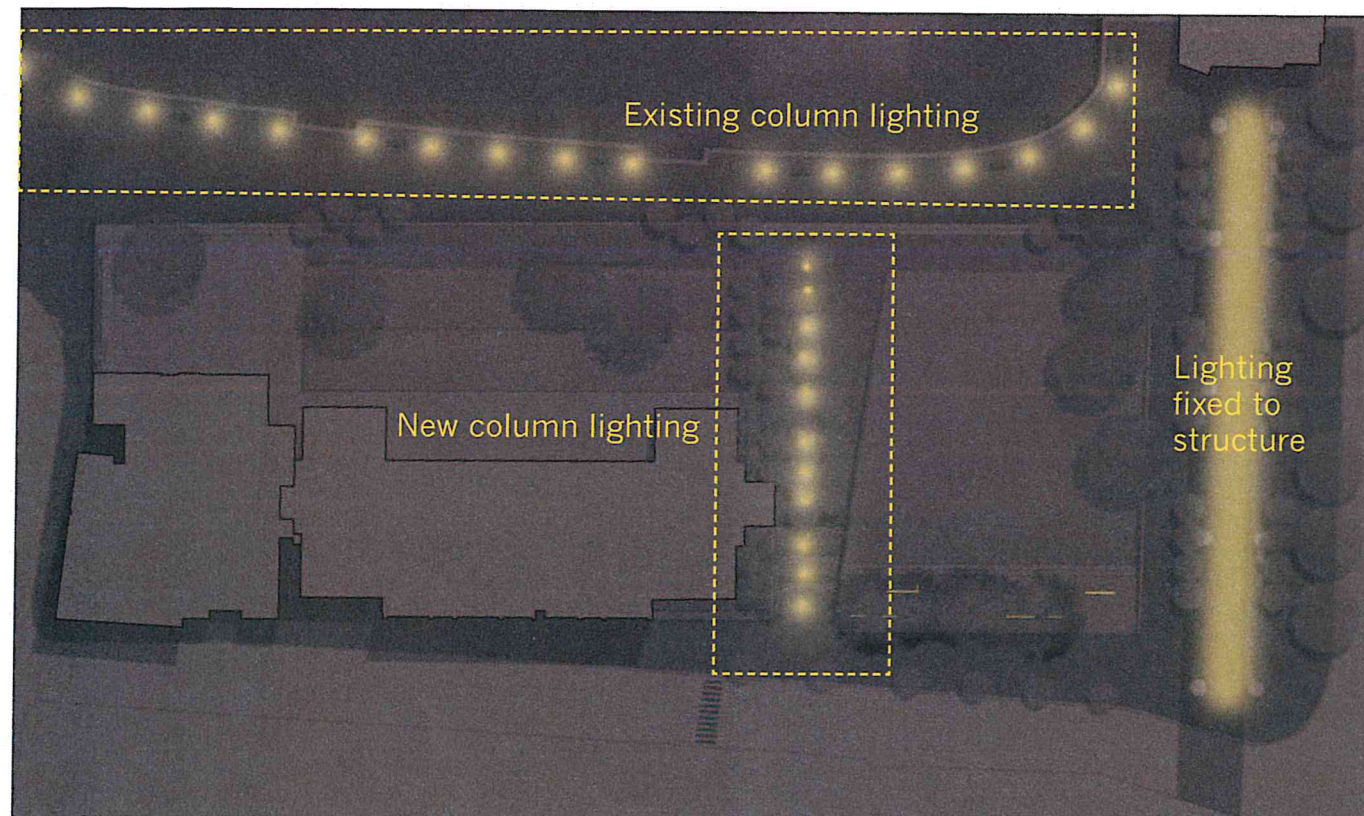
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granted on the.....	27/6/11
Signed.....	Rug Wang
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5. Create generous provision of informal and formal seating
6. Create a unified and coherent ground plane
7. Provide well lit pedestrian paths at night



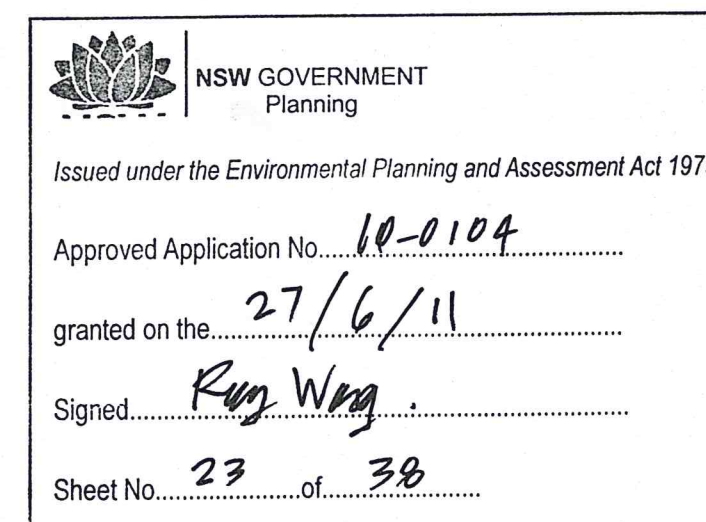
	
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7. Lighting

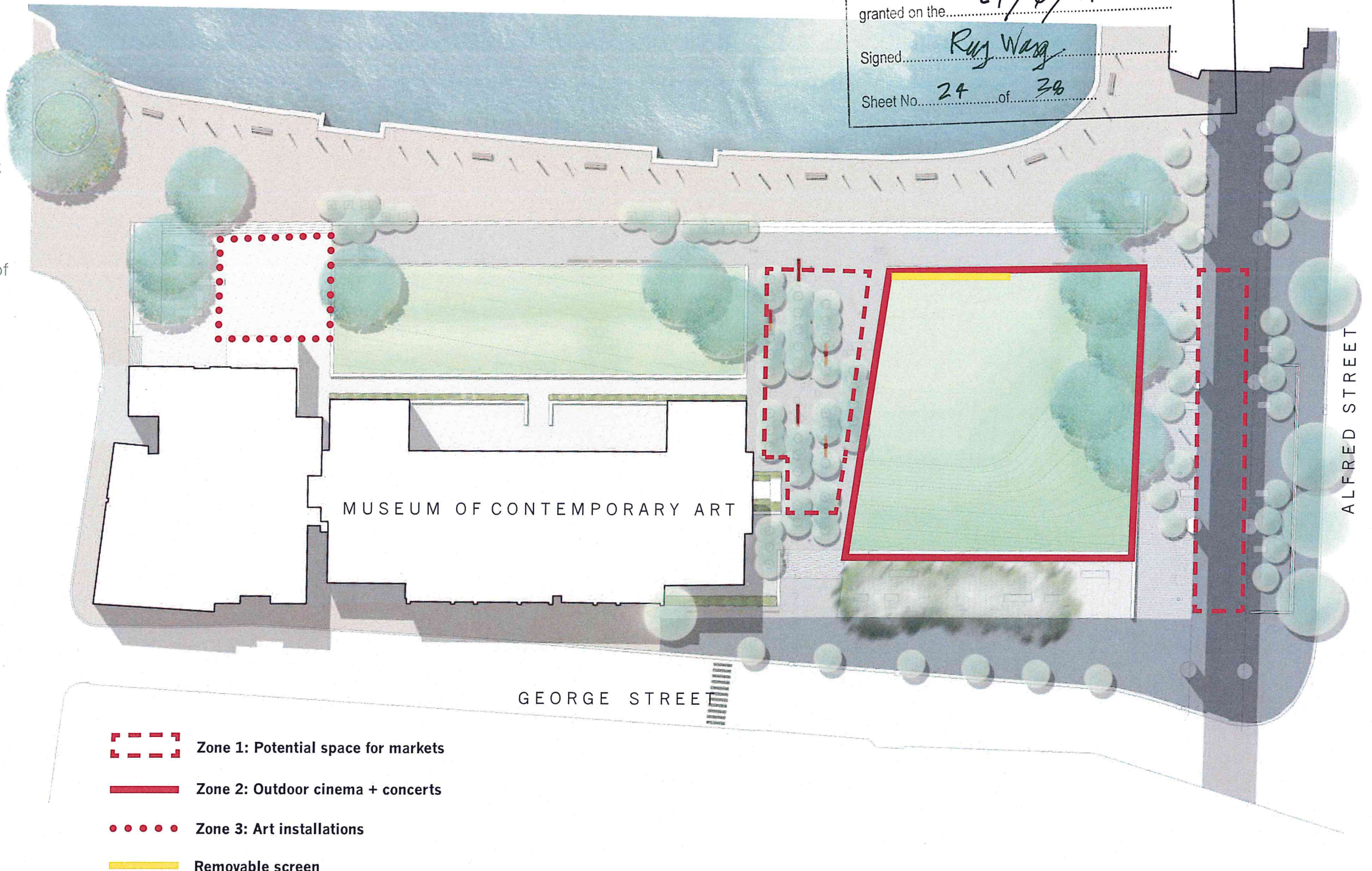
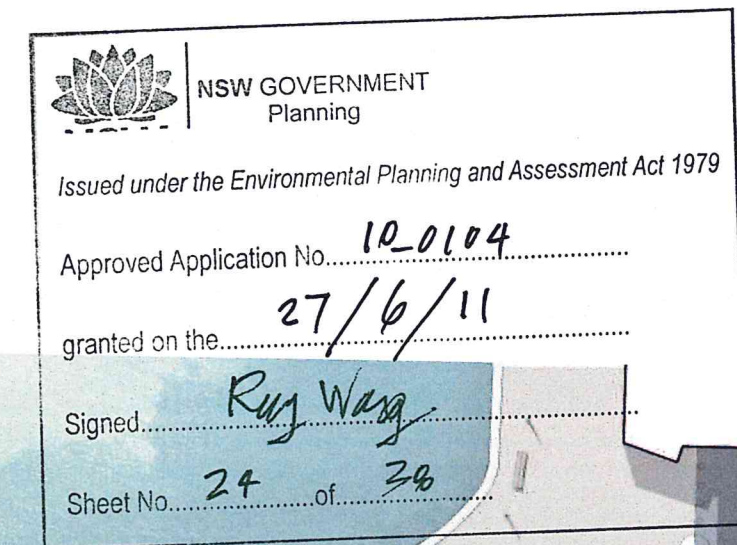
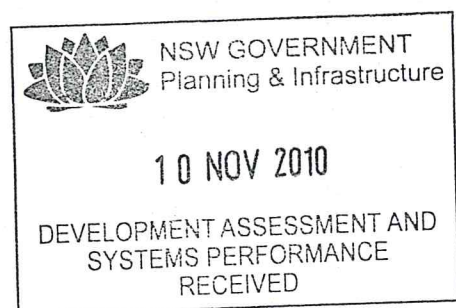
Key principles for lighting

