

KURRUM YALLOCK PLENTY RIVER

Suburban Parks Program - Plenty River Trail
100% DESIGN DEVELOPMENT REPORT

23.05.22 Rev 04



T.C.L



We proudly acknowledge the Wurundjeri woi-wurrung people of the Kulin Nation as the owners of the lands on which this project is to be delivered, and pay our respect to their Elders past, present and emerging.

We recognise the deep connection of First Peoples to Country and value their contribution to caring for, and managing the land, water, natural and built landscapes and their profound knowledge systems.

We are committed to pursuing genuine and lasting partnerships with First Peoples to learn about and understand their culture and connections to Country in the way we plan for, and manage, the delivery of all projects.

We also extend our acknowledgement to all First Peoples and Torres Strait Islander communities and their rich culture, and pay respect to their Elders past, present and emerging.

INTRODUCTION



Taylor Cullity Lethlean (TCL), Cardno and design team was engaged in March 2021 by Parks Victoria to undertake the design and documentation of the Plenty River Trail Project. The trail is comprised of 24km of shared use trail 19km of primary trail and 5km of secondary loop trails, five lookouts, three new gully crossings and three new bridge crossings designed by Greenaway Architects.

The design process included consultation with the indigenous owners of the land, the Wurundjeri Woi Wurrung with this collaborative engagement and design process undertaken with Greenshoots to ensure indigenous knowledge could be embedded within the project.

This process ran in parallel with the public feedback process run by Parks Victoria. All information regarding this process can be found here - <https://engage.vic.gov.au/plenty-river-trail>

Initial alignment of the trail was undertaken in 2010 by Thompson Berrill Landscape Design with an evolution of the trail alignment required due to vegetation growth, additional information and the objectives from the client. All changes to the initial alignment aimed to minimise impact to the vegetation and enhance the user experience of the trail siting the lookouts and bridges in a responsive way.

This design solution is site responsive and minimises vegetation removal, engages with indigenous knowledge and embeds this in the design. The design unlocks stories of the past, present and future to be integrated into the project.

CONTEXT

Plenty Gorge Park is the most species rich area in the Greater Melbourne region and is home to many plants and animals including many species of state and national significance.

The park is a gem for cultural heritage values, specifically from the Traditional Owners, the Wurundjeri People, and in more recent times from European settlement, agriculture and mining.

TCL Cardno have been commissioned to design the Plenty River Trail, the trail consists of 24,000 metres of trail, including 19,000 metres of primary trail and 5,000 metres of secondary trails.

The commission is to produce a detailed design package, undertake a detailed planning assessment to determine all statutory approvals required, develop key plans and strategies to support all statutory approvals required, management and submission of statutory approval documentation and to provide construction phase services.

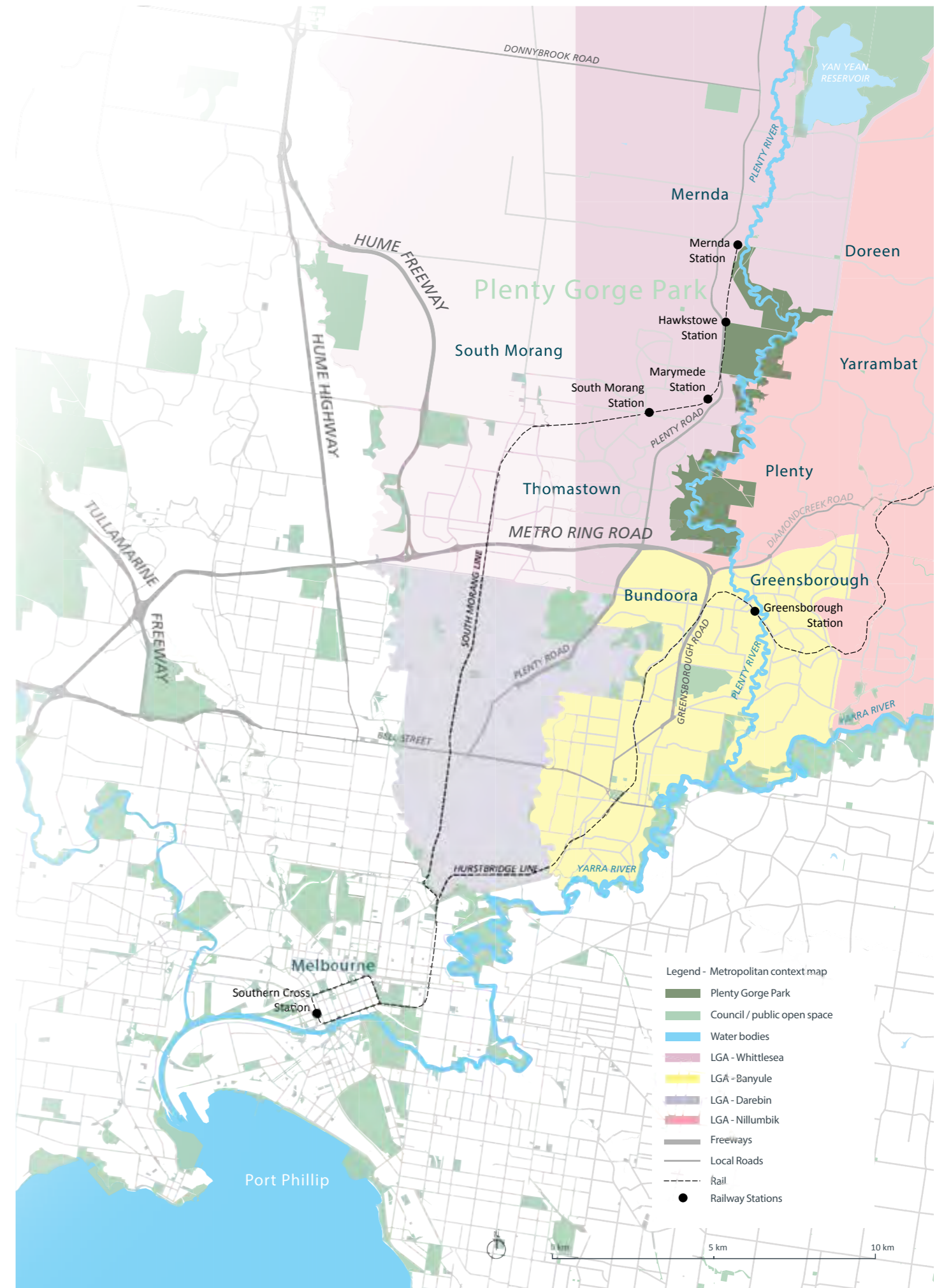


Figure 1: Metropolitan context plan

SIGNIFICANCE OF PLENTY VALLEY

FLORA AND FAUNA

Plenty Gorge is an environmentally significant place with import flora and fauna that requires protection and careful management to ensure this trail can succeed without adverse impacts on the environment.

The trail encounters multiple Ecological Vegetation Classes (EVC's) including:

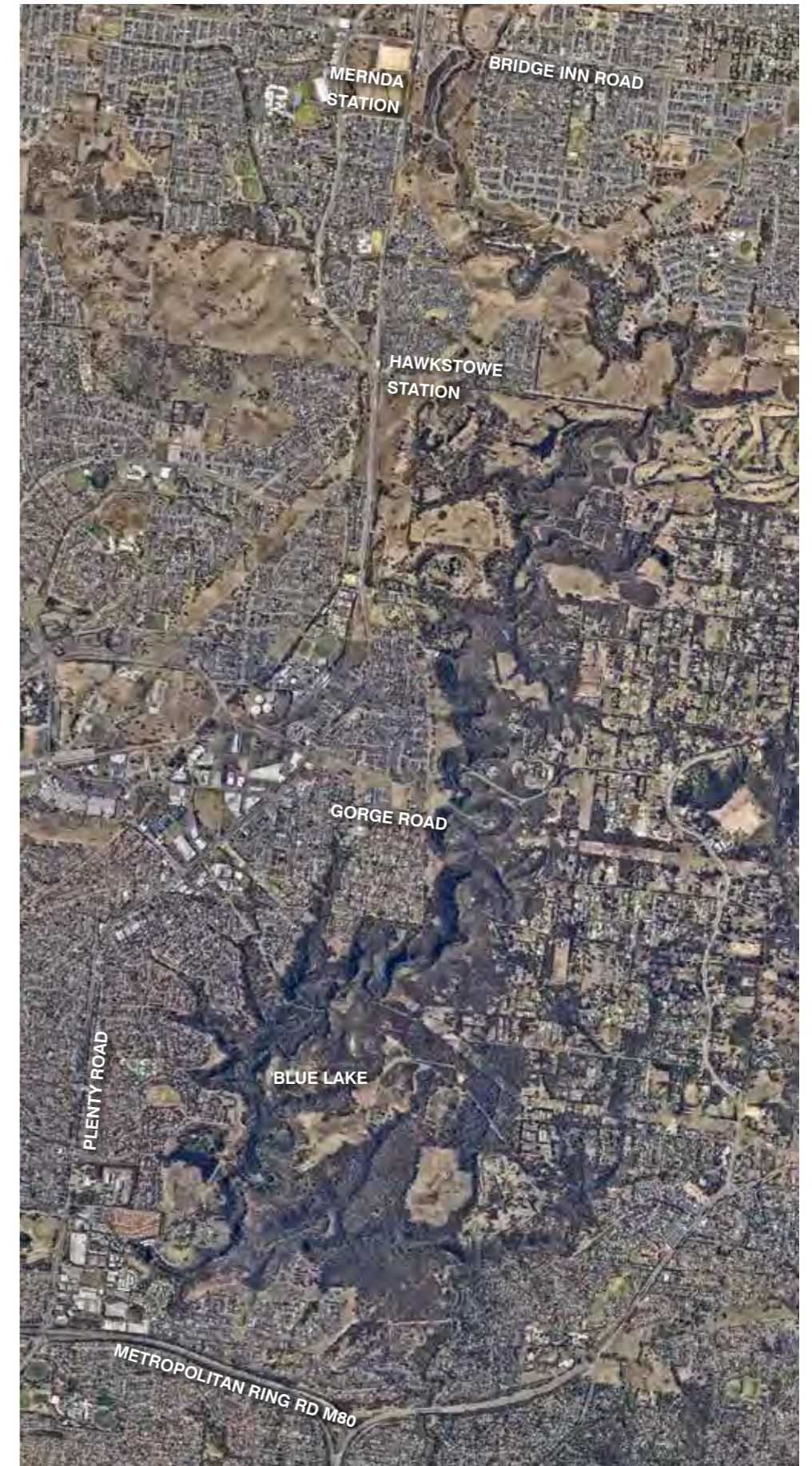
- Riparian Forest (EVC 18)
- Grassy Dry Forest (EVC 22)
- Valley Grassy Forest (EVC 47)
- Swamp Scrub (EVC 53)
- Plains Grassy Woodland (EVC 55_61)
- Riverina Plains Grassy Woodland (EVC 55_62)
- Box Ironbark Forest (EVC 61)
- Creekline Grassy Woodland (EVC 68)
- Swamp Riparian Woodland (EVC 83)
- Plains Grassy Wetland (EVC 125)
- Heavier soils Plains Grassland (EVC 132_61)
- Creekline Herb-rich Woodland (EVC 164)
- Grassy Woodland (EVC 175)
- Plains Sedgy Wetland (EVC 647)
- Tall Marsh (EVC 821)
- Escarpment Shrubland – Treed (EVC 895_61)

Under legislation of the Environmental Protection and Biodiversity Conservation Act 1999, threaten communities are recorded Derived Native Grassland of South-eastern Australia and Grassy Eucalypt Woodland of the Victorian Volcanic Plains, that require careful design considerations and permit triggers.

Significant Fauna present includes Grey-headed Flying Fox, Swift Parrot, nationally significant population of the migratory bird Latham's Snipe, White-throated Needletail and Fork-tailed swift,

Three threatened communities are also recored, Western (Basalt) Plains Grassland Community, Western Basalt Plains (River Red Gum) Grassy Woodland and Victorian Temperate Woodland Bird Community.

Two threatened fauna species Grey-headed Flying-fox and Blue-billed Duck



MASTERPLAN

PLENTY RIVER MASTERPLAN

Plenty Gorge Masterplan outlines a vision and key objectives for the entire park.

Vision

Plenty Gorge Park will provide diverse visitor experiences, reflect community interests and cherish the heritage and nature within the unique geological setting of Plenty Gorge

Objective 1

Improve access and connections - Complete Plenty River Trail to link visitor sites and to provide important walking and cycling access between northern and southern ends of the park. Provide safe access across Gorge Road. Ensure connections with the proposed Mernda and Hawkstowe Stations.

Plenty River Trail

The masterplan outlines the Plenty River Trail with shared-use trail linking all visitor sites west of the river and provide important walking and cycling access between the northern and southern ends of the park.

Wayfinding and Interpretation Strategy

Develop a strategy that outlines key wayfinding points, required signage and directions into and around the park. Develop for interpretation and celebration of the site's important park features, including environmental sensitivity, biodiversity, significance, heritage assets and cultural values. Incorporate digital methods and new technology and ensure materials proposed are consistent throughout the park.

