



CLOUSTON associates



CLIENT : PELLICANO GROUP
387-403 Macquarie St, Liverpool
Development Application - Landscape Design
S15-0101 Issue 03 06/10/15



387-403 MACQUARIE ST, LIVERPOOL

DEVELOPMENT APPLICATION - LANDSCAPE DESIGN

Client:
Pellicano Group

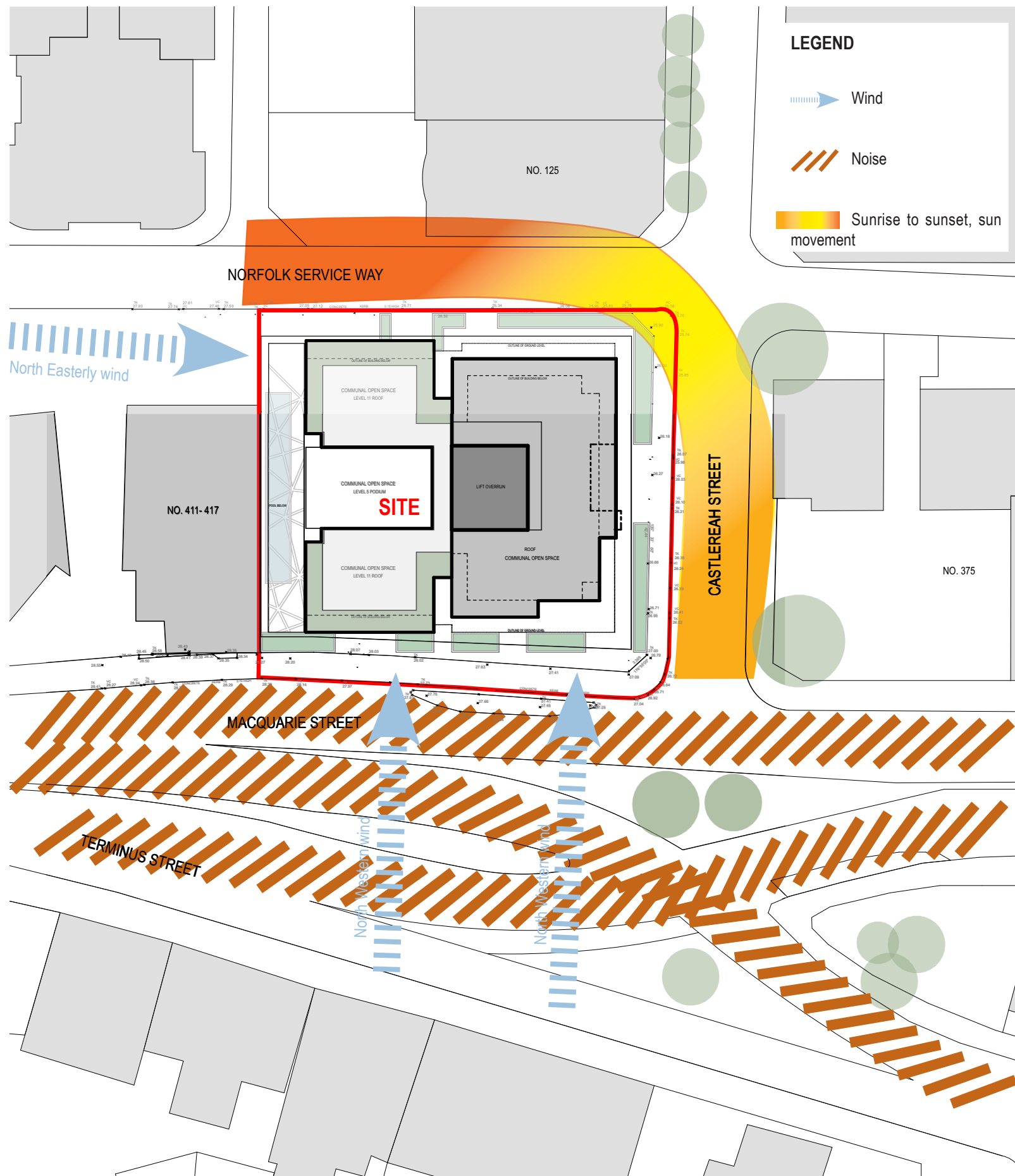
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INTRODUCTION

The project comprises a 23 level mixed-use development. The landscape design for the project addresses streetscape and building forecourt at street level and a series of landscape spaces at Levels 1, 2, 4, 11 and 23.

SITE ANALYSIS

Street Frontage

Macquarie Street and Terminus Street are busy traffic areas and consequently the site receives most road noise from the south and east. The road and paving widths, and the surrounding single storey building heights, mean that each street around the site receives ample sunlight during the day. In the Liverpool area the predominant winds come from the North East and the North West.

Level 1

Level 1 receives limited light through the central building void. Little light enters from the South West, and an area of the space receives no natural light at all due to the overhang of the pool on Level 2. Level 1 is visible from 11 stories of the building. Prevailing winds may influence the landscape below.

Level 2 Pool

This area receives light principally from the west and southwest, from a double storey open elevation. It affords views to the west and southwest.

Level 4

This area receives some natural light and will offer filtered views to the southwest.

Level 11 Roofs

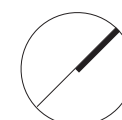
These spaces overlook the Level 1 landscape area and also look out over the wider neighbourhood to the South. They receive natural light, though they will be in the shadow of the Northern wing of the building. During winter the sun will cast less light over this landscape area. North Easterly and North Westerly winds will be the predominant wind directions at this level.

Level 23 Rooftop

This rooftop will receive ample sun. It has 360 views of the context and wider city around. Glass walls around its perimeter will provide some shelter from the prevailing winds.



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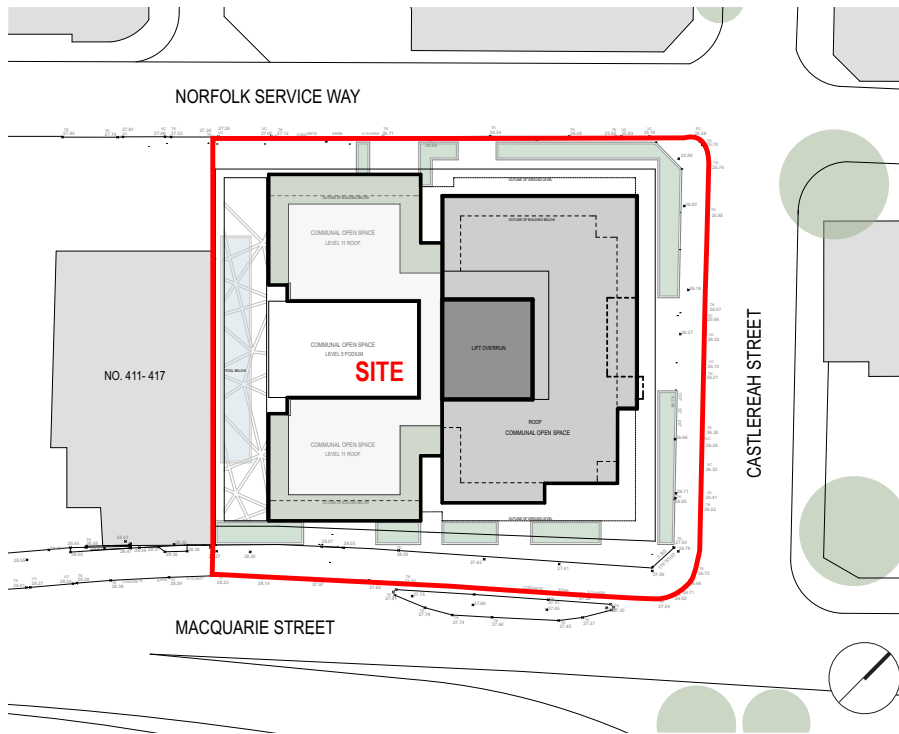


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SITE AND SITE CONTEXT

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LANDSCAPE OVERVIEW

Existing site and context

The site is located at the southern end of Macquarie Street in the suburb of Liverpool where it joins with Castlereagh St. The site runs in a northeast southwest direction and slopes down to the North. The site measures approximately 51m by 45m and is predominately level with the surrounding streetscape. It is currently occupied by single story commerce building and open parking. There are no trees on site. There are currently 2 vehicular access points to the site, one from Norfolk Service Way and one from Castlereagh Street.

Design Principles

- Improve visual presentation of the street frontage by applying a simple landscape treatment.
- Provide clear access points to building entrances.
- Establish clear lines of sight between the road and the ground floor commercial floor space.
- Provide landscaped terraces to the street frontages of the building
- Where possible use landscape to mitigate the effects of wind.
- Provide a roof garden environment that can be used by residents for informal relaxation and social interaction.

LANDSCAPE ZONES

The character and function of the landscape can be described in 6 distinct zones (refer to page DA 16 and DA 17 for character images):

Street Frontage

The landscape design capitalises on the street setback to provide an attractive frontage to the two surrounding Streets and Norfolk Service Way.

The design follows the principles set out in the CBD Streetscape and Paving Guidelines 2005, and aims to shelter pedestrians from the busy traffic along Macquarie Street. The raised beds and screens provide additional noise and wind protection.

Level 1

This communal open space is an important resource offering a restful space in the heart of the building.

The geometry and patterning of pots, pathways and planting present an interesting canvas of textures, shapes and colours that are engaging at ground level and from the upper 11 levels when viewed from above.

The large, architectural pots add playful colour to the rainforest style planting, as striking vertical elements against the mix of lush, dark greens that will handle the relatively shady environment of this space.

Lighting activates the planting and structures with different patterns and forms being highlighted.

Level 2 (Pool Deck)

The key landscape elements of the pool space draw principally on contemporary and comfortable furniture for users of the pool deck varying from fabric covered seats to loungers and benches.

The two planters marking the entries and exit ways provide for feature trees.

Level 4 (Balcony Terrace)

This is a space for quiet relaxation. This balcony area is enriched with lightweight colourful planters filled with succulents with social seating opportunities to look out over the neighbourhood.

Level 11 (Roofs)

Both contemplative and social scenes are catered for within this green oasis. The 11th story spaces provide a relaxing setting for building inhabitants to enjoy their piece of the outdoors in a setting that offers views back into the internal void space and across Liverpool to the west.

Sculptural seating elements give structure to the planting and sequence of resting spaces.

Strips of planting provide a range of textures to please the eye and calm the senses. Trees offer shade spaces to the small seating courts and add seasonal interest.

Viewing areas are provided to take in the wider neighbourhood and enjoy the view of the planting on Level 1.



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Level 23 (Rooftop)

The roof level face Northeast and consequently receives sunlight which makes it an ideal place for residents to get active in gardening, have a BBQ, entertain, or simply lounge in the sun.

Communal garden beds offer residents the ability to grow their own herbs and vegetables and this facility is complemented by a storage space.

Users are greeted by an open lawn upon arrival, which extends into two deck areas available for sun lounging or entertaining.

In the South West corner, a BBQ and kitchenette area adjoin seating and tables under umbrellas creating a space suitable for outdoor eating.

LANDSCAPE ELEMENTS

Planting

The planting provides an attractive setting for social surrounds, clear sightlines to external views, and requires minimal maintenance requirements.

