



Healesville Freeway Reserve

Park Layout Plan and Concept Design Report

August 2023



Supporting
Nature's
Future





Parks Victoria Acknowledgment of Country

Victoria's network of parks and reserves form the core of Aboriginal cultural landscapes, which have been modified over many thousands of years of occupation.

They are reflections of how Aboriginal people engaged with their world and experienced their surroundings and are the product of thousands of generations of economic activity, material culture and settlement patterns.

The landscapes we see today are influenced by the skills, knowledge and activities of Aboriginal land managers. Parks Victoria acknowledges the Traditional Owners of Healesville Freeway Reserve, the Wurundjeri people of the Kulin Nation, and their ongoing role in caring for Country, acknowledging that the site always was, and always will be, Aboriginal land.

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All drone photography captured in elevation outside of Parks Victoria land, and within relevant open space restrictions.

Front cover image: Bellbird Dell Reserve, Healesville Freeway Reserve

Inside front cover image: Supplied by Parks Victoria

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Albert Park Rangers,
Parks Victoria



1.0 About Parks Victoria

Parks Victoria is a statutory authority of the Victorian Government responsible for managing a diverse estate of more than 4 million hectares, including:

- 3,000 land and marine parks and reserves,
- 75 per cent of Victoria's wetlands, and;
- 70 percent of Victoria's coastline.

Areas managed by Parks Victoria attract more than 100 million visits each year.

The primary responsibility of Parks Victoria is to ensure parks are healthy and resilient for current and future generations, through the protection and enhancement of environmental and cultural values.

This is achieved by working in partnership with other government and non-government organisations, community groups, catchment management authorities, private land owners, friends groups, volunteers, licensed tour operators, lessees, research institutes, and the broader community.



1.1 Project Introduction

As a part of the Suburban Parks Program funding initiative, Parks Victoria have expressed their desire to further enhance one of Victoria's most complex collection of open spaces. The Healesville Freeway Reserve envelopes 35 hectares of undeveloped land that spans 3.5 kilometres from Springvale Road in Forest Hill to Boronia Road in Vermont. Within such a vast tract of land, there are unique opportunities and challenges in creating a new linear park.

The consultancy team, led by AECOM, have prepared this Concept Design Report which contains a Park Layout Plan. This plan includes a shared path alignment, revegetation opportunities, as well as presenting options for the locations of certain park amenities. The Concept Design Report also suggests a design narrative and inspiration, as well as the park's potential componentry and compositional qualities.

During the design process, the consultancy team have sought to distill ideas born from community feedback and consultation with Wurundjeri, as well as their interpretation of Healesville Freeway Reserve's rich identity. The Park Layout Plan and Concept Design aims to express these ideas.



1.2 Parks Victoria's 'Shaping Our Future' Strategic Plan

The 'Shaping Our Future Corporate Plan 2020-24' is a strategic document that sets the direction for future Parks Victoria operations and delivery. It contains an overview of Parks Victoria and outlines the objectives and strategies developed to meet their vision.

The plan responds to the expectations and emerging trends of visitor behaviours by acknowledging past experiences and understandings to deliver for the future. It aims to inspire all Victorians to protect and enjoy the unique natural and cultural heritage found in Victoria.

Victoria is home to a diverse collection of landscapes. Parks Victoria are committed to conservation programs that manage environmental impacts threatening biodiversity and help to improve the health of natural landscapes.

The protection of Victoria's precious ecosystems are important for Parks Victoria to achieve their conservation goals.

Parks Victoria is playing a role in the economic recovery of Victoria by supporting local communities and businesses with employment opportunities and increasing demand for services due to the rising number of visitors to parks.

Parks Victoria highlight the importance of nature by managing, protecting, and sharing Victoria's precious places. In partnership with Traditional Owners, Parks Victoria help to connect people with Country, understand cultural heritage, and contribute to human health and wellbeing.

The 'Shaping Our Future' Strategic Plan is framed around four goals that provide the context and focus for all Parks Victoria activities. Each goal has a number of key initiatives and intended outcomes that are measured through key performance targets. Parks Victoria provide a range of services that support the execution of each goal.

The Healesville Freeway Reserve project aims to abide by these goals through its design development, implementation and ongoing care into the future.



**Caring for
Country**



To sustainably manage, protect and conserve Victoria's natural and cultural landscapes.

**Connecting
People and
Nature**



To provide experiences for visitors and volunteers to connect with and value nature.

**Contributing to
Health, Liveable
Communities**



To contribute to improving the health, safety and economic wellbeing of all Victorians.

**Enhancing
Organisational
Excellence**



To enhance our capability, capacity and culture to deliver on our commitments.

1.3 Parks Victoria Planning Framework

Parks Victoria views planning, sharing knowledge and evidence-based learning as essential components in effective parks management. Clear plans, and learning from evidence and experience are crucial to achieving this outcome. As the manager of the state's parks network, Parks Victoria seeks to build partnerships to gather, analyse, and share knowledge to inform its management actions for nature and

heritage conservation, and provision of facilities, programs, and services for visitors and community.

Park management plans guide the future management of parks over a 15-year timeframe. The plans identify the vision, goals, outcomes, measures, and long-term strategies for action.

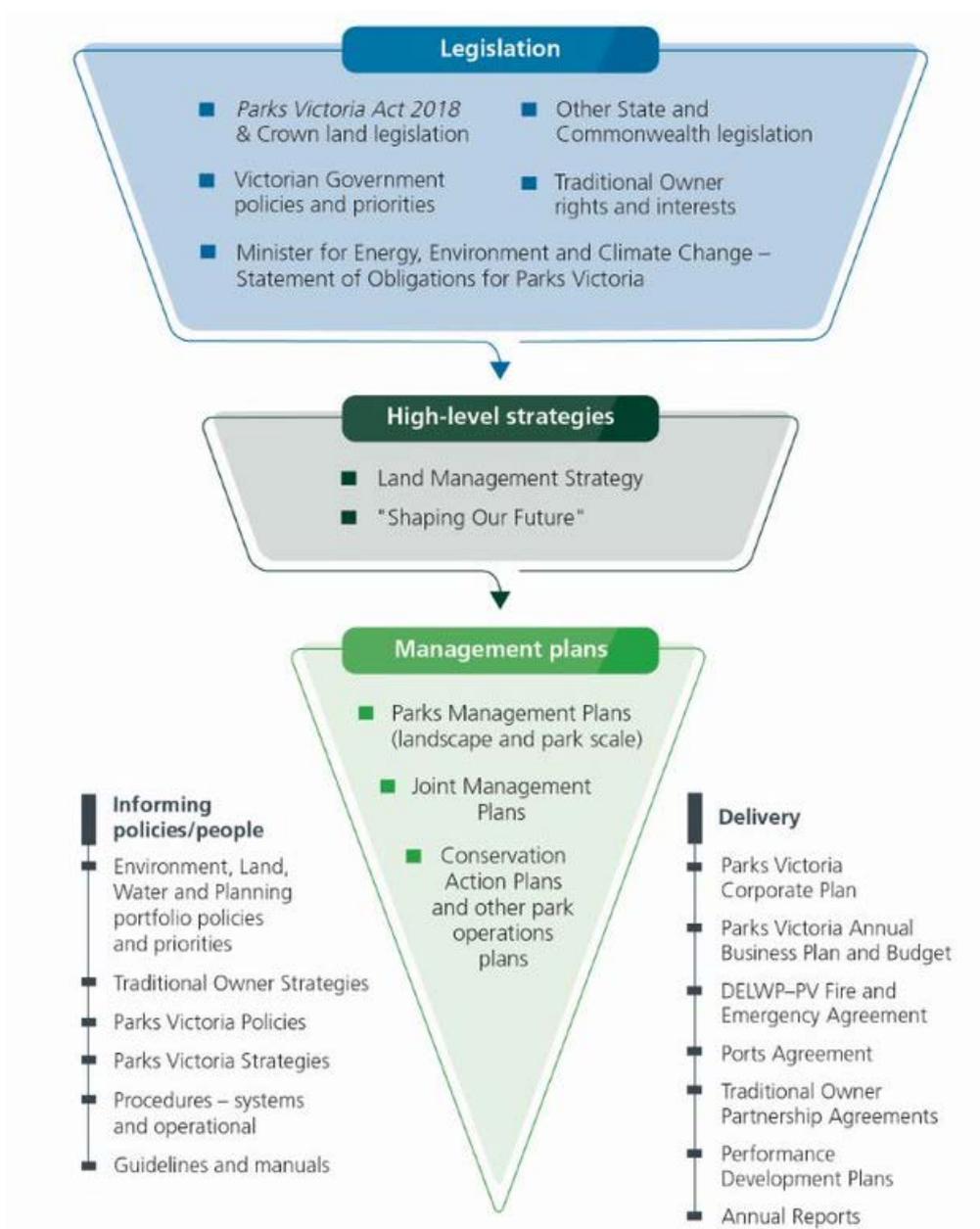


Figure 01: Legislative policy and planning framework

1.4 Healthy Parks Healthy People Framework

Healthy Parks Healthy People (HPHP) was first coined as a marketing tagline by Parks Victoria in 2000. It has since become a global movement that highlights the fundamental connection between environmental health and human health and wellbeing. Healthy parks sustain human life and livability by nurturing healthy ecosystems and providing essential services such as clean water and air, climate regulation, pollination of crops and coastal protection.

Parks also play a role in our physical, mental, spiritual and social health and enrich our lives through connection with cultural heritage and a sense of place. They generate valuable economic wellbeing through income and jobs.

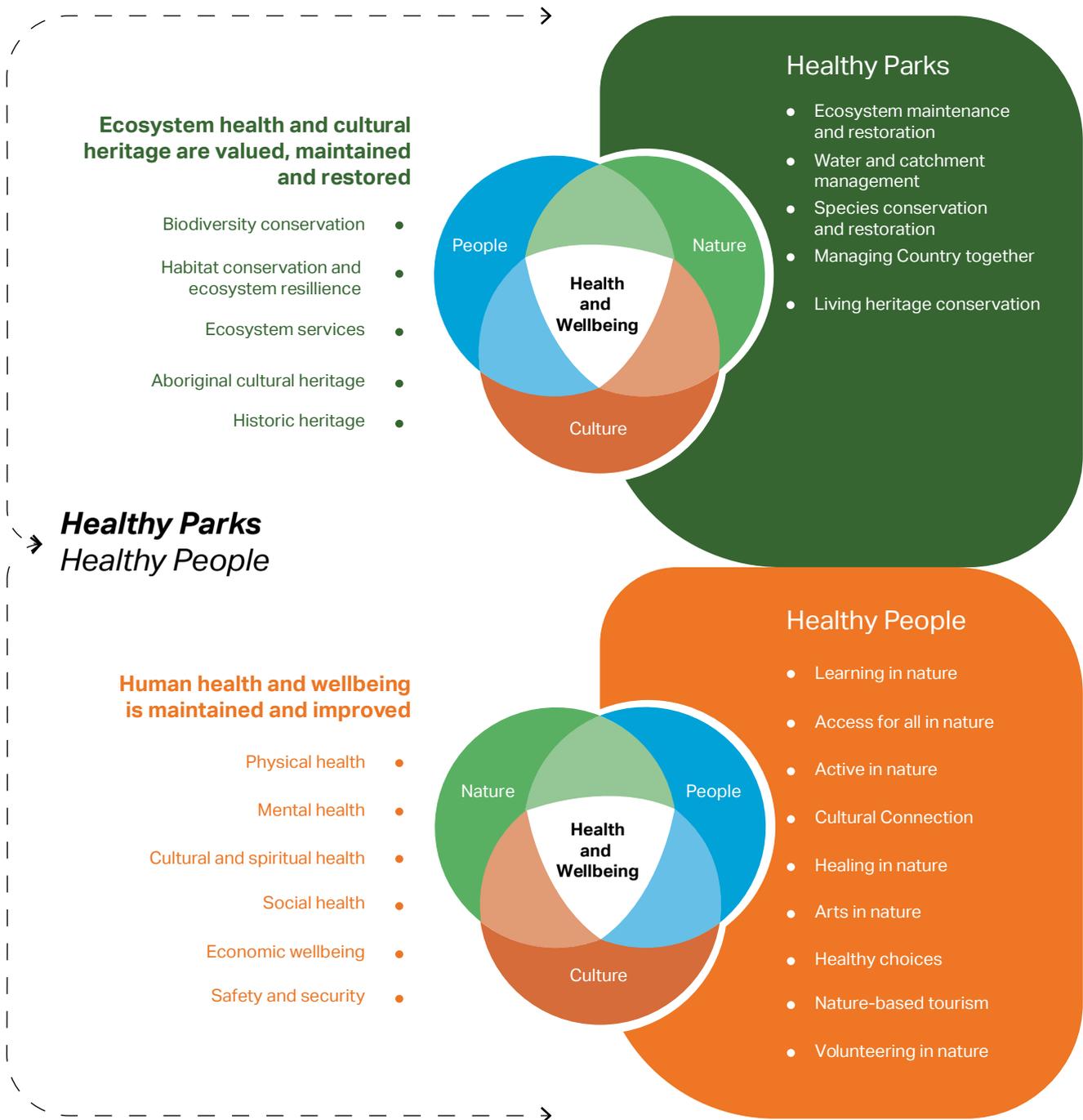


Figure 02: Healthy Parks Healthy People framework



1.5 Connecting with Country

Acknowledgment of Country

Aboriginal cultural landscapes are the core of Victoria's parks and reserves. They have been modified over many thousands of years. Today's landscapes are a product of the cultural and settlement patterns of thousands of generations. The landscapes have been influenced by the skills, knowledge, and activities of Traditional Owners. Parks Victoria acknowledges the Traditional Owners of these cultural landscapes and their continuous care and management of Country on which we learn, play, and live. Parks Victoria acknowledges the Wurundjeri People as the Traditional Owners of the lands in the eastern areas of Melbourne.

Managing Country Together

Traditional Owner rights and responsibilities are increasingly being recognised over Crown land in Victoria, resulting in systematic changes to both tenure and governance arrangements. As a land manager, Parks Victoria have the opportunity to embrace a new, collaborative park management future and lead the way in recognising and enabling Aboriginal cultural rights.

Parks Victoria is committed to delivering high quality conservation outcomes for Victoria's natural significance and cultural heritage. The 'Managing Country Together Framework' recognises the value and importance of working in general partnership with Traditional Owners to manage parks and reserves in a culturally sensitive and ecologically appropriate way. The Framework represents a clear commitment by Parks Victoria to implement government policy and a philosophy to guide the continuous evolution of the organisation.

Victoria has a strong enabling environment for recognising Traditional Owner rights through the Government's commitment to self-determination for Aboriginal people. Parks Victoria have a recognition and land rights framework that is tailored to the needs and aspirations of Victoria's Traditional Owners, supported by the Charter of Human Rights and Responsibilities, which provides a clear legal basis for recognising Aboriginal cultural rights.



Image: Provided by Parks Victoria



1. RESTORING THE KNOWLEDGE SYSTEM

COMPONENT OBJECTIVES

To restore and protect the Traditional Owner knowledge system



2. STRENGTHENING TRADITIONAL OWNER NATION RESILIENCE

COMPONENT OBJECTIVES

To strengthen Traditional Owner Nation resilience to enable delivery of our contemporary role as custodians of Country



3. TRADITIONAL OWNER CULTURAL LANDSCAPES PLANNING

COMPONENT OBJECTIVES

To enable Traditional owner cultural landscapes planning



4. EMBEDDING TRADITIONAL OWNER KNOWLEDGE AND PRACTICE

COMPONENT OBJECTIVES

To embed Traditional Owner knowledge and practice into policy, planning and the management of Country



5. TRADITIONAL OWNER CULTURAL LANDSCAPES MANAGEMENT

COMPONENT OBJECTIVES

To enable the application of Traditional Owner cultural objectives, knowledge and practice in the management of public land

Figure 03: *Managing Country Together Framework*





Bellbird Dell Reserve Path System
Healesville Freeway Reserve



2.0 Healesville Freeway Reserve Research

The Victorian State Government has committed to transferring the undeveloped Healesville Freeway Reserve (HFR) to public open space. The 35 hectare reserve runs for approximately 3.5 kilometres from Springvale Road in Forest Hill, to Boronia Road in Vermont. The reserve has been transferred to Parks Victoria to manage and establish as a new linear public park.

Aided by thorough research pertaining to the physical, historical and cultural significance of the site, this project aims to provide a range of amenities, including a shared use trail, to create a safe and accessible visitor experience.

Components supporting these experiences include recreational amenities such as playscapes, picnic facilities, seating, drinking fountains, lighting, toilet blocks, a cycle pump track, as well as directional and storytelling signage to reflect cultural and historical features of the park.

Despite the proposed constructed amenities, a major design motivation will be to protect and enhance valuable remnant native vegetation, as well as the cultural values of the site.



2.1 Historic Heritage

Pre European Aboriginal History

Before European settlement, Aboriginal people inhabited the land for at least 40,000 years.

[1837] Robert Hoddle's Survey

Assistant Surveyor to the Colonial Establishment, Hoddle divides the Port Phillip district, including land eventually known as the Parish of Nunawading.



[1841] Elgar's Special Survey

Henry Elgar acquires a survey of 5,120 acres of land in the Box Hill area west of Elgar Road known as Elgar's Special Survey.

[1850] Arrival of Woodcutters and Charcoal Burners

Making their living from harvesting the densely timbered bushland. Species present included Stringybark, Messmate Box and Cherry. Much of Whitehorse (Formally Nunawading) was still native forest at this stage. It was then illegal to fell timber within five miles of Melbourne.

[1851] Discovery of Gold in Victoria

Gold discoveries in Victoria leads to rapid growth in Melbourne spurring the development of many manufacturing industries and establishment of more farms to grow produce to feed the population.

[1870s] Orcharding becomes Primary Agricultural Industry

Orcharding had been prominent in the Nunawading area since the early 1870s. Aerial imagery from the 1930s and 1940s shows extensive orcharding in this area. Properties developed from commercial orchards to the post war suburban development.

[1882] Camberwell to Lilydale Railway Line Extension

Railway extended from Camberwell to Lilydale stimulated a wave of subdivision which characterised much of the municipality.

[1950s] Urbanisation post WWII

The 1950s saw rapid growth after WWII which can be attributed to increasing popularity of the motor-car. Demand for new housing areas led to subdivision and eventual removal of orchards.

At this time the Melbourne Metropolitan Board of Works (MMBW) was responsible for town planning as well as drainage, sewage and water supply services. Many new areas lacked drainage or sewerage services, resulting in concern over drain and waterway pollution.

[1969] Healesville Freeway Reservation - Metropolitan Transport Plan

The reservation for the Healesville Freeway was incorporated into the Metropolitan Transport Plan in 1969 and originally extended from Riversdale Road, Box Hill South, to Maroondah Highway, Coldstream. Also referred to as the 'F9' or the 'F9 East', at the time it would have become Melbourne's longest freeway at 18km in length.

[1977] Nunawading Community Gardens

The first community gardens in Australia were established in Nunawading, featuring a rich diversity of cultures creating a comprehensive range of vegetables, herbs, and flowers.

[2014] Campaign to Save Healesville Freeway Reserve

Four-year-campaign to save Healesville Freeway Reserve ends in success after Victorian Government promised to preserve 100 percent of 35ha reserve.

[2018] Healesville Freeway Reserve Concept Plan

Healesville Freeway Reserve Concept Plan released by the former Department of Land, Environment, Water & Planning (DELWP) to guide future development of the reserve as a public open space.

