MAMRE ROAD OPEN SPACE MASTER PLAN

BLIGH TANNER REALM studios

WE PAY OUR RESPECTS TO THE DHURUG PEOPLES, THEIR ANCESTORS AND ELDERS PAST, PRESENT AND EMERGING AND ACKNOWLEDGE THAT THROUGH HONOURING COUNTRY, WE ALSO HONOUR THEIR TIMELESS CONNECTIONS TO COUNTRY.

IT IS ALSO HERE ON THIS COUNTRY THAT WE ACKNOWLEDGE OUR MUTUAL RESPONSIBILITY TO SAFEGUARD THE LANDSCAPE AND ITS MANY SITES AND PLACES, AND ITS LIVING HISTORY. BEYOND THE PROTECTION AND ENHANCEMENT OF COUNTRY, WE ALSO MAKE SPACE SO ITS TRADITIONAL OWNERS ARE RESPECTED, LISTENED TO AND LEARNED FROM, AND THAT THE UNDERSTANDING OF COUNTRY AND CONNECTION FORM THE FOUNDATIONS OF DECISION MAKING.

IF WE CARE FOR COUNTRY, COUNTRY CARES FOR US.

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1 INTRODUCTION

1.1 INTRODUCTION

The Mamre Road Precinct Context

The Mamre Road Precinct is located within the Western Sydney Employment Area and is developing into a significant employment, freight and logistics hub. The Precinct is expected to accommodate approximately 17,000 jobs across 850 hectares of industrial zoned land.

Open Space in the Mamre Road Precinct

Proposed industrial and commercial development within the Mamre Road Precinct and broader development with the Western Sydney area will increase demand for passive and active recreation areas.

There are currently limited public recreation opportunities in Western Sydney.

The Mamre Road Precinct Development Control Plan and Western Sydney Aerotropolis Precinct Plan envisage a linear open space along a narrow corridor on the floodplain fringe between Wianamatta/South Creek and Kemps Creek to the west and the emerging industrial zoned land within the Mamre Road Precinct to the east.

Sydney Water Regional Basins

To manage stormwater run-off from the emerging industrial areas and protect sensitive downstream receiving environments of Wianamatta/South Creek system, Sydney Water have proposed significant regional basins as part of the Mamre Road Precinct Integrated Stormwater Scheme.

These assets are partly located on land zoned for Public Open Space (RE1).

Master Plan Objectives

The Open Space Master Plan will provide a continuous, sustainable and resilient open space corridor along the Mamre Road Precinct which sensitively balances recreation, the needs of the Precinct and surrounding communities with opportunities to protect and enhance riparian corridors of Kemps Creek and Wianamatta-South Creek.

Objectives of the master plan include:

- Providing cohesive interfaces between co-located stormwater infrastructure and open space to provide opportunities for connection, recreation and education.
- Connecting the open space to the broader Mamre Road Precinct and Aerotropolis to provide connected recreational areas and active transport connections.
- Maintaining access to and along the open space corridor through the creation of an Open Space Edge Road and facilitating maintenance access to Sydney Water drainage infrastructure.

The Master Plan will provide an example to guide further open space and recreation development within the Aerotropolis.

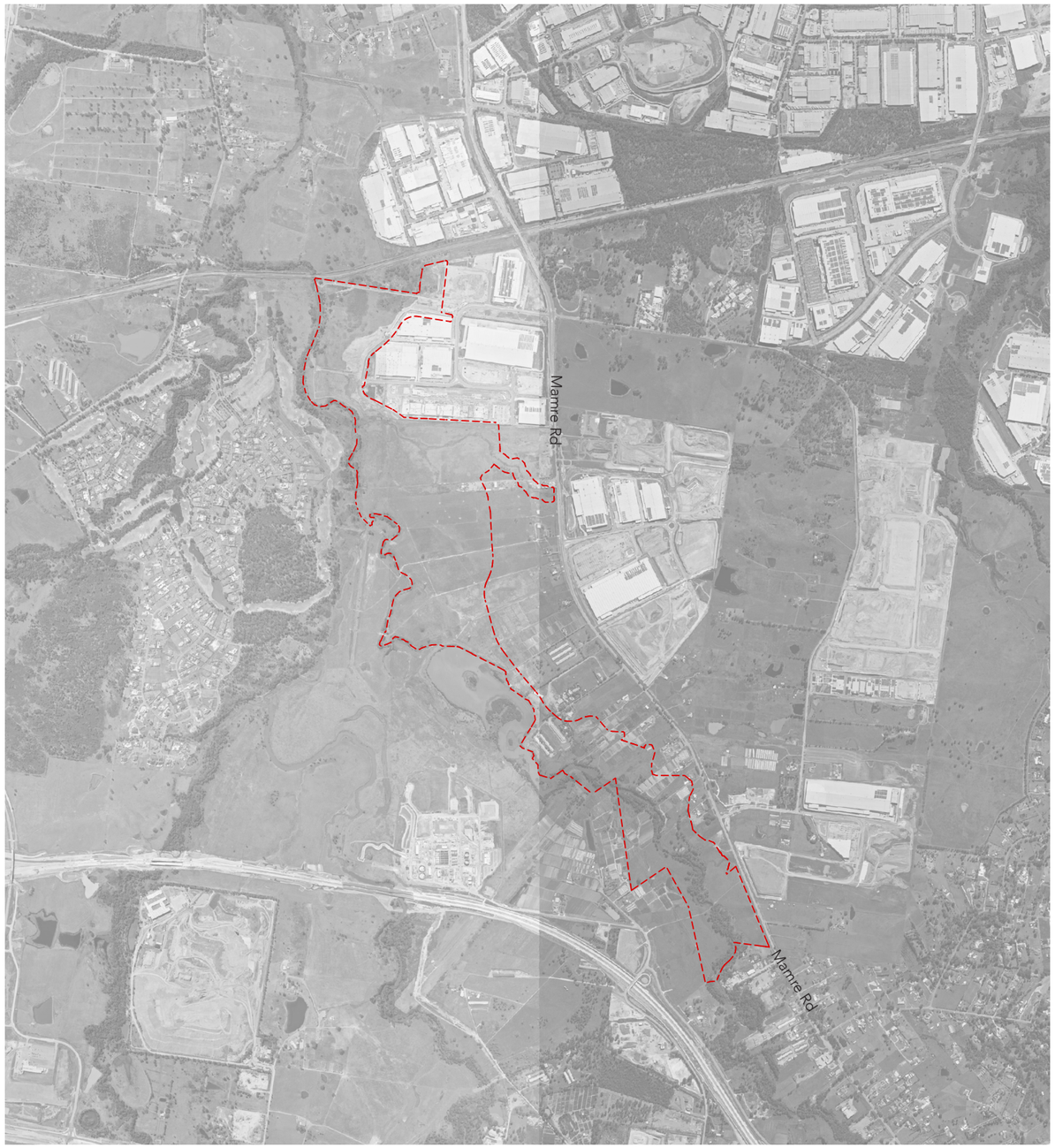


Figure 1: Mamre Road Precinct Context

1.2 STRATEGIC CONTEXT

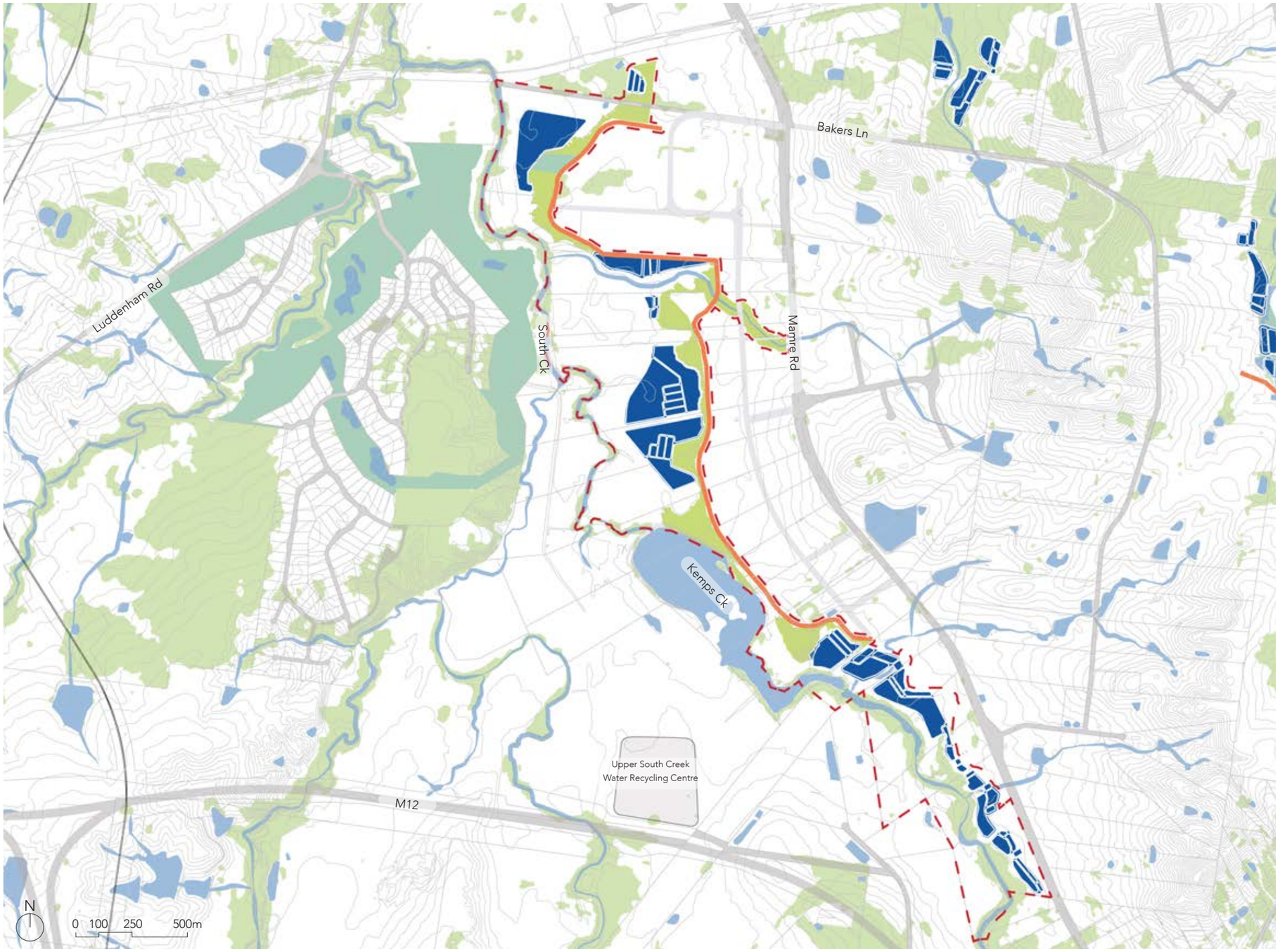
Strategic Plan/Document		Alignment with Master Plan
	Connecting with Country Guidelines (2023)	Provides a best-practice framework for embedding Country in public open space and infrastructure project planning and implementation.
	Greener Places (2020)	Provides a best-practice framework for integrating urban green infrastructure. The Greener Places Design Guide identifies the three major components that make up green space:, including open space for recreation, urban tree canopy for climate adaptation and resilience and connectivity of bushland and waterways for habitat and biodiversity.
	Sydney Green Grid (2018)	Promotes the creation of an open space network that supports recreation, biodiversity and waterway health across Greater Sydney. Well-connected networks of open space through enhanced creek corridors, shaded streets and active transport routes will provide a range of ecosystem services as Sydney grows, including water quality and riparian health, managing stormwater and flood risk, enhancing ecological habitat and connectivity and adapting to and mitigating climate change impacts and improve landscape and urban quality. The open space proposed within the Mamre Road Precinct provides a opportunity to deliver a green spine along the Kemps Creek and Wianamatta/South Creek corridor.
	Western Sydney Employment Area Mamre Road Precinct Development Control Plan (2021)	Defines development controls and intended outcomes for development within the Mamre Road Precinct, including envisaging a linear corridor of RE1 zoned open space land, and transport connections including the Open Space Edge Road relevant to the Master Plan.

Strategic Plan/Document		Alignment with Master Plan
	Western Sydney Aerotropolis Precinct Plan (2021)	Establishes the Wianamatta-South Creek Precinct within the waterway corridor. Balances land-uses with the environmental characteristics of the precinct, including flooding and riparian vegetation. The Precinct, which partly contains the master plan area, is envisaged as a blue-green network consisting of private land, open space and waterways. Waterbodies, with compatible uses, including walking trails, minimal impact sports and recreation. The precinct will form a green buffer between surrounding urban development. Additional precinct objectives include prioritising restoration and protection of the Wianamatta-South Creek Corridor and management of water.
	Everyone Can Play	The guideline aims to promote inclusive playspaces across the state by setting out best-practice design and planning standards so that people of all ages, abilities and cultural backgrounds can access, use and enjoy play environments. Key objectives include ensuring that playspaces are physically accessible, offer engaging and appropriate play opportunities, and provide safe, welcoming amenities so people can stay comfortably It also seeks to embed inclusive play as the norm, with guidelines and tools to help deliver playspaces that embrace diversity and community connection.
	Penrith City Council Sport and Recreation Study	The Strategy provides a 15-year roadmap for sport, play, recreation, and open space in Penrith. Its objectives are to plan for growth, improve accessibility and inclusion, support sustainability, create economic benefits, manage assets, secure funding, and monitor outcomes. It delivers a framework for diverse, safe, and connected spaces that support healthy lifestyles, protect natural values, and enhance the city's liveability.
	Western Sydney Aerotropolis Open Space Needs Study (2021)	While this study considers the broader Aerotropolis, and specifically provision of a regional parkland at Thompsons Creek, it identifies specially for the Mamre Road Precinct that green infrastructure, integrated with urban development and grey infrastructure, will increase the Precinct's resilience and make it a great place to work. Demand assessment for Mamre Road Precinct nominated 25,500m2 open space requirement.
	Social Recreation Needs Study - Catchment of Regional Park at Thompsons Creek (2024)	The Social Recreation Needs Study for Thompsons Creek outlines the open space and recreation requirements across the Western Sydney Aerotropolis. The Mamre Road Precinct is identified as a major industrial and logistics hub supporting the Western Sydney Airport, with an emphasis on high-quality infrastructure and a safe, attractive working environment. The study highlights the importance of integrating green and social recreation spaces, such as connected parks and shaded active areas, to enhance amenity, resilience, and links to the wider Thompsons Creek Regional Park network.

1.3 MASTER PLAN FRAMEWORK

The framework that underpins the Open Space Master Plan is founded on the integration of stormwater infrastructure, creek ecology, and recreation opportunities. Sydney Water's regional basin stormwater assets form the structural armature of the corridor, shaping the alignment of the open space and ensuring waterway health and resilience. Alongside this, the requirements of Wianamatta–South Creek and Kemps Creek establish ecological priorities, guiding the protection and restoration of riparian corridors and the re-establishment of Cumberland Plain ecologies.

Within this layered structure, recreation will be carefully embedded, from active hubs and community gathering areas to passive parklands and shared paths, ensuring that the open space delivers both amenity and environmental function. Together, these interdependent systems create a cohesive framework that supports the development of the Master Plan, ensuring that the corridor is at once functional, resilient, and connected to Country.



- Mamre Rd Precinct Boundary
- Extent of Mamre Rd Open Space Master Plan
- Open Space
- Vegetation Cover
- Proposed Water Treatment System
- Water
- Private Recreation
- Open Space Edge Road
- Road
- Existing contours
- Rail Line
- Lot Boundary

Figure 2: Master Plan Framework Plan

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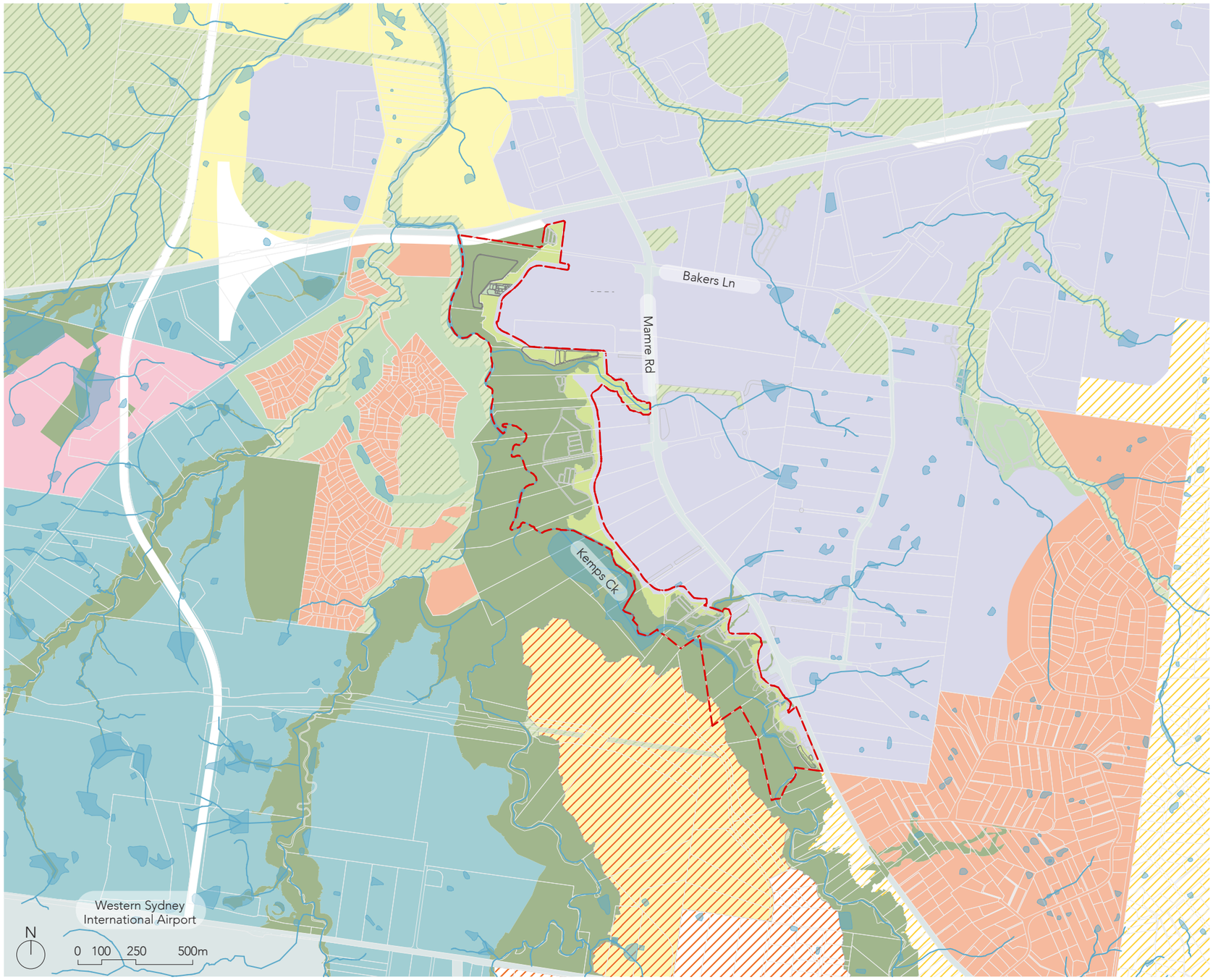
1.4 CONTEXT & ZONING

The Open Space Master Plan represents just one segment of the broader environment and recreation corridor extending along Wianamatta South Creek and Kemps Creek, as established through zoning for public recreation and environmental conservation. This framework positions the corridor as a key contributor to Western Sydney's blue-green grid, providing opportunities for the restoration of Cumberland Plain ecologies historically cleared for agriculture and industry. The precinct's edges are defined by contrasting zonings: to the west, IN1 General Industrial land forms part of the wider employment and logistics hub, while to the south-west, small-lot primary production areas create a transitional rural fringe. Within this zoning structure, the Open Space Master Plan reinforces the corridor's role as a buffer, a place of ecological repair, and a landscape that balances recreation with environmental conservation.



- Environment and Recreation
- Environmental Conservation
- Public Recreation
- General Industrial
- Environmental Living
- Private Recreation
- Enterprise
- Rural Landscape
- Mixed Use
- Infrastructure
- Identified for Future Rezonings (Aerotropolis Sector Plan 2025)
- Primary Production Small Lots

Figure 3: Context and Zoning Plan

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1.5 DEVELOPMENT CONTEXT

"The Mamre Road Precinct will be a world-class industrial area, primarily catering for warehousing and logistics on larger consolidated land parcels close to the Western Sydney Airport….Sympathetic site planning, earthworks and building design will be required at the interface with sensitive land uses as well as Wianamatta-South Creek, Kemps Creek and Ropes Creek, bushland and open space, to ensure public spaces and environmental lands are protected, attractive and activated" (Mamre Road Precinct Development Control Plan)

The Mamre Road Precinct is rapidly developing into a major logistics and warehousing hub within the Aerotropolis. A number of major developments are planned or in construction (development current at mid-2025) which border the open space, including:

- The Yards – 657-769 Mamre Road including a privately-owned food and leisure precinct within RE2 zoned land and Microsoft Data Centre.
- Yiribana West – 771-797 Mamre Road
- Gibb Group – 805-817 Mamre Road
- 859-915 Mamre Road – DA25/0034
- 931 Mamre Road

The Open Space master plan will need to respond to both existing developments and guide future development to ensure that there is a sensitive transition between industrial zoned land, open space, Sydney Water regional basin stormwater infrastructure and the riparian corridor. This transition will partly be facilitated through the Open Space Edge Road (OSER) corridor.

