

Bradfield City Centre - Moore Gully Riparian Corridor

Landscape Architecture

Design Report

Review of Environmental Factors Submission



I ACKNOWLEDGEMENT OF COUNTRY

Taylor Brammer acknowledges more than 60,000 years of continuous Aboriginal connection to the land that makes up Australia and the state that is known as New South Wales. Since time immemorial, Aboriginal people have managed, cultivated, and cared for the landscape where Sydney was established and continues to grow. Aboriginal people hold profound knowledge, understanding, obligation and custodianship of the landscape.

Taylor Brammer acknowledges the traditional owners of the lands that include the Western Parkland City and the living culture of the traditional custodians of these lands.



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1. Project Background

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Amendment register

DOCUMENT ISSUE	REVISION	DATE	STATUS	PREPARED	CHECKED
Work in Progress	P1	22.01.2024	DRAFT	SC	AL
DRAFT REF ISSUE	P2	01.03.2024	DRAFT	SC	AL
REF ISSUE	A	26.03.2024	FINAL	AL	VH
REF ISSUE	B	29.04.2024	FINAL	AL	VH
REF ISSUE	C	05.11.2024	FINAL	VH	AL
REF ISSUE	D	27.11.2024	FINAL	NW	AL



PROJECT BACKGROUND



01

PROJECT BACKGROUND

Project Context

Bradfield City Centre (BCC) will be situated within Western Sydney Aerotropolis which is within the Greater Sydney Metropolitan Region. Upon completion of this new city, Bradfield will be located 56km from Sydney CBD, 50km from Sydney Kingsford Smith Airport, and will be in close proximity to the new Western Sydney International Airport.

The new city is within close proximity of the Nepean River and Blue mountains, which are significant landscape forms within the Sydney Basin that allow for connections to water and ridges.

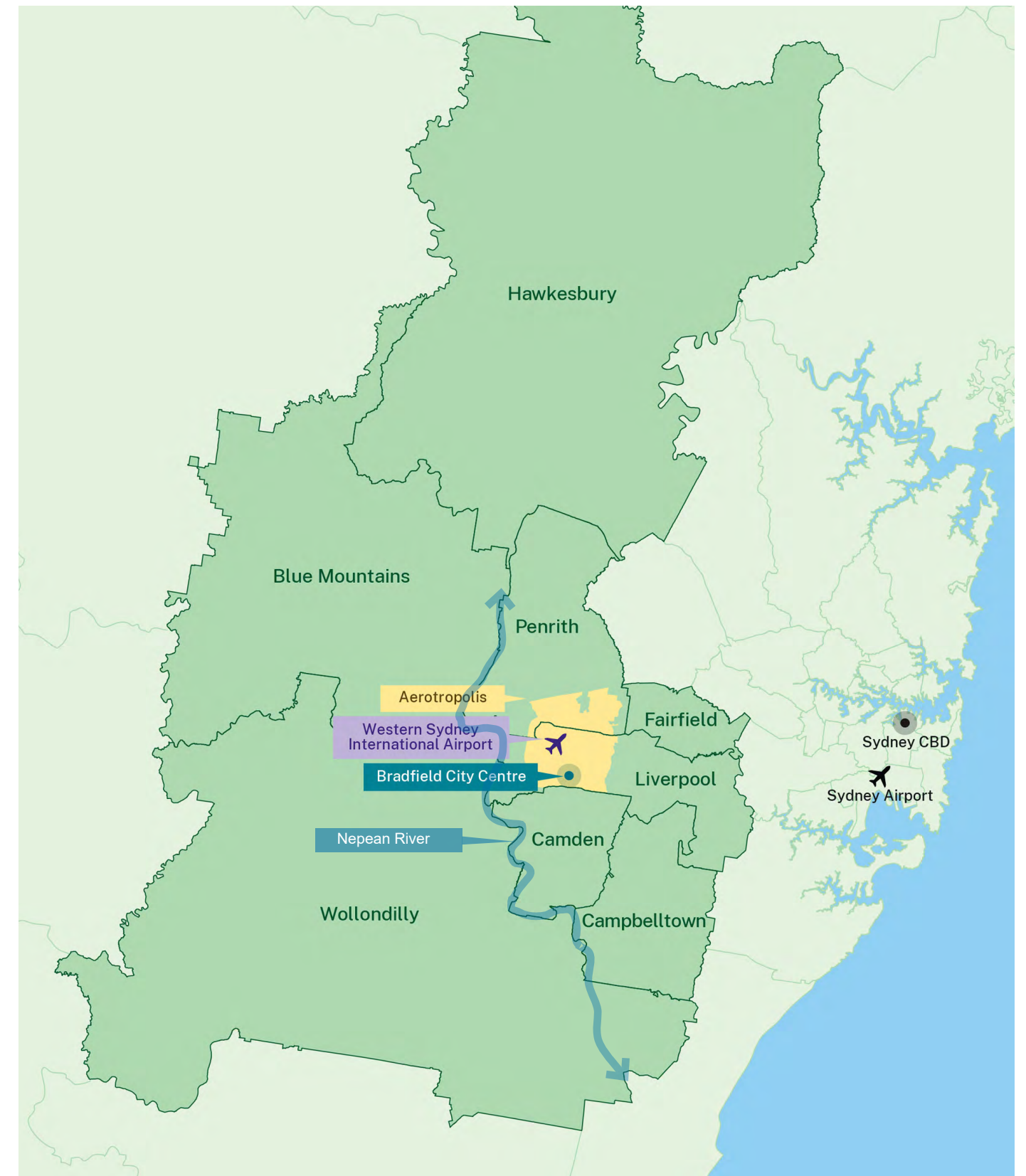
This project is identified as the Moore Gully Riparian Corridor and this project sits within a broader Regional Stormwater Infrastructure Project, which covers an area of 20 hectares within the broader Bradfield City Centre. In summary, the proposed activity of the Regional Stormwater Infrastructure Project relates to site clearing, construction of maintenance tracks, the provision of service authority utilities, riparian landscaping, and drainage and stormwater infrastructure.

Specifically, the scope of works for the Moore Gully Riparian Corridor project includes:

- Provision of stormwater infrastructure,
- Two pedestrian and cycle access connections crossing Moore Gully,
- Pedestrian (Green loop) and maintenance paths throughout,
- Construction of pavilions in the landscape to aid pedestrian movement,
- Extensive landscape re-vegetation works along the Moore Gully realignment and across the project site and
- New lighting.

The report is accompanied by concept plans and a range of supporting technical studies which have been prepared to inform the proposed design.

The proposed Moore Gully realignment and enhancement, and civil infrastructure for the riparian corridor is in accordance with the Western Sydney Aerotropolis Plan 2020, SEPP (Precincts - Western Parkland City 2021), Western Sydney Precinct Plan May 2023, and Western Sydney Aerotropolis DCP Phase 2 (2022) and is broadly consistent with the BCC Master Plan.



Source: Western Parkland City Authority

PROJECT BACKGROUND

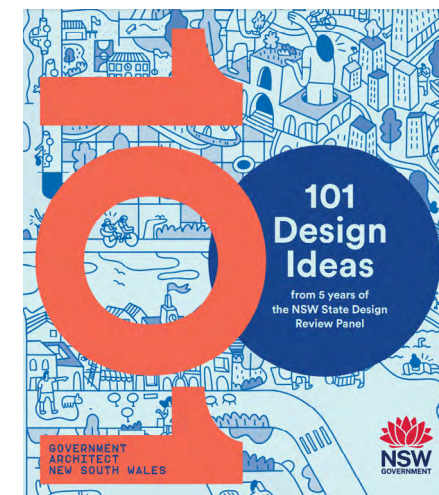
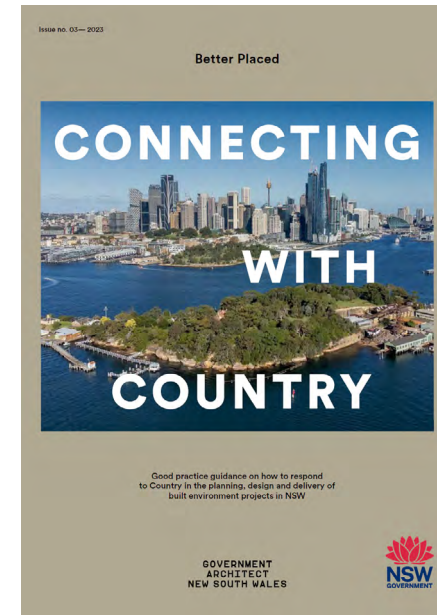
State Government Strategic Reference Documentation

This project and the associated design outcomes has considered leading design and strategic documentation to create a design that is resilient, innovative, connected well placed in its setting.

The design outcomes integrate ideas and opportunities outlined in the adjacent documentation prepared by the NSW Government Architect and the NSW Department of Planning, Industry and Environment.

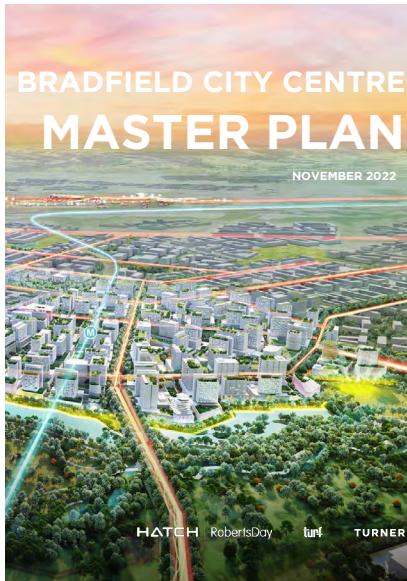
Key design themes integrated into the proposal include:

1. Creation of vibrant and responsible outcomes integrated with Country
2. Utilisation of native planting and use of local materials wherever possible
3. Creation of a sophisticated design outcomes where high embodied energy materials are used sparingly
4. Creation of extensive new tree canopy and shade cover
5. Creation of sustainable native ecological corridors
6. Integration of Water Sensitive Urban Design outcomes throughout
7. Creation of safe and functional areas that are universally accessible



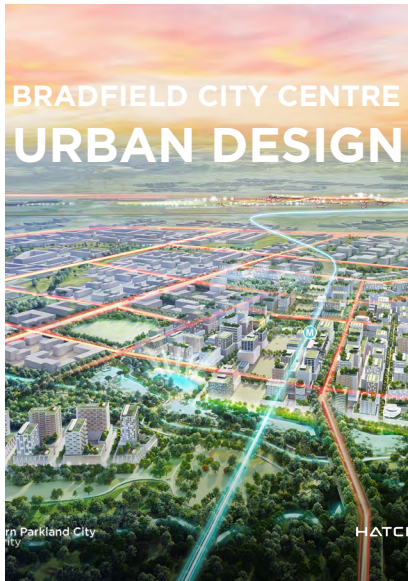
PROJECT BACKGROUND

Bradfield City Centre Masterplan Reference Documentation



Key Considerations

- Broader Aerotropolis context
- Connecting with Country - adopting non-hierarchical perspective which considers all of the entities of the land, soil, rocks, sky, water, plants, animals, stories and people as independent and held in relation to one another
- Existing site conditions and landscape typologies
- Hydrology - existing waterways
- Ecology - existing vegetation communities
- Connections to / from the scope area



Key Considerations

- Masterplan constraints
- Western Parkland City blueprint - Green, Connected, Advanced.
- Bradfield key values
- Masterplan objectives and outcomes
- Designing with country and response to country
- Public domain and landscape - series of distinct places
- Tree canopy coverage and perviousness
- Land use and character areas

Attachment B - Bradfield City Centre Master Plan - Urban Design Report



Key Considerations

- Key Values: Green, Travel, Connect, Dream
- Views - Visual connections between key spaces, ridges and lower lying creeks
- Planting strategy - plants retained and re-vegetated with locally endemic species for Ridge Park, Moore Gully and Thompson Creek.
- Impact of light in ecosystems
- Intuitive wayfinding to key destinations
- Responsive design with adaptive spaces

Attachment C - Bradfield City Centre Master Plan - Response to Country Report

Attachment A - Bradfield City Centre - Master Plan Report



Key Considerations

- Public domain principles - Design with Country, re-imagining and enhancing water, a cool, green and livable city, and interconnected, innovative and sustainable city
- Key city spaces - Central Park, Ridge Park, City Walk West, City Walk East, Green Loop, Local Parks, City Parkland West, City Parkland East, Waterfront Promenade
- Open space requirements
- Tree canopy (40% target)
- Tree retention

DRAFT 20221130 Master Plan Report - Public Domain & Landscape



Key Considerations

- Solar access
- Wind impacts - mitigate prevailing winds through streetscapes and larger open spaces through proposed vegetation
- Water sensitive urban design
- Tree canopy and native vegetation
- Locally endemic species only for Green Loop, Central Park, Ridge Park, City Parklands, and residential streets (Bangawara 2022)