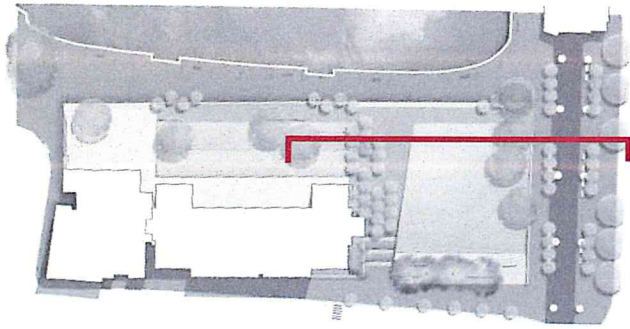
- Ensure safe lighting levels are provided on primary pedestrian routes
- Ensure lighting proposals allow for opportunities to enjoy the night time experience of the key harbour landmarks, the Opera House and the Harbour Bridge.
- Minimise upward spill light
- Design solutions that balance lighting requirements whilst minimising excessive numbers of lighting columns
- Illustrate and amplify key features including interpretative elements in the MCA Square, the Lookout and Market Wharf.
- Maximise energy efficiency




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5. Create generous provision of informal and formal seating
6. Create a unified and coherent ground plane
7. Provide well lit pedestrian paths at night
8. Create a layout that accommodates temporary events and festivals







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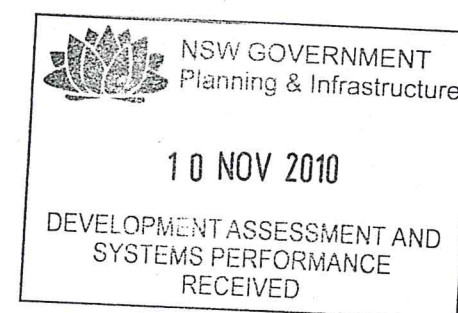
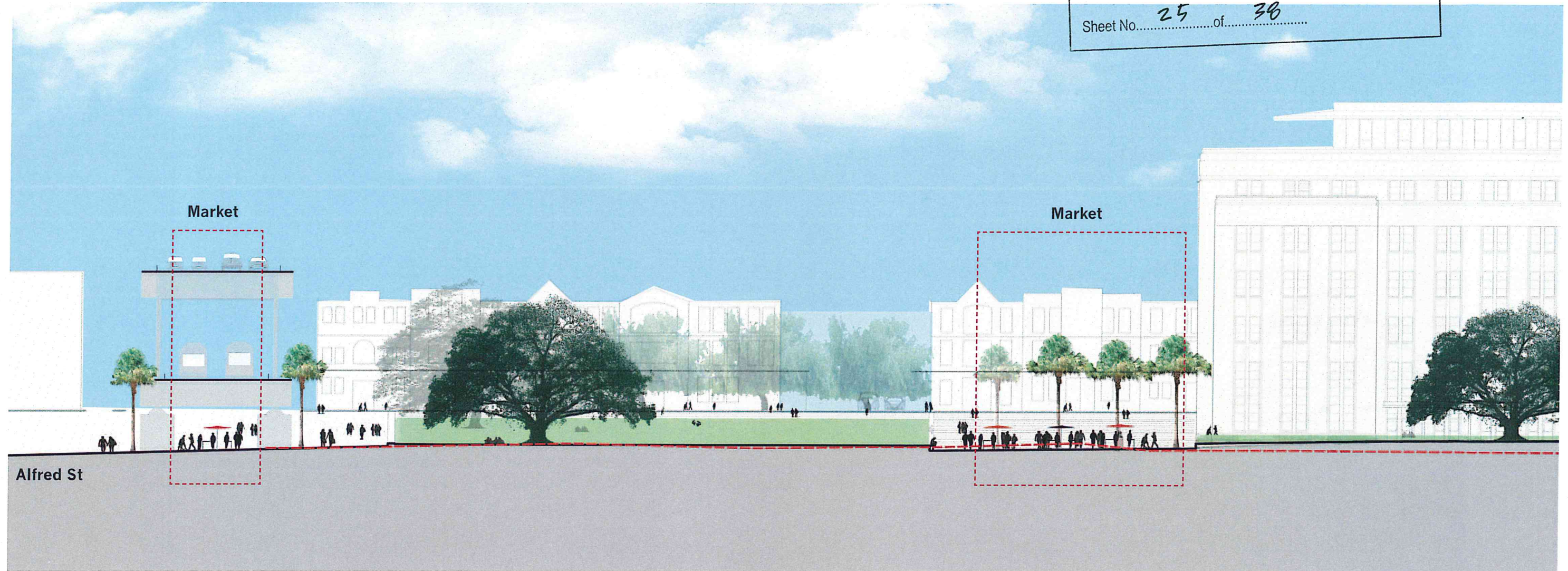
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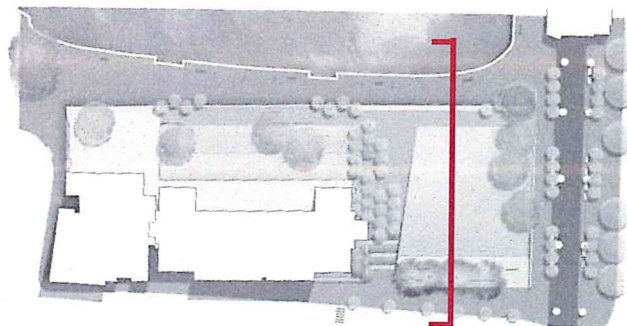
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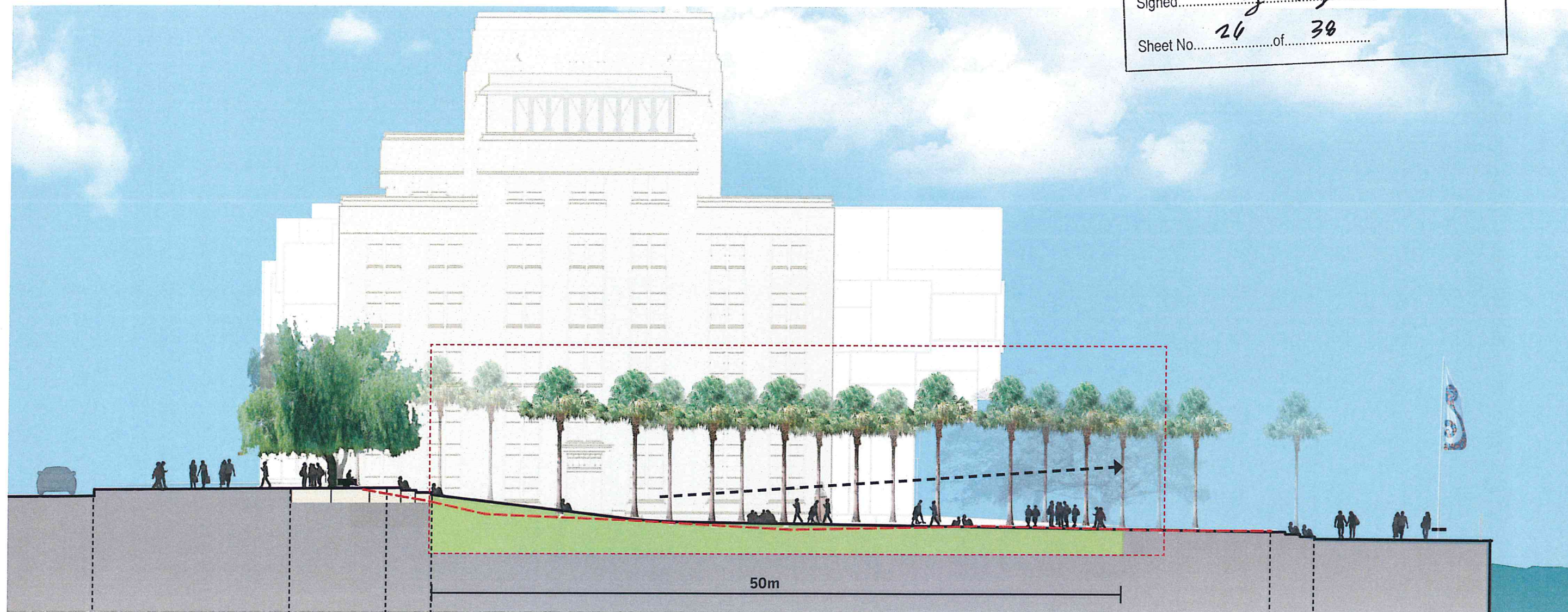
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George Street
Footpath