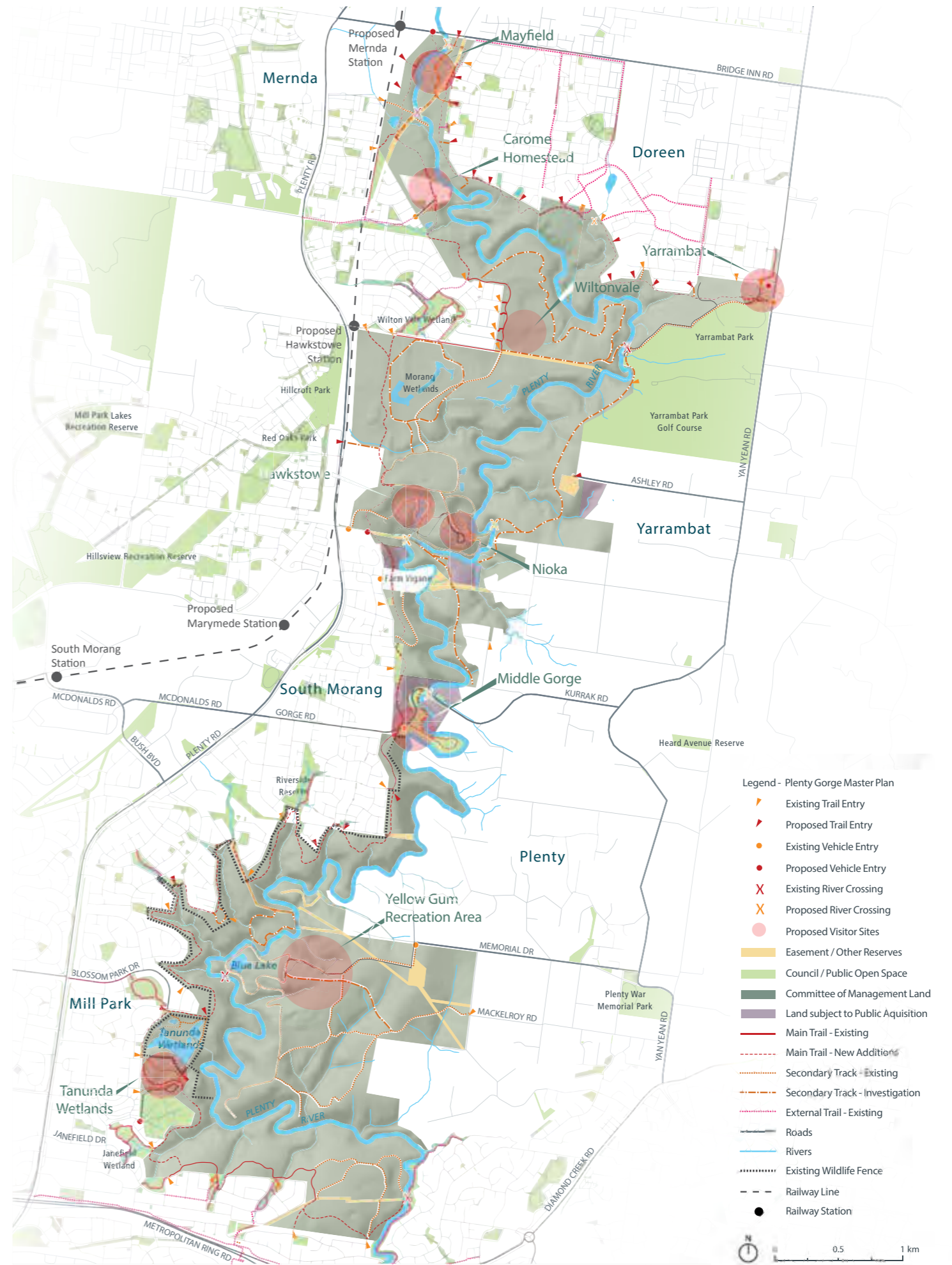


Figure 6: Plenty Gorge Park Master Plan

INDIGENOUS CONSULTATION

CULTURALLY RESPONSIVE ENGAGEMENT: MEANINGFUL CONNECTION TO COUNTRY IN PLENTY RIVER TRAIL

Greenshoots Consulting undertook an indepth Traditional Owner Engagement and validation of the design outcomes.

This process included:

- Development of a Traditional Owner Engagement Strategy
- Historical + cultural mapping as it relates to Indigenous themes, history and sites of significance
- Traditional Owner consultations with Wurundjeri to inform the trail opportunities
- Development of a Traditional Owner Consultation Report
- Workshops with Design Team to integrate Traditional Owner insights into the design process
- Validation of outcomes with Traditional Owner

Through the consultation process, top narrative, design, and activation opportunities were brought to light by the Traditional Owners.

Narrative Opportunities

- Amplifying + Celebrating Culture
- Celebrating Important Flora + Fauna
- Site of Significance
- Honour local Leaders
- Caring for Country

Design Opportunities

- Celebrating Significant site
- Environmentally Sensitive Design
- A Pedagogical wayfinding Strategy
- Highlight Cultural Practice
- Timeline of Occupation

Activation Opportunities

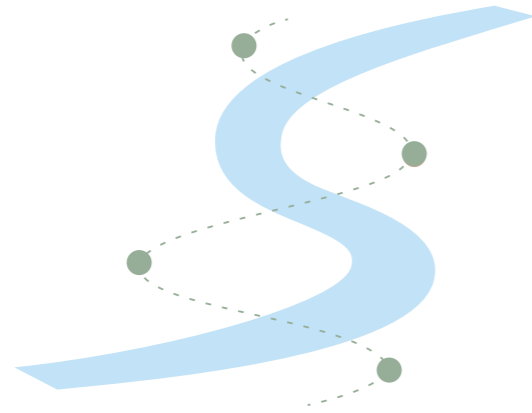
- Capacity Building and Ongoing Engagement
- Building ongoing Relationships
- Cultural Tourism opportunities
- Activation through Art.

Traditional Owner Feedback throughout the design validation process progressed all lookouts and bridges to integrate traditional owner feedback into the designs. This was done through an iterative process with multiple presentations and discussions.

A site responsive interpretation strategy will tell the stories of culture, flora, fauna and history. The interpretation elements will create a distinct park identity, weaving an integrated narrative from indigenous, ecological and historical perspectives.



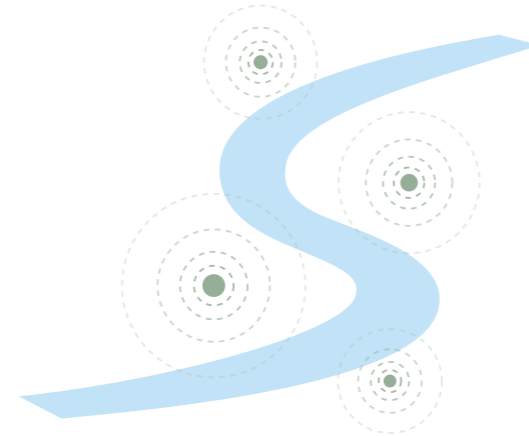
DESIGN PRINCIPLES



**Walking
Country**



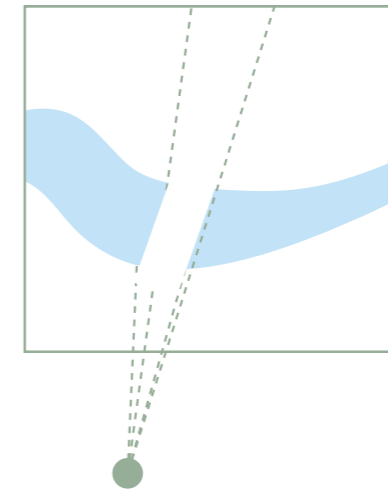
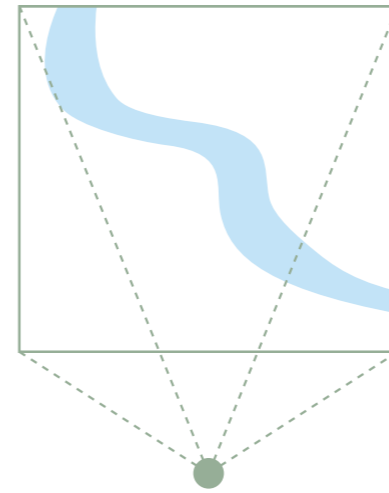
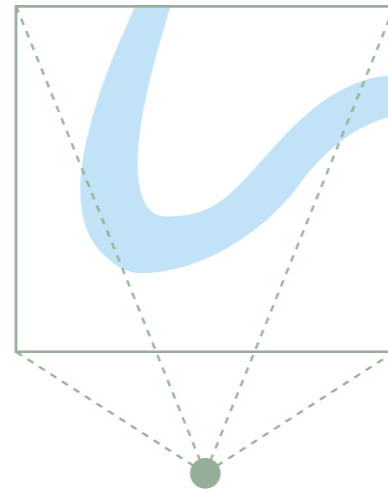
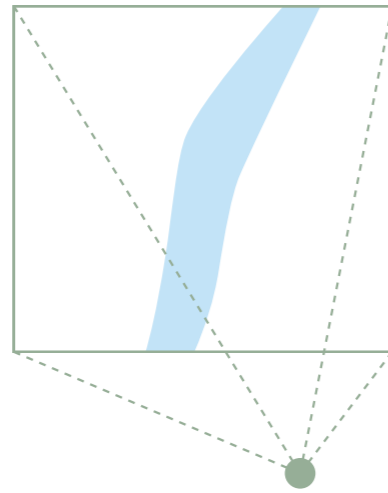
**Crossing
Country**



**Seeing | Hearing
Country**



Healing Country



Framing connections to Kurrum Yallock (Plenty River)