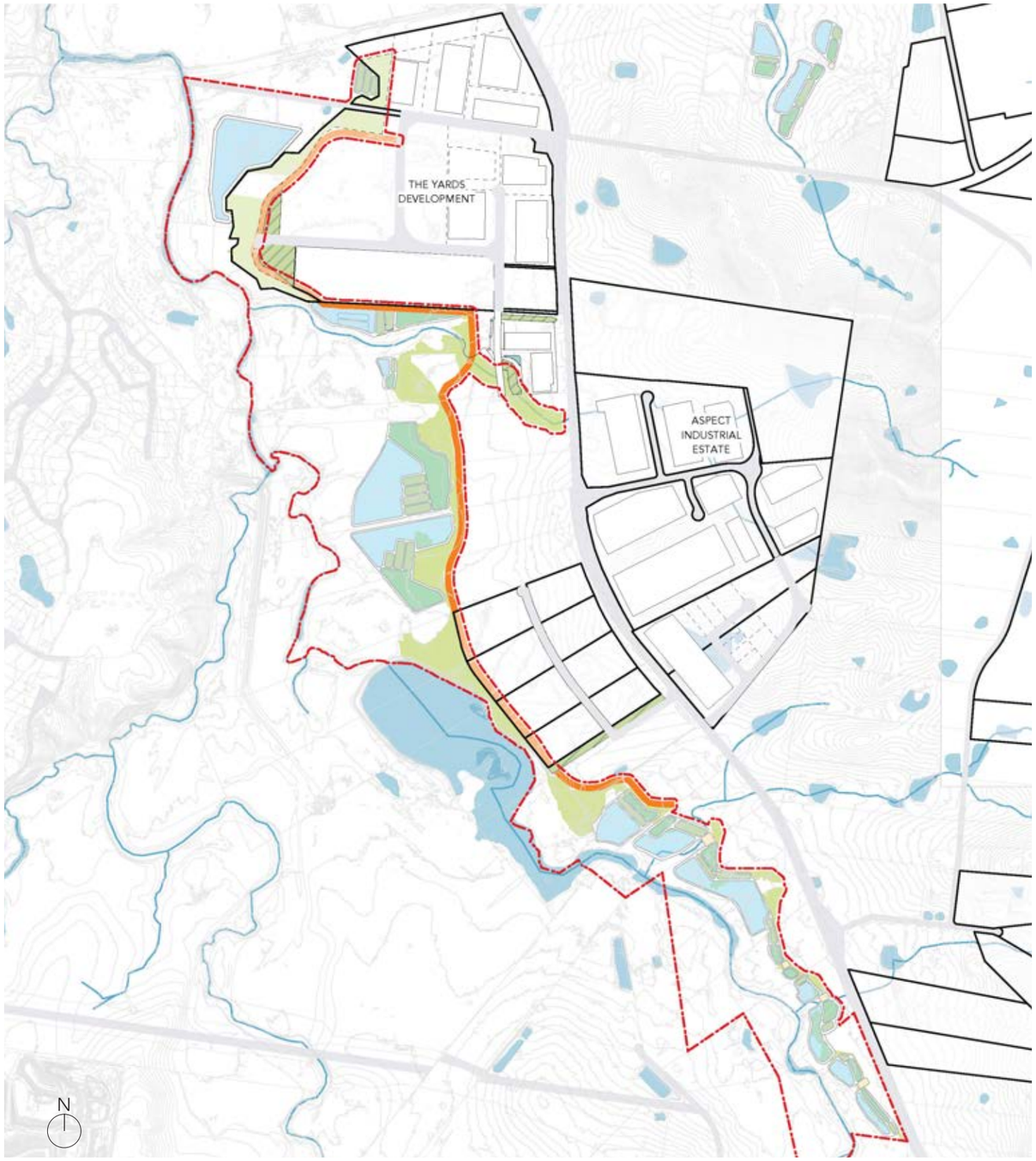

Figure 4: Development Context Plan

- Master plan boundary
- RE1 land
- Pond
- Bioretention Basin
- Wetland
- Indicative open space edge road

2 UNDERSTANDING PLACE

2.1 COUNTRY CENTRED APPROACH

The Mamre Road Open Space Master Plan takes a Country-centred approach that recognises Wianamatta–South Creek as both an ecological and cultural landscape. Rather than treating the corridor as residual land between industry and water, the framework is guided by the principle of working with Country, embedding Dharug cultural values, ecological priorities, and water systems as the foundation for design. Stormwater infrastructure, riparian restoration, and recreation are interwoven to create a resilient blue-green spine, ensuring that the open space not only performs a functional role but also honours the deep cultural and spiritual connections of the Dharug people .

Wianamatta–South Creek, meaning 'mother place' in Dharug language, is acknowledged within the master plan as a living system that holds cultural identity, story, and continuity. By restoring Cumberland Plain ecologies, re-establishing riparian vegetation, and integrating cultural spaces in partnership with the Dharug community, the plan positions the creek as a central anchor for both people and place. Importantly, the cultural design elements outlined at this stage are preliminary. The next phases of the project will require deeper engagement and ongoing co-design with Dharug knowledge-holders and community representatives to ensure the open space continues to evolve in a way that reflects living culture, shared custodianship, and reciprocity. Spaces for gathering, reflection, and storytelling are intended to be co-created, reinforcing Wianamatta–South Creek as a landscape of repair, cultural learning, and enduring connection.

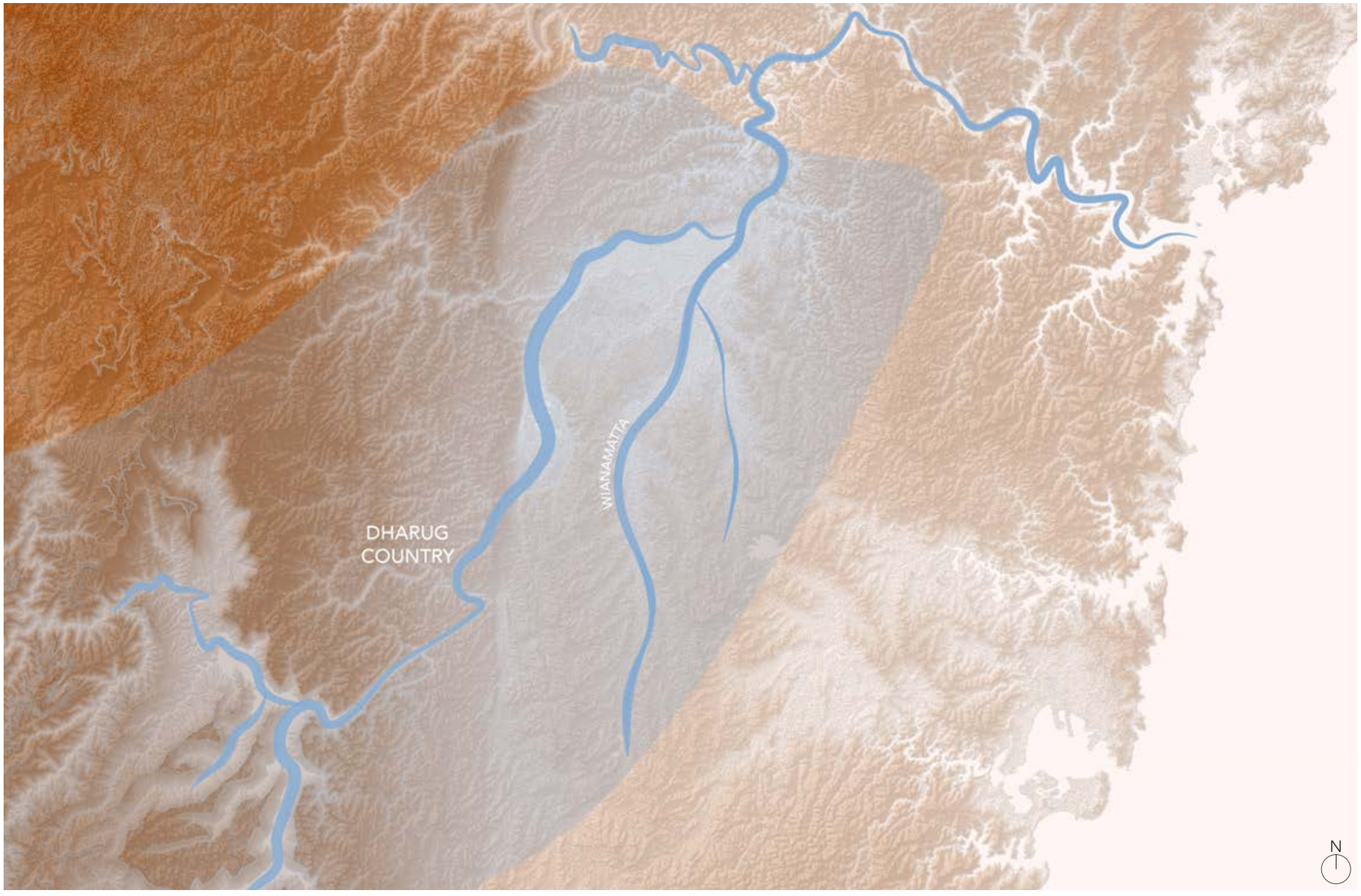

Figure 5: Country Centred Approach Plan

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2.2 GEOLOGY & SOILS

Soil and Geology Context

The Mamre Road Open Space Master Plan lies within a landscape underlain by Bringelly Shale and alluvium floodplain deposits, which give rise to gleyed podzolic soils. These soils are typically poorly drained and acidic, with strongly differentiated profiles that reflect prolonged waterlogging.

Gleyed podzolic soils form where water movement is slow, resulting in saturated conditions and periodic water accumulation. They are commonly associated with low-lying depressions and floodplain environments, where drainage is impeded by both surface and subsurface conditions.

In practice, this soil type presents challenges for open space planning and management:

- Drainage limitations create waterlogged zones, particularly after rainfall events.
- Seasonal water saturation makes the soils vulnerable to compaction and erosion under high use.

These characteristics highlight the need for careful planting selection, soil amelioration, and water-sensitive urban design measures to ensure the long-term health and functionality of the open space.

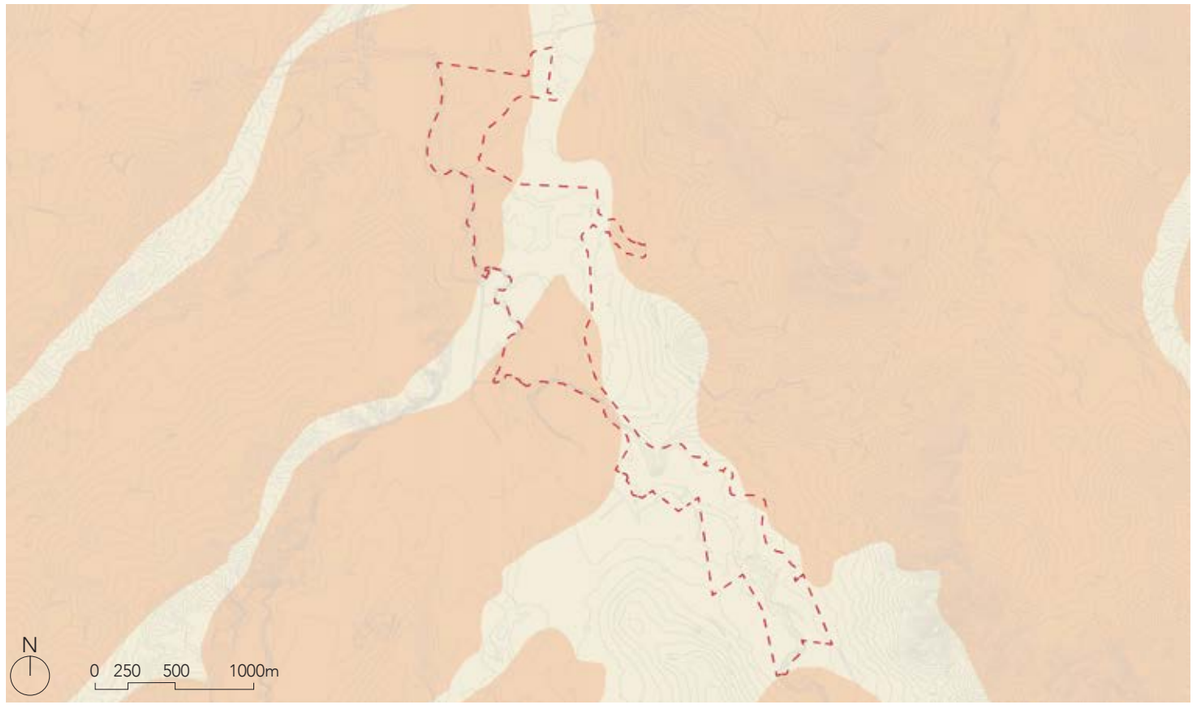

Figure 6: Geology Mapping

Extent of Mamre Rd Open Space Master Plan
Bringelly Shale
Alluvial Floodplain Deposits
Ungrouped Mesozoic igneous units - breccia

Figure 7: Soil Mapping

Extent of Mamre Rd Open Space Master Plan
Red Podzolic Soils - less fertile (granites and metasediments)
Yellow Podzolic Soils - less fertile (granites and metasediments)
Gleyed Podzolic Soils
Soloths
Water

2.3 PRE-CLEARING VEGETATION

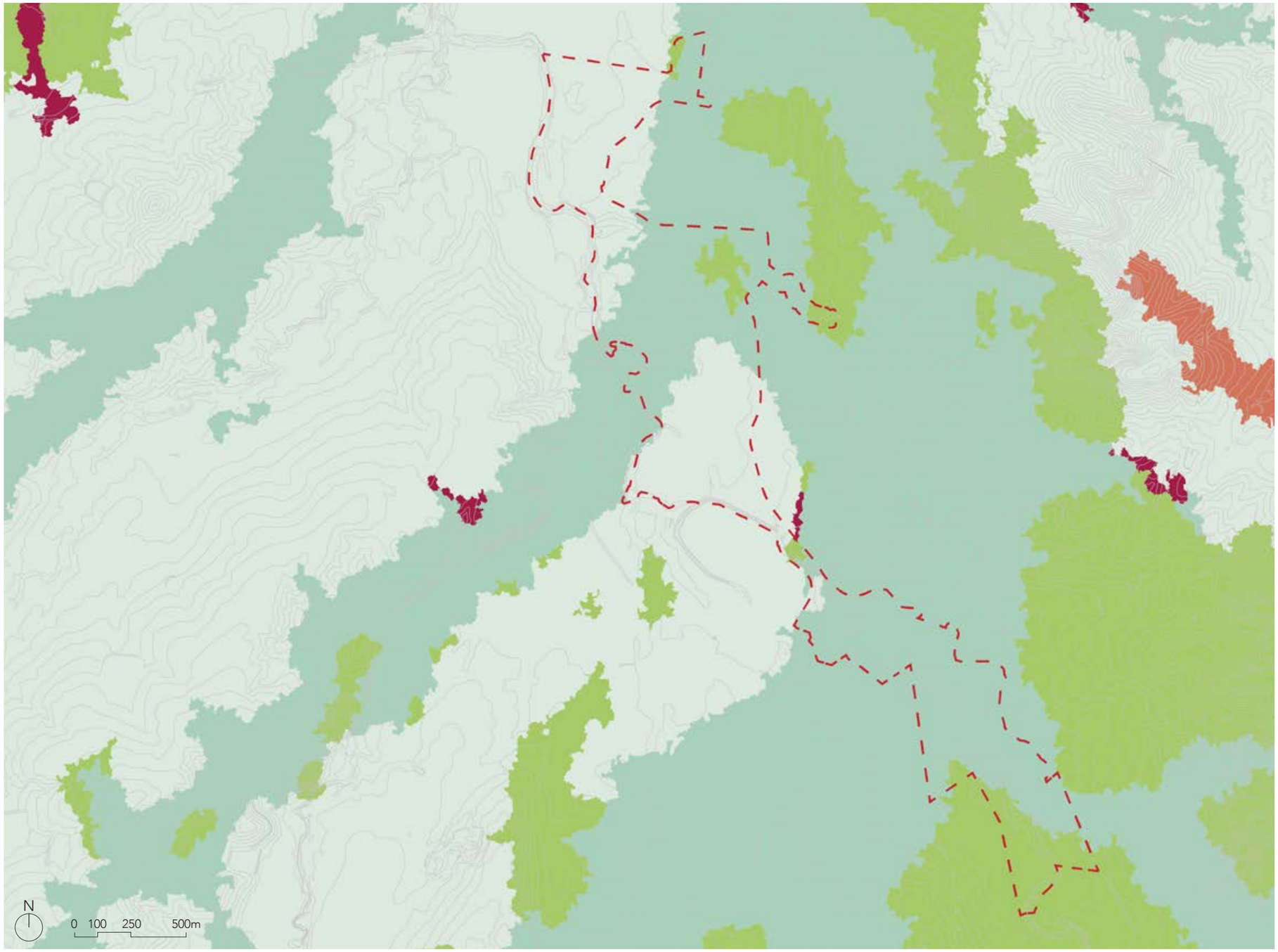

Figure 8: Pre-Clearing Vegetation Mapping

Images depicting Cumberland Shale Plains Woodland

- Extent of Mamre Rd Open Space Master Plan
- Existing contours
- Castlereagh Ironbark Forest
- Cumberland Red Gum Riverflat Forest
- Cumberland Shale Plains Woodland
- Coastal Valleys Riparian Forest
- Cumberland Shale Hills Woodland

2.4 EXISTING VEGETATION

Vegetation

Prior to clearing, the site would have been part of the Cumberland Plain's rich mosaic of ecological communities. The area was characterised by:

- Cumberland Shale Plains Woodland, dominated by Grey Box (Eucalyptus moluccana) and Forest Red Gum (Eucalyptus tereticornis)
- Cumberland Red Gum River-flat Forest (River-flat Eucalypt Forest) along creek lines and floodplains, with Forest Red Gum, Cabbage Gum, and Rough-barked Apple stabilising riverbanks and supporting diverse fauna.

Pockets of Castlereagh Ironbark Forest, linked to shale-gravel soils and supporting Narrow-leaved Ironbark and Spotted Gum.

Since European settlement, this landscape has been extensively cleared for agriculture and, more recently, urban development, leaving only remnant patches of Cumberland Red Gum River-flat Forest along Wianamatta South Creek. Today, these remnants are part of a broader conservation priority, as less than 10% of the original extent of some communities (such as Cumberland Plain Woodland) remains intact across Western Sydney.

Opportunities for Restoration

The Open Space presents an opportunity to re-establish ecologies that are intrinsic to Country:

- Cumberland Shale Plains Woodland on higher, drier ground.
- Cumberland Red Gum River-flat Forest in association with the creek corridors.
- Strategic reintroduction of Castlereagh Ironbark elements where suitable soil conditions exist.

Re-establishing these communities will not only restore ecological integrity but also support threatened species such as the Swift Parrot, Spiked Rice-flower, and Cumberland Plain Land Snail, which depend on these habitats.

- Extent of Mamre Rd Open Space Master Plan
- Existing contours
- Castlereagh Ironbark Forest
- Cumberland Red Gum Riverflat Forest
- Cumberland Shale Plains Woodland
- Coastal Valleys Riparian Forest
- Cumberland Shale Hills Woodland

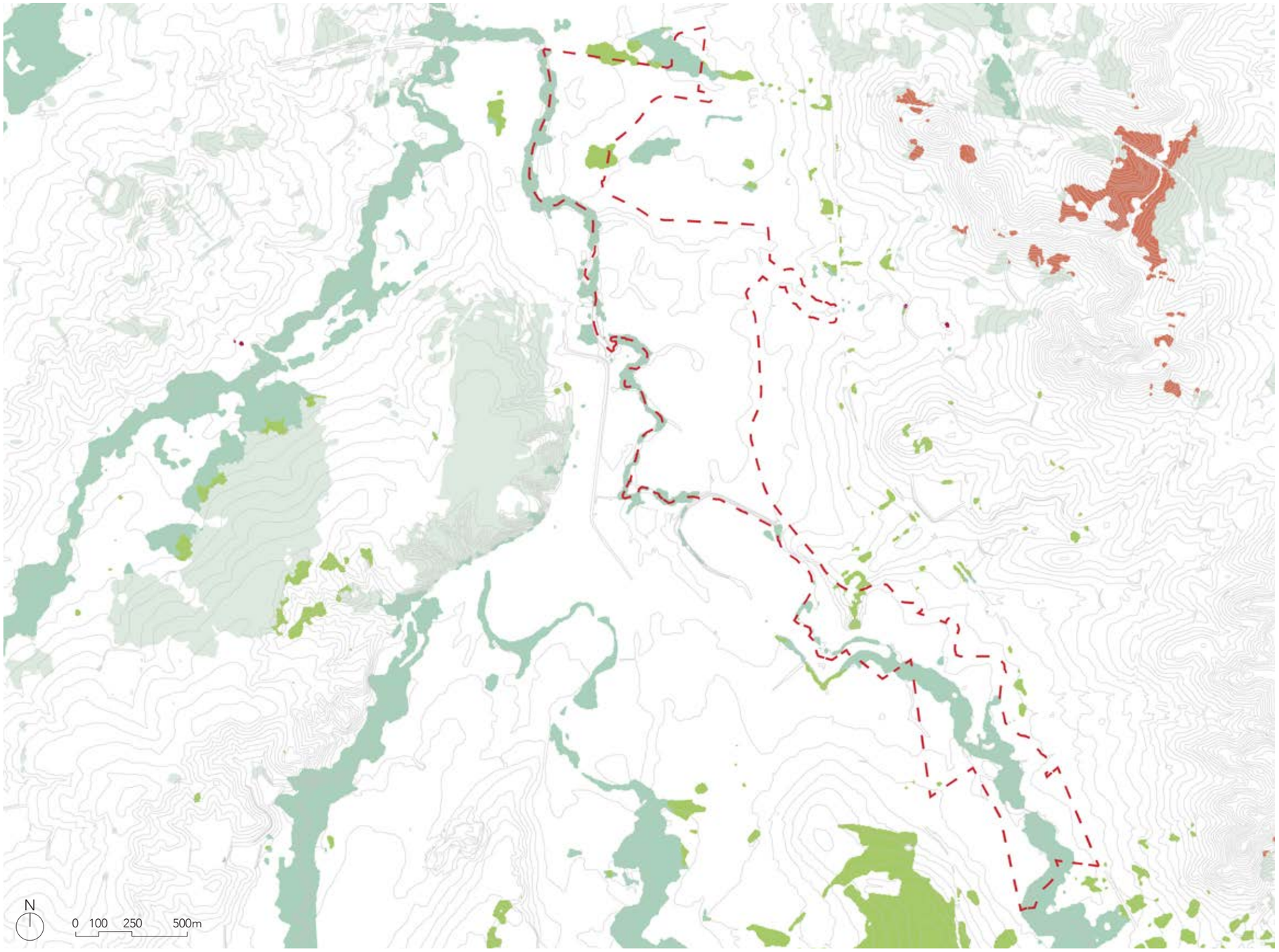

Figure 9: Existing Vegetation Mapping

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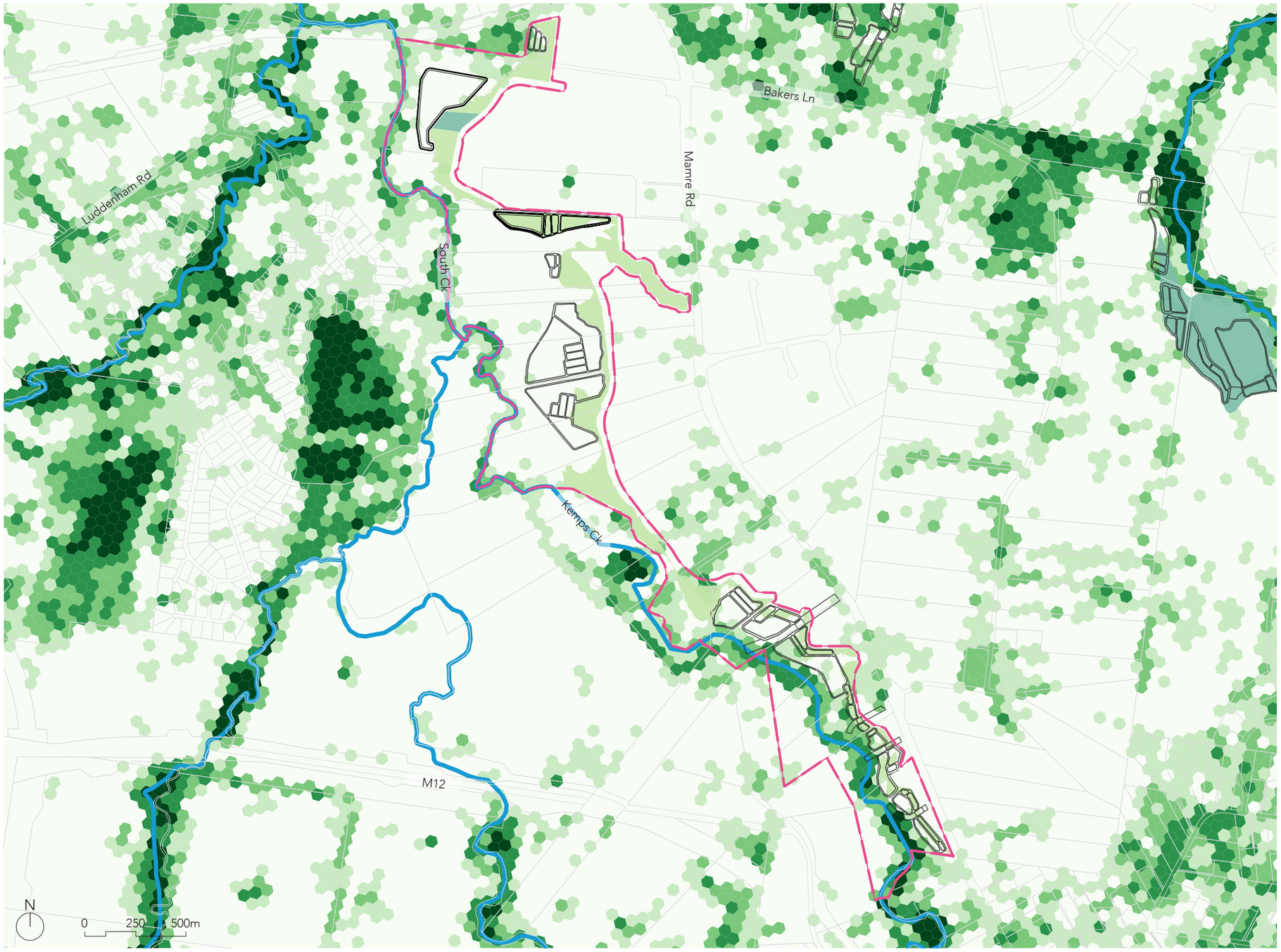
2.5 CANOPY COVER

Canopy Cover and Opportunities for Enhancement

As expected, the Mamre Road Open Space currently exhibits low canopy cover, with most areas ranging between 0–13%. Higher canopy densities, between 13–71%, are primarily concentrated along the Wianamatta South Creek and Kemps Creek corridors, where remnant vegetation remains.

