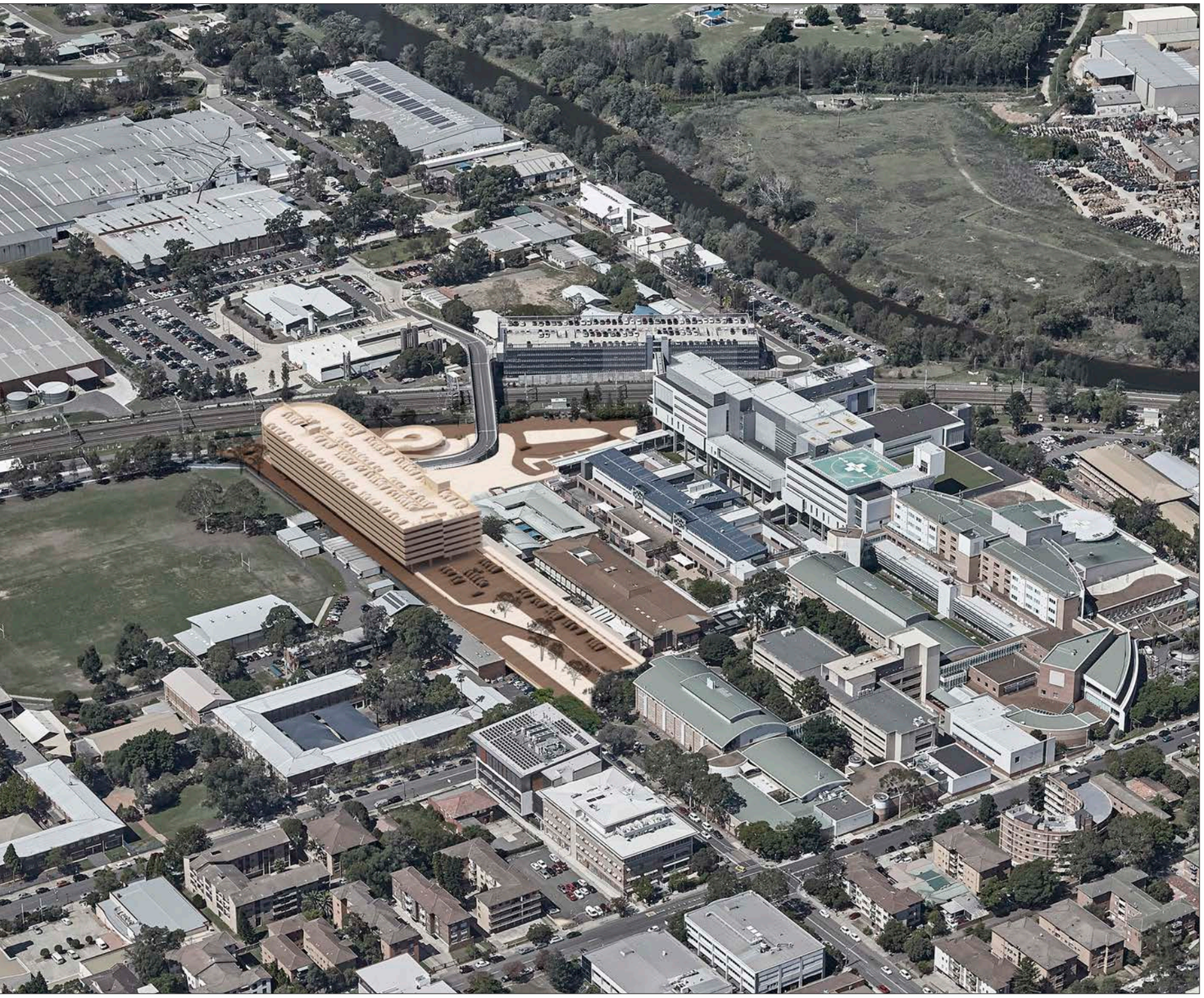
NSW GOVERNMENT Health Infrastructure

CLOUSTON associates

Health Infrastructure NSW
Liverpool Health and Academic Precinct
Multistorey Car Park SSDA
Landscape Design Report

S19-0011 R-600

Issue F • 06/05/2020



Cover Image: Artists impression of new carpark courtesy of F+P Architects

Inside Cover: Aerial imagery showing new MSCP

CLOUSTON associates

LIVERPOOL HEALTH & ACADEMIC PRECINCT MULTI STOREY CARPARK SSDA - LANDSCAPE DESIGN REPORT

Client:
Health Infrastructure NSW

NSW GOVERNMENT | Health Infrastructure

Prepared by

CLOUSTON Associates
Landscape Architects • Urban Designers • Landscape Planners
65-69 Kent Street • Sydney NSW 2000
PO Box R1388 • Royal Exchange NSW 1225 • Australia
Telephone +61 2 8272 4999 • Facsimile +61 2 8272 4998
Contact: Crosbie Lorimer
Email • sydney@clouston.com.au
Web • www.clouston.com.au

Document	Issue	Date	Status	Reviewed	Verified	Validated
S19-0011 R-600	A	06/06/2019	DRAFT	MOD		
S19-0011 R-600	B	13/12/2019	DRAFT FOR REVIEW FINAL DRAFT	JG	MOD	
S19-0011 R-600	C	11/02/2020	FINAL	JG	AR	
S19-0011 R-600	D	21/02/2020	FINAL	JG	AD	CL
S19-0011 R-600	E	30/03/2020	FINAL	AD	MOD	MOD
S19-0011 R-600	F	06/05/2020	FINAL	AD	MOD	MOD

Note: this document is preliminary unless validated.