DESIGN PHILOSOPHY

Activating Culture
CELEBRATING COUNTRY



Caring for Country
MINIMAL IMPACT



Healing Country
HEALING LANDSCAPE



Listening to Country
SITE RESPONSIVE

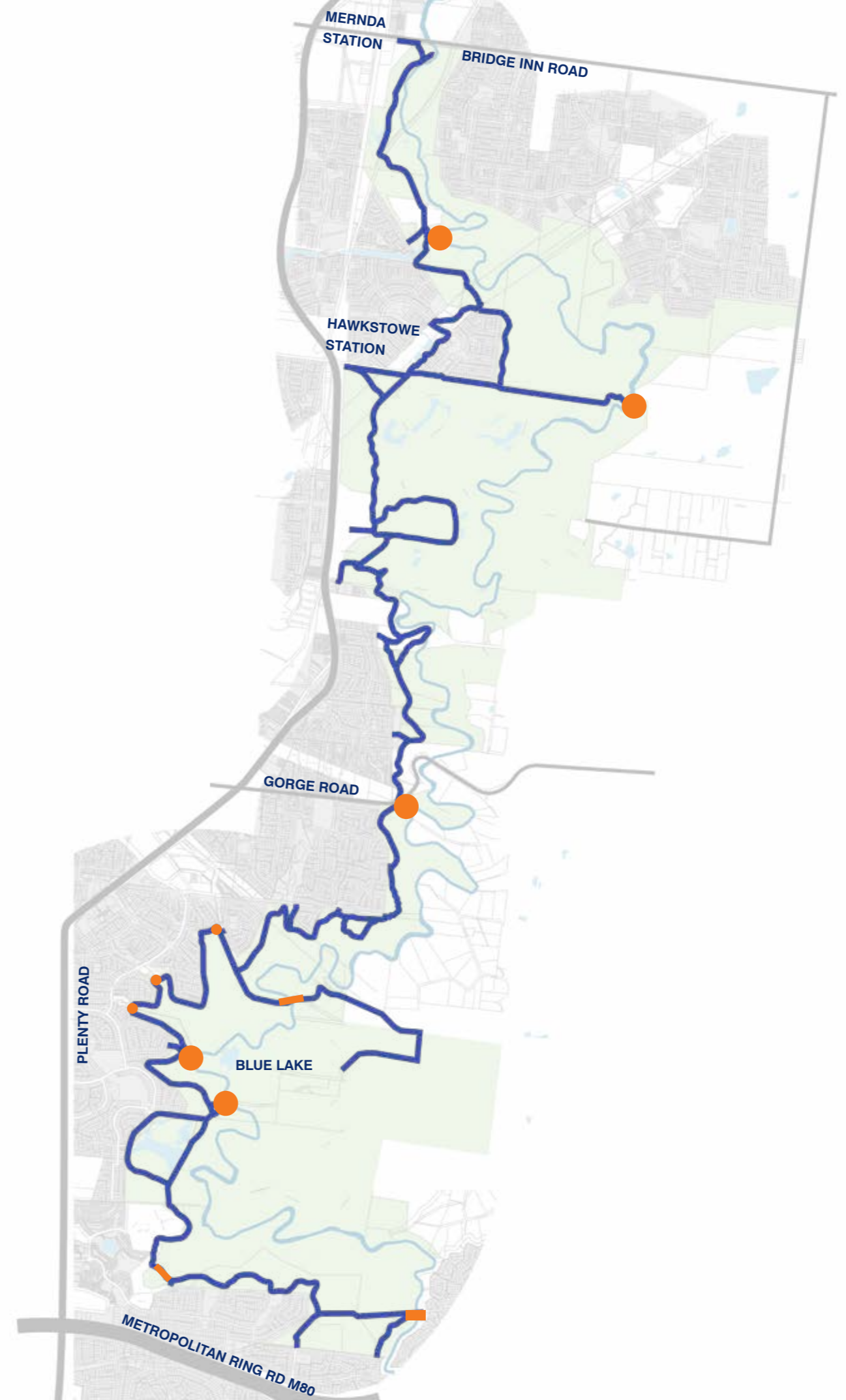
PATH

BRIDGES

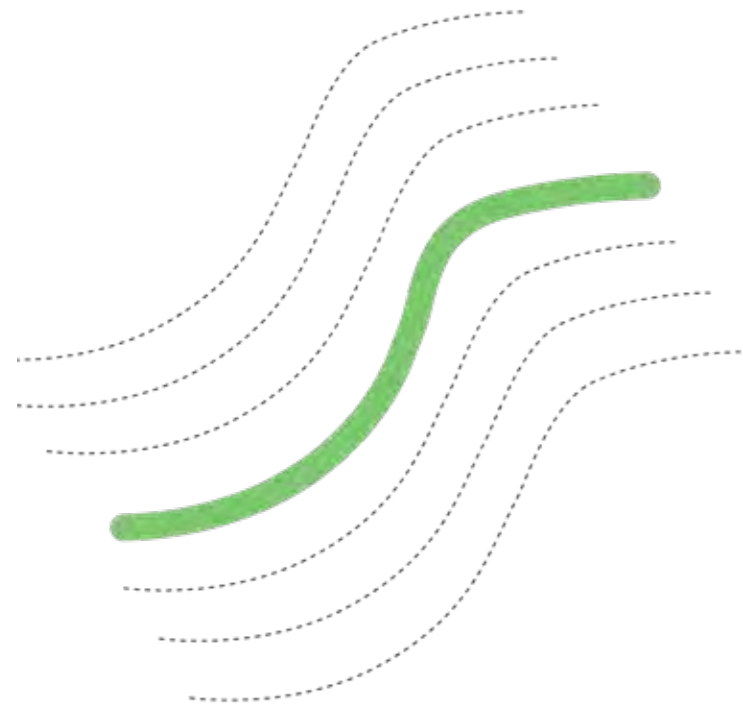
LOOKOUTS

GULLY CROSSINGS

HAWKSTOWE PRECINCT



PATH



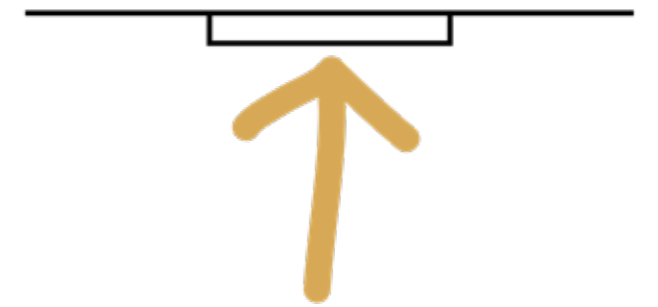
Follow the contours



Avoid trees



Utilise existing path



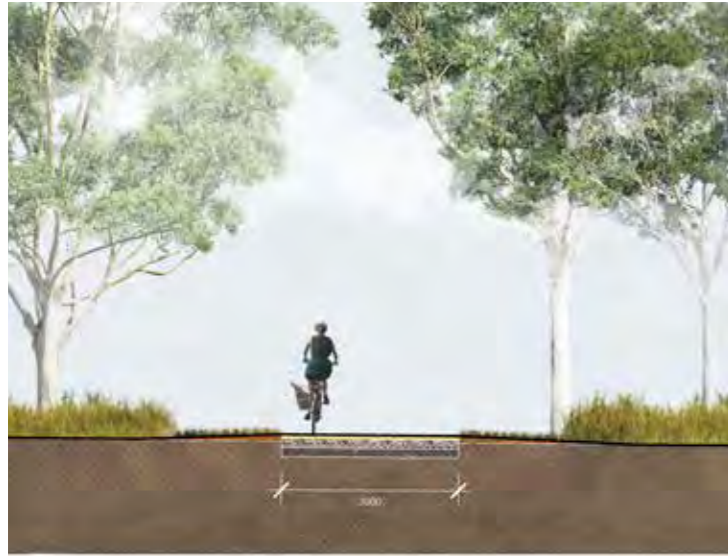
Minimise the profile

PATH

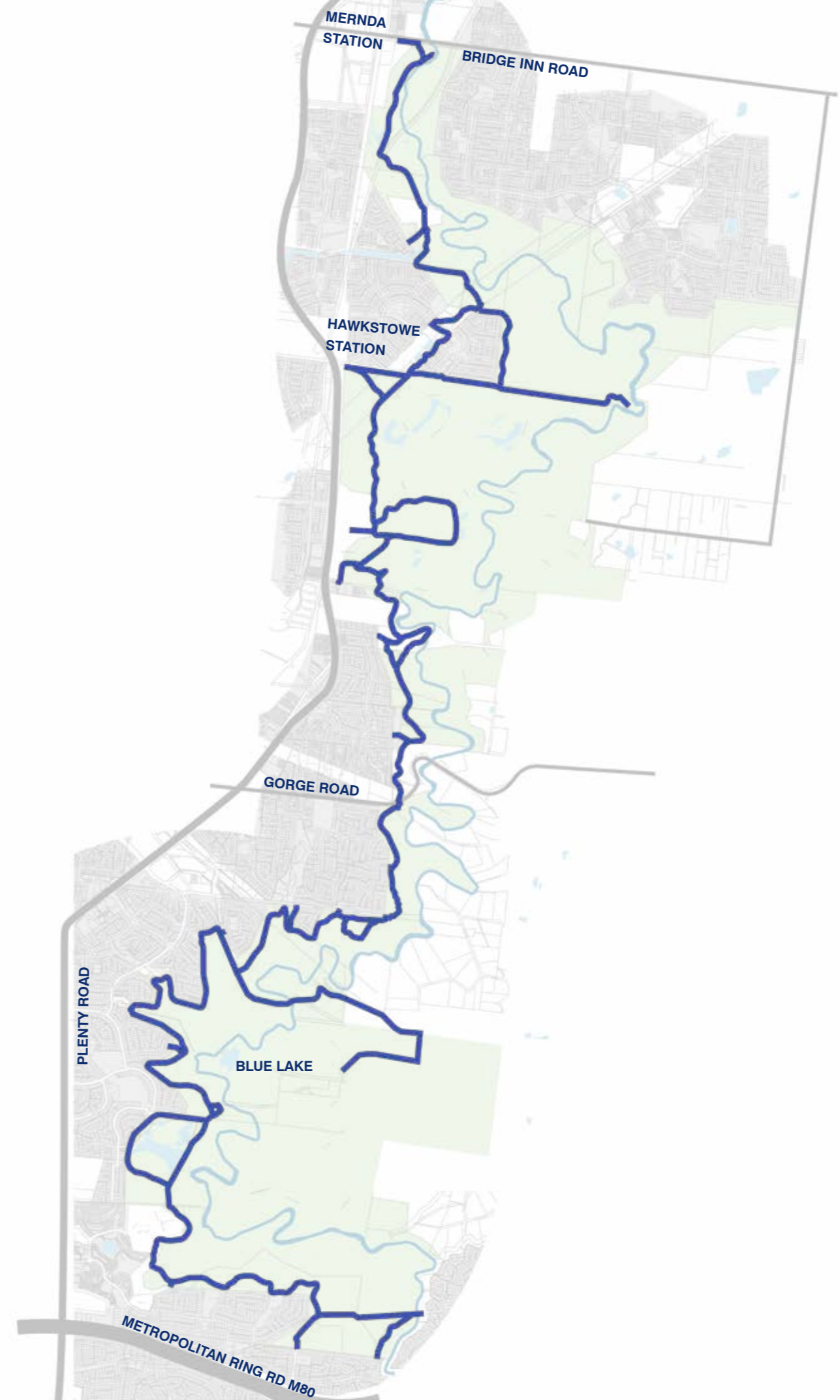
PRIMARY TRAIL

The primary path width is 3 meters, with secondary loop paths at 1.5 meters. The trail utilises the existing access path where possible. The profile for the trail has been determined based on geotechnical investigations.

Primary Trail



Secondary Trails



PATH

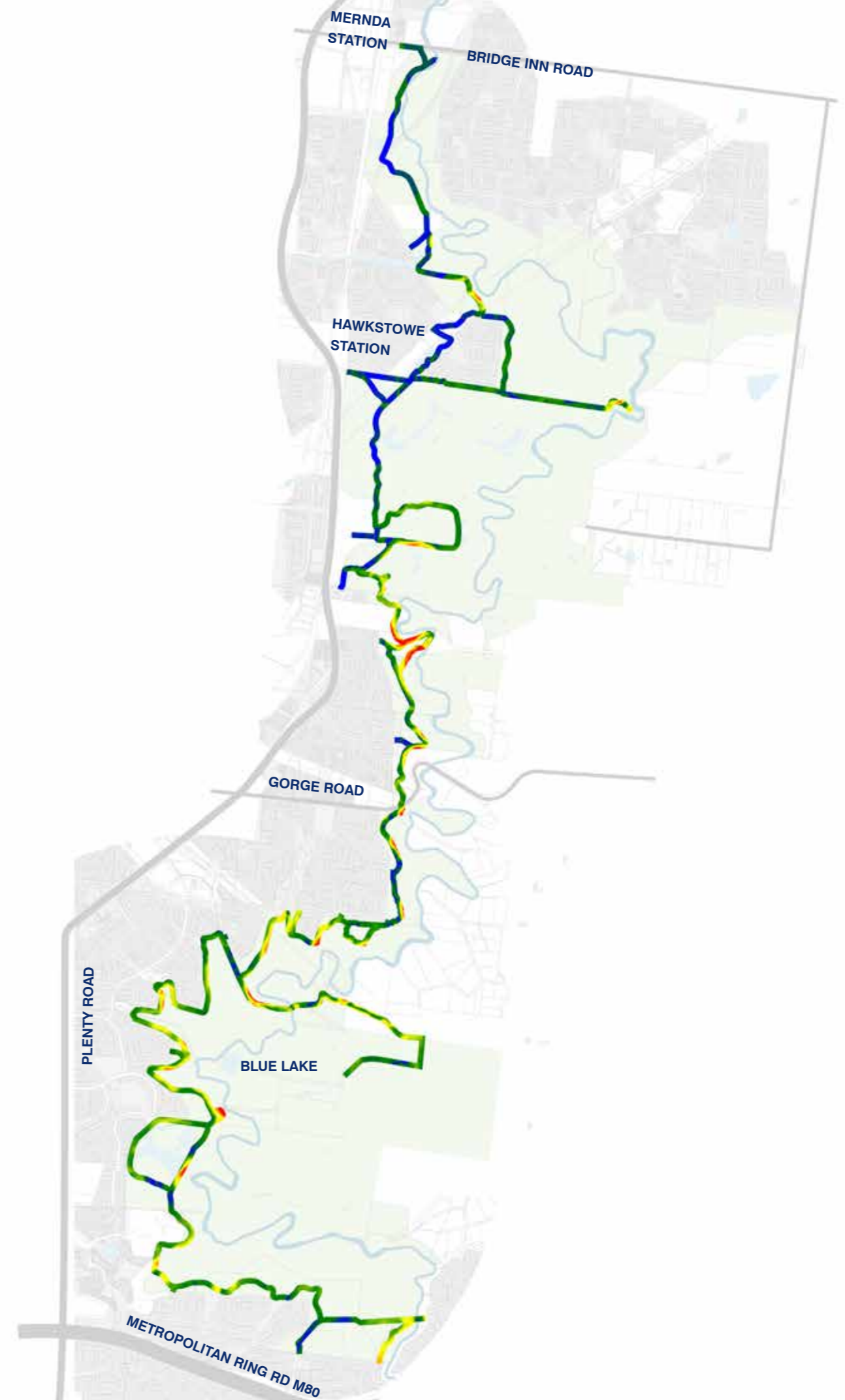
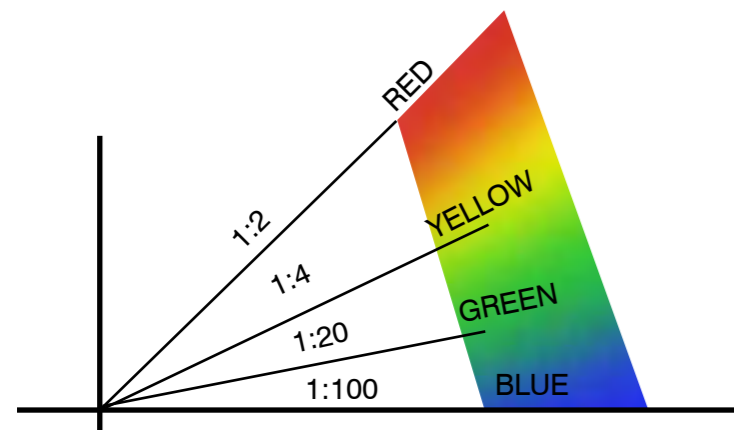
GRADE ANALYSIS

High level existing conditions analysis illustrates multiple compliant areas (Blue and Green)
Areas that show yellow to red are greater than 1:4 and at extremes 1:2. The path has been designed to maximise the compliant paths where possible and follow the Parks Victoria grading manual where terrain is too steep, access steps have been provided.

The data for this representation is based off a triangulated mesh.



LEGEND



PATH

SECONDARY TRAIL LOOPS

The primary trail enables three secondary loops to occur. The community consultation revealed that loops were desired by the community.

