



MANCHESTER ROAD AUBURN

LANDSCAPE CONCEPT PACKAGE - OPTION 7a
AUG 2018

1.0 The Big Picture

The Duck River catchment flows to the Parramatta River covering an area of approximately 104 square kilometres. Duck River is tidal from its mouth at Parramatta River to the Clyde Weir near the Main Western Railway Line at Granville, and freshwater above the weir. The Upper Duck River (which includes the Manchester Road site) is surrounded by a majority of public land owned and managed by Cumberland Council and further upstream by the City of Canterbury Bankstown. Major landowners include State Rail Corporation, Australia Post, and others.

The Duck River wetlands are of regional conservation significance, providing home to three Endangered Ecological Communities and several threatened species, and are highly valued by the local community. The subject area provides opportunities for passive recreational activities, and is surrounded by numerous sporting facilities and playing fields. Overall, however, the corridor and its wetlands are in a degraded condition with numerous environmental and hydrological issues.

The Duck River corridor is a priority project for the "Green Grid" and the work proposed will go a long way toward realising the vision for the corridor.

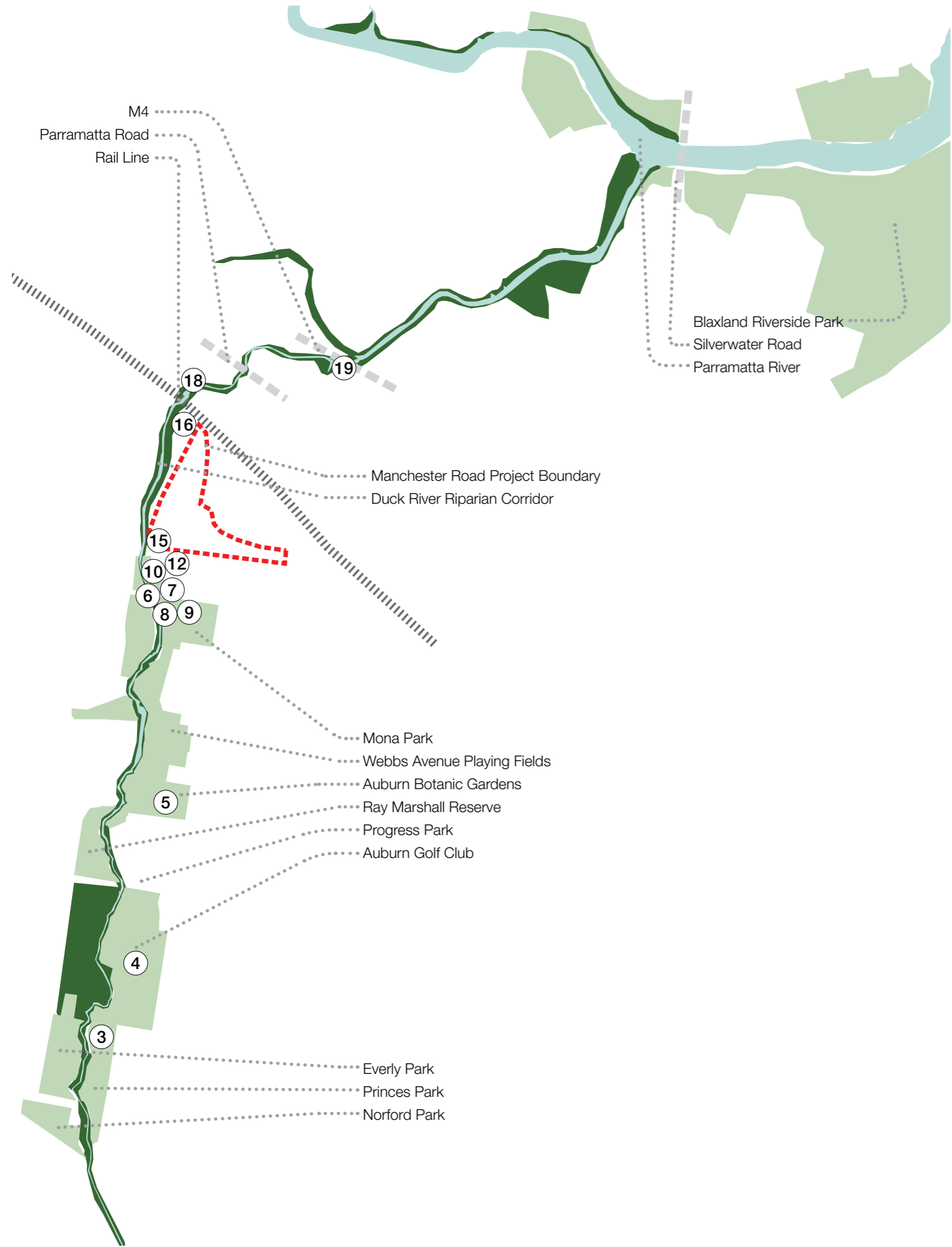
The Manchester Road proposal includes a detailed vegetation management action program for about 210m of the Duck River corridor opposite the Manchester Road residential development. High priority actions include;

1. provision of the "missing Link" of shared use footpath/cycleways along this section of River
2. controlling weeds with bushland regeneration techniques,
3. revegetation planting,
4. control of pollutants at the source,
5. new open space parkland,
7. community education and interpretive signage
8. Crime Prevention Through Environmental Design

All works will be undertaken according to the recommendation provided in the Masterplan for the Duck River Catchment (prepared for Parramatta City Council by Applied Ecology June 2012).