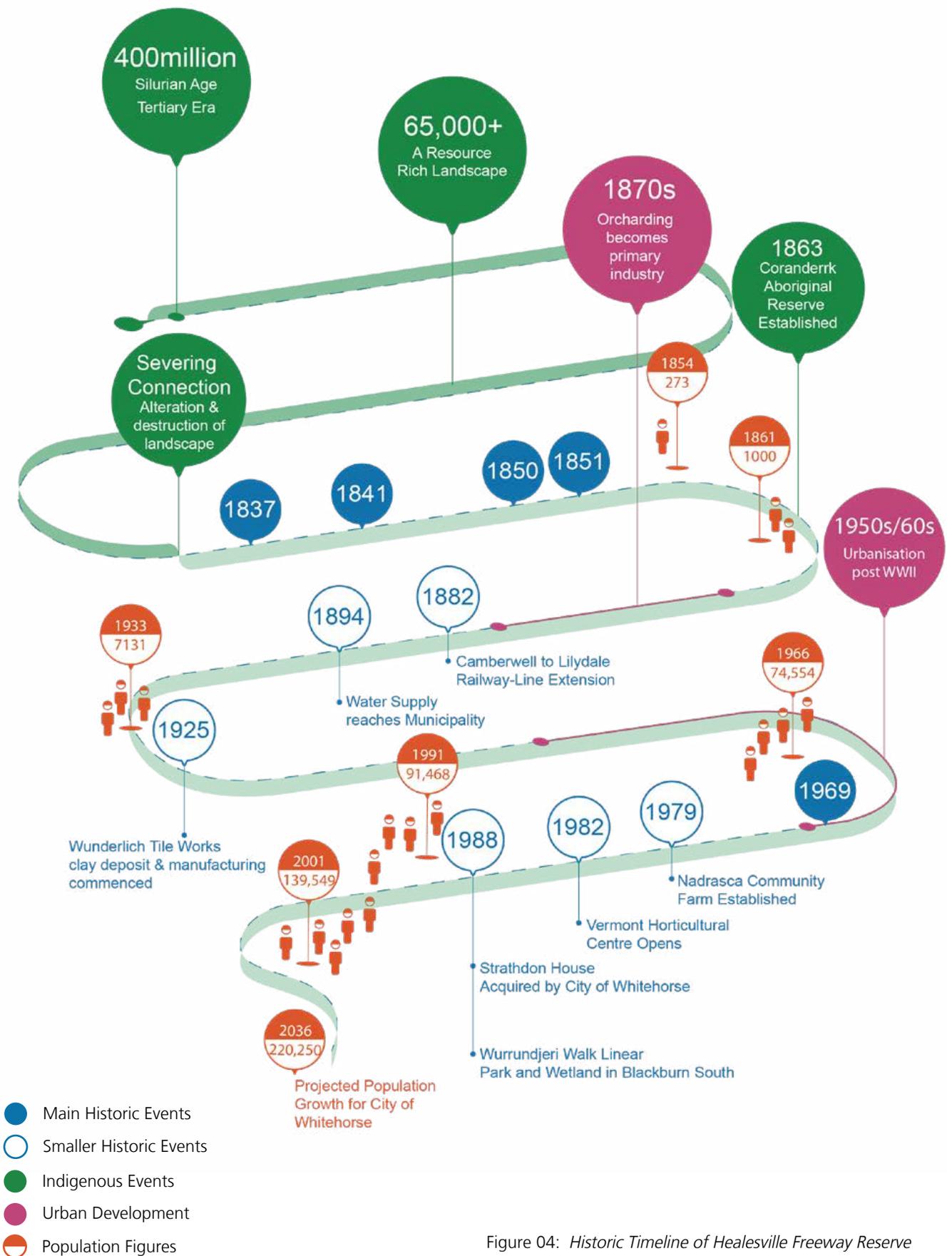


Figure 04: Historic Timeline of Healesville Freeway Reserve



2.2 Geographic Context

HFR is located approximately 20 kilometres east of the Melbourne CBD. Travel time via the Eastern Freeway and Eastlink (M3) or the Monash Freeway (M1) is approximately 40 minutes from the CBD.

The site is located in the City of Whitehorse, and it borders the City of Knox and the City of Maroondah to the east at Dandenong Creek.

The reserve is located 3 kilometres south of the Lilydale/Belgrave railway line between Nunawading, Mitcham, and Heatherdale Stations and 4 kilometres north of Glen Waverley station, the terminus of the Glen Waverley railway line. The future Suburban Rail Loop will provide an additional station at Glen Waverley and Box Hill, and a new station in Burwood.

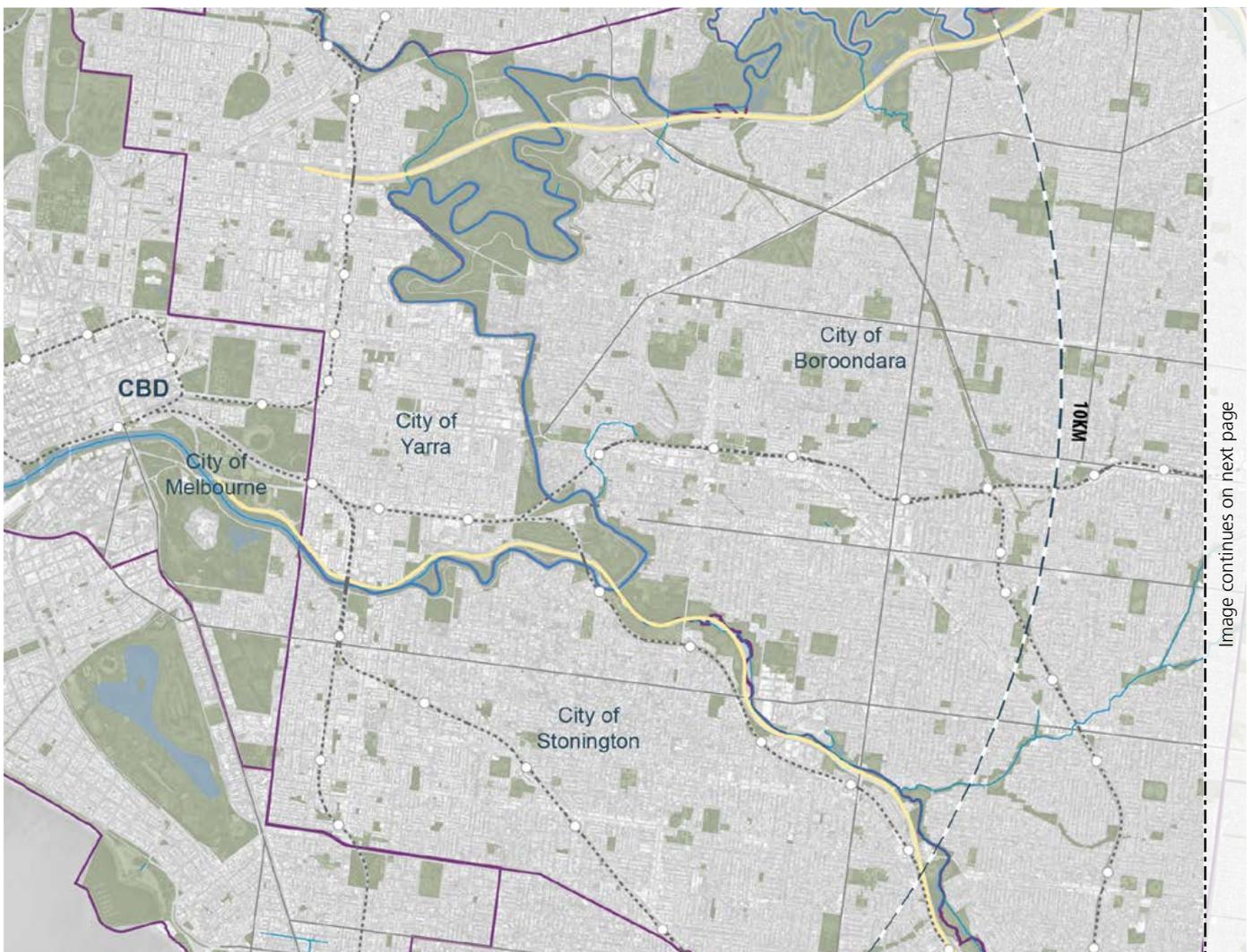


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LEGEND

- | | | |
|----------------------------------|-----------------------------|------------------------------------|
| Local Government Area Boundaries | Proposed Suburban Rail Loop | Parks, Open Space and Recreational |
| Major Road Corridor | 10km Increments from CBD | Project Site Boundary |
| Railway Centreline and Station | Watercourse Centerline | Waterbodies |

Figure 05: Melbourne Contextual Map

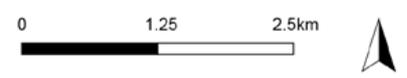




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|----------------------------------|-----------------------------|------------------------------------|
| Local Government Area Boundaries | Proposed Suburban Rail Loop | Parks, Open Space and Recreational |
| Major Road Corridor | 10km Increments from CBD | Project Site Boundary |
| Railway Centreline and Station | Watercourse Centerline | Waterbodies |



2.3 Site Context

HFR runs east-west for approximately 3.5 kilometres from Springvale Road in Forest Hill to Boronia Road in Vermont. Southern portions of the site are located in Vermont South. Two residential roads (Terrara Road and Morack Road) traverse the site north-south. There are also a number of street courts that provide public access points to the reserve. There is no continuous path or adjoining road that connects the site East-West.

The reserve consists of 35 hectares of undeveloped land that predominantly interfaces with residential land use. It also traverses a mix of recreational and open space amenities including parks and reserves,

playgrounds, the Municipal Horticulture Centre and Community Garden, Morack Public Golf Course, and the Dandenong Creek Trail.

There are three public and private schools located within 500 metres of the site. Parkmore Primary School and Vermont Secondary School share a fence boundary with the reserve.

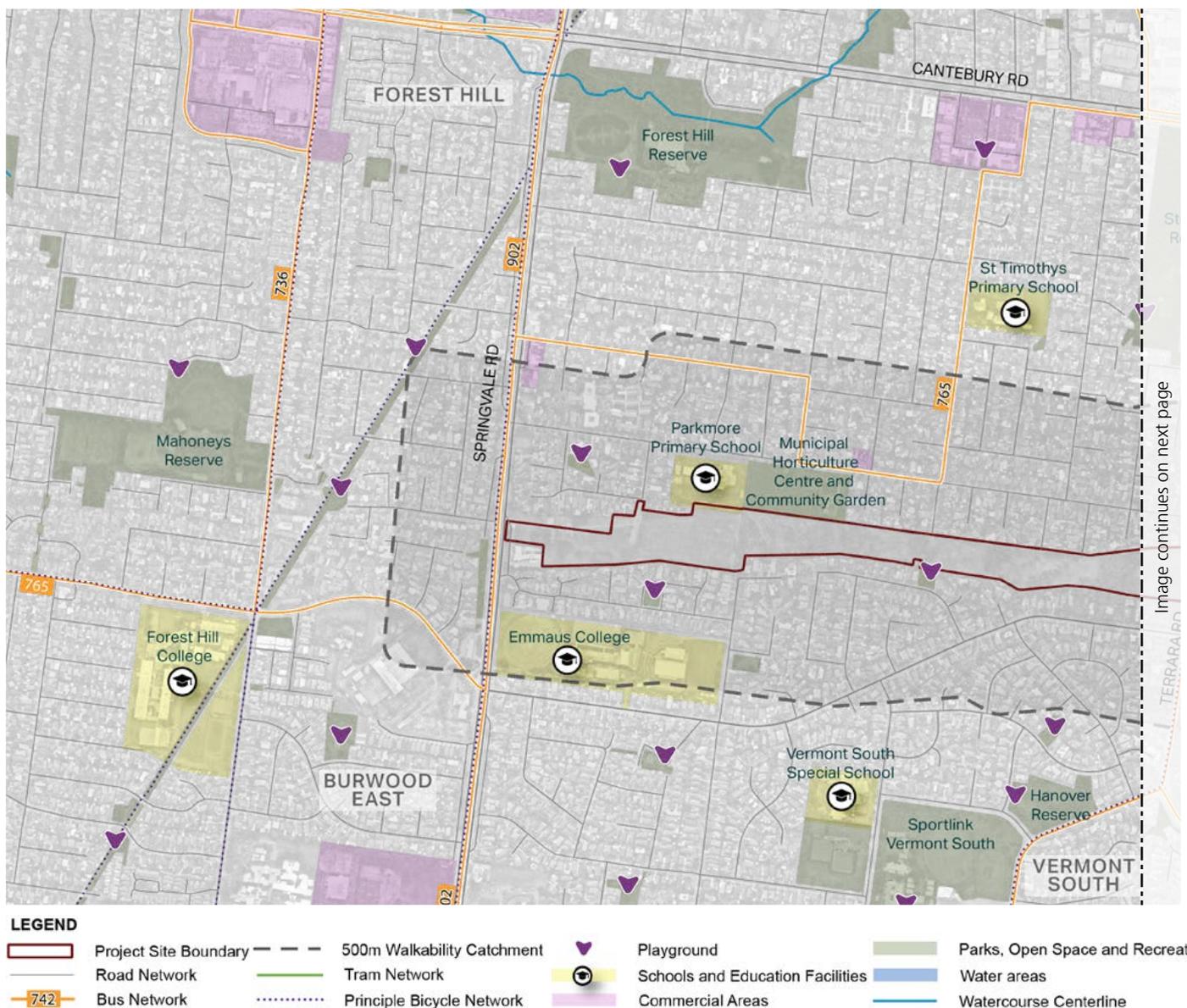
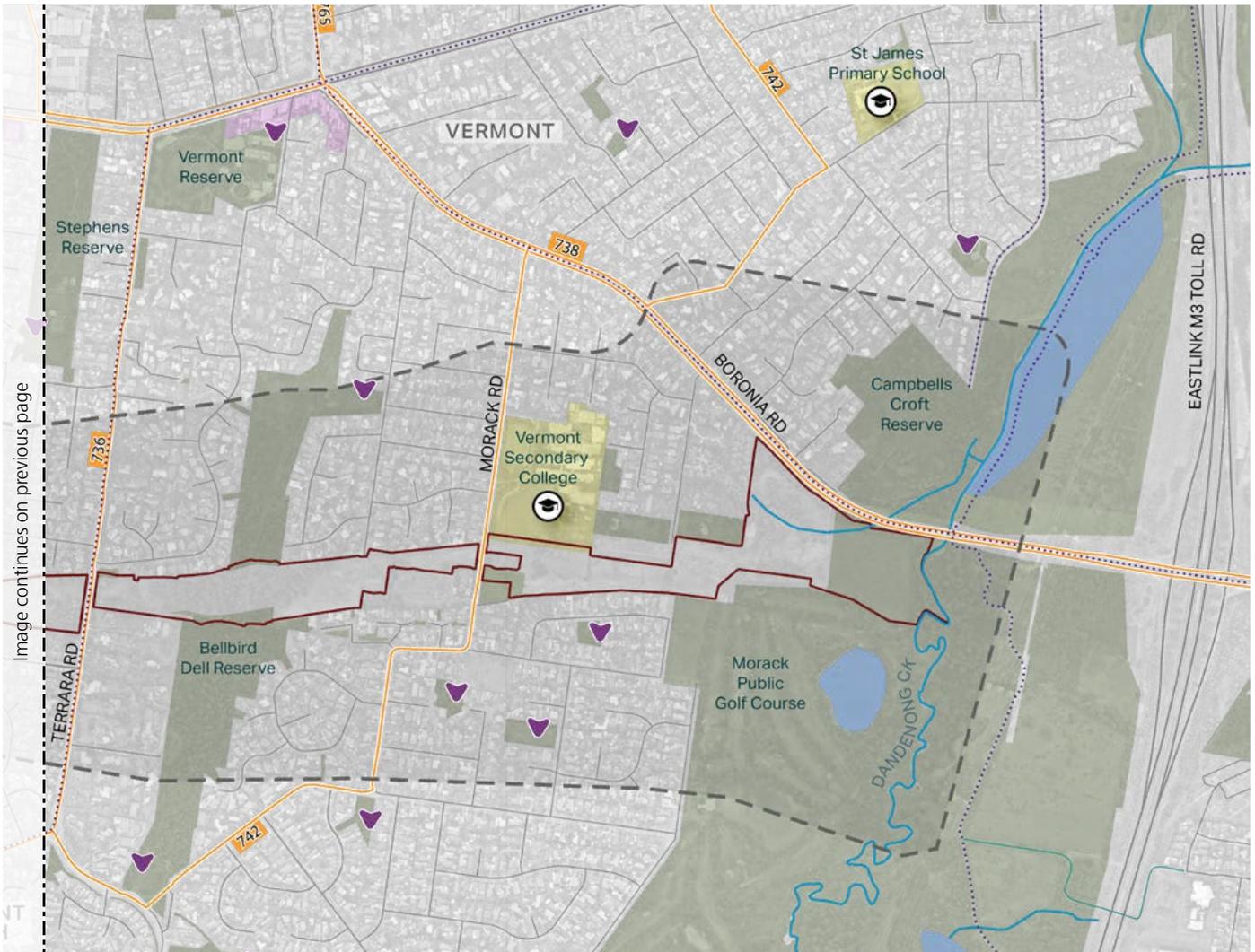


Figure 06: Local Site Contextual Map

0 1.25 2.5km



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- LEGEND**
- Project Site Boundary
 - 500m Walkability Catchment
 - ▼ Playground
 - Parks, Open Space and Recreational
 - Road Network
 - Tram Network
 - Schools and Education Facilities
 - Water areas
 - Bus Network
 - Principle Bicycle Network
 - Commercial Areas
 - Watercourse Centerline



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2.4 Planning Context

The area surrounding HFR is predominantly residential, comprising detached dwellings of one and two storeys. A large number of residential properties have a direct interface with the reserve, with access enabled via gates in the rear gardens.

The Forest Hill Police Station is located west of the reserve along Springvale Road. Local shops are located on Springvale Road and Jolimont Road, comprising of cafes, professional services, and commercial shops. Larger shopping centres are located along Boronia Road and Burwood Highway, with supermarkets, takeaway food, medical practices, and professional services. There is a business

park and the Peter James Centre, which provides rehabilitation and aged-care services along Burwood Highway, west of Springvale Road.

Most of the reserve is within the Public Park and Recreation Zone (PPRZ) The planning scheme amendment C236whse has rezoned land in the reserve to reflect the existing land use and support the reserve to be formally established as public open space. Land has been rezoned from General Residential Zone Schedule 5 to the Public Park and Recreation Zone and the Significant Landscape Overlay Schedule 9 has been removed. The amendment also corrected several zoning anomalies.

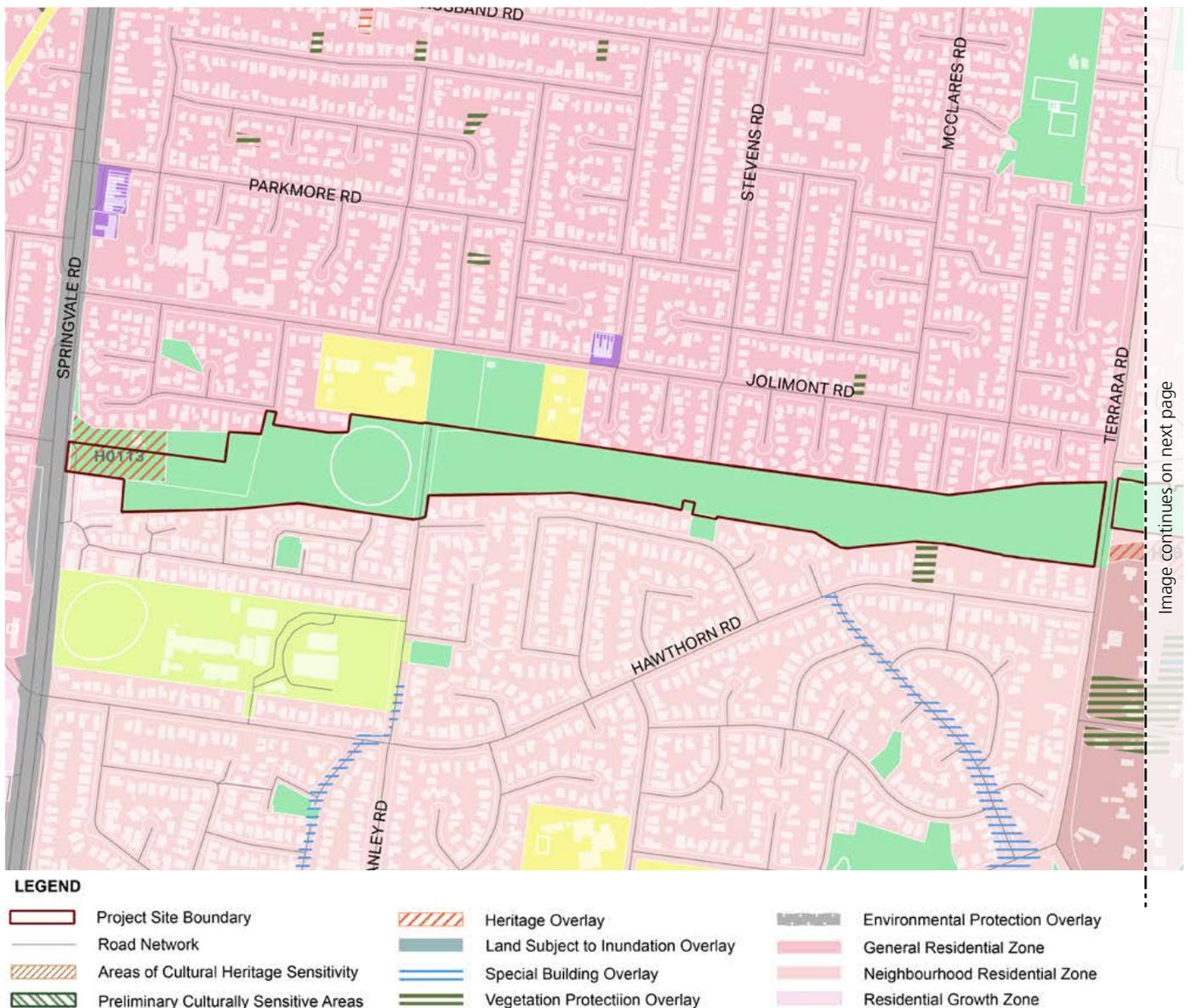


Figure 07: Local Site Planning Zones and Overlays Map

Overlays

There are several heritage listed historic homes adjacent to the reserve, including:

- HO62 - Willowbank, 29 Moore Road
- HO63 - Mirrabooka, 30-34 Moore Road
- HO80 - Plumstead, 77 Terrara Road
- HO107 - Greenways, 142 Boronia Road
- HO113 - Strathdon House and Orchard Precinct, 449-465 Springvale Road

Strathdon House and Orchard Precinct is west of the reserve and provides community facilities and open space connecting into Davy Lane Reserve.