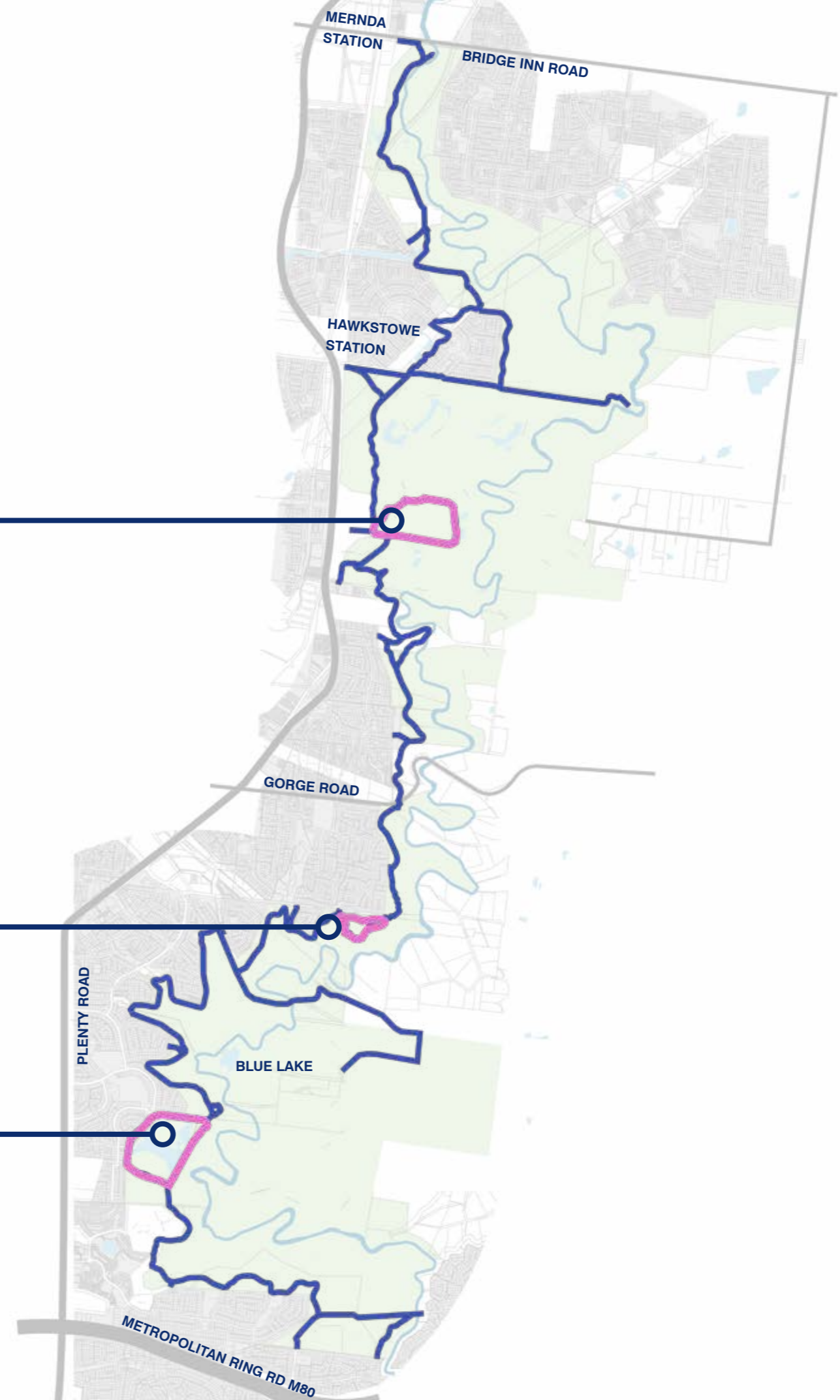
Hawkstowe and Tanunda wetlands will provide scenic riding and walking trails for regular use.



Hawkstowe Loop

Minor loop

Tanunda Wetlands Loop



PATH

STEEP SECTIONS OF PATH

The trail encounters steep sections of path greater than 1:10. In multiple locations stairs will be required to assist users to negotiate the steep terrain.

As per the Parks Victoria Track and Trail Grading Manual Version 2.0, the stairs can be modified to assist with this grade.

Utilising existing 3m track with modifications and a stepped path in the middle of the existing track to allow vehicle, bike and pedestrian access.

May have arduous climbs and steep sections. May include long steep sections exceeding 1:10. May have modifications to assist walkers negotiate the climb.



Page 18 Parks Victoria Track and Trail Grading Manual



PATH

MATERIALITY

Cardno undertook a maintenance study to assess the various material options.

The track pavement materials need to be suitable for the track sections, grades and conditions. Unsealed surfaces require ongoing grading as the surface is affected by traffic from people, bicycles and vehicles.

Track erosion, grade and storm water flow management needs to be considered and managed to ensure the longitudinal erosion is minimized.

The primary trail wearing course will be constructed with a 50mm stabilised compacted gravel, locally sourced. Refer study for path depths.

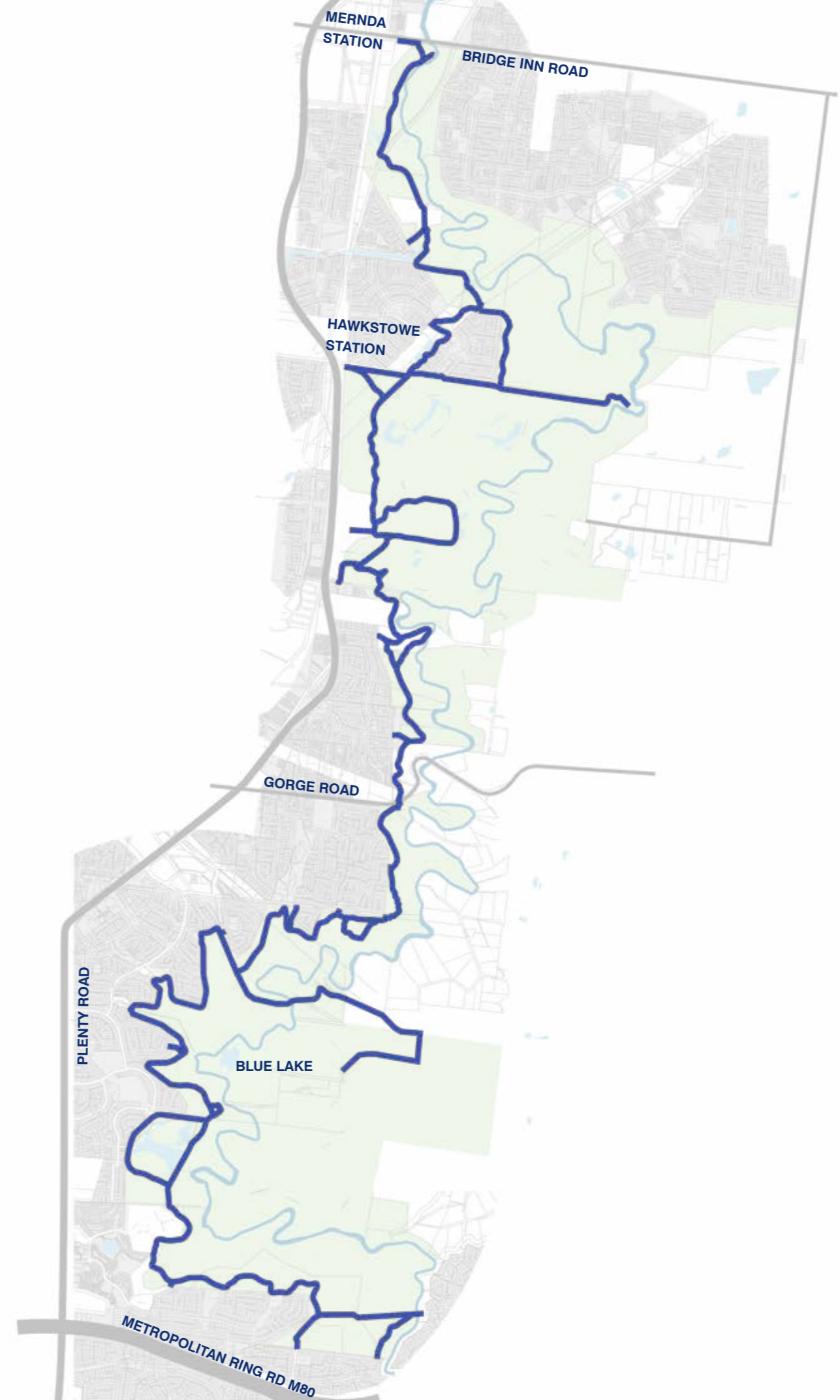
Primary Trail



Granitic Sand



Existing Concrete Trail



PATH

FIRE SAFETY STRATEGY



Terramatrix Pty Ltd has been commissioned to prepare a Fire Safety Strategy (FSS) for the Parks Victoria 'Plenty River Trail' (PRT) project. Specifically:

1. Identification of access and egress points for emergency services;
2. Mapping of trail network usable by vehicles;
3. Load rating capacity of the trail;
4. Load rating capacity of the new proposed bridge crossing;
5. Wayfinding with associated trail (ESTA) markers; and
6. Management of people (entrance signage and emergency gathering points).

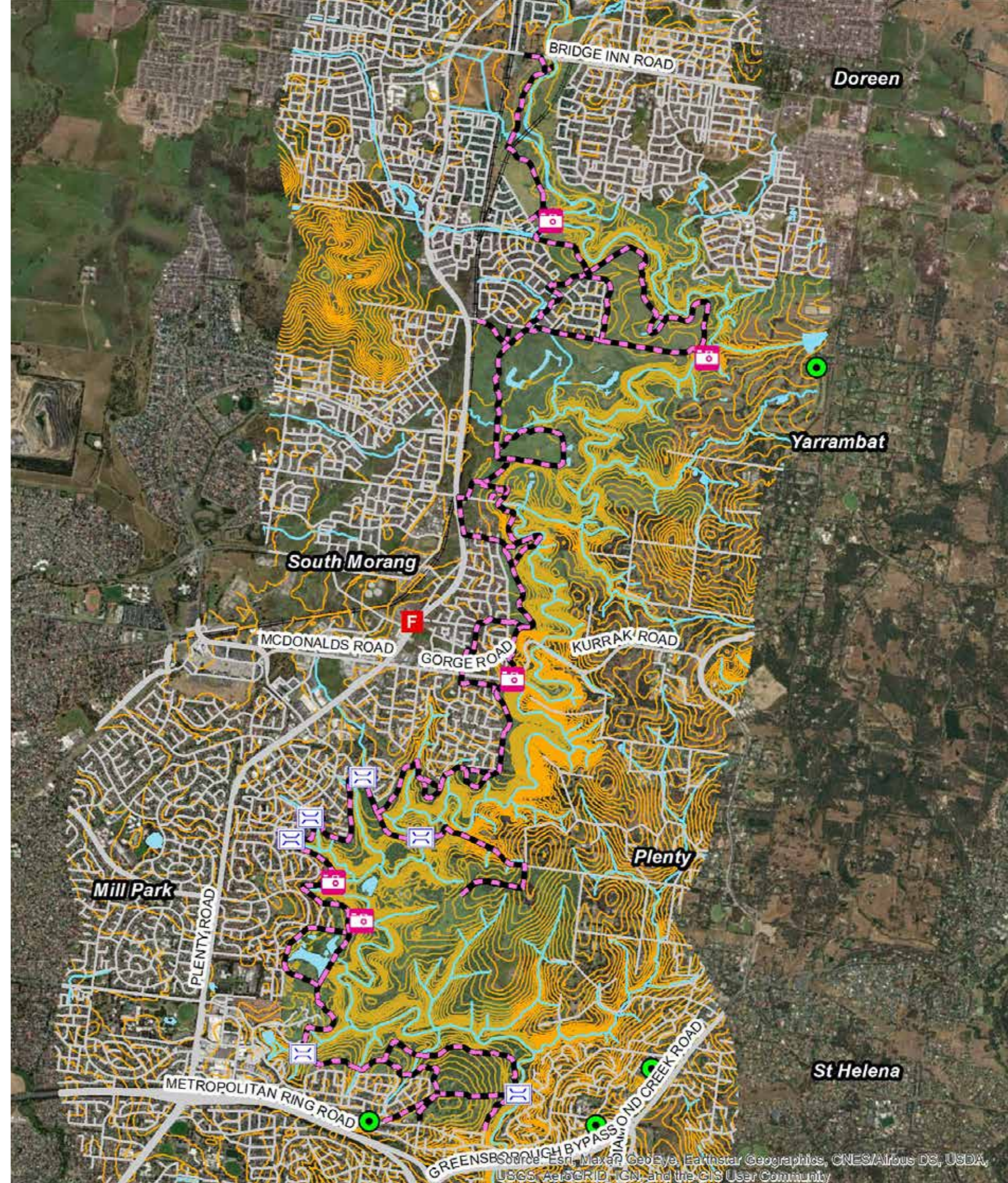
Fire Safety Strategy objectives

Consistent with Parks Victoria's Emergency Response Planning Procedure (Parks Victoria 2016) and the Emergency Response Instruction for Bushfire Incident (Middle Yarra / Plenty Park Area) (Parks Victoria 2020), the following fire safety objectives apply:

1. To protect life and assets from unplanned fire events;
2. To protect the environmental, historical and cultural values of the managed estate; and
3. To minimise the potential for spread of fire on, from, or into the managed estate.

Specifically, the following bushfire objectives apply to PRT for this Fire Safety Strategy:

1. To prevent bushfire ignitions on the PRT;
2. To limit the size and intensity of bushfire in proximity to the PRT;
3. To facilitate safe and effective fire suppression;
4. To remove visitors from the PRT prior to any high risk bushfire event; and
5. To evacuate visitors safely from the PRT in the event of a bushfire.



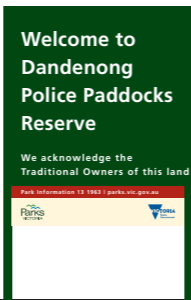

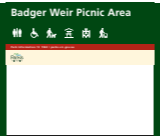
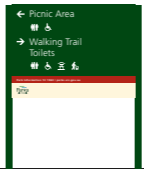
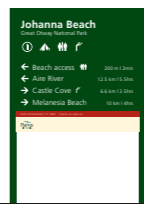

WAYFINDING



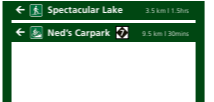


Located north of the Metropolitan Ring Road between Whittlesea and Nillumbik shires Plenty Gorge Park is home to walking trails, a rich natural landscape, a significant number of Indigenous sites of importance, recreational facilities and picnic and camping areas - all within walking distance of populated growth areas.

Currently, key visitor sites operate as stand-alone spaces. Lack of trail connectivity and poor visitor awareness of the park extent contribute to a fragmented sense of the parkland.

Numerous entry points, especially along the western perimeter encourage community access and circulation.

The new trail and way finding strategy will utilise the Parks Victoria signage manual and elements to create a clear, legible and logical way finding journey through the parklands.