1.1 Duck River Walkthrough



1 Duck River Aerial



2 Duck River Bushland



3 Central Reserve opp. Auburn Golf Course



4 Auburn Golf Course



5 Auburn Botanic Gardens Reflection Pond



6 Duck River - Mona Street Bridge



7 Duck River - Mona Street Bridge



8 Mona Park Bike Path



9 George Parry Oval - Mona Park



10 Bangor Park, Auburn



10 Bangor Park, Auburn



12 Sheffield St, Cnr Payce Land



10 Bangor Park



14 37.5 metres South West



15 Duck River from Manchester Rd



16 Flying Fox Colony



17 Duck River Bridge at Clyde - 1833-1836



18 Duck River Bridge at Clyde

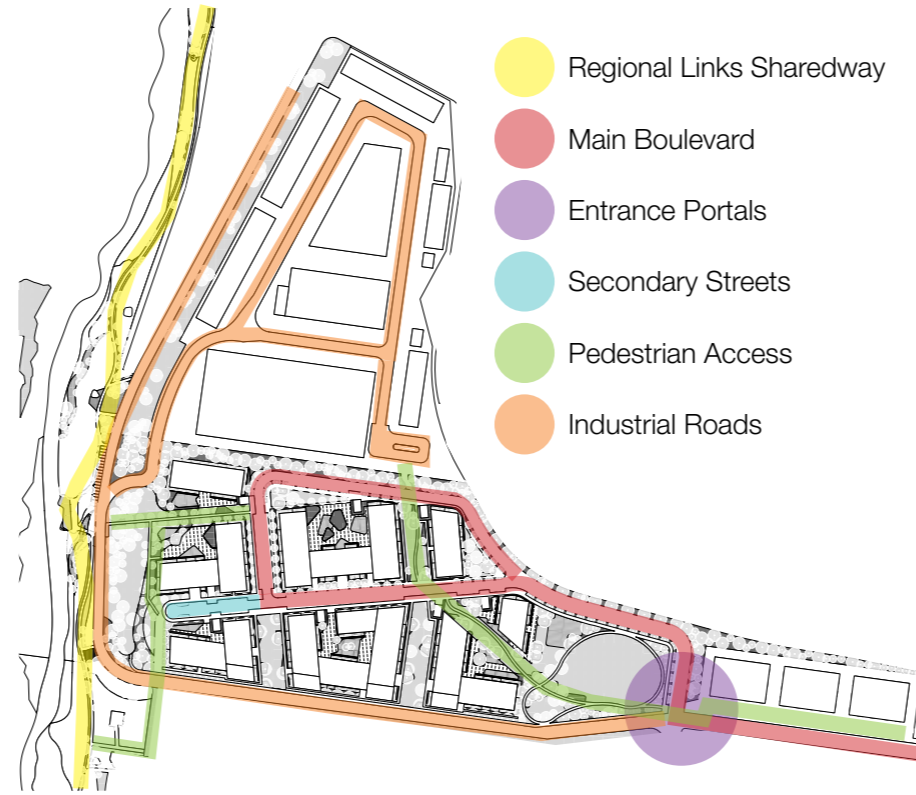


19 M4 Western Motorway - Duck River, Clyde

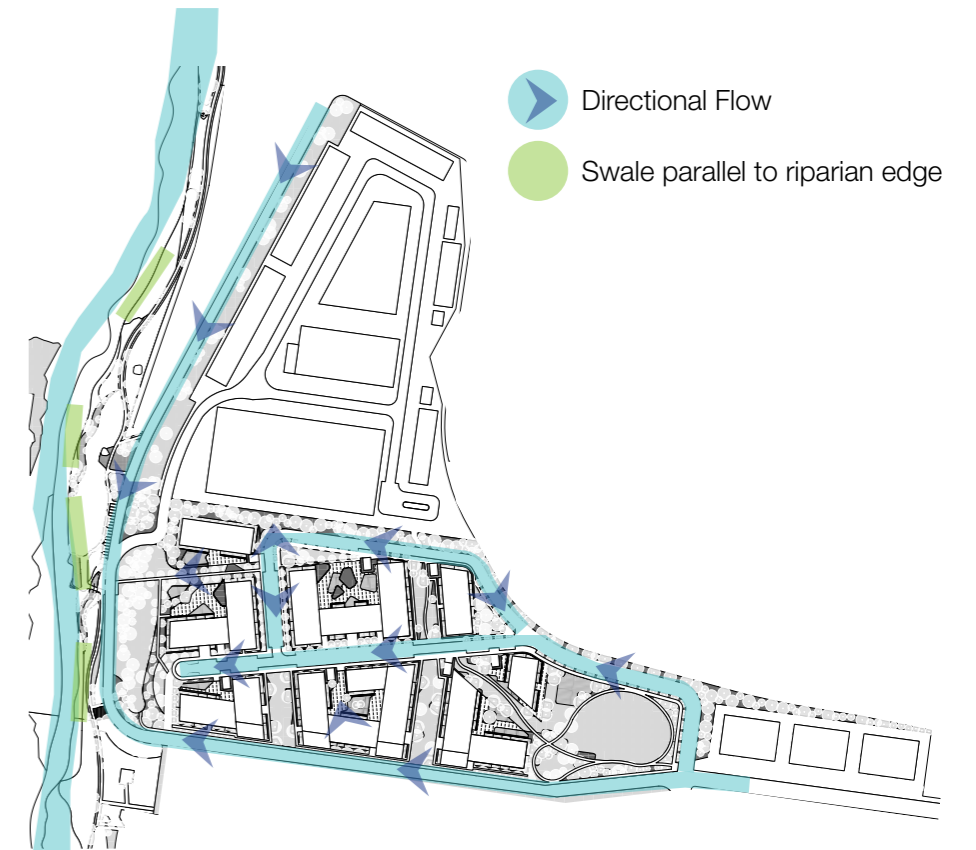
Zones of Use



Connectivity



Water Treatment



3.0 Landscape Concept Plan

The landscape concept master plan encapsulates the entire PAYCE site including the Duck River Rehabilitation zone and adjacent streetscapes.

The Site incorporates 7 major zones;

- ① Duck River Riparian Corridor
- ② Employment Lands
- ③ Duck River Park
- ④ Residential
- ⑤ Streetscapes
- ⑥ Pedestrian Laneways (shaded green links).

--- Extents of upgrade to the Duck River Riparian Corridor

In broad terms, the landscape mimics the natural gradation of planting types as it radiates away from the riverside with riverside species dominating in the west and streetscapes fronting the river. Further from the river, a greater diversity of species is used including the introduction of deciduous exotics such as Jacaranda and Crepe Myrtle to add colour and allow winter sun to penetrate.



3.1 Duck River Rehabilitation

As an integral part of the Manchester Road development, Payce propose to rehabilitate the bushland and wetland zones of the Duck River, connect and complete the missing link of the Duck River corridor shared path for pedestrian and cyclists, and provide grassed parkland open space outside of the bushland management zones and adjacent to the shared path. The rehabilitation process will have five components;

Bushland Regeneration

The remnant Coastal freshwater Wetland, Cumberland Riverflat and Cumberland Swamp Oak Forest vegetation communities are all listed as Endangered Ecological Communities (EEC's). However they are severely degraded and remnant trees along the Duck River corridor to the west of the site are not regenerating due to the thick weed occurrence.