A number of properties bordering the reserve are subject to a Vegetation Protection Overlay (VPO). The Bellbird Dell Reserve and land adjacent to the Dandenong Creek have a Special Building Overlay (SBO) or Land Subject to Inundation Overlay (LSIO). There is an Area of Aboriginal Cultural Heritage Sensitivity around Dandenong Creek.



2.5 Demographics

HFR is located in the City of Whitehorse Local Government Area (LGA). It has an area of 64km² and is located 12 to 22km east of the Melbourne CBD. The LGA borders the City of Knox and the City of Maroondah to the east. The populations of these three LGAs are expected to contribute the largest portion of visitors to the reserve. Understanding the population's composition is critical in providing amenities relevant to local users.

Population

The City of Whitehorse had an estimated resident population of 171,167 in the 2021 Census.



This was a 3.09% decline from the previous year. The LGA had the same proportion as Greater Melbourne of couple families with dependent(s) (33.1%) to Greater Melbourne. There was a slightly higher proportion to Greater Melbourne of lone person households (24.4% compared to 23.7%) and couples without children (23.8% compared to 23.5%).

The population density was 2,664 persons per square km with an average household size of 2.53 people.

Analysis of the types of dwellings in City of Whitehorse shows that 62.0% of all dwellings were detached, low density dwellings, 27.7% were medium density dwellings, and 10.1% were in high density dwellings. The largest change in dwelling types was seen in high density (+3,966).

The population comprised of 51.6% females and 48.4% males.



Australian citizens made up 76.9% of the population. There were 521 individuals (0.3%) that identify as Aboriginal or Torres Strait Islander. The three largest ancestries in the LGA were English (26.5%), Australian (23.1%), and Chinese (22.2%). There is a significantly larger population of people with Chinese ancestry (22.2%) compared to Greater Melbourne (7.9%).

Other ancestries represent similar proportions between City of Whitehorse and Greater Melbourne. City of Maroondah had the same three top ancestries, with higher proportions English (31.5%) and Australian (29.2%) to Chinese (11.1%). In the City of Knox, Irish ancestry was the third most prevalent at (11.4%), only 5.9% of the population had Chinese ancestry.

The largest changes in reported ancestries of the population in the LGA between 2011 and 2016 were:

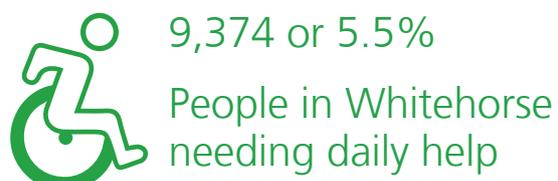
- Chinese (+11,987)
- Australian (-3,685)
- Indian (+1,949)
- Irish (+1,047)

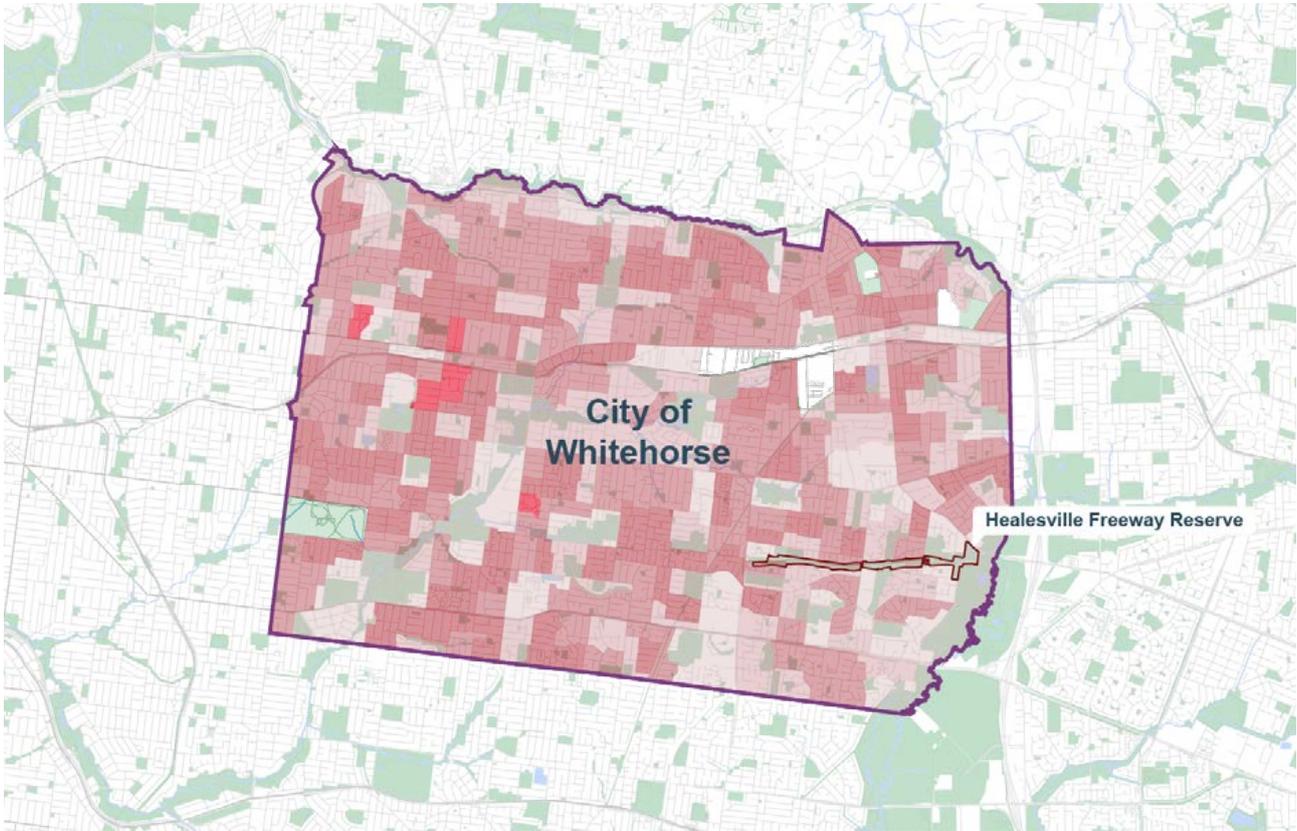
Age

In 2021, the City of Whitehorse had a lower proportion of children (under 18) and a higher proportion of persons aged 60 years or older than Greater Melbourne. The median age was 39 years old.

Overall, 29.3% of the population was aged between 0 and 24, 46.9% were aged between 25 and 59, and 23.8% were aged 60 years and over. The neighbouring City of Knox and City of Maroondah follow similar trends to City of Whitehorse.

In 2021, 9,374 (5.5%) people in the City of Whitehorse reported needing help in their daily lives due to disability. The proportion of people was higher in City of Maroondah (6.0%), and City of Knox (5.8%).





LEGEND

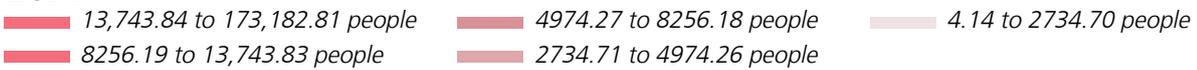


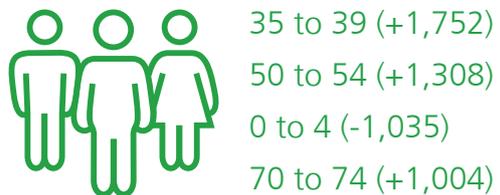
Figure 08: City of Whitehorse Local Government Area Map

The major differences between the age structure of City of Whitehorse and Greater Melbourne in 2021 were:

- A larger percentage of people aged 85 and over (3.2% compared to 2.0%)
- A larger percentage of people aged 80 to 84 (2.9% compared to 2.0%)
- A smaller percentage of people aged 30 to 34 (6.9% compared to 8.2%)
- A larger percentage of people aged 20 to 24 (7.5% compared to 6.7%)
- A smaller percentage of people aged 0 to 4 (4.6% compared to 5.9%)

Emerging Age Groups

The largest changes in age structure in the LGA between 2016 and 2011 were in the age groups:



**All data obtained from Profile.ID and Australian Bureau of Statistics (ABS) Census Data.*



2.6 Geomorphology

The HFR geological and geotechnical attributes were assessed as part of the Geotechnical Desktop Assessment provided by Parks Victoria.

The underlying geology of the site was formed in the Silurian Era as the Andersons Creek Formation (Sla/Sxa). The sedimentary rock unit comprises of thick to thin bedded marine deposits containing sandstone, siltstone, and minor conglomerate.

A second geological formation is found at the east of the site along Dandenong Creek, which extends across to the south of the Bellbird Reserve. This unnamed alluvium (Qra,Qa,Qrt,Qc/Qa1) was

formed in the Quaternary (Holocene) Era. It is also a sedimentary rock unit formation, however, it is made up of non-marine fluvial deposits of alluvium, gravel, sand, and silt.

Additional geotechnical studies will be undertaken following the acceptance of the Reserve's Draft Park Layout Plan (refer Section 5.2). These tests will be performed in localised areas where the consultancy team expect to construct structural landscape elements such as toilet facilities, furniture, and play equipment.

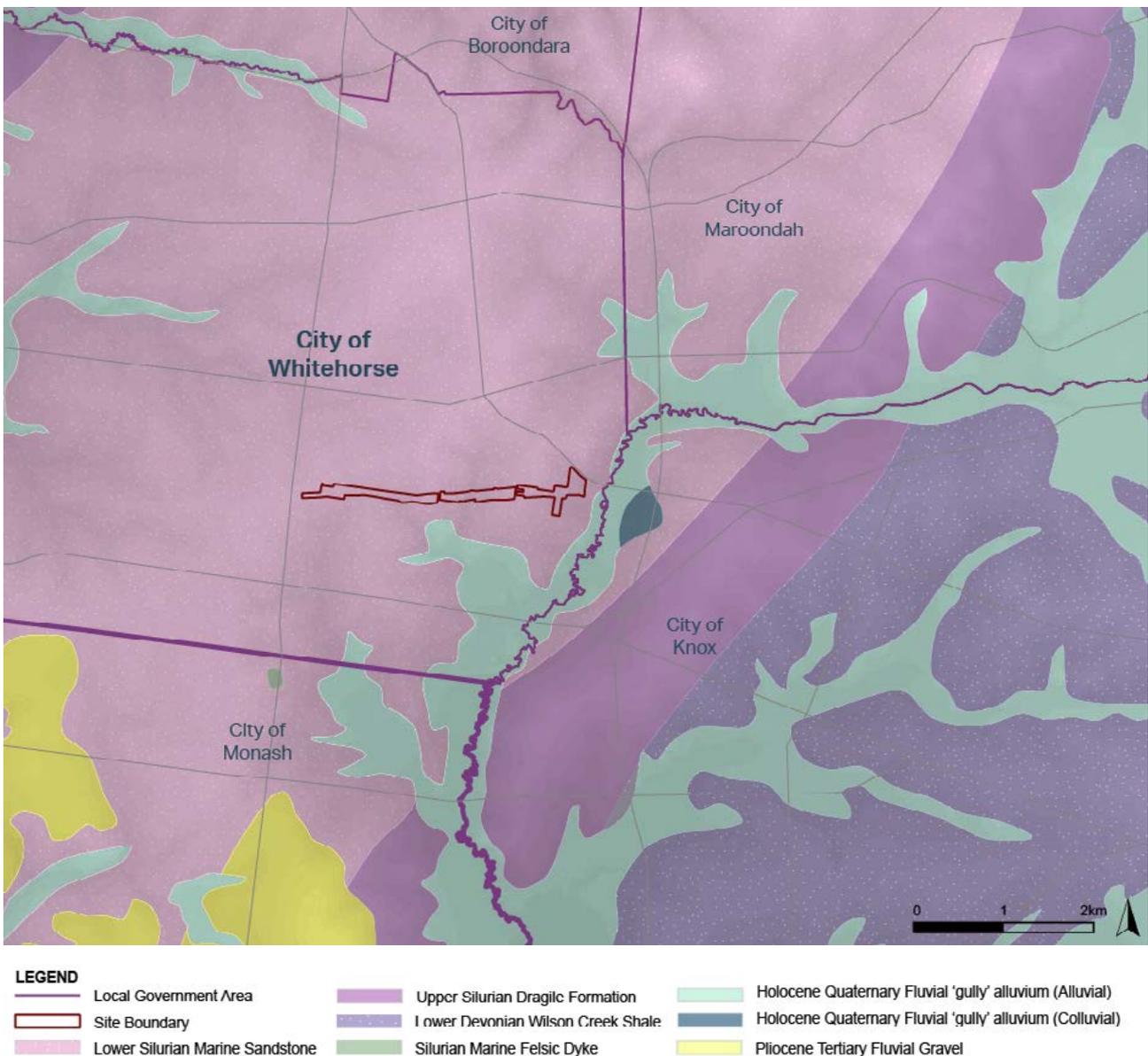


Figure 09: Geological context of Healesville Freeway Reserve

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2.7 Topography and Water Movement

The wetlands within the Bellbird Dell Reserve feature ornamental ponds and a dry creek bed that runs from north to south. The gully provides an area of natural wetlands after adequate rainfall. The creek was barrelled in 1972 following a major flooding event.

Water movement across the site typically follows the topography towards the Bellbird Reserve and low points near Dandenong Creek. Small areas of existing informal paths have been subjected to erosion due to water movement. Flooding is a known issue for adjacent properties in the southeast of the reserve. Currently, there are several swale systems at the southern portions of the site to protect

adjoining properties.

The project's proposed path alignment seeks to implement a new system of swale drains, as well as new pipe culverts where necessary. Opportunities to capture and even harvest water runoff will be explored as a part of the concept design.

Recent inspections have indicated that established overland flow paths, coupled with existing Council stormwater infrastructure, leave some sections of the reserve unable to disperse water and remain wet. Landscaping treatments such as wide vegetated swales have been used to locally capture water

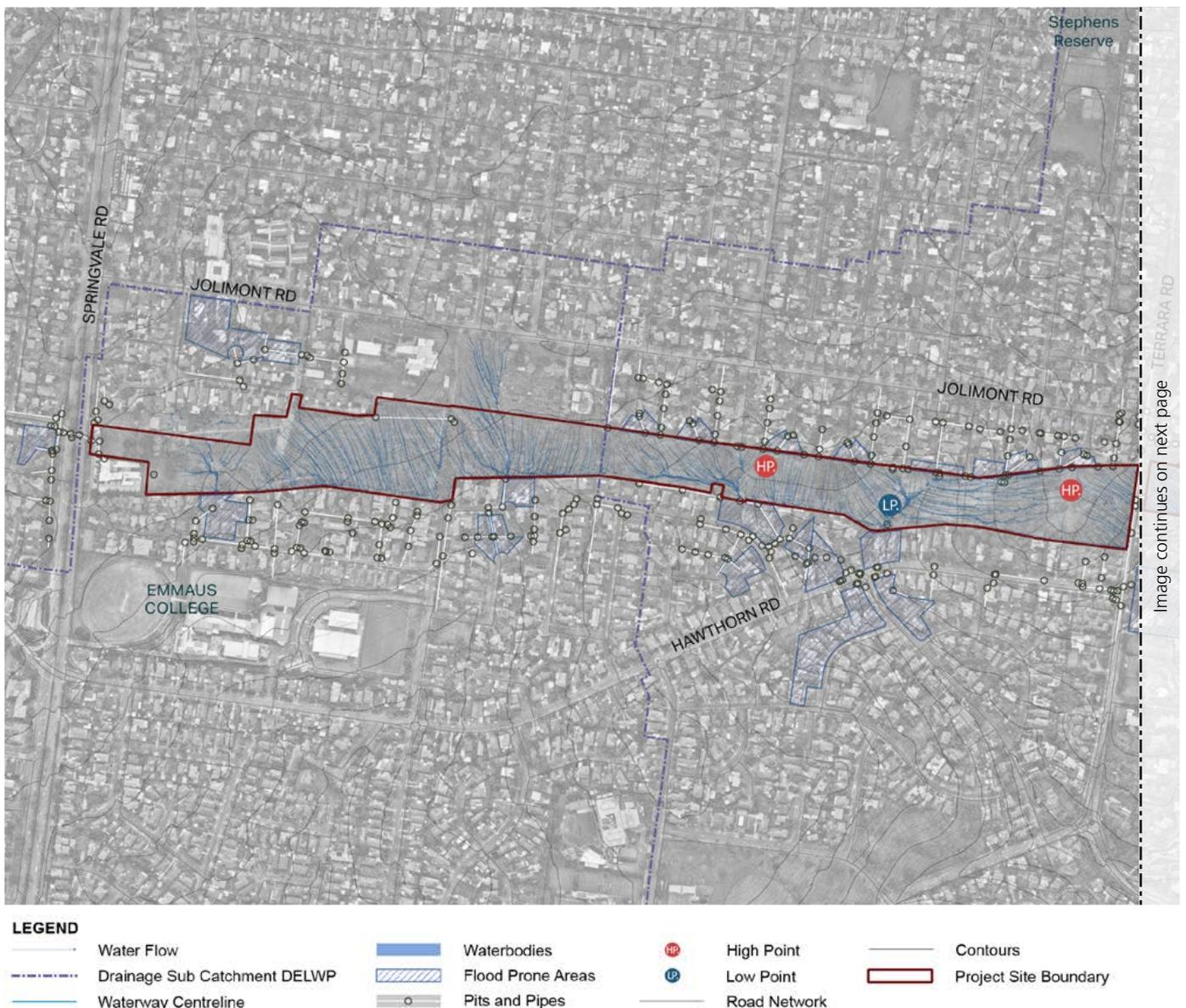


Figure 10: Topography and Water Movement Analysis Map

0 1.25 2.5km



and create a linear drainage line. These swales have proved to become wet during winter, and are expected to dry over summer.

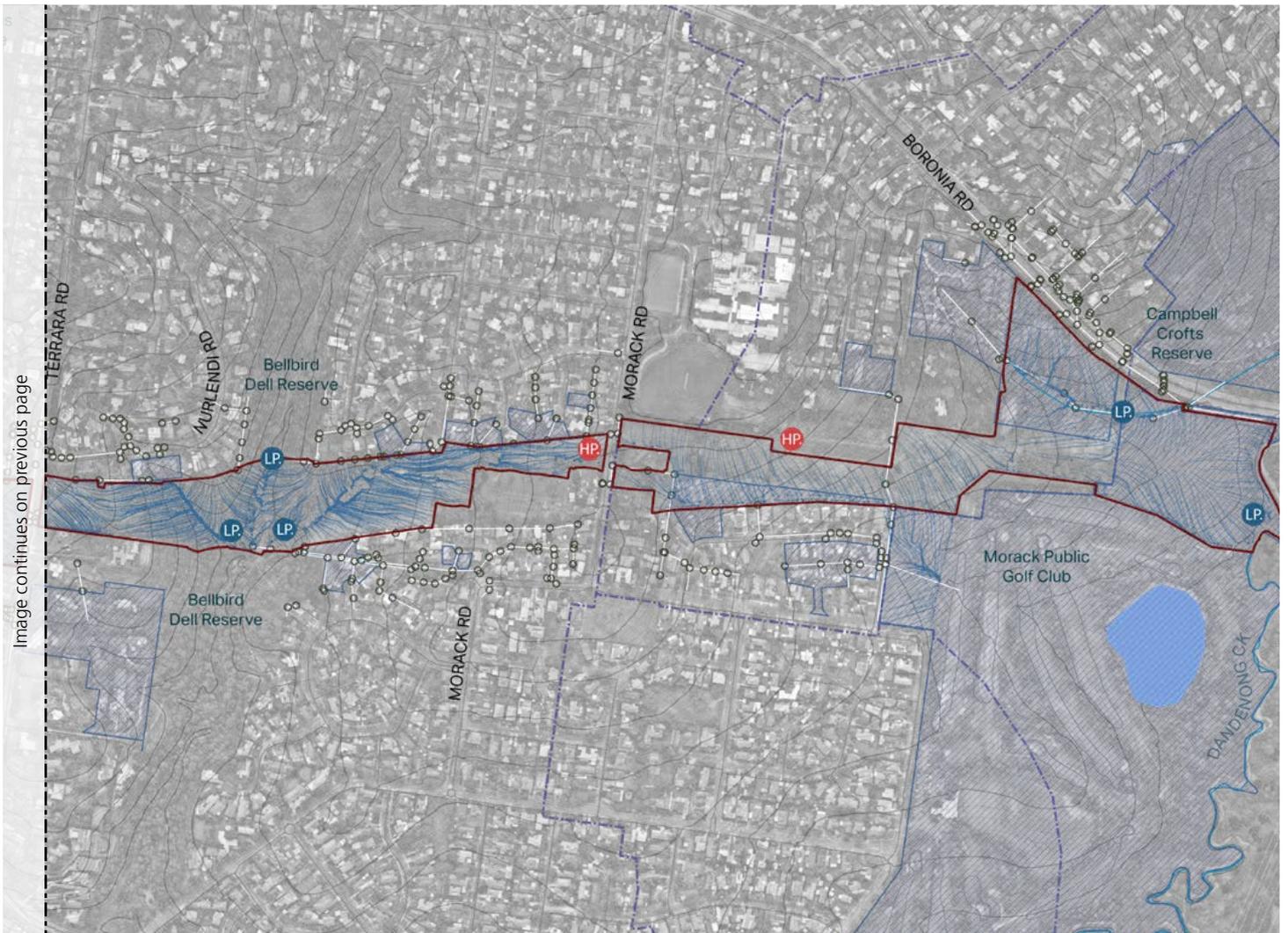


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LEGEND

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|------------------------------|-------------------|--------------|-----------------------|
| Water Flow | Waterbodies | High Point | Contours |
| Drainage Sub Catchment DELWP | Flood Prone Areas | Low Point | Project Site Boundary |
| Waterway Centreline | Pits and Pipes | Road Network | |



2.8 Ecology

Throughout the reserve, there are several sections of endangered remnant bushland that provide habitat for native animals. These patches of vegetation are separated by areas of largely cleared land with scattered indigenous trees and small patches of native forest.