220718_WSY AIR_Design Guidance

PROJECT AND SITE ANALYSIS



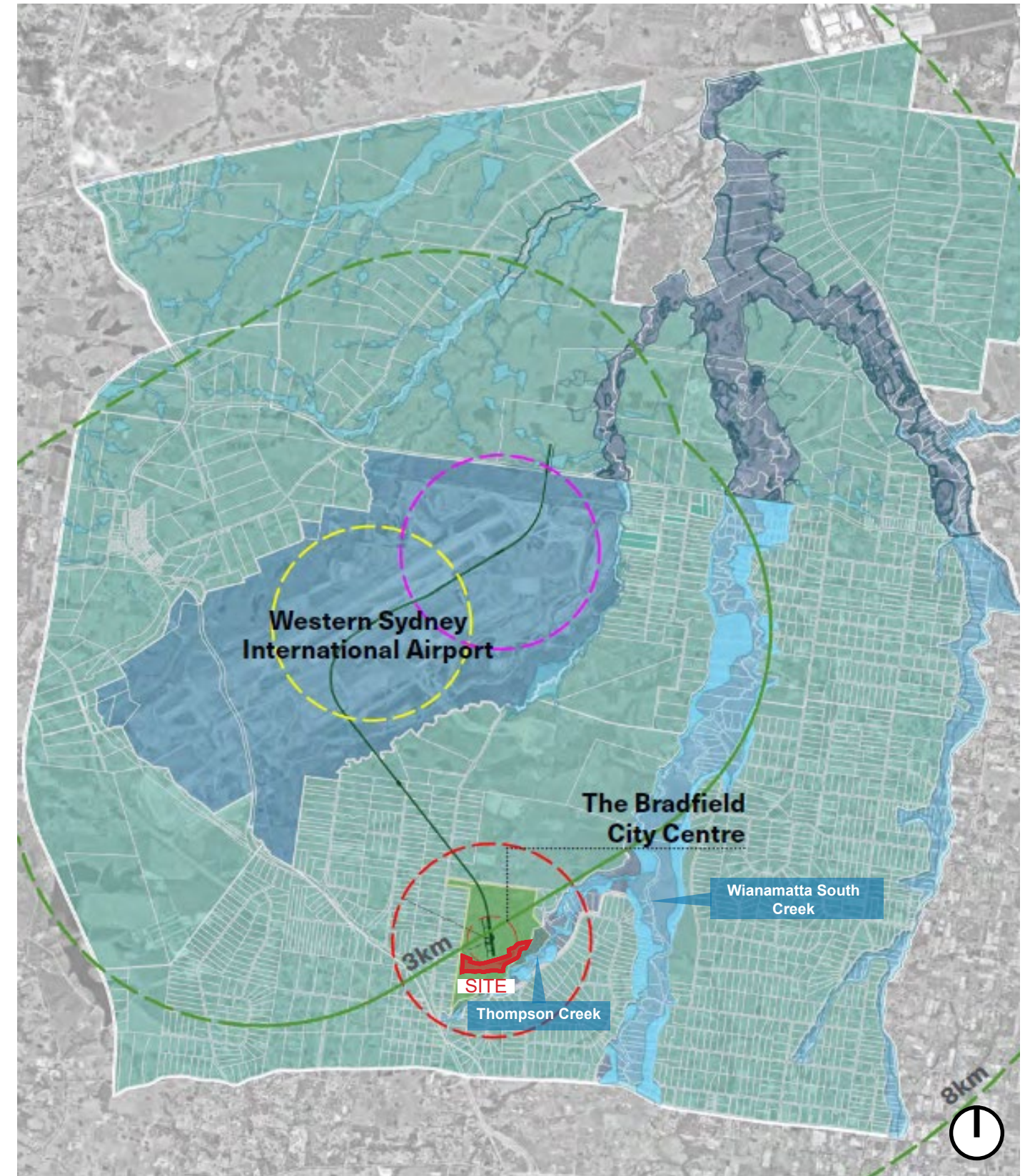
02

ANALYSIS

Regional Context

The Bradfield City Centre will be situated within the southern zone of Western Sydney Aerotropolis. Main arterial roadways and Metro line will provide a transport network with Bradfield City, neighboring suburbs, Western Sydney Airport and Sydney CBD.

Wianamatta-South Creek runs along the south-eastern boundary of Bradfield City Centre, and connects the Cumberland Plain flora and fauna with Thompson Creek and Moore Gully. This Indigenous Cumberland Plain ecology of the region will inform the landscape vegetation for the Moore Gully Riparian Corridor to promote biodiversity and provide habitat for native fauna species.



Source: Western Parkland City Authority

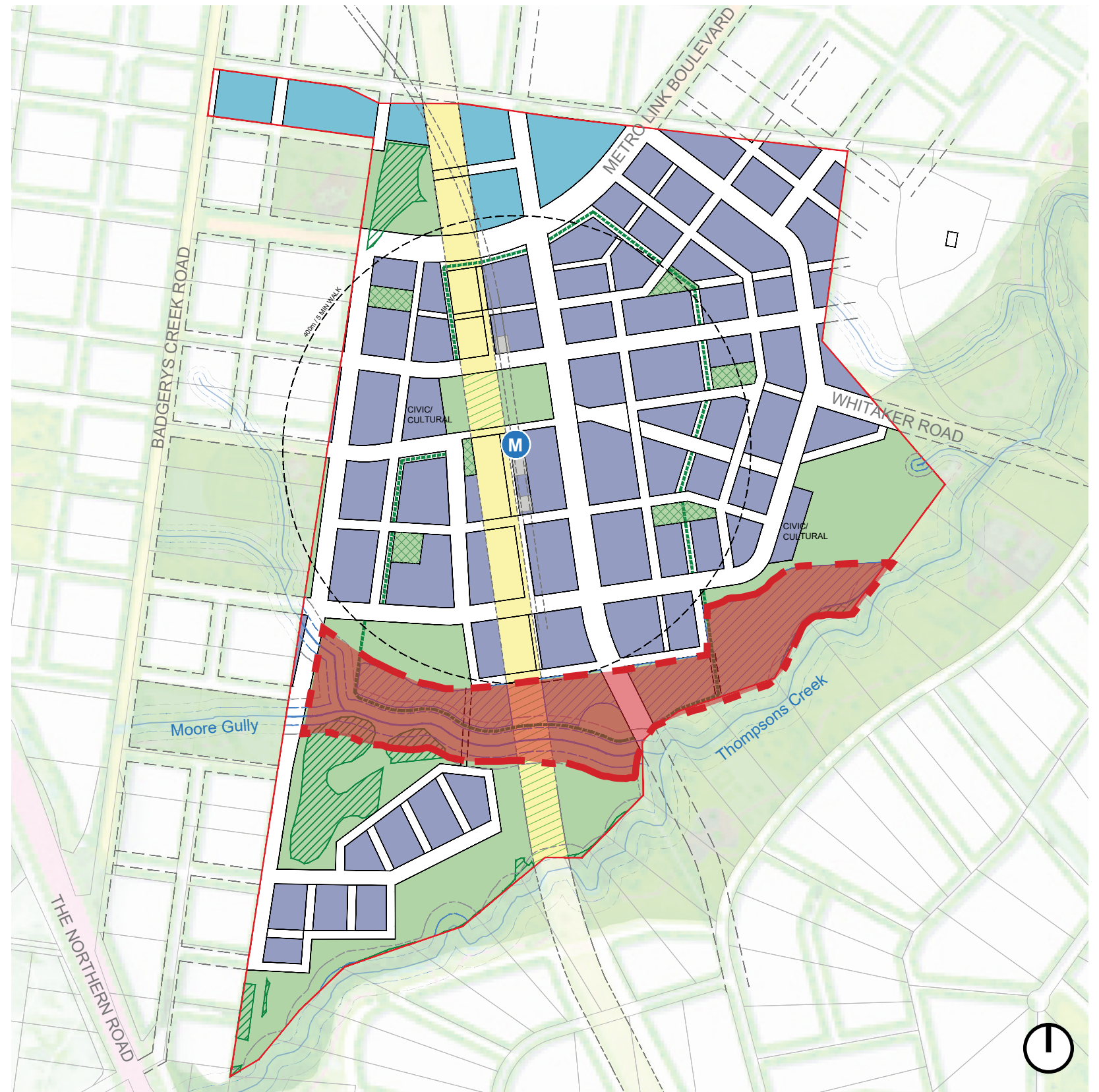
ANALYSIS

Bradfield City Centre Context

The proposed extent of works is located to the south of Bradfield City Centre, creating a green and blue border to Bradfield. This green and blue precinct is well connected to future residential development further south and to the east. This green corridor will provide a amenity and habitat for native flora and fauna for the region. The two proposed pedestrian footbridges that cross Moore Gully and the Green Loop will be integrated within Country and future coordination is to be undertaken with the relevant consultant for this project broadly.

Legend

— Project boundary



Bradfield City Centre Masterplan; source: Western Parkland City Authority




ANALYSIS

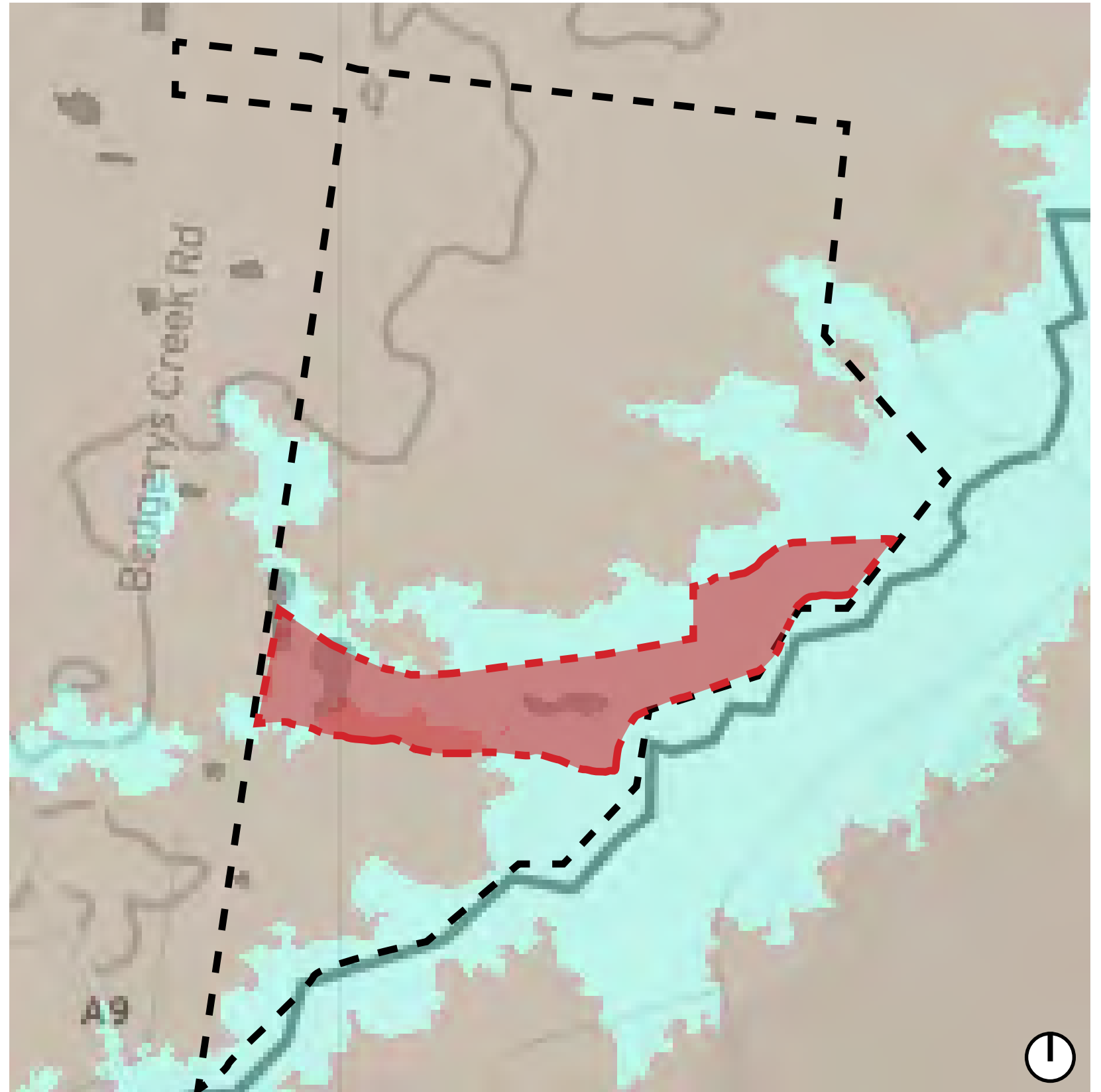
Pre-clearing Condition - Remnant Vegetation

The Pre-clearing condition of the scope are is understood to have included:

- Cumberland Shale Plains Woodland
PCT 849: Grey Box - Forest Red Gum Grassy Woodland on Flats of the Cumberland Plain, Sydney Basin
- Cumberland Red Gum River-flat Forest
PCT 835: Forest Red Gum-Rough-barked Apple Grassy Woodland on Alluvial Flats of the Cumberland Plain, Sydney Basin

Legend

-  Project boundary
-  Cumberland Red Gum River-flat Forest
-  Cumberland Shale Plains Woodland



Source: SEED Portal

ANALYSIS

Current Condition - Vegetation

The existing site area has range of ecological values listed in Appendix M of the DCP, with three different PCTs, scattered trees, waterways, dams and wetlands present. These include:

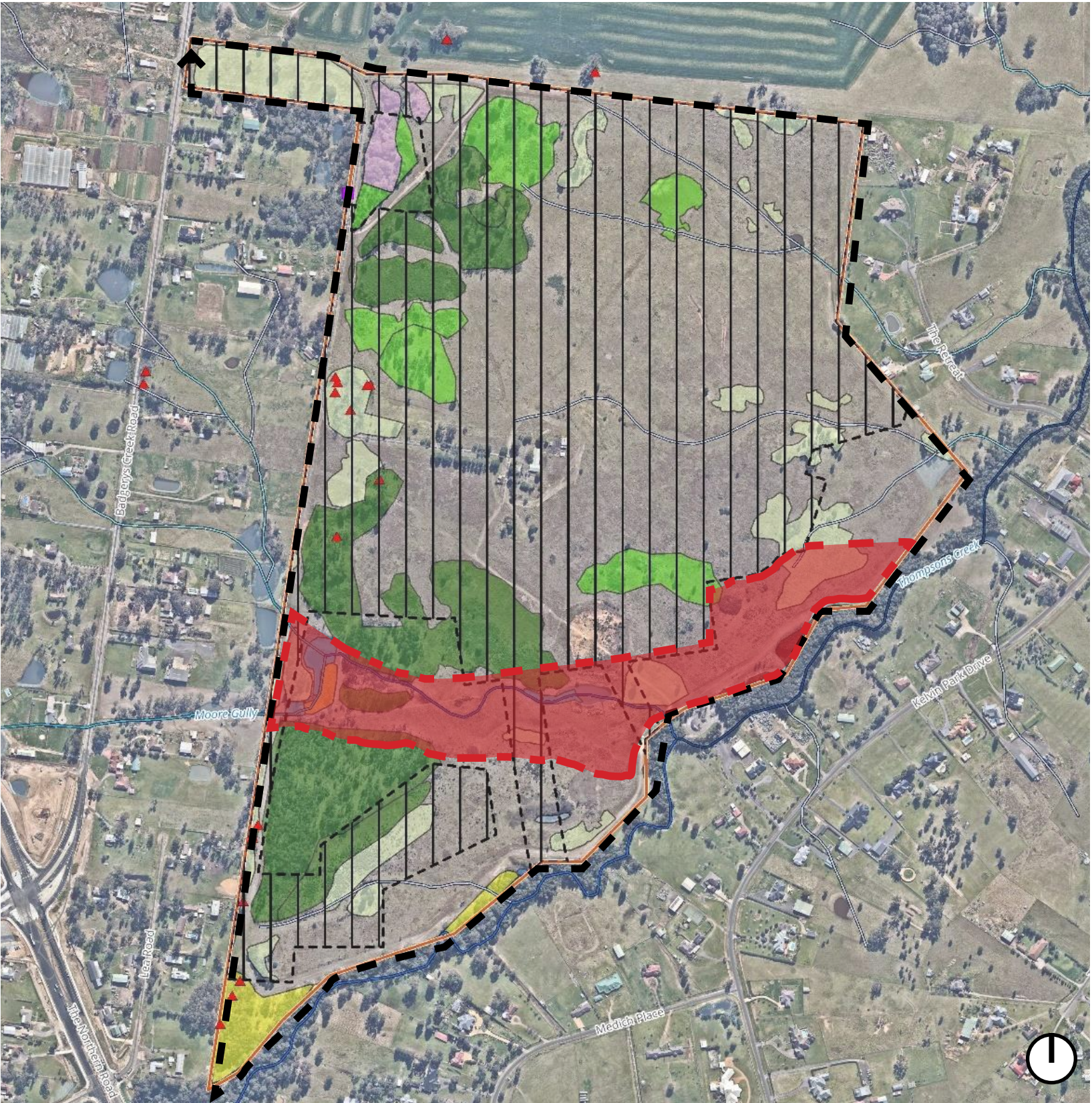
- PCT 781: Coastal Freshwater Lagoons of the Sydney Basin and South East Corner
- PCT 849: Grey Box - Forest Red Gum Grassy Woodland on Flats of the Cumberland Plain, Sydney Basin
- PCT 1071: *Phragmites australis* and *Typha orientalis* coastal freshwater wetlands

Legend

Project boundary

Plant Community Types

- | | |
|--|--|
| 725 - Broad-leaved Ironbark - Melaleuca decora shrubby open forest on clay soils of the Cumberland Plain, Sydney Basin Bioregion, Moderate condition | 849 - Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion, Moderate condition |
| 781 - Coastal freshwater lagoons of the Sydney Basin Bioregion and South East Corner Bioregion, High condition | 849 - Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion, Low condition |
| 781 - Coastal freshwater lagoons of the Sydney Basin Bioregion and South East Corner Bioregion, Moderate condition | 1071 - <i>Phragmites australis</i> and <i>Typha orientalis</i> coastal freshwater wetlands of the Sydney Basin Bioregion, Moderate condition |
| 781 - Coastal freshwater lagoons of the Sydney Basin Bioregion and South East Corner Bioregion, Low condition | 1800 - Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter valley, High condition |
| 835 - Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion, High condition | |
| 849 - Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion, High condition | |



Source: Western Parkland City Authority

ANALYSIS

Coastal Freshwater Lagoon

PCT 1071
Phragmites australis and *Typha orientalis* coastal freshwater wetlands of the Sydney Basin Bioregion

Although this vegetation group is not locally indigenous to the site, it is essential in native wetland communities around the Sydney Basin and will inform the selection of planting in the Moore Gully re-alignment works and Macrophyte planting strategy for the basins

- Dominant plant species typical of this vegetation group include:
- Reeds and sedges: *Eleocharis sphacelata*, *Baumea juncea*, *Baumea rubiginosa*, *Baumea articulata*, *Gahnia sieberiana*, *Ludwigia peploides subsp. montevidensi*, *Typha orientalis*, *Phragmites australis*, *Persicaria decipiens*, *Persicaria strigosa*
 - Shrubs: *Casurina glauca*, *Banksia robur*, *Xanthorrhoea resinifera*, *Melaleuca nodosa*, *Melaleuca linariifolia*, *Leptospermum juniperinum*, *Lomandra longifolia*

Reeds and Sedges



Baumea juncea



Baumea rubiginosa



Baumea articulata



Eleocharis sphacelata



Gahnia sieberiana



Ludwigia peploides subsp. montevidensi



Typha orientalis



Phragmites australis



Persicaria decipiens



Persicaria strigosa

Shrubs



Casuarina glauca



Banksia robur



Xanthorrhoea resinifera



Melaleuca nodosa



Melaleuca linariifolia



Leptospermum juniperinum



Lomandra longifolia

ANALYSIS

Cumberland Red Gum River-flat Forest

PCT 835

Forest Red Gum-Rough-barked Apple Grassy Woodland on Alluvial Flats of the Cumberland Plain, Sydney Basin

This vegetation group is listed as an Endangered Ecological Community under the TSC Act.

Dominant plant species typical of this vegetation group include:

- Canopy trees: *Eucalyptus tereticornis*, *Angophora floribunda*, *Eucalyptus amplifolia*, *Eucalyptus saligna*
- Small trees: *Acacia decurrens*
- Shrubs: *Bursaria spinosa*, *Ozothamnus diosmifolius*
- Groundcovers: *Dichondra repens*, *Brunoniella australis*, *Mircolaena stipoides*, *Desmodium varians*, *Einadia hastata*, *Entolasia marginata*, *Solanum prinophyllum*, *Echinopogon ovatus*, *Oplismenus aemulus*, *Cheilanthes sieberi*, *Dianella longifolia*, *Commelina cyanea*, *Digitaria parviflora*
- Vines and Climbers: *Glycine tabacina*, *Glycine clandestina*, *Glycine micophylla*

Canopy trees



Angophora floribunda



Eucalyptus tereticornis



Eucalyptus amplifolia

Small Trees



Acacia decurrens

Shrubs



Bursaria spinosa



Ozothamnus diosmifolius

Groundcovers



Dichondra repens



Brunoniella australis



Mircolaena stipoides



Desmodium varians



Cheilanthes sieberi



Dianella longifolia



Digitaria parviflora



Einadia hastata



Entolasia marginata



Solanum prinophyllum



Echinopogon ovatus



Oplismenus aemulus



Commelina cyanea

Vines and Climbers



Glycine tabacina



Glycine clandestina



Glycine micophylla

ANALYSIS

Cumberland Shale Plains Woodlands

PCT 849

Grey Box-Forest Red Gum Grassy Woodland on Flats of the Cumberland Plain, Sydney Basin.

This vegetation group is listed as a Critically Endangered Ecological Community under the TSC Act.

Dominant plant species typical of this vegetation group include:

- Canopy trees: *Eucalyptus moluccana*, *Eucalyptus tereticornis*, *Eucalyptus fibrosa*
- Small trees: *Acacia decurrens*, *Acacia implexa*
- Shrubs: *Bursaria spinosa*, *Indigofera australis*
- Groundcovers: *Dichondra repens*, *Brunoniella australis*, *Mircolaena stipoides*, *Themeda australis*, *Desmodium varians*, *Cheilanthes sieberi*, *Aristida vagans*, *Dichelalachne micrantha*, *Lomandra filiformis*, *Dianella longifolia*, *Aristida ramosa*, *Opercularia diphylla*, *Eragrostis leptostachya*, *Lomandra multiflora*, *Wahlenbergia gracilis*, *Oxalis perennans*, *Tricoryne elatior*, *Euchiton sphaericus*, *Cymbopogon refractus*, *Stackhousia viminea*, *Chloris ventricosa*, *Solanum pungetium*
- Vines and Climbers: *Glycine tabacina*, *Glycine clandestina*, *Glycine micophylla*, *Hardenbergia violacea*

Canopy trees



Eucalyptus moluccana



Eucalyptus tereticornis



Eucalyptus fibrosa

Small Trees



Acacia decurrens



Acacia implexa

Shrubs



Bursaria spinosa



Indigofera australis

Groundcovers



Dichondra repens



Brunoniella australis



Mircolaena stipoides



Themeda australis



Desmodium varians



Cheilanthes sieberi



Stackhousia viminea



Aristida vagans



Lomandra filiformis



Dianella longifolia



Wahlenbergia gracilis



Oxalis perennans



Chloris ventricosa



Cymbopogon refractus

Vines and Climbers



Opercularia diphylla



Tricoryne elatior



Euchiton sphaericus



Glycine tabacina



Glycine clandestina



Glycine micophylla



Hardenbergia violacea

SITE ANALYSIS

Access

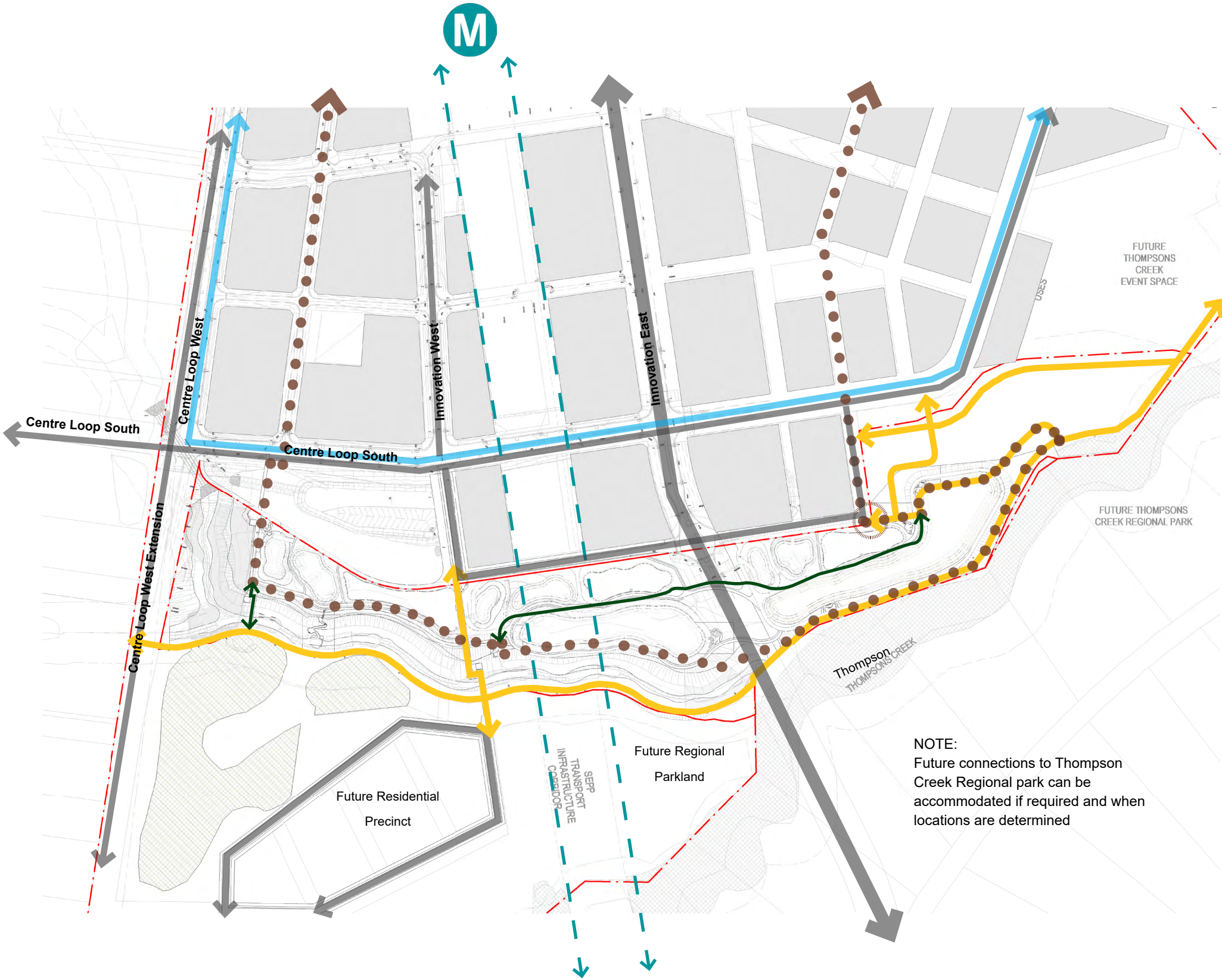
In accordance with the objectives outlined in the Bradfield City Centre Masterplan, the Moore Gully Riparian Corridor provides a hierarchy of access points. The proposed design provides a primary pedestrian crossing (eastern) that provides connections from the future residential areas from the south to the Bradfield City Centre and Metro.

A supplementary pedestrian crossing is provided to the west of the project that connects to the Green loop. Pedestrian and cycle connections are provided in an east / west orientation to provide access to open space and connection with the Green Loop.