PAYCE will engage professional bushland regenerators to undertake bushland regeneration of all bushland areas along the river's edge where there is existing native canopy

Using the 'Bradley method' of bush regeneration, sites along the riparian corridor with remnant trees will be methodically cleared in small patches so that the area can be initially re-colonised by the seed shed from existing trees. Strategic infill planting will introduce shrub and groundcover species that have been lost.

A staged removal of weeds is recommended, generally starting with woody weeds and shrubs, then ground layer weeds. Noxious weeds should be treated as the first priority. Follow up weed control during the recovery phase will be carried out and is essential to a Bushland Regeneration program.

Three main principles will guide the bushland regeneration;

- 1 secure the best areas first. They are the easiest to work with the best results. They are the core areas that can then be expanded.
- 2 minimise disturbance to the natural conditions (e.g. minimise soil disturbance and off-target damage).
- 3 don't over clear – let the regeneration of the bush set the pace of clearance.

Revegetation Planting

Where there is little or no native species present, additional revegetation planting of species selected from the EEC's will improve connectivity between adjoining areas of better bushland. Revegetation also applies to the wetland areas where a fringing buffer of native vegetation will be the best approach in managing the protection of the wetlands. If stabilisation is required on any of the steep banks, organic fibre mesh will be used in conjunction with the revegetation planting. In other areas, wood waste mulch will be used to aid establishment and control weeds.

Open Space Parkland

Where there is no existing bushland or only tree weeds present, PAYCE will create a clear delineation between the Bushland Management Zones and introduce grassed open space parkland with indigenous shade trees for community benefit. These areas will be mostly adjacent to the shared path, but where appropriate, will extend to allow public access to the river's edge. a "Lookout" will be constructed near the water's edge where residents will be able to picnic and relax, and shelters will provide protection from sun and rain. Park seating will be installed throughout the park in strategic locations.

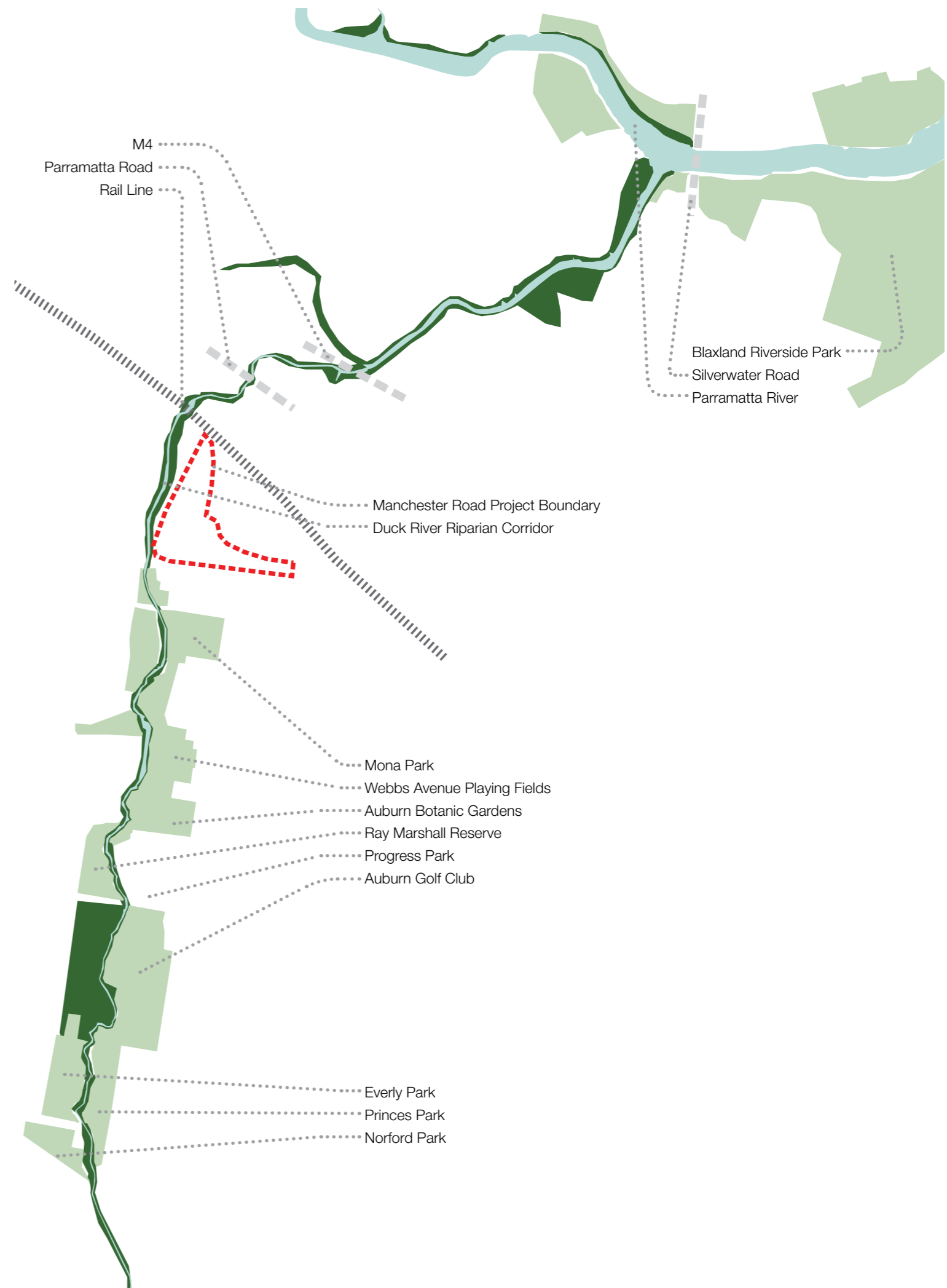
Interpretative signage will be installed to inform users of local features such as the Flying Fox Colony and the importance of the river's regeneration in the wider context of the Parramatta River Catchment and Sydney Harbour.

A series of high quality Exercise Stations with clear instructions on how to use it will be installed in close proximity to the shared path at a strategic distance apart so that the shared path is also used as an Exercise Trail and will continue a circuit that begins from within the residential development. Outdoor Lighting will be integrated within the park, the bridge, shared path and the riverside edge of Manchester Road to ensure passive surveillance at night-time and extend the use of the park into the evenings.

Shared Path

A new 3.0m wide shared path will be installed between the existing shared path where it terminates at Mona Park, and in line with the northern edge of the residential development. Pedestrians and cyclists will have access to an increased extent of the river.