At the western end of the reserve between Dayv Lane and the Municipal Horticulture Centre and Community Garden, the Level Crossing Removal Project has planted garden beds with new native plants and trees as a part of the project's broad offset planting initiative.

In July and August 2022, AECOM's Environmental Scientists collected data to inform a Flora and Fauna Assessment for the extent of the HFR. The assessment highlights existing features, characters, habitats and potential impacts of the project. The following are extracts from the ecological assessment highlighting the key considerations situated within the project area.

Ecological Vegetation Classes

Prior to European settlement, the site was dominated by woodland vegetation including Valley Heathy Forest (EVC 127) and Swampy Riparian Complex



Figure 11.01: Ecological Map

(EVC 126). There were two Ecological Vegetation Classes recorded within the study area. Valley Heathy Forest has fragmented patches across the site while the Swampy Riparian Complex traverses the Bellbird Dell north-south.

Flora

The vegetation consisted of a range of qualities and types, including weedy patches, revegetation patches, and remnant vegetation patches. The western end of the reserve contains an assortment of semi-successful revegetation and remnant patches. These areas have a canopy of Eucalypts with a scarce understorey.

Newer revegetation areas have a mix of native understorey species, however, most patches typically have large portions of weeds including Blackberry, Common Ivy, and Gorse. A number of weeds are listed as Weeds of National Significant (WoNS) or noxious under the Victorian Catchment and Land Protection Act 1994 (CaLP). High densities of these weeds were found across the site with dense well-established patches prevailing between the Bellbird Dell and Boronia Road. The removal of woody weeds is recommended as a priority action for ecological enhancement.



LEGEND

- | | | |
|---------------|--|-----------------------------------|
| Site Boundary | Valley Heathy Forest [2005 EVC 127] | Existing Revegetation Planting |
| Waterbody | Swampy Riparian Complex [2005 EVC 126] | Targeted areas for Revegetation |
| Water Course | Riparian Forest [2005 EVC 18] | Areas identified for weed removal |



Fauna

The largely degraded quality of the reserve provides minimal habitat and foraging resources for native local fauna. Habitat features should be placed throughout the reserve to provide important shelter and foraging opportunities including logs, stags, rocks, nesting boxes, creek beds, and ponds.

A number of native bird species were observed in the reserve including the Gang Gang Cockatoo, Kookaburra, the Rainbow Lorikeet, and the Eastern Rosella. An extensive amount of native wildlife is regularly seen and heard in the Bellbird Dell Reserve,

and the wetland habitat supports the Eastern Banjo Frog, Southern Shortfin Eel, and Rakali. The grassland characteristics at the eastern end of the reserve offer habitat for the Eastern Blue Tongue Lizard and Short-beaked Echidna.

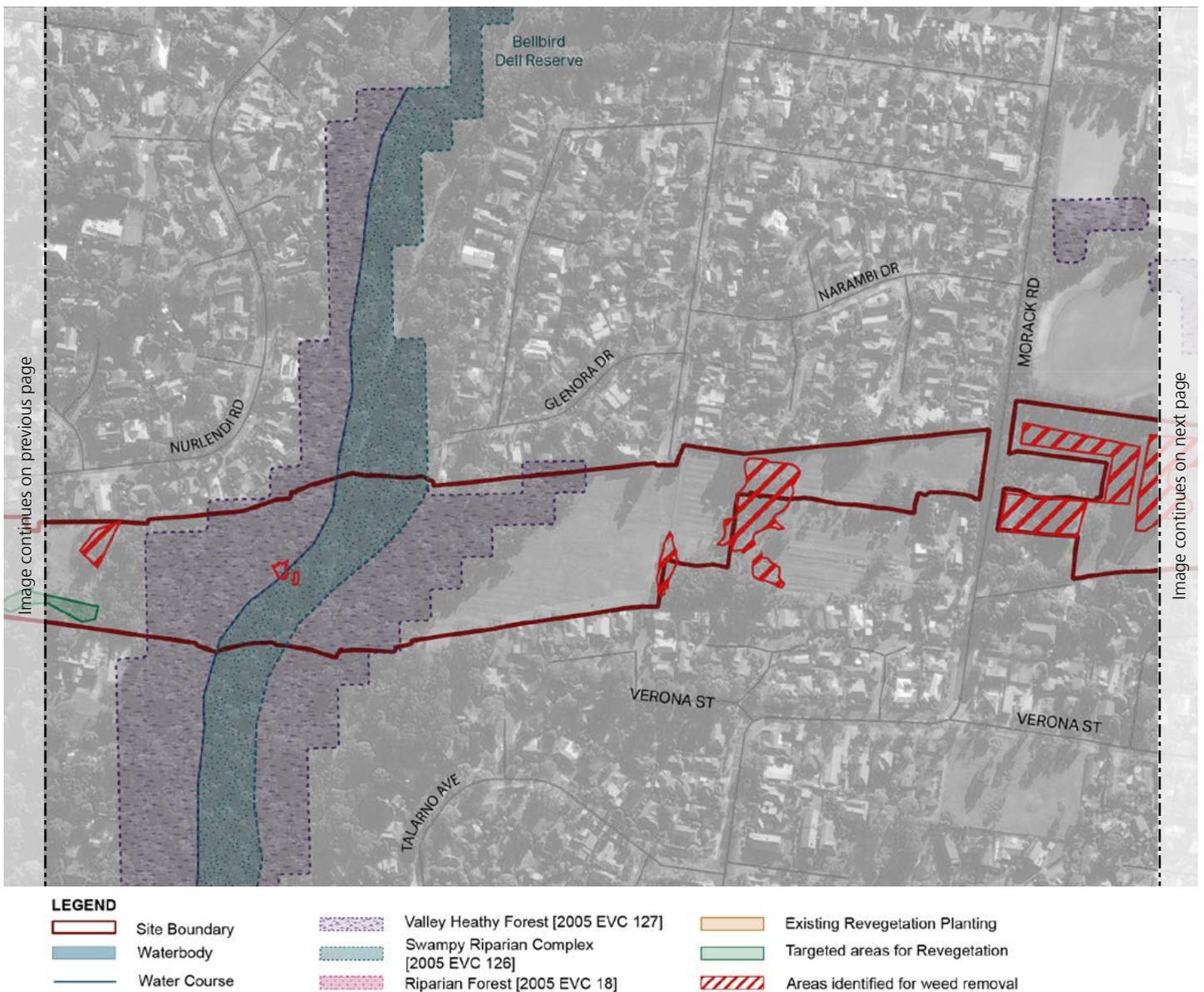


Figure 11.02: Ecological Map - continued

0 1.25 2.5km





Figure 12: Animals found across Healesville Freeway Reserve (left to right) Gang Gang Cockatoo, Kookaburra, Eastern Banjo Frog, Short-beaked Echidna

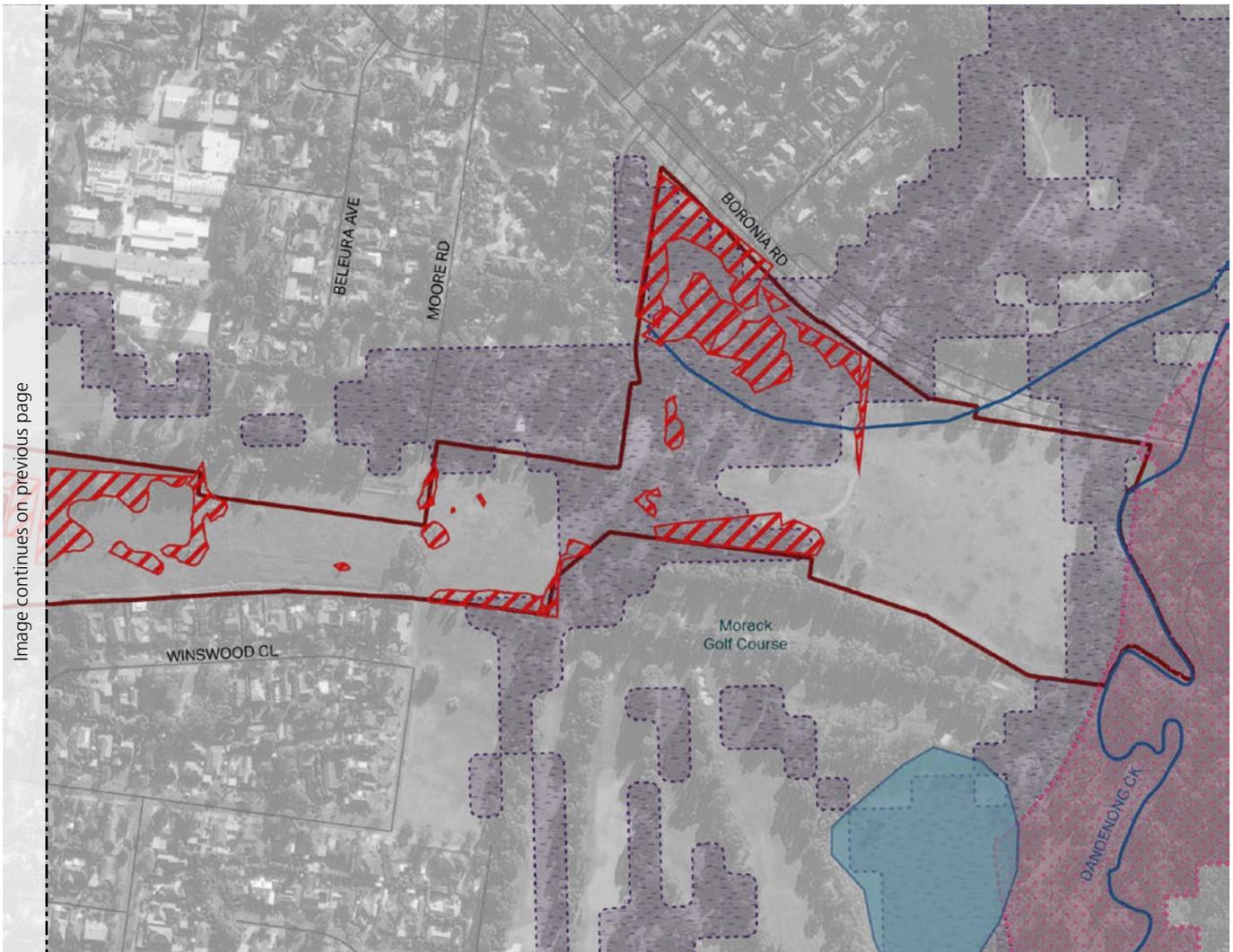


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LEGEND

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|---|--|--|
|  Site Boundary |  Valley Heathy Forest [2005 EVC 127] |  Existing Revegetation Planting |
|  Waterbody |  Swampy Riparian Complex [2005 EVC 126] |  Targeted areas for Revegetation |
|  Water Course |  Riparian Forest [2005 EVC 18] |  Areas identified for weed removal |

0 1.25 2.5km



2.9 Movement and Access

Road access to the HFR broadly stem from the roads that traverse the site: Springvale Road, Terrara Road, Morack Road, and Boronia Road. There are a number of local roads and courts that also provide access at varying intervals to either the north or south of the site.

The reserve has a series of internal informal trails traversing north-south between local streets. There is a continuous, meandering path that transitions east-west from Springvale Road to Boronia Road. Many of these paths represent 'desire lines' or are used for recreational activities like mountain biking.

Formalised, compacted gravel paths are located throughout the Bellbird Dell Reserve. Circulation within Bellbird Dell is assisted by a boardwalk system elevating users above the wetlands south of the reserve.

Five bus routes stop in streets surrounding the park including:

- Route 902 (Chelsea to Airport West) via Springvale Road
- Route 765 (Mitcham to Box Hill) via Springvale Road

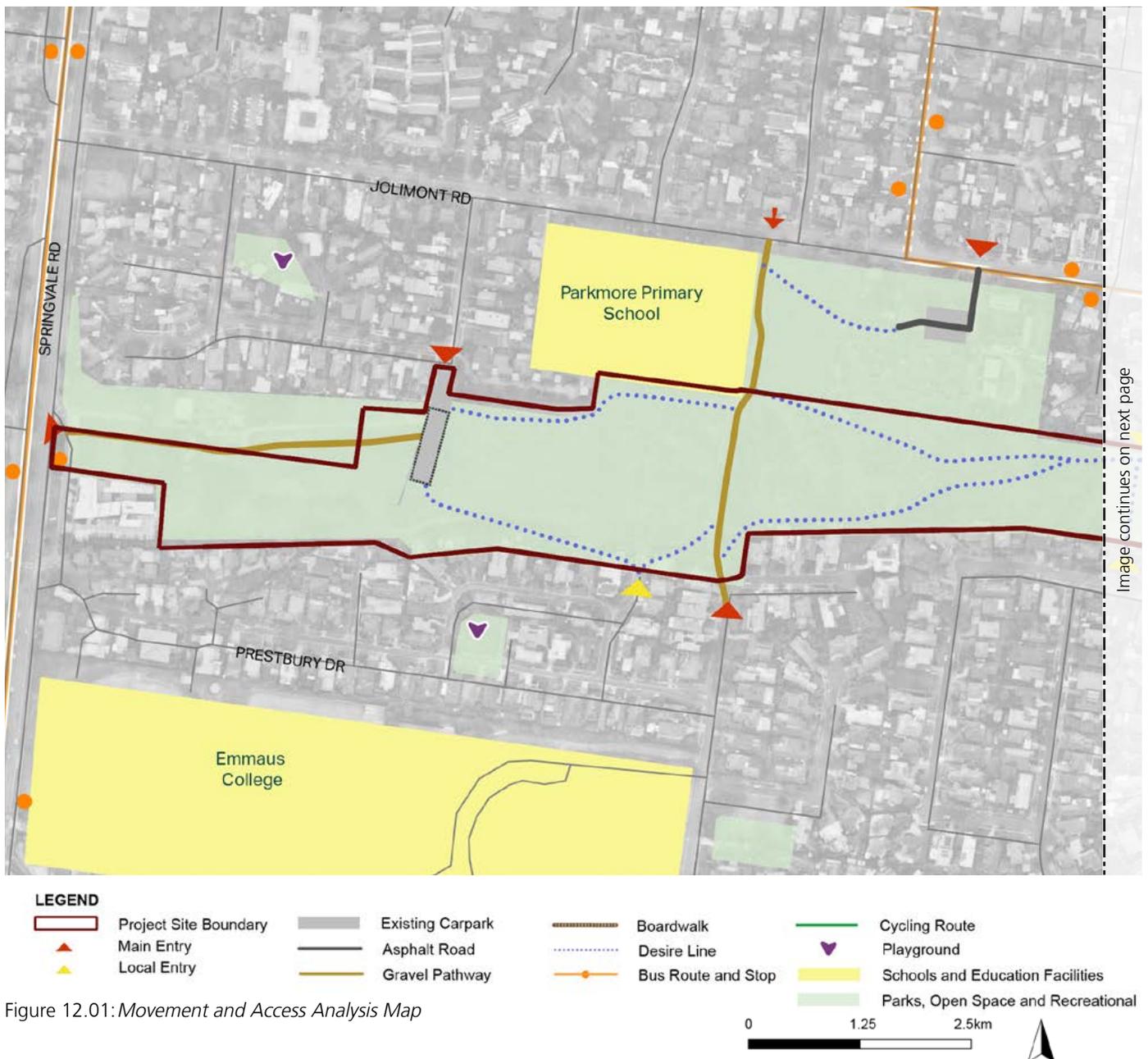


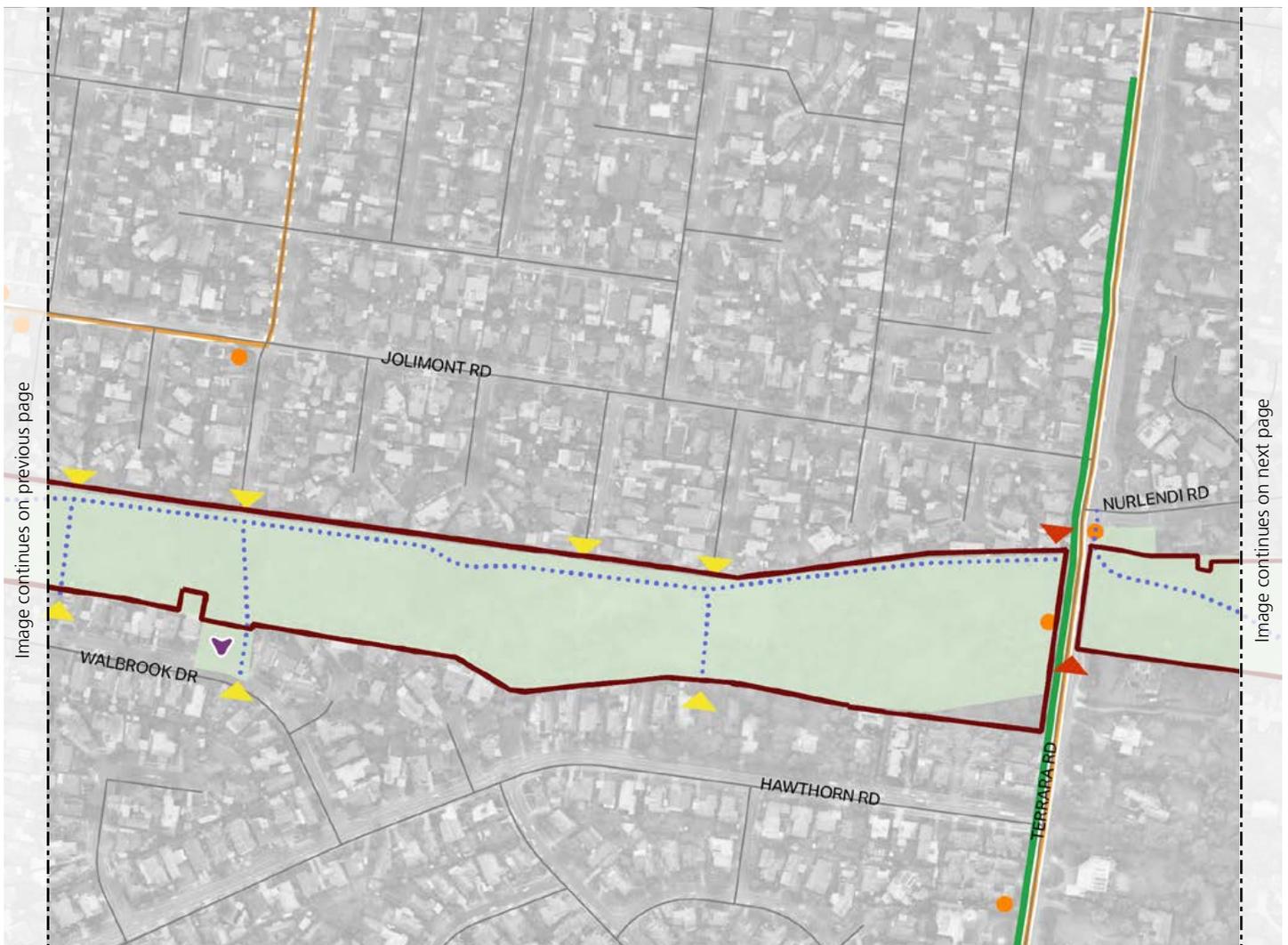
Figure 12.01: Movement and Access Analysis Map

- Route 736 (Mitcham to Blackburn) via Terrara Road
- Route 742 (Ringwood to Chadstone) via Morack Road
- Route 738 (Mitcham to Knox) via Boronia Road

There is currently only one off-street carpark with direct access to the reserve at Davy Lane. Local streets within close proximity also provide informal kerbside parking. A future carpark is proposed in the vacant lot of land between Parkmore Primary School and the Municipal Horticulture Centre

and Community Garden as part of the City of Whitehorse's Davy Lane Precinct.