Maintenance access paths are provided to supplement these pedestrian connections to provide ongoing functional access to the basins.

Legend

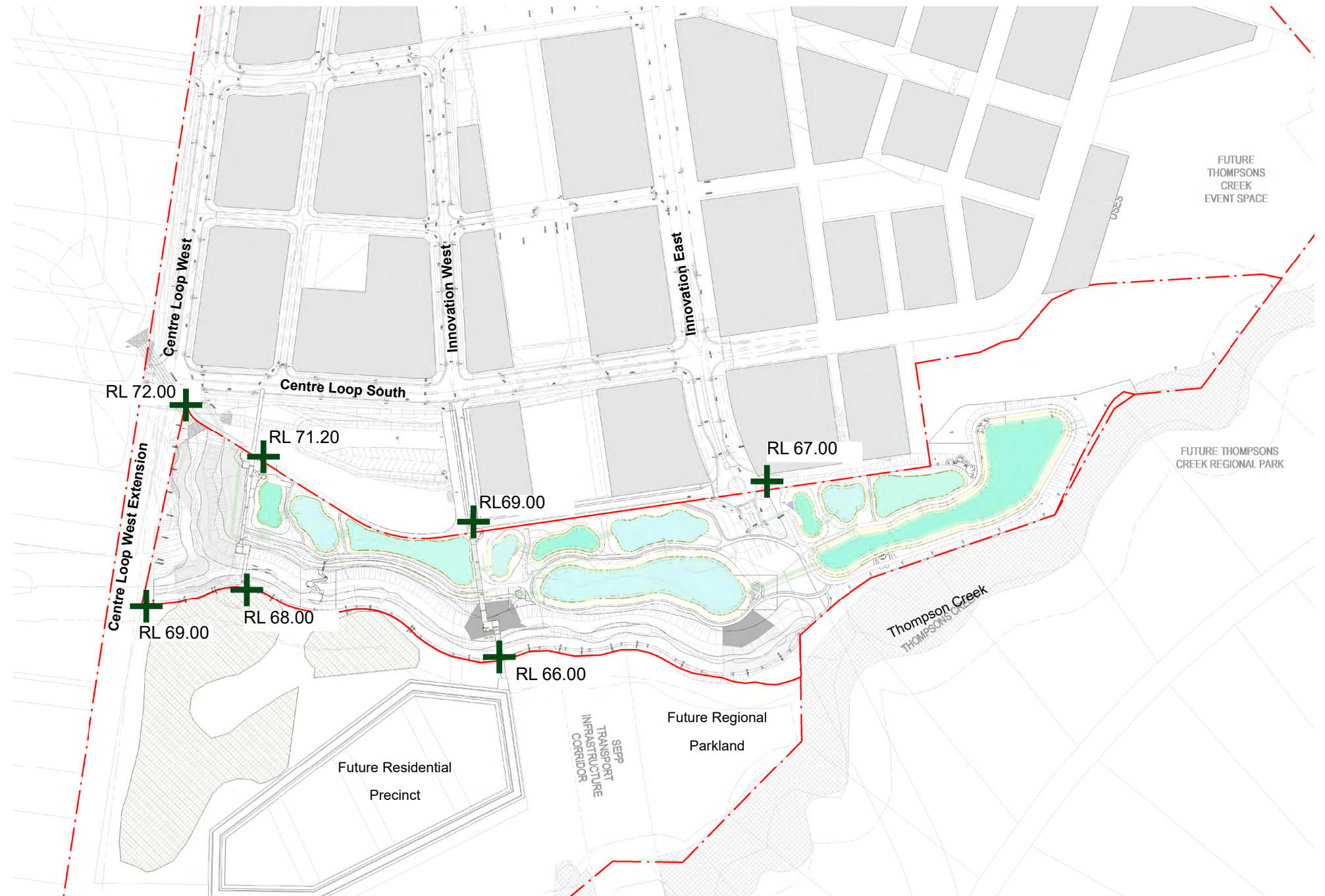
- Project Boundary
- Off street bike trail / Shared path
- Existing / Proposed roads adjoining site
- The Green Loop (shared path)
- Proposed supplementary pedestrian and maintenance access path
- Metro Corridor



I SITE ANALYSIS

Topography

Bradfield as a whole is a relatively flat area and part of the Cumberland Plain region of South Western Sydney. The project area within Moore Gully experiences a fall of almost 8m from east (low) to west (high) . Utilising the site's grade is integral to managing water on site for utility and amenity purposes and visually when this is experienced across the sites length and width, the level change is marginal.



Legend

— Project Boundary

+ Key level
RL 62.00



I SITE ANALYSIS

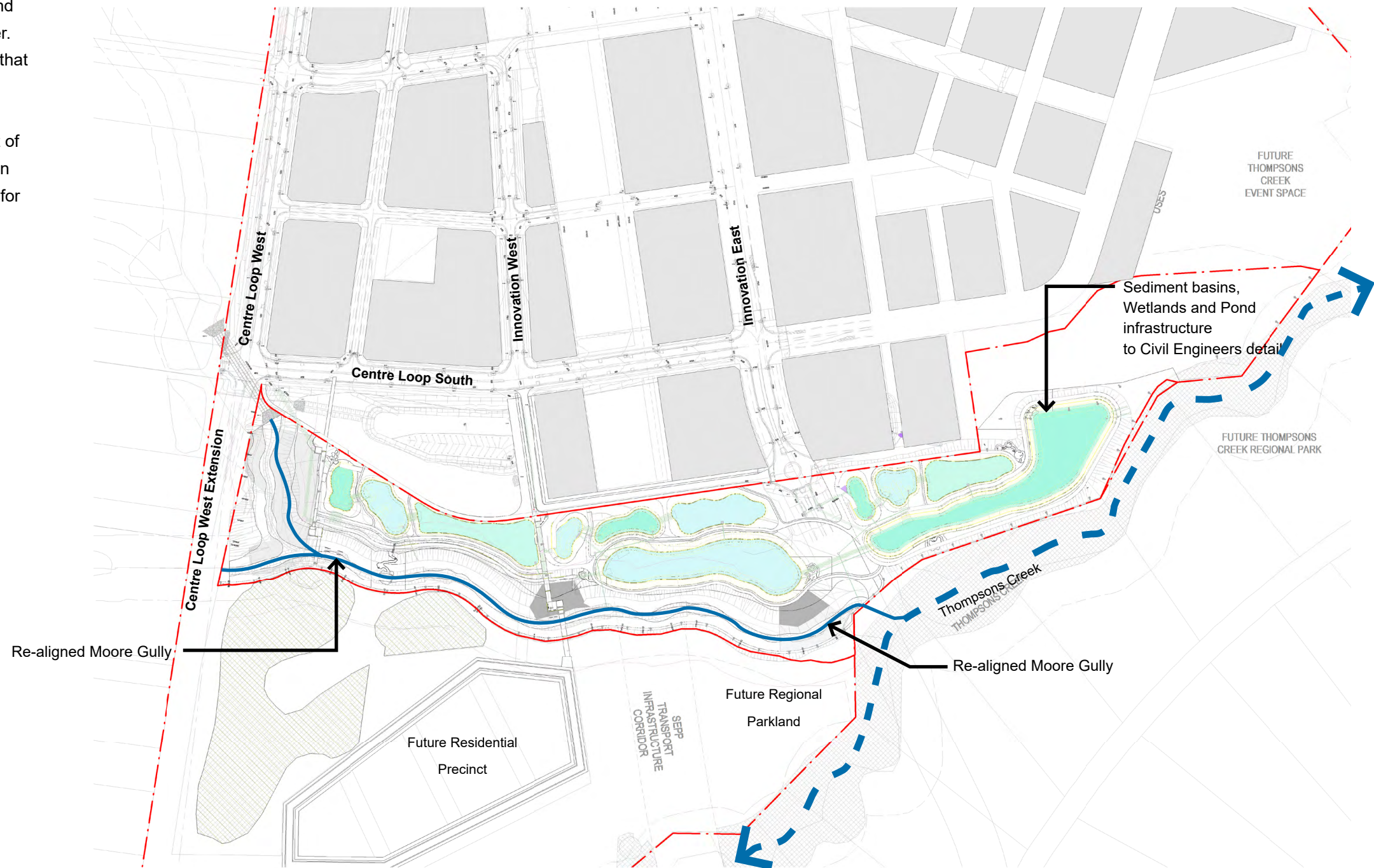
Water

Stormwater collected from the Bradfield City Centre infrastructure is captured and treated within the project by a series of sediment basins, wetlands and ponds. Detailed designs have been prepared by the project Civil Engineer. Integrated into this design is extensive wetland and macrophyte planting that aids in water quality and habitat creation.

A section of the existing Moore Gully is proposed for re-alignment as part of this works. The re-alignment includes extensive re-vegetation strategies in order to re-create the vegetation communities and typologies of the area for amenity and ecology.

Legend

- Project Boundary
- Existing water courses
- Proposed water course re-alignment
- Stormwater infrastructure to Civil Engineers detail



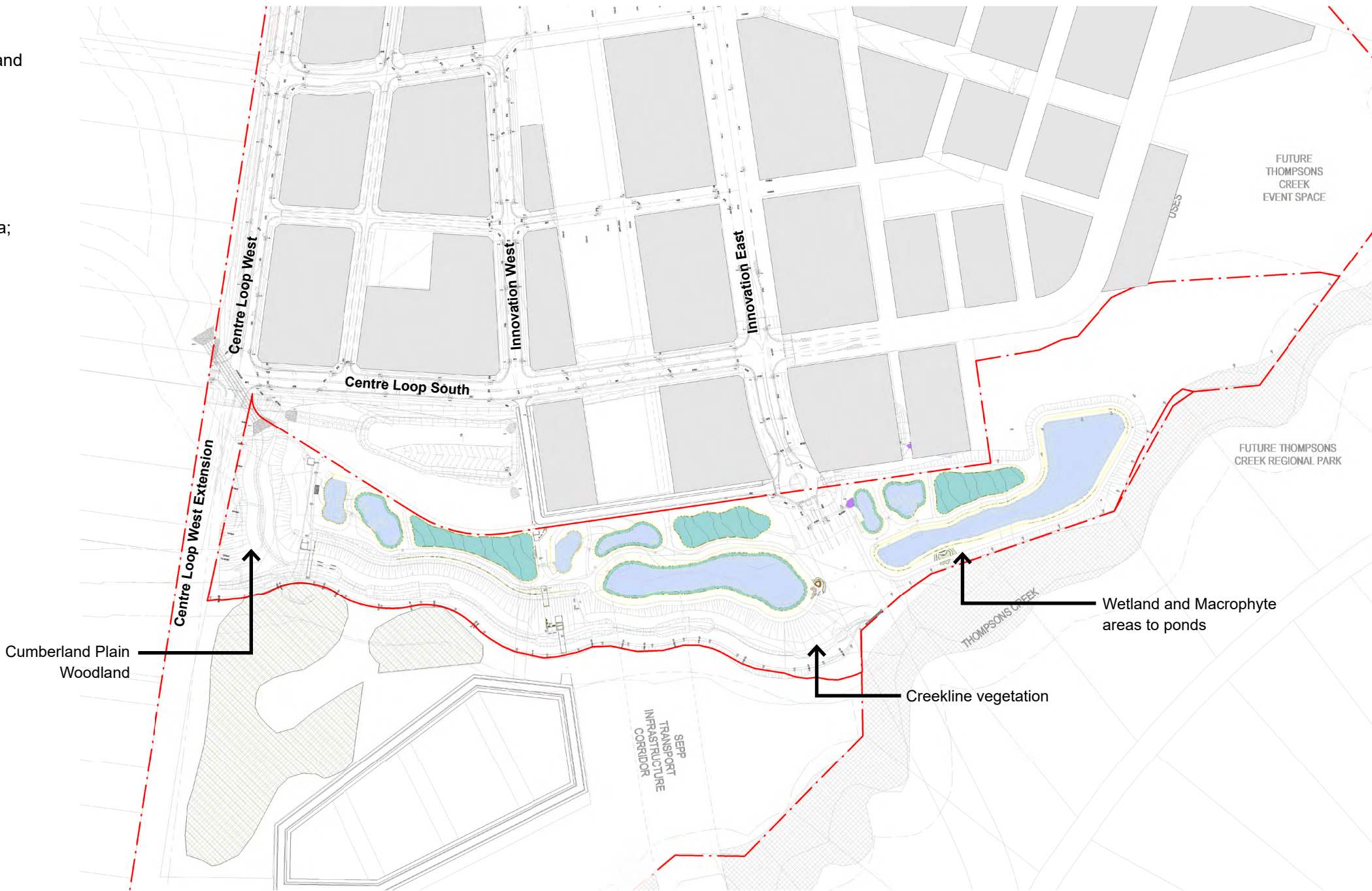
SITE ANALYSIS

Vegetation Opportunities

The proposed microclimates and conditions created by the project will be informed by the endemic vegetation communities of the place and the proposed earthworks and stormwater drainage works. The vegetation opportunities for re-vegetation include Creeklines, Cumberland Plain, Wetland and Bio-filtration areas

Each of these communities are specially adapted to thrive in each unique condition and generate amenity within the landscape.

This is in accordance with Bushfire Advice prepared by EcoLogical Australia; dated 15th March 2024.