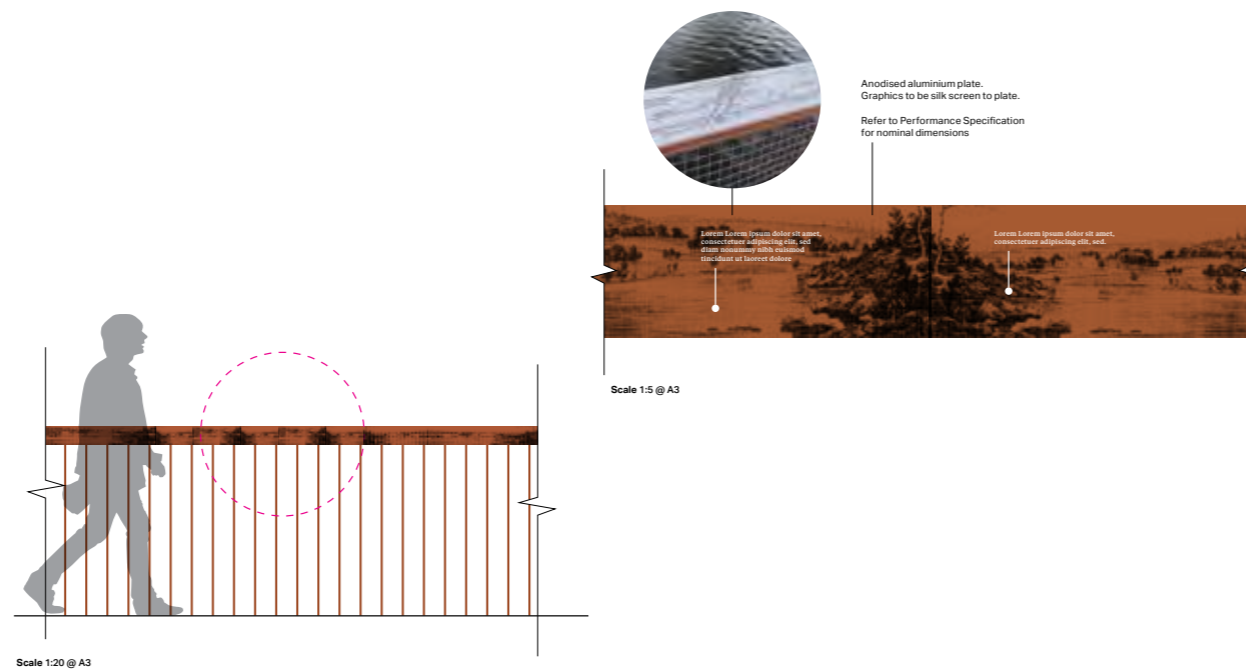
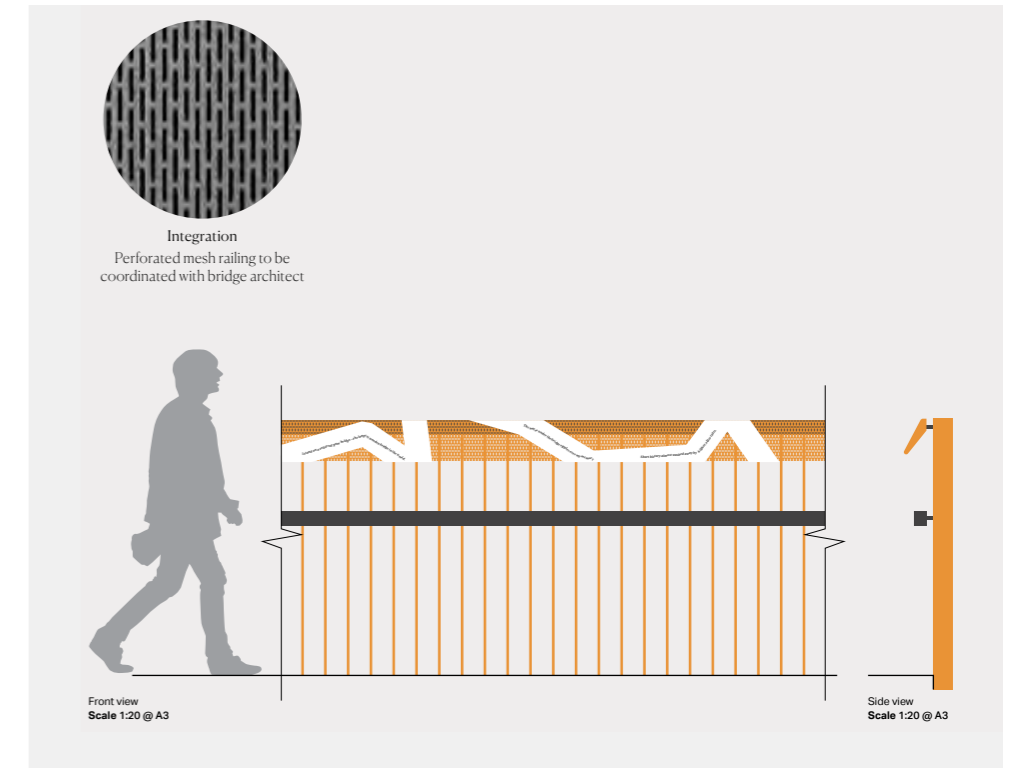
						
Sign	A1.1 Major Entry Sign	A1.2 Minor Entry Sign	A3.2 (wide) Site Identification	A4.3 Multi Directional Type (2 destinations)	A4.6 Site ID/Directional Hybrid (Multiple destinations)	A4.7 Site ID & Wayfinding Plinth
Mounting	Free standing	Free standing	Free standing	Free standing	Free standing	Free standing
Information	<ul style="list-style-type: none"> Welcome message Traditional owner acknowledgement Park information number and web address Parks Vic and Victorian State Government logos 	<ul style="list-style-type: none"> Welcome message Traditional owner acknowledgement Park information number and web address Parks Vic and Victorian State Government logos 	<ul style="list-style-type: none"> Site name Facility pictograms Park information number and web address Parks Victoria logo 	<ul style="list-style-type: none"> Direction identity x2 Facility pictograms Park information number and web address Parks Victoria logo 	<ul style="list-style-type: none"> Site identity Facility pictograms Direction identity, distance/ time Park information number and web address Parks Victoria logo 	<ul style="list-style-type: none"> Site identity Map Facility pictogram, direction identity, walk time Parks Victoria logo
Dimensions	1400mm (w) x 1780mm (h) (excluding posts)	750mm (w) x 950mm (h) (excluding posts)	1200mm (w) x 500mm (h) (excluding posts)	1000mm (w) x 750mm (h) (excluding posts)	1000mm (w) x 1000mm (h) (excluding posts)	350mm (w) x 1800mm (h)
Materiality	As per Parks Victoria Signage Guidelines	As per Parks Victoria Signage Guidelines	As per Parks Victoria Signage Guidelines	As per Parks Victoria Signage Guidelines	As per Parks Victoria Signage Guidelines	As per Parks Victoria Signage Guidelines

					
Sign	A4.9 Finger board	A4.10 Directional Pillar for Pedestrians	A7.2 Directional Straddle	A8.1 Information board	A8.2 Information board (large map)
Mounting	Free standing	Free standing	Free standing	TBC	TBC
Information	<ul style="list-style-type: none"> Directional identity Arrow pictogram 	<ul style="list-style-type: none"> Directional arrows and pictograms as required Walk time and distances TBD Site identity (applied to side) 	<ul style="list-style-type: none"> Directional identity Facility pictograms Distances / walk times 	<ul style="list-style-type: none"> Welcome message and site identity Images, maps and detail information per site requirements 	<ul style="list-style-type: none"> Welcome message and site identity Images, maps and detail information per site requirements
Dimensions	Variable x 150mm (h) (excluding posts)	100mm (w) x 100mm (h)	1100-1500mm (w) x 150mm (h) (excluding posts)	1500mm (w) x 900mm (h)	1500mm (w) x 900mm (h)
Materiality	As per Parks Victoria Signage Guidelines	Final design details TBD	As per Parks Victoria Signage Guidelines	As per Parks Victoria Signage Guidelines	As per Parks Victoria Signage Guidelines

PATH

INTERPRETATION

A site responsive interpretation strategy will tell the stories of culture, flora, fauna and history. The interpretation elements will create a distinct park identity, weaving an integrated narrative from indigenous, ecological and historical perspectives.



BRIDGES

Bridge 01
New Bridge

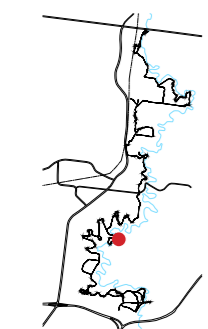
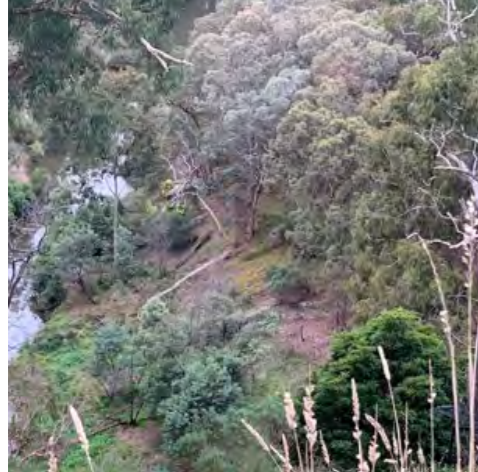
Bridge 02
Pedestrian Bridge

Bridge 03
Pipe Bridge



BRIDGES

3 LOCATIONS



LOCATION PLAN

*Bridge 1
New Vehicle Bridge*



LOCATION PLAN

*Bridge 2
New Pedestrian Bridge
Janefield Gully*

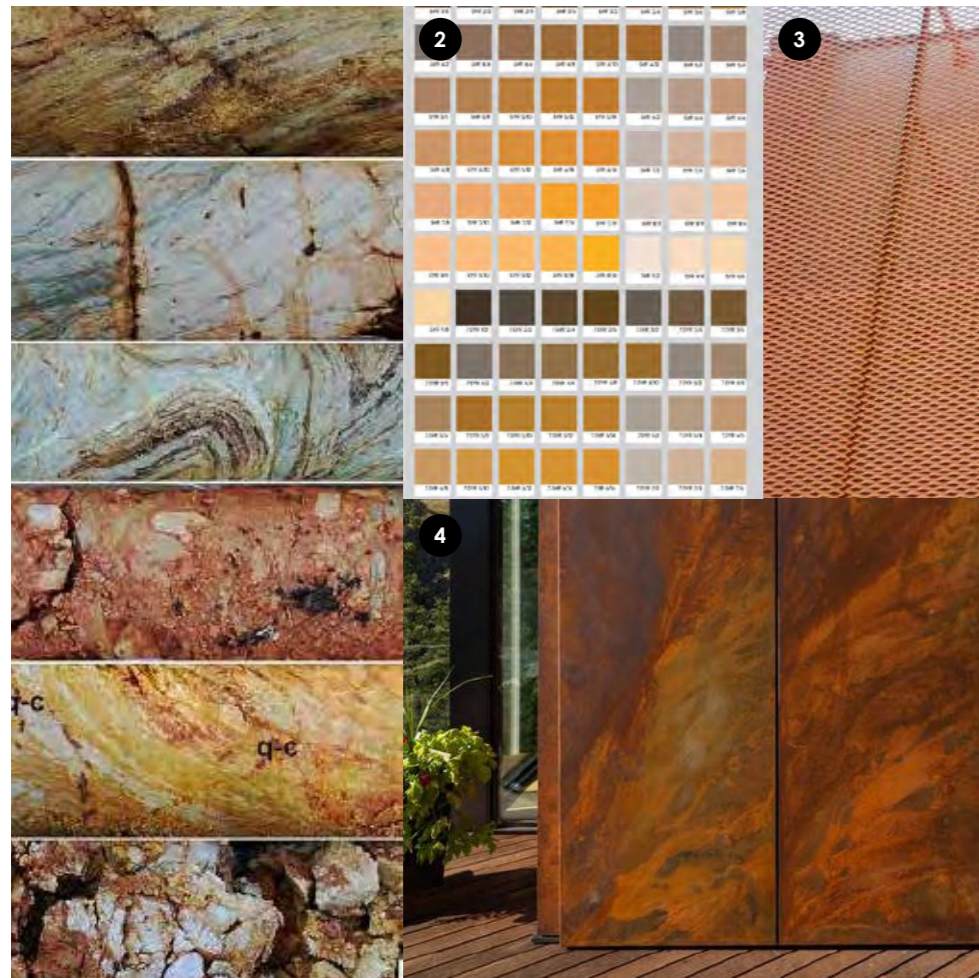


LOCATION PLAN

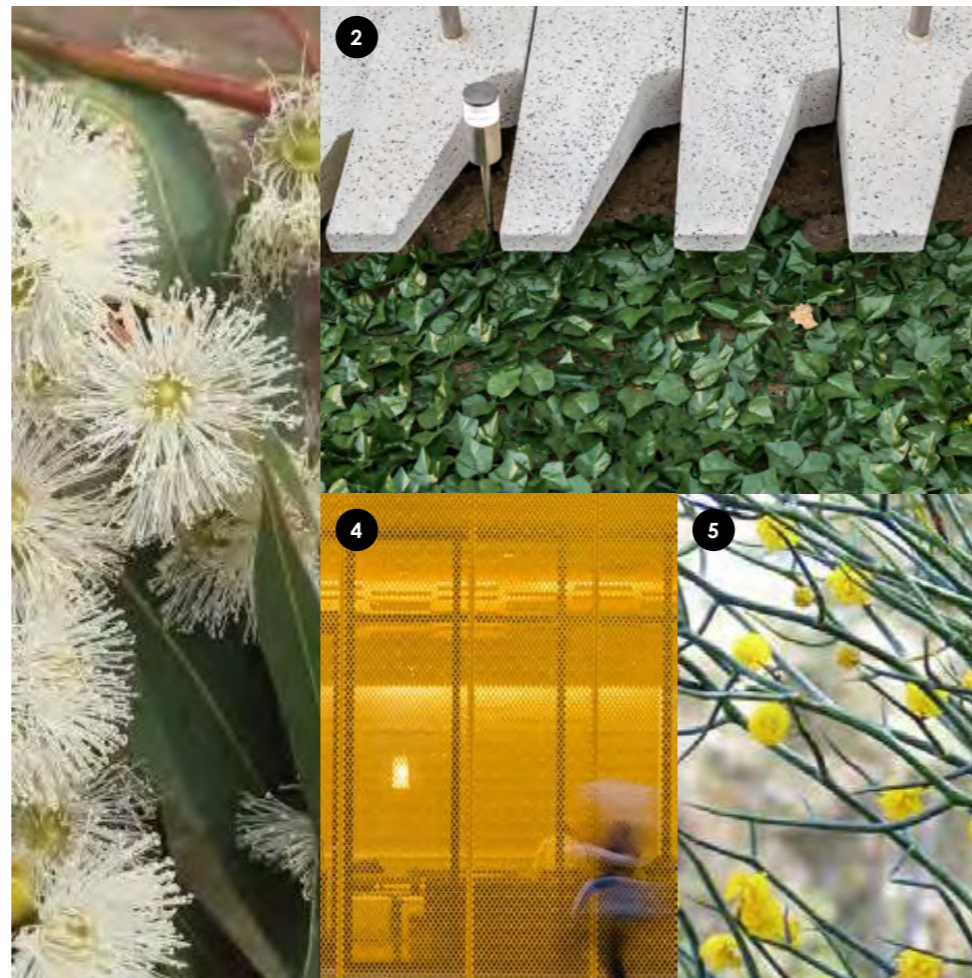
*Bridge 3
Pipe Bridge
(restored heritage bridge
- pedestrian bridge)*