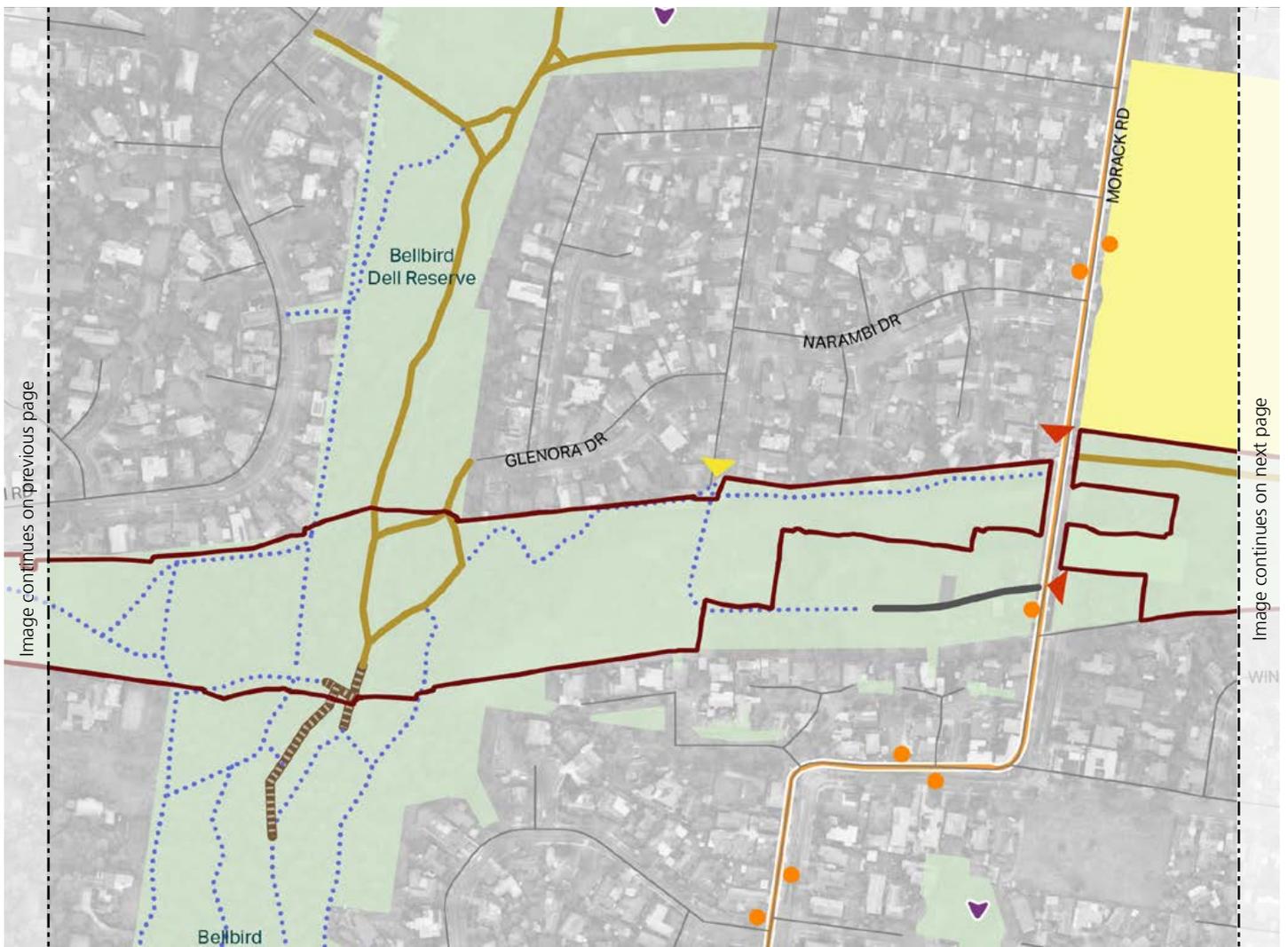
Towards the east of the site, access is restricted due to limited street access points and isolated infrastructure. Moore Road from the north and Livermore Close from the south offer off-street access to areas adjacent to the horse paddock.



LEGEND

- | | | | |
|-----------------------|------------------|--------------------|------------------------------------|
| Project Site Boundary | Existing Carpark | Boardwalk | Cycling Route |
| Main Entry | Asphalt Road | Desire Line | Playground |
| Local Entry | Gravel Pathway | Bus Route and Stop | Schools and Education Facilities |
| | | | Parks, Open Space and Recreational |





LEGEND

- | | | | |
|-----------------------|------------------|--------------------|------------------------------------|
| Project Site Boundary | Existing Carpark | Boardwalk | Cycling Route |
| Main Entry | Asphalt Road | Desire Line | Playground |
| Local Entry | Gravel Pathway | Bus Route and Stop | Schools and Education Facilities |
| | | | Parks, Open Space and Recreational |

Figure 12.02: Movement and Access Analysis Map - continued

0 1.25 2.5km



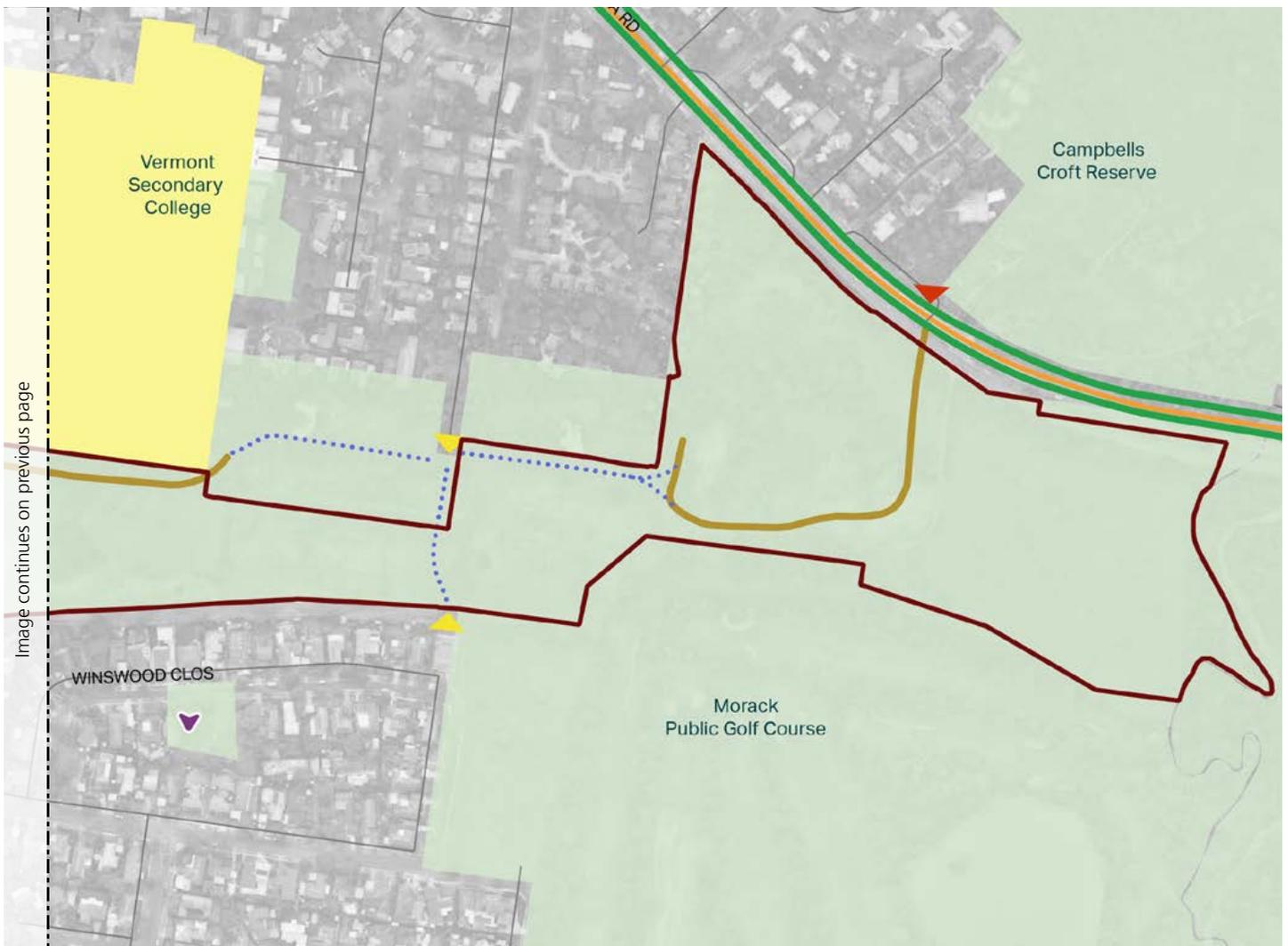


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LEGEND

- | | | | |
|-----------------------|------------------|--------------------|------------------------------------|
| Project Site Boundary | Existing Carpark | Boardwalk | Cycling Route |
| Main Entry | Asphalt Road | Desire Line | Playground |
| Local Entry | Gravel Pathway | Bus Route and Stop | Schools and Education Facilities |
| | | | Parks, Open Space and Recreational |



2.10 View Lines

The topography of the HFR allows for extensive east to west views, thus providing high scenic value to the site. Significant views are typically presented at the high points scattered throughout the reserve.

Davy Lane provides view lines almost 180 degrees from the east to the west, displaying long range views to Melbourne's southern suburbs and surrounding landscape. The reserve grades down towards the east at Davy Lane providing accentuating panoramic views of the Dandenong Ranges. This view is also prominent at the high point of the reserve, south of Vermont Secondary College where the cleared land provides a sweeping view of the hills.

Localised views are experienced throughout the reserve to varying distances dependent on vegetation coverage and topography. These are generally experienced along the existing informal trail in locations with fewer trees. In the Bellbird Dell Reserve, view lines are short and framed by the path.

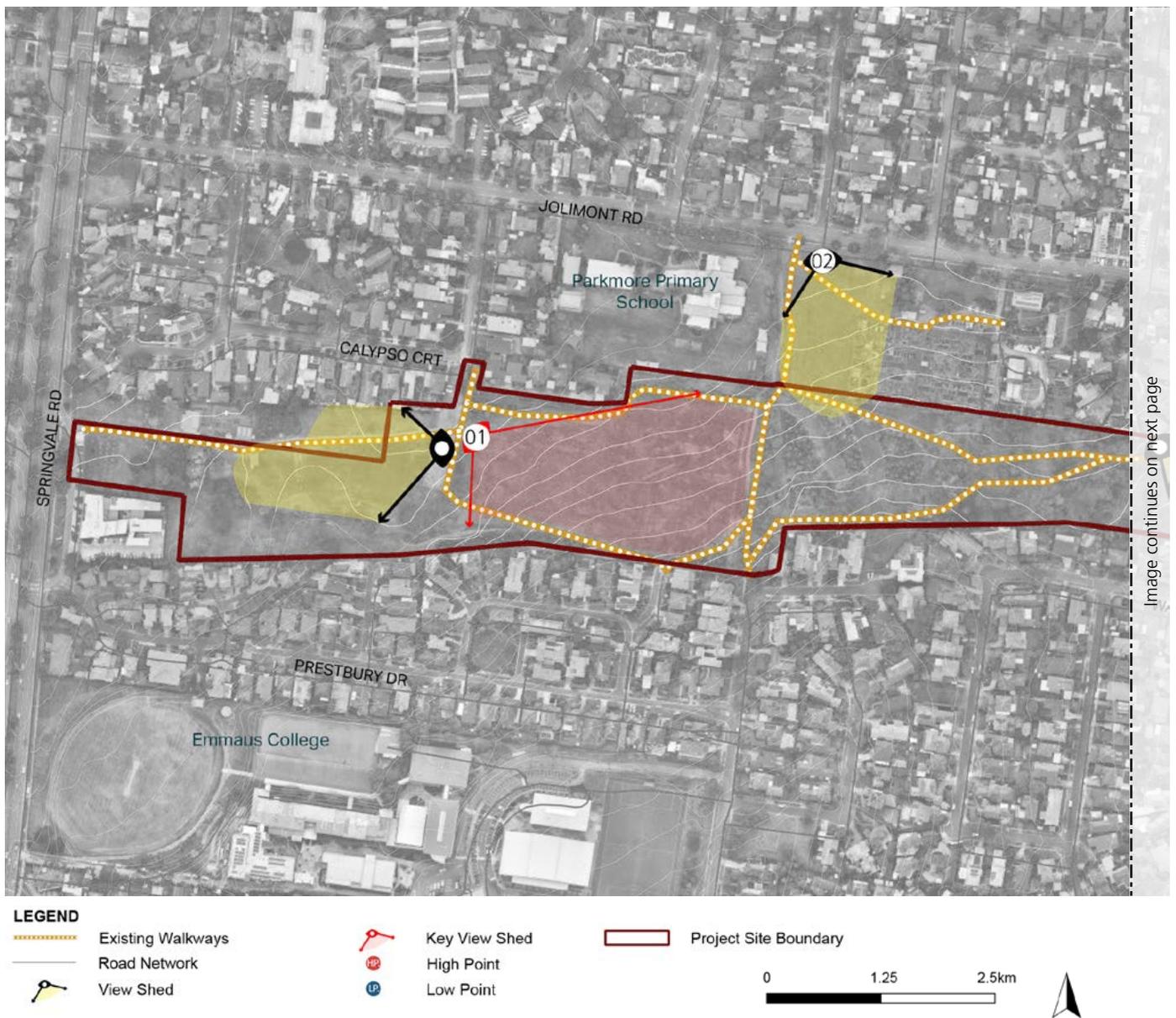


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Figure 13.01: Site View Line Analysis Map



01: View from Davy Lane looking east



02: View from Jolimont Road towards future carpark area



03: View at Terrara Road looking west



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LEGEND

- Existing Walkways
- Road Network
- View Shed

- Key View Shed
- High Point
- Low Point

- Project Site Boundary





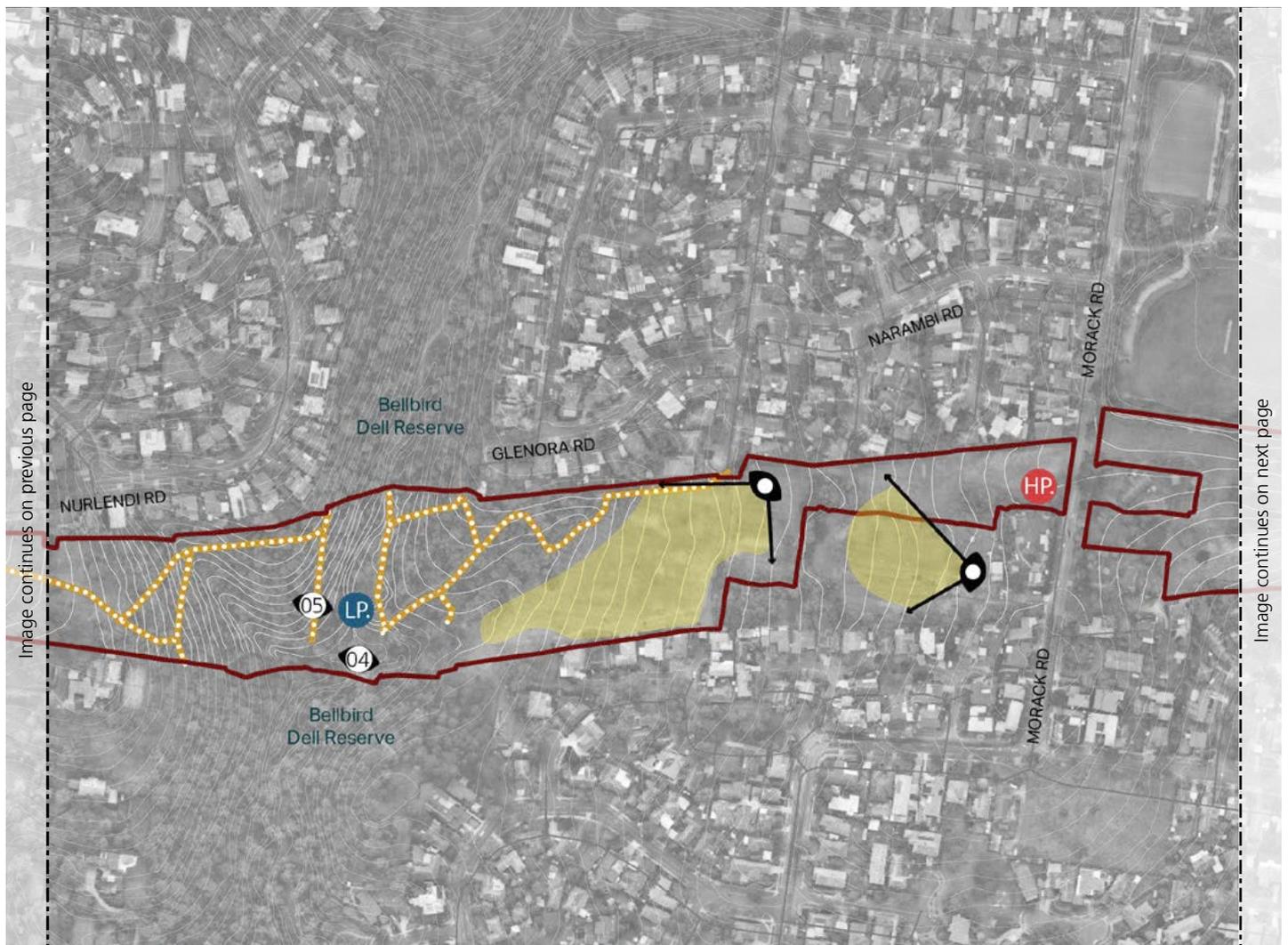
04: View from Bellbird Dell boardwalk looking south



05: View from gravel trail within the Bellbird Dell Reserve



06: View at high point of reserve east of Morack Road looking east



LEGEND

- Existing Walkways
- Road Network
- 05 View Shed
- HP Key View Shed
- LP High Point
- Low Point
- Project Site Boundary

Figure 13.02: Site View Line Analysis Map - continued





07: View at mid point of reserve east of Morack Road looking east



08: View west from Boronia Road reserve boundary

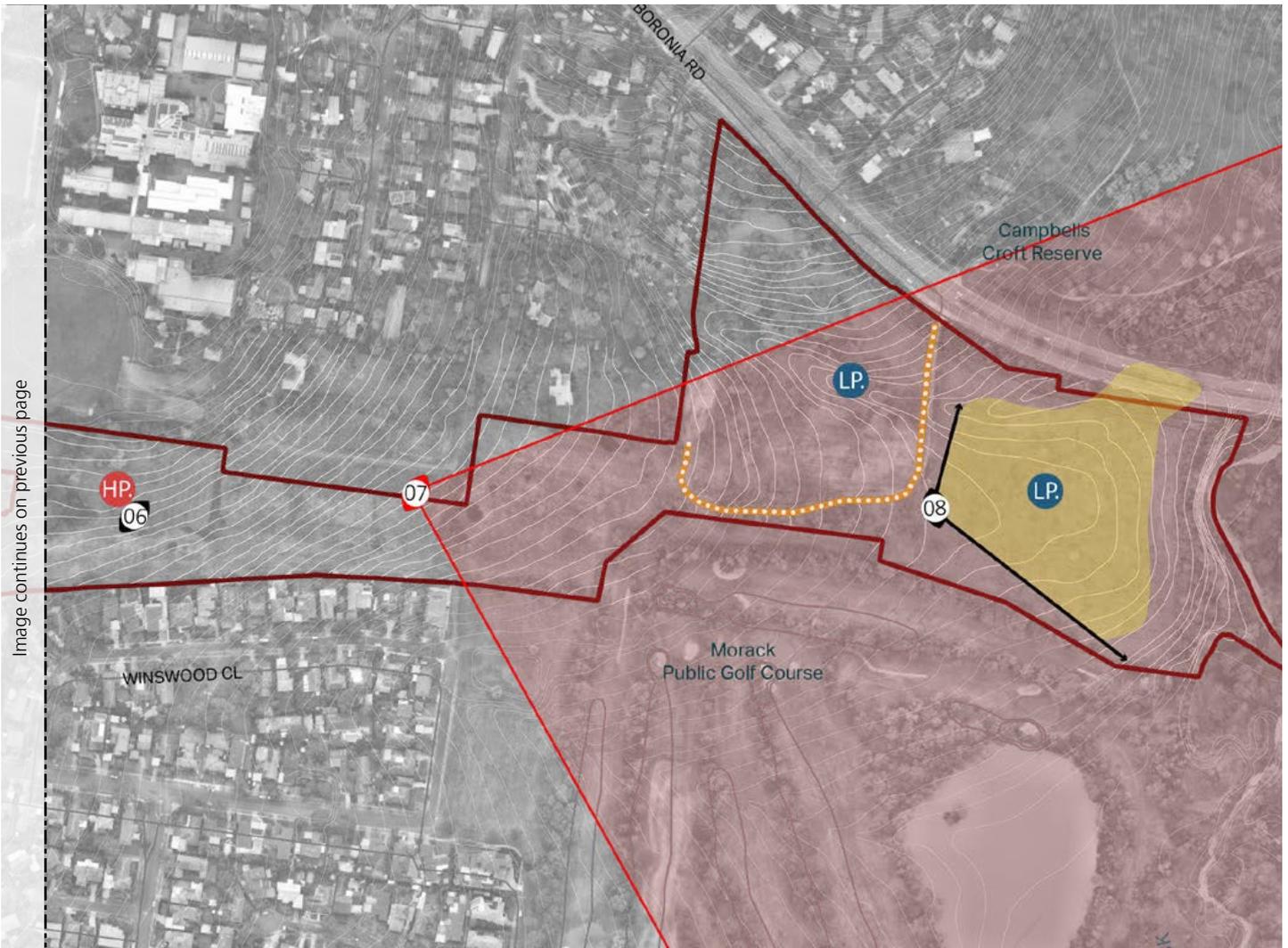


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LEGEND

- Existing Walkways
- Road Network
- View Shed
- Key View Shed
- High Point
- Low Point
- Project Site Boundary



2.11 Landscape Characters and Conditions

The existing site landscape conditions vary significantly across the HFR, presenting a collection of precincts with unique characteristics. The different management groups are detailed in Section 2.12.