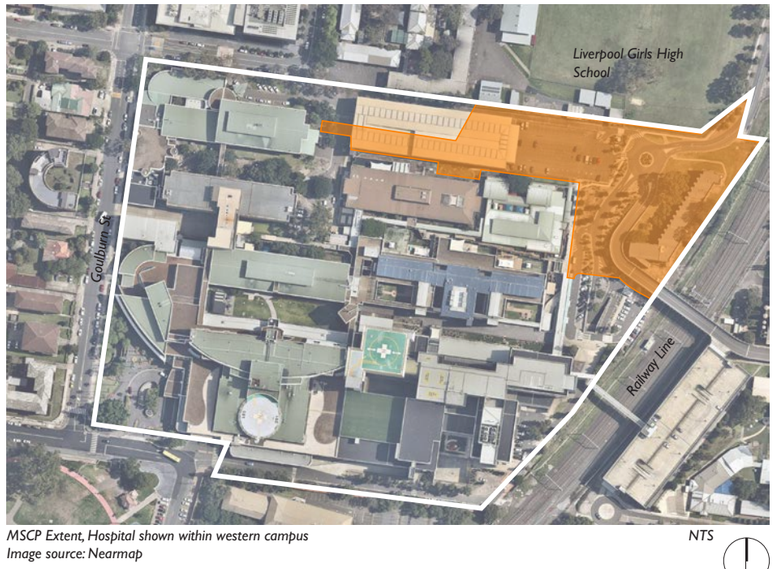
SEARS REQUESTS

This report outlines the landscape design considerations for the Multi Storey Carpark works. It covers design principles, the SEAR's requirements and associated plans and graphics.

SEARS Requirements	Relevant Report Pages
Provide a detailed site-wide landscape strategy, including details of the number of trees to be removed and the number of trees to be planted on the site.	Page 5-6 & 10 Refer also to A1 drawings
Landscape architectural drawings showing key dimensions, RLs, scale bar and north point, including:	Page 7-9 Refer also to A1 drawings
Landscape architectural plans at appropriate scale, with detail of new and retained planting, shade structures, materials and finishes proposed	Page 7-9 Refer also to A1 drawings
Plans identifying significant trees or other vegetation to be removed and retained on the site	Page 14 Refer also to A1 drawings
Details of the native vegetation community (or communities) and native plant species that once occurred in this location	Page 13
Specification that any landscaping will use a diversity of local provenance native species (trees, shrubs and groundcovers) from the native vegetation community (or communities) that once occurred in this location to improve biodiversity	Page15 Refer also to A1 drawings
Identification of any trees proposed to be removed and replaced	Page 14 Refer also to A1 drawings

LOCATION AND CONTEXT

Liverpool Hospital location *NTS*



MSCP Extent, Hospital shown within western campus
Image source: Nearmap

NTS

Aerial view looking southwest - Image source: Skyview

Location

Liverpool Hospital is located within the Liverpool Central Business District (CBD), on the corner of Elizabeth Street and Goulburn Streets, Liverpool. The Hospital includes land east and west of the Main Southern Railway, which forms an eastern and western campus. The proposed works are located in the northern portion of the western campus which is currently occupied by an existing 4 storey car park and at-grade car parking. The site is legally described as Lot 501 in DP1165217.

The application seeks consent for the construction of a multi storey car park, connections to the existing road network and associated landscaping. A detailed project description is provided by Ethos Urban within the EIS.

Context

The proposed multistory carpark (MSCP) site works is within the boundaries of the Liverpool Hospital campus, against the northern boundary beside Liverpool Girls High School and along the eastern side adjacent to the train line.

Extent of works

The MSCP works are located on the north eastern side of the main western Hospital campus. The primary scope of works includes:

- Demolition of the existing P4 carpark
- Construction of a new multistorey carpark
- Construction of a new on-grade carpark
- Associated Services and infrastructure works
- Associated Landscape works (this document)