BRIDGES

CULTURAL INSPIRATION | ANCHORED IN COUNTRY



*Bridge 1
New Vehicle Bridge*



*Bridge 2
New Pedestrian Bridge*



*Bridge 3
Pipe Bridge
(restored heritage bridge
- pedestrian bridge)*

BRIDGES

DESIGNS



*Bridge 1
New Vehicle Bridge*



*Bridge 2
New Pedestrian Bridge*



*Bridge 3
Pipe Bridge
(restored heritage bridge
- pedestrian bridge)*

BRIDGE 1 NEW VEHICLE BRIDGE



BRIDGE 2 NEW PEDESTRIAN BRIDGE



BRIDGE 3 PIPE BRIDGE PEDESTRAIN BRIDGE



LOOKOUTS

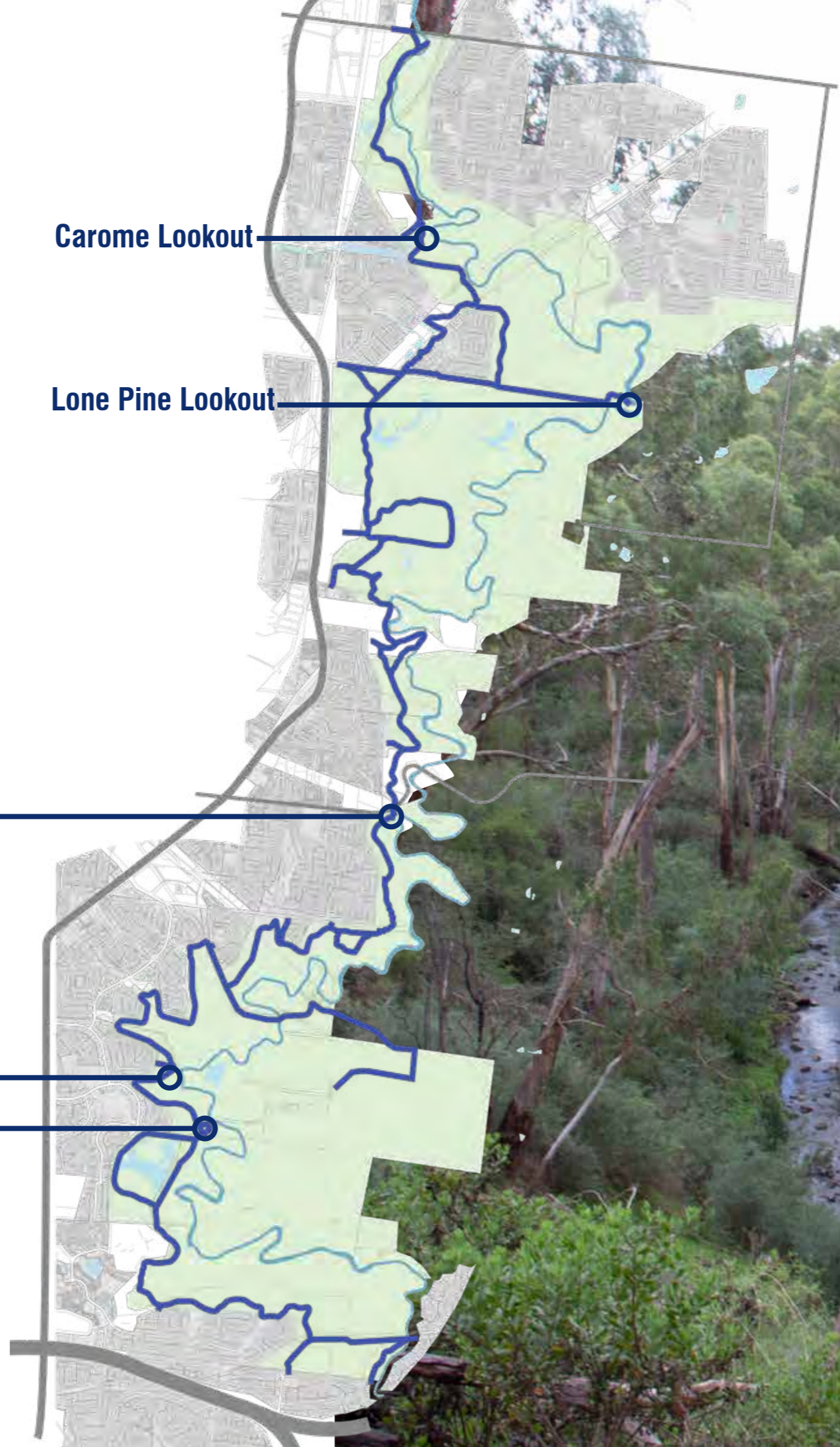
Carome Lookout

Lone Pine Lookout

Gorge Rd Lookout

Blue Lake Lookout

River Lookout



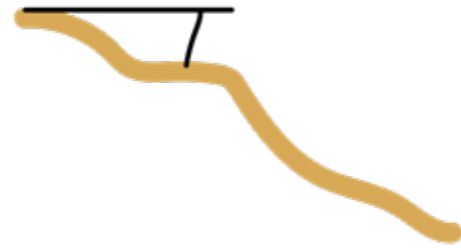
LOOKOUTS

PRINCIPLES



Create a moment to pause

STOP

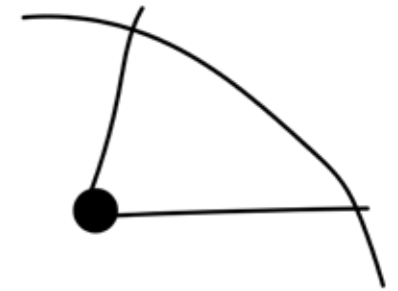


Touching the ground lightly



Connecting to country

LOOK



Telling a story

LEARN

LOOKOUTS

A COLLECTION

CAROME



LONE PINE



GORGE ROAD



BLUE LAKE



RIVER



CAROME LOOKOUT

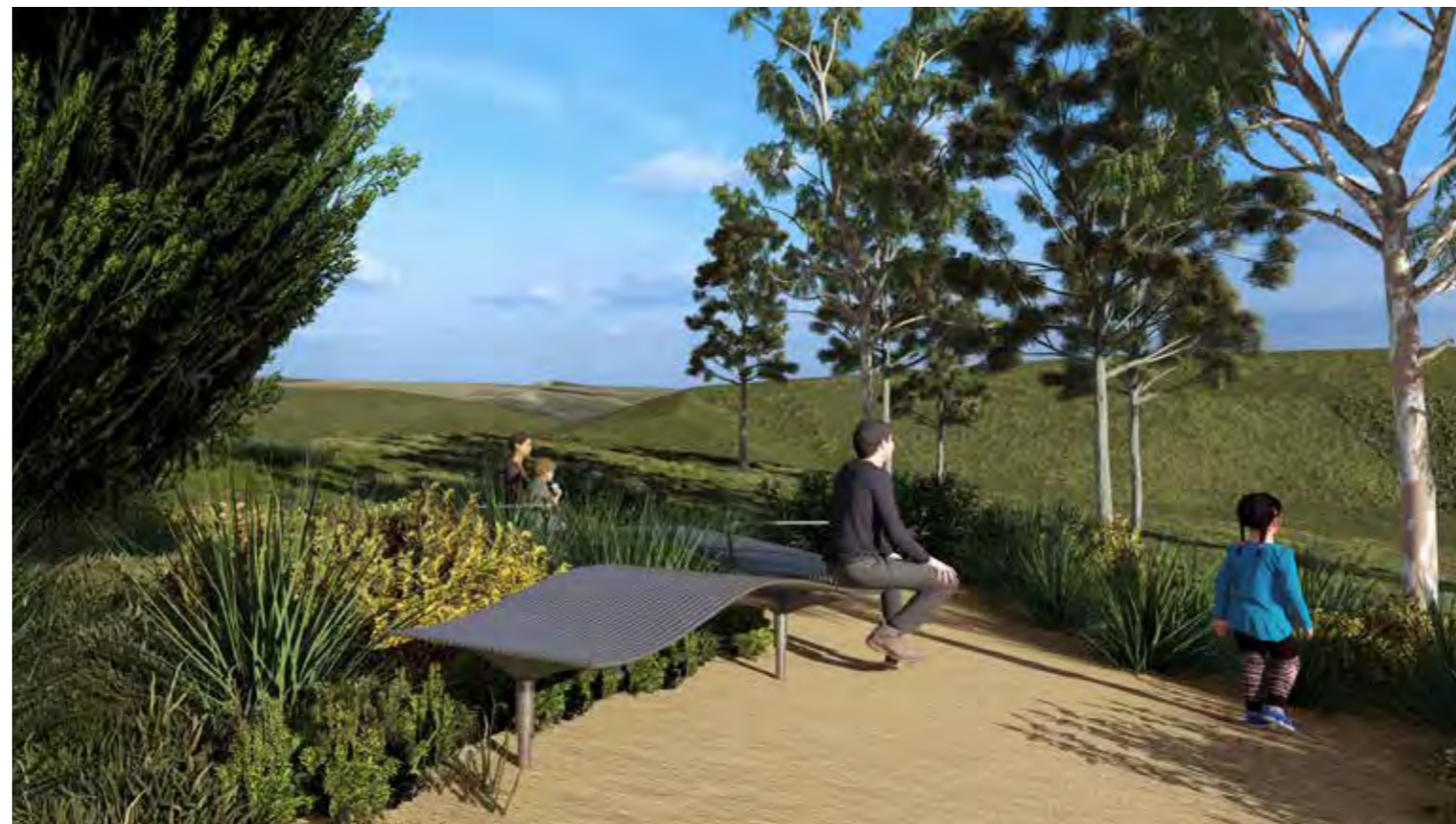
Situated to the south of Carome Homestead this lookout captures a bend of the Plenty River with an expansive view to the eastern rock outcrops. Working Heritage run Two Beans and a Farm café and the Mernda Community Garden at Carome Homestead. This location will become an important stop on the Plenty River Trail. Opportunity to incorporate interpretive graphics and storytelling about Carome Homestead, the flour mill built on the site in the 1840s and also indigenous stories regarding this location.



LONE PINE LOOKOUT

Situated on a section of path that is aligned with Wilton Vale Road, this lookout creates an immersive location to sit and enjoy the existing topography, natural scenery and bend of the river.

This lookout respects its setting by minimising ground disturbance with reduced footings and avoiding important trees in this location.



GORGE ROAD LOOKOUT

Gorge Road lookout upgrades an existing timber deck with a viewing platform. The lookout frames the Gorge and river view providing visitor information and cultural interpretation.

This lookout is located at the middle of the trail and is the largest proposed lookout. It can be used as a central gathering point and is a visible marker in the landscape on a busy road.

The frame provides a sculptural viewing device to see the landscape, creating a moment to pause and connect with country and understand the trail and the journey of the river.



BLUE LAKE LOOKOUT

Elevated on a steep escarpment Blue Lake lookout will provide an experience of the gorge like no other lookout. The view towards blue lake and towards east is sensational with stunning views up and down the river. This lookout provides an elevated vantage point and a sense of being in the gorge.

This lookout has an opportunity to incorporate interpretive graphics and storytelling about Plenty Gorge geology, the plenty river, and also indigenous stories regarding this location.



RIVER LOOKOUT

Nestled off the main trail, this lookout establishes a setting within the towering trees and closer to the sound of the river. Situated on a bend this river lookout will provide an informal shaded area for respite, eating, and relaxing within the natural setting. River lookout takes advantage of the slope to incorporate an integrated seat. This lookout has an opportunity to incorporate interpretive graphics and storytelling about the river of plenty, flora, fauna and also indigenous stories regarding this location.



GULLY CROSSINGS

LOCATION PLAN

Gully Crossing #1 & #2 can utilise the existing access track.

Gully Crossing #3
Shamrock Drive and Vanbrook Drive

Gully Crossing #4
Stockdale Way and Wagstaff Drive
over a Blossom Park Drain

Gully Crossing #5
Wagstaff Drive
over a Blossom Park Drain

Gully Crossing #6
Requires earth work to establish the trail.