Recreational Precinct

The reserve between Springvale Road and Stanley Road is dominated by introduced vegetation with a few scattered Eucalyptus trees and native revegetation. Davy Lane Reserve is currently used as an off-leash dog park and for local community sport, namely cricket.

The City of Whitehorse have proposed a concept plan to create a sport and recreation precinct at Davy Lane Reserve. This includes upgrading the oval with two floodlit sporting fields, a multi-use pavilion, multi-use outdoor training facility, and a sealed surface carpark off Jolimont Road.

Site Plan:

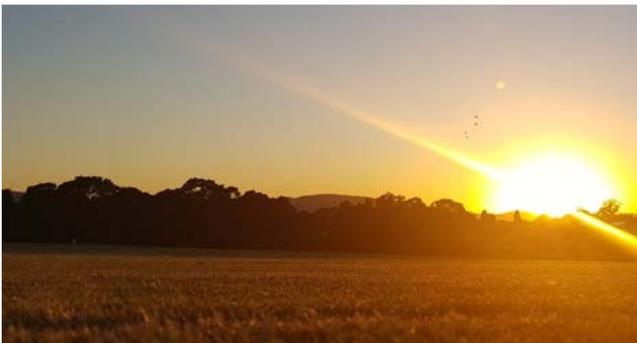
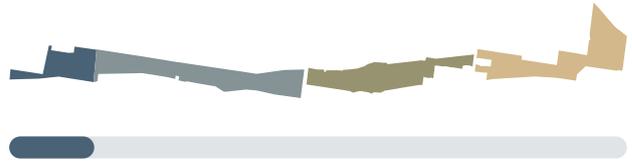


Figure 14: An array of images showing the recreational open space at Davy Lane Reserve and use as a cricket field.

Horticultural Precinct

The Municipal Horticulture Centre and Community Garden is located at Jolimont Road providing extensive plots for local residents to garden. Large native garden beds were planted by the Level Crossing Removal Project's 'offset planting initiative', located south of the gardens and in Davy Lane providing a densely vegetated area.

Between Gibbon Avenue and Moray Avenue, there are patches of high quality native vegetation. From these patches, towards Terrara Road the reserve is largely cleared with only clusters of trees remaining.

Site Plan:

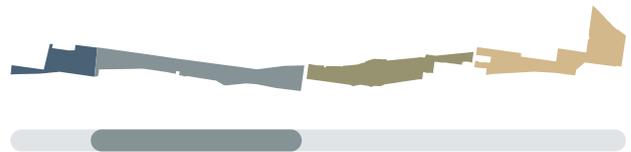


Figure 15: A mixture of images showing remnant vegetation in the reserve and the community plots in the Municipal Horticultural Centre.



Ecological Precinct

The reserve between Terrara Road and Bellbird Dell Reserve contain areas of indigenous vegetation with high conservation significance. The Bellbird Dell Reserve has a flowing stream dissecting it at its centre.

The site features predominantly indigenous vegetation with a dense grass and shrub understorey. The 'Dell' has areas of remnant vegetation, walking trails, boardwalks, wetlands, and ornamental lakes. It provides habitat for a large variety of native birds and reptiles. Colourful wildflowers scattered throughout

the Ecological precinct emerge during spring. Ecology is being preserved throughout the entire reserve.

Site Plan:

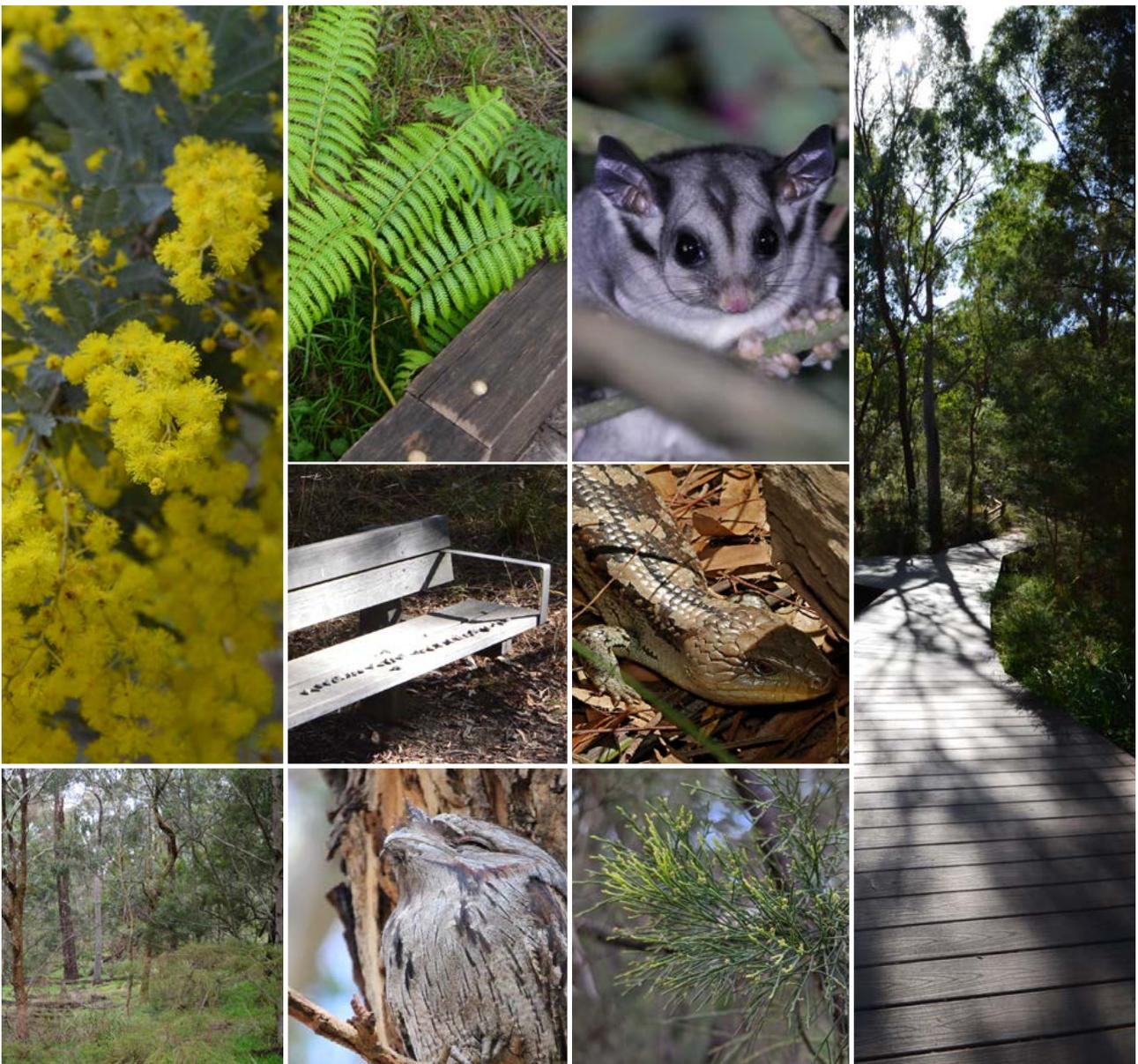
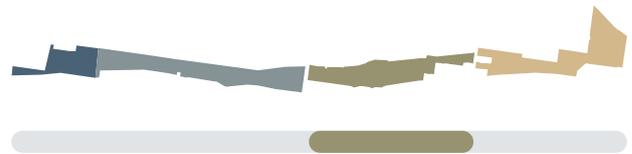


Figure 16: Images showing key fauna and flora found in the Bellbird Dell Reserve and key furniture such as seats and the boardwalk.

Historic Precinct

The reserve east of the Bellbird Dell Reserve has been heavily modified by former grazing and clearing for agricultural purposes. The alignment of allotments and vegetation types provide visual cues to the former orchards that dominated the landscape until the 1960s. The remoteness of the eastern extent of the reserve provides a rural setting and context.

The eastern reserve boundary is immediately adjacent to Dandenong Creek which supports remnant vegetation. Prior to European settlement, the land surrounding the creek and gullies would have been

used by Aboriginal Australians for camping. The under utilised expanse suffers from water-logging after heavy periods of rainfall, potentially attributed to the lack of tree vegetation. Views towards to the Dandenong Ranges contribute greatly to the Historical Precinct's landscape character.

Site Plan:

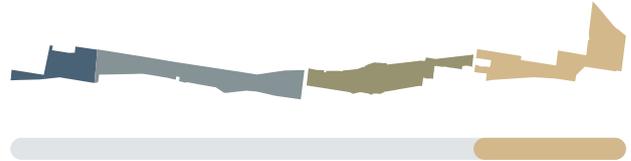


Figure 17: Images demonstrating past practices of the site including indigenous burning off, Orchard planting, and equestrian activities.



2.12 Landscape Management

The land within the Healesville Freeway Reserve is part of the Traditional Lands of the Wurundjeri people.

There are multiple public authorities and community groups managing portions of the site including Parks Victoria, City of Whitehorse and Nadrasca. The Department of Energy, Environment and Climate Action (DEECA) is responsible for administering Committees of Management of Crown land reserves.

Parks Victoria was appointed as the land manager of the reserve in September 2021 and will oversee the planning and construction of the new park.

In August 2022, Whitehorse City Council was appointed Committee of Management for the Davy Lane Reserve, Bellbird Dell Reserve, and 18th Tee of the Morack Public Golf Course in respect of former arrangements that were in place prior to Parks Victoria being appointed as land manager for the HFR.

Nadrasca is an organisation that provides a community environment and services for people with disabilities. 'The Farm' at Morack Road allows participants to develop valuable skills and build social and community connections. The rural environment includes herb and vegetable gardens, equipment and



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LEGEND

- | | | | | | |
|---|--|---|--|---|--|
|  | Project Site Boundary |  | City of Whitehorse Management |  | Proposed NADRASCA Management (subject to DEECA approvals)* |
|  | PV Management |  | Proposed City of Whitehorse Management |  | Bellbird Dell Friends of Community Group |
|  | Proposed PV Management *This area will remain as public open space irrespective of any changes in land management |  | NADRASCA Management | | |



Figure 18: Landscape Management Map

woodworking sheds, a sanctuary garden, and a few sheep. The site is proposed to extend to the Council boundary at the east side of the Bellbird Dell. The park design will aim to sensitively integrate Nadrasca while being mindful that the site is under separate management agreements to the park. Opportunities will be explored to celebrate and share the work that occurs at 'The Farm' with park users.

There are two active friends groups that operate in the reserve, the Friends of Healesville Freeway Reserve, and Friends of Bellbird Dell.

These groups provide opportunities for residents to

be actively involved in the planning, promotion, and care of the parkland. The committee runs regular working bees, school planting sessions, basic vegetation/weed surveying and fire management, community BBQs, and provides information on local notice boards.



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LEGEND

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|--|--|--|
| Project Site Boundary | City of Whitehorse Management | Proposed NADRASCA Management (subject to DEECA approvals)* |
| PV Management | Proposed City of Whitehorse Management | Bellbird Dell Friends of Community Group |
| Proposed PV Management *This area will remain as public open space irrespective of any changes in land management | NADRASCA Management | |





Elevated eastern view above WCC land
Healesville Freeway Reserve



3.0 Project Overview

The Victorian State Government has committed to transferring the undeveloped HFR to public open space. The 35 hectare reserve stretches 3.5 kilometres from Springvale Road in Forest Hill to Boronia Road in Vermont. The reserve has been transferred to Parks Victoria to manage and establish as a new linear public park for community enjoyment.

The reserve will provide a range of amenities including a shared use trail to create a safe and accessible visitor experience. Other amenities support recreational activities, including play areas, picnic facilities, seating, drinking fountains, lighting, a toilet block, cycle pump track, and wayfinding and educational signage.

A major design consideration will be the protection and enhancement of remnant native vegetation and cultural values of the site.



3.1 Traditional Owner Engagement

Greenshoot Consulting have been engaged to undertake comprehensive Traditional Owner Engagement to inform the design of HFR in alignment with the International Indigenous Design Charter. Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation (WWCHAC) are the Registered Aboriginal Party for the HFR. The objective of engagement with the Wurundjeri Elders is to embed and celebrate First People's cultural stories in the design of the park, and gain support and guidance on renaming the reserve.

Opportunities for the development of interpretive content and cultural translation of other design elements that celebrate and amplify culture will be guided by Wurundjeri Elders.

Critical Success Principles

Six key success principles have been identified by Greenshoot to guide the development of the HFR. These principles ensure that engagement with Wurundjeri Elders covers a broad range of opportunities for input into the design of the reserve to help reveal the layers of history and place.



Figure 19: Traditional Owner Critical Success Principles

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3.2 Community Engagement

Engagement with community and key stakeholders has informed the development of the Park Layout Plan and scope of works, and was key in driving the decision to protect this land for future use as a park.

Department Environment, Land, Water and Planning (DELWP)

In 2016, DELWP engaged CoDesign Studio to lead the development and delivery of engagement activities to shape the future of the HFR, understand the current park function, and identify potential uses.

A Project Reference Group (PRG) made up of community stakeholders and interest group representatives, and local and state government representatives was established and served as an advisor to DELWP in the development of the 2018 HFR Concept Plan. Further consultation was undertaken with the broader community with over 2100 people engaged and 620 providing feedback.

Four key themes emerged from community feedback:

- Access and trails
- Nature and biodiversity
- Activity and active spaces
- Community and gathering

General comments from respondents included creating a shared path connecting the full length of the reserve, removing redundant fences, dedicated spaces for dogs, increased biodiversity and natural areas, open spaces for play, active sport and facilities, and future amenities being located across the entire reserve. Lighting, toilets, and parking were also important elements, with opportunities to incorporate education, community facilities, cafes, and other amenity. Walking and being part of nature were key activities respondents wanted to see in the park.

Parks Victoria

Parks Victoria became land manager of the HFR in September 2021 and commenced engagement with near neighbours. Activities undertaken over the ensuing two years included:

- letter drops, social media post, posters
- Expressions of Interest for a Community Reference Group (CRG), and five CRG sessions
- two online information sessions with near neighbours
- a drop-in session, an in-park pop-up engagement opportunity, and an online survey on the Engage Victoria webpage

Community Reference Group

In December 2021, a group of 30 CRG participants were selected from 111 applications to meet a diversity of community demographic and interest group representation. The CRG was asked to reflect on the 2018 DELWP Concept Plan, share ideas on future park amenity and refine recommendations. Participants were provided with updates about on-ground investigations and scope refinements, and ultimately a Park Layout Plan was drafted based on their inputs and other on-site research findings.

The CRG attended additional sessions for a briefing at the release of the draft Park Layout Plan, and again met following the close of community engagement to assess results and have input on the final Park Layout Plan.

Parks Victoria is grateful to the CRG for their work and commitment in bringing this Park Layout Plan to fruition.

Guiding Principles

The CRG sessions informed a set of Guiding Principles for the project. They were to:

- minimise impacts to Aboriginal cultural heritage and post-settlement heritage
- minimise impacts to the existing natural environment and improve the natural environment and biodiversity over time
- provide a variety of places for community to relax and unwind, and to gather, exercise and play

- provide a shared trail running the full length of the park, with other trails to connect key locations and create different experiences
- increase access to parks for people of all-abilities
- involve existing and new communities in the creation and maintenance of the park
- create opportunities for people to learn about the natural environment, Aboriginal Cultural Heritage and post-settlement history of the area.

Park Amenities – ideation and refinement

CRG participants were asked to share ideas, discuss, and refine park amenities under key themes. The statements presented below were largely agreed, but areas of disagreement have been noted.

Play Spaces

Participants broadly agreed that the play spaces should be:

- accessible to all-abilities, wherever possible
- natural (equipment and materials)
- adventurous
- provide for different age groups
- avoided in areas of high environmental value
- scattered throughout the park.

Participants largely agreed that play spaces and high activity areas should be kept separate from more passive recreation areas, though some were uncertain.

Sporting and Activities

There was mixed support for sporting activities in the reserve. Some participants supported sporting fields and activities throughout, while others supported their development at Davy Lane Reserve only. Some participants commented on the City of Whitehorse's planned development at Davy Lane Reserve* with concern regarding environmental impacts and provision of lighting. The majority of participants agreed to the following statements regarding sporting and activity areas:

- an enclosed off-lead dog walking should be included
- park activities should cater for a range of users
- the park should include a mountain bike pump track beginners/child-friendly.

Other sporting elements were discussed and received mixed or low levels of support.

The Trail

Participants discussed how the trail would cross the Bellbird Dell area and wished to minimise environmental impacts. They also discussed the slope and noted a will for ease of crossing for cyclists and people of all abilities. They agreed that the trail should:

- provide an end-to-end journey
- aim to minimise gradient changes where possible
- should prioritise all-abilities access
- be executed with minimal impacts to Cultural heritage, post-settlement heritage and environmentally sensitive areas
- have safe-road crossings implemented as required
- connect high-activity areas such as playscapes and sporting areas
- be planned with consideration for neighbouring houses
- use varied surface materials to meet on-site conditions and use
- be planned to allow sight lines through isolated areas for improved safety.

Some participants suggested providing secondary trails to offer a variety of experiences and reduce user conflict. Some participants were uncertain about allowing for sightlines if it required removal of vegetation and they preferred to feel immersed in nature. Participants debated the material of the trail, speed of use and potential user conflicts.

*At the time of CRG session 3, Davy Lane was being investigated for sporting activity through the Whitehorse City Council planning process. Whitehorse City Council has since been confirmed as a committee of management for the Davy Lane area and is pursuing development of sporting fields in this area.



It was acknowledged that accessible grades may not be achieved across the whole site due to existing topography, but the trail should still go through these areas.

Other Amenities

Finding a balance of amenity and protecting environment was frequently discussed by the CRG. Participants largely agreed that:

- additional car-parking should be included to minimise impacts to neighbouring streets, well-lit for safety and located near high-use facilities such as sports fields and picnic areas
- lighting should be planned to minimise impact to wildlife
- picnic areas should be included with accessible seating, and seating materials should be vandal resistant
- some natural seating areas like rocks or logs should be included
- toilets should be accessible and included in high activity areas/play areas
- lighting should be on timers and no lighting added in the Bellbird Dell area.

There was debate about carparking and lighting with environmental impacts the key concern.

Nature and Biodiversity

There was high level agreement that protecting nature and biodiversity is important., noting:

- areas of high natural value should be protected or restored, with biodiversity improved, aiming to create ecological connections to adjacent reserves
- habitats such as nest boxes and hollows should be included, and means to protect wildlife from pets and human impacts such as road crossings applied
- educational opportunities should be included in the park
- community should be welcomed to participate in conservation efforts through volunteering
- aquatic habitats should be retained or restored

- bushfire risk should be minimised through park planning and maintenance, heat resilient or climate change resilient planting and indigenous vegetation should be included/prioritised.