Although the broader open space landscape is presently sparse in canopy, this presents a significant opportunity for transformation. By re-establishing the ecologies intrinsic to Country, including Cumberland Shale Plains Woodland and Cumberland Red Gum River-flat Forest, there is capacity to:

- Increase canopy coverage across the precinct, addressing urban heat and creating shaded, resilient landscapes. Reinforce ecological corridors along waterways, enhancing biodiversity and habitat connectivity.
- Contribute to the cooling and greening of the Mamre Road Precinct, supporting both ecological function and community well-being.
- Targeted canopy renewal in this context not only restores ecological integrity but also aligns with broader precinct objectives for urban cooling, climate resilience, and place-based identity.



Extent of Mamre Rd Open Space Master Plan
Watercourse
Public Recreation

Canopy Coverage (%) 2022
0 - 1.6
1.6 - 13.4
13.4 - 33.8
33.8 - 71.2
71.2 - 100

Figure 10: Canopy Cover Mapping

2.6 WIANAMATTA-SOUTH CREEK

Floodplain Context and Riparian Management Considerations

The open space is located within the broader 627 km² Wianamatta-South Creek catchment and adjacent to the Kemps Creek. Other minor tributaries include Badgerys Creek to the west.

The edge of the Mamre Road Precinct has generally been delineated by the existing 1% Annual Exceedance Probability (AEP) modelled flood extents.

There is some overlap of the 1% AEP flood extent and proposed RE1 zoned land and Sydney Water assets. Importantly, there are areas of proposed RE1 zoned land high-level floodway and critical flood storage areas as identified in the Cumulative Impact Assessment (Advisian, 2023). This assessment considers the future ultimate development of the Mamre Road Precinct and densification of floodplain vegetation.

Proposed open space vegetation treatments and embellishments/assets have been located with consideration of both potential flooding in significant flood events and maintaining critical flood storage to avoid flooding impacts on downstream areas.

Proposed crossings of trunk drainage channels and Kemps Creek will require consideration of suitable flood immunity and possible flood impacts.

Where it can be implemented consistently with modelled flood impacts, the master plan provides opportunity to protect and undertake rehabilitation of riparian vegetation within the Wianamatta-South Creek and Kemps Creek corridors to contribute to improved riparian condition.

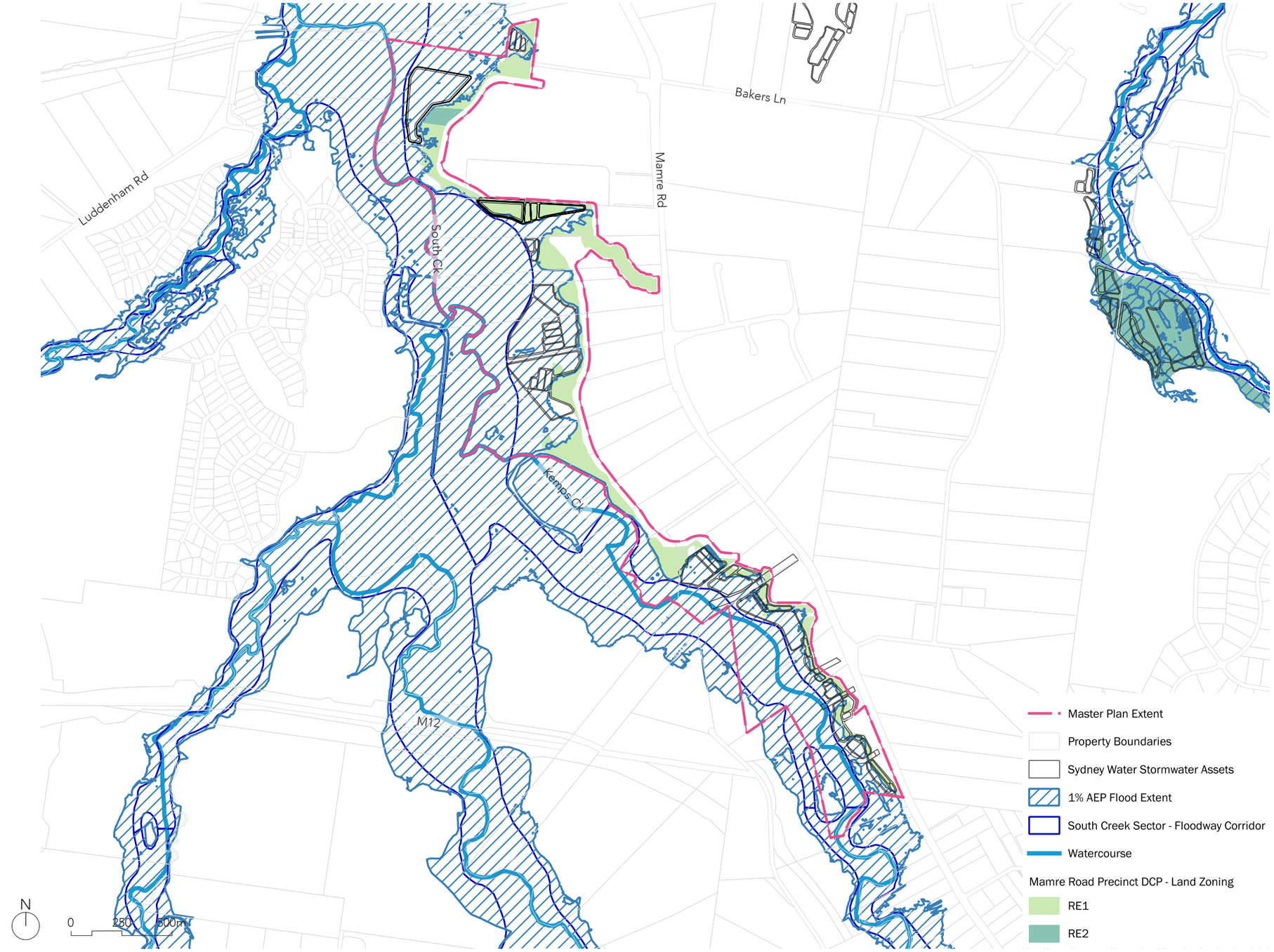


Figure 11: Floodplain Mapping

2.7 STORMWATER INFRASTRUCTURE

Stormwater Infrastructure and Open Space Integration

The open space partly overlaps with Sydney Water's regional basins stormwater drainage infrastructure associated with the Mamre Road Precinct Integrated Stormwater Scheme. Additional private stormwater infrastructure will be delivered as part of future developments.

Sydney Water's stormwater assets, as outlined in the Integrated Stormwater Scheme Plan, Stormwater Scheme Infrastructure Design Guideline (Draft), and associated engineering drawings, include:

- Trunk drainage channels
- Sediment and bioretention basins
- Constructed treatment wetlands
- Storage ponds

Associated infrastructure such as overflow weirs, maintenance access tracks, and access points.

Hydrological Characteristics

- Bioretention systems: ephemeral, with nominal extended detention depths of 300 mm.
- Storage ponds: deeper permanent water bodies, with depths up to 3 m and extended detention depths maximum 300mm.
- Constructed wetlands: shallow systems planted with macrophytes, generally with permanent pond depths of 300 mm and extended detention depths maximum 350mm.

Design Integration

The Open Space Master Plan has been developed to address the interface between stormwater assets and public open space, with consideration of visual and landscape character, safety, and community access. Edge treatments and water profiles vary by asset type, allowing for diversity of ecological and recreational outcomes.

Access and Maintenance

Maintenance access is essential for Sydney Water's stormwater assets and typically requires a 3.5 m wide track. Where feasible, these tracks will be co-located with 3.0m wide shared paths, providing efficiency and dual use. Detailed maintenance requirements will be refined at the detailed design stage, in accordance with Sydney Water's Stormwater Scheme Infrastructure Design Guidelines.

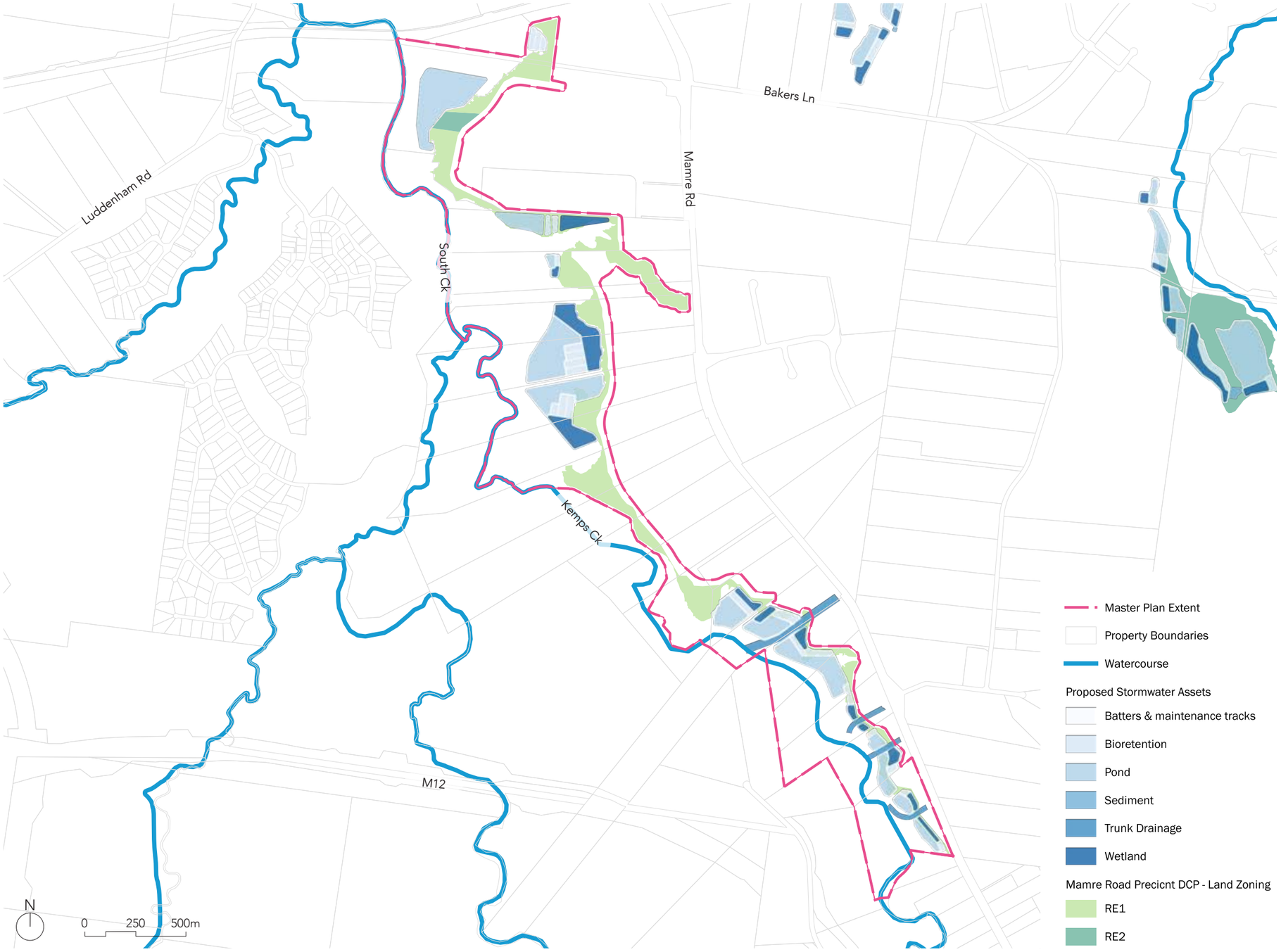


Figure 12: Stormwater Infrastructure Plan

2.8 LAND SURFACE TEMPERATURE

Stormwater Infrastructure and Open Space Integration

The Land Surface Temperature mapping illustrates summer 2022–2023 heat patterns across the Mamre Road Precinct, showing elevated temperatures within the open space compared to the cooler riparian corridors of Wianamatta South Creek and Kemps Creek, where canopy and vegetation provide natural cooling. While the mapping does not account for the new Mamre Road Industrial Precinct, anticipated to further increase land surface temperatures, it highlights the opportunity to leverage the creek corridors and stormwater assets for their cooling effect, supported by the revegetation of natural ecologies to improve canopy cover, mitigate heat, and enhance thermal comfort for future users.

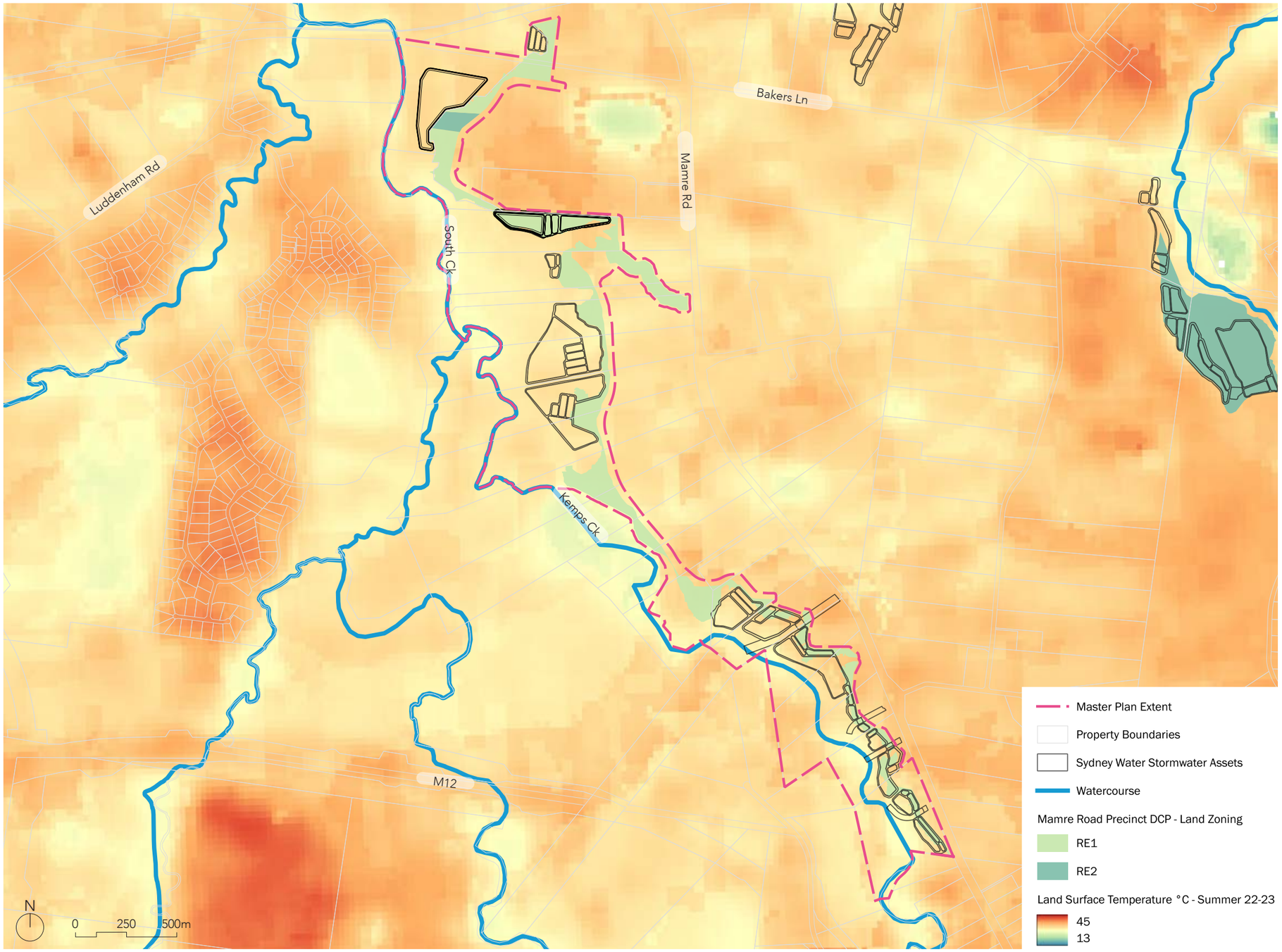


Figure 13: Land Surface Temperature Mapping

2.9 BUSHFIRE

Bushfire Prone Land and Risk Management

The Bushfire Prone Land map identifies areas within the Mamre Road Precinct subject to varying levels of bushfire risk. Category 1 lands, the highest risk, are associated with forested and woodland vegetation, while Category 2 and 3 areas represent lower-risk vegetation types such as rainforests, grasslands, and wetlands.

This mapping is critical for guiding the open space planning, asset placement, and vegetation management, ensuring that bushfire risk is mitigated while maintaining ecological values.

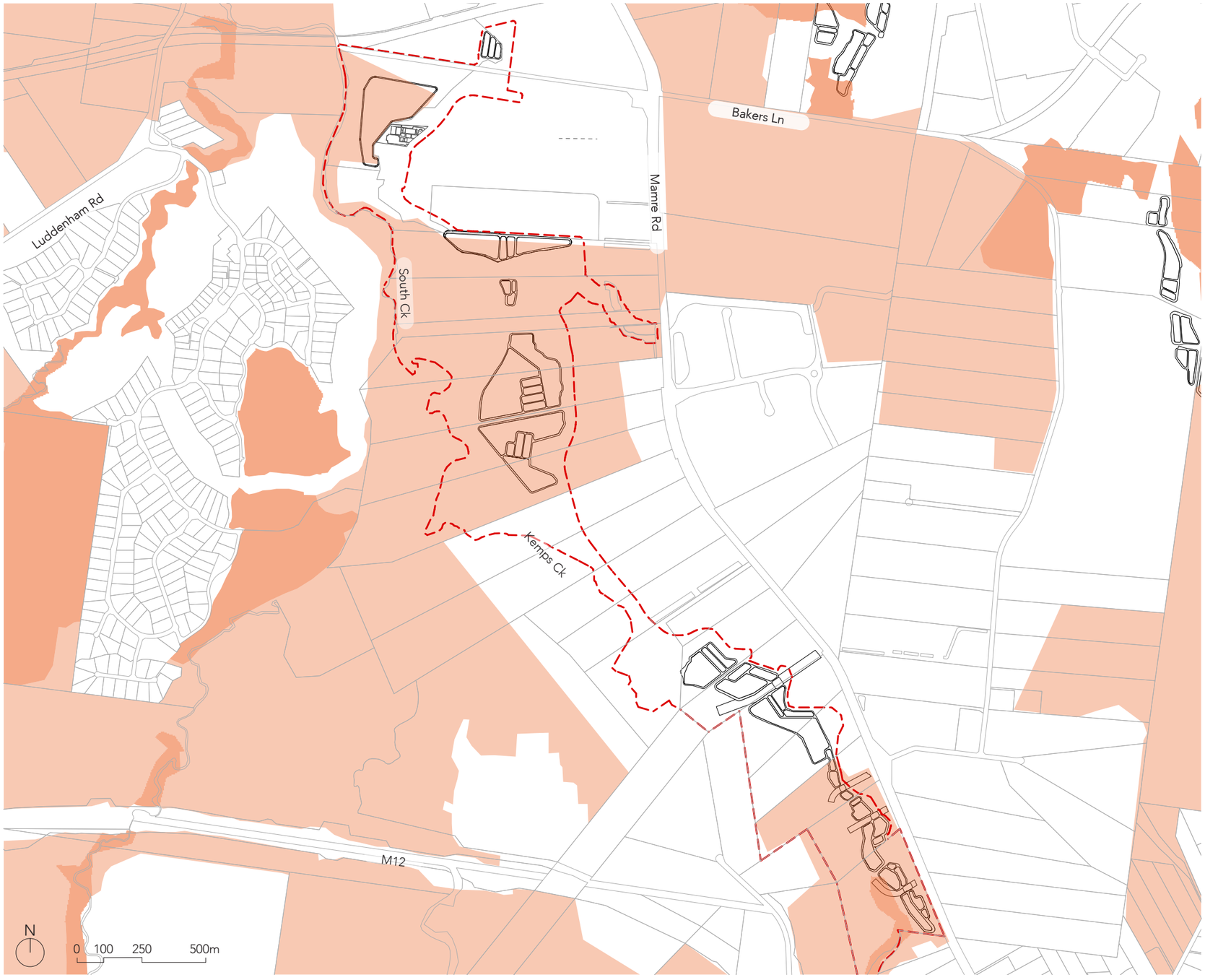


Figure 14: Bushfire Mapping

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Category 1: highest risk for bushfire

Category 3: medium bush fire risk

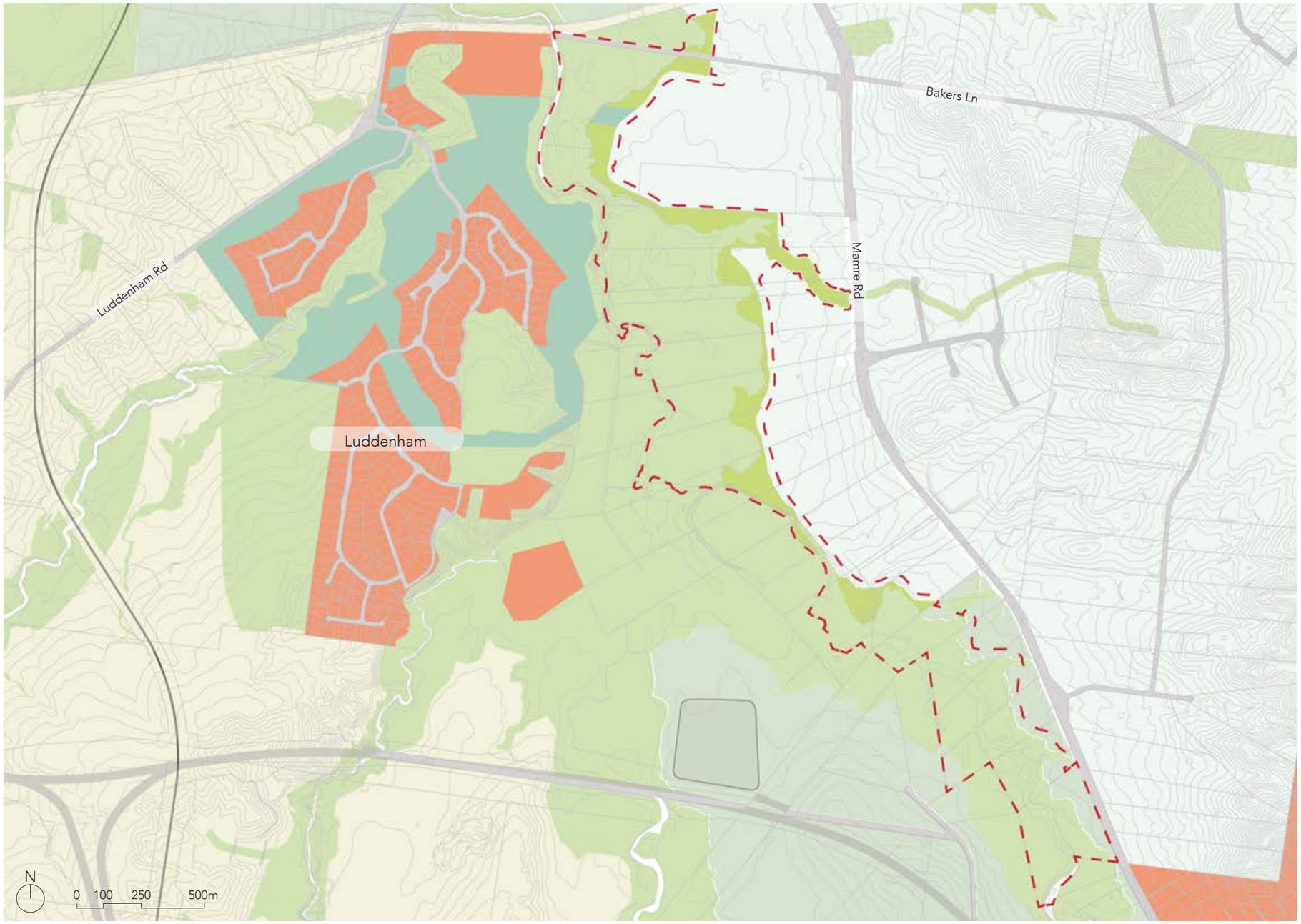
Category 2: lower bush fire risk

2.10 CONTEXT & CHARACTER

Context and Open Space Corridor Considerations

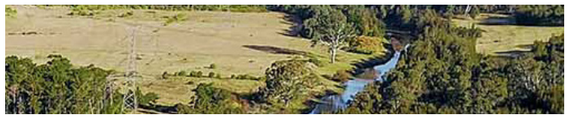
The zoning of the Mamre Road Precinct establishes a strong framework for the creation of a continuous open space and ecological corridor. While much of the precinct is zoned IN1 General Industrial to support warehousing and logistics, land adjoining Wianamatta South Creek, Kemps Creek, and their tributaries is protected through RE1 Public Recreation, RE2 Private Recreation, and ENZ Environmental Conservation zoning.