In the future, the path can be extended to provide access to Clyde station and the Olympic Peninsula.



3.1.1 Duck River Rehabilitation



Local provenance species will be used for replanting where possible. The species list will include the following indicative species:

Cumberland Riverflat Forest

Trees and Shrubs

- Acacia decurrens*
- Angophora floribunda*
- Bursaria spinosa*
- Eucalyptus amplifolia*
- Eucalyptus baueriana*
- Eucalyptus saligna*
- Eucalyptus tereticornis*
- Hibiscus heterophyllus*
- Leucopogon juniperinus*
- Ozothamnus diosmifolius*
- Persoonia linearis*

Vines and Groundcovers

- Clematis glycinoides*
- Cyperus laevis*
- Desmodium varians*
- Dianella longifolia*
- Dichondra repens*
- Echinopogon caespitosus*
- Echinopogon ovatus*
- Einadia hastata*
- Einadia trigonos*
- Entolasia marginata*
- Eragrostis leptostachya*
- Lomandra longifolia*
- Microlaena stipoides*
- Brunoniella australis*
- Veronica plebeia*
- Wahlenbergia gracilis*

Cumberland Swamp Oak Riparian Forest

Trees and Shrubs

- Acacia decurrens*
- Eucalyptus crebra*
- Melaleuca styphelioides*
- Angophora floribunda*
- Breynia oblongifolia*
- Bursaria spinosa*
- Casuarina glauca*
- Jacksonia scoparia*
- Maytenus silvestris*
- Melaleuca decora*
- Melaleuca nodosa*
- Ozothamnus diosmifolius*
- Polyscias sambucifolia*

Vines and Groundcovers

- Arthropodium milleflorum*
- Billardiera scandens*
- Carex appressa*
- Dianella longifolia*
- Alternanthera denticulata*
- Clematis glycinoides*
- Dianella revoluta*
- Dichelachne micrantha*
- Echinopogon ovatus*
- Eclipta platyglossa*
- Einadia hastata*
- Eleocharis cylindrostachys*
- Eragrostis leptostachya*
- Gonocarpus tetragynus*
- Goodenia ovata*

Legend

- Revegetation Planting
- Bushland Regeneration
- Open Space Parkland
- Duck River

Revegetation Planting

- ① Cumberland Swamp Oak Forest
- ② Cumberland Riverflat Forest & Cumberland Swamp Oak Forest
- ③ Cumberland Riverflat Forest & Cumberland Swamp Oak Forest
- ④ Cumberland Swamp Oak Forest
- ⑤ Cumberland Swamp Oak Forest
- ⑥ Cumberland Swamp Oak Forest
- ⑦ Cumberland Swamp Oak Forest

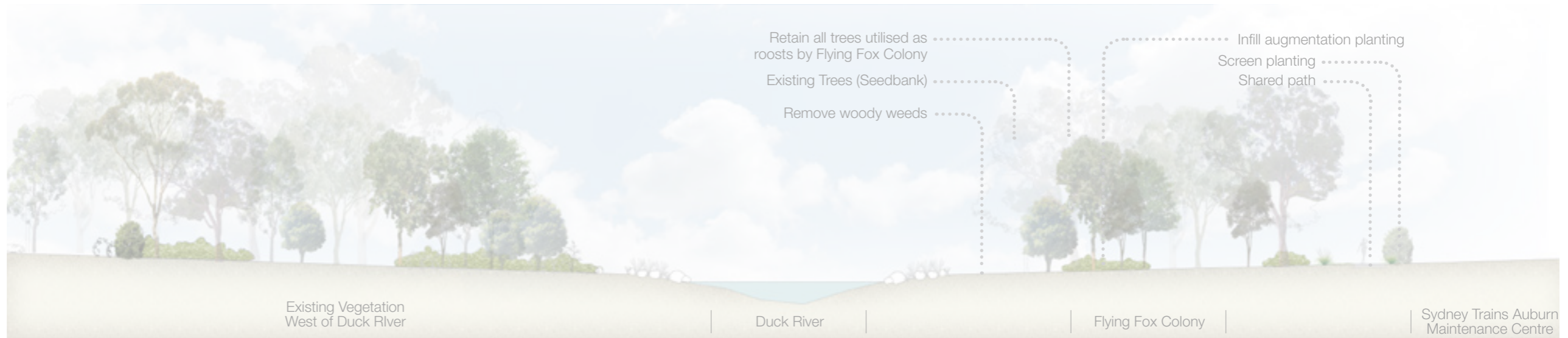
Bushland Regeneration

- ① Cumberland Swamp Oak Forest
- ② Cumberland Swamp Oak Forest
- ③ Cumberland Swamp Oak Forest
- ④ Cumberland Riverflat Forest & Cumberland Swamp Oak Forest
- ⑤ Cumberland Swamp Oak Forest

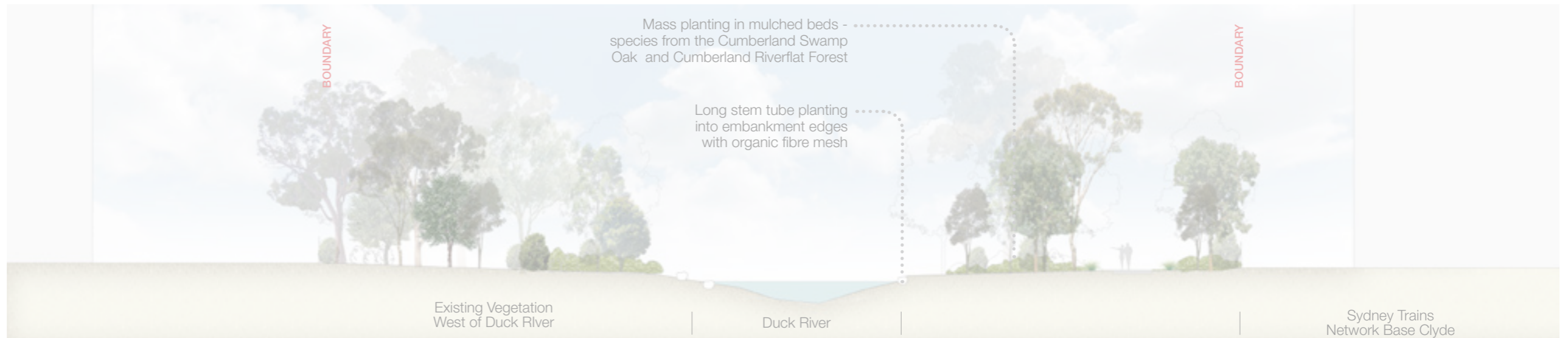
Open Space Parkland

- ① Cumberland Swamp Oak Forest
- ② Cumberland Swamp Oak Forest
- ③ Cumberland Riverflat Forest & Cumberland Swamp Oak Forest
- ④ Cumberland Swamp Oak Forest
- ⑤ Cumberland Swamp Oak Forest
- ⑥ Cumberland Swamp Oak Forest
- ⑦ Cumberland Swamp Oak Forest
- ⑧ Cumberland Swamp Oak Forest
- ⑨ Cumberland Swamp Oak Forest