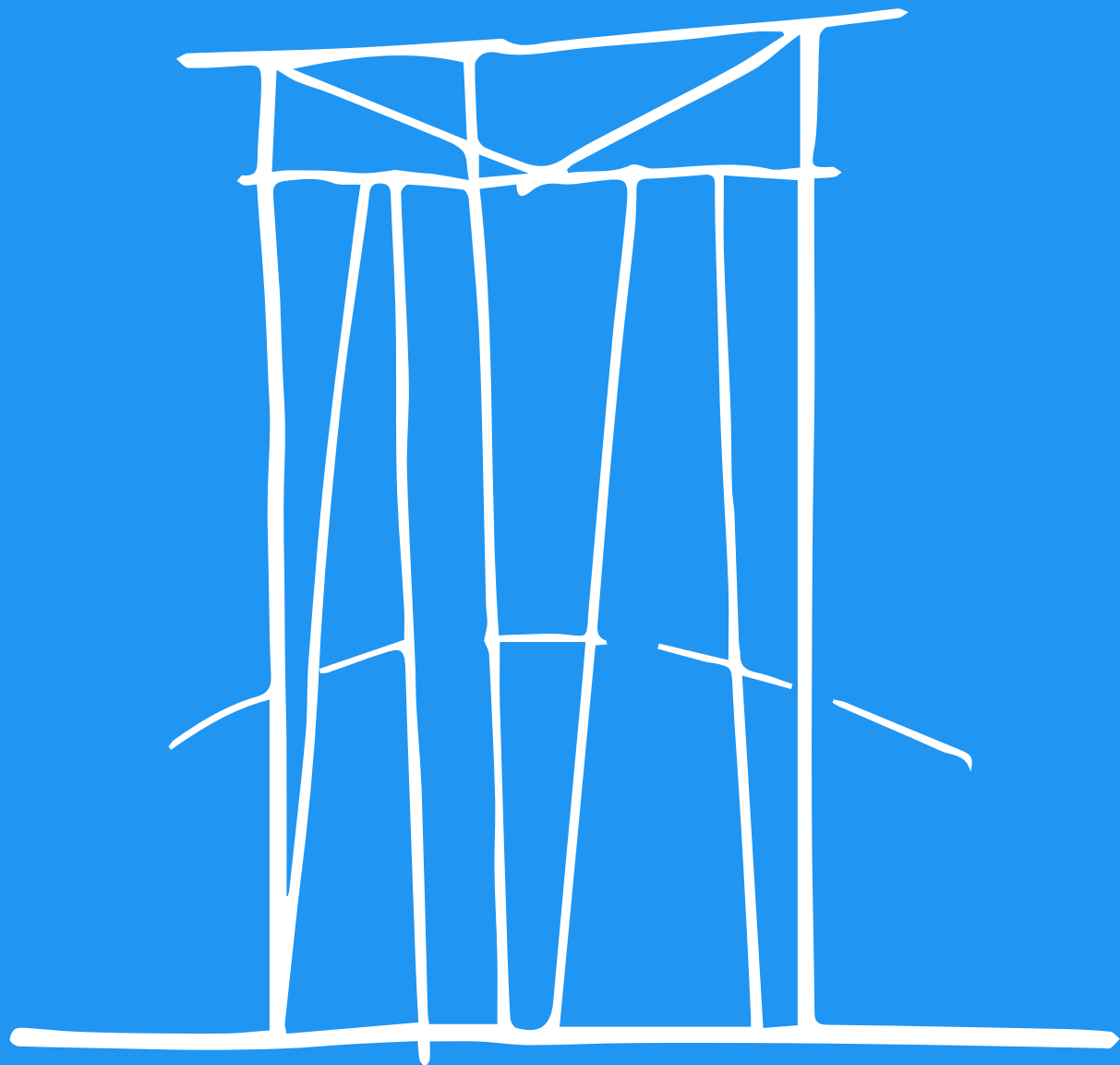


Legend

- Project Boundary
- Creekline
- Cumberland Plain Woodland
- Wetland and Macrophyte



DESIGN



03

DESIGN VISION

The design of the Moore Gully Riparian precinct is a vital green open space connected to the Bradfield City Center. This vital open spaces plays a vital ecological role and environmental role in the health and wellbeing of Country including the people of Bradfield. The design is focused on the creation of this sustainable environment where Country is embedded throughout.

Overarching design principles

1. Country
2. Environmental
3. Green infrastructure
4. Country

Response to Country - Green and Connected

1. Wetland Habitat restoration
2. Learning about Country
3. Cultural spaces
4. Darug Stories and Artworks

Materiality and the Human Scale

1. Wayfinding
2. Adaptive design
3. Materials



DESIGN PRINCIPLES

Overarching Design Principles

COUNTRY



Connecting to Country

The design approach integrates of all facets of Country by incorporating first nations people knowledge and relationship with Country. Re-vegetation and regeneration of the Moore Gully Riparian Corridor will incorporate predomination endemic Cumberland Plain species to promote biodiversity and habitat for native fauna.

Key Considerations

- Endemic tree and understory planting of Cumberland Plain Woodlands species
- Promote biodiversity and fauna habitat
- Re vegetation & regeneration of native bushland
- Evergreen canopy trees

ENVIRONMENT



Water Sensitive Urban Design (WSUD)

Water is a scarce and a valuable resource which is particularly significant in the Western Sydney region. The Moore Gully Riparian Corridor will incorporate WSUD principles that addresses both these environmental water calamities via the use of drought tolerant endemic species and stormwater retention.

Key Considerations

- Endemic drought tolerant species
- Permeable paving to reduce stormwater runoff and stormwater pollution
- Combined wetland with on-site stormwater detention
- Rainwater retention basins to harvest and store stormwater for use during dry periods.
- Integrated wetland zones within the vegetated buffer
- Berms and paths to accommodate the 1% AEP

GREEN INFRASTRUCTURE



User Comfort and Walk ability

The design integrates aspects of user comfort to create accessible spaces and amenity for the growing population. With evidence suggesting that green spaces within walking distance improve public wellbeing, it is imperative that the Moore Gully Riparian Corridor promotes users with a connection to nature.

Key Considerations

- NSW Government Greener Places Policy
- Aesthetic natural environments & improved air quality
- Light coloured hardscape materials
- Cooling comfort for pedestrians and cyclists through the wetland system.
- Pedestrian resting stops and platforms to observe and connect with riparian flora and fauna.

SAFETY AND SECURITY



Crime Prevention Through Environmental Design (CPTED)

Public spaces should be safe and comfortable places for all users. The Moore Gully Riparian Corridor will be designed to promote safety for pedestrians, cyclists and native fauna. Crime prevention design strategies such as clear sightlines will also be incorporated to further promote safe spaces.

Key Considerations

- Promotes safety and security in public spaces
- Crime mitigation and prevention
- Clear sightlines created with considered planting
- Appropriate lighting levels for safe pedestrian usage and clear signposting
- Pedestrian and cyclist friendly design

I DESIGN PRINCIPLES

Response to Country - Green and Connected

WETLAND HABITAT RESTORATION

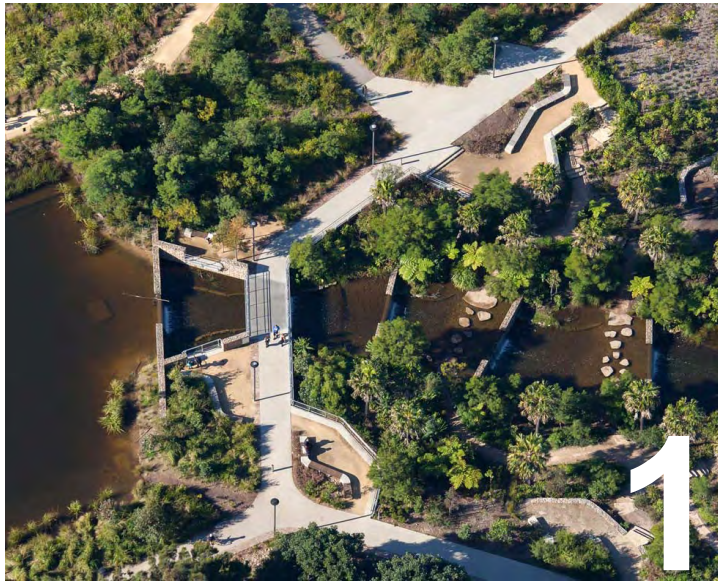


Image: Sydney Park

Source: Landezine

Key Considerations

- Connects to the broader Wianamatta Creek
- Priority for integrating water quality, reuse and flood management.
- Water flows downstream to be reused for irrigation and recirculated upstream
- Low levels of lighting and light spill in areas of protected ecologies.
- Planting of endemic species that promote biodiversity
- Opportunity for more native fauna species such as birds, bees, butterflies, possums and lizards.

LEARNING ABOUT COUNTRY



Image: The Australian Garden

Source: Landezine

Key Considerations

- Opportunities to acknowledge, respect and learn about Country in different spaces
- Restoration and re-purposing of existing dams to promote ecology
- Platforms to view sight lines and landmarks across Country, day and night sky with educational markers

CULTURAL SPACES



Image: Tikkurila Waterfront

Source: Landezine

Key Considerations

- Organic, country themed paths that connect to dedicated First Nations Cultural spaces
- Connection to Sky Country through open spaces

DARUG ARTWORK AND STORIES



Source: Thompson Square

Key Considerations

- Art and sculptures to prioritise local First Nations art and making styles and other methods of visual storytelling
- Avoid generic or imported styles for artwork

I DESIGN PRINCIPLES

Materiality and the Human Scale

WAYFINDING



Source: TIDE / Peter Lambert Design

Key Considerations

- Elements such as art, signage, language, plants, animal markings, paving, creative lighting and sounds, and views can provide education and wayfinding
- Welcome to country signage visible from city loops and wayfinding posts within the wetland walk.

ADAPTIVE DESIGN

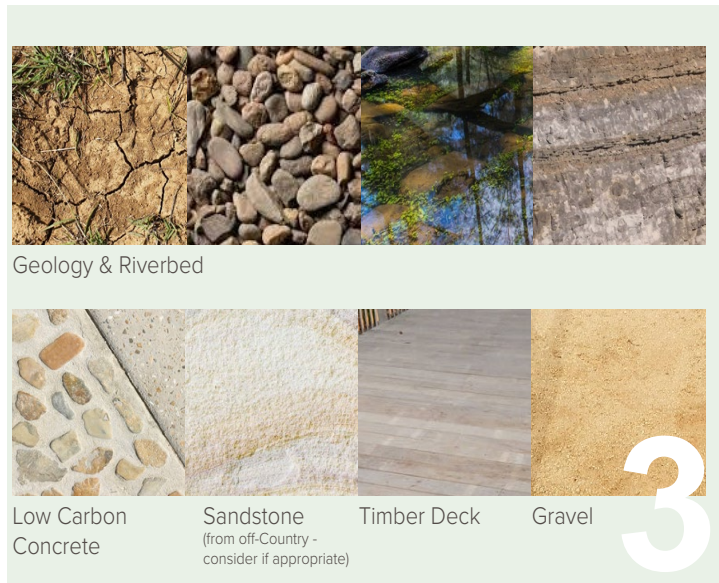


Source: ArchitectureAU

Key Considerations

- Adaptive and flexible spaces with opportunities that may include gathering, events, education, cultural practice, performance, recreation, play and markets
- Immersive engagement with nature so people can see, hear, feel and smell plants, flowers, birds and insects

MATERIALS



Source: Western Sydney Parkland Authority

Key Considerations

- Priority for natural materials such as stone, soil, sand and grasses
- Variations in pavement material, colour and finish for stream interpretation
- Locally sourced materials that are located in site specific areas

I PROPOSED SITE PLAN



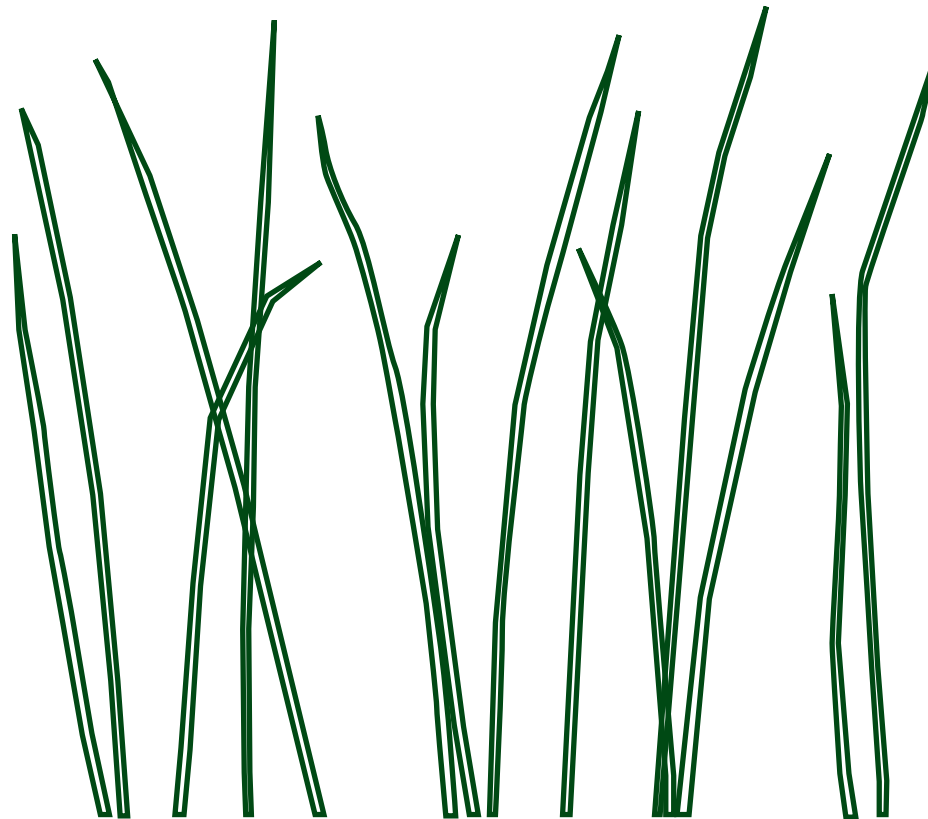
- ### Design Notes
- 1 Proposed vegetated wetlands and associated stormwater infrastructure to Civil detail
 - 2 Proposed shared path crossing with lookouts, wayfinding pavilion and wetland connection points
 - 3 Proposed pedestrian crossing with lookouts, wayfinding markers and wetland connection points
 - 4 Proposed access path and nature walk with rest stops, seating, lighting and interpretive signage
 - 5 Proposed wayfinding pavilions
 - 6 Existing vegetation to be retained
 - 7 Moore Gully re-aligned and revegetated

LEGEND:

Project scope boundary	F.R.P. Proposed pedestrian and cycle bridge	T.C. Proposed timber bridge and decks	Proposed creek channel planting	Proposed basin planting	Future building and associated public domain by others	Vegetated Riparian Zone (VPZ)	Proposed lighting by electrical engineer	Existing vegetation area retained and protected	DE.CO Proposed pedestrian and maintenance vehicle access path	Proposed wayfinding pavilions	Proposed creek bank planting	Proposed open grassland planting	Existing tree retained	Top of Bank (TOB)
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EASTERN CROSSING

Conceptual Inspiration



Macrophyte planting character

Macrophyte planting throughout the project area will be extensive and include a variety of reeds and rushes suitable for dry, periodic inundation and permanent inundation conditions.