These designations safeguard riparian lands, flood storage areas, and remnant vegetation while also providing opportunities for public access, recreation, and the re-establishment of Cumberland Plain ecologies. Importantly, the open space master plan functions as a buffer between industrial development and nearby residential areas, while also needing to accommodate recreation for an emerging worker population as well as the broader community. The result is a landscape where industrial growth is balanced by a continuous blue-green network, ensuring biodiversity protection, shading and cooling, and the provision of high-quality, multifunctional open space that defines the character of the precinct.



- Extent of Mamre Rd Open Space Master Plan
- Existing contours
- RE1 - Public Recreation
- ENZ - Environment and Recreation
- RE2 - Private Recreation
- IN1 - General Industrial
- RU1 - Primary Production
- C4 - Environmental Living
- Other

Figure 15: Context and Character Mapping

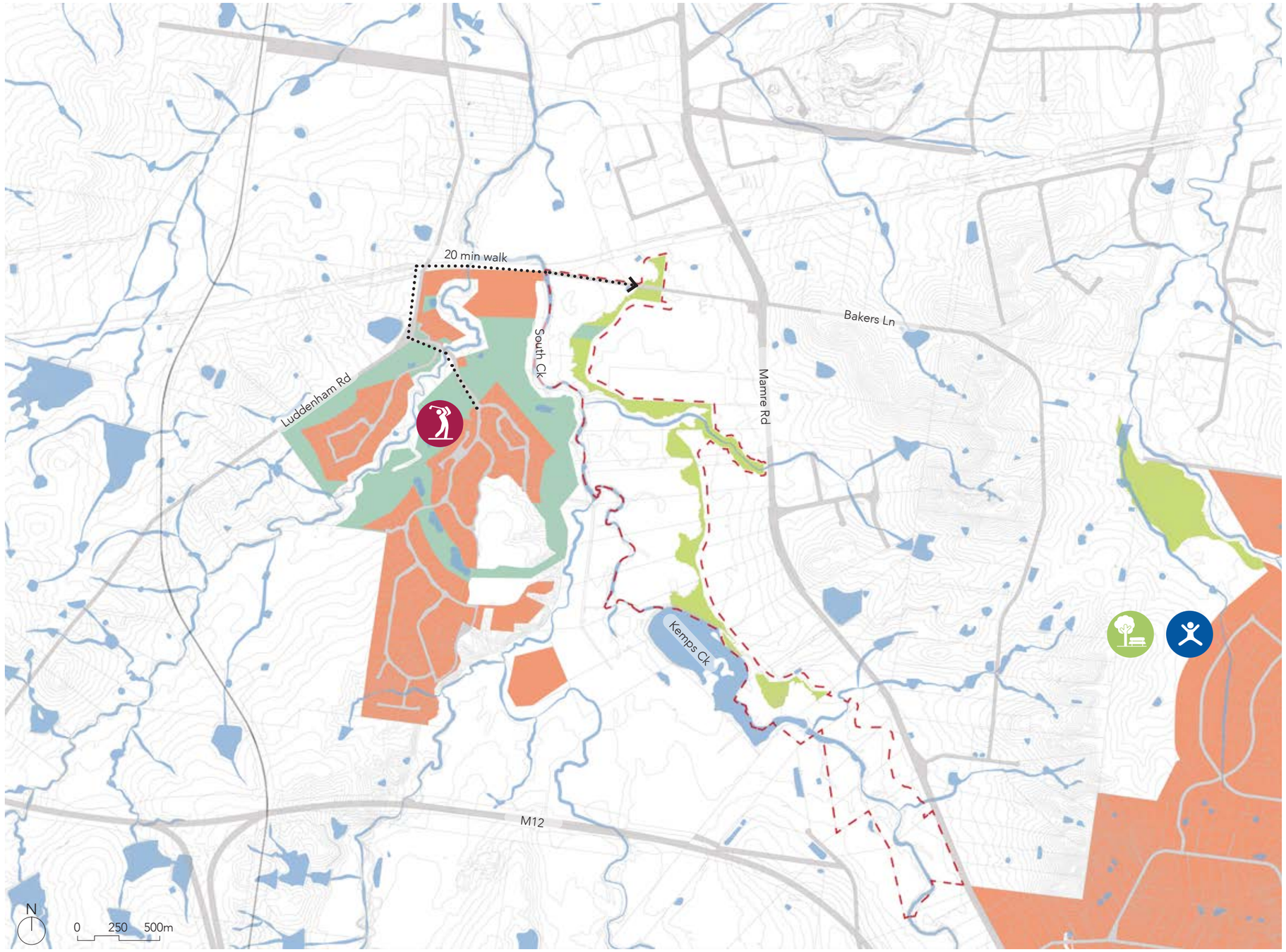


2.11 OPEN SPACE & RECREATION

Existing Open Space Context

At present, there is limited public open space adjoining the Mamre Road Precinct. To the west, the Twin Creeks Golf and Country Club provides a privately operated recreation destination, while Mount Vernon residential area is served by a small local park at its outer edge. The community of Luddenham currently lacks access to formal public open space, though larger residential lot sizes (typically 4,000–6,000 m²) provide private outdoor amenity.

In this context, the future Mamre Road Open Space will play a pivotal role in addressing the current shortfall, creating a significant recreation and ecological corridor that not only serves the surrounding communities but also provides high-quality green infrastructure to support the emerging worker population within the precinct. By establishing this continuous open space network, the Master Plan will deliver a landscape that enhances liveability, connects communities, and contributes to the broader blue-green grid.



- Play space
- Passive open space
- Golf
- Residential - Environmental Living
- Public Recreation
- Private Recreation
- Waterway
- Road
- Existing contours
- Rail Line
- Lot Boundary

Figure 16: Open Space and Recreation Mapping

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2.12 CONNECTIONS

Connectivity

The Open Space is currently poorly connected, with no direct links to the street network along its western boundary, which adjoins additional land zoned for environmental protection and recreation. On the eastern edge, connectivity to Mamre Road is limited, creating challenges for access and integration with the broader precinct. The Master Plan identifies opportunities to address these gaps through the provision of new vehicle connections, open space edge roads, and shared pedestrian and cycle paths, which will tie the corridor into the surrounding street network and planned transport infrastructure.

Strengthening these connections will ensure the open space functions as an accessible green corridor, supporting recreation, ecological linkages, and active transport for both the worker population and nearby communities.

- Extent of Mamre Rd Open Space Master Plan
- Western Sydney Freight Line
- Proposed intermodal freight terminal
- Future vehicle connections
- Potential connections to Mamre Rd
- Potential access to open space
- Cycle lane
- Potential cycle lane
- Open Space Edge Rd
- Public Recreation
- Private recreation
- Environmental Conservation
- Industrial Area
- Proposed Water Treatment System
- Waterway
- Road
- Existing contours
- Rail Line
- Lot Boundary

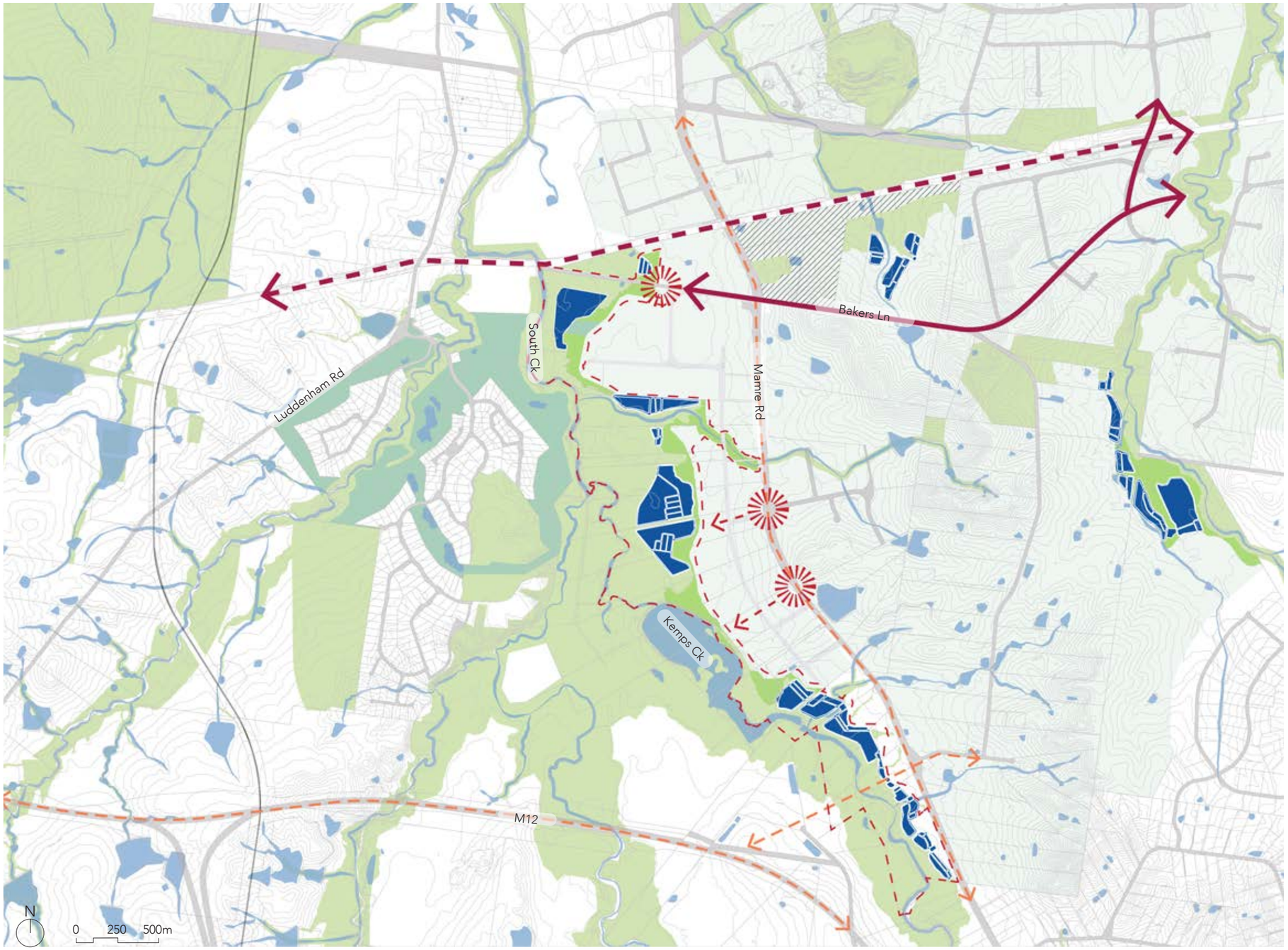

Figure 17: Regional Connectivity Mapping

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3 DESIGN FRAMEWORK

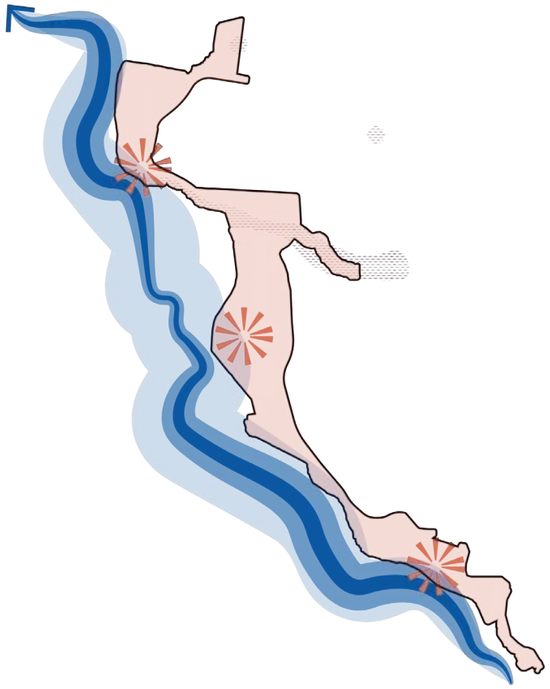
3.1 FRAMEWORK OBJECTIVES

The following objectives provide a framework to guide the Master Plan. They set out clear directions for connecting landscapes and communities, managing edges and interfaces, responding to climate challenges, and delivering recreation opportunities. Together, they ensure that open space functions as essential green and blue infrastructure, supporting ecological health, community wellbeing, and long-term resilience.

OBJECTIVE 01 - COUNTRY

These objectives set the foundation for how the Master Plan engages with Country. They recognise that Country is a living system cultural, spiritual, and ecological and that design has a responsibility to work with, rather than on, these connections. By embedding Aboriginal knowledge and values, the principles create a framework for decision-making that respects Traditional Custodianship and strengthens the relationship between people, place, and environment. They are intended to guide practical outcomes across the Master Plan, ensuring that open spaces, built form, and ecological systems are designed with reciprocity, resilience, and long-term care for Country at their core.

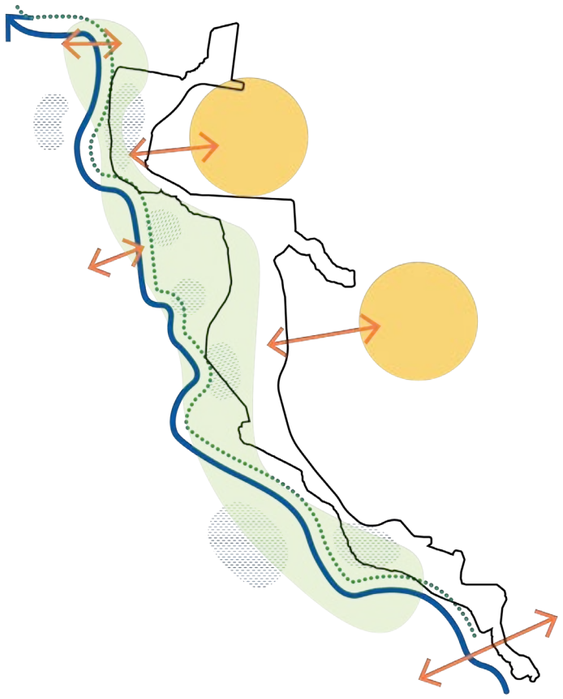
- Design with Country: Acknowledge and reflect the cultural, spiritual and ecological significance of Aboriginal land through meaningful engagement with Traditional Custodians.
- Support Caring for Country: Enable ongoing cultural practice and custodianship through space for ceremony, storytelling, and land management embedded in the open space network.
- Recognise Living Culture: Respect and celebrate Dharug culture as a living culture, with integrated opportunities for cultural learning and sharing.
- Water as a Cultural and Ecological Anchor: Honour Wianamatta (mother and place of water) through landscape-led water management that supports ecological function and cultural narrative.
- Protect Cultural Heritage: Protect Aboriginal heritage sites within the open space as part of cultural continuity and preservation.
- Integrate Education: Embed opportunities to learn about Indigenous ecology and cultural heritage within the open space.
- Working with Country: Respect Country by working with the existing and ancient natural landscape, vegetation and topography.



OBJECTIVE 02 - CONNECTIVITY

The following objectives establish a framework for building a connected, resilient, and accessible open space network. They recognise the importance of strengthening ecological systems while also creating meaningful links for people, whether for recreation, commuting, or everyday connection to nature. By prioritising ecological restoration alongside clear and legible movement networks, these principles aim to stitch together waterways, remnant bushland, employment areas, and neighbourhoods into a cohesive landscape framework. The intent is to deliver an open space corridor that functions as both an ecological backbone and a recreational spine, supporting biodiversity, active transport, and the wellbeing of local communities and workers alike.

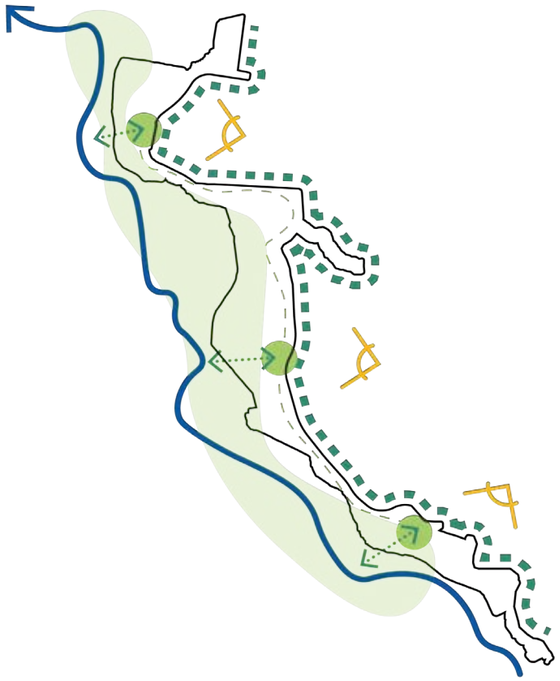
- Contribute to the Blue-green Network: Connect remnant native vegetation, riparian corridors, and open space through continuous ecological and recreational corridors (e.g. Wianamatta–South Creek, Kemps Creek, Ropes Creek).
- Enhance Ecological Connectivity: Restore and protect native vegetation to support biodiversity and long-term ecological resilience for plant and animal communities.
- Legible Public Connections: Ensure clear and inviting pedestrian and cycle links between industrial, residential areas and the open space network.
- Link Employment and Open Space: Maximise access between open space and surrounding employment hubs to encourage active transport and outdoor respite for workers.
- Regional Connections: Tie the open space in with regional cycle links to create north-south and east-west connectivity.
- A Connected Open Space: Prioritise the integrity of the open space corridor by avoiding the use of recreational land for infrastructure delivery, ensuring seamless, connected, and uninterrupted access to the parkland.



OBJECTIVE 03 - INTEGRATION

These objectives guide how the master plan manages the critical edges and interfaces of the open space network. They emphasise the role of design in balancing amenity, safety, and functionality where open space meets industrial land, residential areas, and stormwater assets. By shaping edges that are welcoming, legible, and responsive to site conditions, the Master Plan aims to create places that feel public and inclusive while also supporting ecological function and operational requirements. Together, these objectives ensure that edges are not leftover spaces but active, safe, and resilient transitions that strengthen both community amenity and the performance of urban systems.

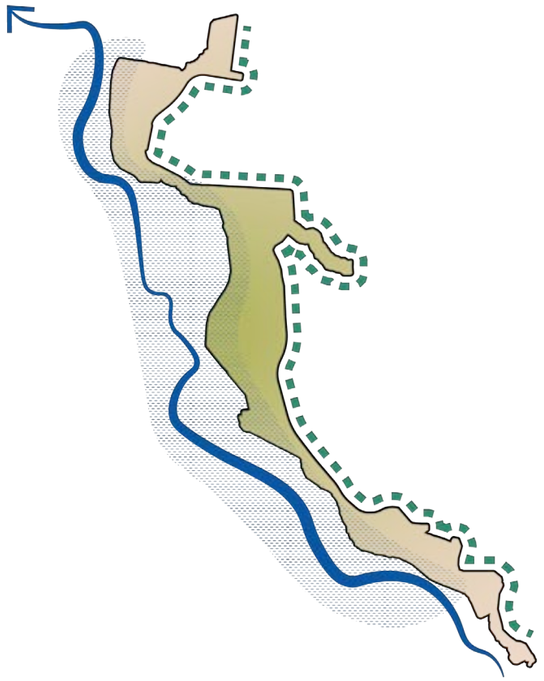
- Sensitive Edge Planning: Use open space to buffer industrial land from rural-residential areas, maintaining amenity while enabling land-use transitions.
- Promote Safety and Surveillance: Ensure open space has public street frontage to enable natural surveillance, wayfinding, and safe access and evacuation.
- Create a Welcoming Landscape: Design open space edges to feel public, accessible, and generous in character, balancing amenity, greening, and public safety.
- Embed Site-Specific Design Responses: Respect topography, drainage patterns, and view corridors to inform functional and aesthetic site planning.
- Interface with Stormwater Assets: Design open space interface with stormwater assets to balance safety, amenity, access, and maintenance needs. Minimise fencing by using planting, topography, and path alignment to manage movement and promote safe, respectful connections to water where appropriate.
- Balance Amenity and Maintenance: Design spaces to provide amenity and recreation opportunities while considering the maintenance and operational requirements for infrastructure.



OBJECTIVE 04 - RESILIENCE

These objectives position the master plan to respond proactively to the challenges of climate change and urban heat. They highlight the role of open space as critical green and blue infrastructure, providing shade, cooling, and climate-adaptive landscapes that support both people and ecosystems. By leveraging natural systems for flood management, microclimate regulation, and habitat health, the master plan ensures that open space remains safe, usable, and resilient under future conditions. At the same time, careful consideration of maintenance and operational requirements supports cost-effective, long-term performance, reinforcing the value of open space as essential infrastructure for the Mamre Road Precinct and the wider Parkland City.