The
Lookout


Steps

The Green

Approximately 2400
people in event mode

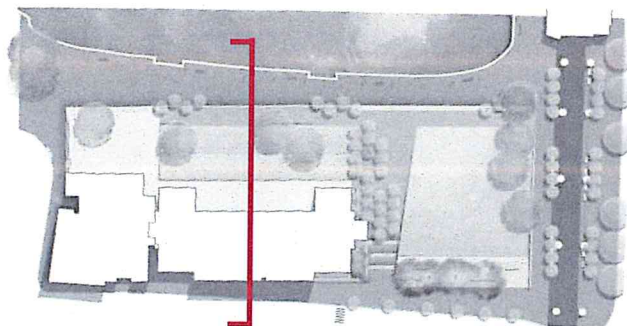
Steps

Lower Promenade


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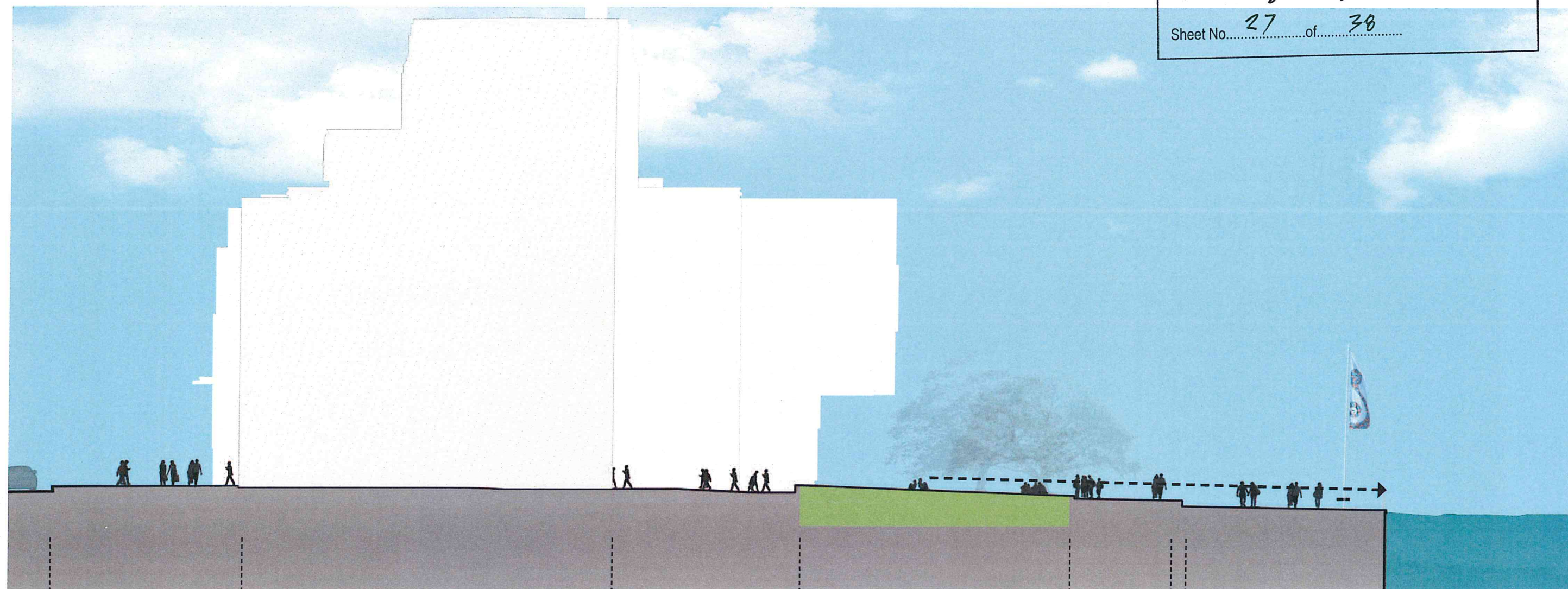
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George Street
Footpath

MCA

MCA terrace

The Lawn

Upper
Promenade

Wall

Lower Promenade



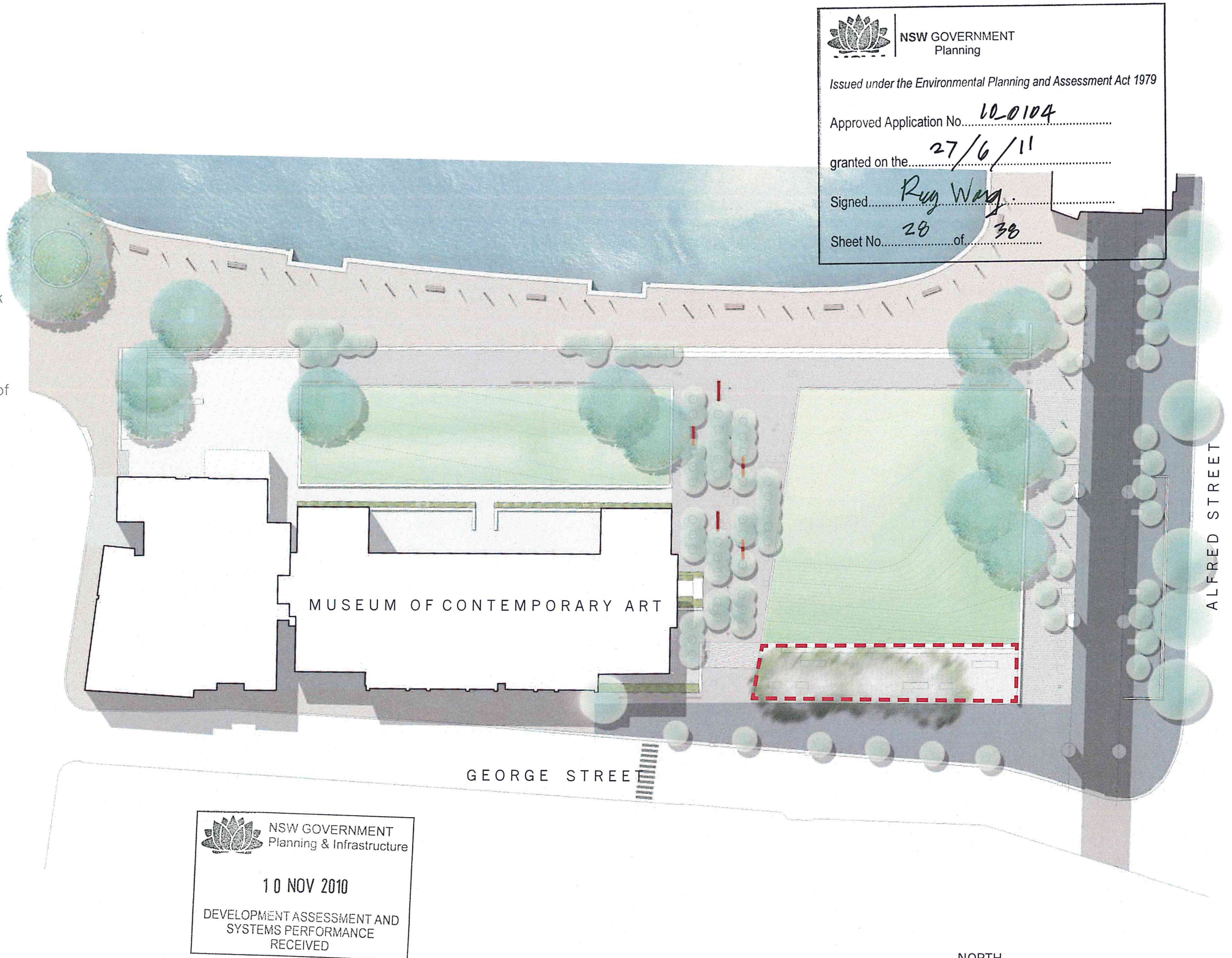
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6. Create a unified and coherent ground plane
7. Provide well lit pedestrian paths at night
8. Create a layout that accommodates events and festivals
9. Provide opportunities for interpretation