Park Layout Mapping

On a map of the reserve, CRG participants were asked to demonstrate their preferred location for park amenities, key connections, and areas of perceived environmental value.

- Participants grouped higher activity areas such as picnic and play areas with other amenities.
- Activity areas were scattered across the length of the park.
- Sporting facilities were only mapped in the Davy Lane area.
- Connecting pathways was a point of interest for cyclists in the room.
- Participants debated the inclusion and potential impact of amenity in the Bellbird Dell Reserve
- Participants noted that more information on areas of environmental significance should allow for better informed placement of activity areas and amenity.

The map and discussion informed the development of the Park Layout Plan.

Broad engagement

Engagement was opened for the broader community in October - November 2022. Approximately 170 people shared their ideas on the project by completing an online survey, providing a submission, or joining a drop-in or pop-up event.

Overall there was a high level of agreement (81%) with the following four statements about the draft Plan:

- The park will be a place community can enjoy.
- The natural environment and biodiversity will be protected and enhanced.
- The park includes the right amount of amenities (trails, toilets, car parking, seating, signage etc.).
- The plan balances allowing for recreation and enjoyment, and protecting and enhancing the environment.

Key things we heard from broad engagement:

Shared use trail

Participants were most excited about the shared use trail and new connections for the community with most saying they would access the park by walking or cycling. Some suggested alternative routes for the trail, particularly near Boronia Road, Bellbird Dell, and Davy Lane.

Some were concerned about the shared use trail width, materials, gradients, connections, user conflicts, and environmental impacts.

Activity areas and bicycle pump track

Participants mostly preferred that activity spaces were accessible and located close to main roads, car parks, and other amenities such as schools. Many noted a preference for activity spaces to be evenly spaced throughout the park, and most were supportive of the inclusion of a beginner-level bicycle pump track.

Some were concerned about development plans for the Davy Lane precinct and the Nadrasca farm site. A lack of space for off-lead dog walking was also noted.

Environmental protection

Participants said that they were excited about improvements to the natural environment and wished to see vegetation and wildlife habitats protected.

Some expressed concerns about infrastructure impacts on the natural environment.



3.3 Response to Community Engagement

The following table outlines the design response to what was heard through the 2016 DELWP engagement process and the Parks Victoria engagement with the CRG and broader community.

| Theme | Design Response |
|---------------------------------|---|
| Play spaces | <p>Each playscape is designed to integrate with the local site context. The selection of colours, materials, and plant species is informed by the natural environment.</p> <p>The distribution of play spaces is evenly located across the reserve considering existing play infrastructure in the local area. It is intended that one play space will be in the centre, and one in the west of the reserve. A playscape planned for the west of the reserve will not be completed as it is a duplication of existing facilities. Instead a sensory garden will be included in the west of the reserve adjacent Nadrasca Farm.</p> <p>Play spaces will have small footprints that provide a few different nature-based and traditional play elements such as swings, timber logs and steppers, balance beams, and play boulders. These elements may vary depending on product availability. The play spaces will be located on flat ground to provide all abilities access.</p> |
| Sport and activity areas | <p>Sporting activity will be located in the Davy Lane Precinct by Whitehorse City Council. Some open areas will be available for informal sport, passive recreation and gathering. A proposal for disc-golf will be considered for a temporary trial period in the park, with further information to be provided in the future. Other areas of the park will focus on conservation and protecting the natural environment.</p> <p>Off-lead dog walking will be allowed on the sports fields when not in use by other sporting or community groups. Council is also considering feedback from community on encouraging and better supporting dog activity at Davy Lane.</p> |
| Gathering spaces | <p>A number of gathering spaces will be provided throughout the reserve to provide places for community to meet and spend time in the park. The main gathering spaces will be co-located with the play spaces. There will also be informal seating throughout the trail alignment, which will also provide rest areas for steep sections of the trail.</p> <p>These places will include varying levels of amenity depending on location within the park and may include picnic shelters and tables, benches, sheltered BBQs and drinking fountains. Pole mounted solar lighting will be provided where appropriate.</p> |
| The trail | <p>The project will deliver a shared use trail from east-west for pedestrians and cyclists which will predominantly be granitic gravel with small concrete sections that connect to existing paths, carparks, or where required due to steep grades. The stabilised granitic gravel will provide a stable surface that remains permeable, thus reducing environmental impacts whilst managing cyclist speeds. The intention is to provide a safe path that prioritises recreational use.</p> <p>Some participants wished to see paths for cyclist and pedestrians separated, however provision of two separate paths would negatively impact the environment due to the large increase in hard surfaces and subsequent vegetation removal. Secondary paths have been incorporated into the design where appropriate to provide an alternative experience for pedestrians.</p> <p>Initial community feedback has confirmed that the Bellbird Dell should be preserved and retained as a tranquil recreation area. Though the existing path through the Dell has steep gradients, the least environmental impactful design option is to improve the existing Whitehorse Council path and boardwalk network through the Dell to make it suitable as a shared-use path.</p> |

Theme**Design Response**

Natural environment

The planting strategy for the reserve focuses on increasing biodiversity and restoring the landscape to its natural condition. The proposed species are predominantly indigenous or native and have been selected based on local EVCs. Plant species, logs and rocks will be strategically located through the reserve to provide habitat and support local fauna.

Flooding and waterlogging has been identified as an issue in areas of the reserve, natural water management techniques will be implemented to help mitigate this. These water sensitive urban design (WSUD) features will be designed in collaboration with hydraulic engineers to provide elements such as swales and dry creek beds within the reserve. This will create natural pools of water in wet periods.

Lighting will be strategically placed along high trafficked north-south sections of paths, in carparks and at activity spaces, picnic spaces and with picnic settings. A mix of solar powered and main powered lighting will be provided throughout the park. The lighting design will be considerate towards sensitive fauna and neighbouring properties and will include the use of timers and motion sensor dimmers.

One toilet block will be provided at either end of the reserve near Davy Lane and the eastern activity space (off Boronia Road). Each block will have one accessible cubicle. These locations have been chosen following an assessment of utility connection points. The final positioning of toilet blocks will be subject to advice from utility providers.

Other amenity

Two off-street carparks will be provided for users of the reserve, one off Jolimont Road near the Municipal Horticultural Centre. The second will be located off Boronia Road near the eastern activity area, providing 20 car spaces each. The carpark designs will be placed to minimise impacts to existing mature trees and topography. The car park locations also allow for future expansion when the need arises.

All furniture and materials have been selected to reflect the natural environment while being vandal resistant to minimise damage and maintenance requirements. Where possible elements will be sourced from recycled materials or use felled trees from site such as garden bed mulch, habitat logs, or play features.





View up through tree canopy
Healesville Freeway Reserve



4.0 Concept Plan Vision



4.1 Concept Design Vision

The revitalisation of the Healesville Freeway Reserve encompasses a broad series of initiatives spanning an extensive geographical extent.

The vision statement and corresponding concept design principles were developed following engagement with Traditional Owners and community.

The Concept Design outlines a vision for the Healesville Freeway Reserve that will:

- Deliver a shared trail that connects the site from east to west, enabling safe, universal access and easy to navigate pedestrian and cyclist links to key locations.
- Support a diversity of user experiences through the creation of spaces for community to gather, relax, play, and exercise.
- Incorporate and acknowledge ecological, aboriginal cultural, and post-settlement values throughout the reserve providing opportunities to learn from and celebrate local histories.
- Enhance and restore the natural environment to increase biodiversity links and create a strong landscape character.



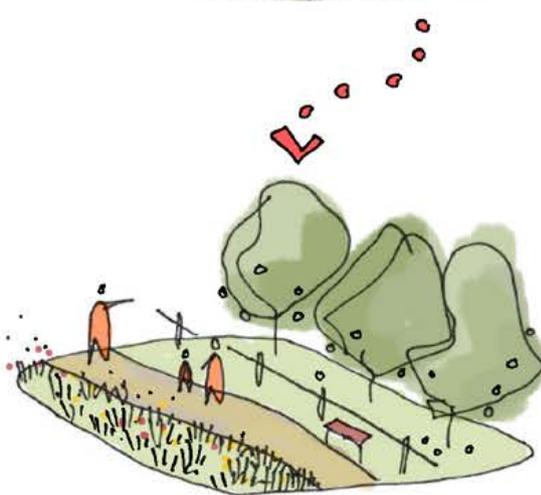
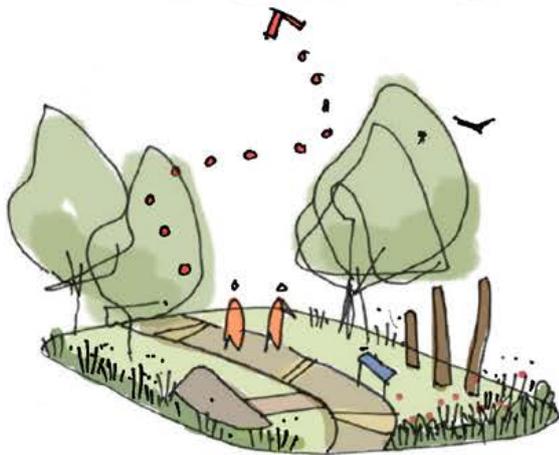
Figure 20: *View east towards the Dandenong Ranges*



To create an immersive destination that nourishes the human experience, strengthens community links, and enables new recreational and educational opportunities, and to protect and enhance the environment while enabling the reserve's diverse environmental, Aboriginal cultural, and historic qualities to be expressed.



4.2 Concept Design Principles



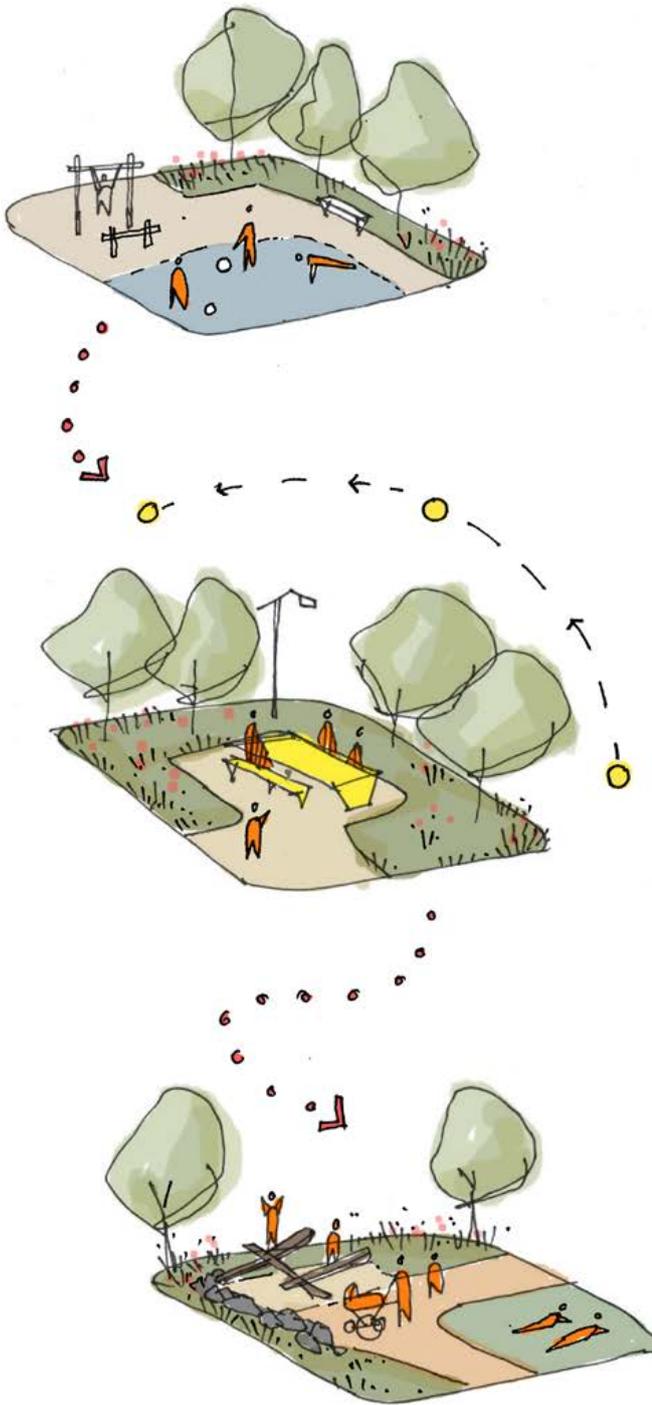
Culturally Responsive Design

Embedding cultural perspectives to generate a voice for Indigenous and post-settlement history



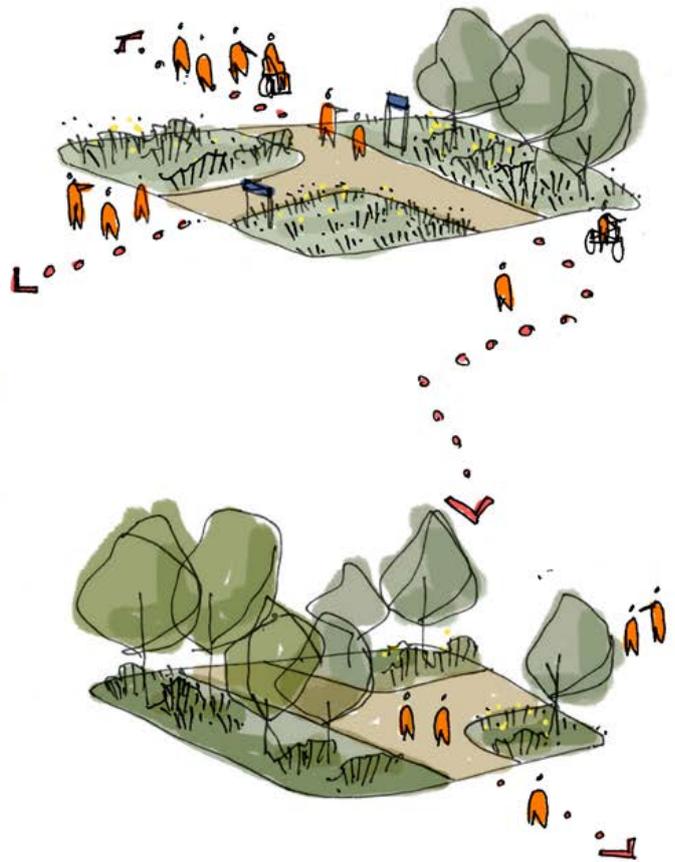
An Enriching Landscape

Enhance and protect environmentally significant characteristics of the landscape



Celebrate Inclusivity and Sense of Community

Attract users of all demographics and abilities with places to gather, exercise, play and unwind.



Accessible Parklands

Provide immersive spaces that connect to the broader area.





Existing pathway under tree structure
Healesville Freeway Reserve



5.0 Park Layout Plan



5.1 Park Layout Plan Overview

The Concept Design vision, principles, project brief and community engagement process contained within the Concept Design Report has guided the development of the project's Park Layout Plan. The Park Layout Plan aims to provide amenities to cater for local residents and encourage activation. Refer to the Park Layout Plan (section 5.2) for feature locations.

The following elements are proposed to be delivered as part of the project scope:

Shared Path

A shared pedestrian and cycle path will traverse the site from west to east and connect into the Dandenong Creek Trail. The path will comply with Parks Victoria Grade 2 Trail, to be suitable for wheelchair users with some assistance. The final alignment and gradient steepness will aim to not exceed 1:10 and have the smallest impact on existing vegetation. The path will be approximately 2.5m wide and be suitable for a maintenance vehicle to travel along.

----- Secondary paths will connect to local access points and provide an alternative track for pedestrians (subject to project budget).

Toilet Blocks (x2)

An toilet block will be provided in the west near Davy Lane. A second toilet block with two cubicles (one accessible) will be provided at the east of the reserve close to the proposed activity space. The exact locations will be informed by the locations of existing services.

Water Drinking Fountains

Water drinking fountains with dog bowls and water bottle taps will be provided along the trail and at each activity space. The locations are limited to where existing water services are located.

Picnic Areas

Three areas have been identified as locations to provide new picnic tables. These include:

- Activity Spaces
- Stevens Road to complement the existing Walbrook Drive Reserve play equipment
- Bellara Road to formalise existing outdoor furniture
- South of Vermont Secondary College

Seating

Accessible seating will be placed along the trail to provide rest points, opportunities to enjoy local views, whilst being within close proximity to existing amenities.

Lighting

Potential lighting has been identified along high trafficked north-south path connections, in carparks, and activity spaces, picnic spaces and with picnic settings. Lights will use solar lamp posts and consider timers to light the space during periods of low light while being sensitive to fauna.

Signage and Wayfinding

Directional signage will be provided throughout the reserve to assist wayfinding and distances to key amenities. Educational and interpretive signage will also be provided to detail ecological and historical features of the park. Refer to Section 7.0.

Carparks (x2)

The existing Davy Lane carpark will be formalised and extended into the reserve to provide approximately 20 car spaces. This carpark will be located west of the City of Whitehorse's Davy Lane Precinct.

A second carpark will be provided next to the Eastern Activity Space with approximately 20 car spaces. The car park will be designed to minimise impacts to existing mature trees and topography, and reduce user conflict.

Planting

Proposed planting aims to optimise aesthetic and environmental values by providing tree canopy cover and a variety of understorey planting that reflects the natural environment. Refer to Section 5.3 for more detail on the Planting Strategy.

Habitat boxes

Habitat boxes will be located strategically throughout the park to provide habitat opportunities to select wildlife.

5.2 Park Layout Plan



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Legend

- | | | | | |
|--------------------------------|----------------------|----------------------------|----------------------------------|-----------------------------|
| Project Study Area | Existing Path | Proposed Toilet Block | Proposed Dog Off-Leash Area | Proposed Davy Lane Precinct |
| Existing Trees | Proposed Playground | Proposed Park Bench Seat | Proposed Planting | Proposed Nadrasca Expansion |
| Shared Path (2.5m wide) | Proposed Pump Track | Proposed Drinking Fountain | Proposed Asphalt Carpark | |
| Secondary Path (max 2.0m wide) | Proposed Picnic Area | Proposed Habitat Boxes | Existing Bellbird Dell Boardwalk | |



Figure 20.01: Park Layout Plan - Sheet 1



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Legend

- | | | | | |
|--------------------------------|----------------------|----------------------------|----------------------------------|-----------------------------|
| Project Study Area | Existing Path | Proposed Toilet Block | Proposed Dog Off-Leash Area | Proposed Davy Lane Precinct |
| Existing Trees | Proposed Playground | Proposed Park Bench Seat | Proposed Planting | Proposed Nadrasca Expansion |
| Shared Path (2.5m wide) | Proposed Pump Track | Proposed Drinking Fountain | Proposed Asphalt Carpark | |
| Secondary Path (max 2.0m wide) | Proposed Picnic Area | Proposed Habitat Boxes | Existing Bellbird Dell Boardwalk | |



Figure 20.02: Park Layout Plan - Sheet 2





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Legend

- | | | | | |
|--------------------------------|----------------------|----------------------------|----------------------------------|-----------------------------|
| Project Study Area | Existing Path | Proposed Toilet Block | Proposed Dog Off-Leash Area | Proposed Davy Lane Precinct |
| Existing Trees | Proposed Playground | Proposed Park Bench Seat | Proposed Planting | Proposed Nadrasca Expansion |
| Shared Path (2.5m wide) | Proposed Pump Track | Proposed Drinking Fountain | Proposed Asphalt Carpark | |
| Secondary Path (max 2.0m wide) | Proposed Picnic Area | Proposed Habitat Boxes | Existing Bellbird Dell Boardwalk | |



Figure 20.03: Park Layout Plan - Sheet 3



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Legend

- | | | | | |
|--------------------------------|----------------------|----------------------------|----------------------------------|-----------------------------|
| Project Study Area | Existing Path | Proposed Toilet Block | Proposed Dog Off-Leash Area | Proposed Davy Lane Precinct |
| Existing Trees | Proposed Playground | Proposed Park Bench Seat | Proposed Planting | Proposed Nadrasca Expansion |
| Shared Path (2.5m wide) | Proposed Pump Track | Proposed Drinking Fountain | Proposed Asphalt Carpark | |
| Secondary Path (max 2.0m wide) | Proposed Picnic Area | Proposed Habitat Boxes | Existing Bellbird Dell Boardwalk | |



Figure 20.04: Park Layout Plan - Sheet 4



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Legend

- | | | | | |
|--------------------------------|----------------------|----------------------------|----------------------------------|-----------------------------|
| Project Study Area | Existing Path | Proposed Toilet Block | Proposed Dog Off-Leash Area | Proposed Davy Lane Precinct |
| Existing Trees | Proposed Playground | Proposed Park Bench Seat | Proposed Planting | Proposed Nadrasca Expansion |
| Shared Path (2.5m wide) | Proposed Pump Track | Proposed Drinking Fountain | Proposed Asphalt Carpark | |
| Secondary Path (max 2.0m wide) | Proposed Picnic Area | Proposed Habitat Boxes | Existing Bellbird Dell Boardwalk | |



Figure 20.05: Park Layout Plan - Sheet 5

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5.3 Planting Strategy

The extensive planting strategy for Healesville Freeway Reserve is focused on enhancing biodiversity and environmental value. As a result, the nominated species palette comprise of planting varieties that are predominately indigenous to the area.