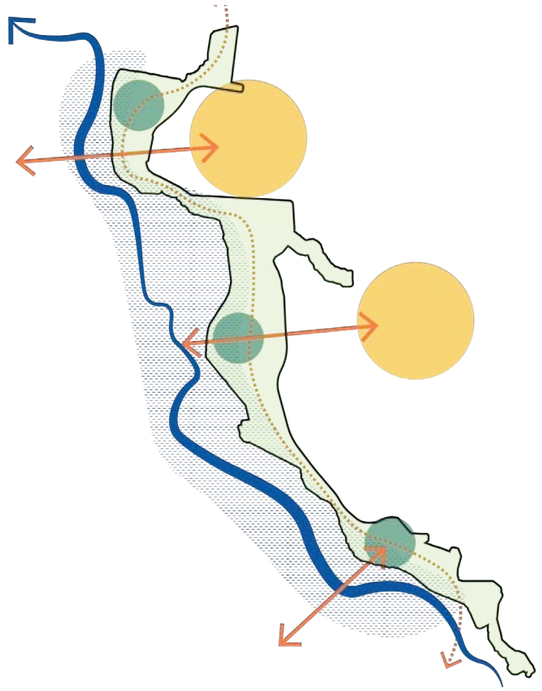
- Green Spine for Urban Cooling: Leverage open space and water systems to create shaded, vegetated buffers along industrial zones that reduce heat impacts and enhance microclimate of the broader Mamre Road Precinct.
- Localised Cool Refuge: Prioritise canopy cover, water-sensitive urban design, and permeable landscapes to build resilience into the public realm and to contribute to overall canopy targets for Parkland City. Consideration is to be given to reduce wildlife strikes while prioritising canopy cover.
- Climate-Adaptive Open Space: Design spaces to be resilient to increased extreme weather, including heat, floods and drought, ensuring they remain usable, comfortable, and beneficial year-round.
- Preserve Floodplain Storage: Maintain critical flood conveyance and floodplain storage to reduce downstream flooding impacts.
- Efficient Maintenance Solutions: Design spaces for efficient long term maintenance access to ensure resilient and cost-effective infrastructure operation.



OBJECTIVE 05 - RECREATION

These principles set the direction for delivering diverse and inclusive recreation opportunities within the master plan. They recognise that open space must respond to both local communities and the significant worker population, offering facilities that support active lifestyles, informal gathering, and daily wellbeing. Recreation is positioned not only as an activity but as an experience that connects people to waterways, landscape character, and cultural values. By carefully balancing recreation with ecological and cultural sensitivities, the master plan ensures that open space enhances health and social connection while protecting the integrity of Country and the environment.

- Deliver a Range of Recreation Opportunities: Plan for active and passive recreation opportunities, including walking, cycling, running, and informal community use.
- Plan for Worker Recreation Demand: Anticipate and accommodate non-resident use of open space by workers, with infrastructure that supports before, during, and after work recreation.
- Respond to Place and Waterways: Locate recreation areas beside waterways where appropriate, integrating landscape values and user experience.
- Balance Use with Environmental Values: Ensure recreational uses are low-impact and complementary to the environmental and cultural significance of the site.



4 MASTER PLAN

4.1 MASTER PLAN PHASING

The Mamre Road Open Space Master Plan is structured as a staged framework to guide the progressive delivery of the corridor over time. This approach responds to the realities of infrastructure delivery, funding mechanisms and land release, while ensuring that each phase contributes meaningfully to the long-term vision. Rather than a single end-state outcome, the Master Plan establishes a clear pathway from early implementation through to a fully realised open space network.

The Short-term Master Plan (Base Case) focuses on delivering the core infrastructure enabled under the current Development Contributions Plan and stormwater requirements. This phase establishes the fundamental structure of the corridor, integrating essential water management infrastructure with functional and accessible open space, and providing immediate benefit to the community.

The Optimised Master Plan represents the intermediate stage, building on this foundation to enhance connectivity, amenity and ecological performance. It addresses gaps in the initial network through the introduction of additional path connections and recreational loops, while commencing riparian and bushland revegetation. This phase strengthens the usability, comfort and legibility of the corridor, and begins to establish the landscape character that will define the long-term outcome.

The Long-term (Aspirational) Master Plan sets out the ultimate vision for the corridor as a connected, high-performing landscape of regional significance. At this stage, the open space network is fully integrated across all land parcels, with a mature canopy, established ecological systems, and a comprehensive hierarchy of recreational spaces and movement corridors.

Together, these three phases provide a flexible yet robust delivery framework, ensuring that early investment is not only functional but also strategically aligned with the long-term vision, enabling the corridor to evolve over time into a cohesive, resilient and valued public landscape.

4.2 SHORT TERM MASTER PLAN

The Short-term Master Plan is aligned with the infrastructure and works enabled under the Penrith City Mamre Road Precinct Development Contributions Plan and Sydney Water's stormwater asset management requirements. Open space delivery is focused within land zoned RE1, with the open space edge road, where feasible, located within adjoining IN1 land to support integration with the broader precinct structure.

This base case establishes a clear and deliverable framework for the early stages of the corridor, demonstrating how essential stormwater infrastructure can be positively integrated with functional, accessible and legible open space. This approach ensures that foundational investment delivers immediate community benefit, while setting up a coherent structure for future expansion and enhancement.

Key elements identified within the Development Contributions Plan, and incorporated into this Master Plan, include the extension of the open space edge road to connect with the future industrial collector road, and the provision of a shared path network that links these segments and supports pedestrian and cycle movement through the corridor. Maintenance access paths are integrated to enable efficient management of stormwater infrastructure, while contributing to the overall permeability of the landscape.

The open space is further supported by the establishment of turf areas for flexible use, the delivery of four new fitness nodes (complementing one existing developer-delivered node), and the introduction of planted batters that stabilise and soften the interface with stormwater infrastructure. Together with walking trails and cycling paths, these elements create a cohesive and usable open space network that balances infrastructure performance with recreational and landscape outcomes.

- Master plan boundary
- Entry
- Fitness node
- Stormwater infrastructure
- Open Space Edge Road
- Tracks and trails
- Dense vegetation
- Irrigated turf
- Proposed regional park as identified in The Western Sydney Aerotropolis Precinct Plan

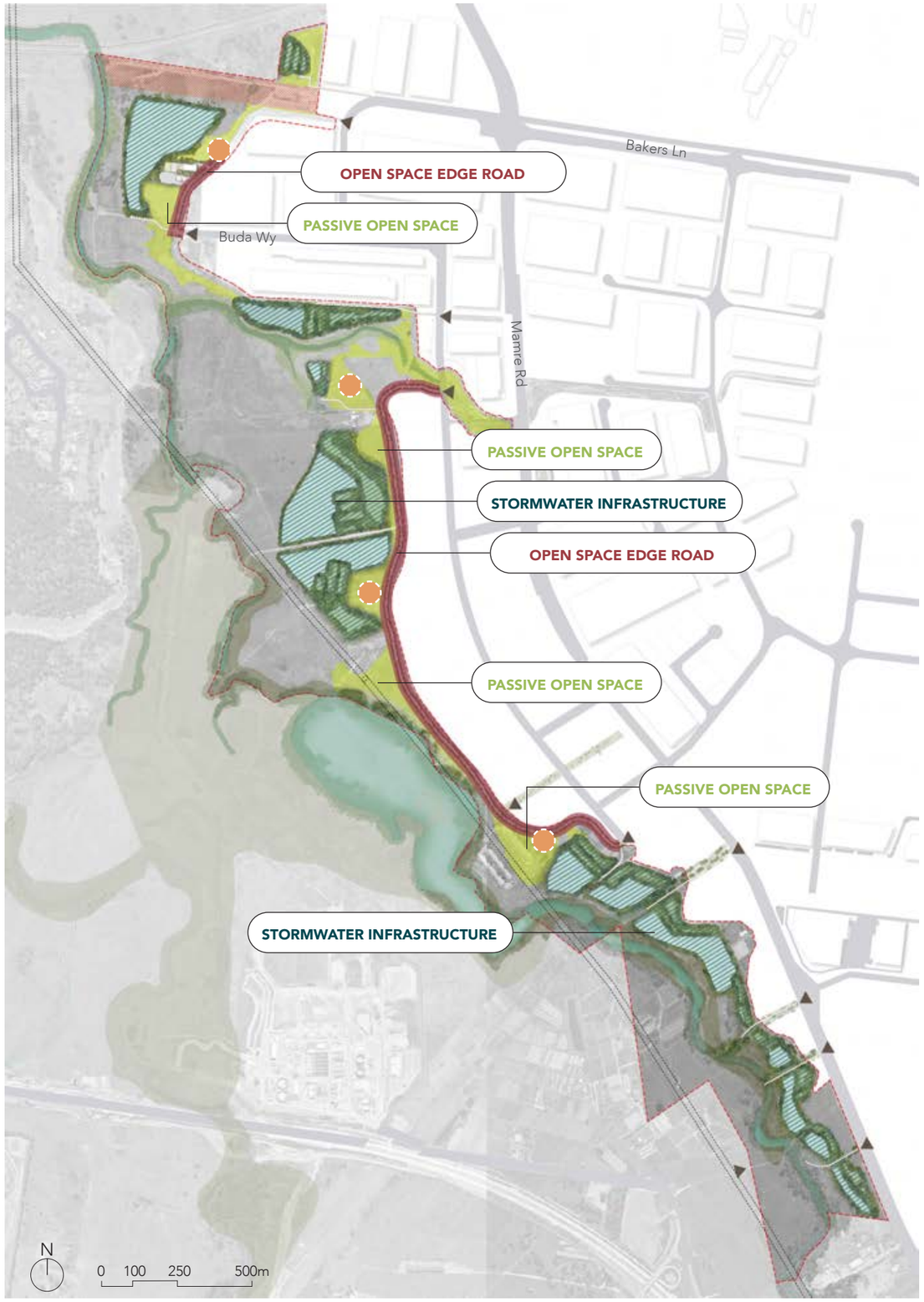


Figure 18: Short Term Master Plan

4.3 OPTIMISED MASTER PLAN

The Optimised Master Plan represents the intermediate stage of the corridor's evolution, building directly on the structure established in the short term to enhance connectivity, landscape performance and user amenity. It focuses on strengthening the functionality of the open space network through targeted improvements that address gaps in movement, landscape continuity and ecological value.

A key move is the consolidation and extension of the pedestrian and shared path network to resolve the fragmented connections established in the base case. Additional links are introduced across the corridor to create continuous movement routes and establish defined walking and running loops, improving accessibility, legibility and everyday usability of the open space. These loops support a broader range of recreational experiences and encourage more active use of the corridor.

The Optimised Master Plan also marks the commencement of ecological restoration within the corridor. Revegetation of riparian bushland and areas zoned for environmental conservation establishes the foundation for a more resilient and ecologically functional landscape. Early intervention in these areas begins to stabilise the creek corridor, improve habitat connectivity and set up long-term regeneration outcomes.

In parallel, increased tree and mass planting across the open space network enhances canopy cover, contributing to improved microclimate, user comfort and visual cohesion. These planting strategies begin to shift the character of the corridor from a primarily infrastructure-led landscape to one that is increasingly defined by vegetation structure and ecological performance.

Collectively, these moves elevate the corridor beyond its initial delivery, creating a more connected, shaded and usable open space network while establishing the ecological and spatial framework that supports the longer-term Aspirational vision.

- Master plan boundary
- Entry
- Fitness node
- Riparian and Bushland Revegetation
- Open Space Edge Road
- Tracks and trails
- Dense vegetation
- Irrigated turf
- Proposed regional park as identified in The Western Sydney Aerotropolis Precinct Plan

Figure 19: Optimised Master Plan

4.4 ASPIRATIONAL MASTER PLAN

The Aspirational Master Plan is a long term plan that establishes a comprehensive and fully realised vision for the open space corridor, transforming it into a connected, high-performing landscape of regional significance. Building on the structure established in the Short Term and Optimised Master Plan, the ultimate framework integrates the full extent of the corridor, including adjoining conservation lands to the west, to deliver a cohesive system that balances recreation, ecology and water management.

At this stage, the corridor evolves into a continuous and legible network of open space and movement, providing seamless pedestrian and cycle connections across all precincts. A hierarchy of paths supports a range of experiences, from local access routes to longer-distance walking and running loops that traverse RE1, RE2 and ENZ zoned lands. These connections are designed to engage directly with the Creek, allowing users to move alongside, across and around ponds, wetlands and stormwater basins, reinforcing the identity of the corridor as a living water system.

The landscape is characterised by a mature and expansive tree canopy, supported by extensive mass planting that delivers shade, comfort and strong visual cohesion. Over time, ecological restoration establishes robust vegetation communities across the corridor, including mid to high density planting aligned with the principles of the Draft Wianamatta South Creek Cumulative Impacts on Flooding Policy. This supports improved biodiversity outcomes, strengthens habitat connectivity and enhances the performance of the floodplain.

The regeneration of endemic vegetation along the Wianamatta South Creek and Kemps Creek riparian corridors forms a defining ecological spine, embedding the corridor within the broader Western Sydney landscape system and reinforcing its role as both habitat and cultural landscape.

A clear and consistent wayfinding and signage strategy supports intuitive navigation and strengthens the identity of the corridor, with entry markers and interpretive elements positioned at key access points and along primary routes.

Realisation of the full vision, particularly within ENZ zoned lands, will be influenced by future land ownership arrangements, policy settings and detailed flood impact assessment at the time of development.

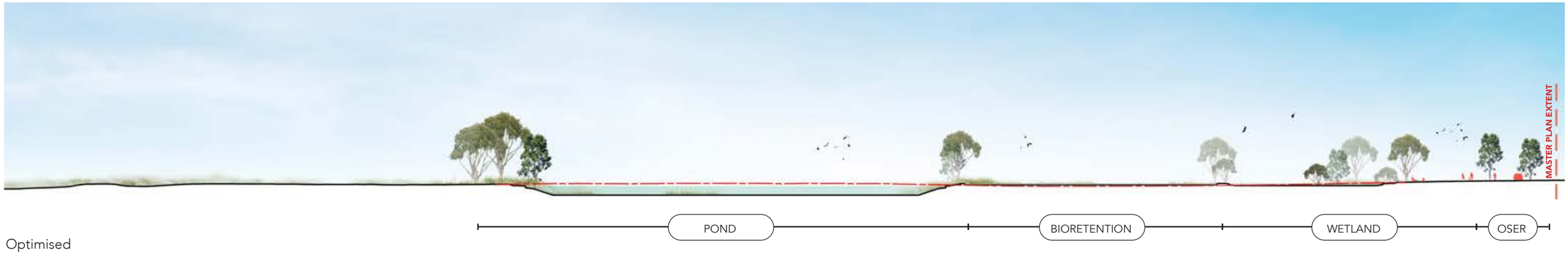
- Master plan boundary
- Entry
- Cultural space (to be determined with Dhurug Community)
- Active recreation hub
- Passive recreation hub
- Shared path
- Open Space Edge Road
- Tracks and trails
- Dense vegetation
- Irrigated turf
- Proposed regional park as identified in The Western Sydney Aerotropolis Precinct Plan

Figure 20: Aspirational Master Plan

4.5 SITE SECTIONS

SECTION 1

Short Term



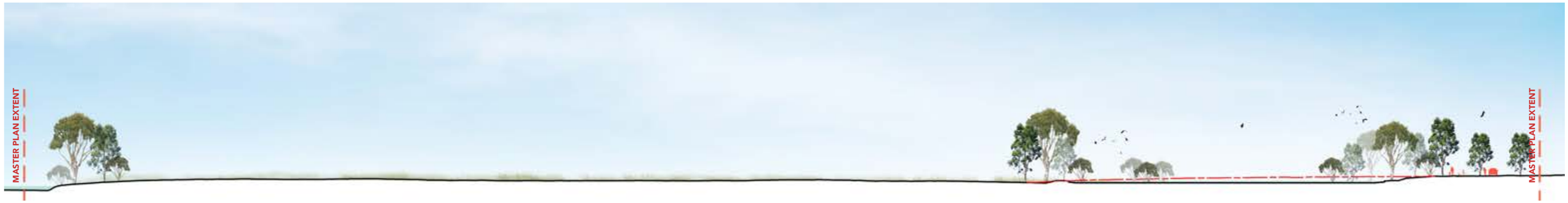
Optimised

Aspirational

Scale 1:1500

SECTION 2

Short Term



WETLAND

OSER

Optimised

RIPARIAN AND BUSHLAND REVEGETATION

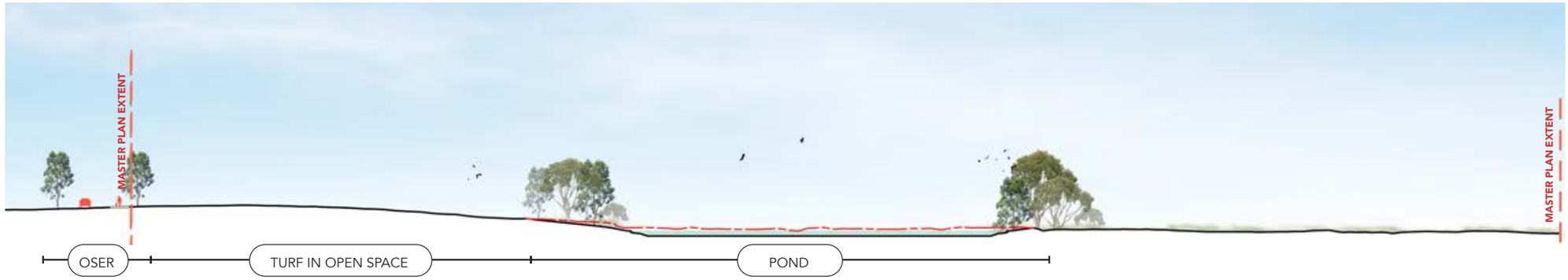
Aspirational

TRACKS, TRAILS & CULTURAL SPACES

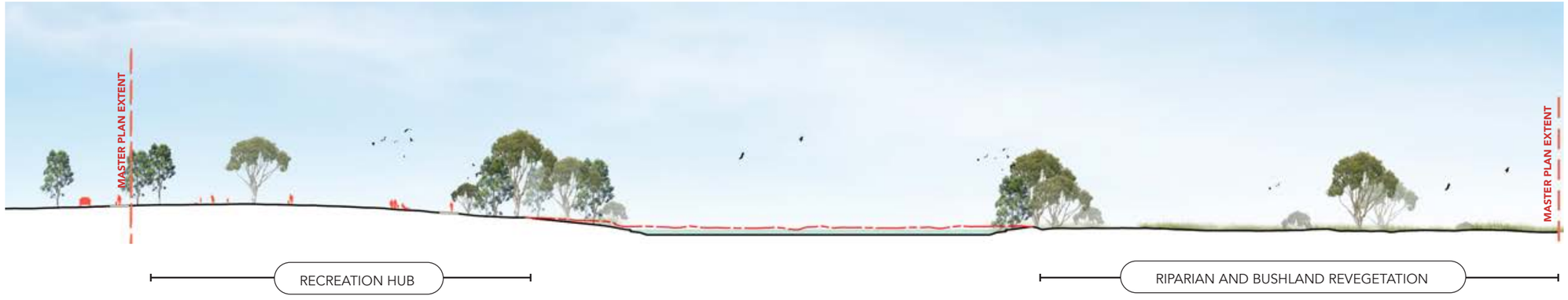
Scale 1:1500

SECTION 3

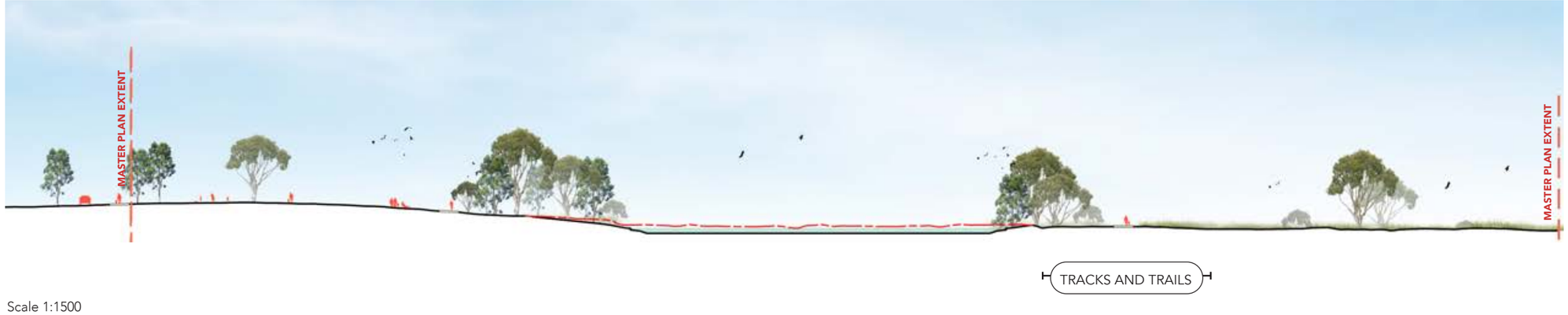
Short Term



Optimised



Aspirational



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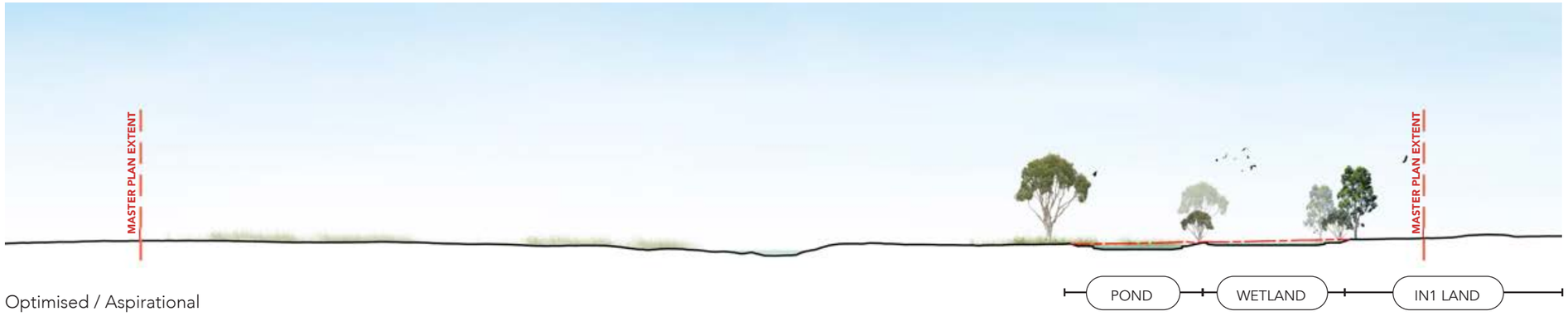
SECTION 4

Short Term



Optimised / Aspirational

Scale 1:1500

4.6 CONNECTING WITH COUNTRY

Overview

The Master Plan is underpinned by a commitment to Connecting with Country, recognising the corridor as part of the broader Wianamatta–South Creek cultural landscape. The framework seeks to embed cultural values within the spatial, ecological and experiential qualities of the open space, with a particular focus on waterways, riparian corridors and areas identified for ecological restoration.

Opportunities are identified to support cultural use, knowledge sharing and connection to Country through the integration of cultural spaces, gathering areas and interpretive elements. These are located in proximity to creek lines and restored landscapes, reinforcing the relationship between water, ecology and cultural practice. The approach is landscape-led and seeks to create spaces that are embedded within Country, rather than applied as standalone features.

While direct engagement with Traditional Custodians has not been undertaken as part of this project, the Master Plan has been informed by outcomes from adjacent engagement processes, including the Upper South Creek Advanced Water Recycling Centre Green Space Master Plan Engagement Outcomes Report. This provides a valuable foundation for understanding cultural priorities, values and opportunities relevant to the broader corridor.

Design Considerations

- Embed a Country-centred approach that recognises the cultural significance of Wianamatta–South Creek and its riparian corridors.
- Locate cultural spaces and gathering areas in relationship to waterways and restored landscapes.
- Support opportunities for cultural practice, ceremony and intergenerational knowledge sharing.
- Integrate cultural interpretation, storytelling and language into the landscape through signage, art and spatial design.
- Align ecological restoration with cultural knowledge, including the use of endemic species and culturally significant planting.
- Consider opportunities for cultural land management practices, such as cultural burning and habitat care.
- Create spaces that support quiet reflection, gathering and connection to Country, rather than high-intensity recreation.
- Enable opportunities for education and learning that communicate cultural values, histories and relationships to water and land.
- Recognise the importance of artefact repatriation and culturally appropriate site management.

Ongoing Engagement

The outcomes of adjacent engagement highlight the importance of ongoing collaboration with Traditional Custodians, including the location and co-design of cultural gathering spaces, input into planting and habitat strategies, and involvement in long-term land management practices such as cultural burning and site stewardship. These processes emphasise intergenerational access, cultural governance and the integration of Traditional ecological knowledge into design and management.

Further targeted engagement with Traditional Custodians will be essential to refine the location, design and management of cultural spaces, ensuring that the Master Plan is responsive to cultural protocols, values and aspirations. This next phase of engagement will be critical to embedding an authentic and enduring connection to Country within the delivery of the corridor.

4.7 OPEN SPACE

Overview

Open space within the corridor is conceived as a connected, multi-functional landscape that balances recreation, ecology and water management, underpinned by a Country-centred approach. The primary RE1 open space areas are strategically located outside of flood-affected land, enabling the delivery of reliable and highly usable parkland that supports active and passive recreation.

This is complemented by a broader corridor of floodplain and ecological landscapes that support water management and environmental restoration, forming part of a continuous blue-green network along Wianamatta–South Creek and Kemps Creek. Together, these layers create a cohesive system that integrates recreation with ecological function and landscape performance.

The framework establishes a clear and legible structure of spaces, movement and edges, supporting everyday use while responding to surrounding industrial development, stormwater infrastructure and riparian corridors. Tree canopy and planting are fundamental to this approach, shaping character, improving microclimate and reinforcing long-term ecological outcomes.

Design Considerations

- Contribute to the broader blue-green network, connecting open space, waterways and ecological corridors.
- Provide a continuous and legible open space network that supports movement and connectivity across the precinct.
- Integrate passive and active recreation within a landscape shaped by water, ecology and infrastructure.
- Establish flexible, usable RE1 parkland outside of flood-prone areas to support everyday recreation.
- Respond to edges and interfaces, balancing amenity, safety and functionality between open space, industry and stormwater assets.
- Maximise tree canopy and planting to support urban cooling, microclimate and ecological performance.
- Reinforce ecological corridors and support restoration of endemic vegetation communities.
- Ensure clear sightlines, access and passive surveillance to support safety and usability.
- Provide inclusive and accessible spaces with legible paths, entries and connections.
- Use planting and landform to define spaces, soften infrastructure and create a cohesive landscape identity.

1% AEP flood extent

RE1 land

RE1 land within 1% AEP flood extent

Figure 21: Open Space Diagram

4.8 RECREATION & PROGRAM

Overview

The recreation and program framework positions the corridor as a connected recreational spine that supports both the surrounding community and the significant future worker population of the Mamre Road Precinct. Building on the Master Plan's objectives of connectivity and integration, recreation is embedded within the landscape as a series of linked experiences, balancing active use, informal gathering and connection to waterways and Country.

The program is distributed along the corridor to create a legible sequence of spaces, from active movement corridors and fitness opportunities to quieter areas for rest and retreat. Recreation is intentionally low-impact and landscape-led, ensuring compatibility with ecological restoration, water management systems and cultural values, while delivering a high level of amenity and everyday usability.

Design Considerations

» Deliver a range of active and passive recreation opportunities, including walking, cycling, running and informal use.

» Plan for worker recreation demand, supporting use before, during and after work hours.

» Embed recreation within a connected network of shared paths and loops to support active transport and movement.

» Integrate recreation with waterways and landscape systems, reinforcing the corridor as a blue-green spine.

» Distribute program elements along the corridor to create a sequence of activity nodes and quieter spaces.

» Balance recreation with ecological and cultural values, ensuring low-impact and compatible uses.

» Provide flexible and adaptable spaces that respond to changing needs over time.

» Support inclusive and accessible recreation for a broad range of users and abilities.

» Incorporate opportunities for rest, shade and informal gathering to improve comfort and dwell time.

» Embed interpretation and learning opportunities linked to Country, ecology and water systems.

Cultural space (to be determined with Dhurug Community)

Active recreation hub

Passive recreation hub

Riparian and bushland revegetation

Irrigated turf

Figure 22: Recreation and Program Diagram

4.9 STORMWATER INFRASTRUCTURE

Overview

Stormwater infrastructure is a defining component of the open space corridor, shaping both its physical form and its experiential qualities. As outlined in the broader water and environment framework (refer Water & Environment Analysis, Section 2.4), these systems are required to perform critical hydrological functions while also contributing to the character, ecology and usability of the landscape.

A range of stormwater asset typologies are distributed throughout the corridor, each with distinct hydrologic behaviours from ephemeral bioretention systems and shallow wetlands to deeper permanent water bodies and trunk drainage channels. Rather than being treated as isolated infrastructure, these systems are integrated into the open space network as multi-functional landscapes that support ecological processes, provide visual and experiential interest, and enable carefully managed public interaction.

The design approach recognises that hydrological performance, safety and maintenance requirements are fundamental, while also identifying opportunities for recreation, interpretation and connection to water. This results in a layered landscape where infrastructure supports both environmental function and community benefit.

Design Objectives

- Integrate stormwater infrastructure as a visible and legible component of the open space network, reinforcing the identity of the corridor as a water-led landscape.
- Respond to the varied hydrologic conditions of different asset types, ensuring design outcomes are aligned with their functional performance and safety requirements.
- Provide opportunities for safe and controlled interaction with water, including boardwalks, lookouts and edge conditions where appropriate.
- Enhance ecological outcomes through the incorporation of habitat, planting and naturalised systems within bioretention areas, wetlands and basin edges.
- Balance recreation and amenity with operational requirements, ensuring stormwater assets remain functional, durable and accessible for maintenance.
- Co-locate maintenance access with shared paths where feasible to maximise efficiency and improve connectivity across the corridor.
- Ensure all stormwater infrastructure is designed in accordance with relevant authority requirements, supporting long-term performance and resilience.
- Minimise the visual and spatial impact of highly functional assets, such as sediment basins, through careful siting, screening and landscape integration

Hydrologic Characteristics and Integration with Open Space

Stormwater assets will exhibit a range of hydrologic conditions, from ephemeral systems and shallow marshes to deeper permanent water bodies. These conditions are inherent to their function and provide varied opportunities for ecological, recreational and visual outcomes within the open space.

- Bioretention systems: Ephemeral systems with nominal detention depths of ~300 mm, suitable for habitat planting and increased tree canopy.
- Storage ponds: Deeper permanent water bodies (up to 3 m) with minor extended detention. Opportunities for controlled access via raised boardwalks and lookout structures.
- Constructed wetlands: Shallow, vegetated systems (approx. 300 mm permanent water depth) supporting habitat, interpretation, and passive recreation such as birdwatching.
- Trunk drainage channels: Primary conveyance systems with potential for fast-flowing and deep water. Provide opportunities for maintenance access and corridor connectivity.
- Sediment ponds: Highly functional assets with limited recreational value, designed to prioritise maintenance access and minimise amenity impacts.

Access and Maintenance

Maintenance access is essential for all stormwater assets and will be co-located with 3.0 m shared paths where feasible to enable dual use and improve connectivity.

- Co-located access with shared paths constructed to Council shared path standards.
- Heavy vehicle access provided where required (e.g. sediment basin maintenance) in accordance with Sydney Water specifications.
- Dedicated maintenance tracks (non-public) delivered to Sydney Water heavy vehicle standards where dual use is not appropriate.
- Light vehicle access provided adjacent to trunk drainage channels to connect to external road networks, in accordance with Sydney Water requirements.

Figure 23: Stormwater Infrastructure Diagram

4.10 OPEN SPACE EDGE ROAD

Overview

The Open Space Edge Road establishes the primary interface between the open space corridor and the adjoining industrial precinct, forming a critical piece of movement infrastructure and spatial definition. It provides essential access for vehicles, servicing and maintenance, while also supporting pedestrian and cycle connectivity along the length of the corridor.

More than a functional road, it is designed as a key edge condition balancing access, safety and amenity. The Edge Road reinforces the legibility of the open space network, provides passive surveillance, and creates a structured transition between industrial land and the public domain. Integrated with planting, shared paths and open space frontage, it contributes to a cohesive and accessible corridor that supports both movement and place.

Design Objectives

» Provide a continuous access and movement corridor along the open space, supporting vehicles, servicing and emergency access.

» Integrate shared pedestrian and cycle paths alongside the Edge Road to support active transport and connectivity.

» Reinforce the open space frontage, enabling passive surveillance and improving safety and usability
Respond to adjacent industrial interfaces, creating a clear and legible transition between built form and landscape.

» Co-locate with maintenance access where feasible to improve efficiency and reduce duplication of infrastructure.

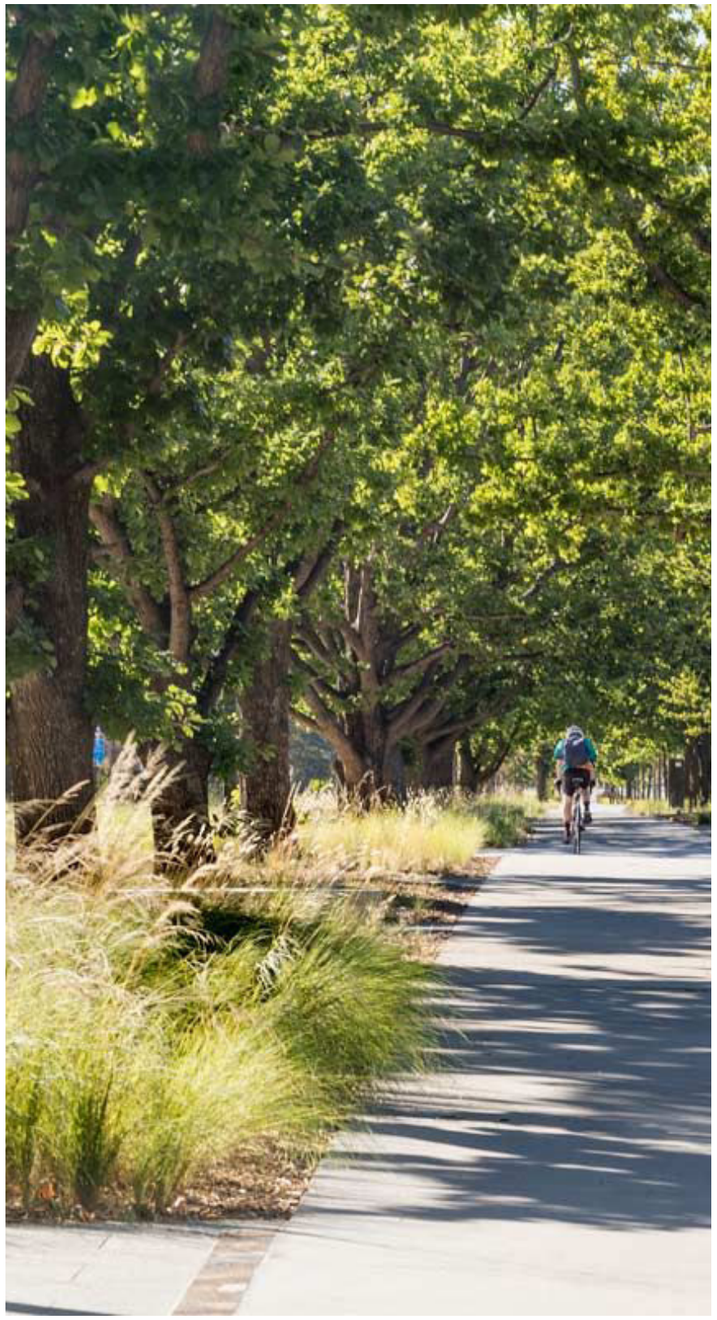
» Support connectivity to the broader road network, including links to Mamre Road and future collector roads.

» Integrate street tree planting and landscape treatments to improve amenity, shade and microclimate.

» Ensure safe and legible crossings and entry points into the open space.

» Balance functional requirements with user experience, ensuring the corridor remains pedestrian-friendly.

» Design for long-term adaptability, accommodating future growth and changing access requirements.



Entry

Open Space Edge Road

Shared path connections

Figure 24: Open Space Edge Road Diagram

4.11 ACCESS & CIRCULATION

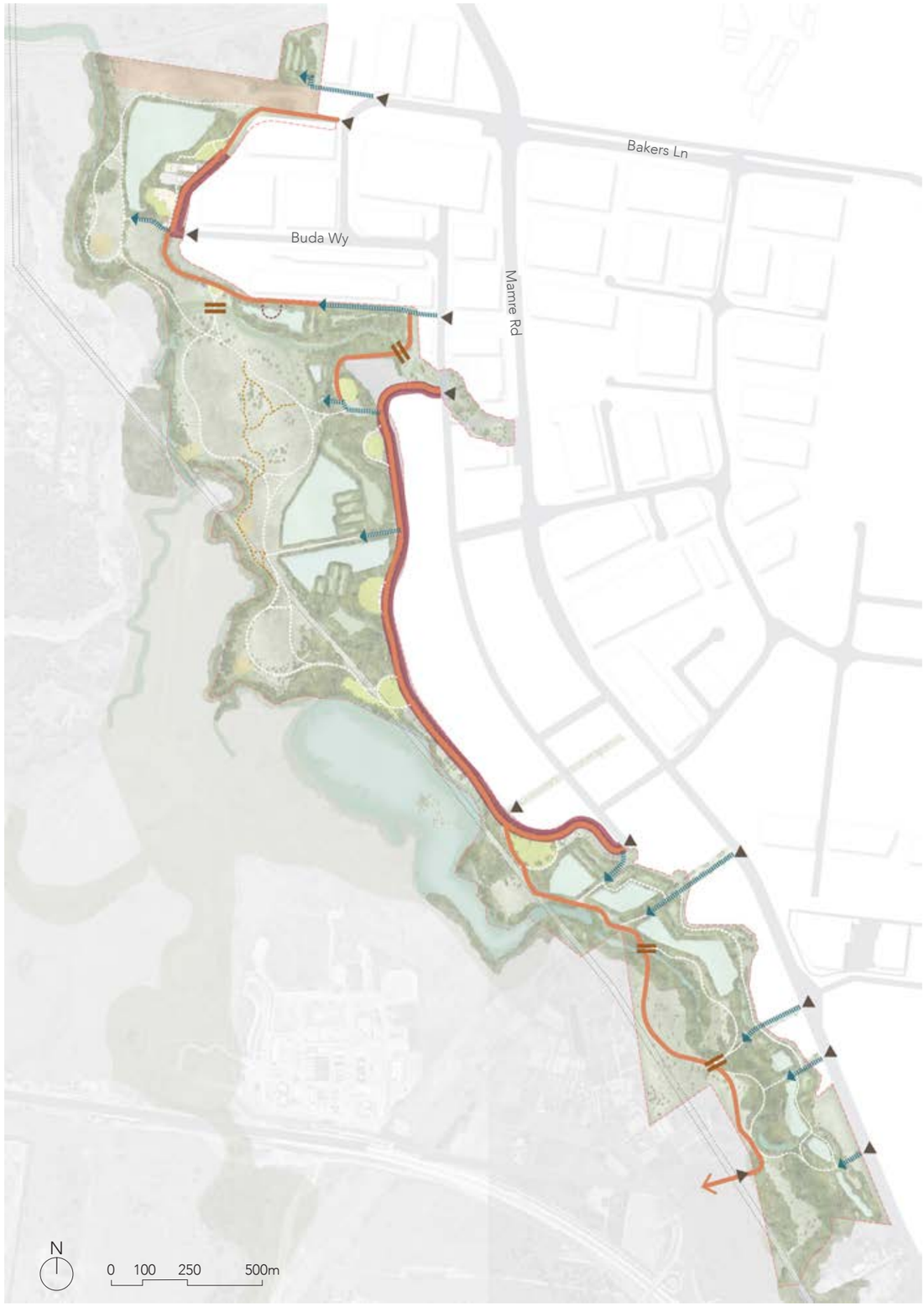
Overview

Access and circulation form the underlying structure of the open space corridor, establishing a clear and connected network that links recreation, ecology and surrounding development. The framework responds to existing gaps in connectivity by creating a legible system of shared paths, local connections and access points that integrate the corridor with the broader Mamre Road Precinct.

Movement is prioritised along the length of the corridor, supporting both active transport and recreational use, while also enabling connections across the corridor to adjoining employment lands and future development areas. The network is designed to be intuitive, accessible and continuous, ensuring the open space functions as both a recreational spine and a key movement corridor within the precinct.

Design Objectives

- Establish a continuous shared path network that supports walking, cycling and running along the length of the corridor.
- Create connected loop paths to support recreational use and everyday movement.
- Improve east–west connections to integrate the open space with surrounding industrial and employment areas.
- Provide clear and legible entry points into the open space, aligned with key desire lines and road connections.
- Integrate circulation with the Open Space Edge Road and broader street network.
- Support connections to regional cycle links and the wider blue-green network including the M12.
- Ensure paths are accessible, inclusive and designed for a range of users and abilities.
- Co-locate paths with maintenance access where appropriate to improve efficiency and connectivity.
- Respond to topography, water systems and infrastructure to ensure safe and resilient movement routes.
- Incorporate wayfinding and signage to support navigation and legibility across the corridor.



Entry
Open Space Edge Road
Shared path connections
Maintenance access
Tracks and trails
Mown trails
Raised pond walkway
Bridged walkway

Figure 25: Access and Circulation Diagram

4.12 ENTRIES & WAYFINDING

Overview

Entries and wayfinding establish the identity, legibility and accessibility of the open space corridor, providing clear points of arrival and intuitive movement throughout the landscape. The framework creates a network of well-defined entry points aligned with the Open Space Edge Road, surrounding development and key movement corridors, ensuring the open space is visible, accessible and easy to navigate.

Wayfinding is integrated with the movement network to support a clear hierarchy of paths and destinations, reinforcing the corridor as a connected recreational spine. Entry points are designed as welcoming thresholds into the landscape, supporting safe access, passive surveillance and orientation, while also offering opportunities to express landscape character and connection to Country.

Design Objectives

- Provide clear and legible entry points aligned with the Open Space Edge Road and surrounding street network.
- Reinforce visibility of entries to improve access, safety and passive surveillance.
- Establish a hierarchy of entries, including primary access points and secondary/local connections.
- Integrate wayfinding with the shared path network to support intuitive navigation and movement.
- Provide consistent signage, markers and cues to guide users along key routes and destinations.
- Align entries with key desire lines, connections and activity nodes within the corridor.
- Incorporate opportunities for identity and place-making at entries, including landscape character and connection to Country.
- Ensure entries are accessible and inclusive for a wide range of users and abilities.
- Support safe crossing points and transitions between road, path and open space.
- Integrate wayfinding with broader precinct and regional connections, including cycle networks.

Entry

Entry signage

Wayfinding signage

Figure 26: Entries and Wayfinding Diagram

4.13 VEGETATION & ECOLOGY

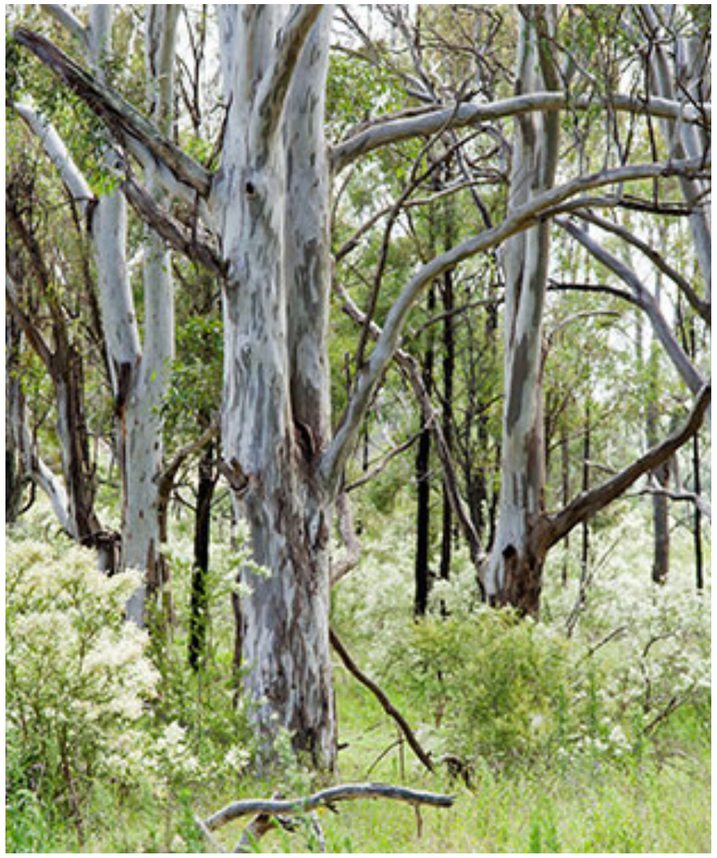
Overview

Vegetation and ecology underpin the long-term performance and identity of the open space corridor, restoring a landscape that has been extensively cleared while reinforcing connections to Country. The framework prioritises the re-establishment of Cumberland Plain ecologies, with riparian corridors along Wianamatta–South Creek and Kemps Creek forming the ecological spine of the precinct.

Planting is structured to support biodiversity, improve microclimate and enhance the usability of the open space network. Canopy and understorey planting are expanded across the corridor to provide shade, habitat and visual cohesion, while also contributing to urban cooling and climate resilience. This approach integrates ecological restoration with recreation and movement, ensuring the landscape functions as both habitat and a high-quality public domain.

Design Objectives

- Restore and reinforce riparian corridors to support biodiversity and ecological connectivity.
- Re-establish endemic Cumberland Plain vegetation communities across the corridor.
- Increase tree canopy to improve microclimate, shade and user comfort.
- Use planting to define spaces, structure movement and create a cohesive landscape character.
- Support habitat creation through layered planting, including canopy, mid-storey and groundcover.
- Integrate vegetation with stormwater systems to support water quality and ecological performance.
- Respond to soil conditions, hydrology and flood regimes in plant selection and placement.
- Contribute to urban cooling through shade, evapotranspiration and reduction of heat island effects.
- Balance ecological outcomes with safety, visibility and maintenance requirements.
- Enable long-term ecological regeneration through staged planting and adaptive management.



Cumberland Plain riparian and bushland revegetation

Planting of batters

Mass planting in open space to support endemic habitat and ecology

Figure 27: Vegetation and Ecology Diagram

Overview

The existing waterways adjacent to the Mamre Road Precinct are sensitive to the impacts of development within the flood plain and catchments. The Open Space Master Plan provides opportunity for aligning with the floodplain revegetation aims of the broader Wianamatta/South Creek Riparian Revegetation Strategy (RRS) to protect and restore existing waterways and waterway dependent ecosystems within the Wianamatta/South Creek system.