A mix of native and non-native species have been used to best effect. Planting on podium areas and within raised planters has been selected to ensure its suitability for this environment. An indicative species list in provided on DA 20. Streetscape species have been selected from the Liverpool CBD Streetscape and Paving Guidelines.

All areas of planting on podium deck will be irrigated and drained.

Hard Materials

Paving materials will be selected for attractiveness, durability and ease of maintenance. All paving will utilise unit pavers or large format tiles.

Timber decking has been selected in certain location to give a greater sense of warmth and soften textures.

Furniture

Fixed furniture such as seating will be provided on Levels 1 and 11, while unfixed resort-style loungers and seats will be provided on Levels 2, 4 and Rooftop.

Access

All spaces are universally accessible at ground floor to the commercial units from Macquarie Street, Castlereagh Street and Norfolk Service Way.

The main entry point for residents is a central access point off Castlereagh Street.

Cars enter and exit the site from Norfolk Street.

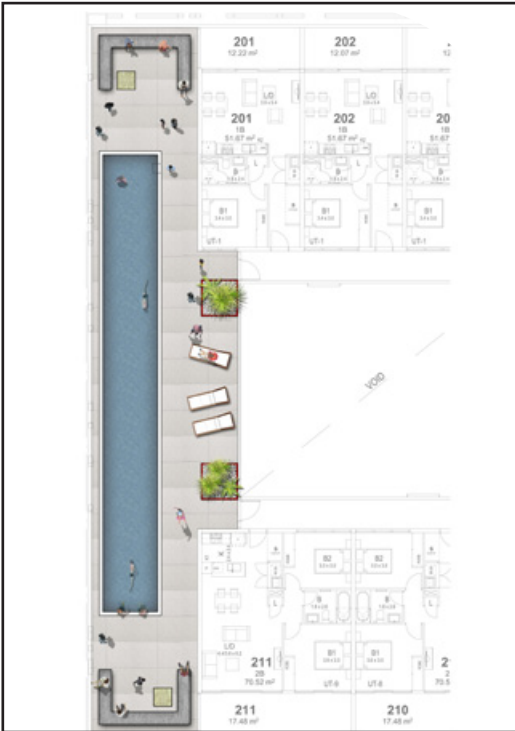
KEY PLANS
NTS



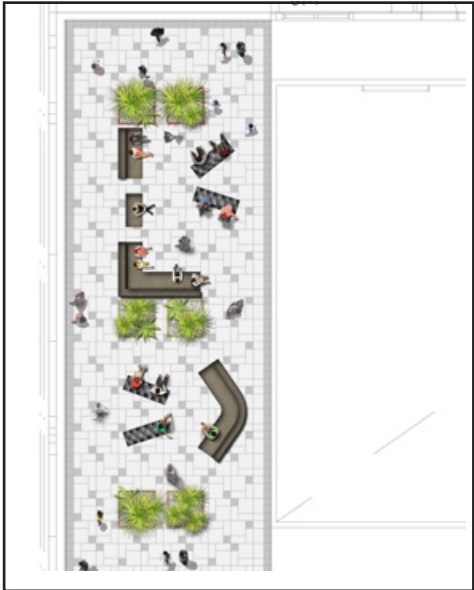
STREETSCAPE



LEVEL 1



LEVEL 2 - POOL



LEVEL 4



LEVEL 11



LEVEL 23 - ROOFTOP



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DESIGN INTENT STATEMENTS

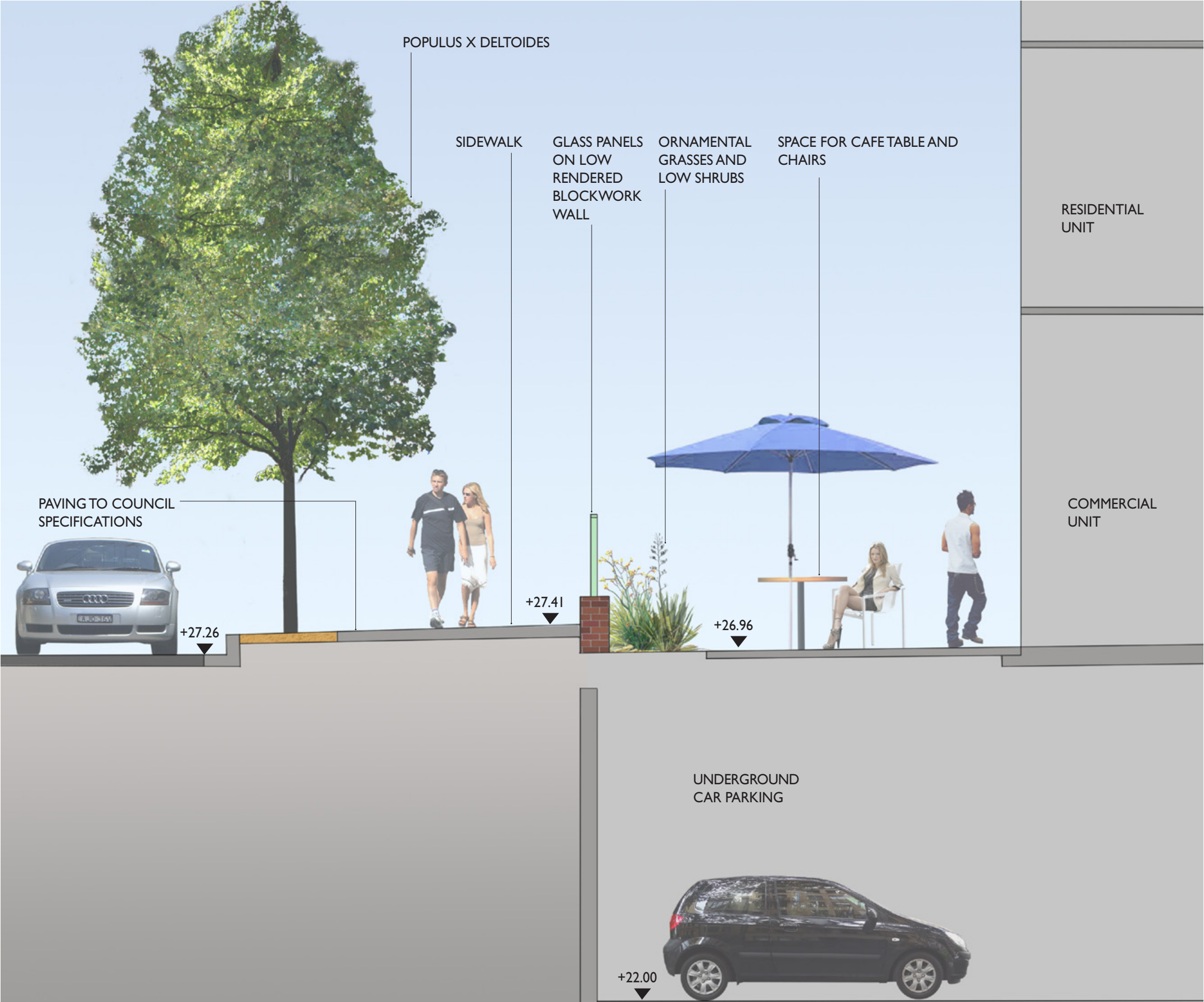
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PLAN





SECTION LOCATION PLAN



Section A-A - Building Frontage



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1:50 @A3



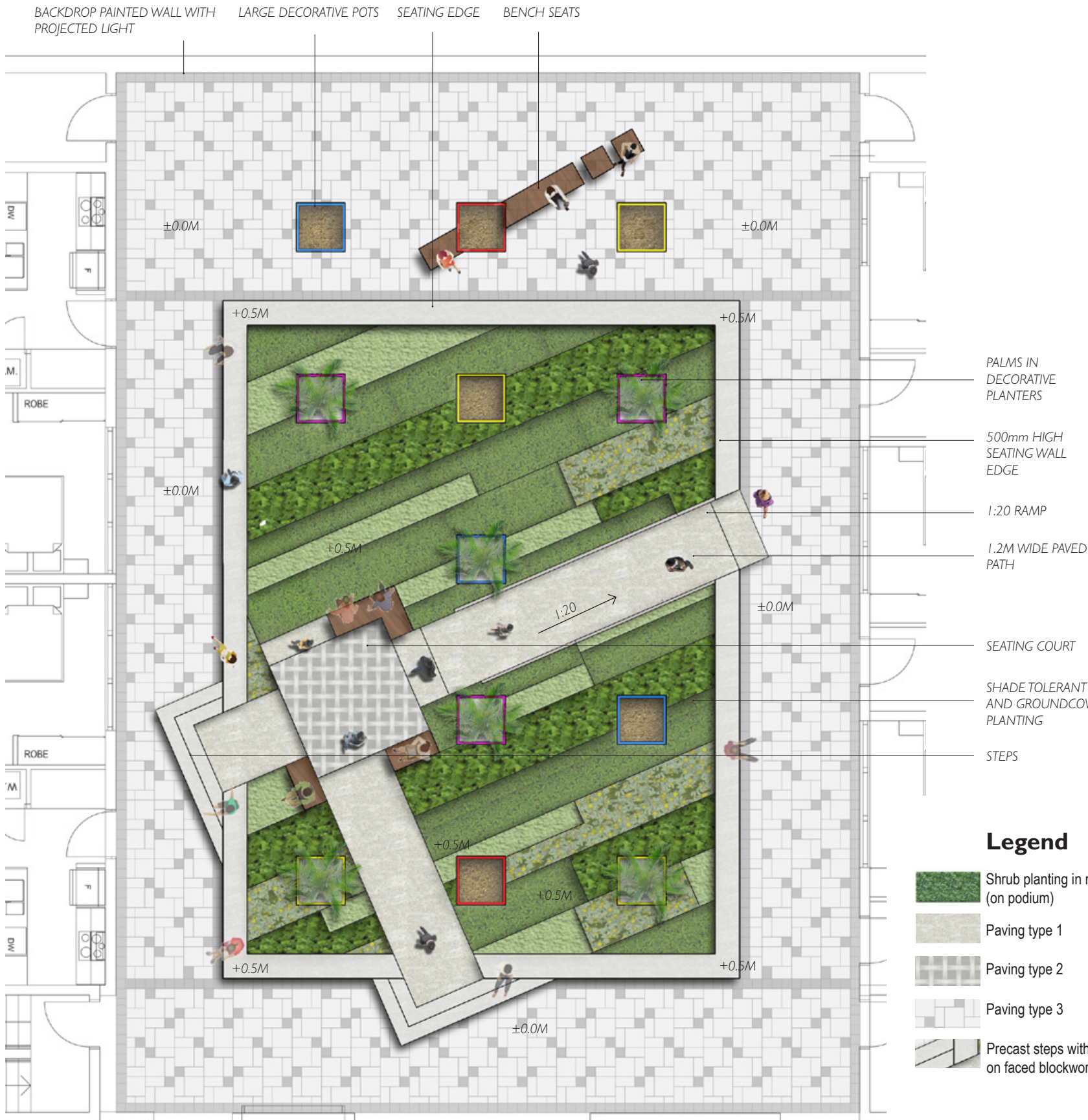
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LANDSCAPE SECTION - STREETFRONT