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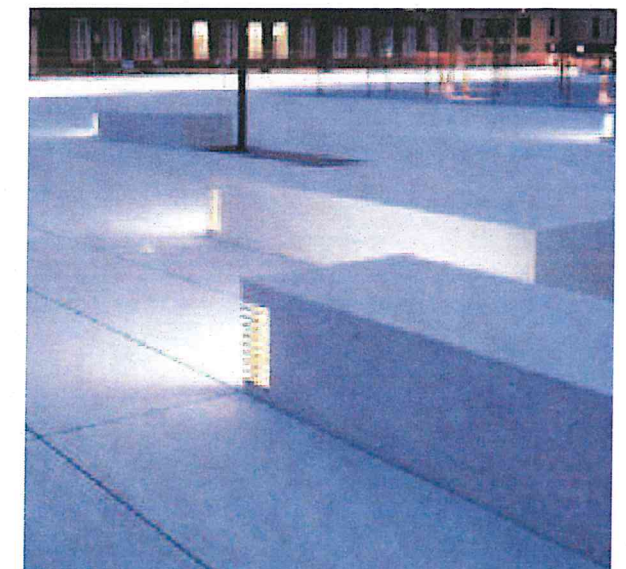
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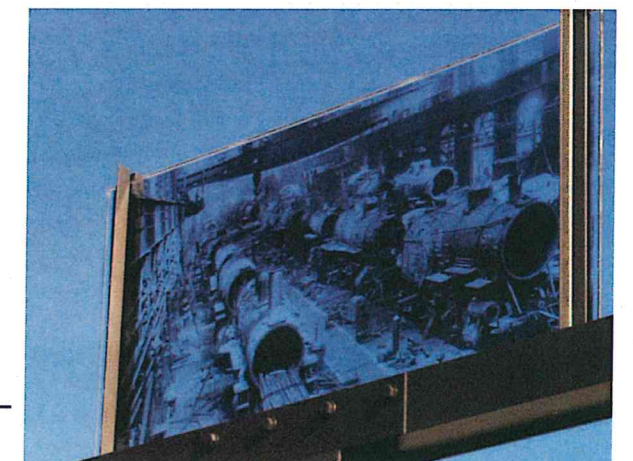
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Suspended precast concrete unit deck with opportunities to integrate lighting and signage



Integrate interpretative elements below deck and within seating elements

9. Interpretation

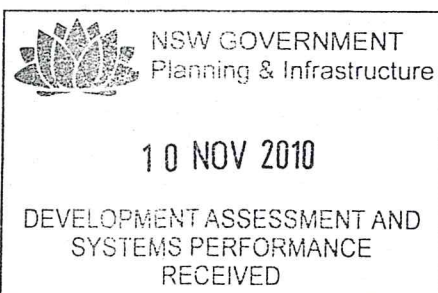

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6. Create a unified and coherent ground plane
7. Provide well lit pedestrian paths at night
8. Create a layout that accommodates events and festivals
9. Provide opportunities for interpretation
10. Incorporate existing artifacts where appropriate



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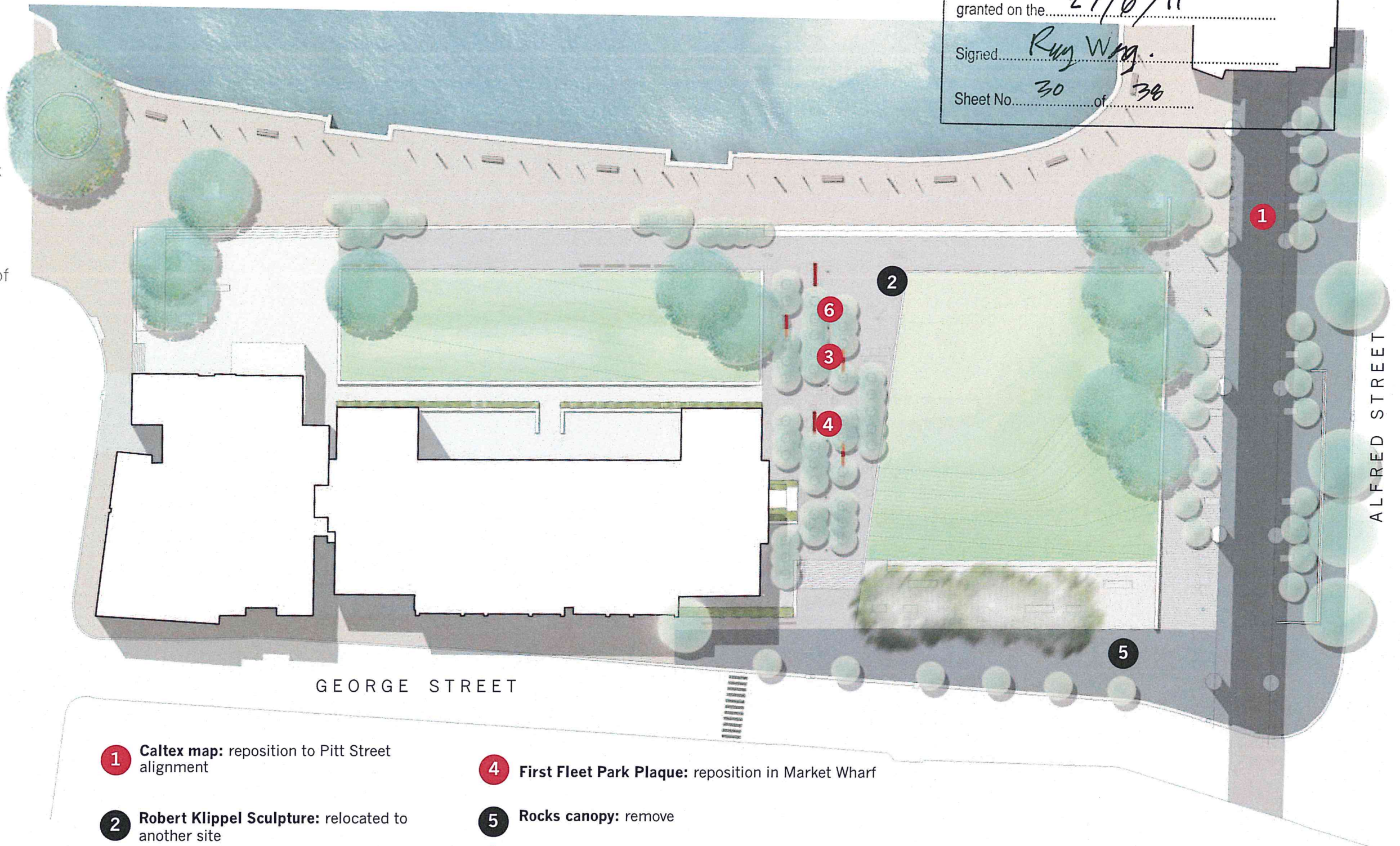
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Signed: *R. W. W.*

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1 **Caltex map:** reposition to Pitt Street alignment