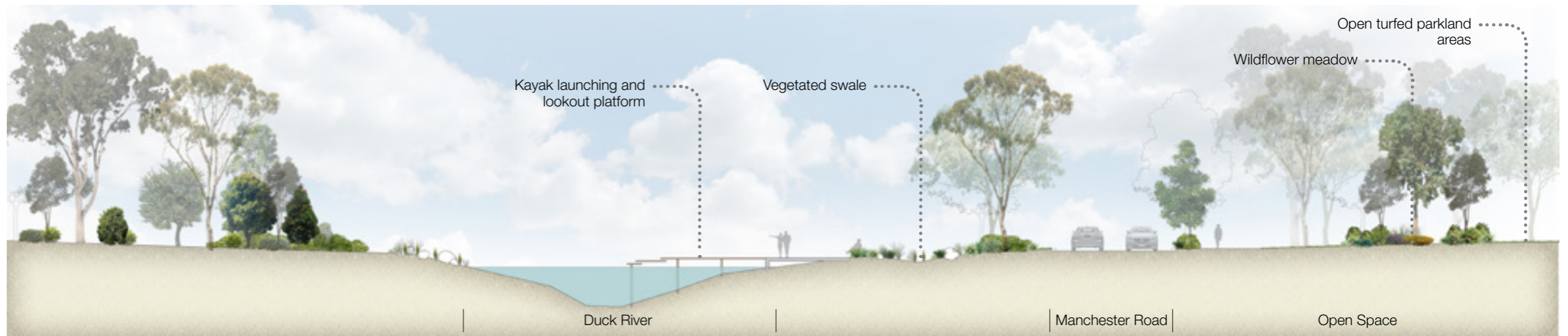
3.1.2 Duck River Rehabilitation Sections



Section AA - Bushland Regeneration



Section BB - Revegetation Planting



Section CC - Open Space Parkland

3.2 Central Park

The Central Park provides the site with ample public open space suitable for active recreation. The landscape for Central Park mediates between the riparian corridor's vegetation and the landscape deeper within the development by using shade tree species within the park will be selected from the local vegetation communities and include *Angophora floribunda* (Rough-barked Apple), *Eucalyptus amplifolia* (Cabbage Gum), *Eucalyptus baueriana* (Blue Box) and *Eucalyptus tereticornis* (Forest Red Gum). The Park creates pleasant views from the apartments to the east and provides a partial landscape buffer zone between the Clyde Marshalling Yards and residential zone. The park also acts as a sponge to store and slow storm water brought to it by the fringing water quality swale.

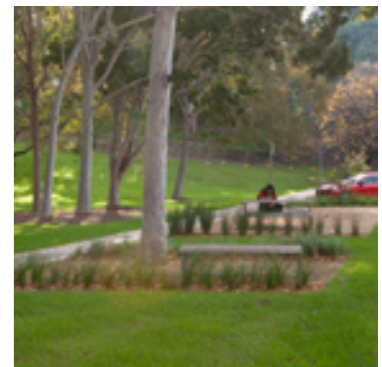
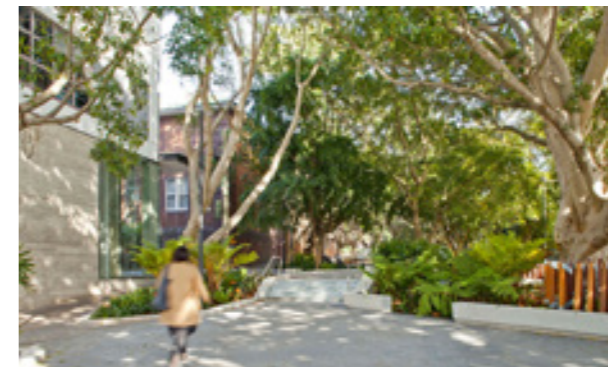
The park provides a venue for moonlight cinema, community / Farmers' markets, community gardens and an outdoor gym.



SCALE 1:750 @ A3

Legend

- 01 500m running track
- 02 Outdoor Gym
- 03 Shade Trees
- 04 Open Active Turf Area
- 05 Secondary Breakout Space
- 06 Shelters
- 07 Community Gardens



3.3 Pedestrian Laneways (Shaded Green Links)

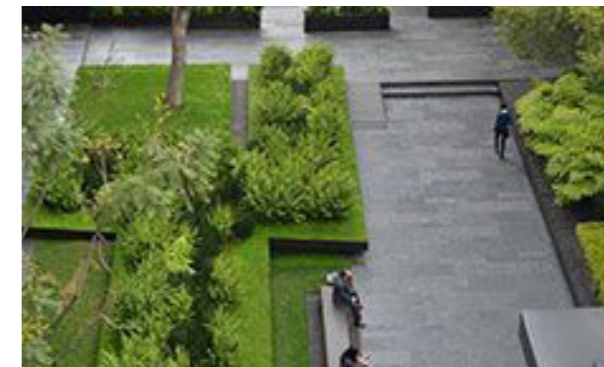
The wide pedestrian laneways between buildings that connect traffic streets have been designed to provide much of the public passive recreational open space for the community. The proximity to residential buildings provides a particular microclimate suited to rainforest plantings. Plantings will include tree ferns, ground ferns, Cordylines, Gingers, Coachwoods, Blueberry Ash, Lemon-scented Myrtle and Firewheel Trees, creating cool restful spaces. Terraces on various levels connected with seating steps and timber platforms will provide ample opportunities for low-impact activities and places to linger.