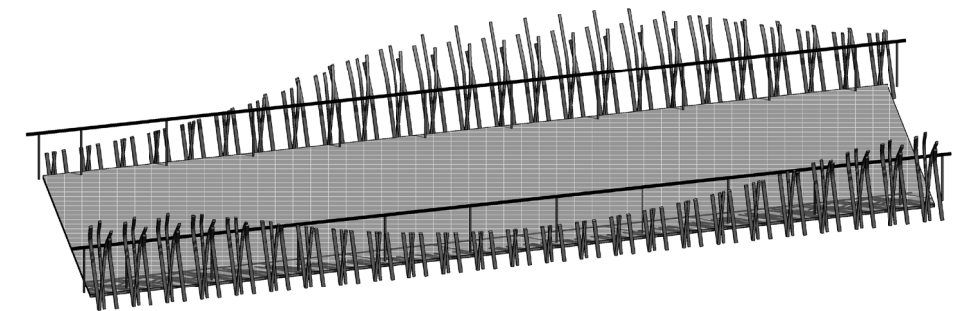
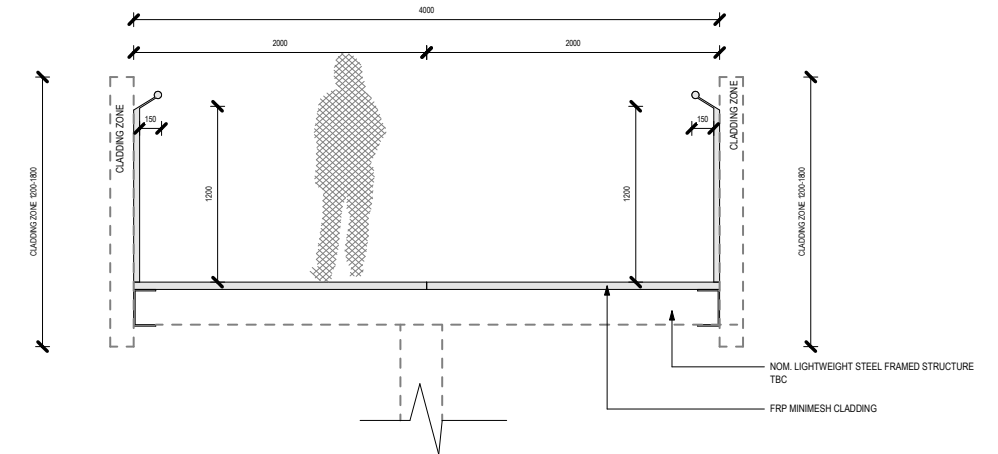
The concept for the eastern crossing is inspired by the character of Cumbungi and other reed planting that is proposed in the wetlands and ponds.

Shape and Form

The planting character of the wetland and pond vegetation is one of the design drivers to create a unique identity to the eastern crossing. Express

Macrophyte planting is typically long weeping grass / stems that create habitat and amenity for other flora and fauna along the edges of the water body. The ephemeral nature of the stems flowing in the wind has informed the design of the pedestrian bridges

Eastern Crossing Section



Conceptual Design

The Macrophyte planting form is considered throughout the design process and informs the ephemeral nature of the cladding to the bridge crossings.

The 'weeping' feature of the Macrophytes has been reiterated through steel rods, flaring out at the tips at different angles to emphasise variation.

The height distribution of the Macrophyte planting and its flowing nature translates into the 'wavy' form along the top of the facade. These different height intervals also translates at the bottom, with various steel rods extending below the base of the bridge.

EASTERN CROSSING

Pavilions

The eastern crossing broad in scale and provides important pedestrian and cycle connectivity between Bradfield City Centre and the future residential areas to the south. This length of this crossing is approximately 145m and several pavilions are proposed as markers aiding in pedestrian movement and which provide safe refuges in heat and inclement weather.

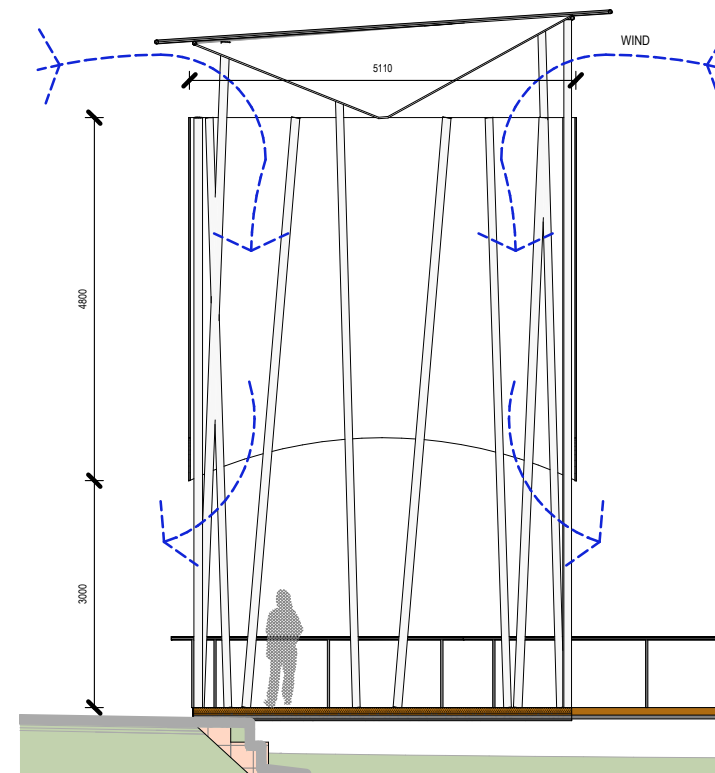
The shelters and the shade they provide create meaningful rest stops for potential visual and physical engagement with the natural ecosystems that are created as part of this project.

Two pavilions are provided to the western crossing and area which are consistent in design language with the pavilions of the east

Proposed Location Plan



Pavilion Section



EASTERN CROSSING

Aerial

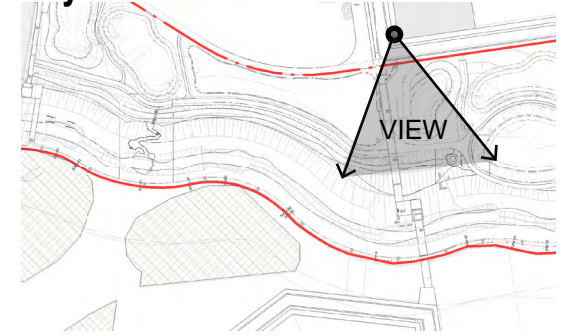


Illustrative perspective by Taylor Brammer Landscape Architects

I EASTERN CROSSING

View from Bradfield City

Key Plan

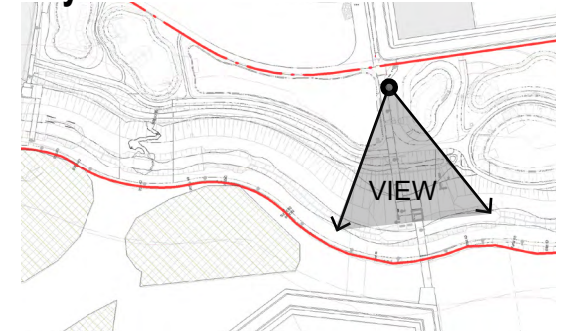


Illustrative perspective by Taylor Brammer Landscape Architects

EASTERN CROSSING

View from Crossing Entrance

Key Plan

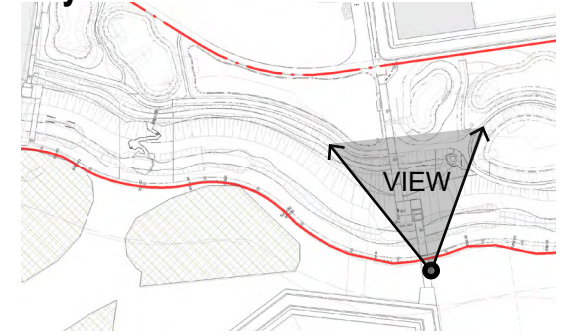


Illustrative perspective by Taylor Brammer Landscape Architects

I EASTERN CROSSING

View from Future Residential Subdivision

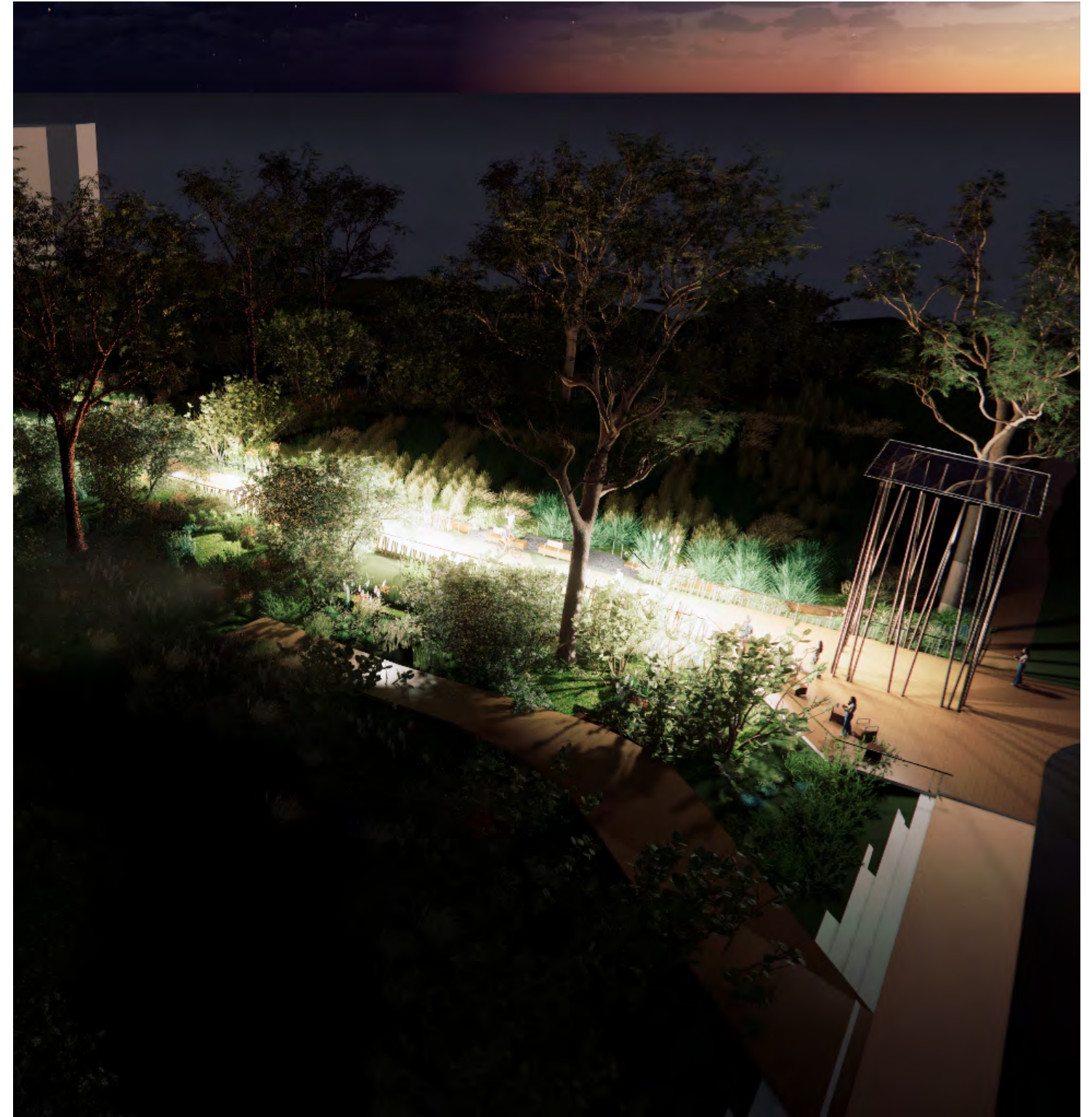
Key Plan



Illustrative perspective by Taylor Brammer Landscape Architects

I EASTERN CROSSING

Eastern Crossing - Day and Night Aerial View



Illustrative perspective by Taylor Brammer Landscape Architects

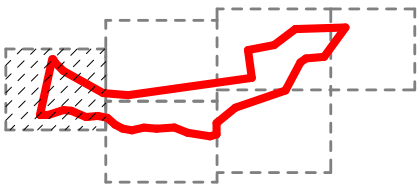
WESTERN CROSSING

Detail Plan - Pedestrian Only

Design Notes

- 1 Proposed vegetated wetlands and associated stormwater infrastructure to Civil detail
- 2 Moore Gully realignment - revegetated
- 3 Proposed pedestrian crossing
- 4 Proposed access path and nature walk with rest stops, seating, lighting and interpretive signage
- 5 Proposed wayfinding pavilions

Key Plan



Legend

- LEGEND:
- Project scope boundary
 - Existing vegetation area retained and protected
 - Proposed basin planting
 - Proposed open grassland planting
 - Future building and associated public domain by others
 - Existing tree retained
 - Proposed pedestrian and cycle bridge
 - Proposed pedestrian and maintenance vehicle access path
 - Proposed timber bridge and decks
 - Proposed wayfinding pavilions
 - Proposed creek channel planting
 - Proposed creek bank planting
 - Proposed basin planting
 - Proposed open grassland planting
 - Vegetated Riparian Zone (VPZ)
 - Top of Bank (TOB)
 - Proposed lighting by electrical engineer



WESTERN CROSSING

Conceptual Information



Ironbark

Description

Eucalyptus fibrosa, Red Ironbark, Broad-leaved Red Ironbark, is a type of Eucalyptus tree endemic to Eastern Australia.

