SANCTUARY, WENTWORTH POINT

PHASE 1 DA - UPDATES

ISSUE F

April 2018

Prepared for Sekisui House Australia PTY Limited

By Turf Design Studio



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Sanctuary will make a significant contribution to the revitalisation of Wentworth Point.

Bound by the Parramatta River and Millennium Parklands the site interacts strongly with the local environment. The 'natural' surrounds provide borrowed views that are identified and celebrated. The landscape design seeks to support and bolster surrounding biodiversity and habitat whilst creating a pleasing, visually and experientially rich landscape. The landscape structure and form responds to the sites locale through 'fluid' forms and arrangement of elements. Shifting, diverging, and converging elements and forms interplay with the natural context suggesting sinuous connections. Landscape materials, again, seek to reflect the sites rustic natural qualities through the use of natural and elemental fixtures and finishes. Plant material will further embed the site into its surrounds through a diverse array of locally indigenous plant material creating a natural 'skin' that flows through site and beyond.

The sites future social landscape will be celebrated through a range of opportunities to connect. Whether alfresco dining, childs play, dog walking, or simply lazing back with a good book, the site will seek to support meeting, inclusiveness, collaboration, congregation and wellbeing.



Core Landscape Principles

- Connect, visually, and environmentally with the sites surrounds.
- Bolster local habitat and biodiversity.
- Knit engineering solutions into the landscape fabric.
- Maximise accessibility and permeability.
- Inclusiveness for all cultures, ages and abilities.
- Provide new recreational opportunities along the river.
- Celebrate 'Water' as a key landscape element along the river.

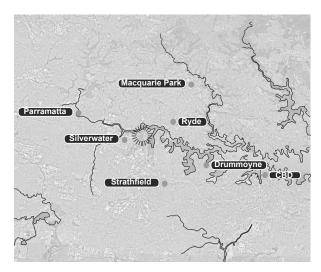
Landscape Objectives

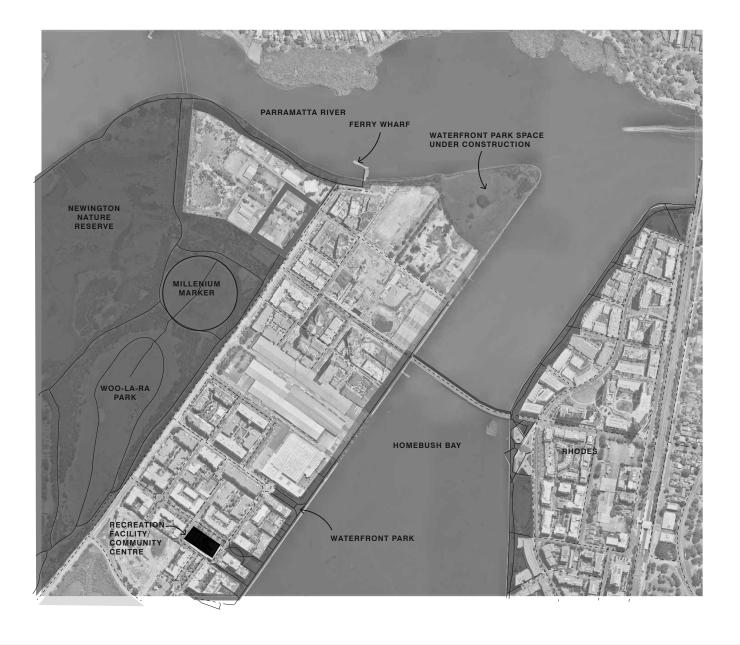
- Protect and minimise impact on surrounding Flora and Fauna during construction
- · Provide a diverse range of habitat and food forage plant species to bolster and support local biodiversity
- Provide a logical path network and hierarchy link the site with its surrounds
- Provide external podium to street access for podium activation
- Use robust safe materials that complement the sites natural / rustic context
- Ensure all landscape elements create a complimentary site language consistent with architectural forms
- Provide summer shade to open space and building facades where possible to promote outdoor use and passive solar initiatives
- Improve micro-climates through planting, mounding & providing access to sheltered locations
- Incorporate service elements with 'soft' landscape engineering solutions to blend seamlessly into the landscape
- Offer a diversity of user experiences with passive and recreational spaces
- Utilise the sites levels for vantage and viewing
- Incorporate educational opportunities to uncover the sites unique environmental and social history
- Incorporate incidental exercise and play opportunities
- Provide adequate soil volumes for tree and shrub growth to support vigorous growth, longevity and plant health
- Maintain healthy existing trees wherever possible
- Incorporate shade tree planting at recreational nodes to maximise comfort and usability in summer



SITE CONTEXT

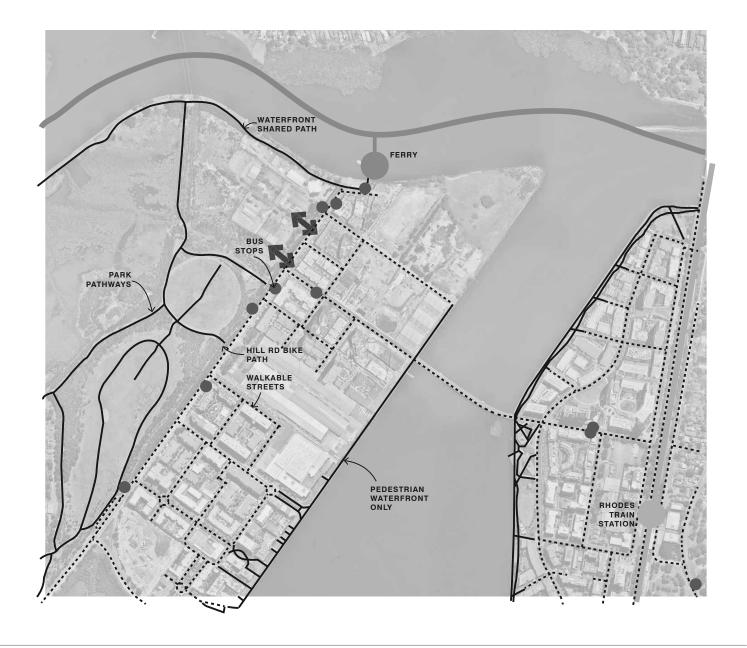






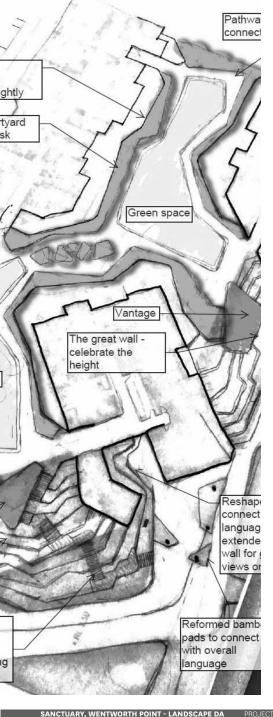


CONNECTIONS









APPROACH

The landscape design seeks to offer a diversity of external spaces that enhance apartment living. The design responds to the surrounding fluid landscape, and building geometry, abstracting form to generate the spatial arrangement and geometry of the landscape.

Vegetation is proposed to augment indigenous biodiversity, moderate environmental conditions, complement vertical building scale and forms, enhance privacy, provide views of lush greenery from apartment balconies and windows, and offer a rich communal landscape setting.

Privacy for podium level residents and communal open space users has been addressed through the selection and placement of trees and screen planting.