- Management Zone 1. Maintain and protect High Ecological Value (HEV) remnant endemic vegetation within the creek channel and flood extent (Forest Red Gum – Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion).
- Management Zone 2 and 3. Re-establish remnant vegetation community in areas between the creek channel and 1% AEP extents to improve existing biodiversity and buffer to Management Zone 1. Revegetation focused on establishing a tree canopy and minimising flood conveyance impacts through native grass and groundcover planting with minimal mid-storey vegetation.
- Management Zone 4 – protect and enhance vegetation zones along creek lines with a fully-structures forest on existing limited ecological value land. Revegetation densities within the open space master plan are guided by the Draft Wianamatta / South Creek Cumulative Impacts on Flooding Policy, 2025 and the RRS to balance revegetation with flood impacts within the broader Wianamatta/South Creek catchment.

The Draft Cumulative Impacts on Flooding Policy identify three broad revegetation opportunities with reference to their impact on flood plain conveyance:

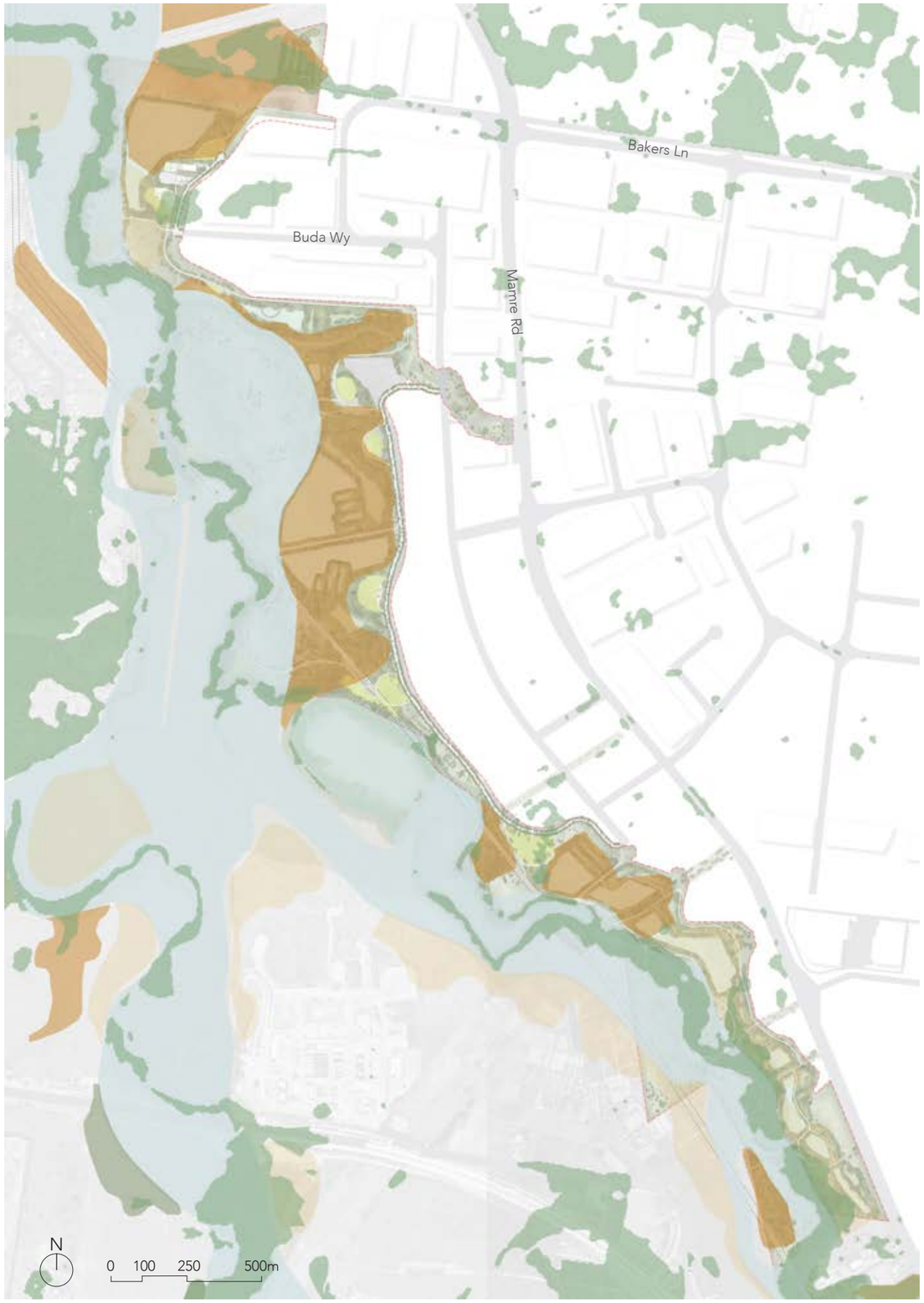
- Sparse density revegetation– nominated as sparse planting with scattered trees and minimal undergrowth.
- Moderate density revegetation– nominated as closely spaced trees and minimal to moderate undergrowth.
- High density revegetation – closely spaced trees with unmanaged and dense undergrowth.

Areas identified for possible vegetation densification are located outside of the Critical Flood Area (Floodway Corridor).

The densification opportunity areas within the Master Plan generally overlap with the proposed Sydney Water regional basins and floodplain fringes along the western edges of the Open Space (RE1) land. Sydney Water basins have generally been located within the floodplain to provide a cost-effective and integrated landscape outcome. There are some localised areas of moderate revegetation opportunity along the western edge of the master plan extents within the Kemps Creek 1% AEP flood extent. Sydney Water basins have been located

Planting palettes and densities for Sydney Water regional basin stormwater infrastructure are consistent with the Sydney Water planting palettes. The planting within Sydney Water regional basins stormwater assets provides opportunities to incorporate habitat and amenity, with riparian planting that is tolerant of expected water levels.

The Draft Cumulative Impacts on Flooding Policy has not been formally adopted at the time of publication of this Master Plan. All proposed planting and revegetation and design of stormwater basins within mapped flood extents shall be modelled to determine and minimise flood impacts as part of future detailed design and designers should refer to any adopted policy on flood impacts current at the time of design for guidance on planting and design to minimise impacts on floodplain storage/conveyance.



Remnant endemic vegetation
Floodway corridor
High vegetation densification
Moderate vegetation densification

Figure 28: Vegetation Densification and Flood Conveyance Diagram

Typical Section of MZ3 and MZ4 based on the Western Sydney Aerotropolis (Initial Precincts) Riparian Corridors Assessment Final Report

Typical Section of MZ1 and MZ2 based on the Western Sydney Aerotropolis (Initial Precincts) Riparian Corridors Assessment Final Report

4.14 IRRIGATION

Overview

Irrigation forms a key component of the Mamre Road Integrated Stormwater Scheme, enabling the reuse of harvested stormwater to support open space and planting while offsetting increased run-off to Wianamatta–South Creek. This approach integrates water cycle management with landscape performance, contributing to both environmental outcomes and the delivery of cooler, greener public spaces.

Irrigation supports the establishment and long-term health of vegetation across the corridor, while also enhancing user amenity through urban cooling and improved landscape quality. Passive irrigation strategies are prioritised, including the reuse of runoff within open space areas and the incorporation of passively irrigated street tree systems along the Open Space Edge Road. Together, these systems contribute to increased soil moisture retention, canopy growth and microclimate improvement.

The irrigation framework is informed by Sydney Water's water balance modelling, which identifies opportunities to sustainably manage soils and downstream receiving environments. Irrigation rates are calibrated to support vegetation without adversely impacting groundwater recharge or salt balance, particularly within floodplain areas. Implementation and long-term management will require coordination between Sydney Water, Council and future landowners.

Design Objectives

- Reuse harvested stormwater to irrigate open space and reduce runoff to Wianamatta–South Creek.
- Support the delivery of cooler, greener landscapes through irrigated canopy and planting.
- Maximise passive irrigation through runoff capture and infiltration within open space areas.
- Integrate passively irrigated street tree systems along the Open Space Edge Road.
- Respond to soil conditions, including salinity, sodicity and erosion risks, in irrigation design.
- Apply irrigation rates in accordance with Sydney Water modelling to manage groundwater and salt balance.
- Support establishment and long-term health of vegetation across RE1 land and WSUD areas.
- Integrate irrigation with stormwater infrastructure, including basins and batters.
- Allow for staged implementation and refinement through detailed design.
- Coordinate ownership, delivery and maintenance responsibilities between Sydney Water, Council and landowners.

Figure 29: Passively irrigated Streetscape design which permits irrigation of landscaped verges through flush kerbs and dedicated utilities corridors (Sydney Water and Bligh Tanner).

Sustainable Soils Management

Sydney Water have developed a water-balance including irrigation opportunities throughout the Precinct to sustainably manage downstream receiving environments (Wianamatta/South Creek) and soils, which are susceptible to sodicity, salinity and erosion issues.

Infiltration modelling was performed for Sydney Water as part of early water planning investigations for the Aerotropolis. This modelling was informed by infiltration testing and ground investigations. Modelling showed that irrigating at 600 mm/yr would start to increase groundwater recharge rates by 10% which is significant enough to begin influencing salt budgets. Salt budgets are understood to be influenced by salt in the soils of the upper slopes rather than within the alluvial soils of the floodplain, and irrigation rates could be as high as 600 mm/yr in the floodplain without influencing salt budgets or increasing groundwater recharge.

Specifically, Sydney Water has identified the following parameters for open space irrigation using harvested stormwater.

» Council or privately owned public open space (RE1/RE2): 600 mm/yr (@ 50% rate)

» WSUD basins and batter areas managed by Sydney Water: 600 mm/yr (@50% rate)

» Floodplain areas: 600 mm/yr (@100% rate)

The following indicative available areas for irrigation have been identified in the open space master plan (subject to further detailed design):

» RE1 land (excluding proposed hardscape and basin areas) = 32.9 ha

» WSUD Batters = 8.1 ha

» Total irrigable area = 41 ha

Irrigation ownership and management arrangements

Ownership and maintenance requirements of irrigation systems within open space areas requires on-going coordination and will be established through an Memorandum of Understanding between Sydney Water and Penrith City Council. Similarly, ownership and management of irrigation of floodplain areas which are currently under private ownership and not currently zoned as RE1 requires future consideration subject to future ownership arrangements of these areas.

Turf in open space

Mass planting in open space

Vegetated batters

Figure 30: Irrigation Diagram

4.15 EDGES AND INTERFACES

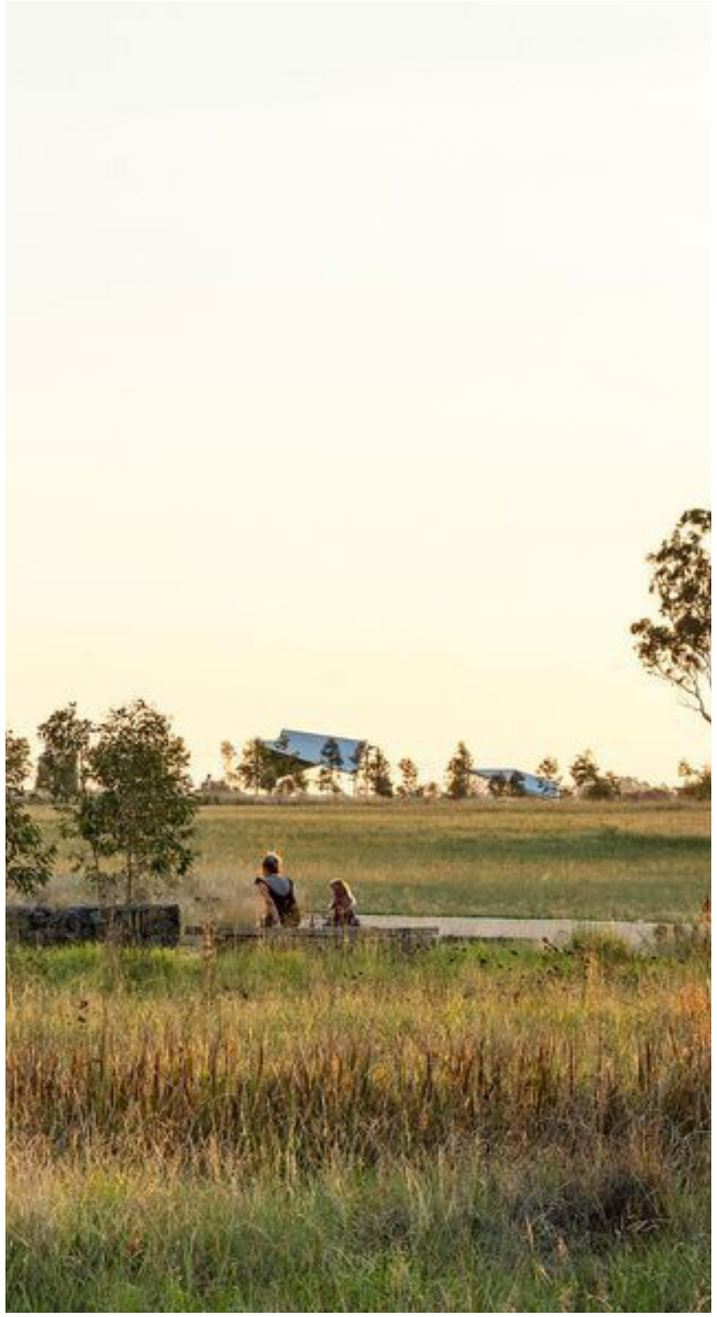
Overview

Edges and interfaces define the relationship between the open space corridor and its surrounding land uses, including industrial development, stormwater infrastructure and riparian landscapes. The framework treats these edges as active and designed transitions, balancing amenity, safety and functionality while reinforcing the identity and legibility of the corridor.

Rather than hard boundaries, edges are shaped through a combination of planting, landform and path alignment to create a cohesive and integrated landscape. This approach supports passive surveillance, improves user experience and enables safe, managed interaction with adjacent systems such as waterways and stormwater assets. The result is a series of responsive interfaces that support both the operational requirements of the precinct and the delivery of a high-quality public domain.

Design Objectives

- Design edges as active transitions between open space, industrial land and water systems.
- Balance amenity, safety and operational requirements at all interfaces.
- Minimise the need for fencing through the use of planting, landform and spatial separation.
- Provide passive surveillance through open frontage and alignment with movement corridors.
- Integrate edges with the Open Space Edge Road to reinforce access, visibility and safety.
- Respond to stormwater infrastructure with appropriate setbacks, grading and safe access conditions.
- Protect and enhance riparian corridors through sensitive interface design and revegetation.
- Use planting to buffer adjoining land uses and improve visual and acoustic amenity.
- Maintain clear sightlines and legibility to support safe and intuitive use.
- Ensure interfaces are resilient and adaptable to future development and operational needs.



Opportunity for irrigation in open space
Planted batters to be maintained by Sydney Water
Pond - RE1 Interface
OPEN SPACE
POND

If this land is in private ownership, fencing may be used to exclude people. This is at the landowners discretion.
Pond - ENZ Interface
POND
ENVIRONMENT AND RECREATION

Wetland - RE1 Interface

WETLAND

OPEN SPACE

ENZ - Wetland Interface

ENVIRONMENT AND RECREATION

WETLAND

Shared service trenches
SHARED PATH
TREE PLANTING
PARKING LANE
THROUGH TRAFFIC
THROUGH TRAFFIC
TREE PLANTING
FOOTPATH
2.5m
1.5m
3m
3.5m
4m
2.5m
1.5m
OSER - RE1 Interface
OPEN SPACE
OPEN SPACE EDGE ROAD
IN1

Shared service trenches
SHARED PATH
TREE PLANTING
2.5m
1.5m
Open Space - Shared Path Interface
OPEN SPACE
SHARED PATH
IN1

5 PLANTING

5.1 RIPARIAN CORRIDOR PLANTING

Botanical Name	Common Name	CPW Species	Tolerance to Saline Soils
Aquatic (Continuously Submerged)			
Bolboschoenus fluviatilis	River bull-rush	×	✓
Eleocharis sphacelata	Tall Spike-rush	×	✓
Lepironia articulata	Lepironia	×	✓
Machaerina articulata	Jointed Twig-rush		
Schoenoplectus validus	River Club-rush	×	✓
Triglochin microtuberosa	Water Ribbons	×	✓
Lower Bank (Regularly Submerged)			
Bolboschoenus caldwellii	Marsh club rush	×	✓
Carex appressa	Tall Sedge	×	✓
Ficinia nodosa	Knobby Club Rush	×	✓
Juncus usitatus	Common Rush	✓	✓
Schoenoplectiella triangulata	Triangular Schoenoplectiella	✓	✓
Upper Bank (Occasionally Submerged)			
Aristida ramosa	Purple Wiregrass	✓	×
Austrostipa pubescens	Spear Grass		
Capillipedium spicigerum	Scented Top grass		
Chloris truncata	Windmill Grass	✓	✓
Cymbopogon refractus	Barbed Wiregrass	×	×
Dianella caerulea	Flax Lily		
Dianella longifolia	Smooth Flax Lily	✓	✓
Dichelachne micrantha	Short-hair Plume Grass	✓	×
Dichondra repens	Kidney Weed	✓	×
Entolasia marginata	Boarded Panic	✓	×
Imperata cylindrica	Bladey Grass	×	×
Lomandra longifolia	Mat-rush		
Microlaena stipoides var stipoides	Weeping Meadow Grass	✓	×
Poa labillardieri	Tussock Grass	✓	✓
Themeda triandra	Kangaroo grass	✓	✓

Note: Planting lists are indicative and all vegetation selection is to be confirmed with the relevant authority during the design stage

5.2 RIPARIAN EDGE PLANTING

Botanical Name	Common Name	CPW Species	Tolerance to Saline Soils
Trees			
Acacia implexa	Hickory Wattle	✓	✓
Acacia parramattensis	Sydney Green Wattle	✓	✓
Alocasuarina littoralis	Black She-oak	×	
Eucalyptus amplifolia	Cabbage Gum	×	×
Eucalyptus moluccana	Grey Box	✓	✓
Eucalyptus tereticornis	Forest Redgum	✓	✓
Melaleuca decora	White Feather Honey Myrtle	×	×
Melaleuca linariifolia	Snow in Summer	×	✓
Melaleuca styphelioides	Prickly-Leaved Paperbark	×	✓
Shrubs			
Acacia falcata	Sickle Wattle	✓	✓
Acmena smithii	Lilly Pilly	×	×
Breynia oblingifolia	Coffee Bush	×	×
Bursaria spinosa	Blackthorn	✓	×
Daviesia ulicifolia	Gorse Bitter Pea	✓	×
Dillwynia sieberi	Prickly-Parrot Pea	✓	×
Indigofera australis	Australian Indigo	✓	✓
Leptospermum polygalifolium	Teatree	×	
Ozothamnus diosmifolius	Rice Flower	×	×
Grasses			
Aristida ramosa	Purple Wiregrass	✓	×
Aristida vagans	Threeawn Speargrass	✓	×
Arthropodium milleflorum	Vanilla Lily	✓	×
Austrostipa ramosissima	Stout Bamboo Grass	×	✓
Chloris truncata	Windmill Grass	✓	✓
Chloris ventricosa	Plump Windmill Grass	✓	✓
Cymbopogon refractus	Barbed Wiregrass	×	×
Dianella longifolia	Smooth Flax Lily	✓	✓
Dichelachne micrantha	Short-hair Plume Grass	✓	×
Echinopogon ovatus	Forest Hedgehog Grass	✓	×
Entolasia marginata	Boarded Panic	✓	×
Imperata cylindrica	Bladey Grass	×	×
Lepidosperma laterale	Variable Sword Sedge	✓	×
Microlaena stipoides var stipoides	Weeping Meadow Grass	✓	×
Panicum simile	Two Colour Panic Grass	✓	×
Paspalidium distans	Shot Grass	×	×
Poa labillardieri	Tussock Grass	✓	✓
Themeda triandra	Kangaroo Grass	✓	✓
Groundcovers			
Brunoniella australis	Blue Trumpet	✓	
Centella asiatica	Centella	×	✓
Cheilanthes sieberi	Mulga Fern	✓	
Desmodium varians	Slender Tick-trefoil	×	
Dichondra repens	Kidney Weed	✓	×
Einadia hastata	Berry Saltbush	×	✓
Einadia trigonos subsp. Trigonos	Fishweed	×	✓
Eremophila debilis	Winter Apple	✓	
Euchiton sphaericus	Cudweed	×	
Geranium solanderi	Native Geranium	×	
Glycine clandestine	Twining Glycine	✓	✓
Glycine tabacina	Love Creeper	✓	
Goodenia hederacea	Forest Goodenia	×	✓
Hibbertia diffusa	Wedge Guinea Flower	✓	
Oplismenus aemulus	Creeping Beard Grass	×	
Pratia purpruascens	Whiteroot	✓	✓
Solanum prinophyllum	Forest Nightshade	×	
Veronica cineria	Speedwell	✓	
Viola hederacea	Native Violet	✓	✓

Note: Planting lists are indicative and all vegetation selection is to be confirmed with the relevant authority during the design stage

5.3 WSUD BATTERS PLANTING

Botanical Name	Common Name	CPW Species	Tolerance to Saline Soils
Lower Bank (Occassionally Submerged)			
Bolboschoenus caldwellii	Marsh club rush	✗	✓
Carex appressa	Tall Sedge	✗	✓
Ficinia nodosa	Knobby Club Rush	✗	✓
Juncus usitatus	Common Rush	✓	✓
Lomandra longifolia	Mat-rush		

BIOFILTER MEDIA PLANTING

Botanical Name	Common Name	CPW Species	Tolerance to Saline Soils
High Performing Plants			
Carex appressa	Tall Sedge	✗	✓
Ficinia nodosa	Knobby Club Rush	✗	✓
Juncus usitatus	Common Rush	✓	✓
Lomandra longifolia	Wattle Mat-rush	✓	✓
Groundcovers			
Centella asiatica	Centella	✗	✓
Dichondra repens	Kidney Weed	✓	✗
Shrubs			
Acmena smithii	Lilly Pilly	✗	✗
Leptospermum polygalifolium cardwell	Tree tree	✓	✓
Melaleuca nodosa			
Trees			
Eucalyptus amplifolia	Cabbage Gum	✗	✗
Melaleuca decora	White Feather Honey Myrtle		
Melaleuca linariifolia	Snow in Summer	✗	✓
Melaleuca styphelioides	Prickly-Leaved Paperbark	✗	✓
Tristaniopsis laurina	Water Gum	✗	✓
Waterhousia floribunda	Weeping lilly pilly	✗	✓

Note: Planting lists are indicative and all vegetation selection is to be confirmed with the relevant authority during the design stage

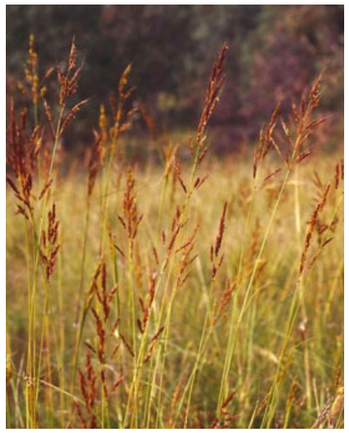
5.4 WETLAND-POND PLANTING

Botanical Name	Common Name	CPW Species	Tolerance to Saline Soils
Shallow Marsh (-0.20M To Ntwl)			
Carex apressa	Tall Sedge	✗	✓
Cyperus exaltus	Umbrella sedge	✗	
Machaerina rubiginosa	Twig Rush	✗	✓
Bolboschoenus caldwellii	Sea Club-rush	✗	✓
Eleocharis cylindrostachys	Common Spike-sedge	✓	✓
Lepironia articulata	Lepironia	✗	✓
Schoenoplectus validus	River Club-rush	✗	✓
Deep Marsh (-0.20 To -0.40M Below Ntwl)			
Eleocharis sphacelata	Tall Spike-rush	✗	✓
Lepironia articulata	Lepironia	✗	✓
Machaerina articulata	Jointed Twig-rush	✗	
Myriophyllum simulans	Amphibious Water-milfoil	✗	✓
Schoenoplectus validus	River Club-rush	✗	✓
Triglochin microtuberosa	Water Ribbons	✗	✓