Ironbark trees have been used by the First Nation’s People for the creation of canoes, shelters, shields, and containers due to their robust and rigid composition.

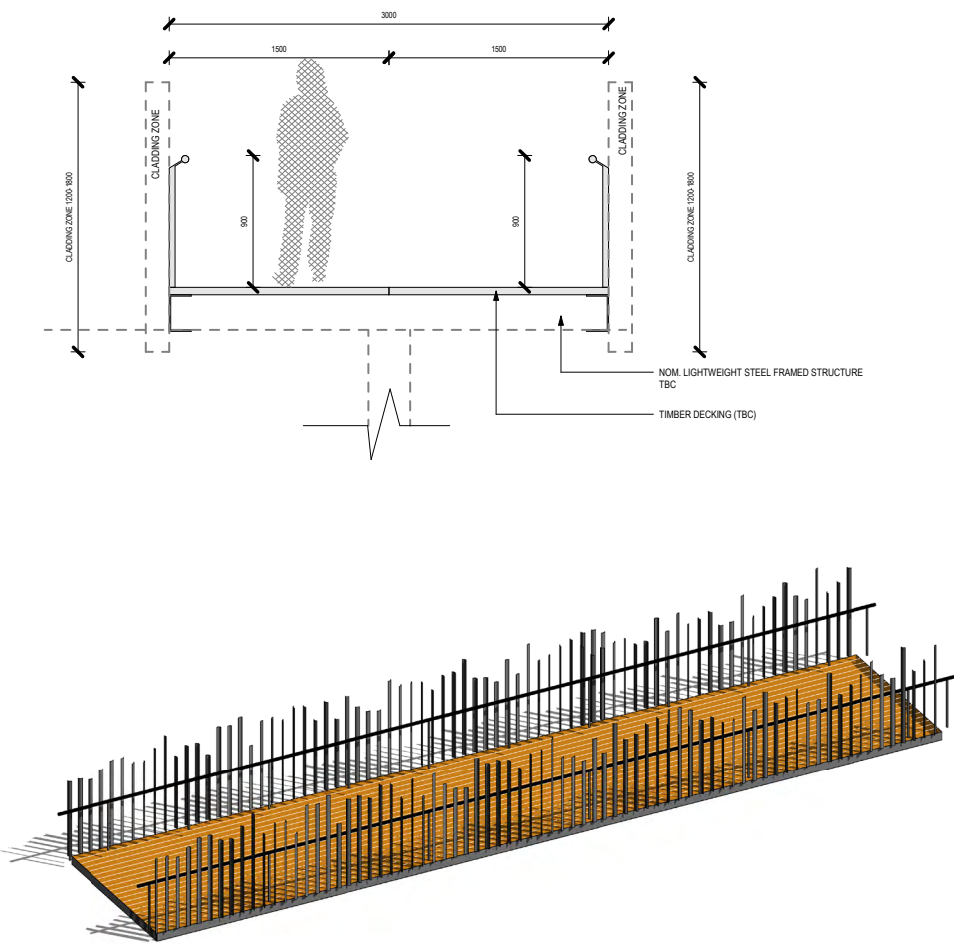
Our concept is inspired by Ironbark, and its significance within the Indigenous community and opportunities it may bring - including the introduction of new ecologies and build on existing Indigenous uses.

Shape and Form

Ironbark can be characterised by its dark, furrowed bark, with flat and narrow at the ridges with deep fissures in between.

The individual pieces of bark themselves are rough in texture, and appear to be serrated at different heights along the trunk. These vertical elements run distinctly along the main portion of the trunk.

Eastern Crossing Section



Conceptual Design

The furrowed bark imagery heavily influenced the facade design of the western crossing.

Using similar materials to the eastern crossing, the western crossing featured quartered steel pipes of various heights, staggered at random intervals to imitate the furrowed nature of the bark.

The quartered pipes are rotated across the stretch of the facade to mimic the movement of rustling leaves, with portions partially obstructed and partially open to resemble foliage.

WESTERN CROSSING

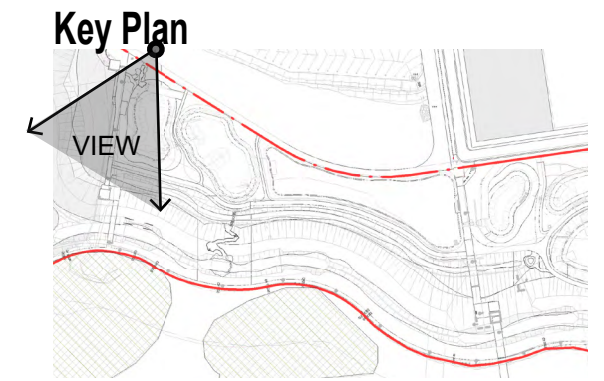
Aerial



Illustrative perspective by Taylor Brammer Landscape Architects

I WESTERN CROSSING

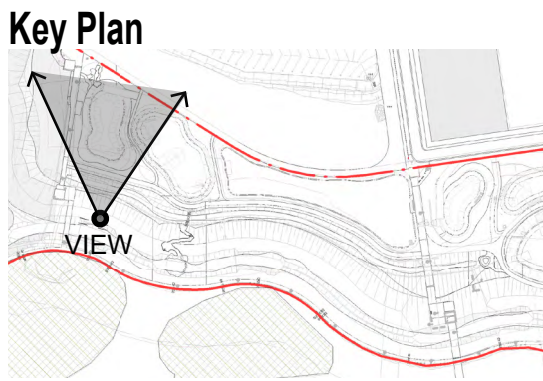
View from Bradfield City



Illustrative perspective by Taylor Brammer Landscape Architects

I WESTERN CROSSING

View from Crossing Entrance

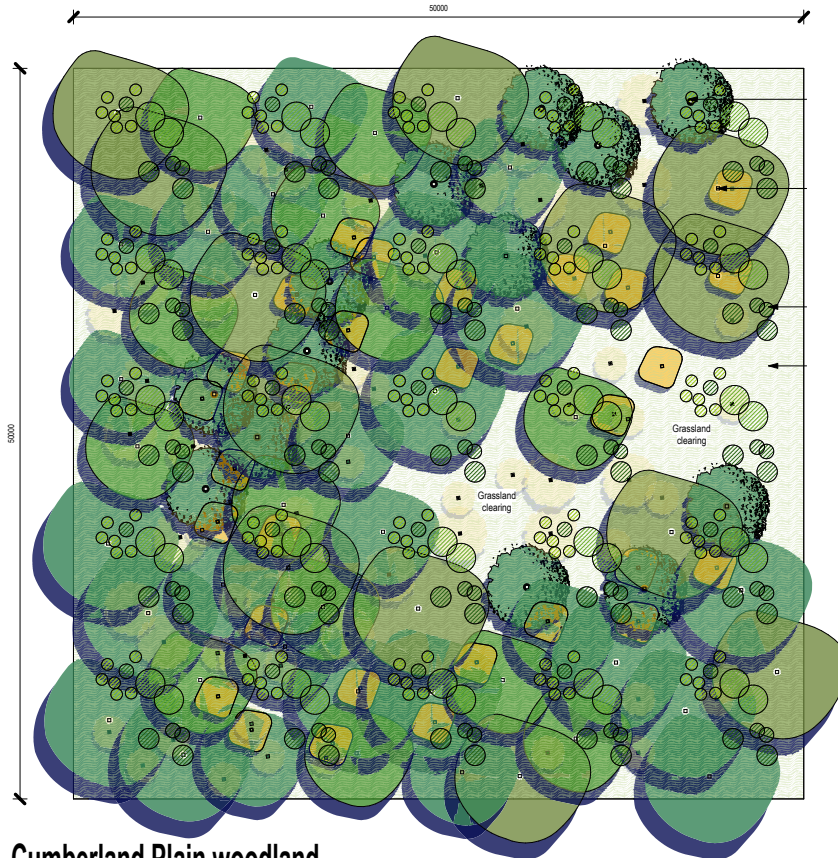


Illustrative perspective by Taylor Brammer Landscape Architects

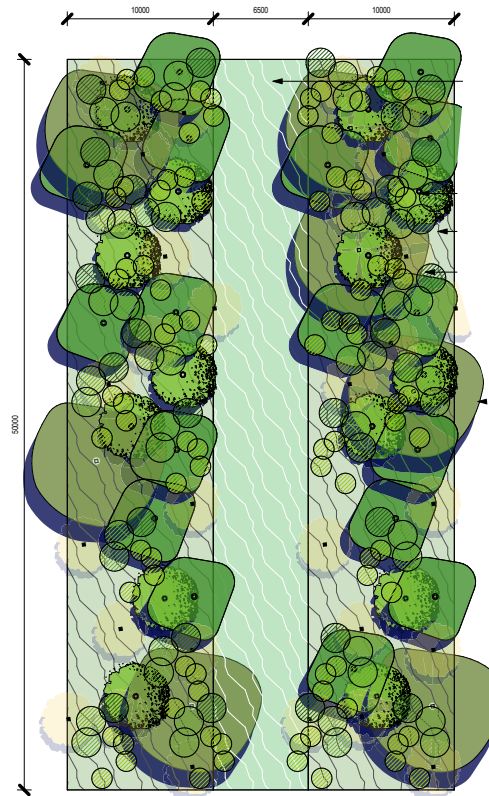
I MATURE TREE CANOPY

Tree Canopy calculations

Total Project Area =	119,800m2
Water holding area =	23,636m2
Wetland/ Macrophyte area =	35,963m2
Total stormwater infrastructure=	59,599m2
Remaining project area =	60,201m2
Cumberland Plain Revegetation	
Total area =	37,950m2
Total mature canopy =	31,500m2
Creekline vegetation area	
Total Area =	18,866m2
Total mature canopy =	11,700m2
Total Canopy =	43,200m2 or
	36% of total project area or
	72% of non stormwater infrastructure area



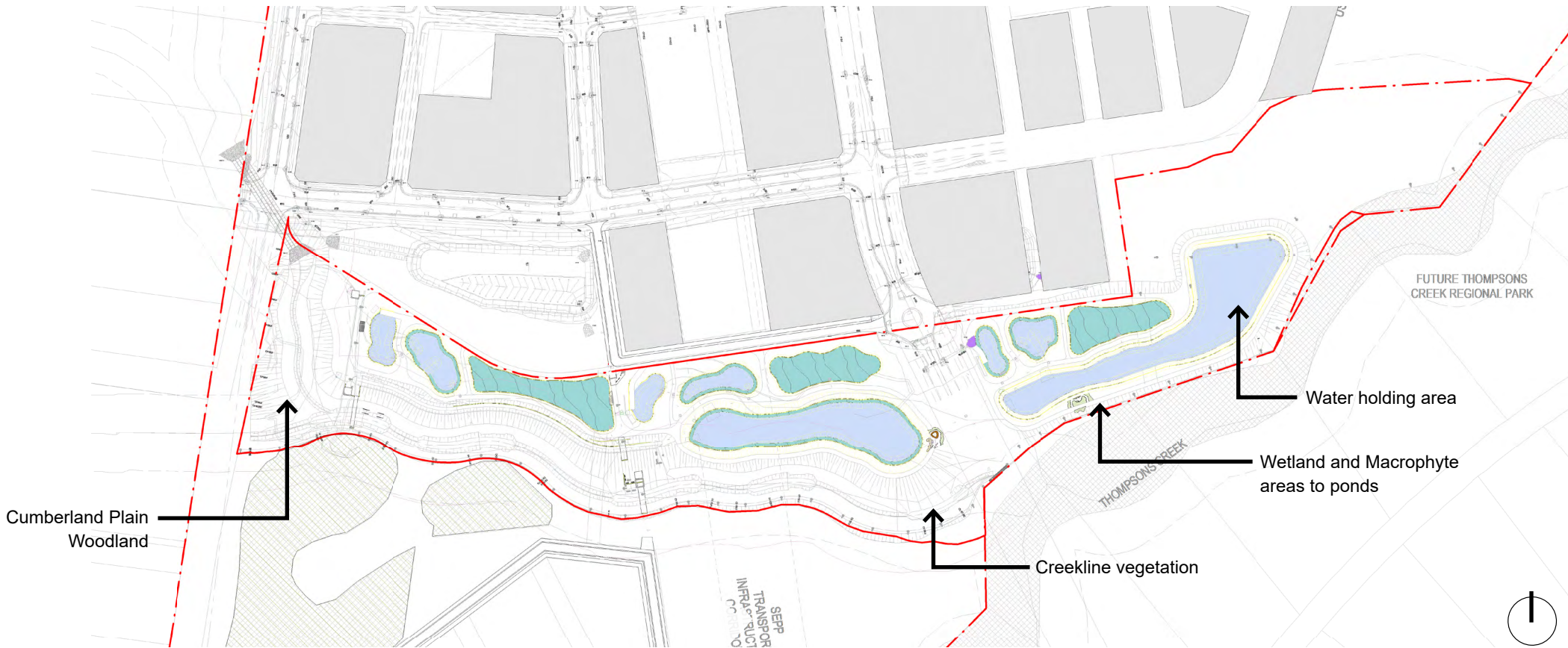
Cumberland Plain woodland
Typical matrix density



Creekline vegetation
Typical matrix density

Legend

- Project Boundary
- Creekline
- Cumberland Plain Woodland
- Wetland and Macrophyte (no trees permitted)



PLANTING APPROACH

Cumberland Plain

The Cumberland Plain woodlands and Red River Gum Flat forest species will be regenerated as part of this project. The key species are reflected as shown and will be located on the flatter areas on the west of the site predominantly.