Legend

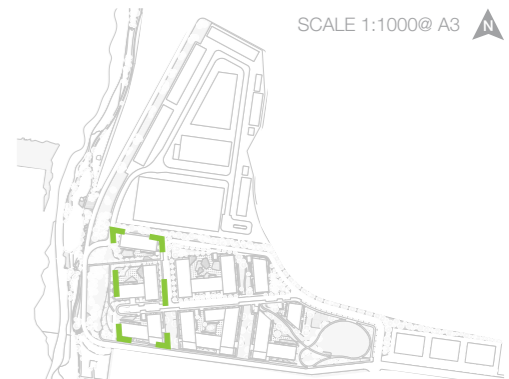
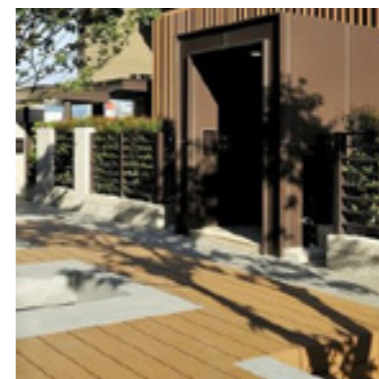
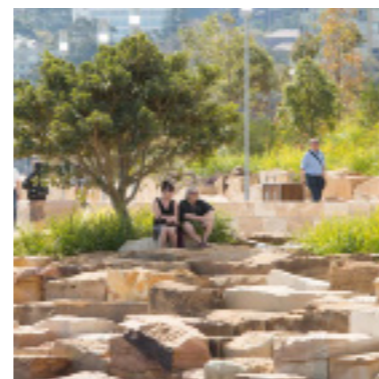
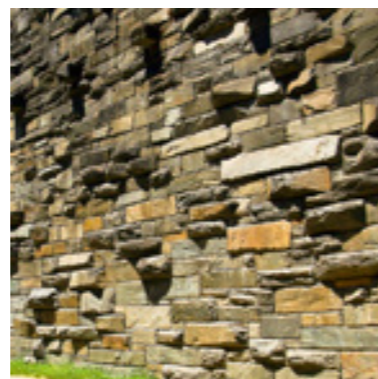
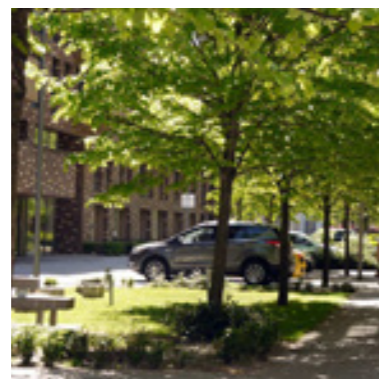
- 01 Meditative Fitness area
- 02 Deep Soil Planting
- 03 Planting on Podium
- 04 Breakout spaces
- 05 Informal seating
- 06 Turf area
- 07 Pedestrian Crossings

SCALE 1:1000@ A3



3.4 Residential Area

Residential areas in the western zone will interface with the railway yards on the eastern side. The outdoor space will be defined by natural materials with the major element being the recycled sandstone blocks which will be used to retain garden and patio terraces for both private and public spaces.



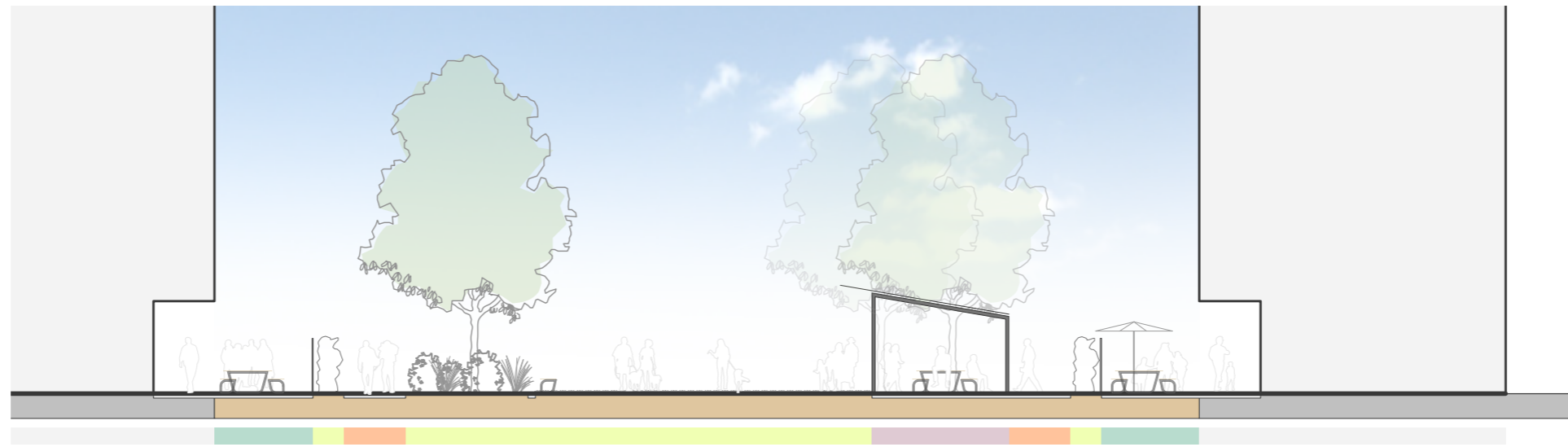
SCALE 1:1000@ A3

Legend

- 01 Reused sandstone Elements
- 02 Feature Planting at Apartment Entrances
- 03 Shade Trees
- 04 Open Lawn Area
- 05 Feature Breakout Space
- 06 BBQ Area
- 07 Linking Path

3.4.1 Residential - Western Zone - Sections

Section AA
Communal open space between buildings



- Legend**
- Building
 - Private outdoor space
 - Landscape area
 - Pedestrian path
 - Communal open space
 - Roadway
 - Deep soil
 - Basement

Section BB
Main boulevard



Section CC
Green link and adjacent communal open space

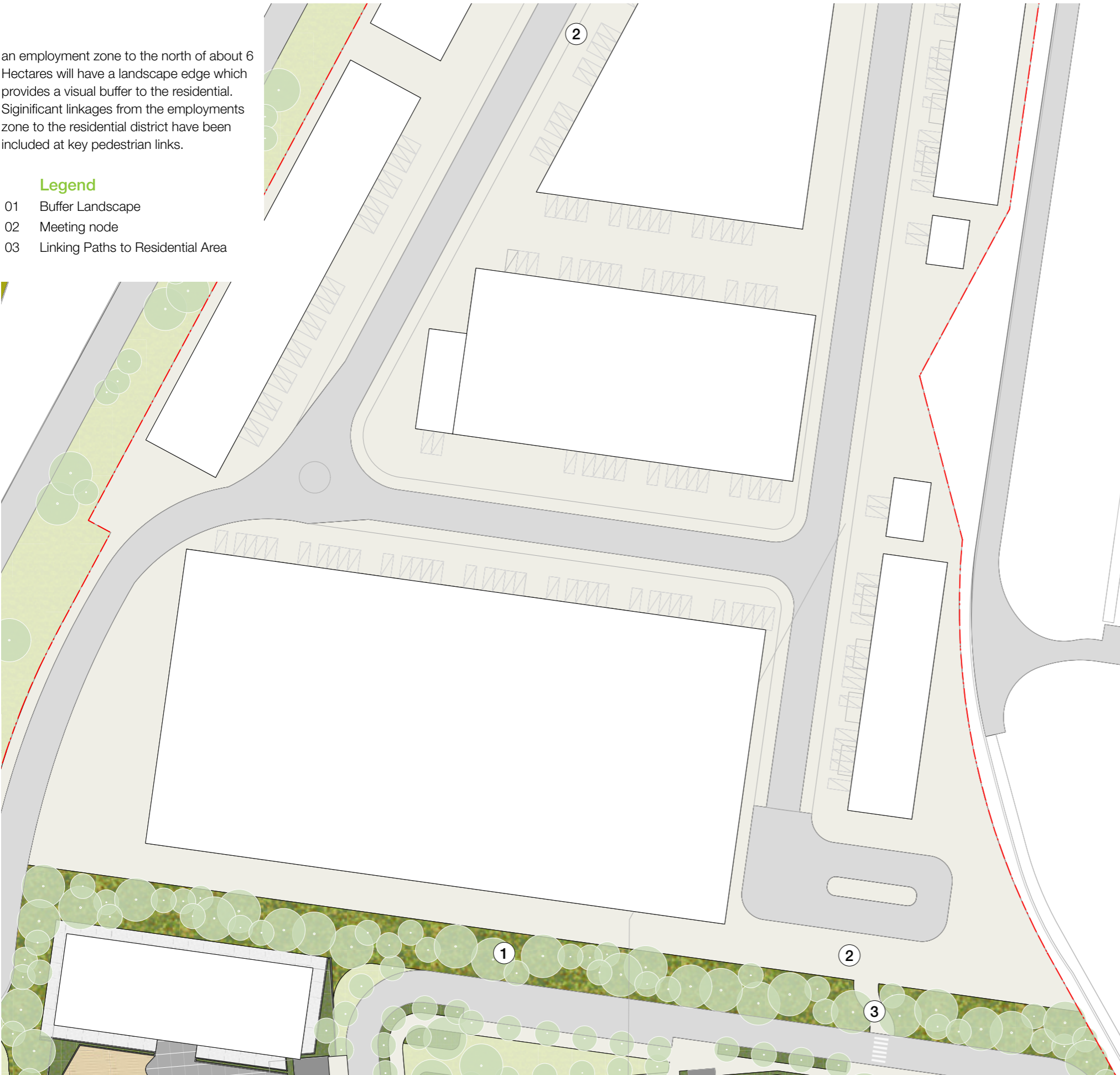


3.5 Employment Land

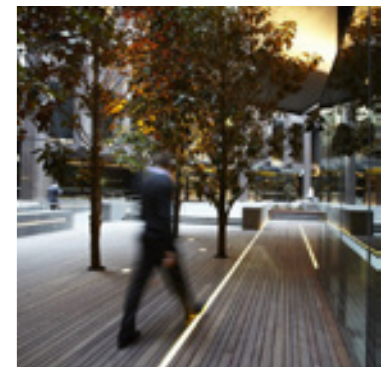
an employment zone to the north of about 6 Hectares will have a landscape edge which provides a visual buffer to the residential. Significant linkages from the employment zone to the residential district have been included at key pedestrian links.

Legend

- 01 Buffer Landscape
- 02 Meeting node
- 03 Linking Paths to Residential Area



SCALE 1:750 @ A3



3.5.1 Employment Land - South

An employment area of about 1Ha located to the east is set aside to provide space for offices and workshops.

A pedestrian boulevard adjacent to Manchester Road and pedestrian linkages through Central Park will provide attractive accessways between the employment and residential areas, while maintaining distinct landscape characters and separation between the two.

There will be public seating available for casual gathering. In addition moveable seating will allow the users to create space and make it their own and take positions in the shade of the deciduous trees or otherwise, extending the time that people will tend to linger on the boulevard.



Legend

- 01 Pedestrian Boulevard
- 02 Meeting/Seating nodes
- 03 Deciduous Trees

SCALE 1:1000@ A3



4.0 Planting Schedule

Manchester Road Plant Schedule	
Botanical Name	Common Name
Native Trees	
<i>Melaleuca styphelioides</i>	Prickly Paperbark
<i>Acacia decurrens</i>	Green Wattle
<i>Angophora floribunda</i>	Rough barked Apple
<i>Casuarina glauca</i>	Swamp She Oak
<i>Eucalyptus amplifolia</i>	Cabbage Gum
<i>Eucalyptus baueriana</i>	Blue Gum
<i>Eucalyptus saligna</i>	Sydney Blue Gum
<i>Eucalyptus teteticornis</i>	Forest Red Gum
Exotic Trees	
<i>Jacaranda mimosifolia</i>	Jacaranda
<i>Lagerstromieia 'Natchez'</i>	Crepe Myrtle
<i>Lagerstromieia 'Tuscarora'</i>	Crepe Myrtle
<i>Magnolia grandiflora</i>	Bull Bay Magnolia
<i>Platanus x acerifolia</i>	Plane Tree
<i>Plumeria rubra</i>	Frangipani
<i>Tibouchina 'Alstonville'</i>	Lasiandra
<i>tristaniopsis laurina</i>	Water Gum
<i>Ulmus parvifolia</i>	Chinese Elm
Native Wildflowers, Shrubs, Grasses and Sedges	
<i>Actinotus helianthii</i>	Flannel Flower
<i>Arthropodium milleflorum</i>	Vanilla Lily
<i>Carex appressa</i>	Tall Sedge
<i>Clematis glycioides</i>	headache Vine
<i>Coronidium scorpioides</i>	Button Everlasting
<i>Dianella caerulea</i>	Blue Flax Lily
<i>Dichelachne micrantha</i>	Short Hair Plume Grass
<i>Eragrostis leptostachya</i>	Paddock Love Grass
<i>Gonocarpus tetragynus</i>	Common Rasport
<i>Goodenia ovata</i>	Hop Goodenia
<i>Helichrysum cultivars</i>	Straw Flowers
<i>Isolepis nodosa</i>	Knobby Club Rush
<i>Juncus usitatus</i>	Common Rush
<i>Lomandra longifolia</i>	Mat Rush
<i>Microlaena stipoides</i>	Wallaby Grass
<i>Syzygium 'Cascade'</i>	Powderpuff Lily Pily
<i>Veronica plebeia</i>	Trailing Speedwell
<i>Wahlenbergia gracilis</i>	Native Bluebell
Pedestrian Laneways (Shaded Green Links)	
<i>Adiantum aethiopicum</i>	Maidenhair fern
<i>Alocasia macrorhiza</i>	Cunjevoi
<i>Aloxyllon flammeum</i>	Tree Waratah
<i>Angiopteris evecata</i>	Gigantic Fern
<i>Anopterus macleayanus</i>	Macleay Laurel
<i>Blechnum brasiliense</i>	Water Fern
<i>Brachychiton bidwillii</i>	Little Kurrajong
<i>Cryptocarya laevigata</i>	Glossy Laurel
<i>Cyathea cooperi</i>	Cicatrice Tree fern
<i>Doodia aspera</i>	Rasp Fern
<i>Flindersia australis</i>	Crows Ash
<i>Gymnostachs anceps</i>	Settlers Flax
<i>Libertia paniculata</i>	Branching Grass-flag
<i>Ligularia reniformis</i>	Tractor-seat Plant
<i>Macrozamia communis</i>	Burrawang
<i>Neomarica gracilis</i>	Apostle Iris
<i>Pogonatherum paniceum</i>	Bamboo Grass
<i>Randia fitzalanii</i>	Native Gardenia
<i>Spathiphyllum cultivar</i>	"Petite"
<i>Stenocarpus sinuatus</i>	Firewheel Tree
<i>Trachelospermum jasminoides</i>	Star Jasmine
<i>zamioculcas zamiifolia</i>	Zanzibar Gem

NATIVE TREES



Acacia decurrens
Green Wattle



Angophora floribunda
Rough-barked Apple



Casuarina glauca
Swamp She Oak



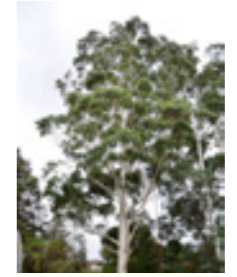
Eucalyptus baueriana
Blue Gum



Eucalyptus crebra
Ironbark



Eucalyptus amplifolia
Cabbage Gum



Eucalyptus saligna
Sydney Blue Gum



Eucalyptus teteticornis
Forest Red Gum



Melaleuca styphelioides
Prickly Paperbark

EXOTIC TREES



Jacaranda mimosifolia
Jacaranda



Lagerstromieia 'Tuscarora'
Crepe Myrtle



Lagerstromieia 'Natchez'
Crepe Myrtle



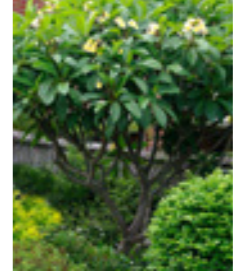
Tristaniopsis laurina
Water Gum



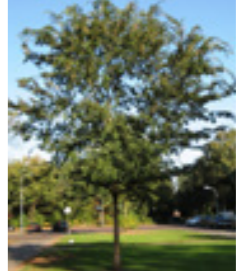
Magnolia grandiflora
Bull Bay Magnolia



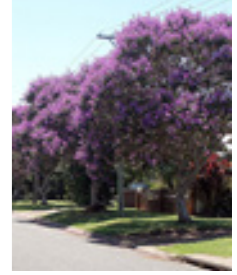
Platanus x acerifolia
London Plane



Plumeria acutifolia
Frangipani



Ulmus parvifolia
Chinese Elm



Tibouchina 'Alstonville'
Lasiandra

NATIVE WILDFLOWERS, SHRUBS, SEDGES + GRASSES



Actinotus helianthii
Flannel Flower



Arthropodium milleflorum
Vanilla Lily



Carex appressa
Tall Sedge



Clematis glycioides
Headache Vine



Dianella caerulea
Blue Flax Lily



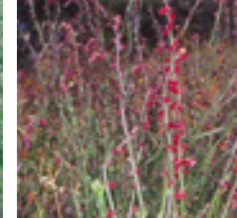
Lomandra Longifolia
Mat Rush



Dichelachne micrantha
Short-hair Plume Grass



Eragrostis leptostachya
Paddock Love Grass



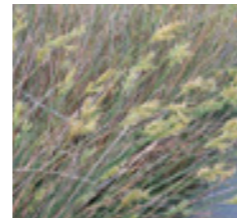
Gonocarpus tetragynus
Common Raspwort



Goodenia ovata
Hop Goodenia



Isolepis nodosa
Knobby Club Rush



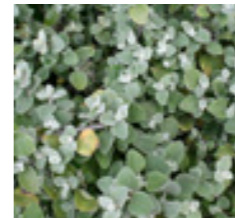
Juncus usitatus
Common Rush



Microlaena stipoides
Common Rush



Veronica plebeia
Trailing Speedwell



Helichrysum petiolare
Licorice Plant



Wahlenbergia gracilis
Australian Bluebell



Syzygium Cascade
Powderpuff Lilly Pilly

PEDESTRIAN LANEWAYS (SHADED GREEN LINKS)



Elaeocarpus reticulatus
Blueberry Ash



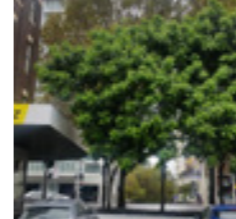
Alocasia macrorhiza
Cunjevoi



Blechnum brasiliense
Water Fern



Stenocarpus sinuatus
Firewheel tree



Flindersia australis
Crows Ash



Alloxyllon flammeum
Tree Waratah



Angiopteris evecata
Gigantic Fern



Anopterus macleayanus
Macleay Laurel



Cryptocarya laevigata
Glossy Laurel



Cyathea cooperi
Cicatrice Tree fern



Doodia aspera
Rasp fern



Brachychiton bidwillii
Little Kurrajong



Macrozamia communis
Burrawang



Randia fitzalanii
Native Gardenia



Trachelospermum jasminoides
Star Jasmine