Note: Planting lists are indicative and all vegetation selection is to be confirmed with the relevant authority during the design stage

5.5 GENERAL AMENITY AND REVEGETATION PLANTING

PCT	Plant type	Botanic Name	Common Name	Saline Soil Tolerance	Urban Cooling Potential	Irrigation Suitability
Cumberland Plains Shale Woodland	Tree	*Eucalyptus moluccana*	Grey Box	Low to Moderate	Medium–High	Yes
Cumberland Plains Shale Woodland	Tree	*Eucalyptus tereticornis*	Forest Red Gum	Moderate	High	Yes
Cumberland Plains Shale Woodland	Tree	*Corymbia maculata*	Spotted Gum	Low to Moderate	Medium–High	Yes
Cumberland Plains Shale Woodland	Tree	*Eucalyptus eugenioides*	Thin-leaved Stringybark	Low	Medium	Yes
Cumberland Plains Shale Woodland	Tree	*Eucalyptus crebra*	Narrow-leaved Ironbark	Low to Moderate	Medium	Yes
Cumberland Plains Shale Woodland	Tree	*Eucalyptus fibrosa*	Broad-leaved / Red Ironbark	Low to Moderate	Medium	Yes
Cumberland Plains Shale Woodland	Tree	*Eucalyptus longifolia*	Woollybutt	Moderate	Medium	Yes
Cumberland Plains Shale Woodland	Shrub/Small Tree	*Acacia implexa*	Hickory Wattle	Moderate	Medium	Yes
Cumberland Plains Shale Woodland	Shrub/Small Tree	*Acacia parramattensis*	Parramatta Wattle	Moderate	Medium	Yes
Cumberland Plains Shale Woodland	Shrub/Small Tree	*Bursaria spinosa*	Blackthorn	Low to Moderate	Low-Medium	Yes
Cumberland Plains Shale Woodland	Shrub/Small Tree	*Indigofera australis*	Austral Indigo	Low to Moderate	Low	Yes
Cumberland Plains Shale Woodland	Shrub/Small Tree	*Dodonaea viscosa*	Hop Bush	Moderate	Low-Medium	Yes
Cumberland Plains Shale Woodland	Shrub/Small Tree	*Dillwynia sieberi*	Sieber's Parrot-Pea	Low to Moderate	Low	Yes
Cumberland Plains Shale Woodland	Shrub/Small Tree	*Hardenbergia violacea*	Purple Coral Pea	Moderate	Low	Yes
Cumberland Plains Shale Woodland	Groundcover	*Themeda australis*	Kangaroo Grass	Low to Moderate	Low	Occasional irrigation
Cumberland Plains Shale Woodland	Groundcover	*Microlaena stipoides*	Weeping Meadow Grass	Low to Moderate	Low-Medium	Yes



Note: Planting lists are indicative and all vegetation selection is to be confirmed with the relevant authority during the design stage

PCT	Plant type	Botanic Name	Common Name	Saline Soil Tolerance	Urban Cooling Potential	Irrigation Suitability
Cumberland Plains Shale Woodland	Groundcover	*Cyperus gracilis*	Slender Flat Sedge	Moderate	Medium–High	Yes
Cumberland Plains Shale Woodland	Groundcover	*Panicum effusum*	Hairy Panic	Low to Moderate	Medium	Occasional
Cumberland Plains Shale Woodland	Groundcover	*Sorghum leiocladum*	Wild Sorghum	Moderate	Medium	Light
Cumberland Plains Shale Woodland	Groundcover	*Bothriochloa macra*	Red-leg Grass	Low to Moderate	Medium	Occasional
Cumberland Plains Shale Woodland	Groundcover	*Oplismenus hirtellus*	Basket Grass	Low to Moderate	Medium–High	Yes
Cumberland Plains Shale Woodland	Groundcover	*Glycine tabacina*	Variable Glycine	Low	Low	Yes
Cumberland Plains Shale Woodland	Groundcover	*Veronica plebeia*	Trailing Speedwell	Low to Moderate	Low–Medium	Yes
River-flat Eucalypt Forest	Tree	*Eucalyptus tereticornis*	Forest Red Gum	Moderate	High	Yes
River-flat Eucalypt Forest	Tree	*Eucalyptus amplifolia*	Cabbage Gum	Low to Moderate	High	Yes
River-flat Eucalypt Forest	Tree	*Angophora floribunda*	Rough-barked Apple	Low to Moderate	High	Yes
River-flat Eucalypt Forest	Tree	*Angophora subvelutina*	Broad-leaved Apple	Moderate	Medium–High	Yes
River-flat Eucalypt Forest	Tree	*Eucalyptus baueriana*	Blue Box	Moderate	Medium–High	Yes
River-flat Eucalypt Forest	Tree	*Eucalyptus saligna*	Sydney Blue Gum	Low to Moderate	Very High	Yes
River-flat Eucalypt Forest	Tree	*Eucalyptus grandis*	Flooded Gum	Low to Moderate	Very High	Yes
River-flat Eucalypt Forest	Shrub/Small Tree	*Melaleuca styphelioides*	Prickly-leaved Paperbark	Moderate	Medium	Yes
River-flat Eucalypt Forest	Shrub/Small Tree	*Backhousia myrtifolia*	Grey Myrtle	Low to Moderate	Medium	Yes
River-flat Eucalypt Forest	Shrub/Small Tree	*Notelaea longifolia*	Large Mock-Olive	Moderate	Low–Medium	Yes
River-flat Eucalypt Forest	Shrub/Small Tree	*Allocasuarina torulosa*	Forest Oak	Moderate	Medium	Occasional
River-flat Eucalypt Forest	Shrub/Small Tree	*Alectryon subcinereus*	Native Quince	Moderate	Medium	Yes
River-flat Eucalypt Forest	Groundcover	*Lomandra longifolia*	Spiny-headed Mat-rush	Moderate	Medium	Yes
River-flat Eucalypt Forest	Groundcover	*Cyperus gracilis*	Slender Flat Sedge	Moderate	Medium–High	Yes
River-flat Eucalypt Forest	Groundcover	*Panicum effusum*	Hairy Panic	Low to Moderate	Medium	Occasional
River-flat Eucalypt Forest	Groundcover	*Microlaena stipoides*	Weeping Meadow Grass	Low to Moderate	Low–Medium	Yes
River-flat Eucalypt Forest	Groundcover	*Glycine tabacina*	Variable Glycine	Low	Low	Yes
River-flat Eucalypt Forest	Groundcover	*Veronica plebeia*	Trailing Speedwell	Low to Moderate	Low–Medium	Yes

Note: Planting lists are indicative and all vegetation selection is to be confirmed with the relevant authority during the design stage

6 IMPLEMENTATION

6.1 SHORT TERM MASTER PLAN IMPLEMENTATION

The Short Term Master Plan reflects the infrastructure and works currently allowed for under the Penrith City Mamre Road Precinct Development Contributions Plan and Sydney Water's stormwater asset management requirements. Open space delivery is confined to land zoned RE1, with the open space edge road, where feasible, located within adjoining IN1 land. The Base Case seeks to deliver an achievable short-term outcome that integrates Sydney Water's stormwater assets with functional recreational use of the RE1 land.

Action		Priority	On-going Responsibility	Priority
1	Additional length of open space edge road connecting to future industrial collector road.	Developer	PCC	High
2	Maintenance access paths to allow for maintenance of stormwater infrastructure.	Developer	SW	High
3	Turf and tree planting (one tree per 20sqm) in open space.	PCC	PCC	Medium
4	Four fitness nodes *one additional fitness node is existing (developer delivered).	PCC	PCC	Medium
5	Planted batters along the interface of stormwater infrastructure.	SW	SW	Medium

1 Sydney Water Action

1 Penrith City Council Action

Master plan boundary

Entry

Cultural space

Active recreation hub

Passive recreation hub

Shared path

Open Space Edge Road

Tracks and trails

Dense vegetation

Irrigated turf

Proposed regional park as identified in The Western Sydney Aerotropolis Precinct Plan

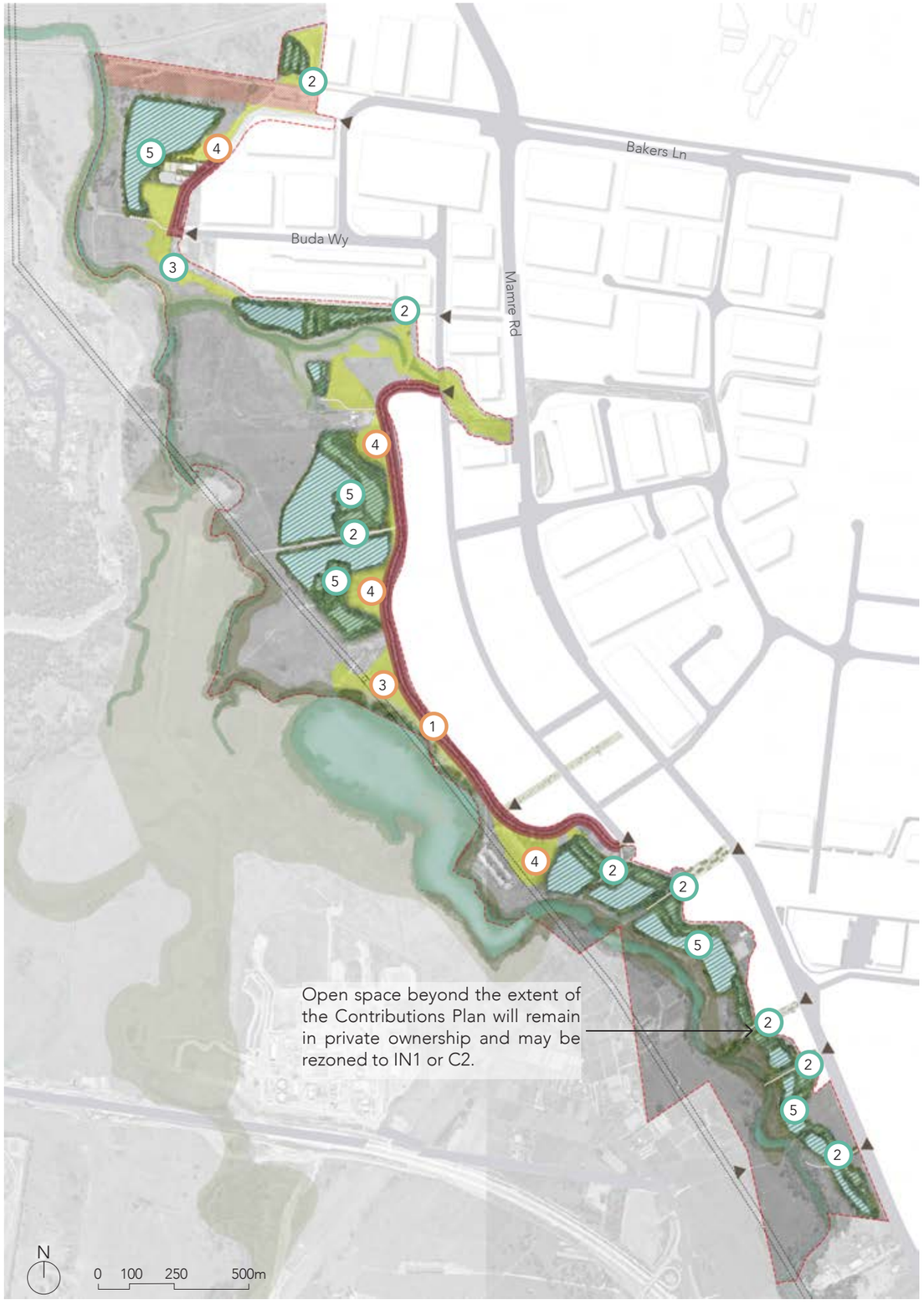


Figure 31: Short Term Implementation Plan

6.2 OPTIMISED MASTER PLAN IMPLEMENTATION

The Optimised Master Plan represents a balanced approach between the Base Case and the Aspirational Master Plan. It builds on the open space infrastructure provided in the Base Case by integrating the conservation land to the west through ecological restoration, strengthening precinct-wide connectivity, improving legibility through a more coherent open space and movement framework, and achieving enhanced ecological and amenity outcomes supported by an expanded tree canopy.

Action		Priority
6	Pedestrian paths connecting RE1 with The Yards RE2 area.	High
7	Additional pedestrian trail across RE1 and ENZ land to provide a walking and running loop.	Medium
8	Pedestrian paths along open space frontage, across RE1 and ENZ land, to allow for active recreation trails and interaction with ponds and basins.	Medium
9	Tree planting and mass planting in open space to provide natural shade for pedestrian and support broader ecosystem services.	High
10	Ecological restoration and the implementation of mid to high density vegetation, guided by the Draft Wianamatta South Creek Cumulative Impacts on Flooding Policy.	High
11	Regenerate and enhance endemic vegetation along Wianamatta South Creek and Kemps Creek riparian corridor.	High
12	Entry signage and wayfinding at open space entries and where required along trails.	Medium
13	Shared path within open space to connect open space edge road segments.	High

- Master plan boundary
- Entry
- Cultural space
- Active recreation hub
- Passive recreation hub
- Shared path
- Open Space Edge Road
- Tracks and trails
- Dense vegetation
- Irrigated turf
- Proposed regional park as identified in The Western Sydney Aerotropolis Precinct Plan

Figure 32: Optimised Implementation Plan

6.3 ASPIRATIONAL MASTER PLAN IMPLEMENTATION

The Aspirational Master Plan sets out a long-term strategic framework to guide the delivery of a future recreational precinct of regional significance for the Penrith City Council local government area and Greater Western Sydney.

Action		Priority
14	Increase amenity within open space by providing gathering spaces including shelters, picnic and BBQ facilities.	Low
15	Additional tree planting and mass planting in open space to provide natural shade for pedestrian and support broader ecosystem services.	Low
16	Passive open space lawns for kick about and passive recreation.	Medium
17	Pedestrian trails on ENZ land to create walking and running loops	Low
18	FRP raised board walk over pond to enable water-based interaction.	Low
19	Mown trails through native grass meadows on ENZ land.	Low
20	Integration of a First Nations cultural space to be further explored with the Dharug community.	High
21	Multi-use courts and other active recreation opportunities to be explored in active recreation zones across the precinct to provide greater amenity within the open space.	Low
22	Regional cycle route connecting Mamre Rd to the M12 via Bakers Ln.	Medium
23	Flood immune raised platforms for gathering and socialisation across Kemps Creek.	Low

Master plan boundary
Entry
Cultural space
Active recreation hub
Passive recreation hub
Shared path
Open Space Edge Road
Tracks and trails
Dense vegetation
Irrigated turf
Proposed regional park as identified in The Western Sydney Aerotropolis Precinct Plan

Figure 33: Aspirational Implementation Plan

7 COSTING

7.1 OPINION OF PROBABLE COST

Delivery of the Mamre Road Open Space Master Plan will be shared by PCC, Sydney Water and private developers.

Contributions from private developers are defined in the Mamre Road Precinct Development Servicing Plan (DSP) - Final (May 2025). Sydney Water has calculated the Infrastructure Contribution for integrated stormwater servicing in the Mamre Road precinct as: $877,200 per developable hectare (FY2025). Private developer contributions are expected to fund delivery of the following aspects of the Mamre Road Open Space Master Plan:

- Regional stormwater infrastructure, including stormwater basins, trunk drainage channels and recycled water network (as defined in the DSP)
- Construction of the Open Space Edge Road where it is located on private land
- Private open space (RE2)

Additionally, Council's Mamre Road Precinct Development Contributions Plan 2022 (s7.11) – Amendment 1 (March 2025) identified the local infrastructure which is expected to be delivered by Council.

- Collector roads
- Provision of public open space (RE1)

The DCP (March 2025) allowed for a limited delivery of open space assets/embellishment on RE1 land (approximately 18.5 ha assumed):

- Turf area with limited landscaping (assumed $75/m2)
- Tree planting (1 tree/20m2) within RE1 (assumed $100/m2)
- Exercise equipment located at 800 m intervals along the length of the RE1 frontage (assumed $120,000)
- Acquisition of developable land for open space land.

The additional capital and operational costs required to deliver the Open Space Master Plan additional to private developer contributions and DCP allowances will be required to be delivered through delivered via stakeholders including PCC, Sydney Water, INSW, or voluntarily by developers via a VPA, or other funding mechanisms, and are generally expected to be include:

Master Plan Phase	Additional Cost Allowances
Short Term Master Plan	» Additional extent of OSER (approx. 2.2 km subject to final design alignment) along RE1 frontage connecting to industrial connector road. OSER includes earthworks, pavement, shared paths, landscape and utilities in accordance with typical OSER cross section. » Shared path connection from Buda Way to Industrial Collector Road adjacent to Basin 3/4.
Optimised Master Plan	» Additional concrete footpaths within RE1 (Approx. 2870m total) » Additional unbound paths within ENZ (Approx. 1110m total) » Additional shade planting within RE1 (Approx. 5.5ha) » Ecological regeneration within Wianamatta South Creek/Kemps Creek corridors » Entry signage and wayfinding » Pedestrian bridge crossings of drainage channels to connect footpaths within Master Plan Area. » Irrigation of turf and mass planting areas (total 41 ha identified for irrigable areas)
Aspirational Master Plan	» Additional amenity/embellishment including shelters, picnic and BBQ facilities (Assumed 2 no. hubs) » Additional tree and mass planting within RE1 » Additional concrete footpaths within RE1 (Approx. 1250m total) » Additional unbound pedestrian paths within ENZ (Approx. 7600m total) and informal mown paths » Fibre Reinforced Polymer (FRP) boardwalks over basins (subject to further design/feasibility) and Kemps Creek corridor. » Multi-use courts or other active recreation opportunities (to be confirmed). » Regional cycling connection to M12
Operational costs	» Mowing of turf areas » Irrigation of turf and mass planting areas » Maintenance of planting » Active/passive recreation asset maintenance.

*Additional costs are assumed to be additive (i.e. Master Plan is delivered progressively).

7.2 COST BENCHMARKING

Embellishment of Blue-Green Infrastructure

There are several aspects of the master plan which are subject to further feasibility assessment and detailed design that will materially impact on delivery cost of the master plan phases. Timeframes for delivery of future master plan phases and likely cost escalation (inflation, global influences on material and labour costs, local labour and material demand/shortages etc.) are also currently highly uncertain at the time of preparing this master plan. As such, it is not possible to accurately define expected delivery costs for the Master Plan. Further detailed design phases should include preparation of a detailed bill of quantities and estimate of cost to determine likely costs at the time of delivery.

However, Infrastructure New South Wales has provided indicative costs for delivery of blue-green infrastructure in Western Sydney. These have been reproduced and may be analogous for delivery of the various master plan phases. These are summarized in the following table:

Open Space Embellishment	Estimated Delivery Cost Rate (Turner and Townsend, March 2026)	Relevance to the Mamre Road Open Space Master Plan
Low embellishment open Space	$0.99M / ha	Short-term master plan
Medium embellishment recreational open space with amenities	$2.88M / ha	Optimised master plan
High embellishment recreational open space with amenities	$4.44M / ha	Aspirational master plan
Maintenance of farmland	$0.047M / ha	Short term master plan (land currently zoned ENZ)

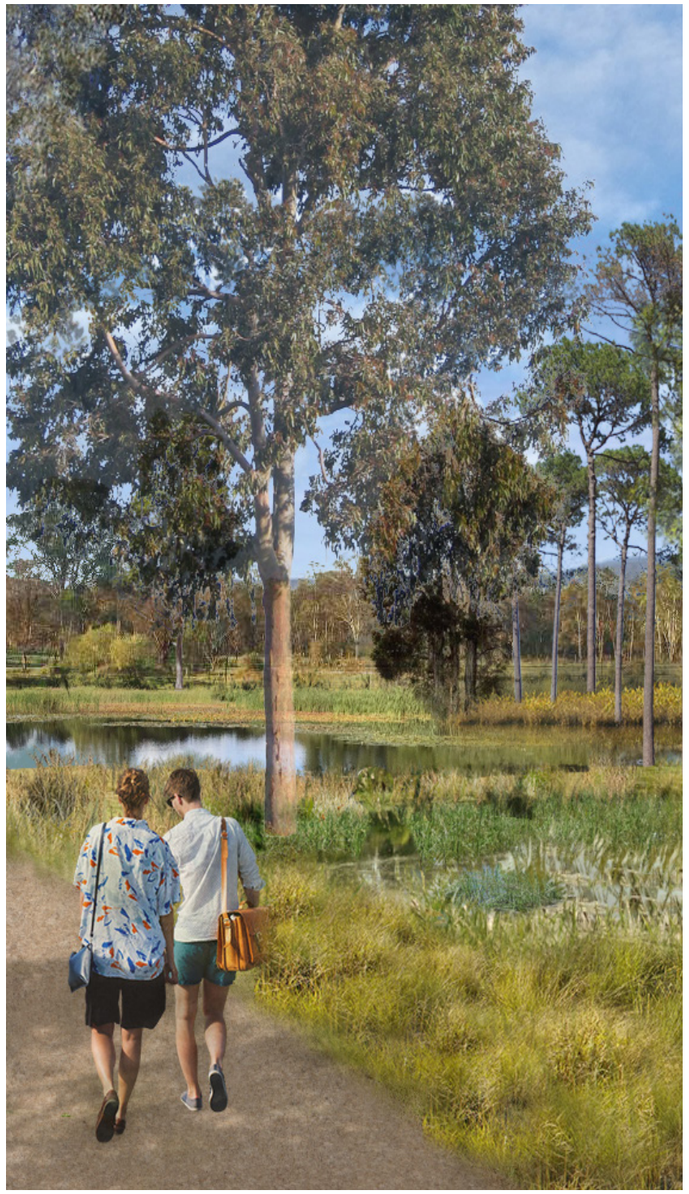
Source: NSW BlueGreen Infrastructure (Turner and Townsend, March 2026), supplied by Infrastructure NSW/Sydney Water.

The costs shown assume relatively straightforward development and do not include allowances for significant earthworks, ground remediation, contamination or relocation of significant services.

Open Space Developments

Comparable recent open space developments may also provide a benchmark of likely delivery costs (with adjustment for inflation and cost escalation), including:

Open Space Development	Description	Area	Delivery Cost (Approx.)
Bungarribee Park, Western Sydney Parklands	Low-Medium level embellishment Incorporating playgrounds, picnic shelters, walking/cycling shared paths, dog park, native vegetation restoration, wetlands, irrigation	200 ha	$15 M ($0.75 M/ha)
Shale Hills Southern Parklands, Western Sydney Parklands	Low-level embellishment Basic turf, footpaths, walking trails	5 ha	$4M ($0.8 M/ha)
Tench Reserve, Nepean River Parklands, Penrith	High level embellishment River-side parkland with active/passive recreation embellishment, boardwalk/ jetties	10 ha	$14 M ($1.4 M/ha)



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