URBAN FLEMENTS

Elements such as paving, furniture, fencing and lighting will be developed further during detailed design. For intended character refer materials & finishes sheet.

PLANTING DESIGN

Refer to the Vegetation Strategy.

AMENITY

Solar access and natural ventilation have been maximised by selecting a variety of tree species to suit varying requirements throughout the site. Light-canopied trees have been nominated in close proximity to building facades.

Visual privacy needs have been addressed in the planting design. The desire for an outlook to public areas is balanced with the need for privacy internally and externally, during day and night.

The design acknowledges the opportunity to provide communal open space and take advantage of views.

ACCESSIBILITY

All residents of the new development can access and enjoy communal areas.

Gently graded pathways will provide accessibility for all age groups and degrees of mobility; ensuring that residents can access site amenities comfortably. Paths are rationally laid out into a clear and identifiable pathway network assisting orientation for visitors, and access to and from building entries and service areas.

Lighting of external spaces will be provided to ensure access points are well lit, improving visibility and the sense of safety.

DRAINAGE

Surface drainage to podium areas will be provide to surface drainage points. Refer to Green Arrow civil drawings for details. Drainage to soft landscape zones on podium will be provided via drainage cell at the base of the soil horizon.

Drainage along Hill Road has been coordinated with Northrop engineers and incorporates grass lined and vegetated drainage swales and new stormwater pits and pipes. Refer Northrop drawings for details.

IRRIGATION

Irrigation will be included as a design & construction item within the tender package. Permanent subsurface irrigation will be provided to all soft landscape areas on structure. Temporary irrigation will be provided during establishment to all gardens on deep soil areas as the indigenous plant selection will not require supplementary watering post establishment.

SOIL

Due to the proposed plant species soil profiles will be provided which have modest nutrient levels particularly phosphorus. Suggested material would equal Australian Native Landscapes Barangaroo Type C mix. This soil mix was specifically developed for the indigenous planting at Barangaroo Headland.

LIGHTING

Lighting of external spaces will be provided to ensure access points are well lit, improving visibility and the sense of safety. Unobtrusive lighting will be incorporated where appropriate to enable night time recreational use.

PLANT ESTABLISHMENT & MAINTENANCE

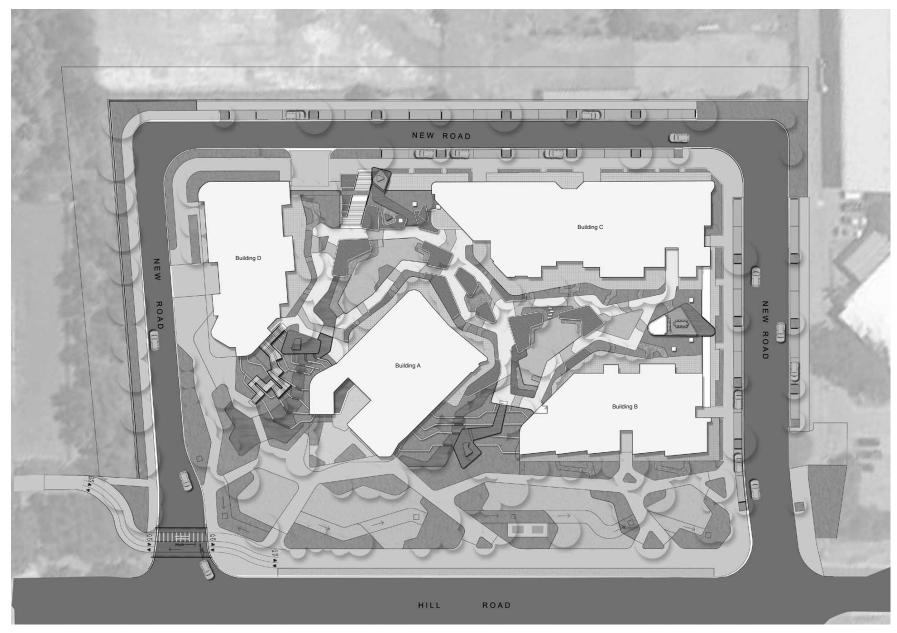
A landscape maintenance contractor will be engaged to maintain all plant material in a state of health and vigour after practical completion. Works will include, but not be limited to:

- Monitoring the irrigation system on a weekly basis to ensure plants are not under or over irrigated,
- Replacing dead plant material to establish a complete cover of planting without obvious voids at final completion.
- Replenishment of mulch as required to provide cover to the soil surface minimising weed encroachment.
- · Suppression of weed growth.
- Low phosphorus nutrient will be provided to indigenous plant groupings, and a broad spectrum fertiliser applied to exotic plant groupings to satisfy differing chemical requirements.
- Selective pruning / crown lifting / canopy shaping of trees to remove potential future structural defects, establish branching above head height, etc.

THOSECT NOTIBER: 1704

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LANDSCAPE SITE PLAN



SANCTUARY, WENTWORTH POINT - LANDSCAPE DA PROJECT NUMBER: 1704

LANDSCAPE PLAN - GROUND



Proposed trees

Hill Road Frontage.

Proposed lawn and trees to Hill Road street verge to reflect the opposite verge condition.

Existing shared path.

shared path. 4.5m width.

Indicative pedestrian / cycle priority crossing in accord with Austroads (2009d) Fig 9.10, based on Roads and Traffic Authority Design development required for

Vehicle basement entry.

Service vehicle entry.

Proposed honed concrete pathways with special aggregate.

Substation. Surrounds in accord with authority requirements.

Bioswales. Vegetated and turfed.

Minor access paths to dwelling

Street tree planting.

retaining wall. No access to power station. Refer L-DA-18.

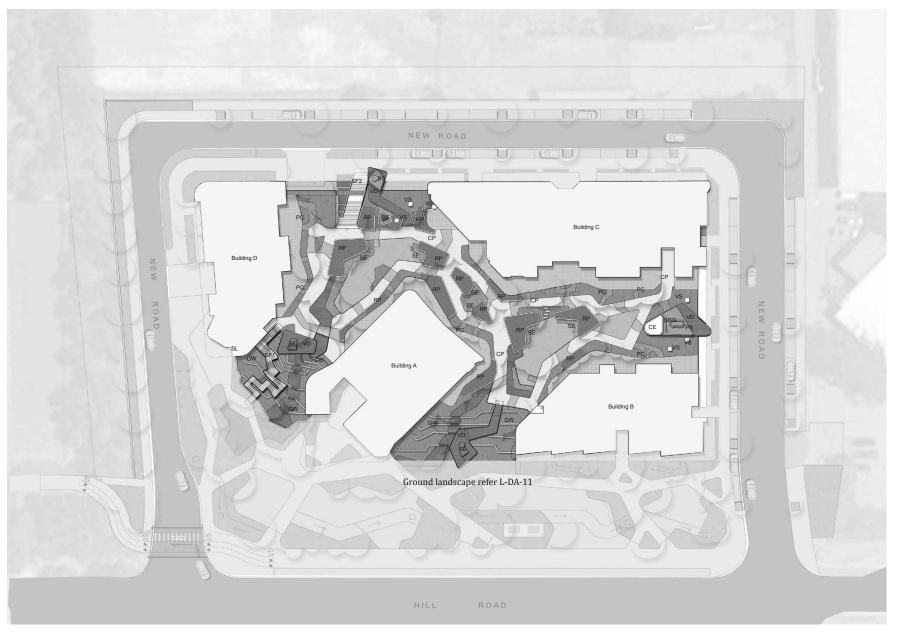
Access drive to existing tenancy.