Refer detailed planting plans for further species, quantities and locations

Key Species



Acacia decurrens



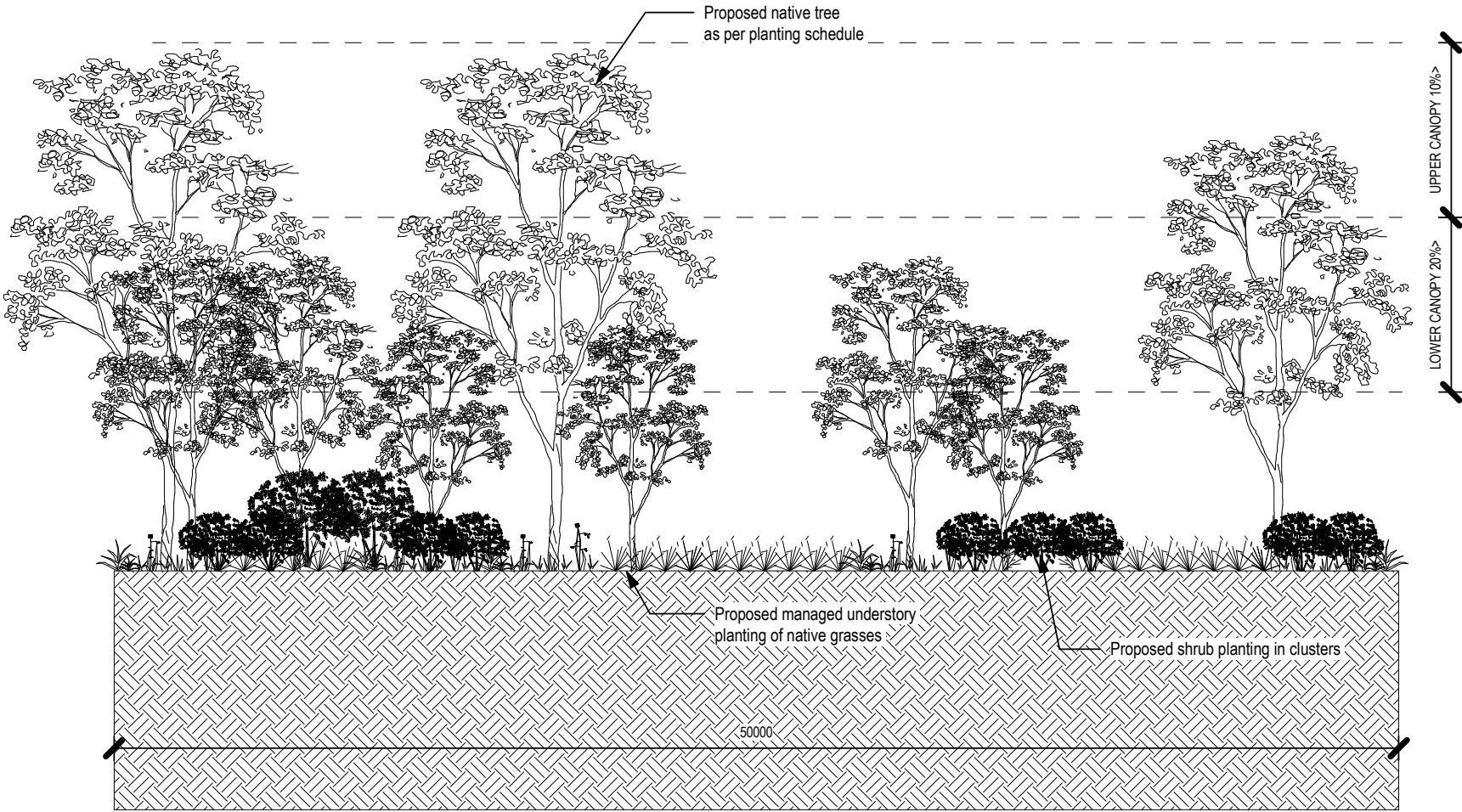
Dichondra repens



Eucalyptus tereticornis



Indigofera australis



Typical Section

PLANTING APPROACH

Creek and Creek bed

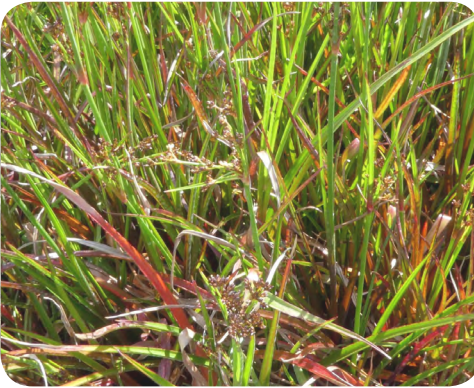
The Red River Gum Flat forest species and other species representative of local gullies and water way systems will be regenerated as part of this project. The key species are reflected as shown and will be located on the Moore Gully re-alignment areas to the south west of the site.

Refer detailed planting plans for further species, quantities and locations

Key Species



Casuarina glauca



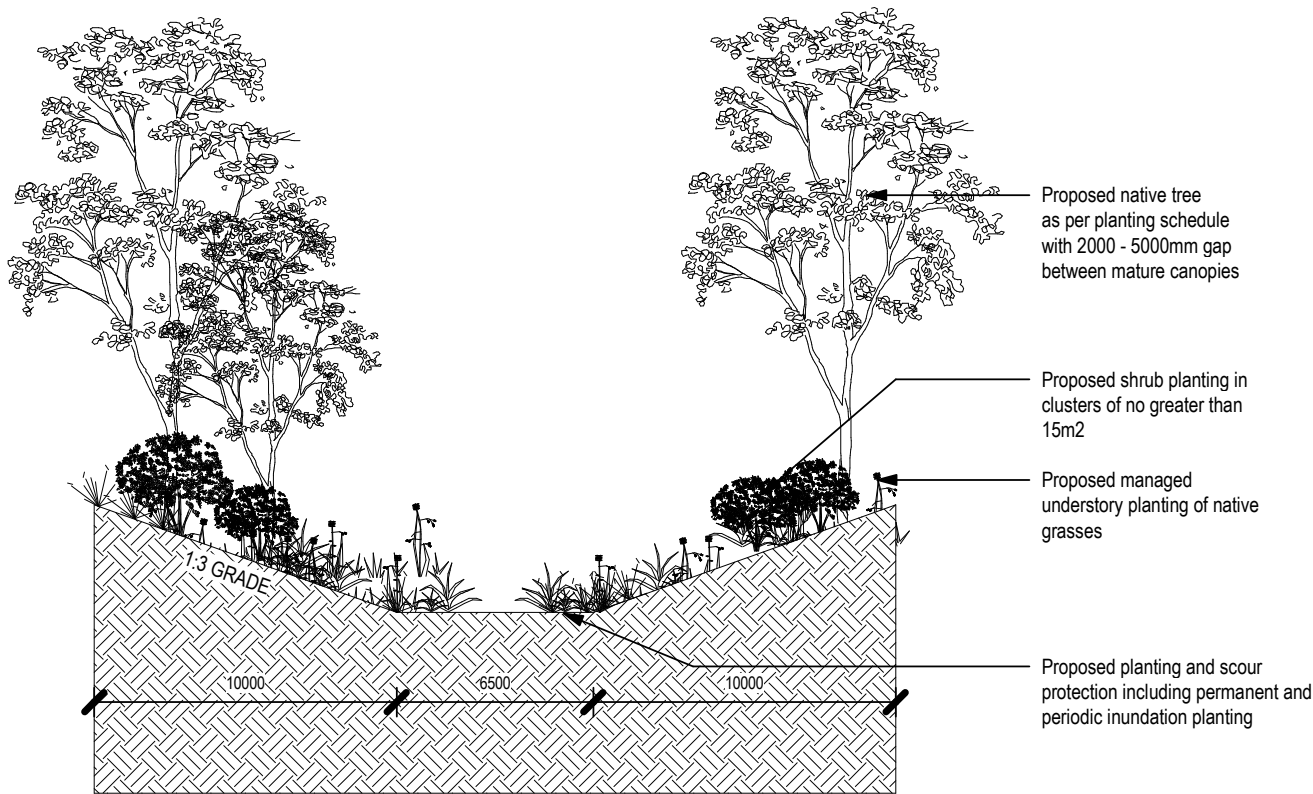
Juncus planifolius



Bursaria spinosa



Ranunculus inundatus



Typical Section

PLANTING APPROACH

Sediment Basins, Wetlands and Ponds

The existing vegetation communities onsite will be used as inspiration for the installation of macrophyte planting and Bio-filtration planting throughout the basins. These species will form part of the managed bushland areas and be generally consistent in terms of planting species with guidance provided by Liverpool Council and Sydney water where applicable.

Refer detailed planting plans for further species, quantities and locations

Key Species



Myriophyllum simulans



isolepis nodosa



Bothriochloa macra



Gahnia aspera

Wetlands

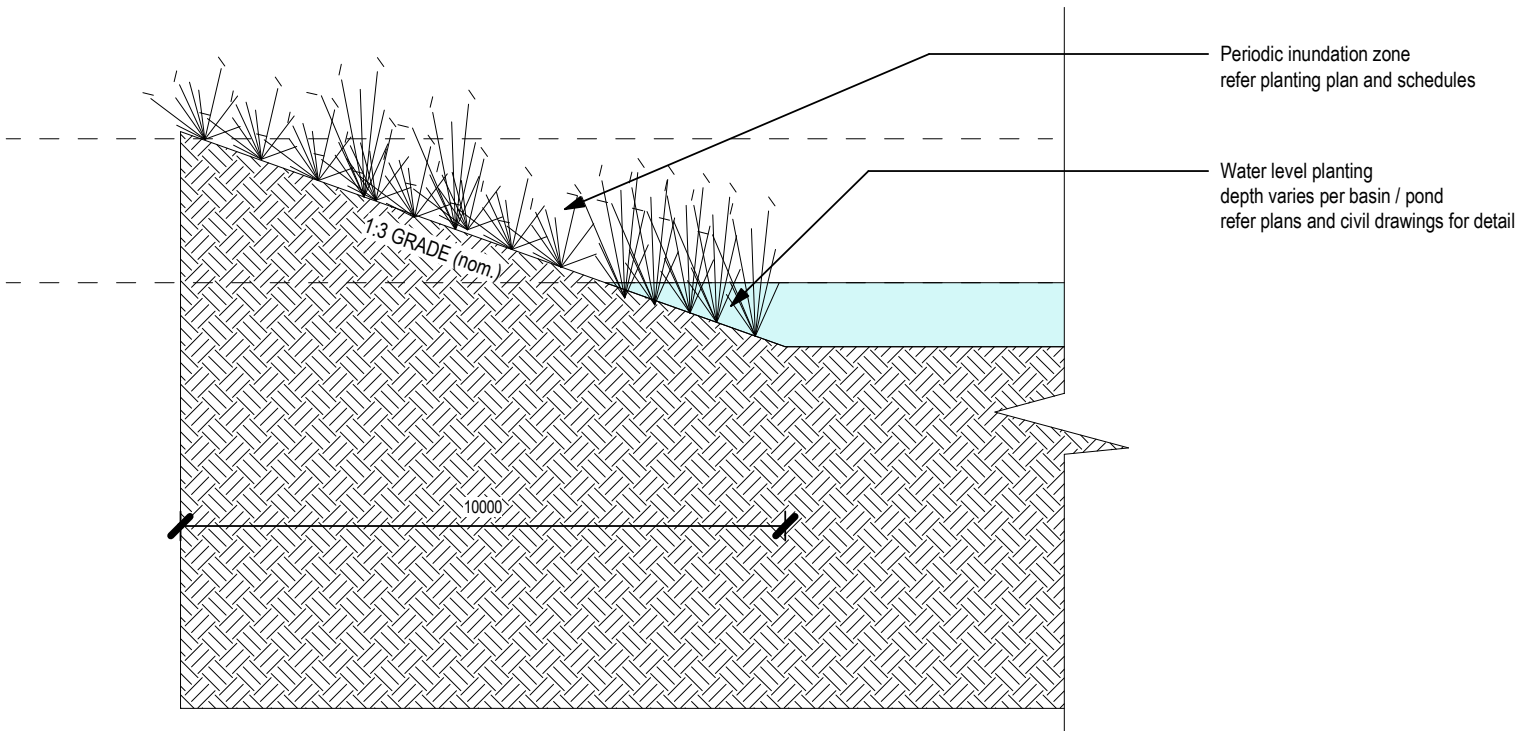


Juncus kraussii



Carex appressa

Bio-filtration



Typical Section

END OF DOCUMENT

TaylorBrammer