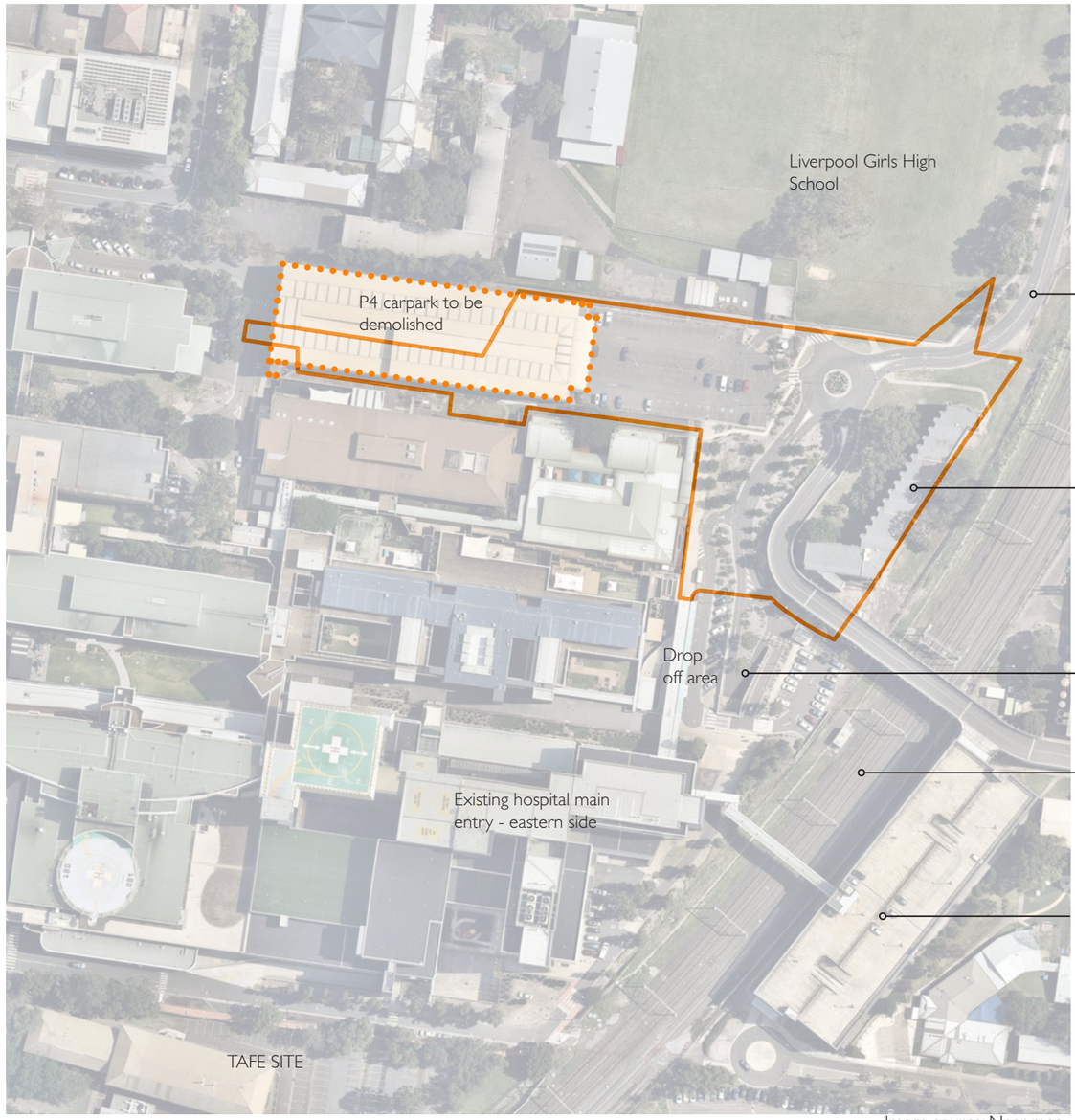


Image source: Near map

1:2000 @A3

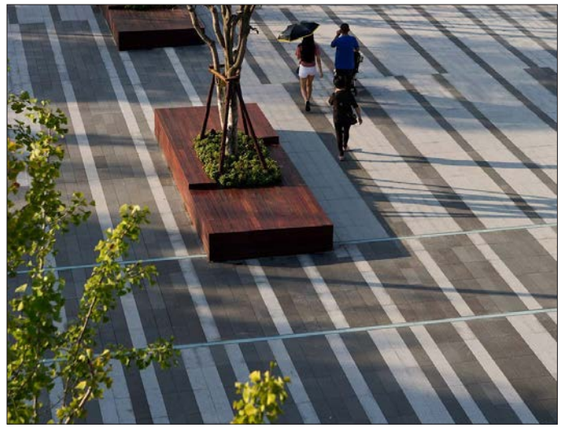
0 20 40 60 100m

DESIGN PRINCIPLES

There are four main masterplan principles guiding the landscape design:

Patient focused

- Make patient's hospital stay as stress free as possible.
- Give patients, visitors and staff opportunities for respite in garden areas.
- Maximise external landscape indoor / outdoor connections and views.
- Provide as many green spaces as possible. Preferably 70% green to 30% hard.



Campus wide integration

- Provide a clear identity to the public domain.
- Utilise a consistent palette of materials for the public domain areas of the hospital.
- Retain and protect existing significant trees where possible.
- Connect to the wider public domain of the Liverpool CBD.

Circulation & wayfinding

- Make it easy to find your way around the hospital.
- Create clear and legible pedestrian arrival and drop off areas.
- Provide a series of placemaking elements including external views, courtyards and artworks to aid internal navigation.
- Capitalise upon public transport and pedestrian arrival.
- Provide high quality active transport options.

Open and connected

- Provide summer shade and winter sun where possible to courtyards and external spaces.
- Enhance the site's environmental values.
- Connect visually and physically to existing public spaces such as Bigge Park and Liverpool Girls High school.

LANDSCAPE DESIGN STATEMENT

The Multi Storey Carpark and associated works provides an opportunity to integrate a new courtyard space within the Liverpool Hospital campus. The terraced courtyard creates an attractive entry to the hospital and helps to soften the built form of the MSCP. The design of the courtyard has been based around the principles and landscape outcomes listed below.

Patient focussed

Green immersion

There are limited areas of open and green space on the Hospital campus. One of the design objectives is to provide respite spaces for patients and staff.

People arriving at the hospital will be greeted with the curvilinear form of the carpark's green coloured facade treatment, and at ground level a northern facade of climbing plants growing on the high tensile wire mesh softens the built form of the new carpark.

The new courtyard provides a range of places to sit including seating walls, lawn areas, individual and group seating opportunities.

Campus wide integration

Planting

Where possible existing planting has been retained. New planting will provide screening to the railway line, provide a green setting to the hospital arrival.

The planting is comprised of a selection of robust and hardy grasses, shrubs and small trees. These have been selected for their ability to survive in relatively difficult locations, and ability to do well in Western Sydney.

Making circulation easy

Vehicle movements

The majority of visitors to the site will travel by vehicle along Burnside Drive where they will arrive at the drop off area outside the existing entry. Staff will continue to use the multi storey carpark on the eastern side of the railway line.

To assist drivers in wayfinding, the roadway surfacing and signage will guide drivers to the Hospital drop off area.

Pedestrian movements

Pedestrian movements will be generated by the location of the main lift tower and pay station.

The car park connects to the main pedestrian thoroughfare on site and will be signed and well lit at night.

Pedestrian movements into and out of the site are likely to be predominantly between the hospital and Warrick Farm Station.

Open and connected

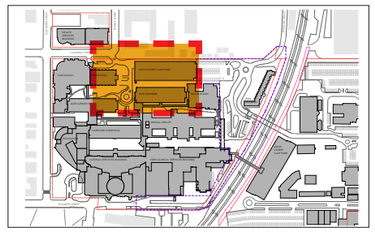
Crime prevention through environmental design

The design has considered safety for visitors and pedestrians. In particular the pedestrian route between the Hospital and lift tower, pay station, access stairs and the route to Warrick Farm train station. Planting has been kept to low shrubs and ground covers to maintain clear lines of sight with existing trees retained. Planting will be kept low around road intersections to ensure clear visibility for drivers.