2 **Robert Klippel Sculpture:** relocated to another site

3 **Governor Phillip Sculpture:** reposition in Market Wharf

4 **First Fleet Park Plaque:** reposition in Market Wharf

5 **Rocks canopy:** remove

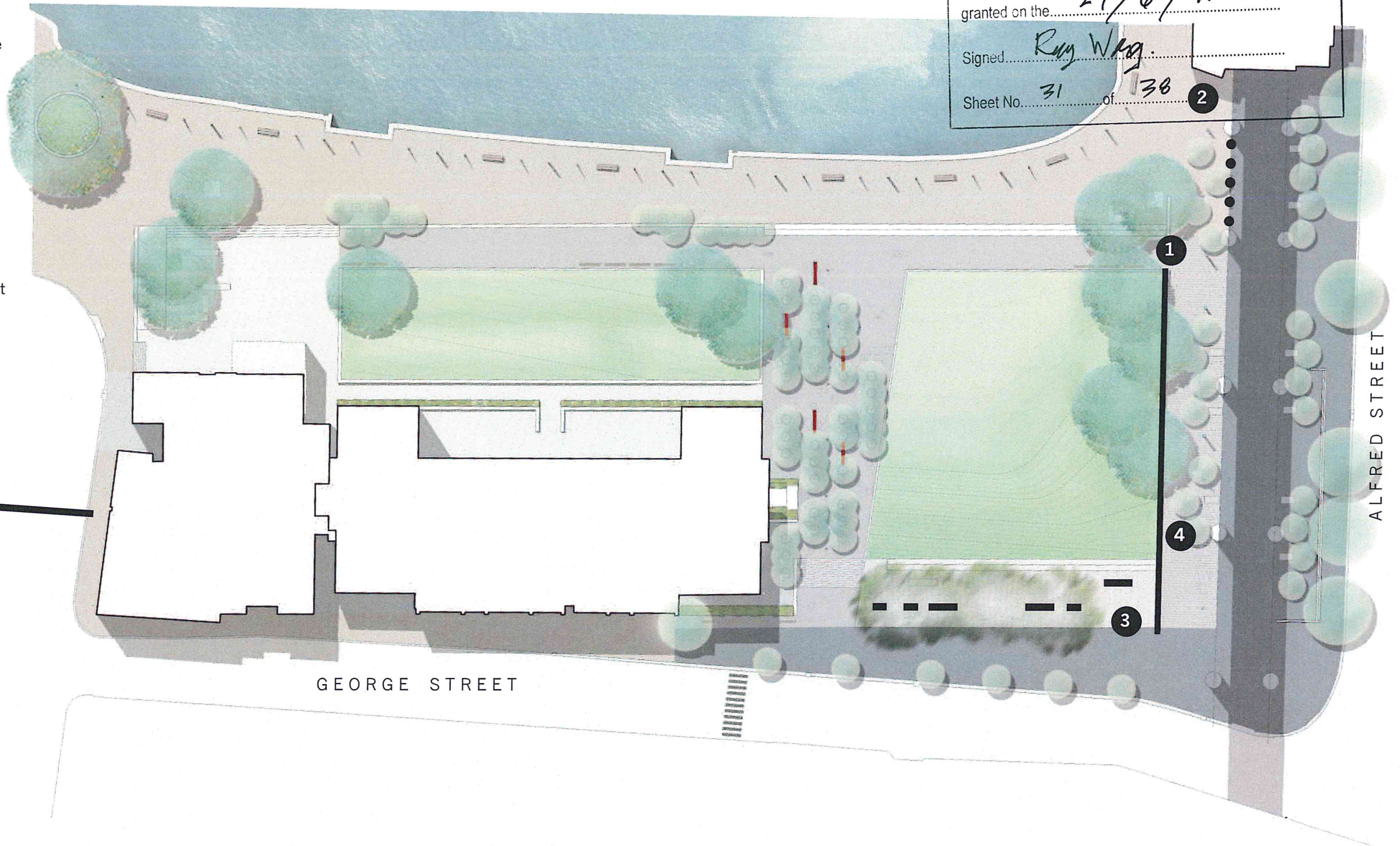
6 **Commissariat Stone:** reposition in Market Wharf



OPT SECURITY

- 1 **Retractable Bollards:** relocate existing
- 2 **Bollard control:** in alignment with the Cahill expressway pylons
- 3 **Heavy duty seats:** at George Street edge to minimise any vehicle access : min 4 m wide gap
- 4 **Barrier wall:** 450mm high seat wall
- 5 Existing boom gate + security

5



GEORGE STREET

ALFRED STREET



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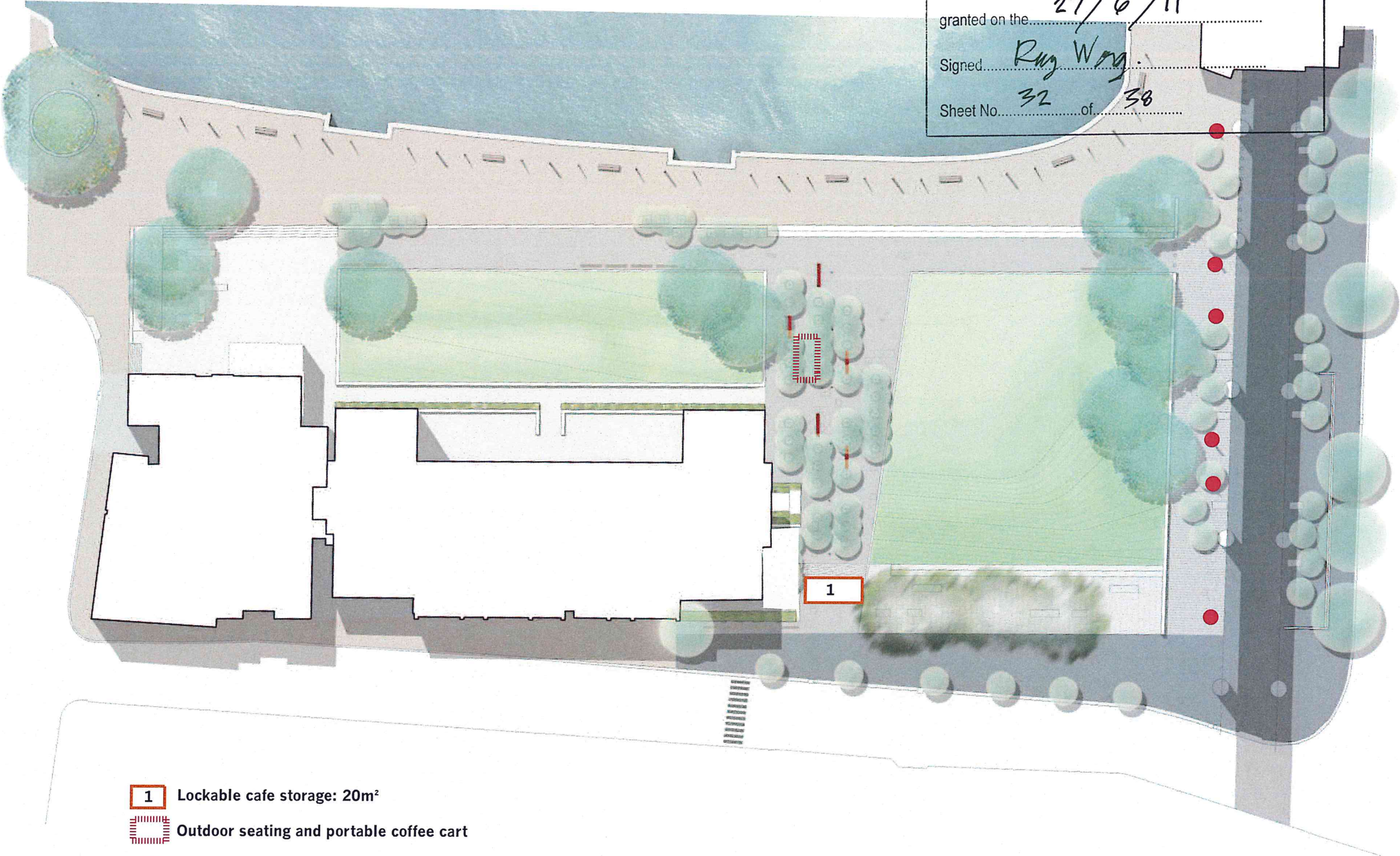
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- 1** Lockable cafe storage: 20m²
-  Outdoor seating and portable coffee cart
-  New banner poles