Gully Crossing #1

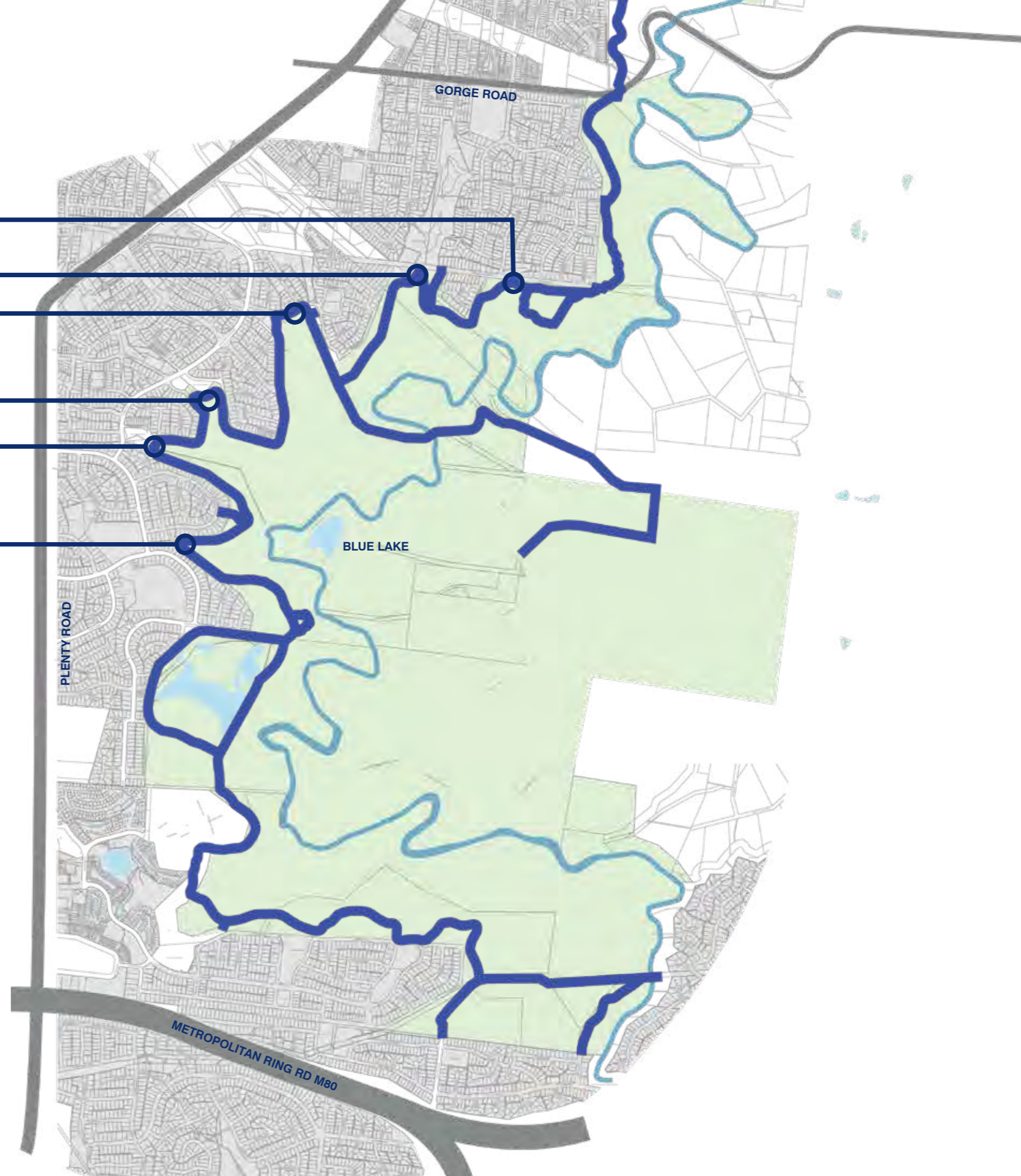
Gully Crossing #2

Gully Crossing #3

Gully Crossing #4

Gully Crossing #5

Gully Crossing #6



GULLY CROSSINGS

PRINCIPLES



Caring for country



Connecting country

GULLY #3

EXISTING CONDITIONS

Gully Crossing #3 is located between Shamrock Drive and Vanbrook Drive. Due to the existing narrow vehicular bridge with minimal room for additional footpath or trail, the existing crossing will be resurfaced and utilised with a new balustrade.



Existing Crossing view from the south



Existing Crossing view from the North

GULLY #4

EXISTING CONDITIONS

Nested within this treed location, Gully 4 provides a good location for a crossing point. This bridge has been sited between three large existing trees.



20m Bridge

Utilise existing crossing



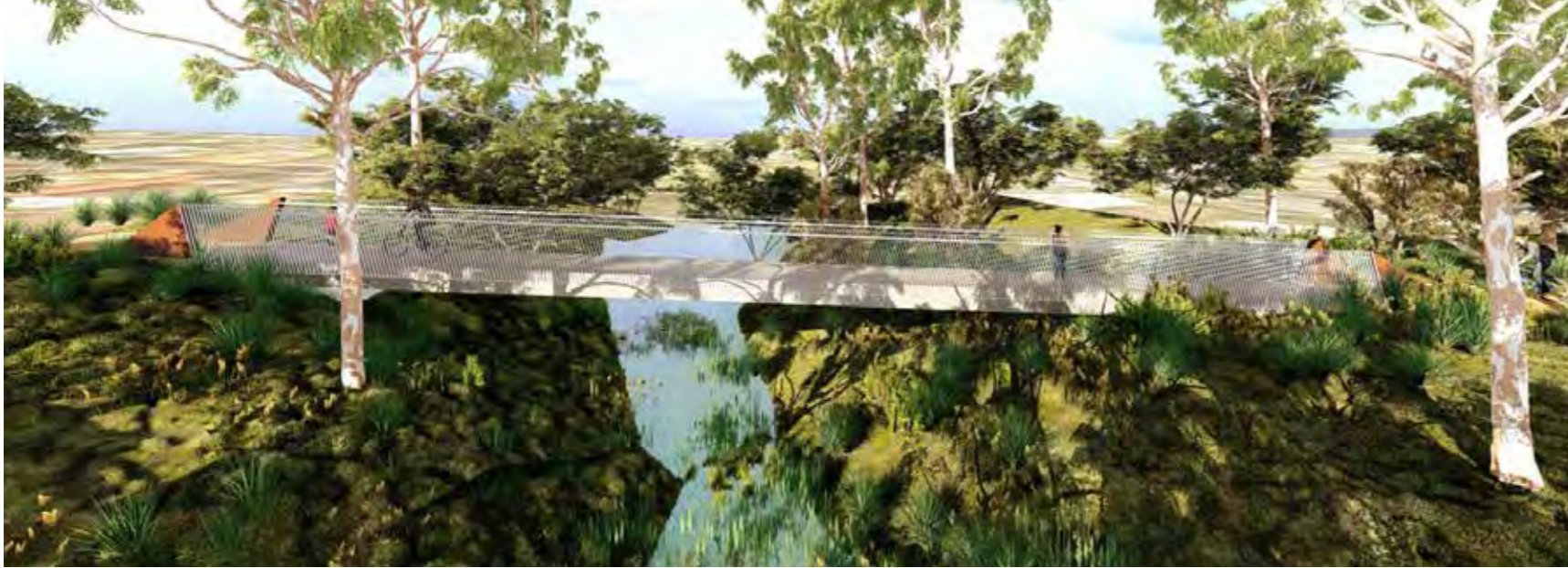
View over existing crossing



New Bridge Location

GULLY #4

DESIGN RESPONSE



GULLY #5

EXISTING CONDITIONS

View through majestic trees.
Proposed alignment to stay lower to the gully and bridge gully with 20m Bridge (pedestrian only)



20m Bridge



View down Gully



View through to house

HAWKSTOWE PRECINCT

Landscape Improvements

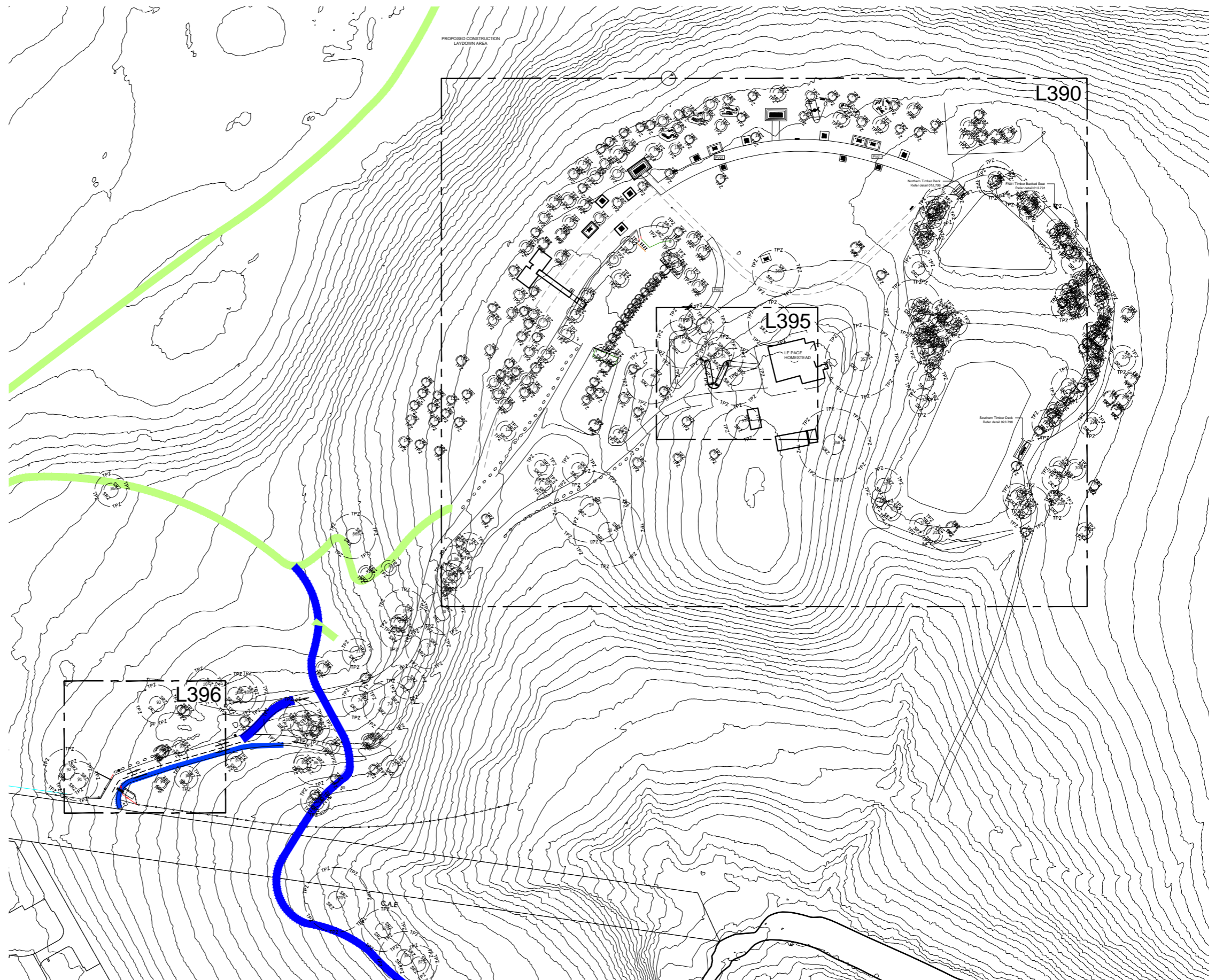


HAWKSTOWE PRECINCT

Hawkstowe precinct includes:

- Modifications to carpark Entrance / Exit
- New Accessible toilet
- Accessible Trail from carpark to LePage homestead
- Nature play equipment