Maintenance

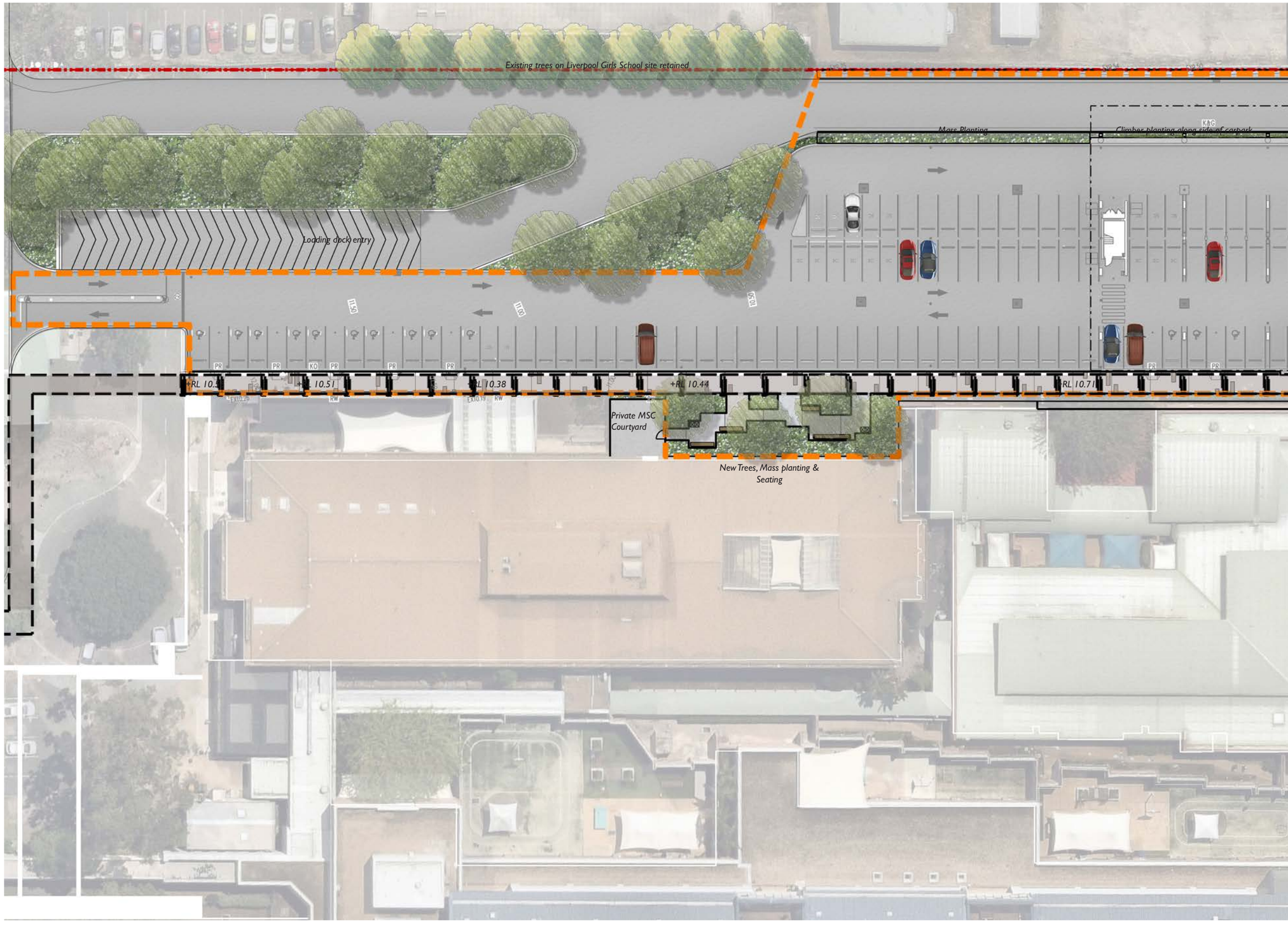
The material selection aims to minimise maintenance through the appropriate selection of hard and soft materials. Plant species have been selected for their low water requirements, hardy proven nature and once established.

MSCP GROUND LEVEL PLAN - WEST



LEGEND

- LHAP Site Boundary
- MSCP Extent of Works
- Proposed Trees
- Existing Trees Retained
- Mass Planting
- Climber Planting
- Lawn
- Synthetic Turf
- Gravel
- Concrete
- Two toned Insitu Concrete Paving
- Feature paving band
- Roadway (Refer to Civil Engineers)



1:500 @A3

0 5 10 15 25m

MSCP GROUND LEVEL PLAN - EAST

LEGEND

- LHAP Site Boundary
- MSCP Extent of Works
- Proposed Trees
- Existing Trees Retained
- Mass Planting
- Climber Planting
- Lawn
- Synthetic Turf
- Gravel
- Concrete
- Two toned Insitu Concrete Paving
- Feature paving band
- Roadway (Refer to Civil Engineers)

1:500 @A3

0 5 10 15 25m

MULTI-STOREY CARPARK COURTYARD

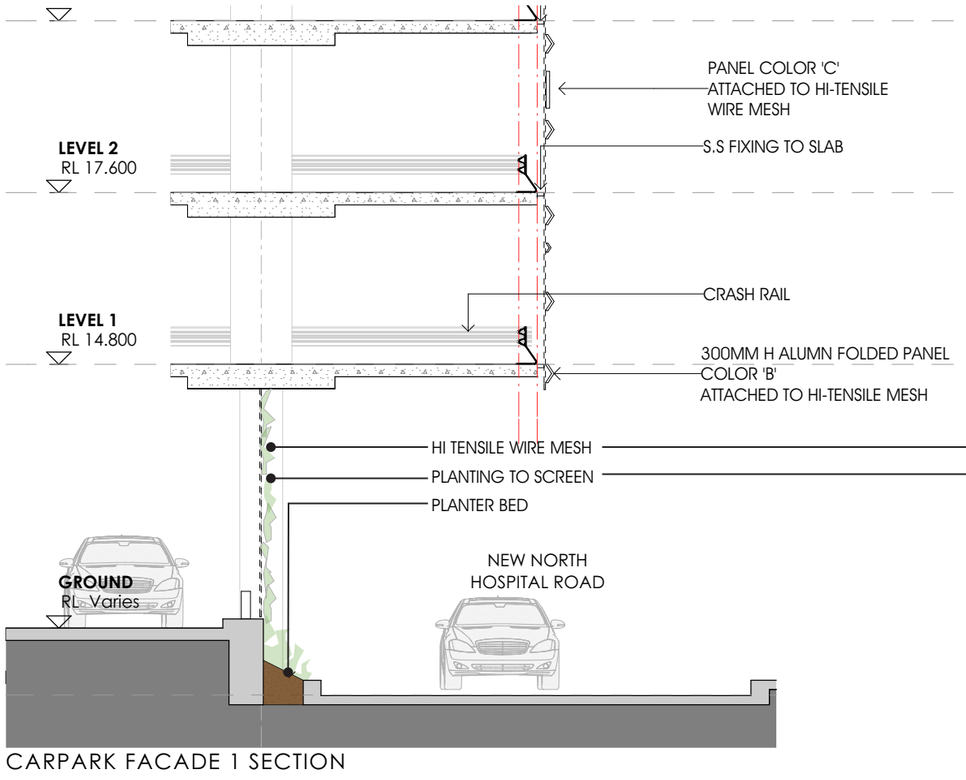
The Multistory carpark courtyard, provides another key outdoor space for hospital staff, visitors and patients. It will form part of the front door arrival experience for many visitors who come from Warrick Farm station or use the Multistorey Car park as their starting point.

- The northern side is heavily shaded and had an artificial turf area to overcome shading from the car park.
- Terraced lawn with raised seat walls provide seating opportunities and limit cross cutting of the lawn.
- It will be well lit at night.
- A garden facing north provides a gathering space and provides a partial screen to the existing carpark and drop off location.

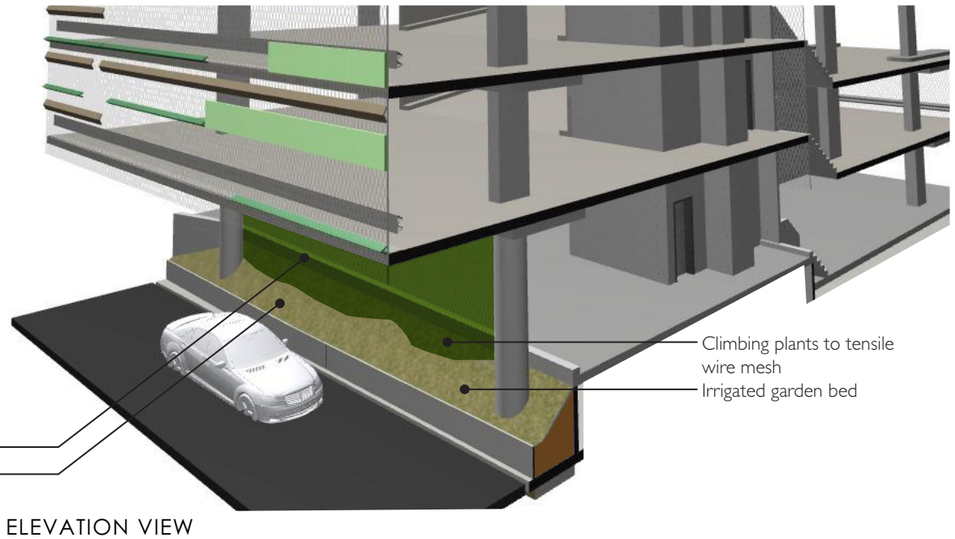
1:250 @A3

0 2.5 5 7.5 12.5m

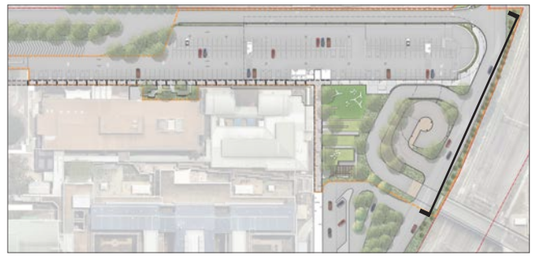
CLIMBER PLANTING

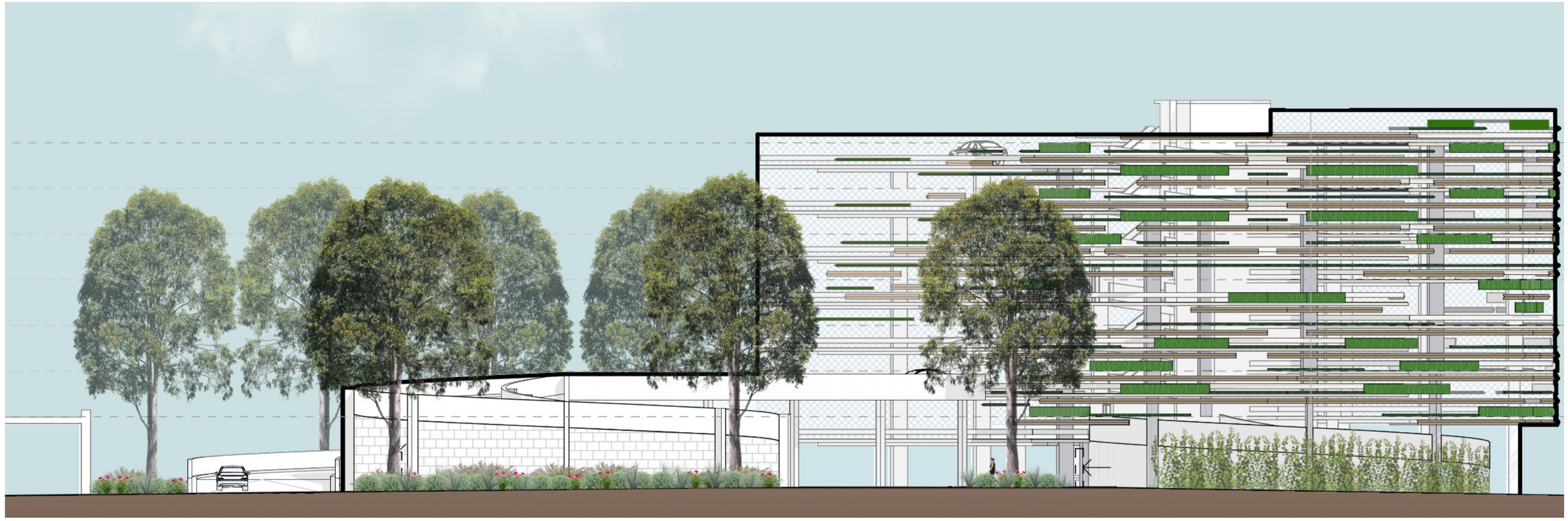


CARPARK FACADE 1 SECTION



ELEVATION VIEW

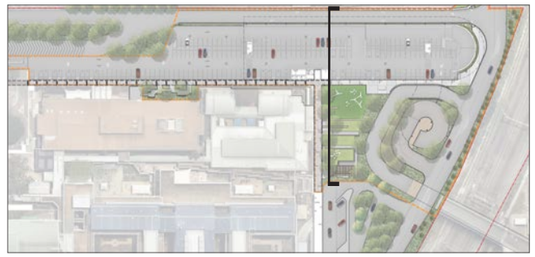




Elevation A - View looking West from Burnside Drive

1:250 @A3

0 2 4 6 8 10m



Elevation B - View looking East

1:250 @A3

0 2 4 6 8 10m

EXISTING AND HISTORIC PLANT COMMUNITIES

EXISTING AND HISTORIC VEGETATION COMMUNITIES

While no native vegetation communities remain within the boundaries of the Liverpool Hospital campus, some remnants of native vegetation can be observed in the general vicinity of the site.

The NSW Government's Sharing and Enabling Environmental Data (SEED) portal indicates portions of remnant vegetation located within the nearby Bigge Park and along the banks of the Georges River. These communities include Cumberland Shale Plains Woodland and Cumberland Riverflat Forest.

Though there is a lack of remnant vegetation within the boundaries of the site it can be assumed that the Cumberland Shale Plains Woodland likely extended across the site at one point. The Cumberland Riverflat Forest was likely limited to the vicinity of the Georges river but may have extended to a portion of the site.

CUMBERLAND SHALE PLAINS WOODLAND

The Cumberland Shale Plains Woodland is a critically endangered national ecological community which has been reduced to less than 10% of its original coverage. The community can be broadly characterised as mostly woodland with eucalypt trees over shrubs or grasses and wildflowers, with some areas demonstrating more of a forest structure. The tree canopy is largely dominated by Eucalypts with some patches also exhibiting a lower tree level of Acacias and Paperbarks. The ground level is dominated by a variety of grasses and wildflowers with some areas also having a shrub layer. When fire frequency is low shrubs such as Bursaria spinosa become much more dense in patches. (Source: Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest, 2010)

A list of common key species split into their different vegetation layers can be seen below.

UPPER AND MID TREE LAYERS

Eucalyptus moluccana - ***Grey box and Coastal Grey Box***
Eucalyptus tereticornis - ***Forest Red Gum***
Eucalyptus fibrosa - ***Red Ironbark, Broad-leaved Ironbark***
Eucalyptus crebra - ***Narrow-leaved Ironbark***
Eucalyptus eugenioides - ***Thin-leaved Stringybark***
Corymbia maculata - ***Spotted Gum***

LOWER TREE CANOPY LAYER

Acacia decurrens - ***Green Wattle***
Acacia parramattensis - ***Parramatta Wattle***
Acacia implexa - ***Hickory Wattle***
Exocarpos cupressiformis - ***Native Cherry***
Melaleuca decora - ***Paperbark***

UNDERSTORY SHRUB LAYER

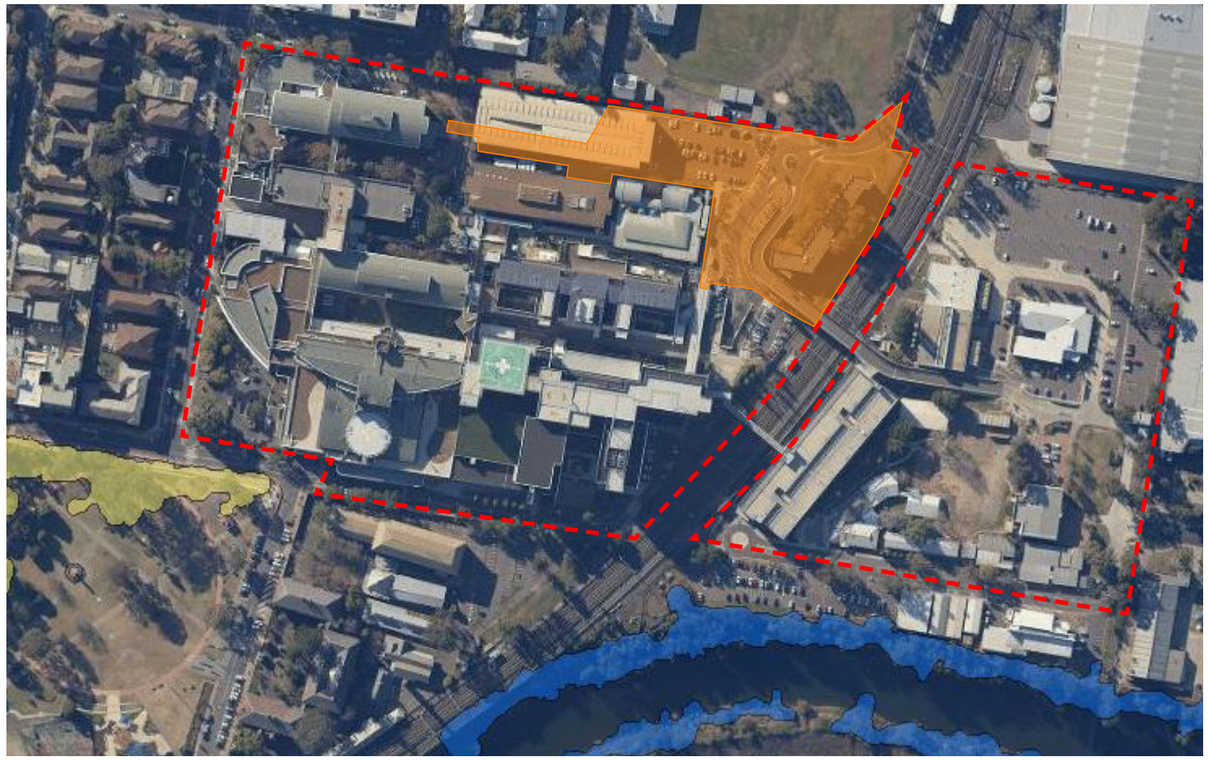
Acacia falcata - ***Sally***
Breynia oblongifolia - ***Coffee Bush***
Bursaria spinosa - ***Blackthorn***
Daviesia ulicifolia - ***Gorse Bitte Pea***
Dilwynia sieberi - ***Sieberi Parrot-pea***
Dodonaea viscosa - ***Wedge-leaf hop-bush***
Indigofera australis - ***Native Indigo***
Lissanthe strigosa - ***Peach Heath***
Rubus parvifolius - ***Native Raspberry***

GRASS LAYER

Aristida ramosa - ***Purple Wiregrass***
Cymbopogon refractus - ***Barbed Wire Grass***
Dichelachne micrantha - ***Plumegrass***
Microlaena stipoides - ***Weeping Grass***
Themeda triandra - ***Kangaroo Grass***
Cyperus gracilis - ***Slender Sedge***
Lomandra filiformis - ***Wattle Mat-rush***
Lomandra multifora - ***Many-flowered mat-rush***

WILDFLOWER AND GROUNDCOVER LAYER

Asperula conferta - ***Common Woodruff***
Dianella longifolia - ***Blue Flax-lily***
Dichondra repens - ***Kidney Weed***
Hardenbergia violacea - ***Native sarsparilla***
Oxalis perennans - ***Wood Sorrel***
Wahlenbergia gracilis - ***Australian Bluebell***



Existing vegetation communities around the site (Source: NSW Government SEED)

TREE REMOVALS AND PLANTING

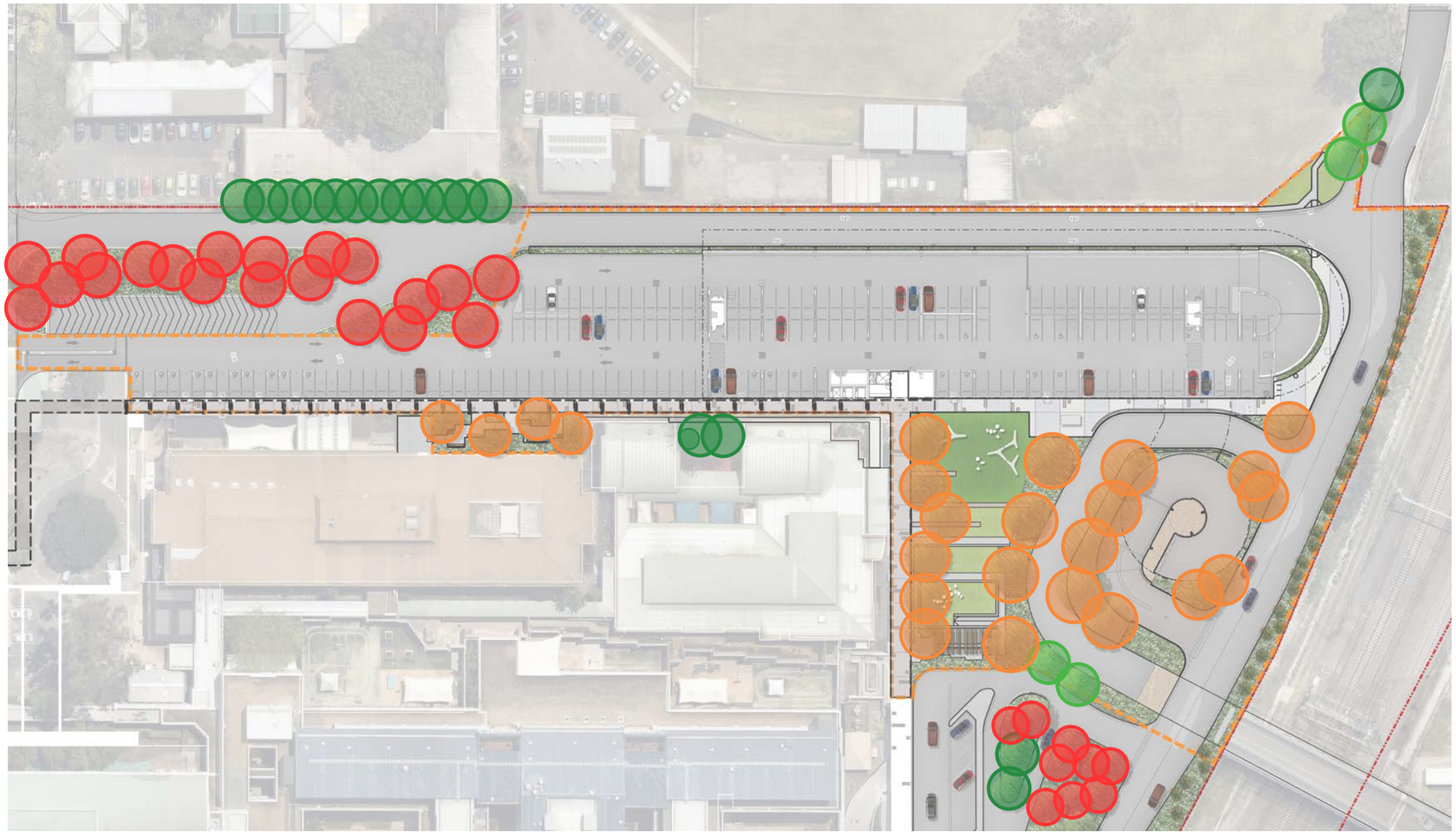
Tree protection and removals

There are no trees required to be removed as part of the MSCP SSDA, as the trees impacted by the construction of the new car park have already been covered in the Review of Environmental Factors 2 package. There are two remaining trees within the MSCP extent of works that will be retained.

There are also a number of trees that will be retained in the near proximity of the MSCP and in particular a row of Casuarinas within Liverpool Girls High School. While these are out of the site, it is anticipated that there will be limited impact on their root zones and canopy, during the construction. There are also two Gleditsia triacanthos located within the Brain Injury courtyard that will be retained and protected during construction. These retained trees are illustrated on the plan opposite.

Replacement trees

Where practical, trees will be replaced in new locations on site. Due to the constrained nature of the site, there are limitations on new tree planting due to the proximity of the railway line, and new roadway construction. A grouping of approximately seven trees will be planted in proximity to the ramp going to upper levels of the MSCP and the ramp leading to the eastern portion of the campus. Approximately nine trees will be planted within the MSCP courtyard including along the western edge of the ramp and on the different levels of the terraces.



Proposed Trees

Proposed Trees (Outside of Scope)

Retained Trees

Retained Trees (Outside of Scope)

MSCP Extent of Works

1:1000 @A3

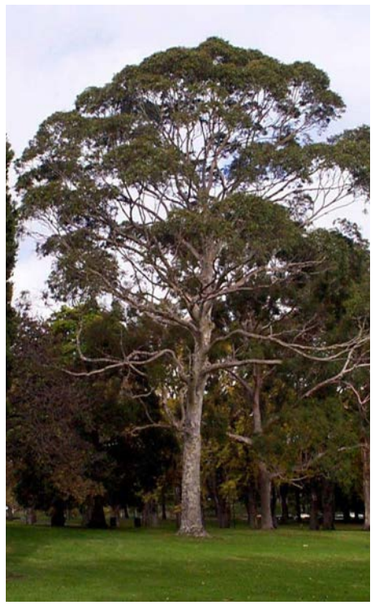
0 10 20 30 50m

INDICATIVE PLANTING PALETTE

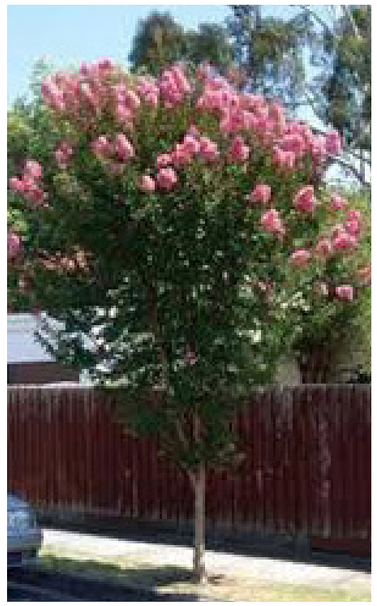
The below indicative planting palette incorporates native plant species from the Cumberland Shale Plains Woodland and other Australian native species.

TREES

Eucalyptus tereticnornis | Forest Red Gum

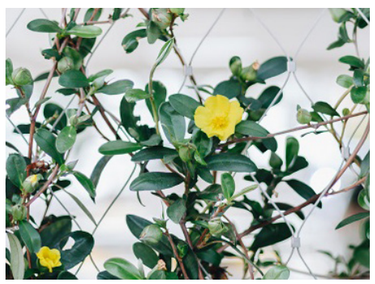


Corymbia maculata | Spotted Gum



Lagerstroemia indica 'Sioux' | Crepe Myrtle

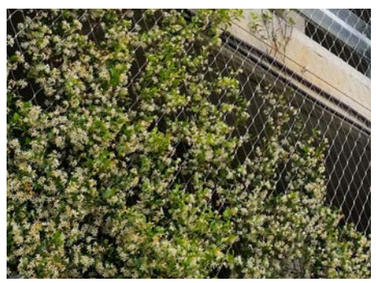
CLIMBERS



Hibbertia scandens | Snake Vine

Ficus pumila | Creeping Fig

Pandorea pandorana | Wonga-wonga Vine



Trachelospermum jasminoides | Star Jasmine

SHRUBS

Westringia fruticosa 'Mundi' | Native Rosemary

Grevillea 'Robyn Gordon' | Robyn Gordon Grevillea

Callistemon viminalis 'Red Alert' | Red Alert Callistemon

Rhagodia spinescens | Aussie Flat Bush

Hardenbergia violacea | Native Sarsaparilla

Indigofera australis | Native Indigo

GRASSES & GROUNDCOVERS

Themeda australis 'Mingo' | Blue Kangaroo Grass

Lomandra longifolia | Spiny-Headed Mat-rush

Themeda australis | Kangaroo Grass

Grevillea 'Royal Rambler' | Royal Rambler Grevillea

Liriope muscari 'Amethyst' | Lily Turf

Impirica c ylindrica | Blady grass

Pennisetum alopecuroides 'PA400' | PURPLE LEA®

Dianella longifolia 'Forte' | Blueberry Lily

MATERIALS AND FINISHES

Paving / Surfaces


Exposed Aggregate Concrete


Exposed Aggregate Concrete


Feature Banding


Gravel


Permeable Paving


Turf Lawn


Artificial Turf

Walls & Seating


Terraced Seating Walls


Concrete seat with timber


Twig Seats

Furniture & Fixtures


Bicycle Rack


Bespoke Pergola shade structure

Planting (Refer to page 11 and L-SSDA-MSCP-05 for more information)


Trees


Shrubs


Groundcovers /Grasses


Climbers

CLOUSTON Associates
Landscape Architects • Urban Designers • Landscape Planners
65-69 Kent Street • Sydney NSW 2000
PO Box R1388 • Royal Exchange NSW 1225 • Australia
Telephone +61 2 8272 4999
Contact: Crosbie Lorimer
Email • sydney@clouston.com.au
Web • www.clouston.com.au