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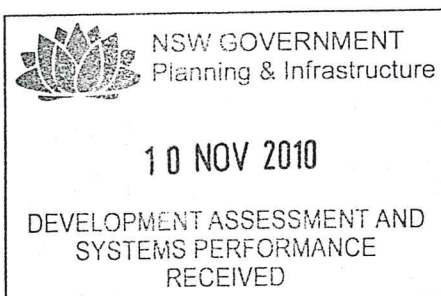
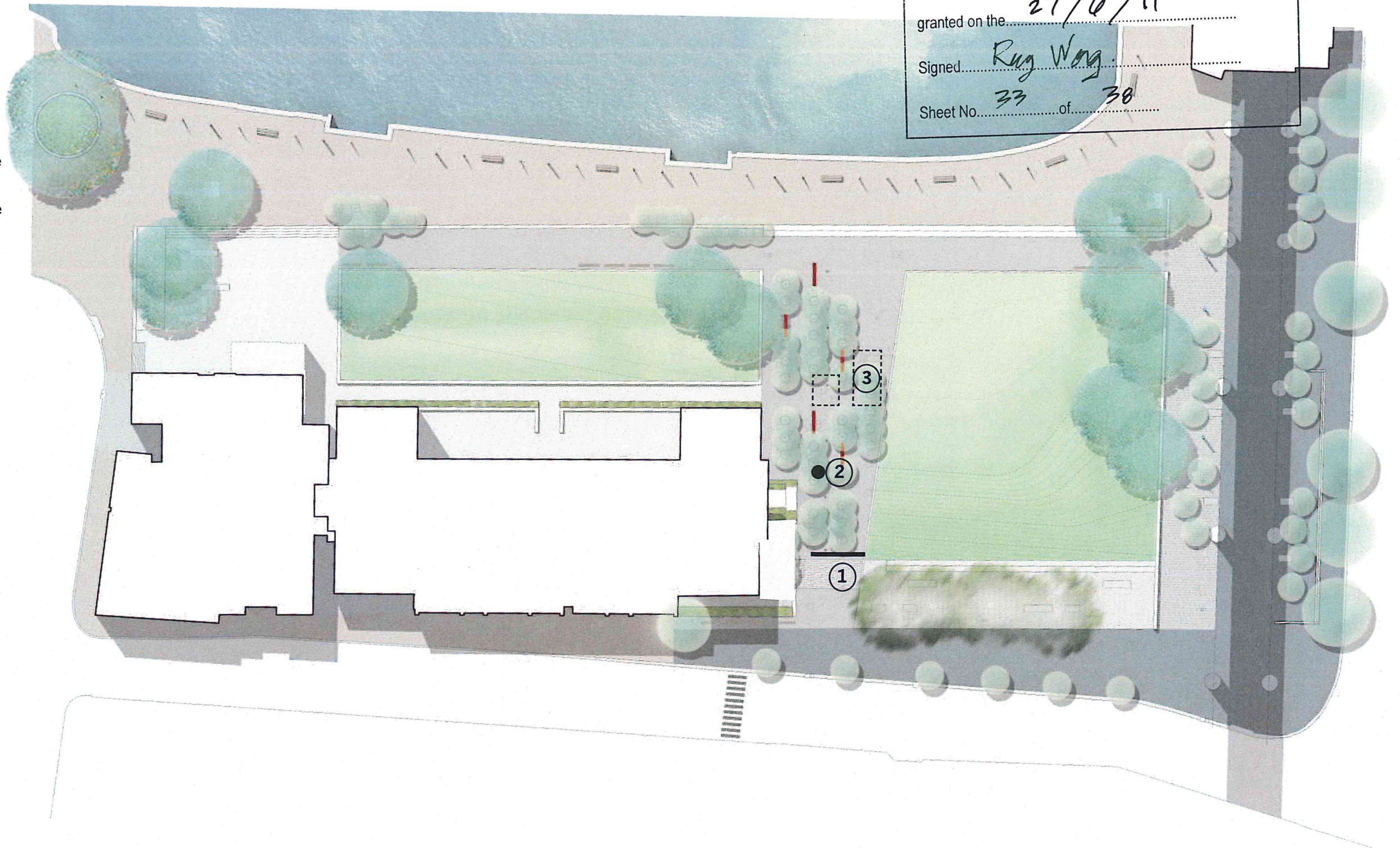
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- ① Sewer induct vents:**
 remove existing stone pedestals and install vents into proposed retaining wall
- ② Sewer educt vent:** Remove existing vent in garden bed and install new sewer vent in alignment with tree grid.
- ③ Existing sewer dry + wet well: to be retained.**
 Replace pit lids with infill pit lid and inlay paving.



SERVICE ACCESS

..... Heavy vehicle access

- 1 Principal entry for service vehicles
- 2 Existing layback for service entry



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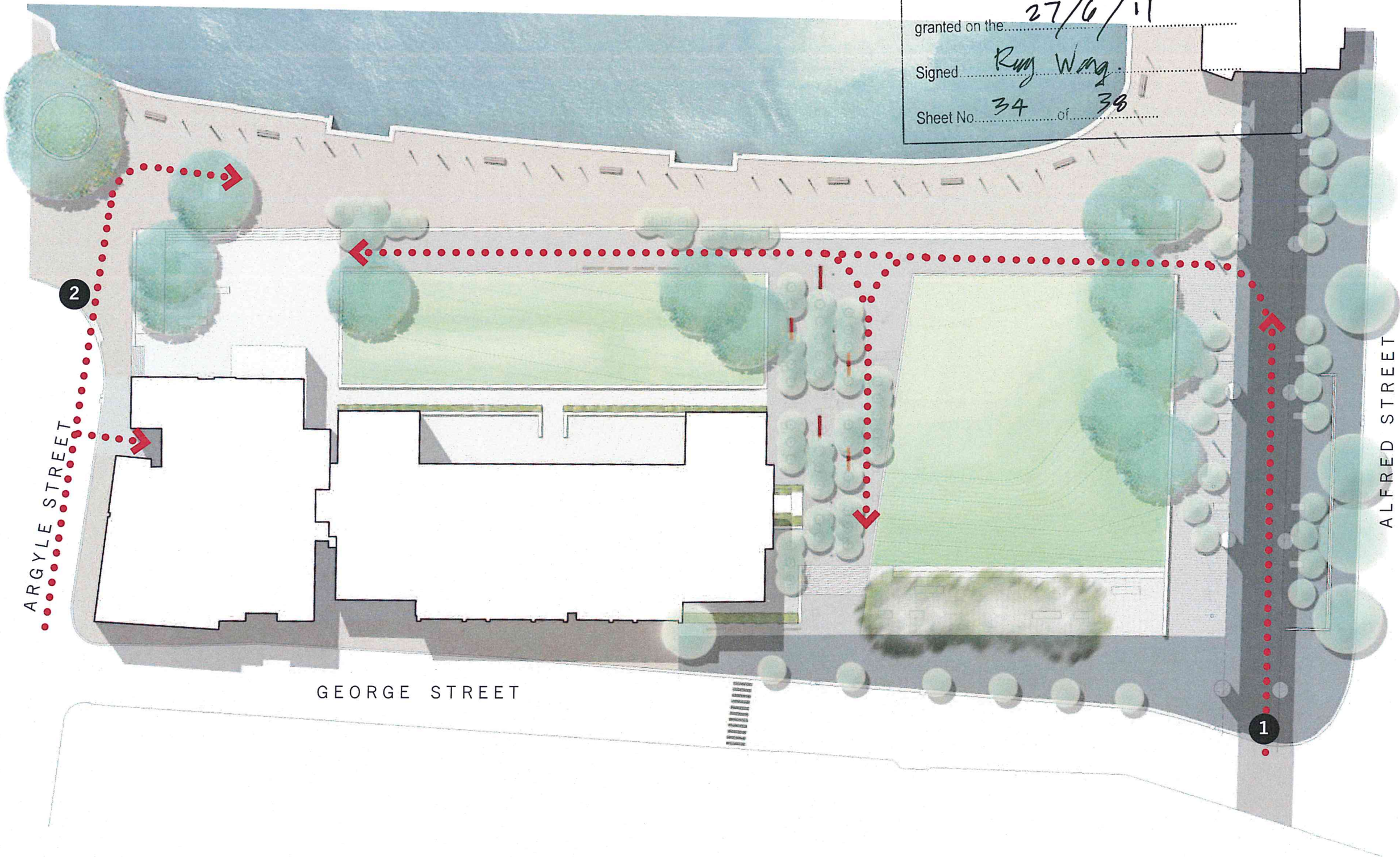
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WSUD PRINCIPLES

1. Address irrigation demands for the park by collection and filtration of storm water runoff from the George Street south catchment. Install a gross pollutant trap and diversion from existing SW system.

2. Install an underground irrigation tank - 150 KL - 200KL tank would meet 80% estimated irrigation demand.

3. Provide SW filtration on site via use of bio-filtration tree pits which allow for stormwater runoff from surrounding paved surfaces to filter through soil medium.

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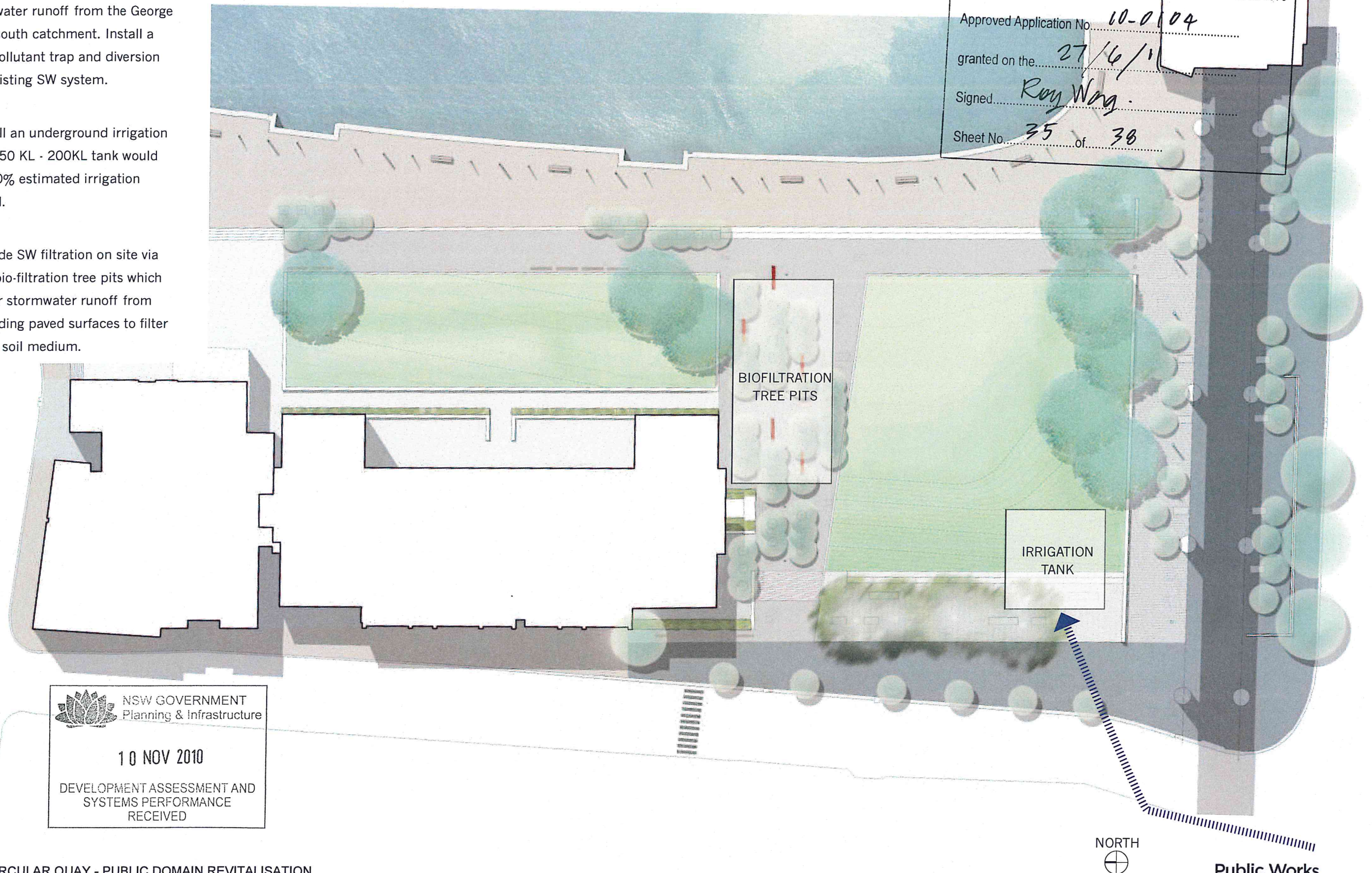
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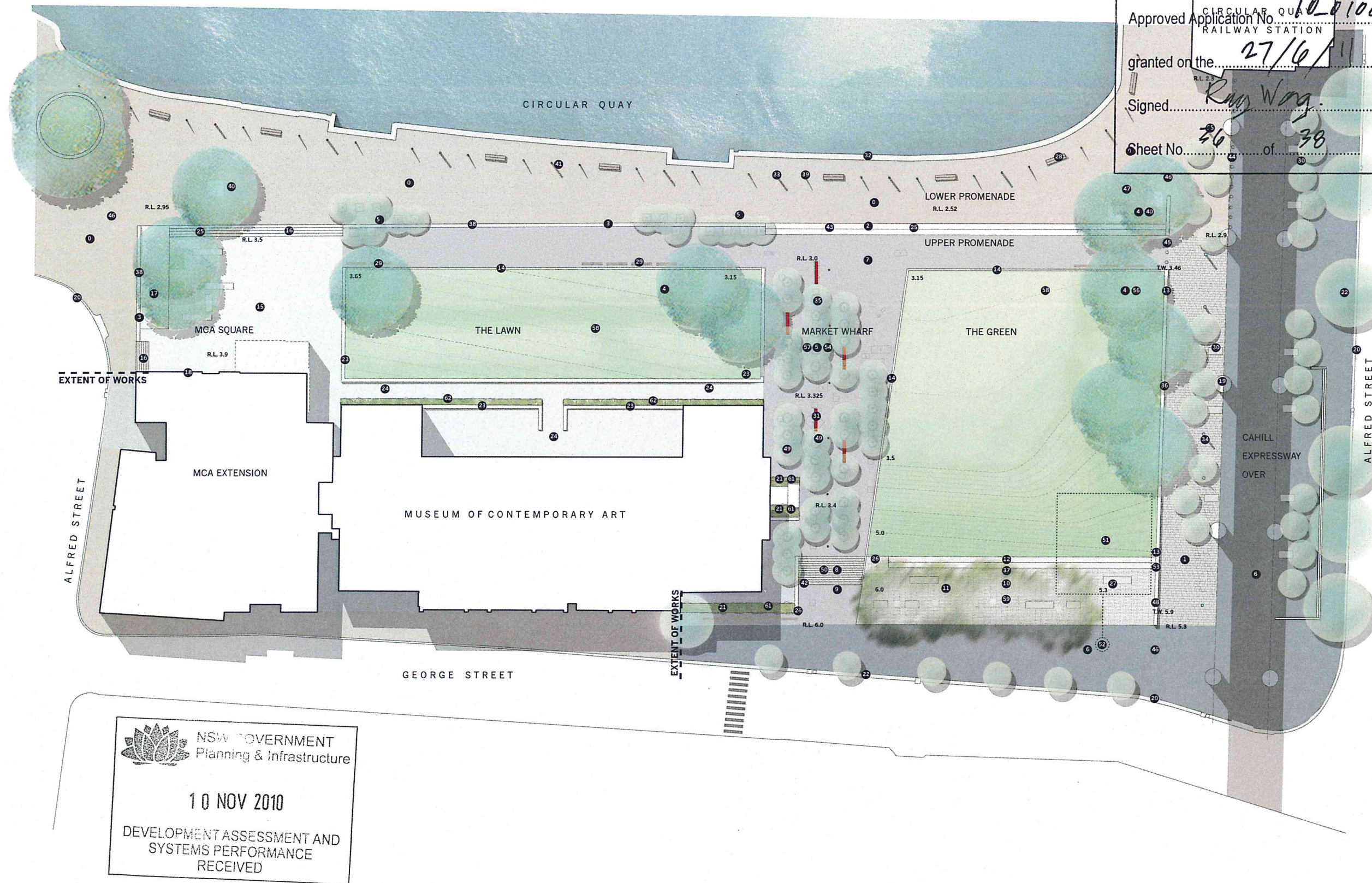
Signed **R. Wong**

Sheet No. **26** of **38**

KEY

Hardworks, Paving + walling

1. Replace existing brick paving to promenade and allow for minor regrading. Use matching brick salvaged from site to interface with new works.
2. Granite paving units 600,300 x 450mm Dark grey and light grey finish
3. Precast concrete steps 600mm wide tread x 150mm high riser - Off white
4. Precast concrete seat wall 900mm high, angled profile with backrest - class 2 finish - Off white
5. Custom cast iron tree grate to fig trees 3000mm square
6. Custom cast iron tree grate to Cabbage tree palms (Livistona australis) 1200mm square
7. Asphalt paving to City of Sydney standards
8. Granite sett paving 150 x 150 x 40mm units with infill service pit lids to match paving.
9. Access stair 310mm wide tread x 155mm high risers. Granite to tread and riser - dark grey
10. Tactile surface indicators - to top and bottom landing of stair.
11. Lookout: steel frame and piles with precast concrete planks 2000mm, 1000mm x 250mm x 175mm depth
12. Interpretive text and images integrated into lookout paving
13. Precast concrete steps 600mm wide tread x 155mm high riser in steel frame - Off white
14. In situ concrete wall - angled profile 450-900mm high, class 2 finish - off white
15. Edging to lawn areas. Precast concrete edging 450mm wide x 200mm high - off white Class 2 finish
16. MCA square. Precast concrete - off white with sandblasted finish
17. Precast concrete steps 310mm wide tread x 155mm high riser - off white
18. In situ concrete ramp. Tactile surface indicators at top and bottom landing of ramp
19. Interpretation by others
20. Existing concrete columns
21. Existing trachyte kerb and sandstone gutter to be retained
22. Existing garden bed to be retained
23. Existing street trees to be retained
24. In situ concrete wall maximum height 600mm
25. In situ concrete paving to MCA terrace and pathway.
- Furniture + Lighting**
26. Handrail to access stair - 1000mm high patinated brass finish
27. Balustrade to level change - 1000mm high mild steel plate and rods
28. Custom benches to lookout - Precast concrete 1100mm width x 4000mm + 2000mm lengths - off white Class 2 finish
29. Retain existing seating to Circular Quay promenade
30. Standard bench + backrest to upper promenade - 3 seats: timber slats + steel frame
31. Standard double sided bench + backrest under Cahill Expressway - 2 seats: timber slats + steel frame
32. Custom bench in Market Wharf - precast concrete 4000mm length, red glass paint finish
33. Existing balustrade to quay edge to be retained
34. Retain existing banner poles to Circular Quay promenade
35. New banner poles to match existing adjacent to Cahill Expressway
36. Column lighting to Market Wharf 6 m high
37. LED lighting integrated into wall
38. Lookout - compact fluorescent lighting to underside lookout platform and steps
39. Lighting - LED lighting integrated into seat wall
40. Retain existing column lighting along quay edge
41. In ground up lighting to Fig tree planting
42. Retain and relocate existing circular litter bins.
43. Handrail to access stair - 1000mm high patinated brass handrail fixed to balustrade
44. Handrail to low stair to quay - 1000mm high patinated brass
45. Relocate and reinstall retractable bollards
46. Install new bollards
- Signage**
47. Directional signage integrated into paving
48. Information sign to SHFA standard - bronze and brass blade 2000mm height
49. Park signage element integrated into walling
- Services**
50. New sewer outlet vent 6 m high
51. Sewer air intake integrated under steps
52. Irrigation tank under lawn 150KL
53. New GPT system to filter SW runoff from George Street
54. Irrigation system using recycled and filtered stormwater to lawn areas and fig tree planting
55. Modification to pit lid levels in Market Wharf
56. NSW Maritime Booster Valve endorsed
- Trees and planting**
57. 8 x super advanced (1000ltr+) Figs (Ficus rubiginosa) in lawn
58. Relocate 20 x Cabbage tree palms (Livistona australis) and supplementary planting of 400L Cabbage tree palms
59. New lawn areas
60. Under prune 4 x existing Peppercom trees (Schinus areira)
61. Remove 4 x existing Peppercom trees (Schinus areira)
62. New shade tolerant shrub planting in garden bed
63. New mass planting




Cahill Expressway undercroft

Proposal for mass planting bed

- 1 Planting bed with steel edge surround
8m width x 64m length
Species:

<i>Aspidistra elatior</i>	Cast Iron Plant
<i>Arthropodium cirratum</i>	NZ Rock Lily
<i>Billbergia nutans</i>	Queen's tears
<i>Elettaria cardamomum</i>	Cardamom
- 2 Crossing point aligned with pedestrian crossing
Precast concrete steps 310mm width x 155 mm height off white sandblast finish
In situ concrete path
- 3 Palm trees relocated north of Cahill expressway with shaded seating



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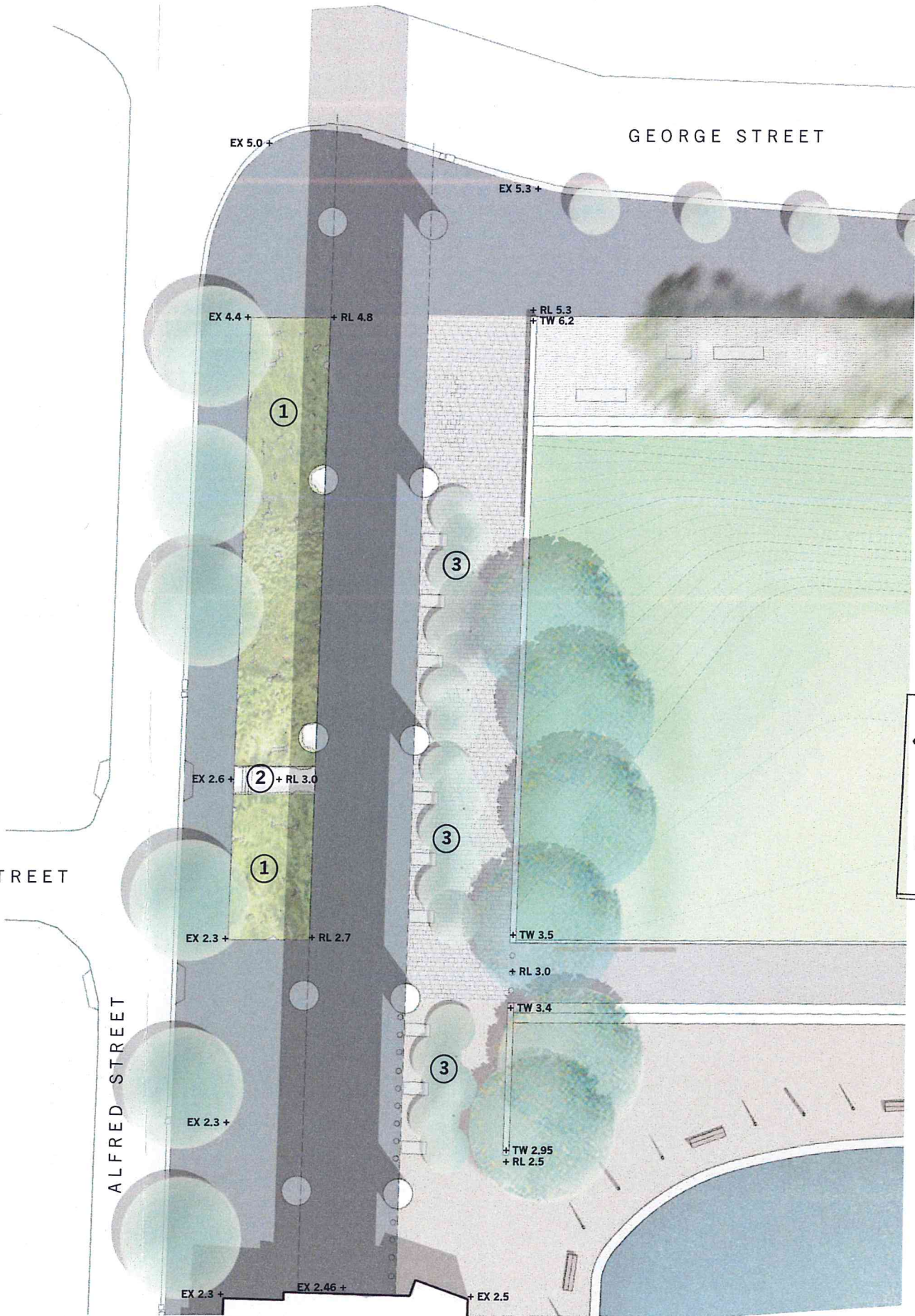
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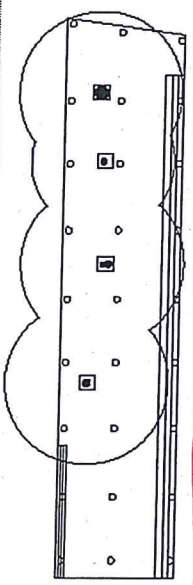
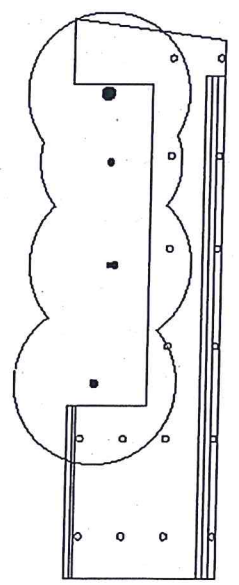
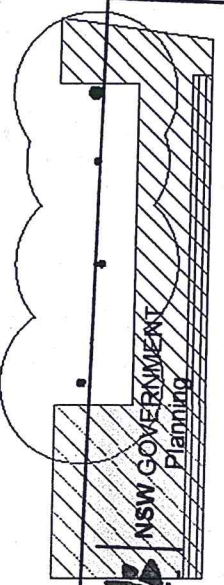

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* REFER TO CONDITION A6 REGARDING OPTION 2

Lookout platform redesign: Summary of options and impacts

	DESIGN/STRUCTURAL IMPACTS	ARCHAEOLOGICAL IMPACTS
<div>OPTION 1</div> <div>Reduced pier footings</div> <div></div>	<ul style="list-style-type: none">• Raised deck level• Post tensioned concrete beams span greater distance• Reduced number of pier footings• Structure founded on sandstone minimising differential settlement	<ul style="list-style-type: none">• Impact of 9 piers under trees cannot be mitigated• Extensive open area excavation required for all other piers
<div>OPTION 2</div> <div>Pier footings only in areas that can be tested</div> <div></div>	<ul style="list-style-type: none">• Raised deck level• Planting bed over structural root zone• Post tensioned concrete beams span greater distance• Reduced number of pier footings• Structure founded on sandstone minimising differential settlement	<ul style="list-style-type: none">• Extensive open area excavation required
<div>OPTION 3</div> <div>Slab on fill base</div> <div></div>	<ul style="list-style-type: none">• Slope of ground and variable depth of fill requires two different foundation systems• Compacted subgrade and base slab in southern section (yellow)• Blockwork support and secondary slab required in northern section to match level at George St• Differential settlement difficult to manage• Expensive structural solution	<ul style="list-style-type: none">• Open area excavation required for southern half of platform• Compaction of subgrade may impact archaeology
<div>OPTION 4</div> <div>Slab on fill Remove trees</div> <div></div>	<ul style="list-style-type: none">• Negative public perception regarding removal of trees• Negotiation with City of Sydney• Need for shade - new trees or custom structure	<div>NSW GOVERNMENT Positive public perception regarding protection of archaeology Compaction of subgrade may impact archaeology</div> <div>DEVELOPMENT ASSESSMENT AND SYSTEMS PERFORMANCE RECEIVED</div>
<div>Note:</div> <ul style="list-style-type: none">• Stormwater tank and diversionary area testing and excavation in all options		

West Circular Quay Public Domain Upgrade Options considered for Lookout design 8 April 2011 01