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PLAN



CHARACTER IMAGES



Zamia furfuracea
CARDBOARD PALM



Concrete Camber seats



Paving type 1,2 and 3
Urban Stone ANZ Docklands Range



In situ concrete steps and seating edge



Coloured ceramic pot



Liriope muscari
BIG BLUE LILYTURF



Allium nutans
SIBERIAN CHIVES



Client:
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1:100 @A3



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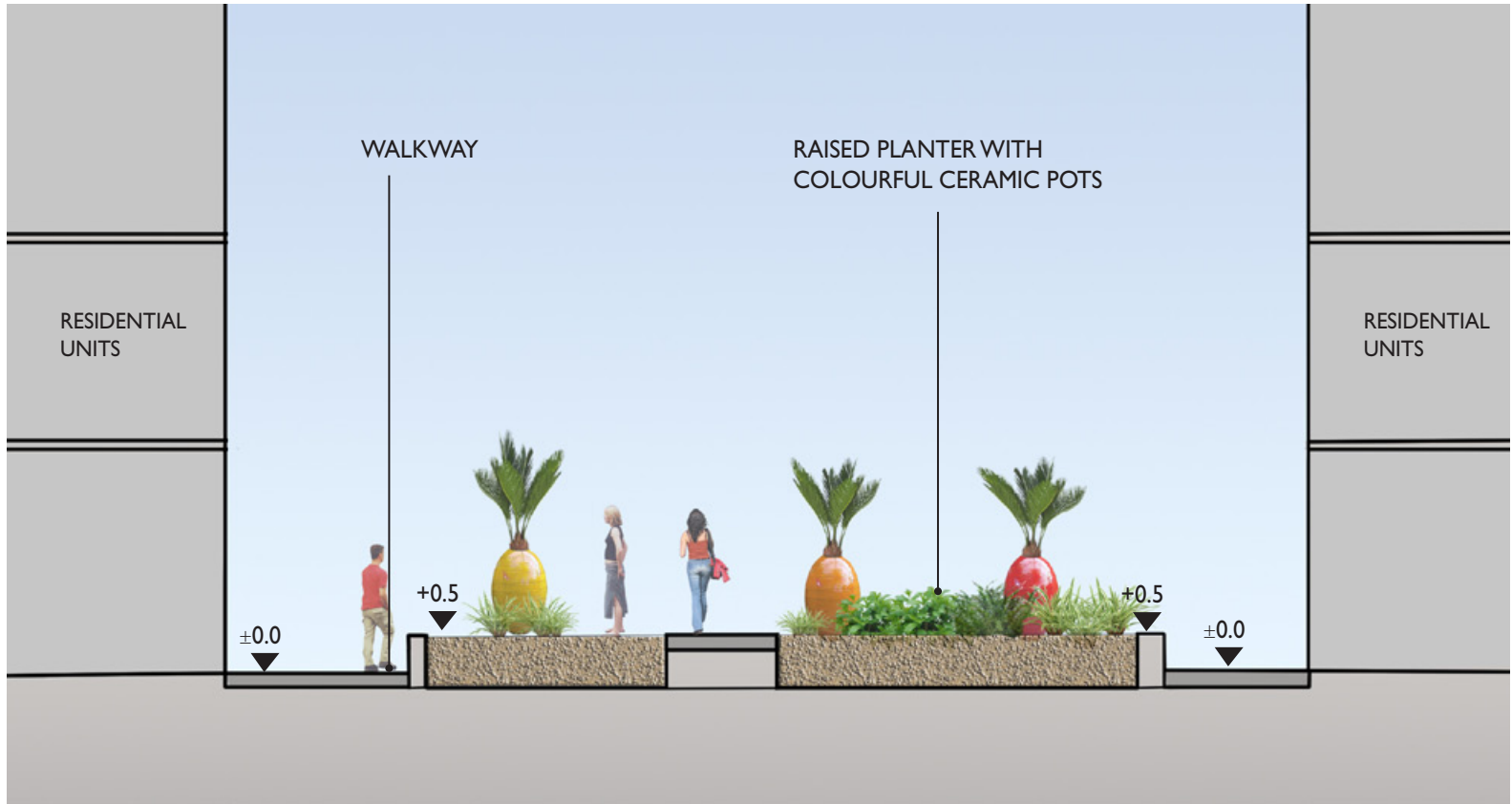
LANDSCAPE PLAN - LEVEL I

S15-0101 DA

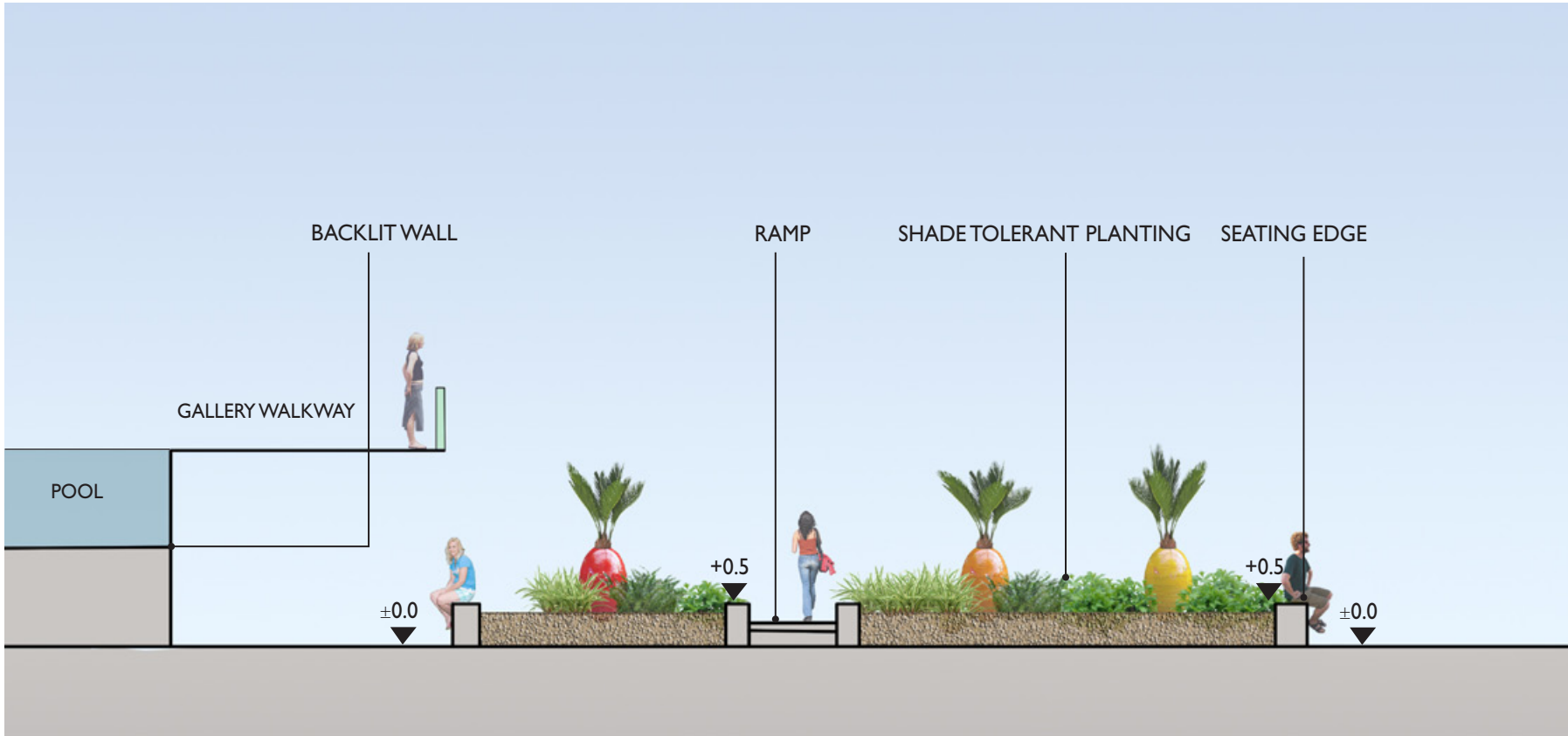
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SECTION LOCATION PLAN



Section A-A - Entry Court



Section B-B - Views from apartments



Client:
Pellicano Group

1:100 @A3



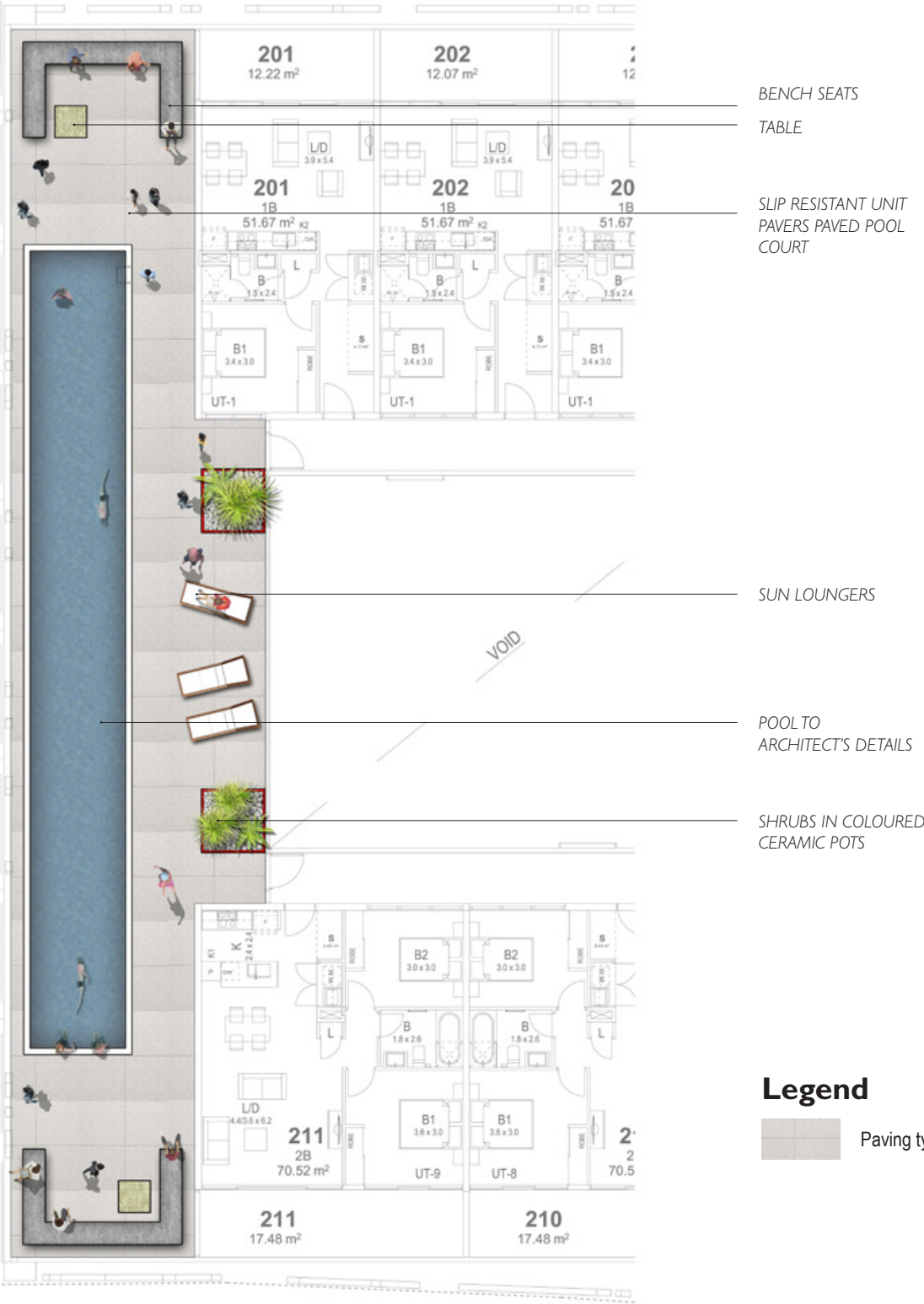
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LANDSCAPE SECTIONS - LEVEL 1

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PLAN



CHARACTER IMAGES



Senecio rowleyanus
STRING OF PEARLS



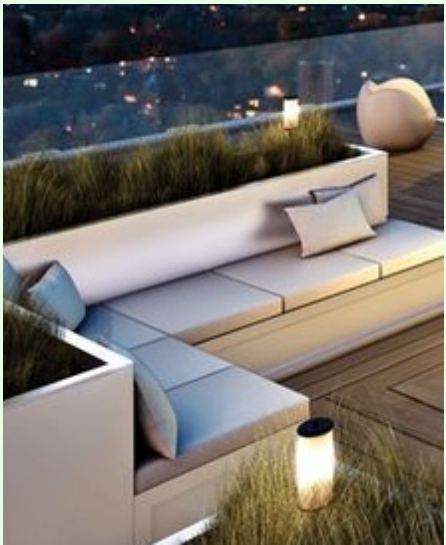
Sedum album



Agave americana
CENTURY PLANT



Feature sun lounger



Bench seats and tables suite



Paving type 4 - 'Urban Stone - Cable Beach Range'



Coloured ceramic pot



Client:
Pellicano Group

1:100 @A3

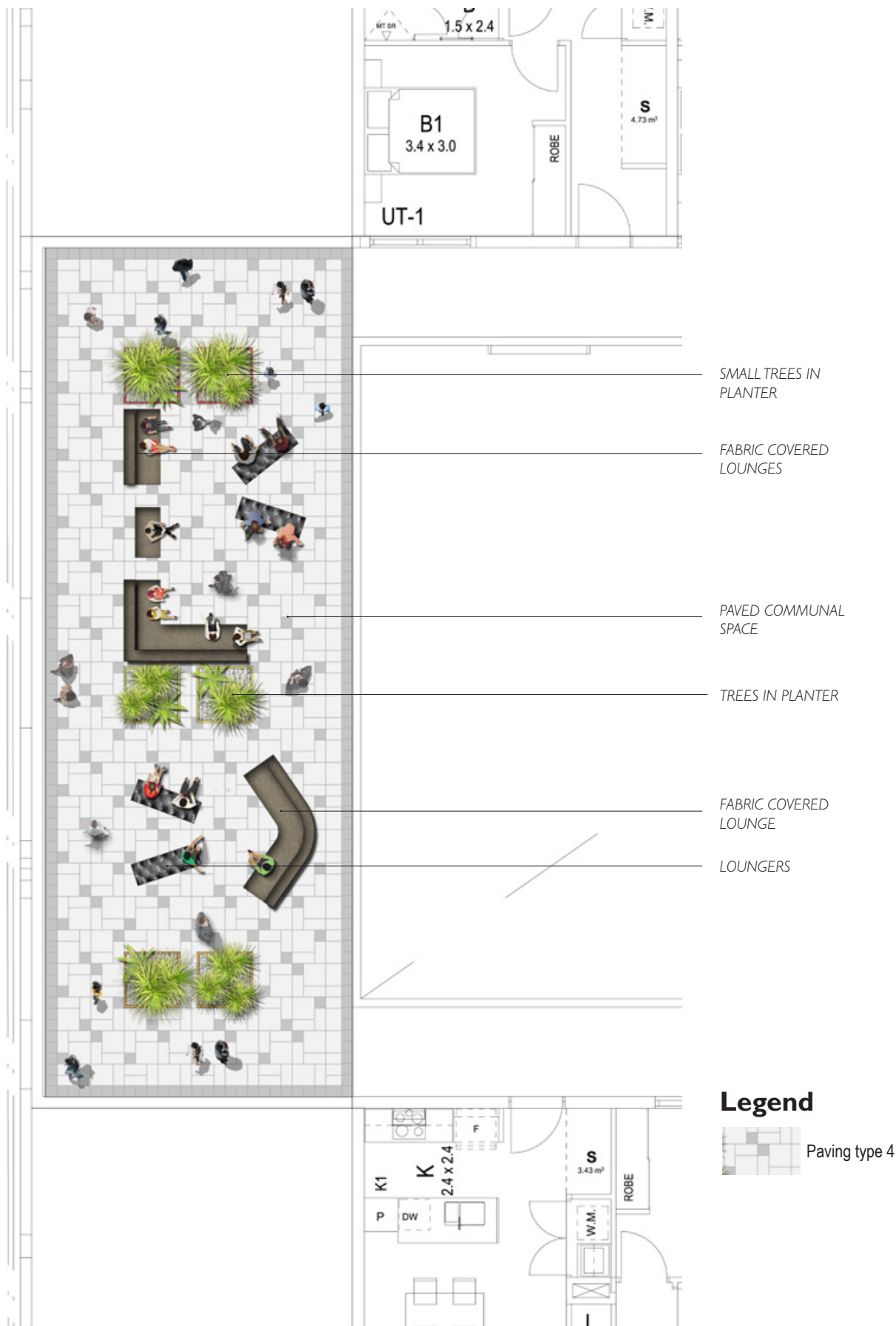


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LANDSCAPE PLAN - LEVEL 2

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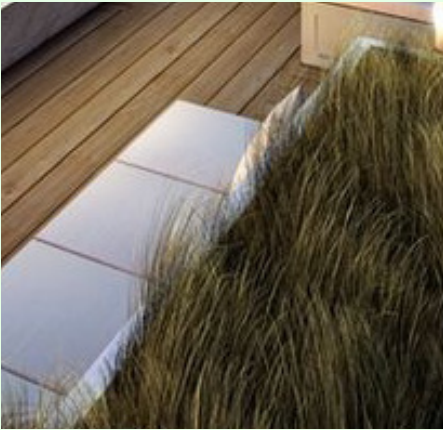
06/10/15 FINAL



CHARACTER IMAGES



Senecio rowleyanus
STRING OF PEARLS



Bench seats and tables suite



Paving type 4 - 'Urban Stone - Cable Beach Range'



Sedum morganianum
DONKEY'S TAIL



Coloured ceramic pot



Kalanchoe thyrsiflora
PADDLE PLANT



Client:
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1:100 @A3



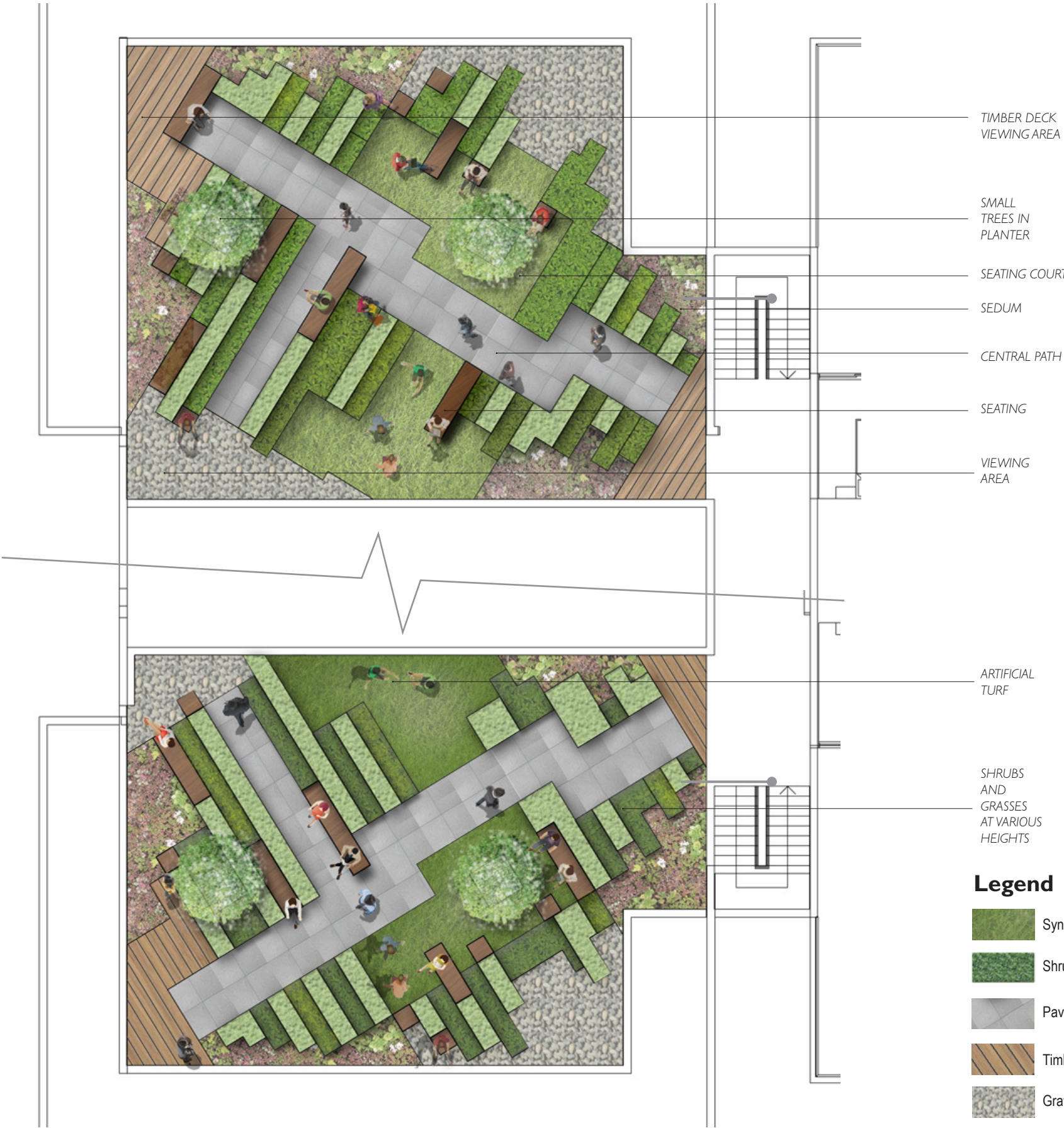
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LANDSCAPE PLAN - LEVEL 4

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PLAN



CHARACTER IMAGES



Planting strips and seats



Paving type 1 - Urban Stone ANZ Docklands Range



Sedum on green roof



Coloured ceramic pot



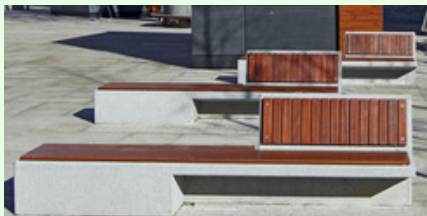
Lagerstroemia indica 'Biloxi' CREPE MYRTLE



Super grey pebbles (Supplier: Menai Sand & Soil)



DECKER composite decking - Slip resistant (Supplier: DECKER Engineered Wood)



Concrete Camber seats



Client:
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1:100 @A3

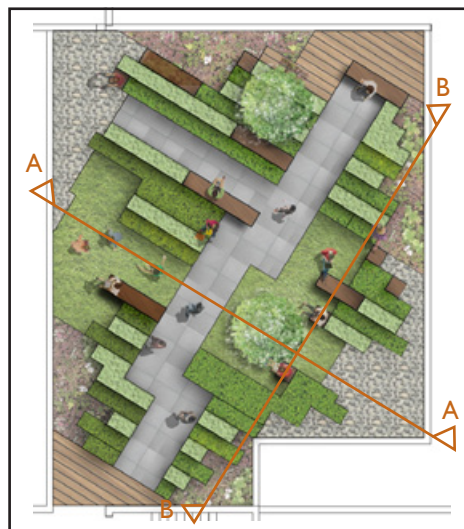


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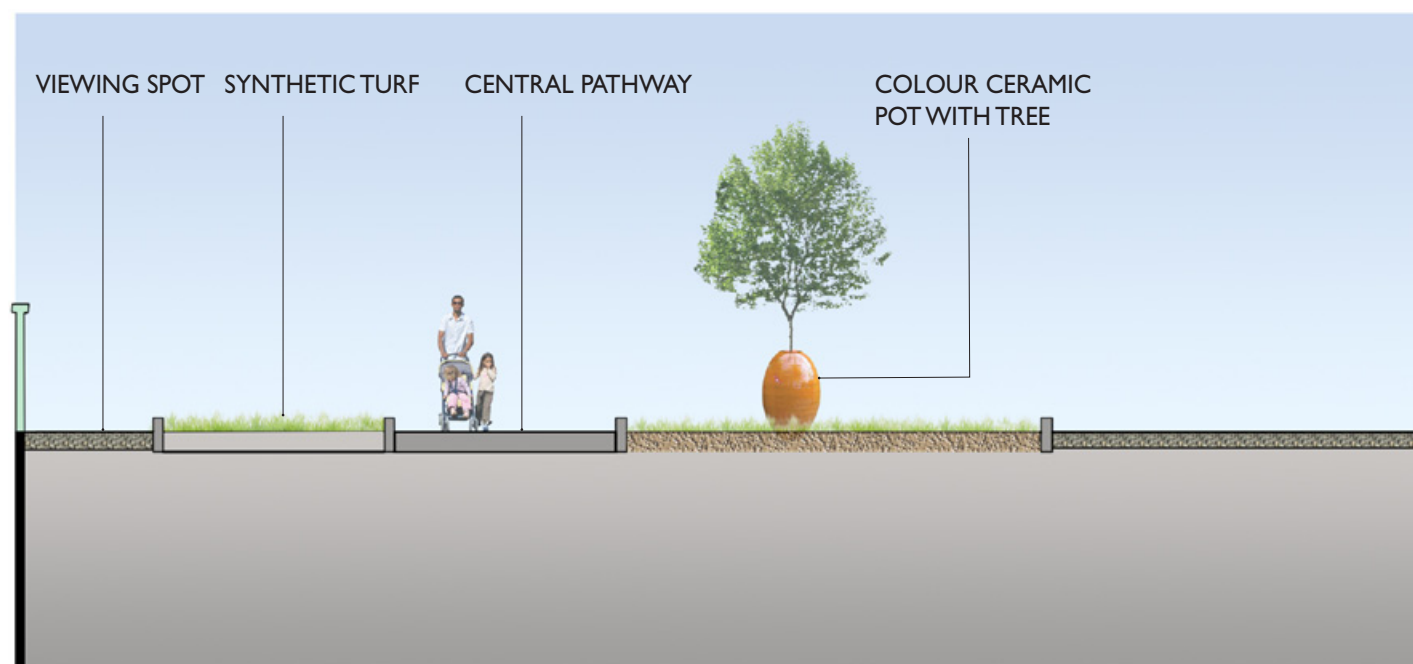
LANDSCAPE PLAN - LEVEL 11

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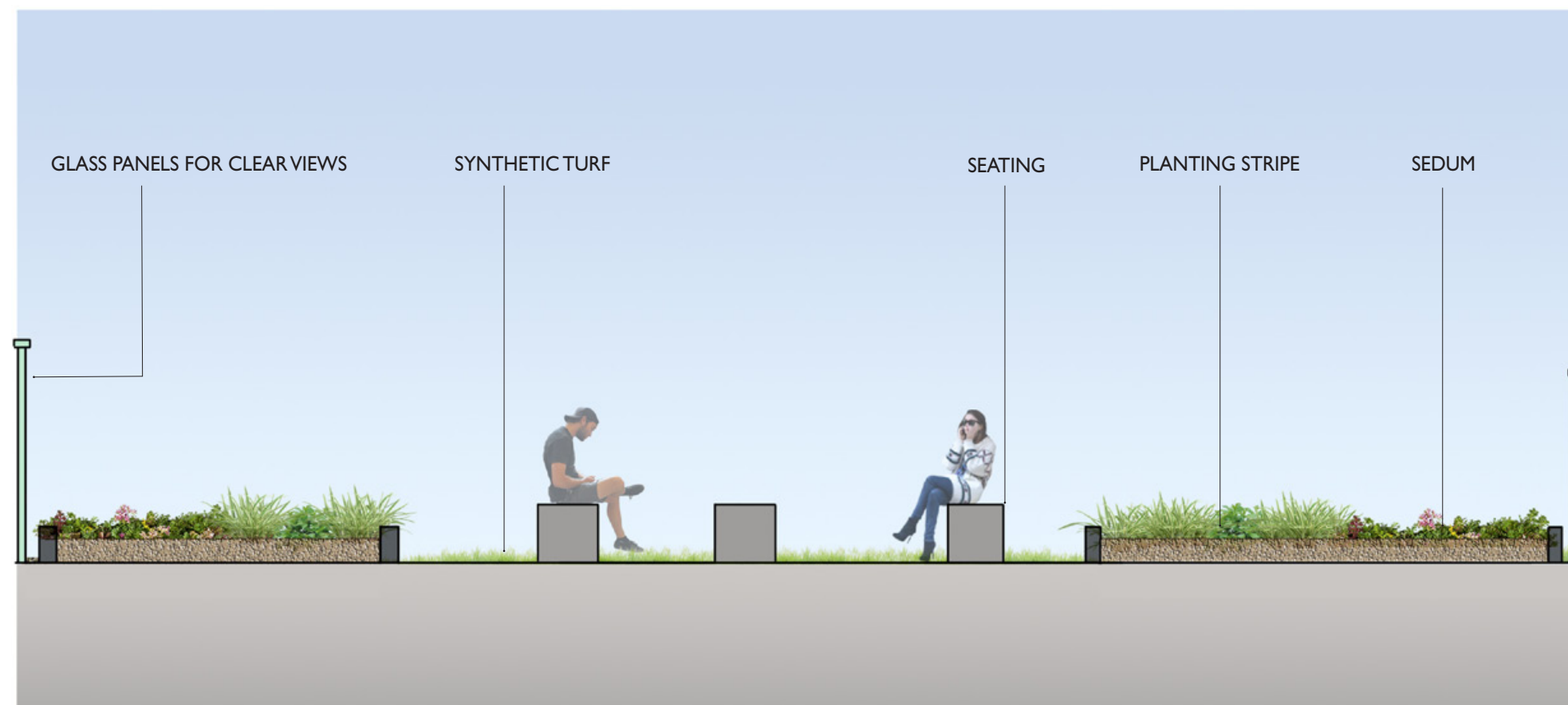
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SECTION LOCATION PLAN



Section A-A - Seating area
1:100 @A3



Section B - Seating area
1:50 @A3



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Scale As Shown @A3

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LANDSCAPE SECTIONS - LEVEL 11 ROOF

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PLAN



Legend

- Synthetic turf
- Shrub planting
- Paving 1 and 2
- Timber decking
- Low hedge

CHARACTER IMAGES



Roof garden BBQ



Featured loungers



Banksia 'Birthday Candles'
PROSTRATE BANKSIA



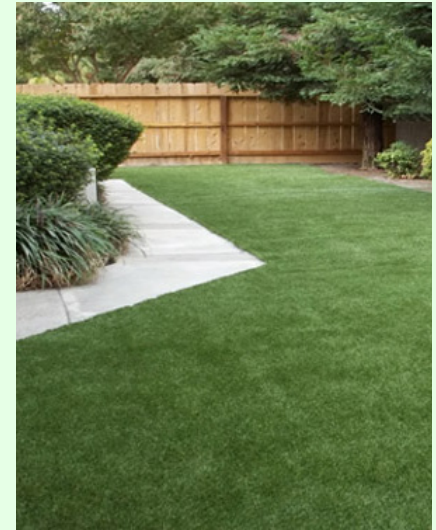
Featured planter in steel



DECKER composite decking - Slip resistant (Supplier: DECKER Engineered Wood)



Roof garden table and chairs with sun umbrella



Synthetic turf
(Supplier: Newturf)



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1:150 @A3

0 1.5 3 4.5 6 7.5 15m



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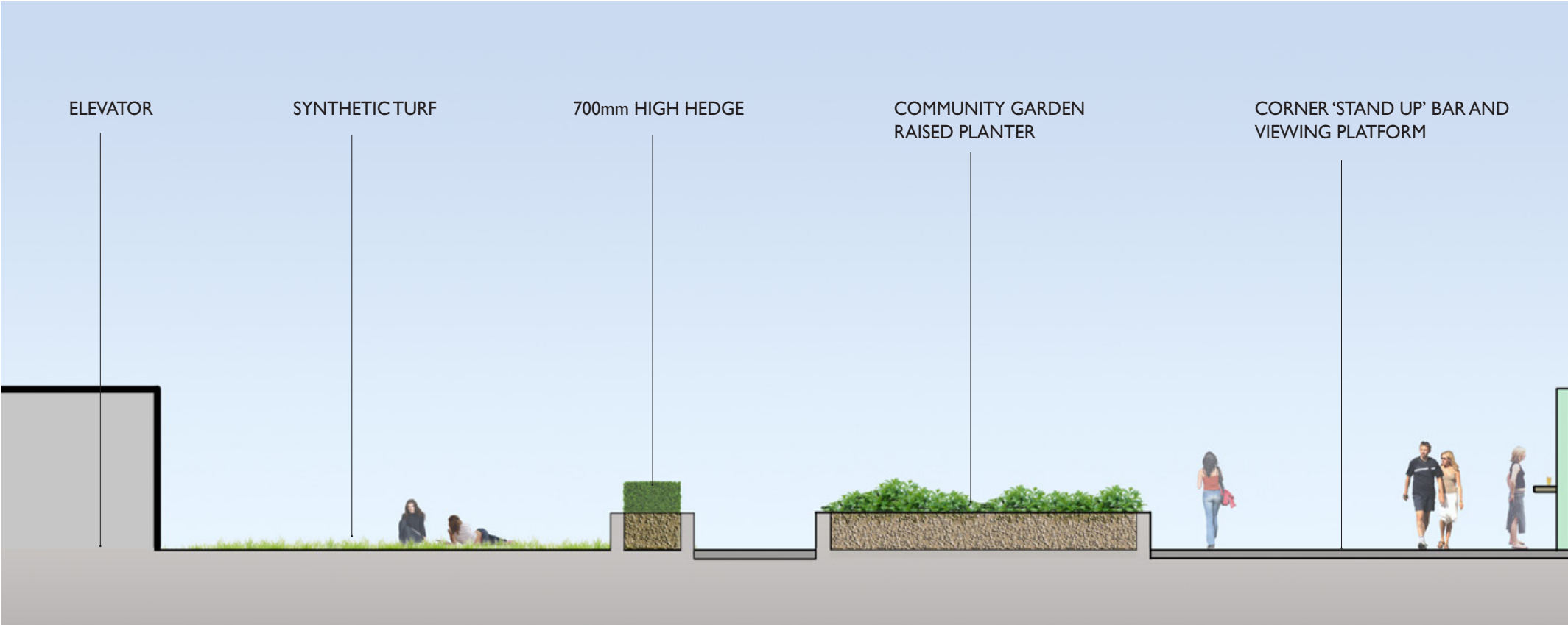
LANDSCAPE PLAN - ROOF TOP

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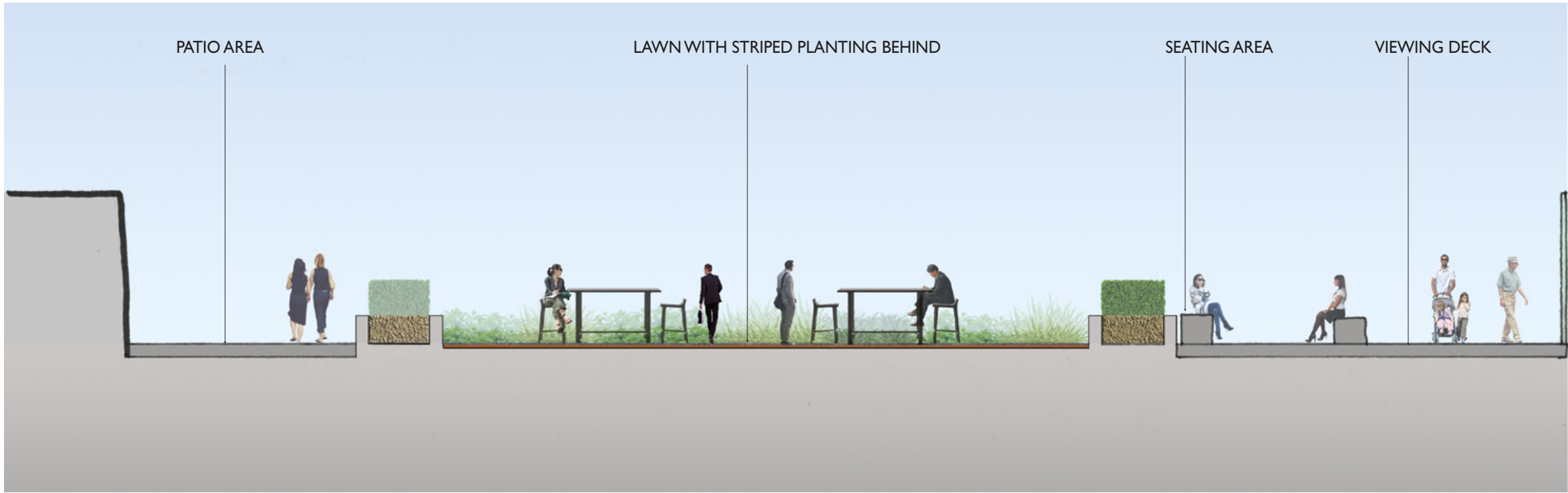
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SECTION LOCATION PLAN



Section A-A - Lawn and community gardens,
1:100 @A3



Section B-B - Seating deck and viewing area
1:100 @A3



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1:100 @A3



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LANDSCAPE SECTIONS - ROOF TOP

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INDICATIVE PLANTING PALETTE

STREETSCAPE



Magnolia grandiflora 'Exmouth' BULL BAY MAGNOLIA
Populus x deltoides POPLAR



Blechnum spicant DEER FERN



Dietes Iridoides BUTTERFLY GRASS DIETES



Allium nutans SIBERIAN CHIVES
Lomandra longifolia 'Tanika' TANIKA

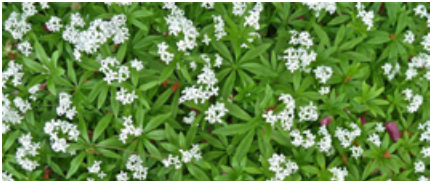
LEVEL 1



zamia furfuracea CARDBOARD PALM



liriope muscari BIG BLUE LILYTURF



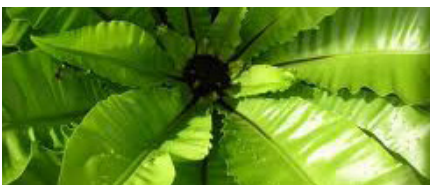
Galium odoratum SWEET WOODRUFF



Juniperus communis 'Green Carpet' GREEN CARPET JUNIPER



Microsorium diversifolium KANGAROO PAW FERN
Nephrolepis exaltata BOSTON FERN



Asplenium nidus BIRD'S NEST FERN

LEVEL 2 - POOL



Senecio rowleyanus STRING OF PEARLS



Sedum albiflora



Agave americana CENTURY PLANT

LEVEL 4



Kalanchoe thyrsiflora PADDLE PLANT



Sedum morganianum DONKEY'S TAIL



Senecio rowleyanus STRING OF PEARLS

LEVEL 11 AND ROOFTOP GARDEN



Lagerstroemia indica 'Biloxi' CREPE MYRTLE



Philotheca myoporoides LONG-LEAVE WAXFLOWER HEDGE



Banksia 'Birthday Candles' PROSTRATE BANKSIA



Allium nutans SIBERIAN CHIVES



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PLANT SCHEDULE

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INDICATIVE MATERIAL PALETTE

STREETSCAPE



Modern outdoor cafe tables and chairs



Glass panel



Paving type 1 and 2
Urban Stone ANZ Docklands Range

LEVEL 1



Concrete Camber seats

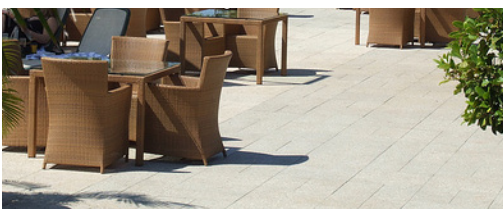


Paving type 1, 2 and 3
Urban Stone ANZ Docklands Range



Cast in concrete steps and seating edge
coping on rendered brickwork planter walls

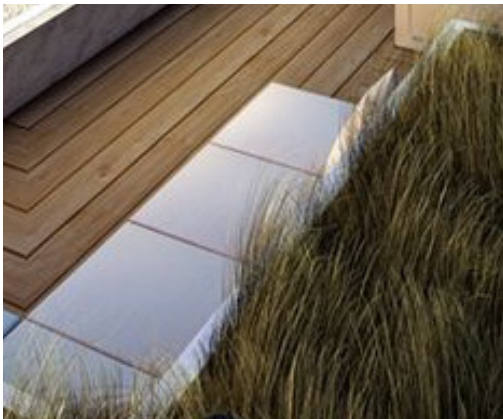
POOL & LEVEL 4



Paving type 4 - Light grey and Bone
Urban Stone - Cable Beach Range



Fabric covered Lounger



Bench seats and tables suite



Coloured ceramic pot

LEVEL 1 | ROOFTOP GARDENS



Raised timber seating deck and entertainment deck



Concrete Camber seats



Paving 1 and 2
Urban Stone ANZ Docklands Range



Super grey pebbles
(Supplier: Menai Sand & Soil)



Coloured ceramic pot



Shrubs and grasses at various heights with raised seating

ROOFTOP GARDEN



Roof garden BBQ



Roof garden table and chairs with sun umbrella



Featured loungers



Featured planter



DECKER composite decking - Slip resistant (Supplier:
DECKER Engineered Wood)



LANDSCAPE ARCHITECTS • URBAN DESIGNERS • LANDSCAPE PLANNERS

Client:
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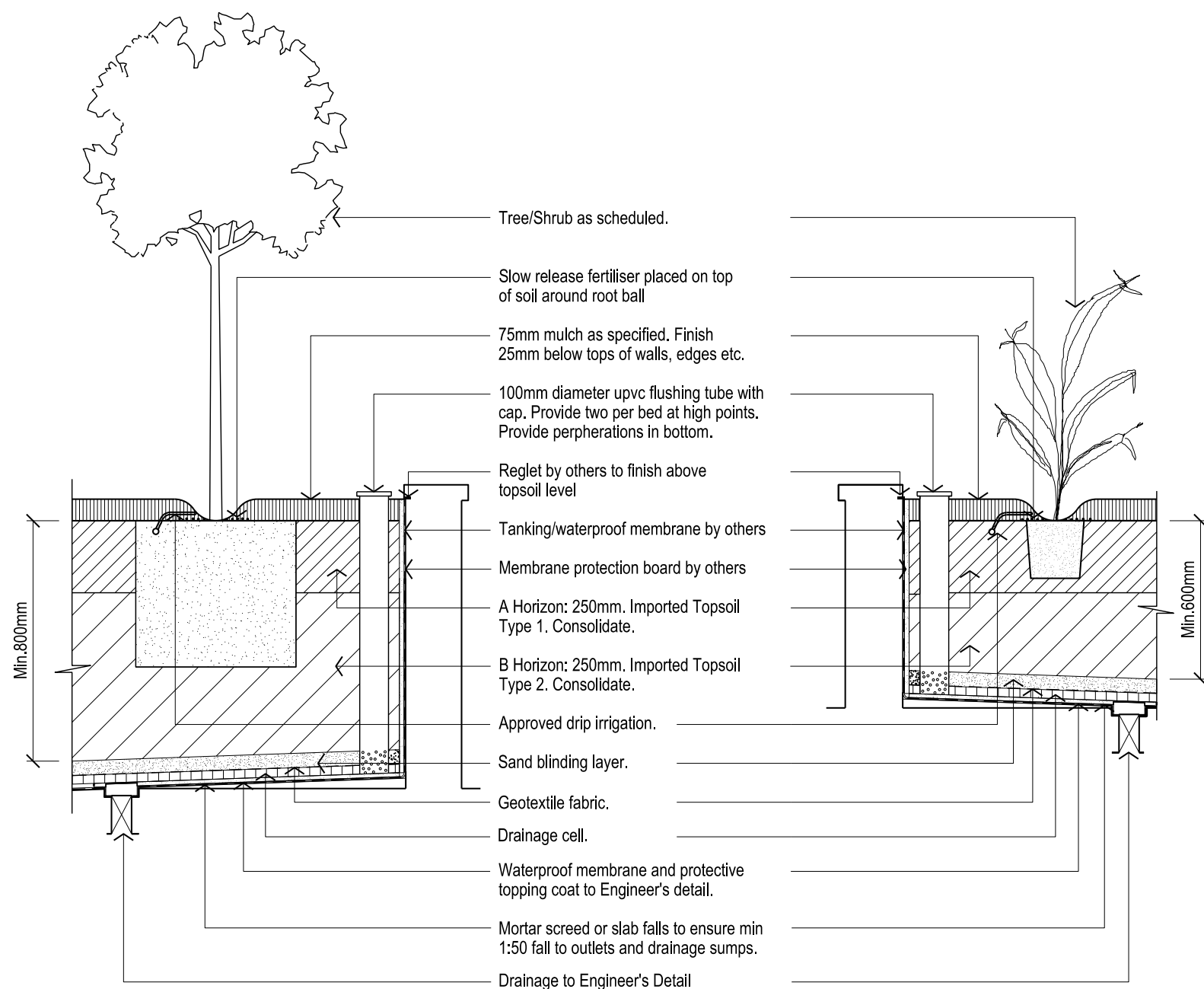
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MATERIALS AND FINISHES SCHEDULE

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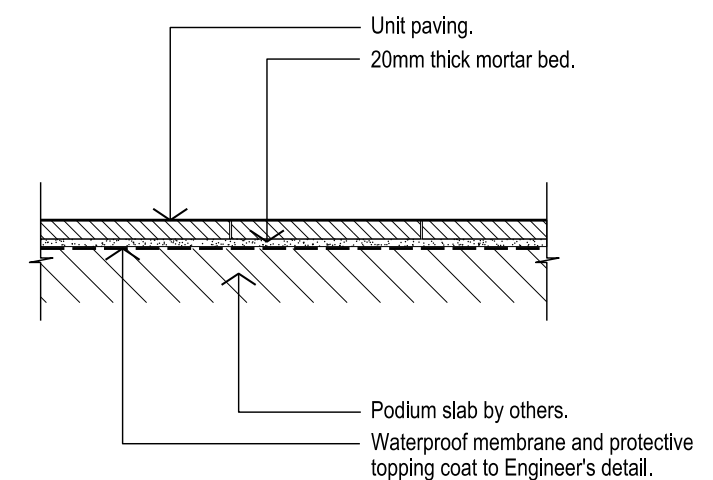


PODIUM DETAIL - TREE PLANTING ON SLAB DRAINAGE CELL

SCALE - 1:20 @ A3

PODIUM DETAIL - SHRUB PLANTING ON SLAB DRAINAGE CELL

SCALE 1:20 @ A3



PODIUM DETAIL - UNIT PAVING ON WATERPROOF MEMBRANE

SCALE 1:20 @ A3



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1:20 @A3

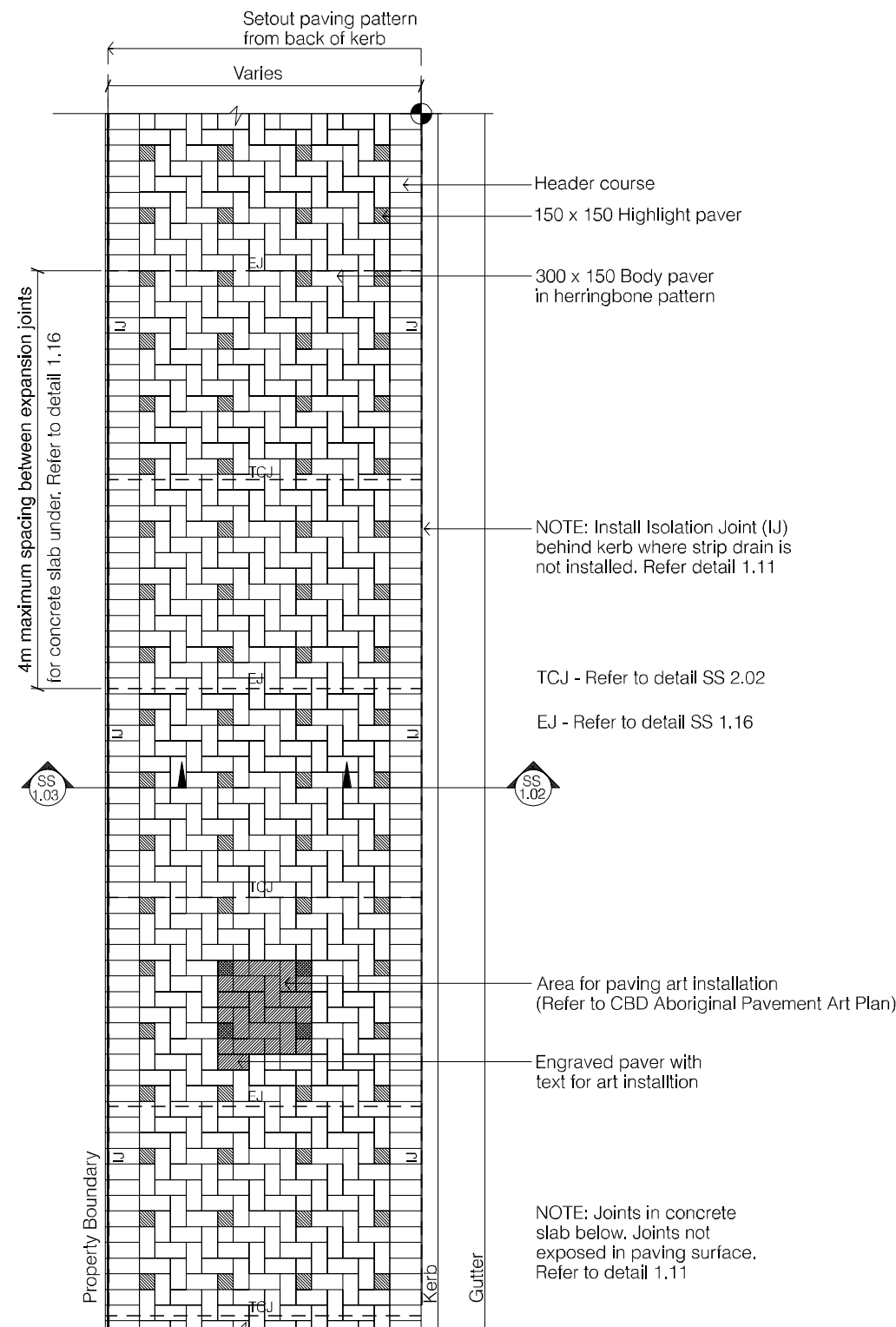


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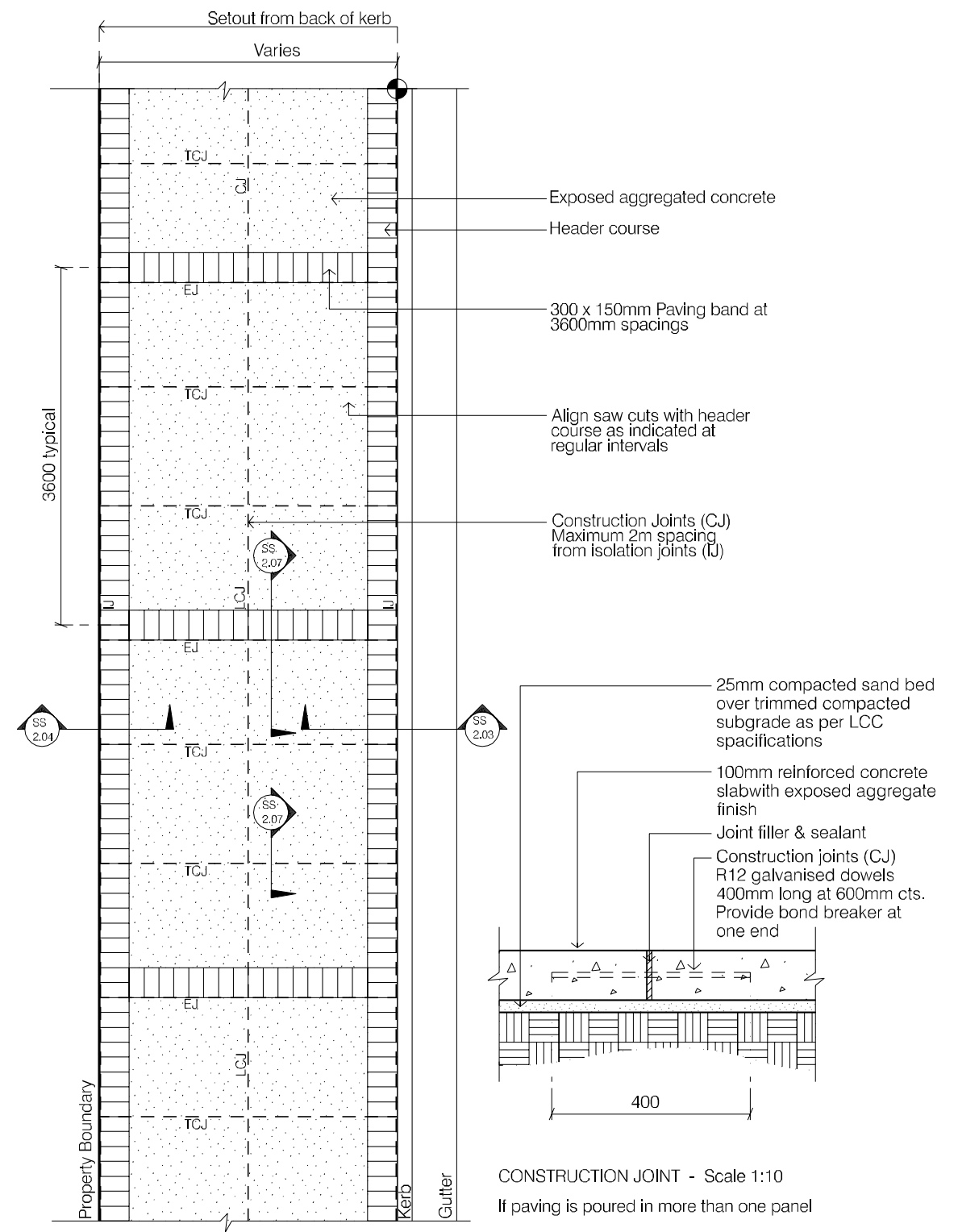
TYPICAL LANDSCAPE DETAILS

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Core Paving as per Council for Macquarie street



Periphery Paving as per Council for Castlereagh street



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STREET FRONT PAVING - COUNCIL SPECIFICATIONS

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PLANT SCHEDULE - GROUND LEVEL AND LEVELS 1, 2, 4 AND 11

CODE	BOTANICAL NAME	COMMON NAME	Indicative mature height (metre)	Indicative mature width (metre)	Pot Sizes	Indicative densities (p/m ²)
STREETSCAPE						
TREES						
Mag gra	Magnolia grandiflora 'Exmouth'	Magnolia	8	4	200L	As Shown
Pop del	Populus x deltoides	Poplar	10	4	200L	As Shown
SHRUBS/HEDGES						
Cli min	Clivia miniata	Bush Lily	0.5	0.4	150mm	5
Die iri	Dietes iridiodes	Dietes	0.5	0.4	150mm	4
Gar rad	Gardenia radicans	Gardenia	0.3	0.5	150mm	5
Lom Tan	Lomandra longifolia 'Tanika'	Tanika	1	1	200mm	4
Pen Rub	Pennisetum advena 'Rubrum'	Red Fountain Grass	1	1.5	200mm	4
Pho ten	Phormium tenax 'Bronze Warrior'	New Zealand Flax	1.8	1.8	5L	2
Rap Sno	Rhaphiolepis indica 'Snow Maiden'	Indian Hawthorn	1	1	200mm	3
Tra jas	Trachelosperum jasmanoides	Confederate Jasmine	6	6	150mm	4

CODE	BOTANICAL NAME	COMMON NAME	Indicative mature height (metre)	Indicative mature width (metre)	Pot Sizes	Indicative densities (p/m ²)
LEVEL 1						
SHRUBS / GRASSES						
Aca mol	Acanthus mollis	Bear's Breeches	1	1	150mm	4
Aga ori	Agapanthus orientalis	African Lily	1.5	1.2	200mm	4
Ble spi	Blechnum spicant	Hard Fern	0.5	0.3	150mm	3
Cli Bel	Clivia miniata sp. Belgian	Orange Bush Lily	1-2	1-2	150mm	3
Cor alb	Correa alba	White Correa	1.5	2	150mm	3
Cor Red	Cordyline 'Red Sensation'	Red Cordyline	1	0.5	200mm	As shown
Jun con	Juniperus confertus	Prostrate Juniper	0.2	0.7	150mm	4
Lir Eve	Liriope muscari 'Evergeen Giant'	Giant Liriope	0.6	0.5	200mm	5
Lom Tan	Lomandra longifolia 'Tanika'	Tanika	1	1	150mm	5
The aus	Themeda australis	Kangaroo Grass	0.7	0.5	150mm	5
Tra jas	Trachelosperum jasminoides	Confederate Jasmine	6	6	150mm	4

CODE	BOTANICAL NAME	COMMON NAME	Indicative mature height (metre)	Indicative mature width (metre)	Pot Sizes	Indicative densities (p/m ²)
LEVELS 2 AND 4						
FEATURE PLTG						
Aga att	Agave attenuata	Fox-tail Agave	1.4	1.5	25L	As Shown
Cor Rub	Cordyline australis 'Rubra'	Orange Sedge	6	3	300mm	As Shown
Luc Thy	Luciea thyrsifolia	Flapjack	0.2	0.4	150mm	5
Tra for	Trachycarpus fortunei	Windmill Palm	20	1.5	200L	As Shown

CODE	BOTANICAL NAME	COMMON NAME	Indicative mature height (metre)	Indicative mature width (metre)	Pot Sizes	Indicative densities (p/m ²)
LEVEL 11						
TREE PLANTING						
Lag ind	Lagerstroemia indica 'Biloxi'	Crepe Myrtle	5	4	200L	As Shown
SHRUBS						
Adi for	Adiantum formosum	Giant Maidenhair Fern	1	1	150mm	3
Asp aus	Asplenium australasicum	Birds Nest Fern	2	2	200mm	2
Asp eli	Aspidistra eliator	Cast Iron Plant	0.7	0.7	200mm	5
Ban Gia	Banksia Giant Candles	Prostrate Banksia	0.4	1	200mm	4
Cli Bel	Clivia miniata sp. Belgian	Orange Bush Lily	1-2	1-2	150mm	3
Pen Pen	Pennisetum 'Pennstripe'	Swamp Foxtail Grass	0.45	0.45	150mm	4
Pen Rub	Pennisetum 'Rubrum'	Red Fountain Grass	0.6	0.6	150mm	4
Phi Xan	Philodendron 'Xanadu'	Xanadu	0.5	0.5	200mm	4
Tra pal	Tradescantia pallida	Purple Heart	0.5	1.2	150mm	4
TURF						
Synthetic						

PLANT SCHEDULE - LEVEL 23 ROOFTOP GARDEN

CODE	BOTANICAL NAME	COMMON NAME	Indicative mature height (metre)	Indicative mature width (metre)	Pot Sizes	Indicative densities (p/m ²)
LEVEL 23 ROOTOP						
TREE PLANTING						
Lag Bil	Lagerstroemia indica 'Biloxi'	Crepe Myrtle	5	4	200L	As Shown
Syz smi	Syzigium smithii	Lily Pily	3	2	200L	As Shown
SHRUBS/HEDGES						
Cor alb	Correa alba	White Correa	1.5	2	150mm	3
Aga att	Agave attenuata	Fox-tail Agave	1.4	1.5	25L	As shown
Alo ven	Aloe 'Venus'	Aloe Vera	1.5	1.5	15-20L	As shown
Ban Gia	Banksia Giant Candles	Prostrate Banksia	0.4	1	200mm	4
Lom Tan	Lomandra longifolia 'Tanika'	Tanika	1.2	0.8	150mm	6
Pen Pen	Pennisetum 'Pennstripe'	Swamp Foxtail Grass	0.45	0.45	150mm	4
Pen Rub	Pennisetum 'Rubrum'	Red Fountain Grass	0.6	0.6	150mm	4
Pho ten	Phormium tenax 'Bronze Warrior'	New Zealand Flax	1.8	1.8	15-20L	As shown
Rap Sno	Rhaphiolepis indica 'Snow Maiden'	Indian Hawthorn	1	1	200mm	3
Syz Pan	Syzigium paniculatum 'Dwarf'	Dwarf Lily Pily	0.5	1	200mm	3
TURF						
Synthetic						



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S15-0101 DA

PLANT SCHEDULE

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LANDSCAPE MAINTENANCE

The following is a list of landscape maintenance activities proposed for the landscape areas within the development. Maintenance activities are based on the NATSPEC landscape specification.

GENERAL

Summary of maintenance responsibilities:

- Watering of garden bed areas and pots.
- Weeding of garden bed areas, and paving.
- Supply and spreading of fertiliser to garden bed areas and pots.
- Supply and installation of mulch to garden bed areas and pots.
- Pruning, trimming and tree surgery.
- Pest and disease control of shrubs and trees.
- Edge trimming of all plants adjacent to lawn areas including collection and removal of clippings.
- Replacement of dead or failed plants.
- Maintenance of irrigation systems.
- Removal of rubbish and debris in garden areas.
- Keeping of a log book.
- Monthly reports

Maintenance procedures: To accepted horticultural and arboricultural practice.

WEEDING

Weeds: Unwanted broadleaf plants and grasses considered invasive to the locality.

Program:

- Trees and shrubs: As required for planted, paved and mulched areas to be weed free when observed at bi-weekly intervals.

Method:

- Clear and keep clear vigorous ground covers 200 mm from the base of any shrub or tree:
- Small areas: By hand.
- Large areas: Proprietary herbicides.
- Herbicide application: Avoid windy days or if rain is likely to follow within 12 hours.

PEST AND DISEASE CONTROL

The landscape contractor is responsible for the control of any pest or disease which may affect the garden bed areas.

Actions:

- Identify the problem.
- Execute the correct treatment until the problem has been eliminated.
- Apply hazardous material out of normal working hours.
- Protect staff and public.

TREES AND SHRUBS

Pruning and trimming

General: Prune to reflect the natural growth flowering and regrowth habit of the individual species.

Shrubs: Prune after flowering.

Program: Spring and Summer and on a spot basis as required.

Hedge trimming:

Schedule trimming at times which will maintain the character and design of hedges. Allow up to three times per season.

Tip pruning:

Do not remove buds before the flowering season in those plants that have terminal flowers.

Purpose: To encourage development of new shoots during the active growing season.

Method: The removal of the top 25 mm or growing tip of each branch.

Radical pruning:

Purpose: To maintain a hedge or formal shape or when a particular problem, growth habit, damage,or disease requires branch removal.

- Clear and keep clear vigorous groundcovers 200mm from the base of any shrub or tree.
- Use only tools fit for purpose.

Trees: Prune to:

- Eliminate diseased or damaged growth, avoid inter-branch contact and thin out crowns in a natural manner.
- Maintain sight lines to signs and lights.
- Maintain visibility for personal security.

Tree branch removal:

- To AS 4373.
- Give notice and engage a suitably qualified 'arborist'.

Plant replacements

General: Replace all evergreen plants that have died or lost 50% of their normal foliage cover.

Provide replacement plants as follows:

- Of the same species and variety and of the closest commercially available size.
- Of uniformly high quality stock equal to the best commercially available.
- Representative of optimum growth for the species as restricted by the container size.
- With a balanced root system in relation to the size of the plant and conducive to successful transpiration. Inspect the root conditions of plants by knocking plants from their containers.
- Without signs of having been stressed at any stage during their development due to inadequate watering, excessive shade/sunlight, suffered physical damage or have restricted habit due to growth in nursery rows.
- Healthy, well grown, hardened off specimens of good shape and free from pests and disease.
- Well rooted and without any indication of having been restricted (pot bound) or damaged at any time.
- Been grown in their final containers for not less than twelve (12) weeks.

WATERING

Planting: Water as required to maintain growth rates free of stress.

Turfing: Water to maintain moisture to this depth.

MULCHING

Clean up: Remove all mulching materials off lawn or paved areas and maintain a clean and tidy appearance when viewed on a weekly basis.

Depth: Maintain a minimum depth of:

- 75 mm for organic mulch.
- 50 mm for gravel mulch.

Top up: Areas of excessive wear.

Appearance: Maintain to keep clean and tidy with no soil disturbance evident on the surface of the mulch.

INCIDENTAL WORKS

Supplementary works

General: Execute the following:

- Removal of rubbish arising from maintenance work.
- Removal of leaf litter fortnightly during leaf fall.
- Wash paving on completion of herbicide application.

Paving

Slip resistance tests:

- Test to AS 4663 annually.
- Notify deviation from the design value.
- Rectify the surface and re-test as required to comply with the design value.

Furniture, signage, and barriers

Scope: All fixed and movable features noted in the record drawings.

Furniture and pots:

- Move and relocate as required for maintenance of the area.
- Repair of replace items damaged by the maintenance contract staff.

Signage: Maintain sight line visibility.

Drains

General: Inspect and clean all drainage structures and pit covers and ensure that they are in proper working order.

Frequency: As required so that all overflow drains are cleared when observed at fortnightly intervals.

Irrigation

Irrigation system program: To suit the following:

- The precipitation requirements of the individual zones/stations with regard to types of plants.
- The infiltration rate of the soil/medium and associated physical factors seasons, evaporation, exposure, topography, local authority restrictions.
- An allowance for adjustment or shut down during and after periods of prolonged heavy rains.
- To co-ordinate water supply and to confirm watering regime against federal and state government legislation and restrictions at the time.

Equipment maintenance:

- Check all components for proper operation.
- Repair or replace damaged component with equivalent parts.
- Flush any dirt or foreign matter from the system and clear all blockages.

Operation:

Ensure by adjustment or replacement of components, that the overall operation of the system is efficient and operational.

Supervision:

Prevent excessive use of water.



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LANDSCAPE MAINTENANCE GUIDELINES

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