Refer L-DA-17 for section and view indicators





LANDSCAPE PLAN - PODIUM



Pro

Proposed trees







- CP Proposed honed concrete pathways with special aggregate.
 Contrast banding for visual interest.
- VD Viewing Deck
- PC Private courtyards with special textured paving entry path.
- E Carpark exhaust. Timber clad with climbers .
- PS Lightweight pergola structure
- vs Vented skylights.
- GW Gabion wall landscaped terraces.
- RP Masonry raised planter
- SF1,2 Stair flights podium access
- SL Street lift access to podium.
- BBQ setting with communal table
- SE Seating element

Refer 'Materials & elements' for indicative imagery/ material samples.

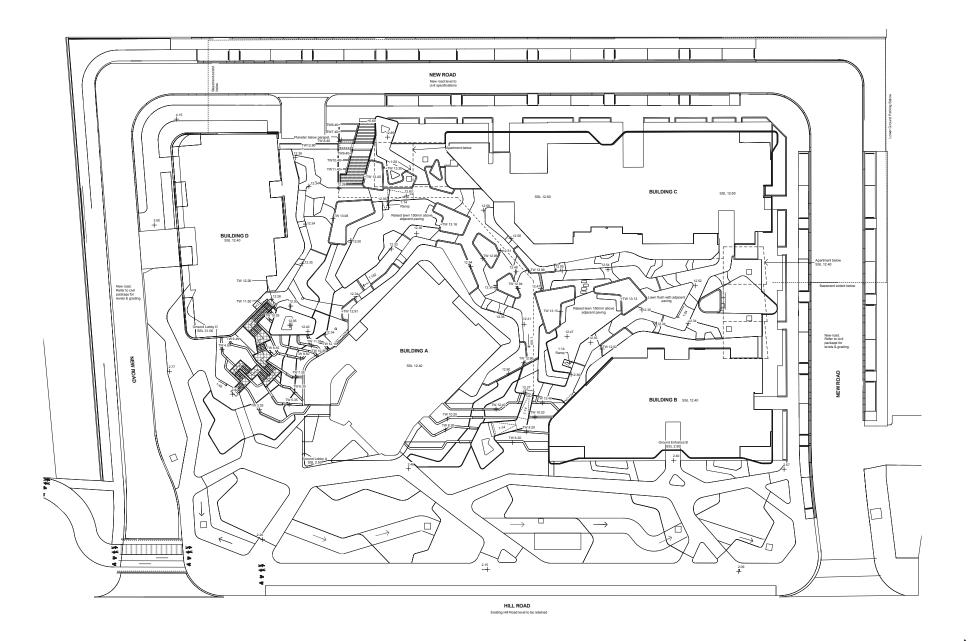
Refer L-DA-17 for section and view indicators







LEVELS PLAN



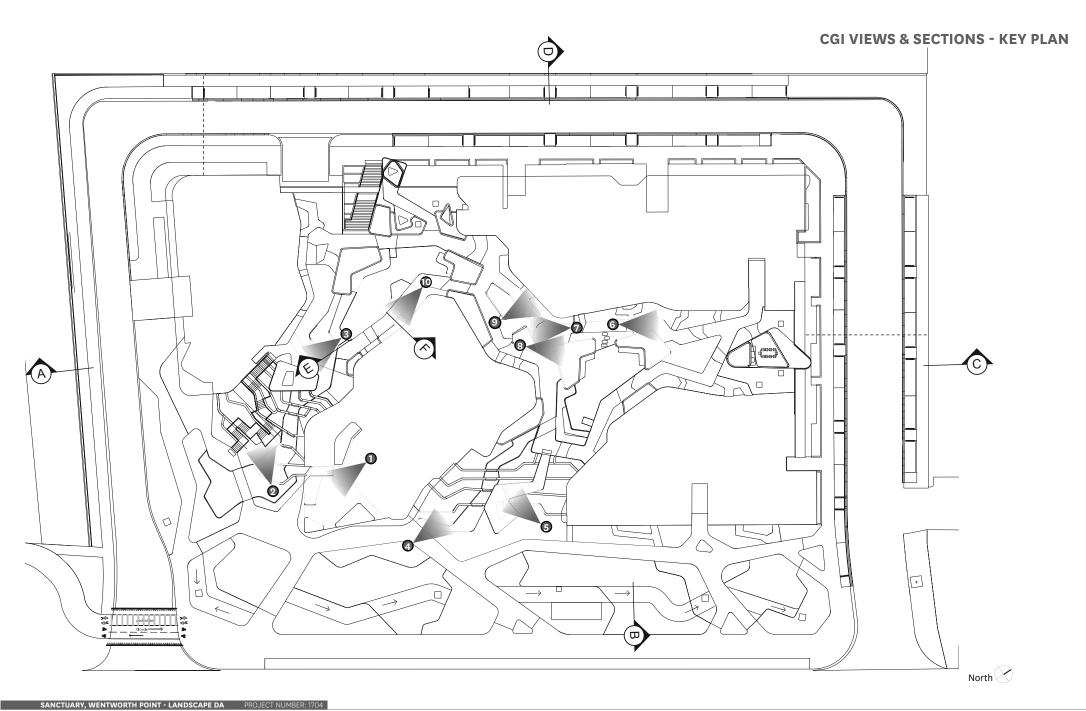
Note:

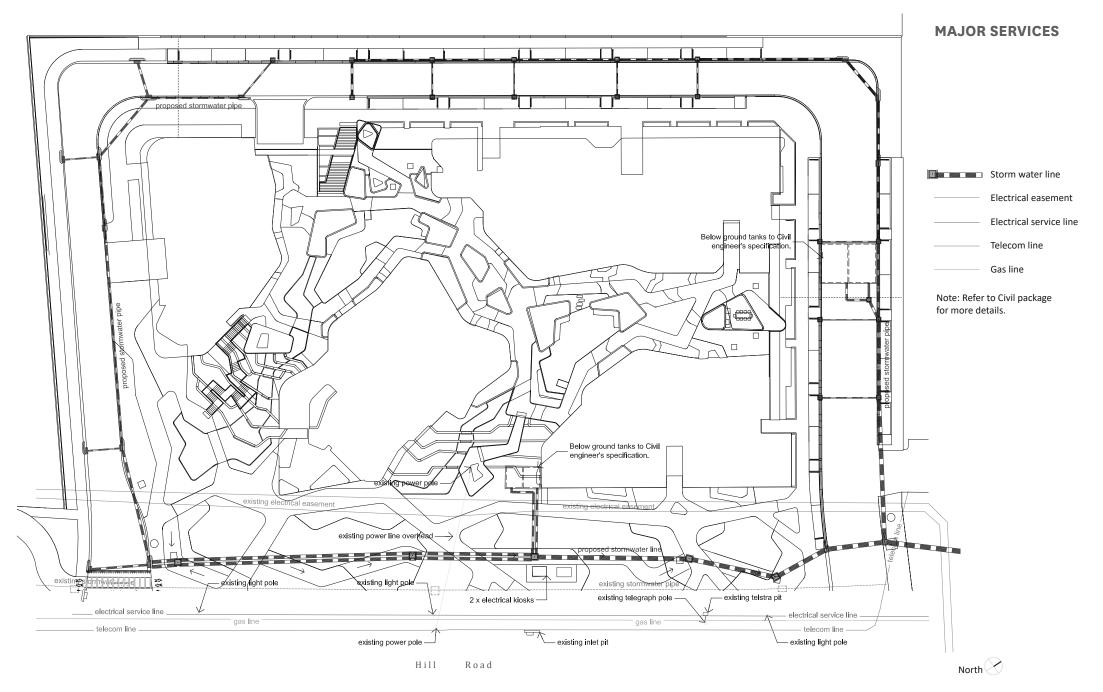
Refer Civil drawings for new road levels and Hill Road interface grading.

North

LANDSCAPE CALCULATIONS

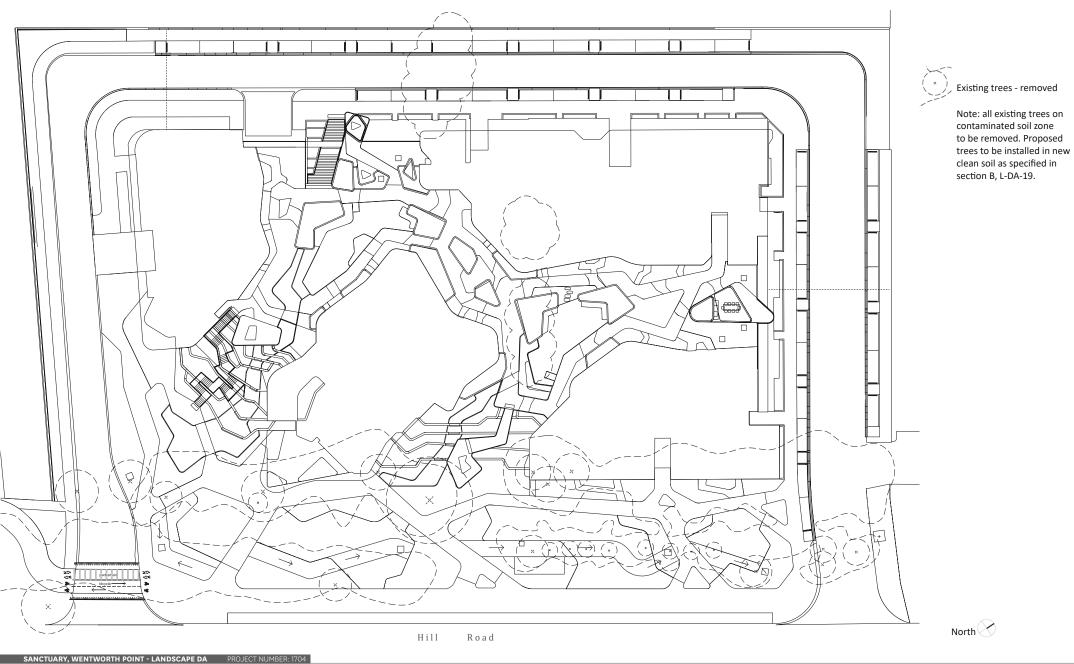








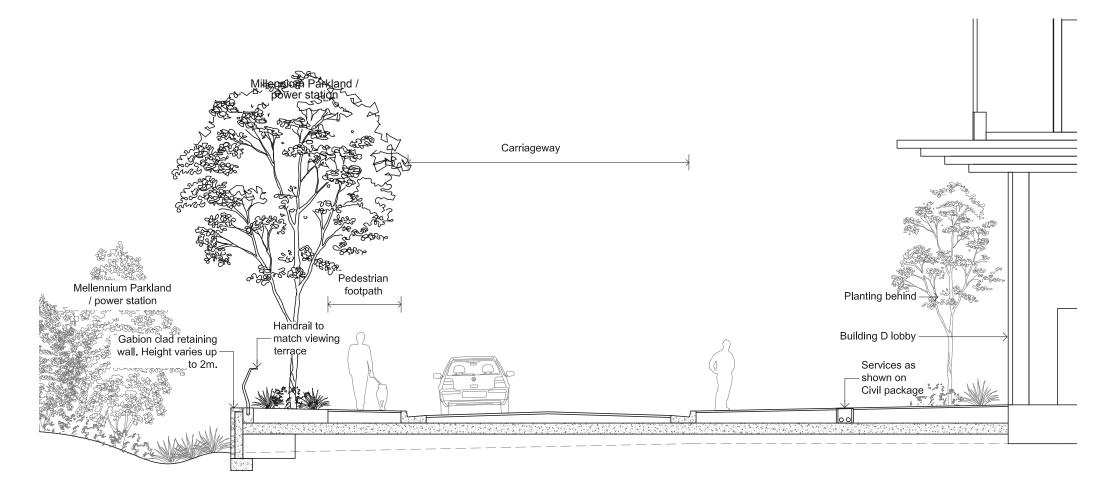
TREE REMOVAL / RETENTION PLAN



MILLENNIUM PARKLAND INTERFACE

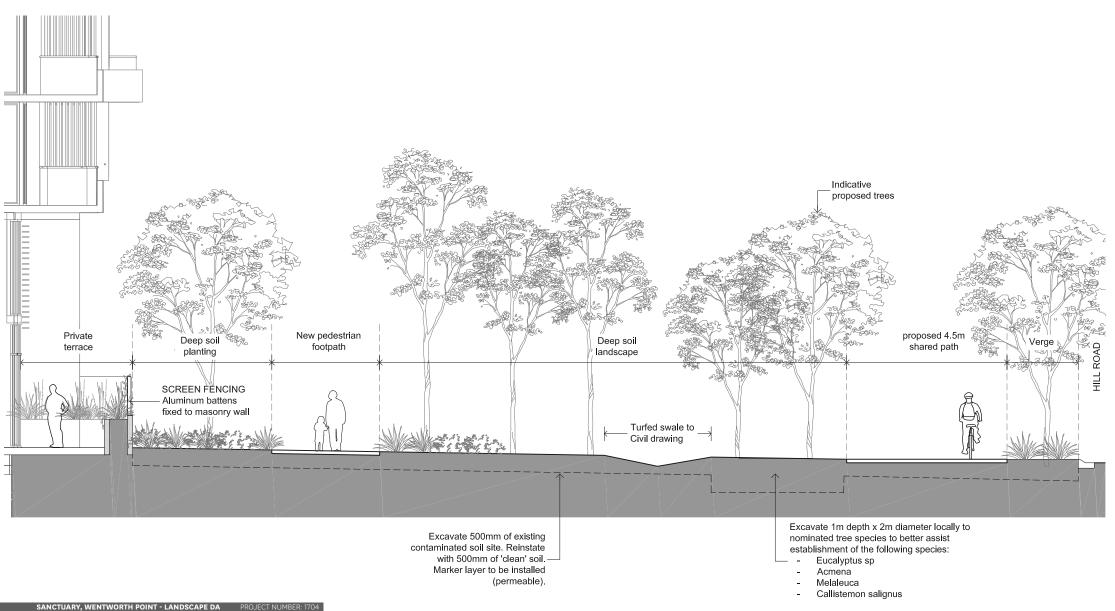
SECTION A

Note, refer to Civil DA package for section dimensions, i.e road carriage way, verge, parking and footpath.



HILL ROAD INTERFACE

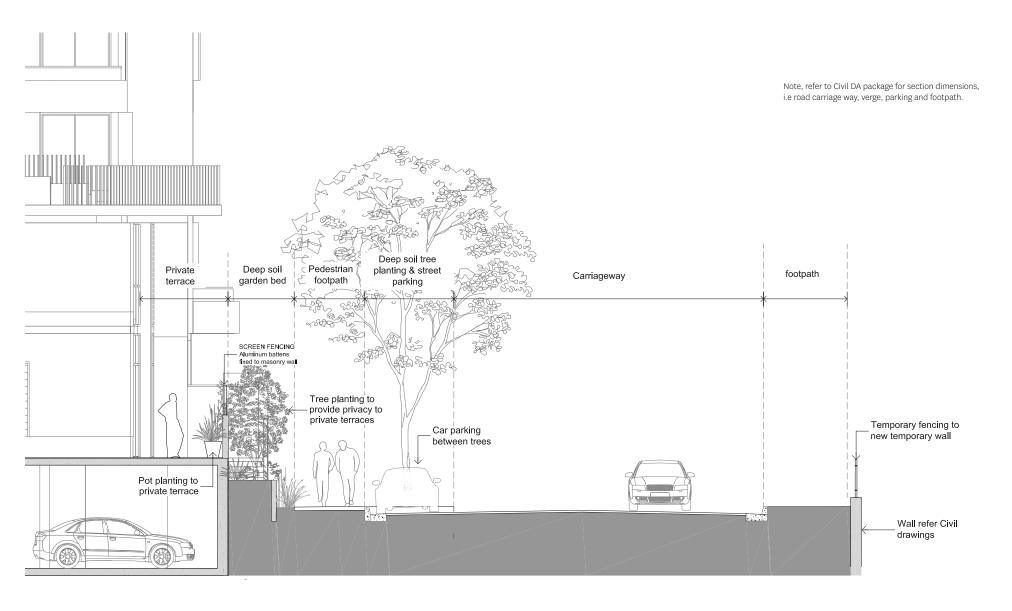
SECTION B





NEW ROAD NORTH INTERFACE

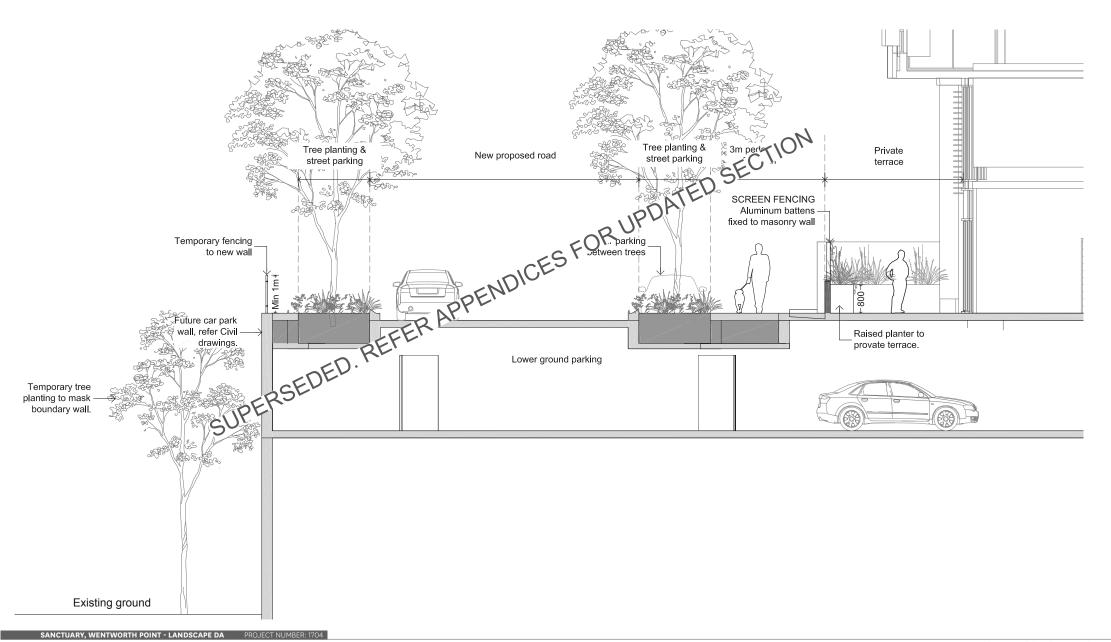
SECTION C



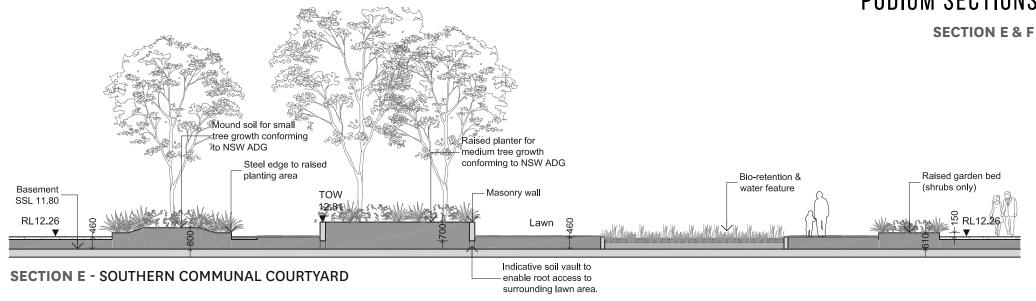


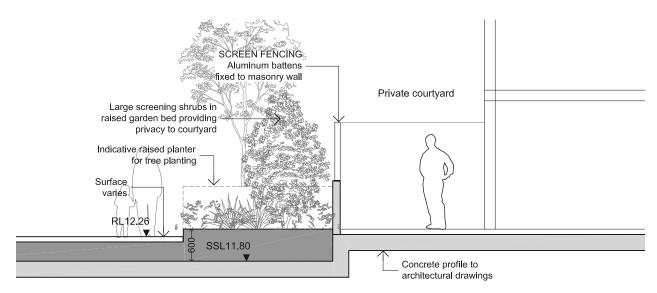
NEW ROAD WEST INTERFACE

SECTION D



PODIUM SECTIONS





SECTION F - TYPICAL PRIVATE COURTYARD INTERFACE



VIEW 1 - TOWER LOBBY

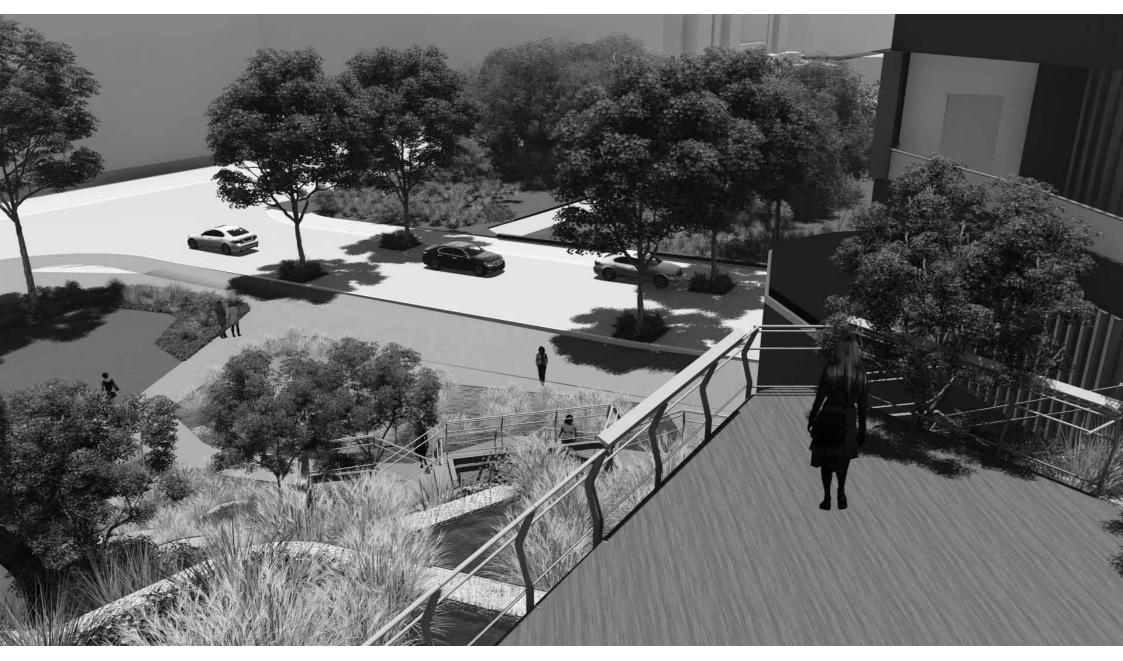
CGI VIEWS



VIEW 2 - ENTRY LANDSCAPED TERRACES



VIEW 3 - ENTRY LANDSCAPE TERRACES TO HILL RD



VIEW 4 - HILL RD FRONTAGE



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VIEW 5 - ENTRY LANDSCAPE TERRACES VANTAGE



VIEW 6 - PODIUM LANDSCAPE



VIEW 7 - PODIUM LANDSCAPE



VIEW 8 - PODIUM LANDSCAPE



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VIEW 9 - PODIUM LANDSCAPE



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VIEW 10 - PODIUM LANDSCAPE





CONTEXT AND INTENT

The Sanctuary site sits between the Parramatta River and Millennium Parklands.

Surrounding habitats include woodlands, saltmarsh, and intertidal wetlands.

The former landfill and ordinance disposal area within the parklands has induced the retention of the land for water conservation and habitat, and now sits as a widely regarded model for the regeneration of degraded sites, and how natural systems and processes can be reinstated, and habitats recreated.

The focus on the rejuvenation of natural systems will be a key aspect of the Sanctuary. The new landscape will draw heavily on the surrounding natural landscape to ensure the site is responsive of, and supportive to the existing natural systems. Plant selection will derive a selection of local species. Species incorporated that are not locally indigenous will be assessed to ensure future 'garden escapes' do not naturalise within the broader parkland.

KEY ASPECTS

- · Retain trees wherever possible.
- · Respond to and enhance the sites unique natural setting on the Parramatta River.
- · Provide summer shade to maximise outdoor use in warmer months.
- · Incorporate deciduous trees in key locations to maximise winter sun.
- · Provide adequate soil depths through mounding and raised planters.
- · Incorporate a diverse range of species to bolster the sites ecological value.
- · Respect key view corridors and vistas.
- · Use trees and shrubs to create spatial definition and outdoor 'rooms'.
- · Utilise shrub planting to mask undesirable views and enhance privacy to private courtyards.
- · Incorporate a range of complimentary foliage colours, forms, and textures to improve visual amenity.
- · Group species into complimentary foliage and flower colour and texture to provide a distinct visual aesthetic.



INDICATIVE SPECIES LIST



Indicative tree species

Eucalyptus gummifera Eucalyptus robusta Eucalyptus botryoides Eucalyptus agglomerata Eucalyptus haemastoma Angophora costata Syncarpia glommulifera Banksia integrifolia Banksia serrata Ficus rubiginosa Alphitonia excelsa Acmena smithii Elaeocarpus reticulatus Ceratopetalum gummiferum Ceratopetalum apetalum Doryphora sassafras Toona ciliata Acacia elata Allocasuarina torulosa Backhousia myrtifolia Glochidion ferdinandi Tristaniopsis laurina

General mass planting

Lomatia silaifolia Acacia terminalis Acacia ulicifolia Bauera rubioides Allocasuarina distyla Callistemon citrinus Banksia marginata Banksia ericifolia Baeckea imbricate Acacia longifolia Acacia linifolia Banksia spinulosa Doryanthes excelsa Hakea teretifolia Persoonia levis Pultenaea daphnoides Dillwynia floribunda Callistemon 'White Anzac' Baeckea virgata 'Dwarf' Melaleuca thymifolia Viminaria juncea Goodenia ovata Grevillea lanigera Lomandra longifolia Hardenbergia 'Meema' Dianella revoluta

Native grasses

Echinopogon ovatus Microlaena stipoides Oplismenus aemulus Themeda australis Imperata cylindrica Poa poiformis Dichelachne crinata Austrostipa pubescens Isolepis nodosa Cymbopogon refractus

Bioretention and swale planting

Carex appressa Juncus usitatus Dianella caerulea Lomandra fluviatlis Isolepis nodosa Lepironia articulata

Hill Road frontage landscape terraces

Callicoma serratifolia Macrozamia communis Doryanthes excelsa Alocasia macrorrhizos Ficus coronata Pellaea falcata Histiopteris incisa Hypolepis muelleri Calochlaena dubia Doodia aspera Blechnum cartilagineum Asplenium austalasicum Lomandra hystrix, fluviatalis Austromyrtus inophloia Bauera rubioides Telopea speciosissima Goodenia ovata Cordyline stricta Helmholtzia glabberima

Emergent aquatic planting, ponds and stream edges. Saturated soil to 100mm

Baumea juncea Carex appressa, fascicularis Ghania siberiana Juncus pallidus, usitatus Persicaria decipiens Isolepis nodosa Shallow water (100-300mm): Philydrum lanuginosum Schoenoplectus mucronatus Triglochin procerum Cyperus exaltatus





POT SIZES, SPACING and QUANTITIES

The following information provides guiding parameters for detailed planting design - to be provide at CC stage submission.

<u>Trees</u>

Proposed tree species are to be planted in pot sizes between 100ltr and 800ltr.

<u>Shrubs</u>

Shrub species are to be planted in 200mm - 150mm pot sizes.

Accent species are to be planted at key locations in 300mm pot sizes.

Plant spacing is species dependent and will range between 400 and 700mm.

Groundcovers

Low growing / groundcover species to be planted in 150mm pot sizes, with a typical spacing between 300mm to 600mm.

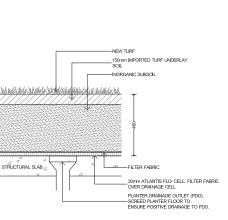
Quantities

The following table utilises the above standards to calculate indicative plant quantities.

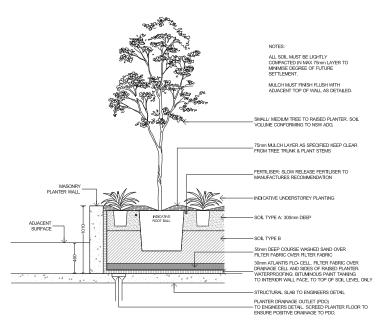
Planting location	Total area	Plant type	Coverage (%)	Typical	Spacing	Quantity /m ²	Quantity
				pot size			
Street trees include	N/A	Tree	As indicated	200 litre	As shown	N/A	45
Hill Road							
Trees in deep soil	N/A	Tree	As indicated	200 litre	As shown	N/A	29
Trees on structure	N/A	Tree	As indicated	200 litre	As shown	N/A	85
General mass planting	2339m²	Shrub	60	200mm	600mm	2.78	3897
		Groundcover	30	150mm	500mm	4	2808
		Accent	10	300mm	900mm	1.23	288
Bioswale	367m²	Reeds /	100	Virocell	300mm	10.9	4000
		rushes					

Total plant quantities

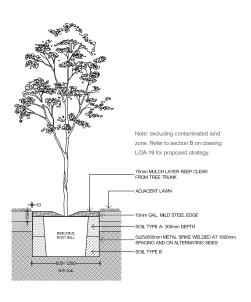




Typical turf on structure



Typical raised planter on structure



Typical tree pit in lawn



INDICATIVE TREE SPECIES











INDICATIVE UNDERSTOREY SPECIES











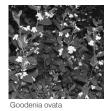






























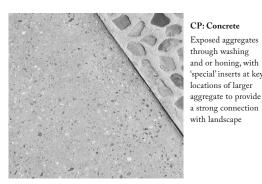




Acacia terminalis

Correa decumbens

MATERIALS & ELEMENTS



CP: Concrete Exposed aggregates through washing and or honing, with 'special' inserts at key locations of larger aggregate to provide



VD: Timber Deck Timber decks to key vantage points and waterway crossings.

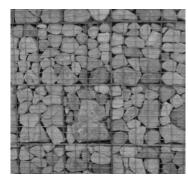


SF1&2: Podium access stair and vantage point balustrades Galvanised structure with mesh infill. FRP Mini-mesh stair access surface with steel

structure.



CW: Cascade Water Cascade water over gabion walling/ terraces.



GW: Gabion Wall Provide gabion treatment to Hill Road frontage terraces.



RP: Raised Planter Rustic stone and textured insitu concrete walling to raised planters.



SE: Seating Provide a variety of seating opportunities.



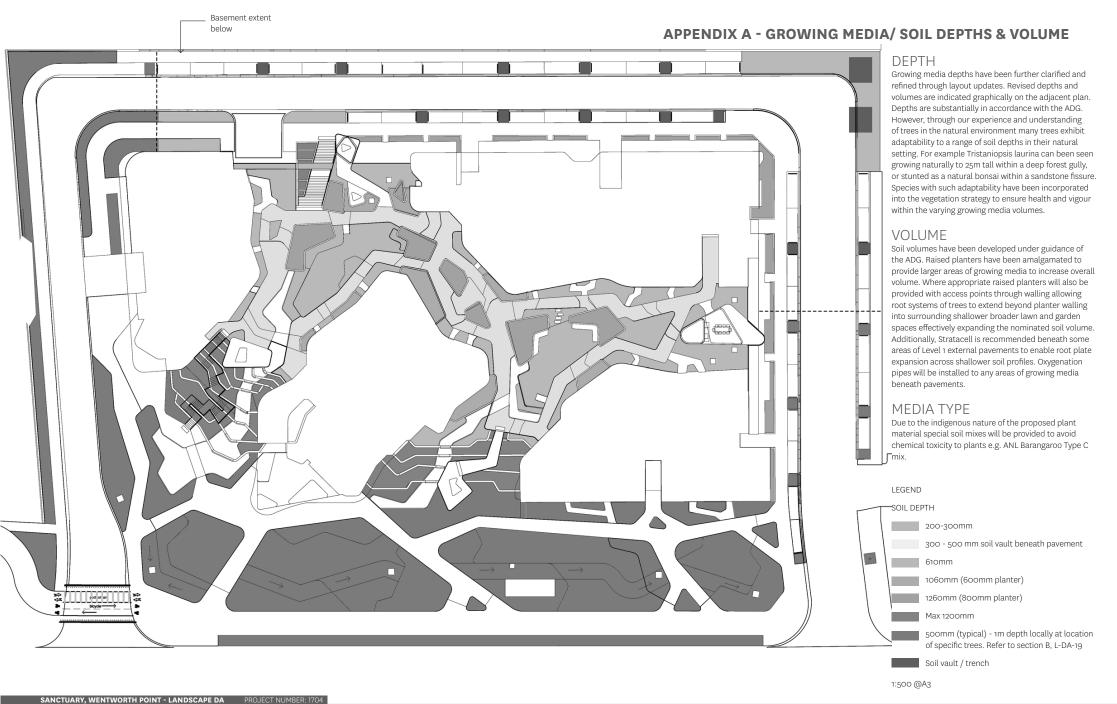


STREETSCAPE MATERIALS

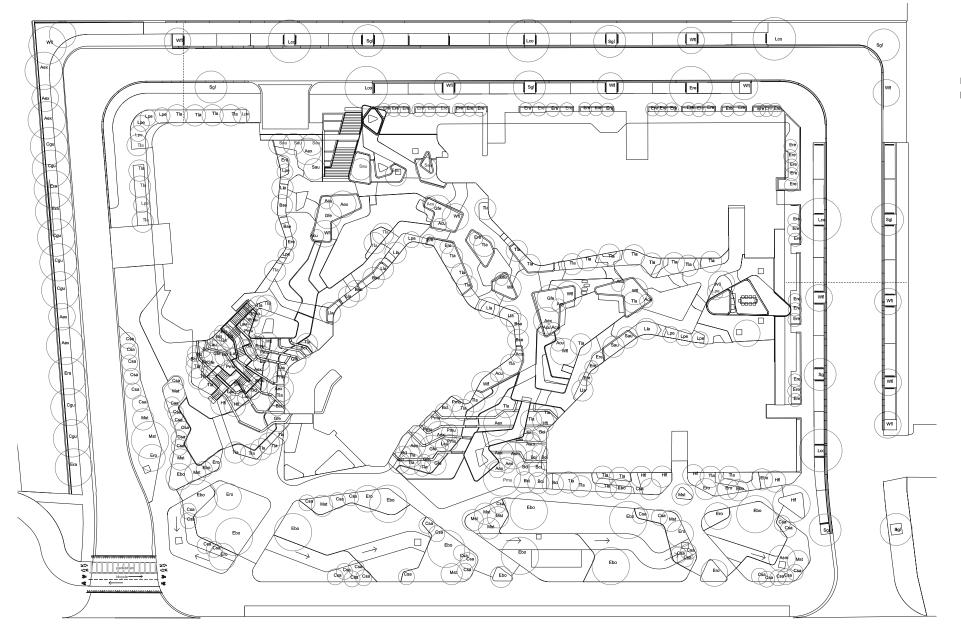
All materials within SOPA controlled land to conform with SOPA guidelines.

Appendices





APPENDIX B - DETAILED TREE PLANTING PLAN



Refer L-DA-APP-42 for tree planting schedule.

SANCTUARY, WENTWORTH POINT - LANDSCAPE DA PROJECT NUMBER: 1704



PHASE 1 - DA TREE SCHEDULE							
Code	Botanical Name	Common Name	Estimated mature height and spread (m)	Qty			
Acu	Archontophoenix cunningamiana	Bangalow Palm	8x3	12			
Aex	Alphitonia excelsa	Red Ash	7x4	11			
Asm	Acmena smithii	Lilly Pilly	8x5	1			
Bci	Backhousia citriodora	Lemon-Scented Myrtle	7x3	20			
Bse	Banksia serrata	Old Man Banksia	6x3	7			
Cgu	Corymbia gummifera	Bloodwood	12x8	3			
Ceap	Ceratopetalum apetalum	Coachwood	7x4	1			
Csa	Callistemon salignus	Willow Bottlebrush	8x4	7			
Ebo	Eucalyptus botryoides	Bangalay	18x12	9			
Era	Eucalyptus racemosa	Scribbly Gum	15x10	5			
Ere	Elaeocarpus reticulatus	Blueberry Ash	7x3	8			
Ero	Eucalyptus robusta	Swamp Mahogany	12x8	7			
Gfe	Glochidion ferdinandi	Cheese Tree	6x5	8			
Hfl	Hymenosporum flavum	Native Frangipani	8x4	18			
Lau	Livistona australis	Cabbage palm	8x3	12			
Lco	Lophostemon confertus	Brush Box	10x6	7			
Lla	Leptospermum laevigatum	Coastal Tea Tree	6x4	9			
Lpe	Leptospermum petersonii	Lemon Scented Tea Tree	7x5	8			
Mst	Melaleuca styphelioides	Prickly Paper Bark	8x5	13			
Pmu	Polyscias murrayi	Pencil Cedar	7x3	15			
Sau	Syzygium australe	Brush Cherry	8x5	8			
Sgl	Syncarpia glommulifera	Turpentine	8x5	9			
Tci	Toona ciliata	Red Cedar	8x5	1			
Tla	Tristaniopsis laurina	Water Gum	7x5	52			
Wfl	Waterhousia floribunda	Weeping Lilly Pilly	8x5	18			

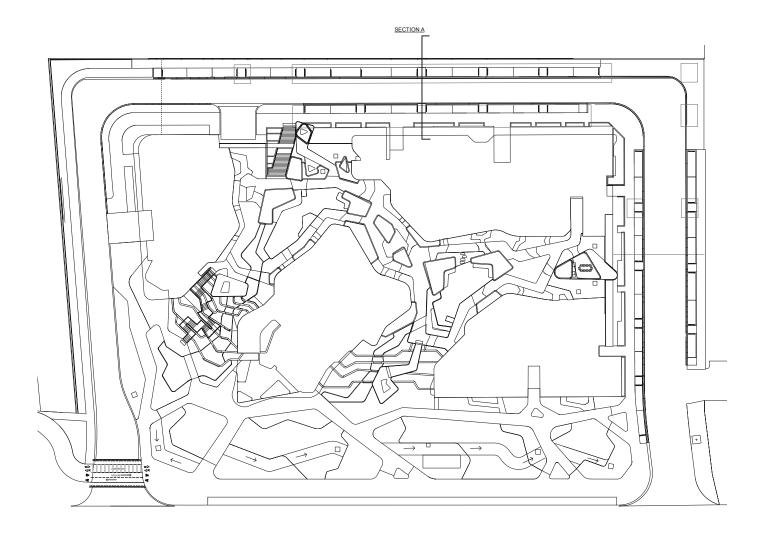
APPENDIX C - TREE PLANTING SCHEDULE

TREE SIZE

A range of tree species and sizes have been recommended to create genetic and visual diversity across the site. Trees species reaching a height of up to 8m have been recommended on structure. Larger trees have been recommended on deep soil. Some species that may attain a height of greater than 8m have been recommended on structure, however these species have the ability to live long term as shorter specimens restricting their growth according to the available soil volume / root growth area.



APPENDIX D - SOIL VOLUME TO WESTERN STREET ALIGNMENT

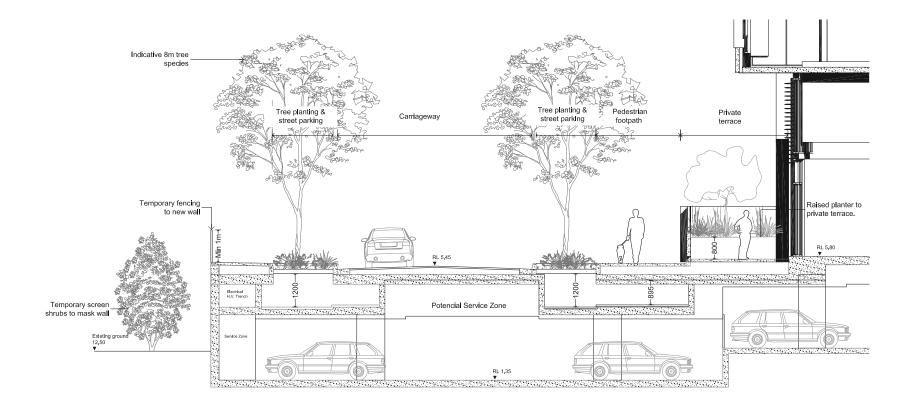


Street trees along the western boundary road within the basement outline have been redefined. 1.2m soil trench / vault provided to for street trees, promoting greater lateral root growth. Trench continue to extend beneath street parking bays as indicated. Aeration pipe network and surface grated opening will be provided to oxygenate soil.

APPENDIX E - SOIL VOLUME TO WESTERN STREET ALIGNMENT - SECTION A

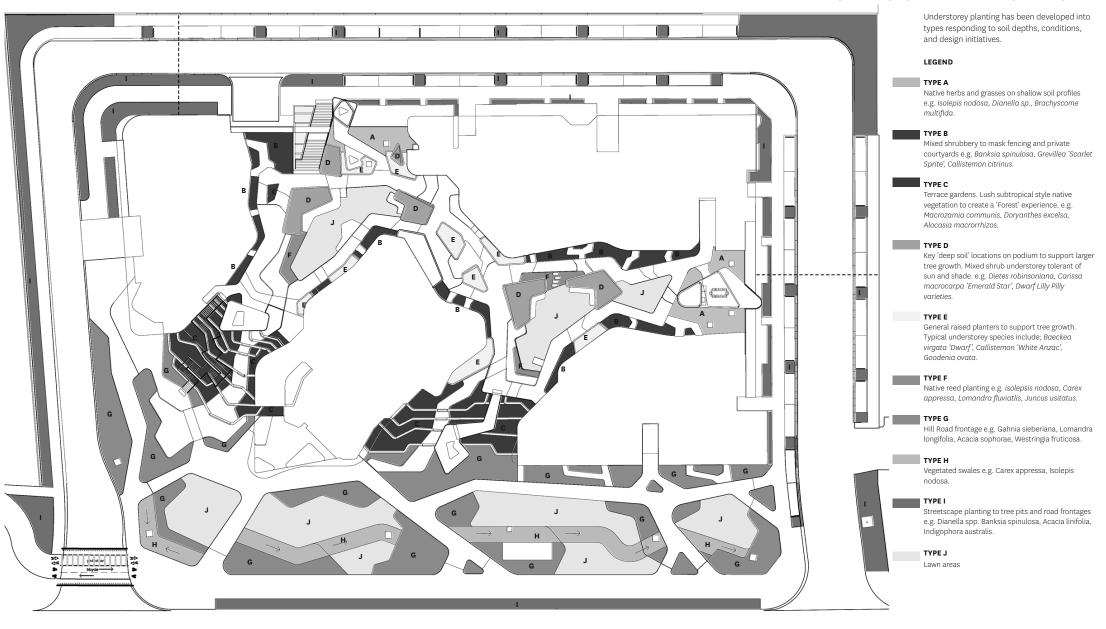
To assist in reduction of pollution entering the Parramatta River the soil vaults will be developed as bioretention pits capturing and cleansing stormwater flows off the adjacent road surface.

Note, refer to Civil DA package for section dimensions, i.e road carriage way, verge, parking and footpath.





APPENDIX F - UNDERSTOREY PLANTING TYPES



SANCTUARY, WENTWORTH POINT - LANDSCAPE DA PROJECT NUMBER: 1704

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