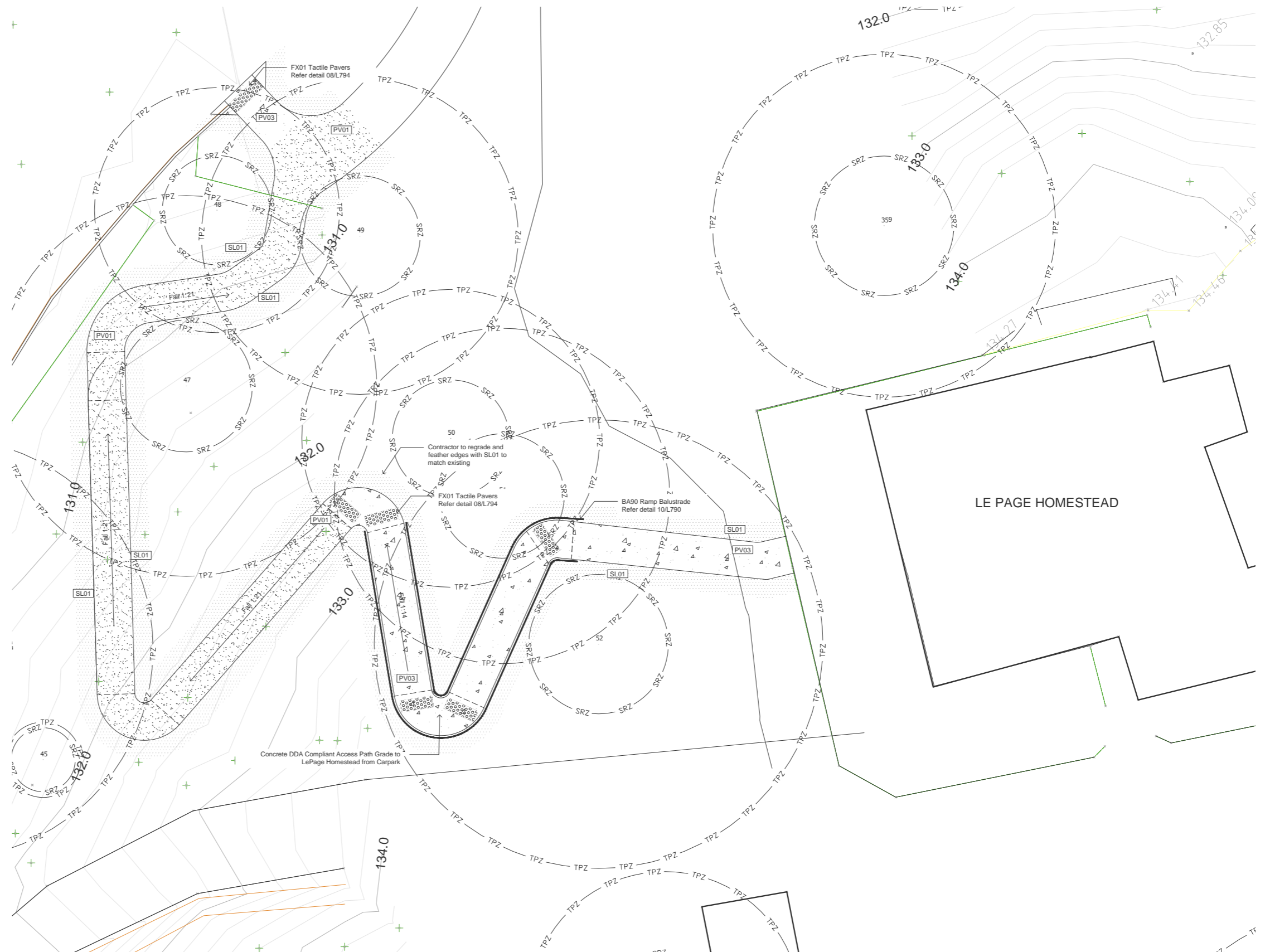
- Integration of 10 new picnic tables with concrete bases, 10 new park benches
- 3 new DDA accessible bbq's with shelters
- Modifications to the existing shelters / new DDA accessible tables
- Upgrade to existing view platforms
- Upgrade to autogate at entrance
- Removal of bollards throughout park and replacement with boulders.



LE PAGE DDA ACCESS

The access from the carpark to LePage Homestead is proposed to weave through the existing trees and provide a DDA ramp via a series of switch back ramps to achieve a compliant grade due to the existing levels and tree locations.

Handrails and tactiles will be required at two ramps due to the 1:14 grade required to achieve a positive grading outcome for the trees.



NATURE PLAY / SEATING LOCATIONS

Two key play areas have been defined and cluster the nature play elements together with additional tables, benches and bbqs arranged along a new gravel path define the activity area.



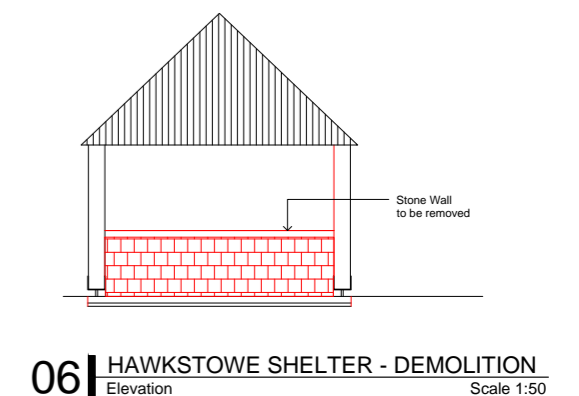
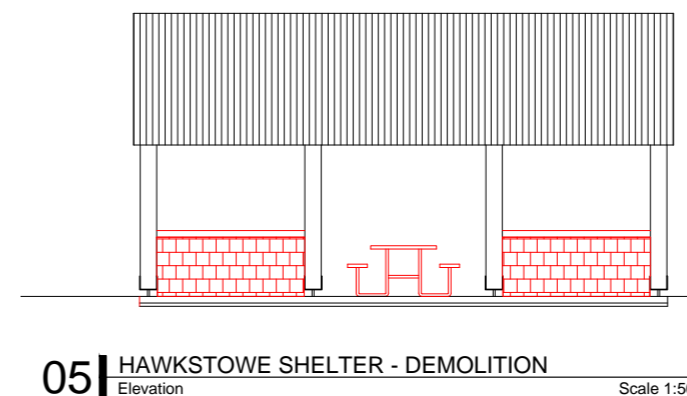
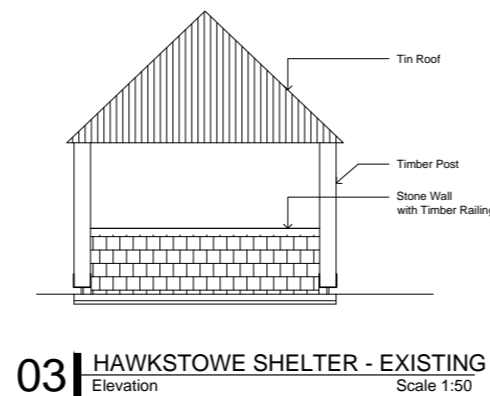
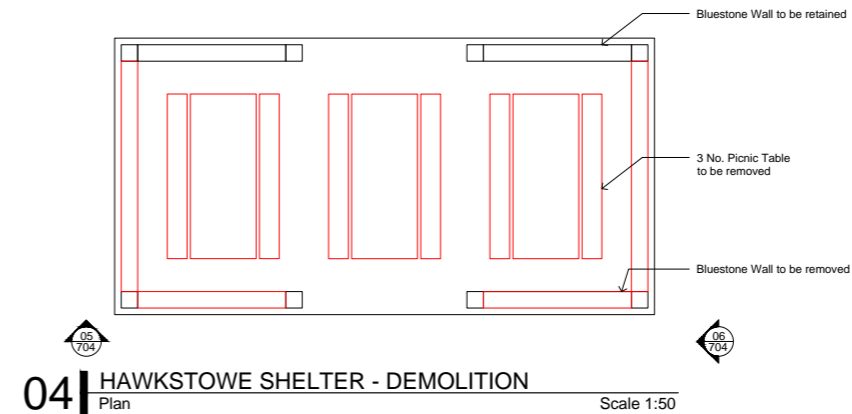
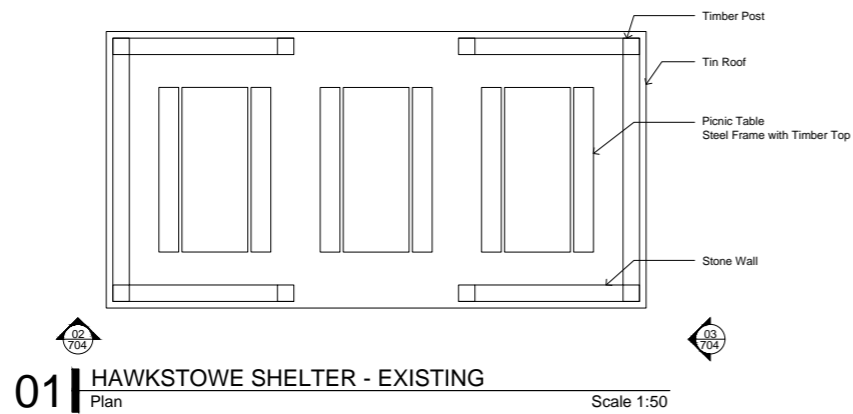
HAWKSTOWE PRECINCT

SHELTER MODIFICATIONS

Two existing shelters onsite require modification.

Modifications include, removal of bluestone walls and new concrete apron to reduce erosions from the roofs with no gutters.

Installation of three picnic tables to create one large communal table in each shelter and two wheel chair accessible ends.



HAWKSTOWE PRECINCT

ACCESS ROAD

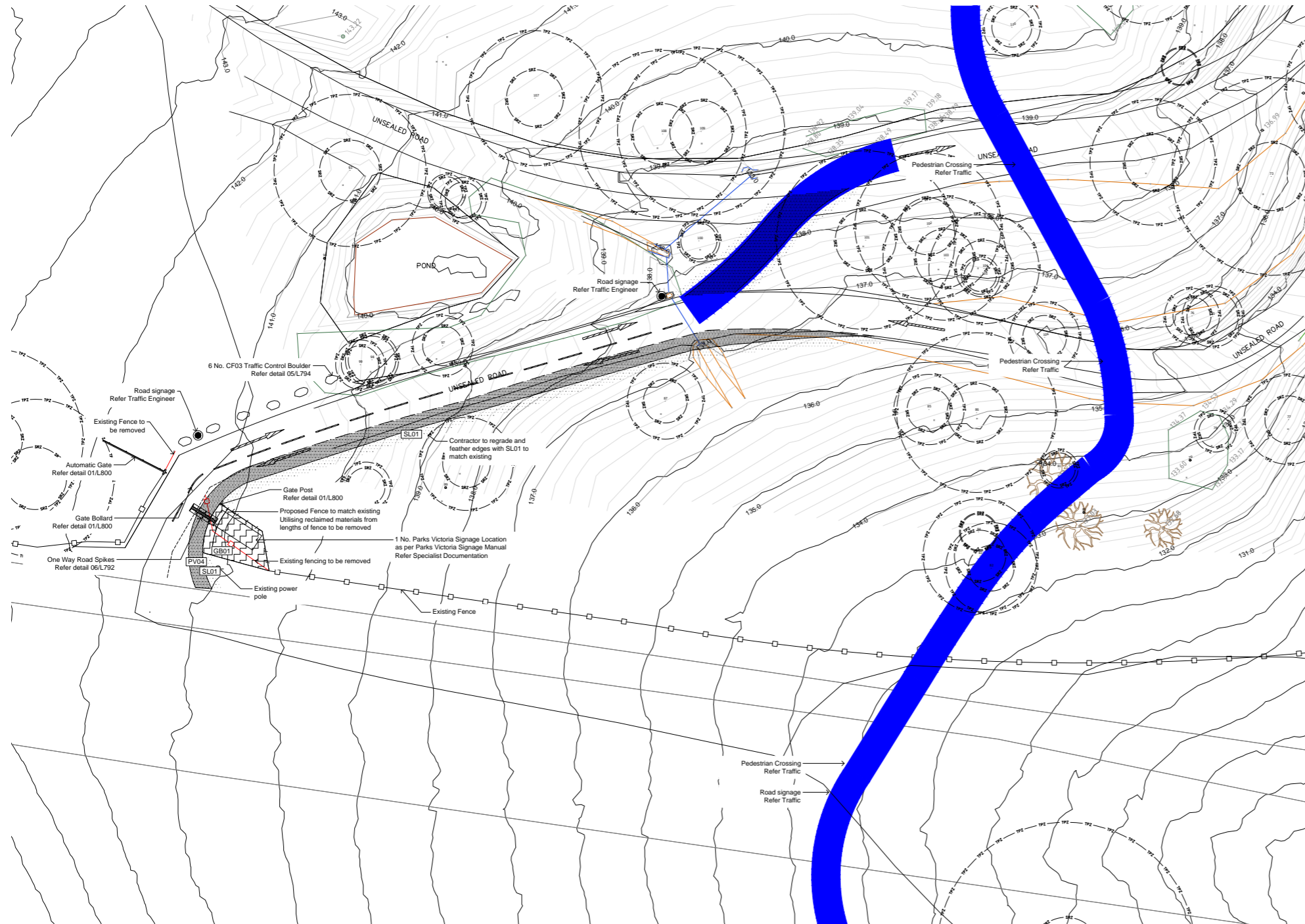


Image 01: View of existing exit gate



Image 02: Existing service road



Image 03: View of existing exit gate

HAWKSTOWE PRECINCT

MATERIALS / FURNITURE

Hawkstowe Precinct has been designed utilising the Parks Victoria Campground Grounds design and facilities manual March 2021.

Selections include:

4.6 BBQ Shelter (Timber Frame)

Toilet Block
4.10 Skillion Quad Toilet (Timber Frame)

4.15 Barrier Free Picnic Table

4.17 Backed Seat

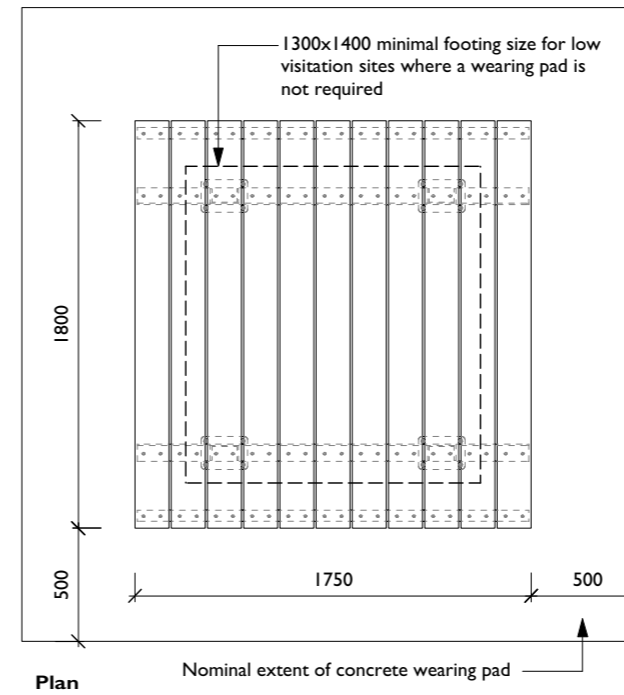
4.18 Table Seat



Timber frame



Timber frame



HAWKSTOWE PRECINCT

MATERIALS / FURNITURE

The precinct also utilises the below elements that are not in the Parks Victoria Campground Grounds design and facilities manual March 2021.

Selections include:

- Granitic Gravel
- Large Boulders
- DDA accessible BBQ
- Roller gate and pin pad
- One Way Spike Wheel Stops
- Large Communal picnic tables
- Decking





T.C.L



ratio:

