

FEBRUARY 2013



**NORTH PENRITH - STAGE 2B & 2C
WATER'S EDGE & THE COMMON
LANDSCAPE CONCEPT REPORT
STATE SIGNIFICANT DEVELOPMENT APPLICATION**



INTRODUCTION

Landcom are seeking landscape design solutions that reflect the image and memory of the site as a fully integrated residential / open space environment reflecting both the history and culture of the site. Along with these historic and cultural references, water storage, usage, amelioration and movement are also key components of this master plan vision and will be reflected throughout the landscape design. The safe interaction between visitor / resident and the Water Sensitive Urban Design initiatives used through out the development will be the key area of focus while helping to formulate public awareness of the importance of improving the stormwater water quality throughout the site.

The landscape design philosophy recognises the current trends in the new home owners demographic, as well as an accepted trend of displaying increased community expectations of a whole range of active and passive recreational uses along with site specific children play facilities. Pedestrian and cycle movement and connections will be sufficiently addressed.

The North Penrith site has a remarkable landscape heritage and an abundance of historic European cultural elements that are varied in typology and as either state or local significance. This heritage is of paramount importance in the landscape for the purposes of education and recreation, not only in the daily lives of the local residents, but also in the wider community.

The North Penrith Landscape Design is based on a clear landscape design theme or themes and a definitive palette of components that will be identified in this document. This will result in a 'big picture' design theme to provide cohesion and site / regional identity.

The landscape treatment to the development aims to promote a unique sense of place, responding to the nature and history of the site whilst creating a meaningful amenity to the local community.

The streetscape network has a simple urban language with more intimate landscape experiences at entry points, delivering fully functional and legible treatments to the residential Roads. Park spaces at key locations create community and natural nodes, tying in with the surroundings and creating a sense of journey and destination to the whole development.

In this way, a sensitive and appropriate standard of landscape design can be applied to the North Penrith development so that the practical, aesthetic and social needs of the residents and community are better realised.





LEGEND

Stage Boundaries

OPEN SPACE:

- 1 Water Feature - Water's Edge
- 2 Kleineg Place - Through Site Link
- 3 Wetland - The Common
- 4 Stage 2D - Howell Park



DESIGN INTENT

There is an opportunity to create a strong lateral landscape connection between the Smiths Paddock open space and Wetland Park detention basin that creates landscape harmony through the varied spatial elements of the project. It will combine a high amenity pedestrian corridor within a Water Sensitive Urban Design element that provides not only an important outlook for the residents to southern side of the water body but also a significant visual amenity to the community. Progressive engineering will ensure that the water level within the channel is maintained through a series of weirs under normal conditions while allowing for limited fluctuation and detention during regular storm events.

The southern boundary of the water feature will consist mainly of a urban hard edge feel to the waters edge through a series of split level paths and terraced steps allowing for safe interaction with the water and emergency egress if necessary. The upper promenade is raised to the level of the regional 100 year storm event and allows for both promenading and possible future private access to the residential apartments. The linear movement of the space can be marked by the rhythm of trees within sandstone clad raised planters that break the linearity of the concrete terrace steps that separates the upper and lower pedestrian path ways. The lower pedestrian path allows the pedestrian to be close to the waters edge at normal operating levels while the concrete terraces invite the walker to stop and contemplate the space before continuing.

The northern edge provides high quality pedestrian movement corridor to the side of the water and allows clear movement through the space without disturbance to the residence to the south. The perimeter of the water body is addressed with aquatic gardens within the water to soften the edge. Sandstone clad walls retain the northern embankments and provides opportunities for seating and the creation of mass planting and turf breakout spaces.

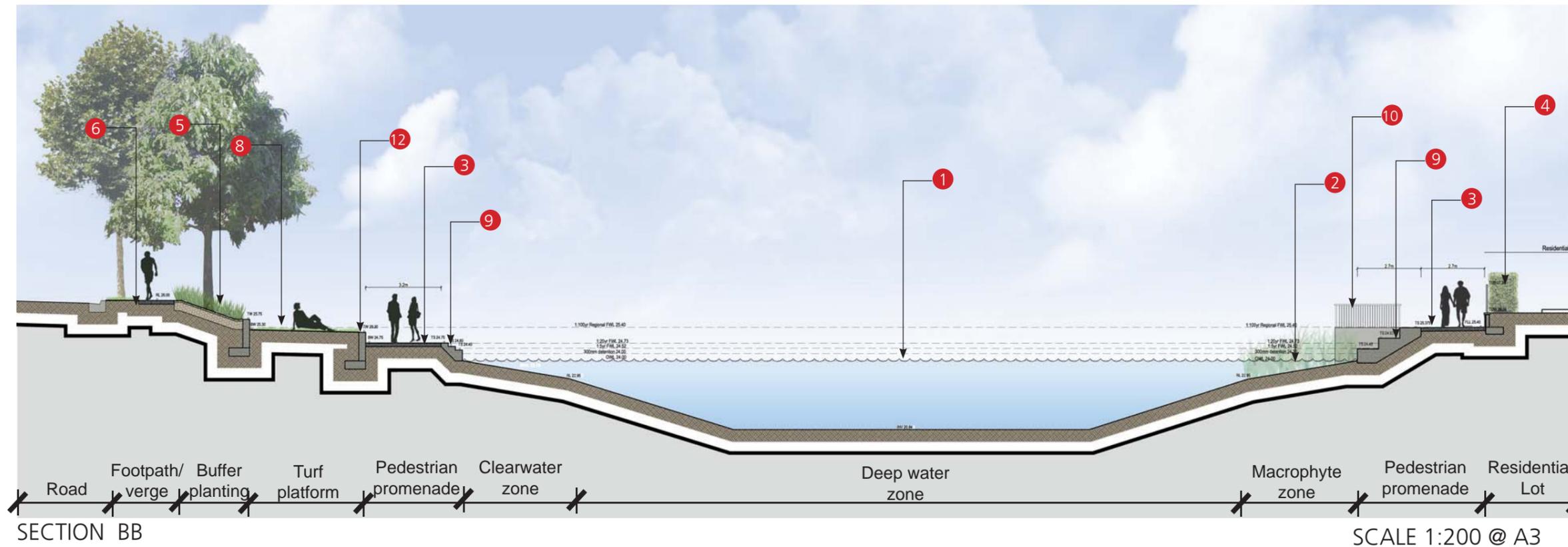
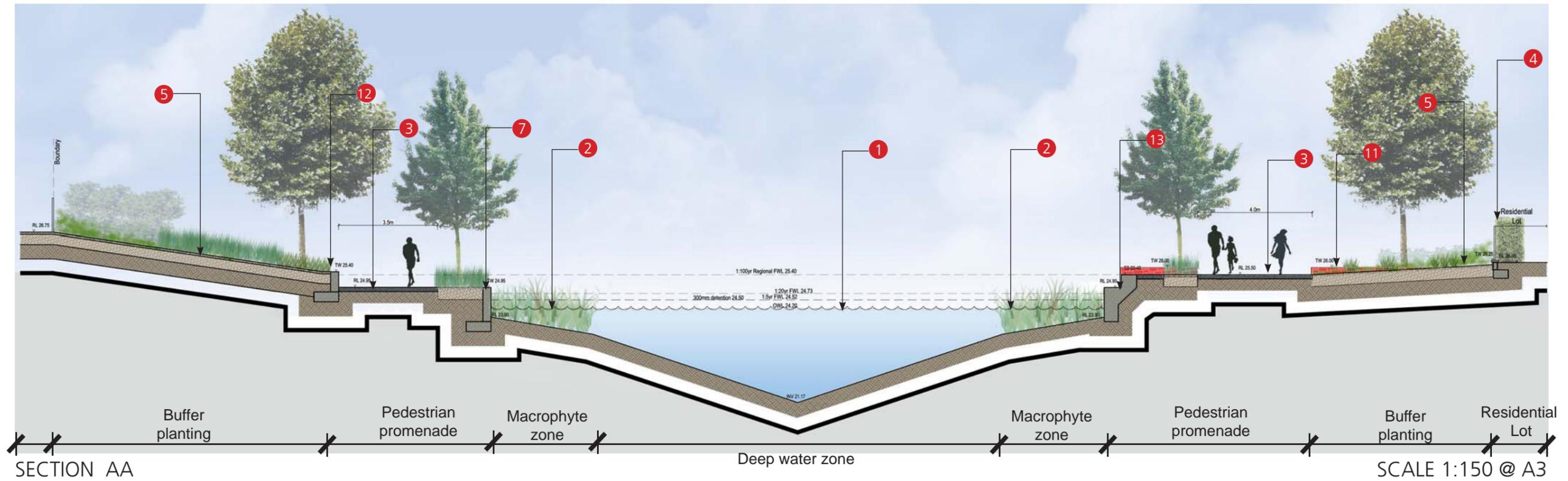
Pedestrian access to the water is provided through a series of connecting ramps from the upper levels of the roads and pedestrian bridge with a Public Art component traversing the water.



LEGEND

- | | |
|--|---|
| 1 Permanent water body | 11 Access ramps to lower promenade |
| 2 Water control weirs | 12 Stone Clad retaining walls to residential lot boundaries |
| 3 Timber viewing deck with Public Art Shelter | 13 Stone Clad retaining walls |
| 4 Pedestrian / cycle way bridge with Public Art element. | 14 Red feature blade walls |
| 5 Timber viewing deck with Cascade water feature | 15 Through site link |
| 6 Upper Level pedestrian promenade (Above 1:100 ARI) | 16 Turf breakout spaces |
| 7 Concrete terrace steps, stone clad planters & stairs | 17 Mass planting |
| 8 Lower Level pedestrian promenade | 18 Macrophyte planting to water edge |
| 9 Off form concrete retaining walls | 19 Granite pavers to thresholds |
| 10 Concrete egress stairs | |





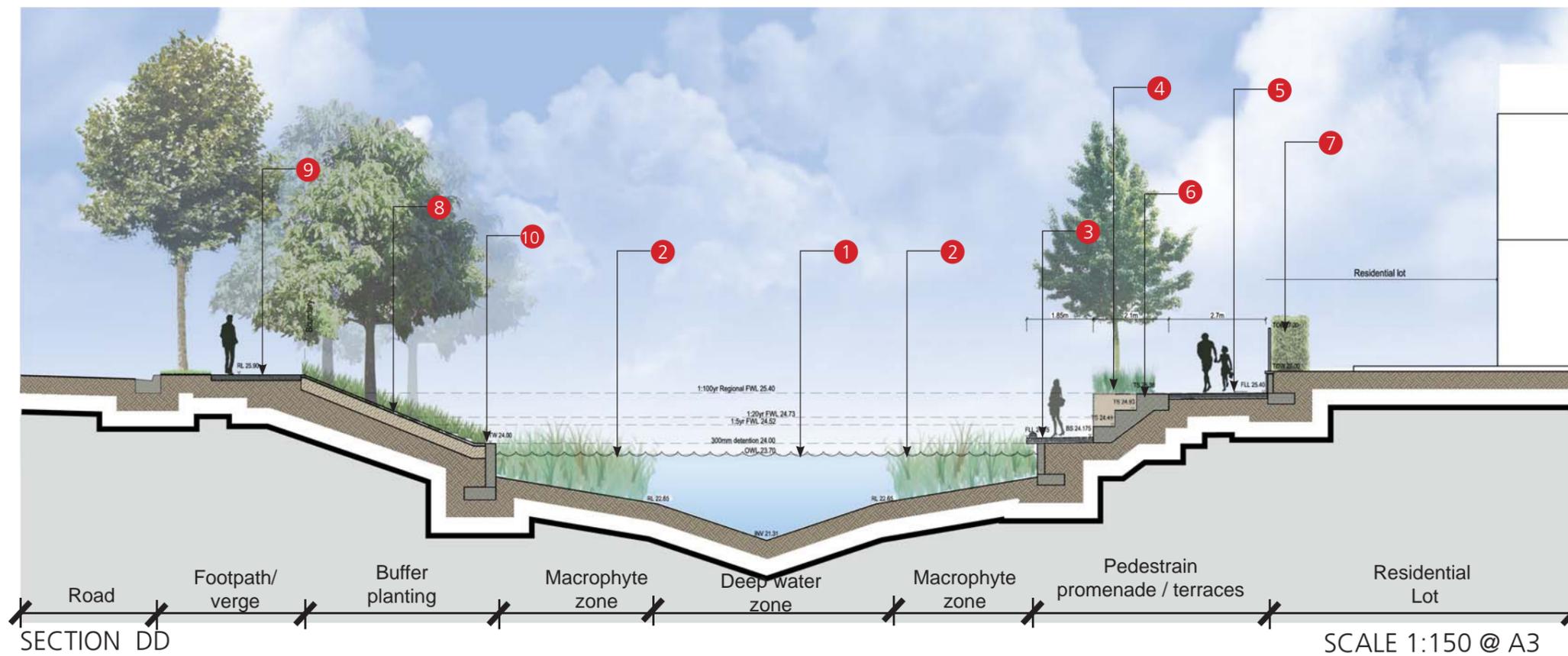
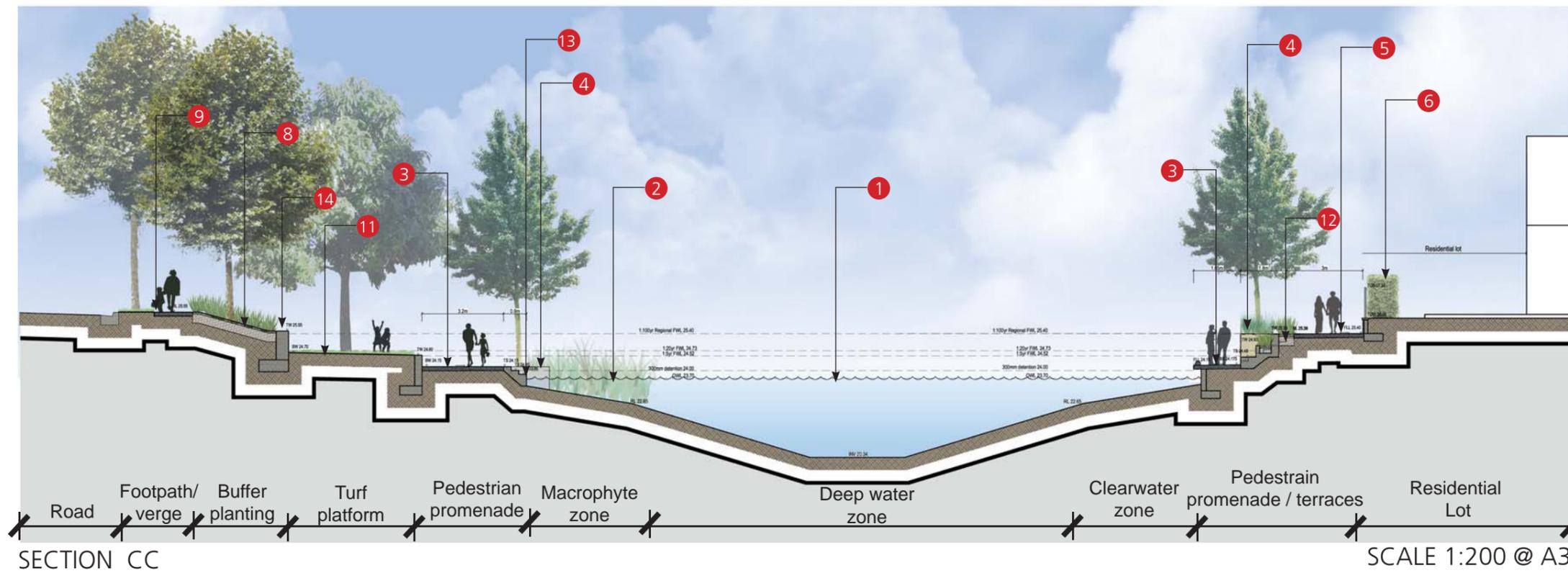
- LEGEND**
- ① Wetland deep water zone
 - ② Water quality macrophyte zone
 - ③ Water feature promenade
 - ④ Screening hedge to residential lot
 - ⑤ Mass planting
 - ⑥ Footpath
 - ⑦ Off form concrete retaining walls
 - ⑧ Turf platform / open space
 - ⑨ Concrete egress steps
 - ⑩ Turf viewing platform
 - ⑪ Red feature blade walls
 - ⑫ Stone clad retaining walls
 - ⑬ Seating Edge
- OWL - Operational Water Level
 FWL - Flood Water Level (ARI 1:100)



'WATERS EDGE' SECTIONS

LEGEND

- 1 Wetland deep water zone
- 2 Water quality macrophyte zone
- 3 Water feature promenade
- 4 Planter with deciduous tree species
- 5 Upper promenade
- 6 Terrace steps
- 7 Screening hedge to residential lot
- 8 Mass planting
- 9 Shared footpath / cycleway
- 10 Off form concrete retaining walls
- 11 Turf platform / open space
- 12 Internal planters to terrace steps
- 13 Egress steps
- 14 Stone clad retaining walls
- 15 Red feature blade walls



OWL - Operational Water Level
 FWL - Flood Water Level (ARI 1:100)



LEGEND

- 1 Wetland deep water zone
- 2 Water quality macrophyte zone
- 3 Berms
- 4 Engineered Inlet Flow diversion device
- 5 Sand Filter for Water Feature reticulation
- 6 Overflow weir / outlet device
- 7 Overland flow channel
- 8 1.8m high black palisade security fence
- 9 Maintenance access ramp
- 10 Off road Recreational shared zone
- 11 Off road Recreational shared zone
- 12 Corner Paved area linking Water's Edge viewing platform & paved corner
- 13 Water's Edge viewing platform and shade structure
- 14 Deep water viewing platform
- 15 Entry Plaza
- 16 Boardwalk over macrophyte zone
- 17 Shade structure with seating
- 18 Feature blade walls
- 19 Littoral planting zones
- 20 Mounding / Shrubs / mass planting
- 21 Native species buffer planting
- 22 Deciduous Trees
- 23 Existing Tree to be retained
- 24 Native Grasses
- 25 Turf / Open Space
- 26 Transmission tower and power line easement
- 27 1.8m high black palisade fence to existing lots



DESIGN INTENT

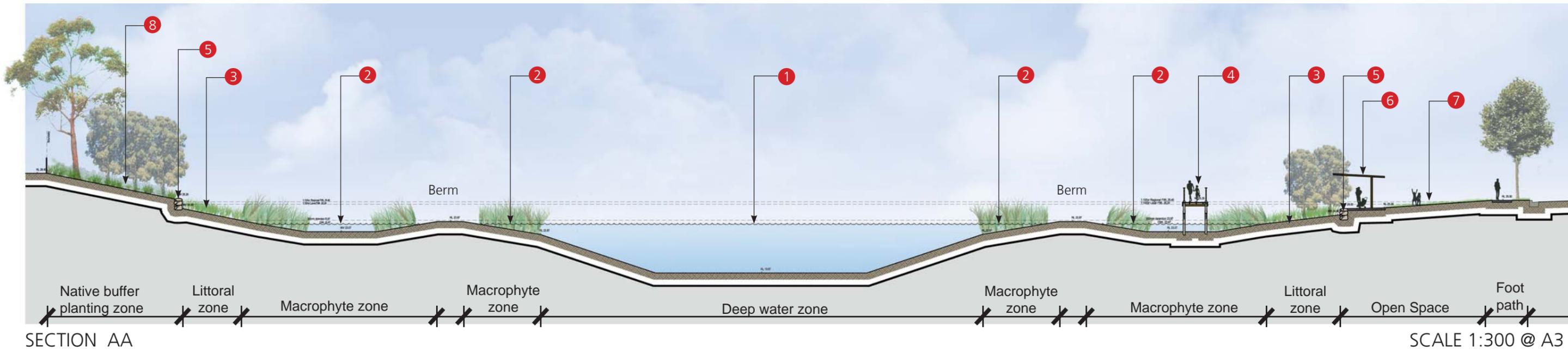
The wetland park or 'The Common' is the final component of the North Penrith's WSUD water quality treatment train. The primary function of the wetland is to improve water quality prior to entering the trunk drainage systems. Stormwater is directed through a series of shallow channels planted out with macrophytes to filter out impurities in the water such as nitrogen, phosphorous and pathogens.

The other essential ingredient for a successful wetland system is the requirement for a deep open water body. This water body has a dual function. While the depth and relative stillness of the water is crucial for the removal of suspended solids and heavy metals through the process of sedimentation it also provides the park with increased biodiversity through improved habitat creation, it also provides a quality landscape amenity for the local population to experience.

The landscape intent of this open space is to create an area for passive recreation and quiet contemplation. Accessibility is enhanced through the creation of a plaza and viewing platform to allow users with easy visual connectivity with the water and the park in general. The wetland edge treatments will be experienced along the peripheral footpath and timber boardwalk that allows for closer interaction with macrophyte plantings. The transition to the wetland planting is laid out as areas of littoral plantings which will create an interesting and varied landscape experience for the local community.

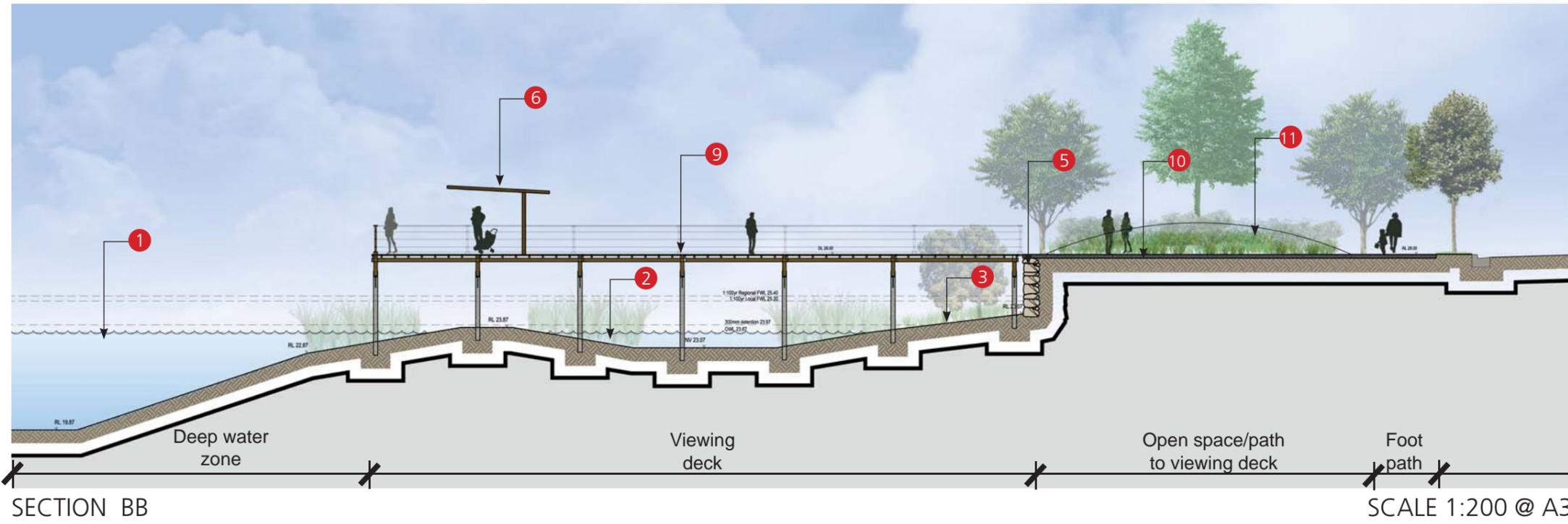
Additional features such as clearly defined entry points, feature blade walls, planted mounding, informal recreation areas, a shelter with BBQ facility and a strong connection to the residential lots will provide an attractive destination for all ages from the community.





SECTION AA

SCALE 1:300 @ A3



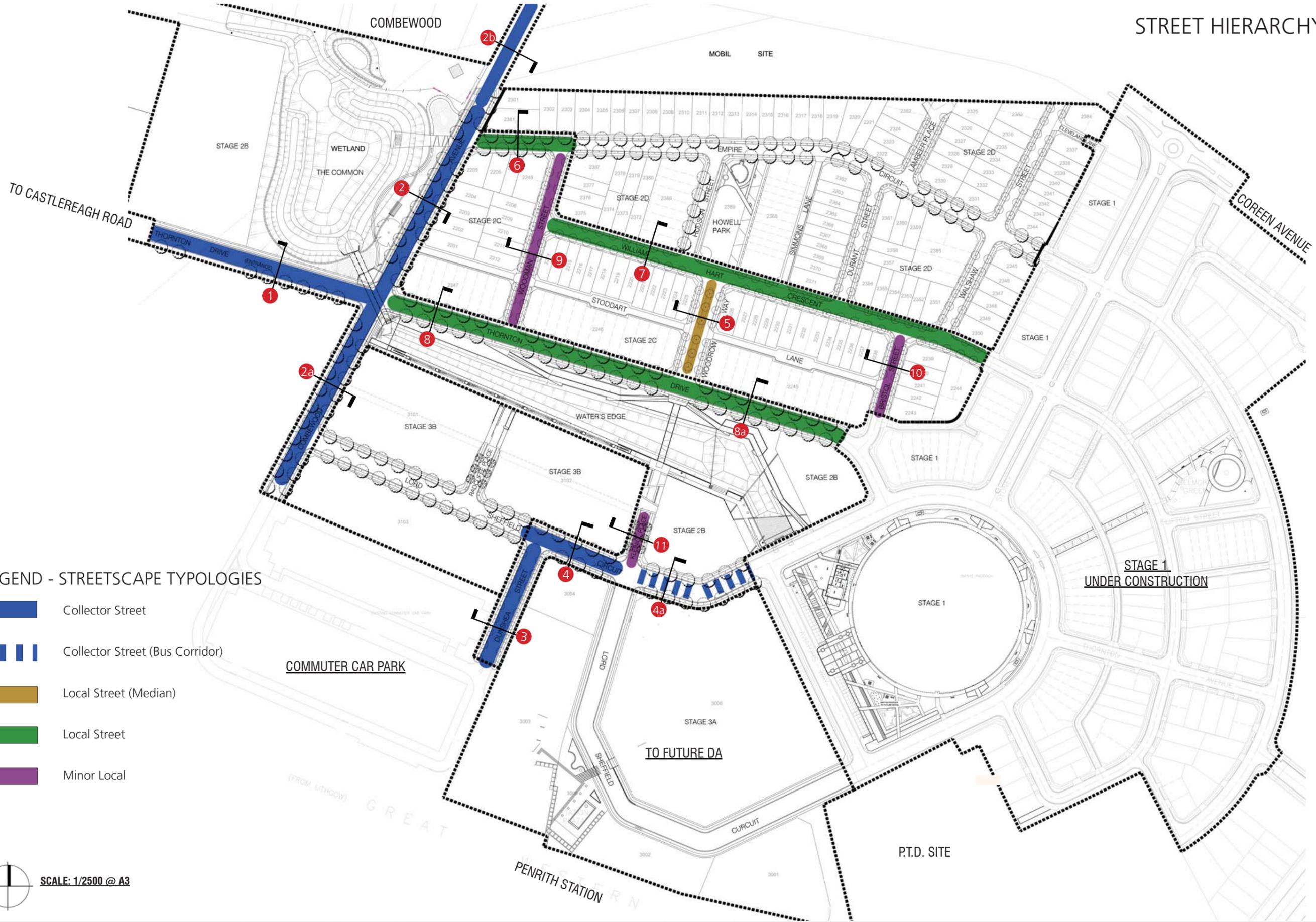
SECTION BB

SCALE 1:200 @ A3

- LEGEND**
- 1 Deep water zone
 - 2 Water quality macrophyte zones
 - 3 Littoral planting zone
 - 4 Boardwalk
 - 5 Stone wall
 - 6 Shade structure with seating
 - 7 Informal open space
 - 8 Native buffer planting zone
 - 9 Deep water viewing platform with shade structure
 - 10 Entry plaza
 - 11 Mounding / mass planting

- LEGEND**
- OWL - Operational Water Level
 - FWL - Flood Water Level (ARI 1:100)



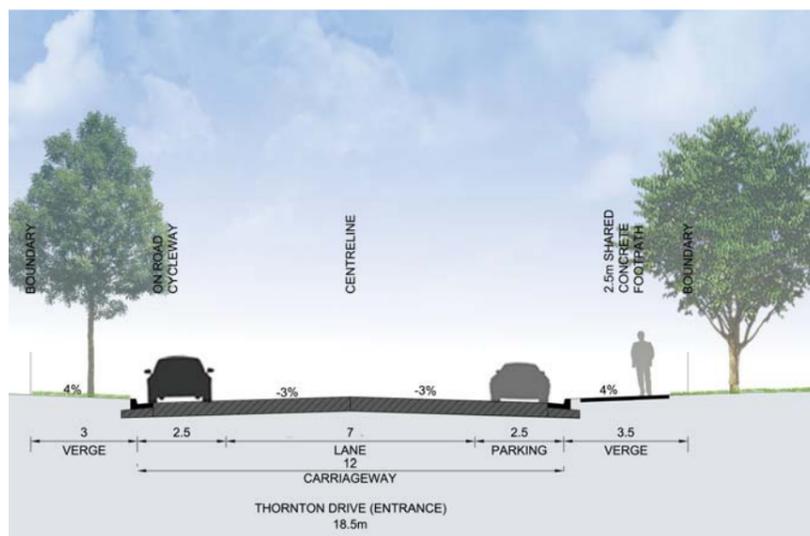


LEGEND - STREETScape TYPOLOGIES

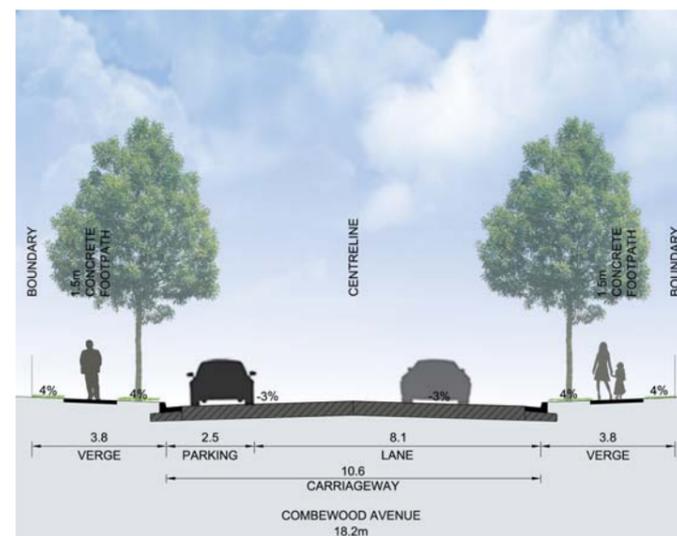
-  Collector Street
-  Collector Street (Bus Corridor)
-  Local Street (Median)
-  Local Street
-  Minor Local

 SCALE: 1/2500 @ A3

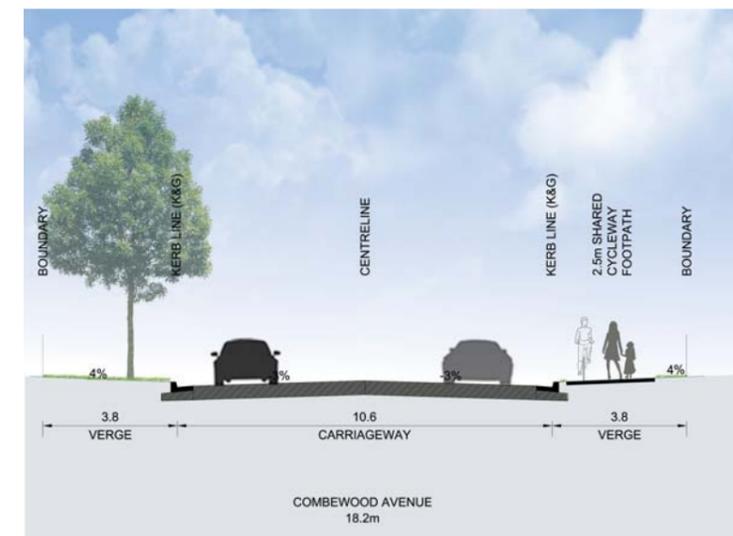




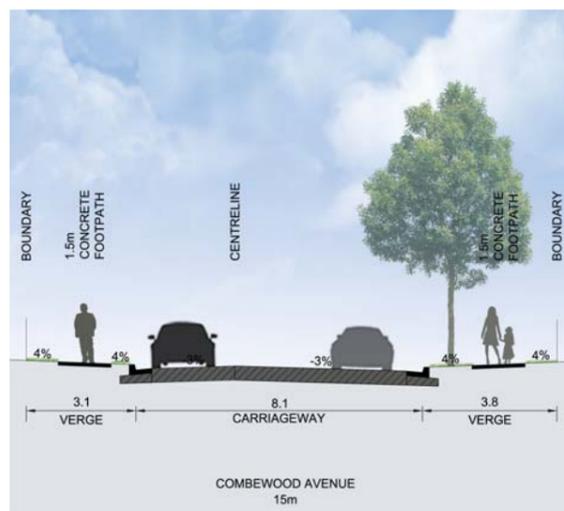
COLLECTOR STREET - THORNTON DRIVE ENTRANCE (SECTION 1)



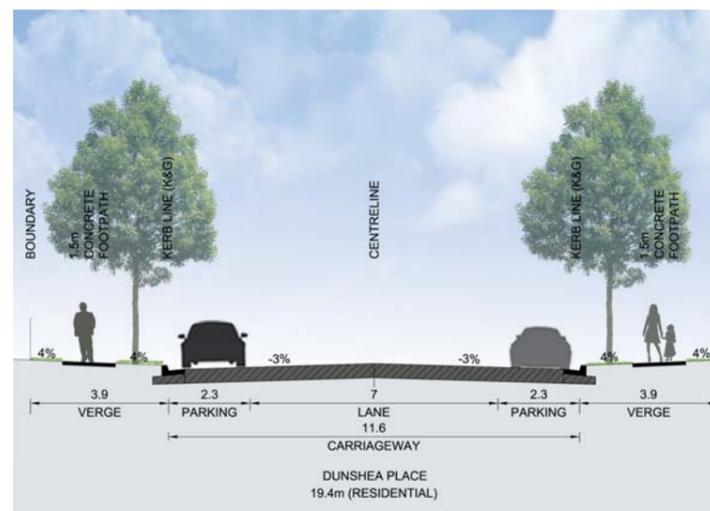
COLLECTOR STREET - COMBEWOOD AVENUE (SECTION 2)



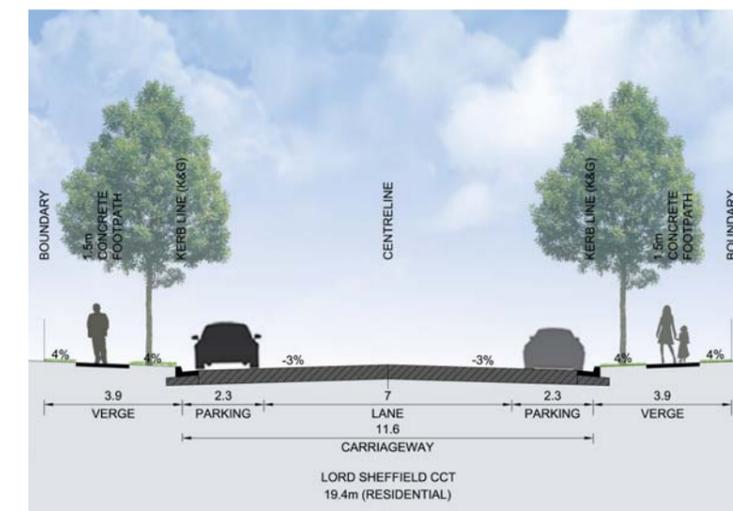
COLLECTOR STREET - COMBEWOOD AVENUE (SECTION 2a)



COLLECTOR STREET - COMBEWOOD AVENUE (SECTION 2b)



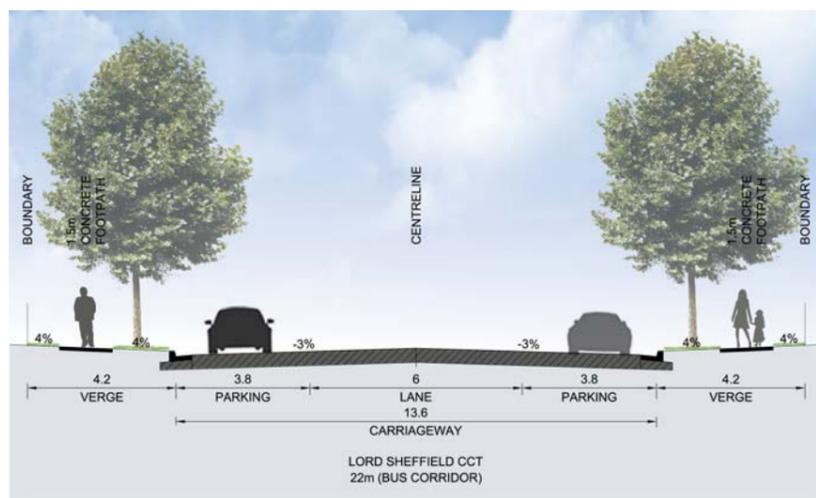
COLLECTOR STREET - DUNSHEA PLACE (SECTION 3)



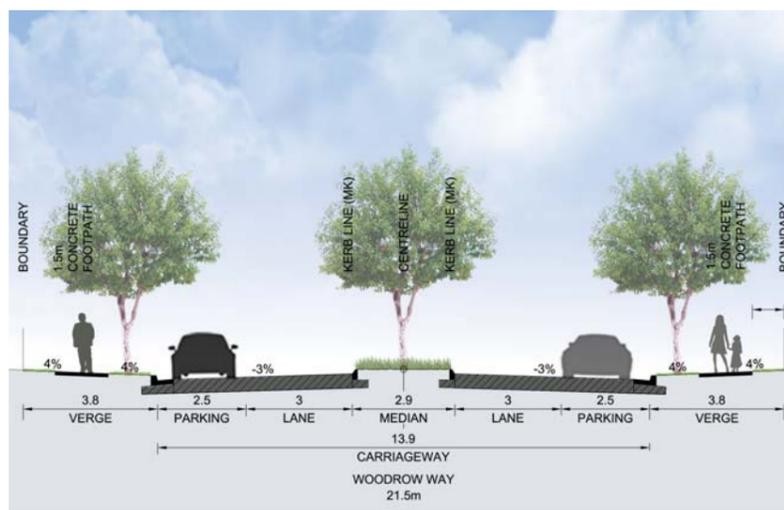
COLLECTOR STREET - LORD SHEFFIELD CIRCUIT (SECTION 4)

Note: For street tree species refer to street tree planting plan

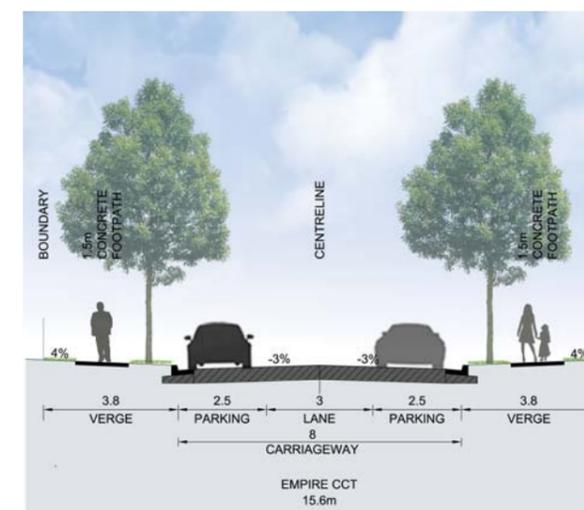




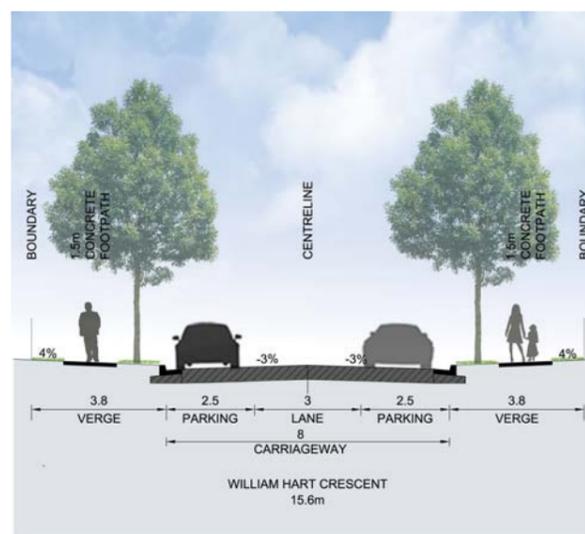
COLLECTOR STREET - BUS CORRIDOR
LORD SHEFFIELD CIRCUIT (SECTION 4a)



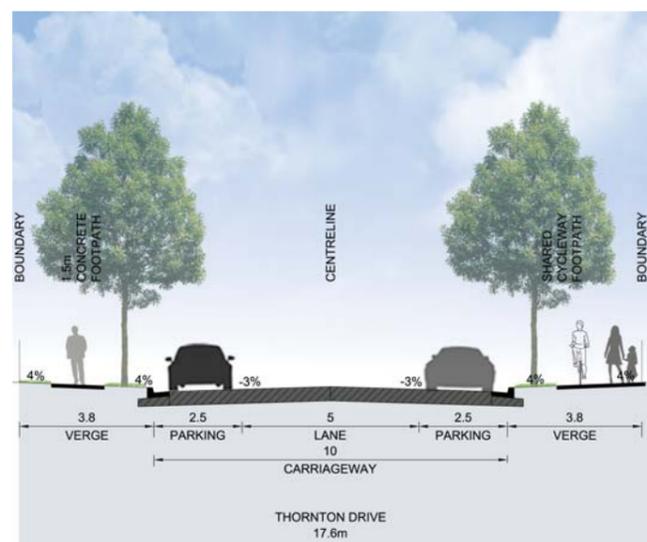
LOCAL STREET - MEDIAN
WOODROW WAY (SECTION 5)



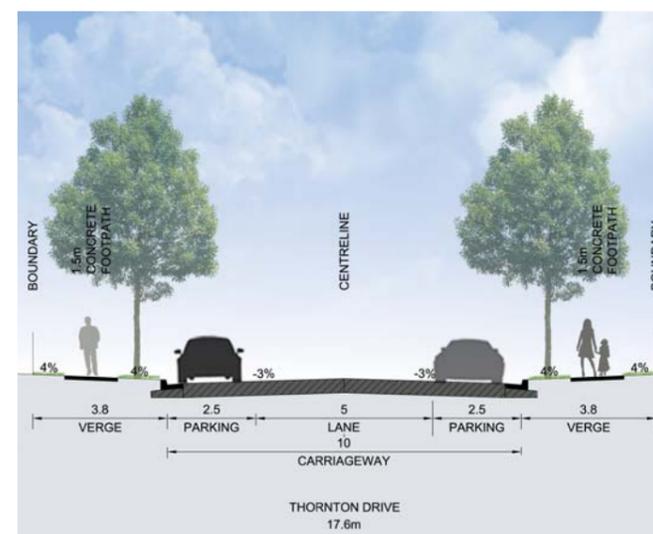
LOCAL STREET
EMPIRE CIRCUIT (SECTION 6)



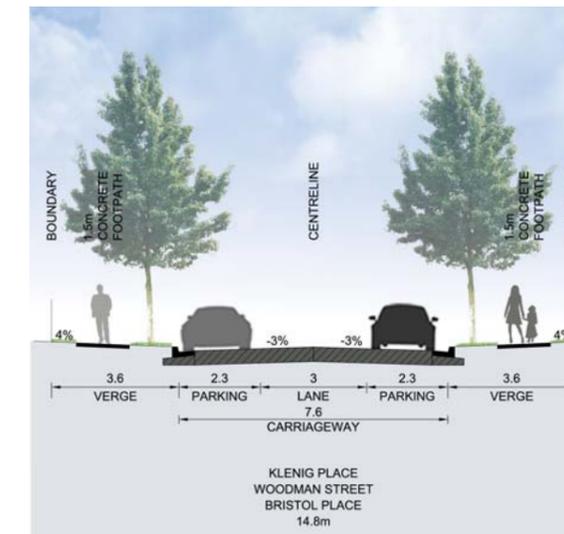
LOCAL STREET -
WILLIAM HART CRESCENT (SECTION 7)



LOCAL STREET - MEDIAN
THORNTON DRIVE (SECTION 8)



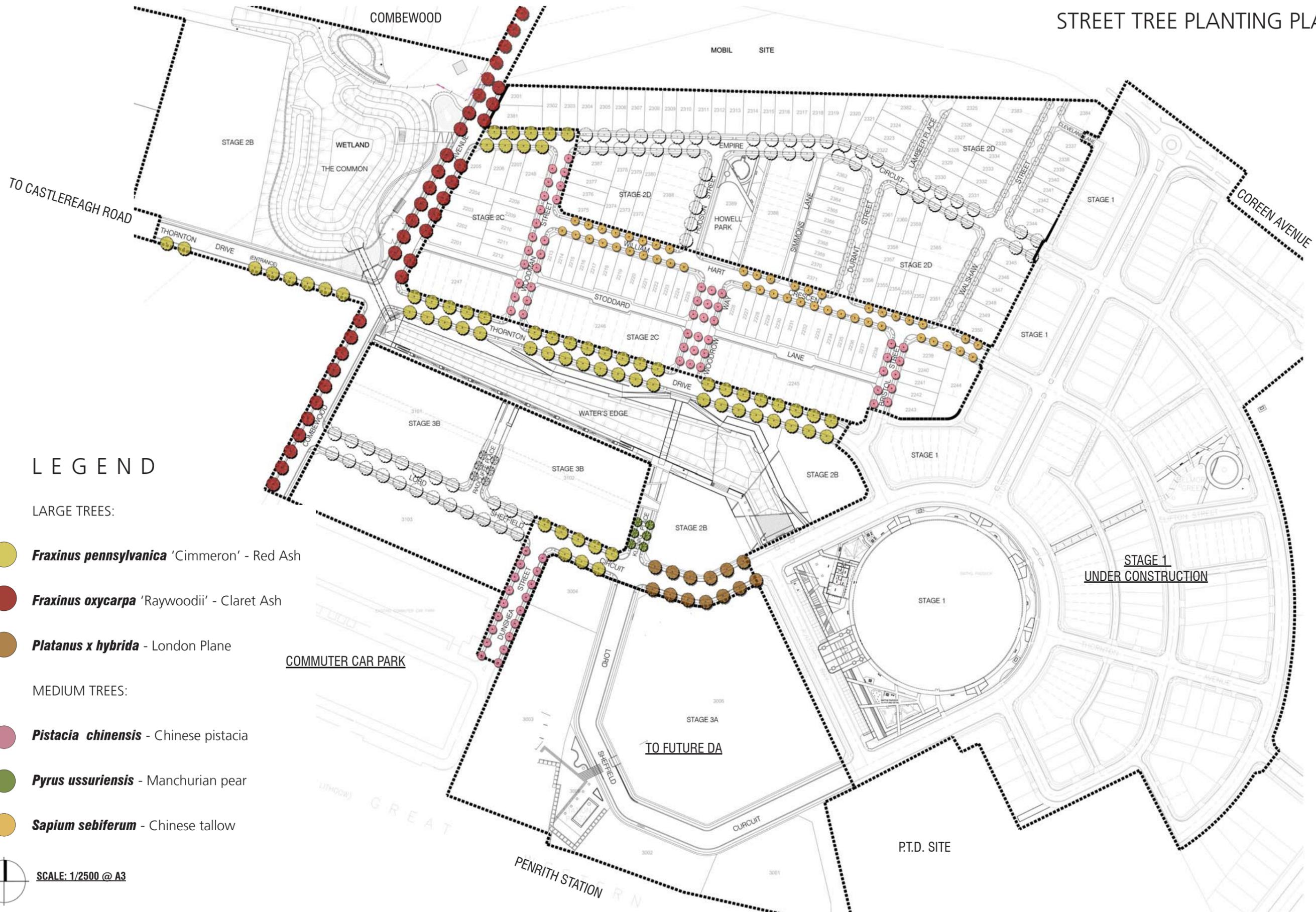
LOCAL STREET
THORNTON DRIVE (SECTION 8a)



MINOR LOCAL STREET
KLEINIG PLACE, WOODMAN STREET, BRISTOL PLACE
(SECTIONS 9, 10 & 11)

Note: For street tree species refer to street tree planting plan





LEGEND

LARGE TREES:

-  ***Fraxinus pennsylvanica*** 'Cimmeron' - Red Ash
-  ***Fraxinus oxycarpa*** 'Raywoodii' - Claret Ash
-  ***Platanus x hybrida*** - London Plane

MEDIUM TREES:

-  ***Pistacia chinensis*** - Chinese pistacia
-  ***Pyrus ussuriensis*** - Manchurian pear
-  ***Sapium sebiferum*** - Chinese tallow

 SCALE: 1/2500 @ A3





Fraxinus pennsylvanica 'Cim�am' Cimmeron
Red Ash
Height: 15m
Spacings: 10m (Min)
Location:
Lord Sheffield Circuit, Empire Circuit
& Thornton Drive



Fraxinus oxycarpa 'Raywoodii'
Claret Ash
Height: 15m
Spacings: 10m (Min)
Location:
Combewood Avenue



Pistascia chinensis
Chinese Pistacia
Height: 10m
Spacings: 7m (Min)
Location:
Bristol Street, Dunshea Street,
Woodman Street & Woodrow Way



Platanus x hybrida
London Plane
Height: 20m
Spacings: 12m (Min)
Location:
Lord Sheffield Circuit



Pyrus ussuriensis
Manchurian Pear
Height: 10m
Spacings: As Shown
Location:
Kleinig Place & Radcliffe Place



Sapium sebiferum
Chinese Tallow
Height: 10m
Spacings: 10m
Location:
William Hart Crescent



INDICATIVE PLANTING PALETTE

There will be a predominant focus on the appropriate mix of formal and native plant species used throughout the site. Overall, a leafy, deciduous character to the streetscapes will aid in the enforcement of a European styled village character. Exotic species will be used in certain specific locations -

- In Streetscapes where Penrith City Council will not accept larger natives;
- Where accent planting is required such as at the entry precincts, pedestrian crossing points and focal points within parks and civic spaces.

A structured approach to the planting design will occur to the more formal open spaces and neighbourhood parks, internal streetscapes and at the main entrances off Coreen Avenue. Open spaces and Public Domain footpaths will be bordered by a hierarchy of formal exotic species and native grasses and ground covers where appropriate to provide a more structured, defined look.

Open Space Trees Deciduous



Fraxinus pennsylvanica
Cimieron - Red Ash



Platanus x hybrida
London Plane



Populus simonii
Chinese Poplar



Pyrus calleryana
'Chanticleer'
Ornamental Pear



Quercus palustris
Pin Oak



Ulmus parvifolia
Chinese Elm

Open Space Trees Evergreen



Brachychiton populneus
Kurrajong



Casuarina glauca
Casuarina



Corymbia maculata
Spotted Gum



Eucalyptus amplifolia
Cabbage Gum



Eucalyptus moluccana
Grey Box



Eucalyptus tereticornis
Forest Red Gum



Magnolia grandiflora
Bull Bay



Melaleuca sp
Paperbark



Tristaniaopsis laurina
'Luscious' Water Gum



Waterhouseia floribunda
Weeping Lilly Pilly

Shrubs



Acmena smithii
'Hedgemaster'



Alternanthera dentata
Ruby Leaf Alternanthera



Buxus microphylla
Japanese Box



Callistemon citrinus
'Anzac'
Dwarf Bottlebrush



Grevillea 'Honey Gem'
Grevillea



Gardenia augusta 'Florida'
Gardenia



Lavandula denata
French Lavender



Murraya paniculata
Orange Jessamine



Viburnum odoratissimum
Sweet Viburnum



Westringia 'Wynyabbie Gem'
Coastal Rosemary

Grasses & Ground Covers



Beschorneria yuccoides
Mexican Lily



Dianella 'Little Jess'
Paroo Lily



Dietes grandiflora
Wild Iris



Hymenocallis littoralis
Swap Lily



Juniperus conferta
Shore Juniper



Liriope muscari 'Evergreen'
Giant' Turf Lily



Lomandra 'Tanika'
Mat Rush



Pennisetum alopecuroides
Swamp Foxtail



Poa labillardieri 'Eskdale'
Tussock Grass



Trachelospermum jasminoides
Star Jasmine



Viola hederacea



INDICATIVE PLANTING SCHEDULE:

THE COMMON (WETLAND PARK)					
SYM	BOTANICAL NAME	COMMON NAME	HEIGHT	SPACING	POT SIZE
DECIDUOUS TREES					
	Fraxinus pennsylvanica 'Cimarron'	Red Ash	15m	As Shown	200L
	Populus simonii	Chinese Poplar	20m	As Shown	200L
	Pyrus calleryana 'Chanticleer'	Ornamental Pear	7m	As Shown	200L
	Quercus palustris	Pin Oak	20m	As Shown	400L
TREES (Littoral Zones & Embankments)					
	Casuarina glauca	She Oak	15m	As Shown	45L
	Eucalyptus amplifolia	Cabbage Gum	20m	As Shown	75L
	Eucalyptus tereticornis	Forest Red Gum	20m	As Shown	75L
	Melaleuca decora	White Feather Honey Myrtle	7m	As Shown	75L
	Melaleuca quinquenervia	Broad Leaved Paperbark	15m	As Shown	75L
	Melaleuca styphelioides	Prickly-Leaved Paperbark	12m	As Shown	75L
SHRUBS (Littoral Zones & Embankments)					
	Acacia parramattensis #	Sydney Green Wattle	3-4m	As Shown	75mm Tube
	Bursaria spinosa	Blackthorn	3m	As Shown	5L
	Callistemon citrinus 'Anzac'	Drawf Bottlebrush	1.0m	4m2	5L
	Callistemon viminalis 'Little John'	Drawf Bottlebrush	1.0m	4m2	5L
	Dodenaia viscosa 'Purpurea'	Purple Hop Bush	2m	2m2	25L
	Grevillea 'Honey Gem'	Grevillea	3m	1m2	25L
	Grevillea 'Misty Pink'	Grevillea	3m	1m2	25L
	Grevillea 'Scarlet Sprite'	Grevillea	1m	3m2	25L
	Leptospermum 'Cardwell'	Tea Tree	2m	2m2	150mm
	Melaleuca thymifolia	Honey Myrtle	0.5m	5m2	150mm
GRASSES, SEDGES, RUSHES & GROUND COVERS (Littoral Zones & Embankments)					
	Carex appressa	Tall Sedge	0.6m	5/m ²	125x50x50
	Dianella longifolia var longifolia	Smooth Flax Lily	0.5m	7/m ²	125x50x50
	Hardenbergia violacea	Native Violet	0.8m	3m2	75mm Tube
	Hibbertia scandens	Snake Vine	0.3m	4m2	75mm Tube
	Isolepis nodosa	Club Rush	0.7m	5/m ²	75mm Tube
	Juncus usitatus	Common Rush	0.7m	7/m ²	75mm Tube
	Lomandra longifolia	Mat Rush	0.7m	7/m ²	75mm Tube
	Lomandra longifolia 'Katrinus'	Mat Rush	0.7m	7/m ²	75mm Tube
	Lomandra 'Tanika'	Mat Rush	0.7m	7/m ²	75mm Tube
	Microlaena stipoides var stipoides	Weeping Grass	0.5m	7/m ²	125x50x50
	Pennisetum alopecuroides 'Nafra'	Swamp Foxtail	0.7m	7/m ²	75mm Tube
	Poa labillardieri 'Eskdale'	Tussock Grass	0.6m	9/m ²	75mm Tube
MACROPHYTES * (Water Quality Basin)					
	Baumea articulata	Jointed Twig Rush	0.6m	5/m ²	125x50x50
	Baumea rubiginosa	Soft Twig Rush	0.6m	5/m ²	125x50x50
	Bolboschoenus fluviatilis	Stream Club Rush	1.5m	5/m ²	125x50x50
	Carex appressa	Tall Sedge	0.6m	5/m ²	125x50x50
	Eleocharis acuta	Common Spike Rush	0.6m	5/m ²	125x50x50
	Isolepis inundata	Swamp Club Rush	0.7m	5/m ²	125x50x50
	Juncus usitatus	Common Rush	0.7m	7/m ²	125x50x50
	Schoenoplectus validus	River Club Rush	1.0m	5/m ²	125x50x50

- Denotes that this stock is to be provenance stock sourced from the local area to maintain the genetic integrity of the threatened native vegetation communities.

* - Denotes that this stock is to be coordinated with detention basin engineers for suitability for water quality / filtration purposes.

WATERS EDGE					
SYM	BOTANICAL NAME	COMMON NAME	HEIGHT	SPACING	POT SIZE
DECIDUOUS TREES					
	Fraxinus pennsylvanica 'Cimarron'	Red Ash	15m	As Shown	200L
	Largerstoemia indica	Crepe Myrtle	12m	As Shown	200L
	Plantanus x hybrida	London Plane	20m	As Shown	200L
	Populus simonii	Chinese Poplar	20m	As Shown	200L
	Pyrus calleryana 'Chanticleer'	Ornamental Pear	7m	As Shown	200L
	Ulmus parvifolia	Chinese Elm	15m	As Shown	200L
EVERGREEN TREES					
	Brachychiton populneus	Kurrajong	20m	As Shown	100L
	Cupaniopsis anacardiodes	Tuckeroo	10m	As Shown	100L
	Eucalyptus amplifolia	Cabbage Gum	20m	As Shown	100L
	Eucalyptus moluccana	Grey Box	20m	As Shown	100L
	Eucalyptus tereticornis	Forest Red Gum	20m	As Shown	100L
	Hymenosporum flavum	Native Frangipani	10m	As Shown	100L
	Magnolia grandiflora	Bull Bay	15m	As Shown	100L
	Tristaniopsis laurina 'Luscious'	Water Gum	12m	As Shown	100L
	Waterhousia floribunda	Weeping Lilly Pilly	15m	As Shown	100L
SHRUBS					
	Acmena smithii 'Hedgemaster'	Lilly Pilly	1m	500mm	25L
	Alternanthera dentata	Ruby Leaf Alternanthera	1.5m	300mm	200mm
	Callistemon citrinus 'Anzac'	Drawf Bottlebrush	1.0m	4m2	5L
	Callistemon viminalis 'Better John'	Drawf Bottlebrush	1.0m	4m2	5L
	Callistemon 'Mauve Mist'	Bottlebrush	2.0m	3m2	5L
	Euphorbia characias 'wulfenii'	Spurge	1.5m	3m2	5L
	Grevillea 'Misty Pink'	Grevillea	3m	1m2	25L
	Grevillea 'Honey Gem'	Grevillea	3m	1m2	25L
	Lavandula dentata	French Lavenda	1m	300mm	5L
	Melaleuca thymifolia	Honey Myrtle	0.5m	5m2	150mm
	Murraya paniculata	Orange Jessamine	3m	750mm	25L
	Syzygium sp.	Lilly Pilly	3m	1.0m	25L
	Viburnum odoratissimum	Sweet Viburnum	6m	500mm	25L
	Westringia sp.	Coastal Rosemary	1m	500mm	25L
GRASSES & GROUND COVERS					
	Agapanthus sp.	Agapanthus	0.6m	5/m ²	150mm
	Cerastium tomentosum'	Snow in Summer	0.3m	5/m ²	150mm
	Dianella 'Breeze'	Paroo Lily	0.5m	7/m ²	75mm Tube
	Dianella 'Wyeena'	Paroo Lily	0.6m	5/m ²	150mm
	Dietes grandiflora	Wild Iris	0.6m	7/m ²	75mm Tube
	Hardenbergia 'Meema'	Native Violet	0.8m	3m2	150mm
	Hibbertia scandens	Snake Vine	0.3m	4m2	150mm
	Juniperus conferta	Shore Juniper	0.3m	4m2	200mm
	Liriope muscari 'Just Right'	Turf Lily	0.5m	5/m ²	150mm
	Liriope muscari 'Evergreen Giant'	Turf Lily	0.7m	5/m ²	150mm
	Lomandra longifolia 'Nyalla'	Mat Rush	0.7m	7/m ²	75mm Tube
	Lomandra longifolia 'Tanika'	Mat Rush	0.7m	7/m ²	75mm Tube
	Pennisetum alopecuroides 'Nafra'	Swamp Foxtail	0.7m	7/m ²	75mm Tube
	Phormium sp'	Flax	0.7m	5/m ²	75mm Tube
	Poa labillardieri 'Eskdale'	Tussock Grass	0.6m	9/m ²	75mm Tube
	Trachelospermum jasminoides	Star Jasmine	0.6m	5/m ²	150m
MACROPHYTES * (Detention Canal Edge)					
	Baumea juncea	Jointed Twig Rush	1.2m	5/m ²	125x50x50
	Bolboschoenus cardwellii	Sea Club Rush	1.0m	5/m ²	125x50x50
	Carex appressa	Tussock Sedge	0.8m	5/m ²	125x50x50
	Eleocharis acuta	Common Spike Rush	0.6m	5/m ²	125x50x50
	Gahnia sieberena	Sawgrass Sedge	2.0m	5/m ²	125x50x50
	Juncus kraussii	Sea Rush	0.7m	5/m ²	125x50x50

* - Denotes that this stock is to be coordinated with detention basin engineers for suitability for water quality / filtration purposes.



North Penrith precinct is widely regarded as a unique setting within the greater urban fabric. In determining the sites 'Genus Loci' the landscape design principles that utilise play - colour, form and materials will be celebrated to create North Penrith with a sense of place which is wholly in keeping with Landcom objectives and guidelines and conducive to the wider community.

The materials to be selected have been carefully considered against the site characteristics and needs of the spaces created. The materials palette must reflect a special sense of identity which is unique to North Penrith.

It is important that the landscape design philosophy reflects, wherever possible, this uniqueness. It is also very important that design solutions need to have a sense of both the formal that is in keeping with the village centre and the parkland character as seen throughout the main body of the development site and the more natural and informal celebrating the remaining areas of remnant endangered forest communities around Thornton Hall to the east.

Drawing together a cohesive design strategy from this juxtaposition of design styles calls upon a more sensitive and understated treatment. It is not simply a case of whatever is deemed appropriate for whichever location but rather an cohesion of site specific materials used in similar but distinct ways. In natural areas materials need to be carefully selected to harmonise with their surroundings and the materials utilised throughout the remainder of the development.

- Waters Edge and surrounds will, by being respectful to the materials utilised in Stage 1 of the development, incorporate both the traditional and contemporary materials such as coloured and lightly exposed concrete along with bands of Porphyry sets and large format granite paver. Sandstone cladding to the surrounding retaining walls and planter walls that punctuate the southern edge of the water feature will interconnect seamlessly with the more traditional timber viewing decks located at either end of the space. The large threshold spaces that signify the location of major entry pathways into the space will be enhanced with higher quality materials such as exfoliated granite pavers and large format concrete pavers respectively. The incorporation of playful patterns and the continuation of the red wall theme will be made from coloured concrete and mosaic tile inlays.

- The Common will comprise of mainly the same mix of traditional and contemporary materials ranging from cast in situ coloured concrete pavements either acid washed or lightly exposed with reduced usage of porphyry sett banding. Block work walls clad with red ceramic tiles create a back drop to the corner plaza consisting of granite and porphyry sets. Rough formed sandstone blocks will retain the open spaces from the wetland while the more traditional material of timber will adorn the deep water viewing deck and macrophyte zone boardwalk. By utilising these more raw materials the design will help to enhance the strong village character which is projected through the use of deciduous street tree planting while being located within a contemporary development.

Generally, the wall stone shall be predominantly sandstone which can be laid in either random or coursed linear fashion. Concrete works will be clean lined and pale in colour to denote contrast. Pavements will be either granite or concrete and porous in function where possible. The timber, where feasible, should be hardwood from sustainable forests that turns a silver colour during the weathering process. The steel, depending upon its application, shall be stainless, galvanised or painted. Cor-ten steel can also be used for certain minor components through the parks. It is intended that these materials in their various forms will provide a unity between different landscape components.

There are also opportunities for bright, idiosyncratic elements such as red enamel or red ceramic tile inlay or cladding to highlight walls. This will provide an continuing colour theme throughout the development and provide an interesting contrast when used in conjunction with the concrete walls or the more natural stone-work.

Indeed, the components chosen for use throughout the landscape theming process at North Penrith comprise, where possible, local materials such as stone, timber (limited due to maintenance requirements), concrete and steel. These shall be used in a variety of ways to reinforce the character of the park or space whilst being practical, low maintenance and cost-effective.



The site furniture palette will reflect the design intent of each individual precinct.

Design principles will be:

1. Furniture palette to be robust and low maintenance.
2. Furniture palette to be modern in design.
3. Possible incorporation of public art into components.