The planting strategy involves seven unique planting mix typologies utilised across the reserve. Each mix contain species which compliment one another ecologically and aesthetically, and collectively serve for a specific design intent.

In addition to the strategy's planting typologies, the project's planting strategy involves contributive actions and initiatives.

The planting strategy aims to capture possible planting opportunities throughout the reserve. This strategy will be further refined through community engagement, reduction of impacts to sensitive areas, and available project budget.

Weed Removal

Weed removal is required in a number of areas identified throughout the reserve's existing vegetation profile. Given the extent and vegetation density of the weeds, it is not expected that all areas will be completely cleared as part of the project. Weed removal will be prioritised in areas directly interfacing with the proposed path alignment, park amenities such as playgrounds, picnic settings, and seating, and the severity of the weed species.

North East Link Project Offset Planting

The Healesville Freeway Reserve project has been identified as a potential site for offset planting as part of the North East Link Project's Offset Tree Planting Program. For every tree removed to build North East Link Project, at least 2 new specimens will be planted to achieve a net gain in tree canopy by 2045. The installation and establishment of approximately 500 trees have been proposed within the reserve.

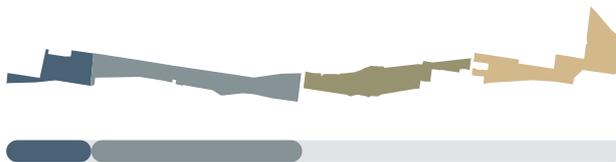
Plant Procurement and Acclimatisation

To prepare for climate change and integrate climate resilience, it is proposed that seed and tube stock will be sourced from a range of different provenances. The largest proportion of plant stock (70%) should be local, 20% of the plants should be from hotter and drier climates (10% from a 2050 climate analogue and 10% from a 2090 climate analogue), and 10% from a wetter, cooler climate (DELWP, 2009). Climate analogues for Melbourne in 2050 include, Young, Cootamundra, Wagga Wagga, Corowa, Albury-Wodonga, Wangaratta, and Benalla.

Woodland Revegetation Planting

The Recreational and Horticultural Precinct at the western end of the reserve are characterised by woodland vegetation. The planting palette aims to provide understorey planting with clusters of trees to reflect the Valley Heathy Forest (EVC 127).

Site Plan:



| Botanical name | Common Name | IN/N/EX |
|---|------------------------|---------|
| Trees | | |
| <i>Eucalyptus cephalocarpa</i> | Silverleaf Stringybark | IN |
| <i>Eucalyptus goniocalyx</i> | Long-leaved Box | IN |
| <i>Eucalyptus melliodora</i> | Yellow Box | IN |
| <i>Eucalyptus obliqua</i> | Messmate Stringybark | IN |
| Shrubs | | |
| <i>Acacia mearnsii</i> | Black Wattle | IN |
| <i>Acacia melanoxylon</i> | Blackwood | IN |
| <i>Dillwynia cinerascens</i> | Grey Parrot Pea | IN |
| <i>Indigofera australis</i> | Austral Indigo | IN |
| Grasses and Groundcovers | | |
| <i>Dianella revoluta</i> | Blue Flax-lily | IN |
| <i>Epacris impressa</i> | Common Heath | IN |
| <i>Hovea heterophylla</i> | Common Hovea | IN |
| <i>Lomandra filiformis</i> | Wattle Mat-rush | IN |
| <i>Microlaena stipoides</i> var. <i>stipoides</i> | Weeping Grass | IN |
| <i>Themeda triandra</i> | Kangaroo Grass | IN |

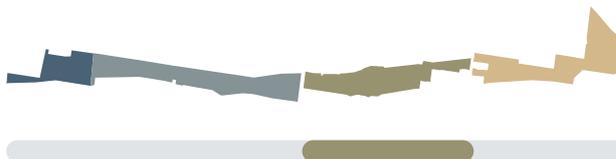
* IN = Indigenous, N = Native, EX = Exotic



Wetland Revegetation Planting

The Ecological Precinct occurs in the central zone of the reserve and is characterised by wetland vegetation. The planting palette aims to complement the existing vegetation of the Bellbird Dell and reflect species found in the Swampy Riparian Complex (EVC 126).

Site Plan:



| Botanical name | Common Name | IN/N/EX |
|----------------------------------|------------------------|---------|
| Trees | | |
| <i>Eucalyptus ovata</i> | Swamp Gum | IN |
| <i>Eucalyptus radiata</i> | Narrow-leaf Peppermint | IN |
| Shrubs | | |
| <i>Bursaria spinosa</i> | Sweet Bursaria | IN |
| <i>Clematis aristata</i> | Old Man's Beard | IN |
| <i>Coprosma quadrifida</i> | Prickly Currant Bush | IN |
| <i>Leptospermum continentale</i> | Prickly Teatree | IN |
| <i>Melaleuca ericifolia</i> | Swamp Paperbark | IN |
| Grasses and Groundcovers | | |
| <i>Carex appressa</i> | Tall Sedge | IN |
| <i>Cyperus lucidus</i> | Leafy Flat-sedge | IN |
| <i>Epacris impressa</i> | Common Heath | IN |
| <i>Juncus procerus</i> | Tall Rush | IN |
| <i>Lobelia anceps</i> | Angled Lobelia | IN |



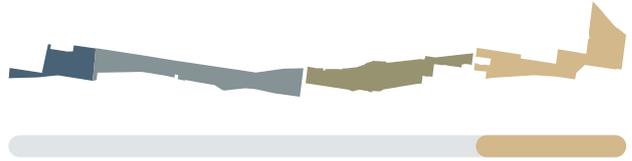
* IN = Indigenous, N = Native, EX = Exotic



Grassland Revegetation Planting

The Historical Precinct occurs at the eastern end of the reserve and is characterised by grassland vegetation. The planting palette aims to retain the open aesthetic of the area while providing colour and visual interest. The plant list reflects species typically found in local grasslands.

Site Plan:



| Botanical name | Common Name | IN/N/EX |
|----------------------------------|--------------------|---------|
| Trees | | |
| <i>Eucalyptus melliodora</i> | Yellow Box | IN |
| <i>Eucalyptus polyanthemos</i> | Red Box | IN |
| Shrubs | | |
| <i>Acacia mearnsii</i> | Black Wattle | IN |
| <i>Acacia melanoxylon</i> | Blackwood | IN |
| <i>Kunzea ericoides</i> | Kanuka | IN |
| Grasses and Groundcovers | | |
| <i>Acaena novae-zelandiae</i> | Bidgee Widgee | IN |
| <i>Arthropodium strictum</i> | Chocolate Lily | IN |
| <i>Calocephalus citreus</i> | Lemon Beauty Heads | N |
| <i>Eryngium ovinum</i> | Blue Devil | N |
| <i>Hardenbergia violacea</i> | Purple Coral-pea | IN |
| <i>Hovea heterophylla</i> | Common Hovea | IN |
| <i>Leptorhynchus tenuifolius</i> | Wiry Buttons | IN |
| <i>Pimelea humilis</i> | Common Rice Flower | IN |
| <i>Poa sieberiana</i> | Tussock Grass | IN |
| <i>Themeda triandra</i> | Kangaroo Grass | IN |
| <i>Wahlenburgia gracilis</i> | Sprawling Bluebell | IN |

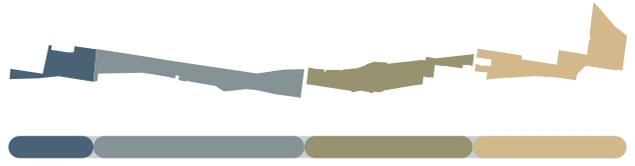
* IN = Indigenous, N = Native, EX = Exotic



Swale Planting

The swale planting palette will be applied to areas of the site that have poor drainage. Small channels that convey water will be planted with grasses and native vegetation to help reduce overland flows and prevent flooding.

Site Plan:



| Botanical name | Common Name | IN/N/EX |
|----------------------------------|------------------|---------|
| Trees | | |
| <i>Allocasuarina littoralis</i> | Black Sheoak | IN |
| <i>Eucalyptus ovata</i> | Swamp Gum | IN |
| <i>Melaleuca ericifolia</i> | Swamp Paperbark | IN |
| Shrubs | | |
| <i>Bursaria spinosa</i> | Sweet Bursaria | IN |
| <i>Leptospermum continentale</i> | Prickly Teatree | IN |
| Grasses and Groundcovers | | |
| <i>Carex appressa</i> | Tall Sedge | IN |
| <i>Cyperus lucidus</i> | Leafy Flat-sedge | IN |
| <i>Dianella revoluta</i> | Blue Flax-lily | IN |
| <i>Dianella tasmanica</i> | Tasman Flax-lily | IN |
| <i>Dichondra repens</i> | Kidney Weed | IN |
| <i>Gahnia radula</i> | Thatch Saw-sedge | IN |
| <i>Juncus procerus</i> | Tall Rush | IN |
| <i>Lomandra filiformis</i> | Wattle Mat-rush | IN |

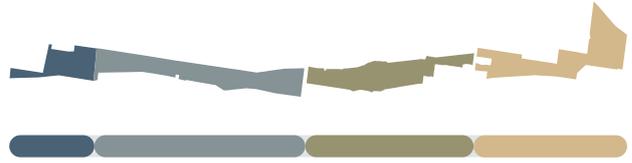
* IN = Indigenous, N = Native, EX = Exotic



Site wide General Revegetation

A general plant list for revegetation will be applied across the site to provide a consistent visual language. The mix aims to enhance species habitat and restore native plant species across the corridor.

Site Plan:



| Botanical name | Common Name | IN/N/EX |
|---------------------------------|-----------------------|---------|
| Trees | | |
| <i>Eucalyptus melliodora</i> | Yellow Box | IN |
| <i>Eucalyptus obliqua</i> | Messmate | IN |
| Shrubs | | |
| <i>Acacia mearnsii</i> | Black Wattle | IN |
| <i>Acacia melanoxylon</i> | Blackwood | IN |
| <i>Correa reflexa</i> | Common Correa | IN |
| <i>Goodenia ovata</i> | Hop Goodenia | IN |
| <i>Indigofera australis</i> | Austral Indigo | IN |
| <i>Spyridium parvifolium</i> | Dusty Miller | IN |
| Grasses and Groundcovers | | |
| <i>Dianella longifolia</i> | Smooth Flax-lily | IN |
| <i>Juncus gregiflorus</i> | Green Rush | IN |
| <i>Juncus pallidus</i> | Pale Rush | IN |
| <i>Lomandra longifolia</i> | Spiny-headed Mat-rush | IN |
| <i>Microseria lanceolata</i> | Yam Daisy | N |
| <i>Poa labillardierei</i> | Common Tussock-grass | IN |
| <i>Themeda triandra</i> | Kangaroo Grass | IN |

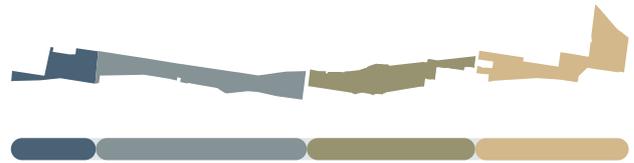
* IN = Indigenous, N = Native, EX = Exotic



Playground Sensory Planting

The planting palette aims to complement each play area by providing a variety of sensory opportunities. The selected plants provide a range of characteristics including different scents, textures, forms, colours and structure.

Site Plan:



| Botanical name | Common Name | IN/N/EX |
|-----------------------------------|----------------------|---------|
| Trees | | |
| <i>Acacia implexa</i> | Lightwood | IN |
| <i>Allocasuarina verticillata</i> | Drooping Sheoak | N |
| <i>Eucalyptus cephalocarpa</i> | Mealy Stringybark | IN |
| Shrubs | | |
| <i>Cassinia arculeata</i> | Common Cassinia | IN |
| <i>Cassinia arcuata</i> | Dooping Cassinia | IN |
| Grasses and Groundcovers | | |
| <i>Acacia cognata</i> | River Wattle | N |
| <i>Arthropodium milleforium</i> | Pale Vanilla-lily | IN |
| <i>Coronidium scoproides</i> | Button Everlasting | IN |
| <i>Dichelachne crinita</i> | Longhair Plume Grass | IN |
| <i>Myoporum parvifolium</i> | Creeping Boobiella | N |
| <i>Poa labillardierei</i> | Common Tussock Grass | IN |
| <i>Pycnosorus glauca</i> | Common Billy Buttons | N |
| <i>Stylidium graminifolium</i> | Grass Trigger Plant | IN |

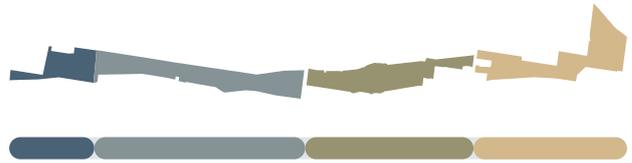
* IN = Indigenous, N = Native, EX = Exotic



Feature Planting

Feature planting will be provided at key entrances and points within the reserve. The colourful plant mix will provide visual interest when entering the park or pausing at picnic areas and seats. The selected plants provide a range of characteristics including different scents, textures, forms, colours and structure.

Site Plan:



| Botanical name | Common Name | IN/N/EX |
|---------------------------------|--------------------|---------|
| Trees | | |
| <i>Acacia pycnantha</i> | Golden Wattle | IN |
| <i>Eucalyptus ovata</i> | Swamp Gum | IN |
| Shrubs | | |
| <i>Acacia paradoxa</i> | Hedge Wattle | IN |
| <i>Banksia marginata</i> | Silver Banksia | N |
| <i>Bursaria spinosa</i> | Sweet Bursaria | IN |
| <i>Hakea decurrens</i> | Bushy Needlewood | N |
| <i>Viminaria juncea</i> | Native Broom | IN |
| Grasses and Groundcovers | | |
| <i>Billardiera scandens</i> | Common Apple-berry | IN |
| <i>Bulbine bulbosa</i> | Bulbine Lily | IN |
| <i>Dianella revoluta</i> | Blue Flax-lily | IN |
| <i>Lomandra confertifolia</i> | Mat Rush | N |
| <i>Veronica perfoliata</i> | Digger's Speedwell | N |
| <i>Wahlenbergia stricta</i> | Tall Bluebell | IN |

* IN = Indigenous, N = Native, EX = Exotic



5.4 Park Layout Plan Inputs

The Park Layout Plan (refer Section 5.2) has required the inputs of multiple professional disciplines, in addition to the aforementioned Traditional Owner and Community Engagement inputs (refer Section 3.0). These disciplines have delivered specific responses to inform the collective design outcome.

Professional Services Inputs

Landscape Architecture

This report has been compiled by the Landscape Architects to provide an integrated design that responds to the project's vision and principles while encompassing the work of all disciplines.

The project is centered on the alignment of the shared path which considers the physical site conditions such as existing vegetation and topography. The path has been located centrally where possible to increase visibility through passive surveillance, curves and elevation changes provide a varied experience while capitalising on views.

Amenities such as playspaces, toilets, picnic settings, BBQs and shelters have been located within close proximity to access points such as carparks, footpath networks and local streets, as well as known utility services. The amenities aim to both compliment and initiate recreational opportunities for the community.

Specific landscape design proposals for these amenities have been developed following forthcoming community and traditional owner consultation.

Planting strategies have been carefully developed alongside the Ecology team to optimise both aesthetic and environmental opportunities.

Ecology

Ecological investigations have occurred to inform the design, these are detailed in Section 5.5.

The Park Layout Plan incorporates key ecological recommendations including the removal of weeds, revegetation of degraded areas, creation of dry creek beds and swales. The introduction of habitat elements such as logs, rock piles, nesting boxes and ponds will be further considered through the detailed design of spaces.

Survey and Arboriculture

Throughout the reserve's study area, each tree has been surveyed, tagged, assessed, and captured within an Arborist Report. This report provides an extensive summary containing each tree's species, approximate age, health, and contribution to the landscape. Any proposed development near existing trees will heavily consider the information and vegetative sensitivities contained within this document.

Crime Prevention Through Environmental Design (CPTED)

The Park Layout Plan's conceptual arrangement considers CPTED principles to assist users in feeling safe and secure. The application of CPTED principles will be applied throughout the design development of the park, and future vegetation management strategies within the reserve. Where possible, the shared path alignment will be positioned centrally to maximise visibility.

Within the Park Layout Plan, new high-activity recreational spaces have been proposed within proximity to roads and pathways to promote accessibility and visibility from surrounding streets. Lighting has also been proposed in areas anticipated for use in low-light conditions.

Lighting Engineering

Lighting Engineers have indicated where lights should be placed in the reserve to prioritise user safety in high trafficked north/south path connections, carparks and activity zones. It is anticipated that these lights are to utilise solar pole top luminaires, and will consider illumination timers to assist the spaces during periods of low light.

Civil Engineering

Civil Engineers have verified the two proposed carparks at Davy Lane and the Eastern Activity Centre. They have also confirmed the path alignment and grades to ensure it can achieve as a minimum, a Grade 2.1 trail as per the Parks Victoria Track Grading Manual. A desktop assessment was completed to understand the existing site topography and determine the extent of works to meet this requirement and accommodate a 2.5m vehicle to traverse the eastern and western paths of Bellbird Dell Reserve. Alignment options have been explored to minimise the need for earthworks and impact on existing vegetation.

Hydraulic Engineering

Hydraulic Engineers have reviewed the proposed path alignment and provided hydraulic design strategies to improve site drainage and potential water capture with planted swales.

The stormwater strategy developed for the Healesville Freeway Reserve aims to have minimal impact of established overland water flow paths and existing Council stormwater infrastructure, whilst also providing adequate drainage to protect the pavement and prevent flooding of the path during events up to the 10% AEP (Annual Exceedance Probability).

Drainage interventions will be provided where the path creates low points, crosses an existing valley floor or drainage line. Drainage will aim to maintain existing flow paths and discharge points (to existing swales or pipe networks).

Planted swales have been proposed along sections of the path to mitigate waterlogging. Drainage along the path alignment will be reviewed during the design process to ensure an optimal balance between managing water on the site, whilst minimising impacts to sensitive areas and vegetation.

Contamination and Geotechnical Engineering Studies

Contamination and Geotechnical Engineering studies were conducted at the commencement of the project. These studies captured the extent of the park, which informed the development of the Park Layout Plan. Further Geotechnical Engineering studies will occur as the project develops.



5.5 Ecological Investigations

Ecology Report

An Ecological Site Investigation of the reserve was conducted at the commencement of the project in July and August 2022 to inform the design. The report provided insight into the existing ecological values of the park and potential threats to these values. Key findings are summarised in Section 2.8.

The report noted that there are excellent opportunities for ecological restoration within the site and recommended the removal of high threat weed species, revegetation of strategic areas, and the introduction of habitat features such as dry creek beds and swales, logs, rocks, nesting boxes, and ephemeral ponds.

Targeted fauna surveys

Targeted fauna surveys were undertaken to determine whether threatened fauna species are present at the site. A desktop assessment and site inspection of the habitat was used to determine which species should be targeted. Field based surveys aimed at detecting the target species were conducted in November and December 2022.

The surveys confirmed the presence of one state and federally listed threatened species, the Grey-Headed Flying-fox and the possible presence of one state listed species, the Yellow-bellied Sheath-tail Bat. Numerous non-threatened species were detected, including mammals, amphibians, birds, and one reptile species.

Recommendations

Threatened and non-threatened species would benefit from habitat enhancement across the reserve. This includes:

- Addition of logs
- Retention of tree stags with natural hollows
- Addition of nesting boxes
- Addition of rock features, such as a dry creek bed

Habitat corridors increase connectivity between land and water and facilitate wildlife movement within the site and to neighbouring habitat in Dandenong Creek. Maintaining and enhancing these corridors would likely attract more species to the site and

improve conditions for species currently occupying the site.

Wildlife friendly lighting that reduces the impact of artificial lighting on nocturnal species, such as microbats, should be considered.

Design advice

The Ecology team have worked closely with the Landscape Architects to develop a planting schedule for the reserve that aims to restore indigenous vegetation across the site. The composition of species have been selected to represent the structures of Ecological Vegetation Classes (EVCs), as well create variation and improve biodiversity across the site.

The reserve aims to connect recreational and educational opportunities with Indigenous and non-Indigenous heritage, environmental, and ecological values. A list of plants that provide traditional uses including food (bushtucker), fibre, medicine, tool-making, and entertainment purposes has been compiled and opportunities to incorporate the species throughout the reserve have been identified, alongside the provision of educational signage.

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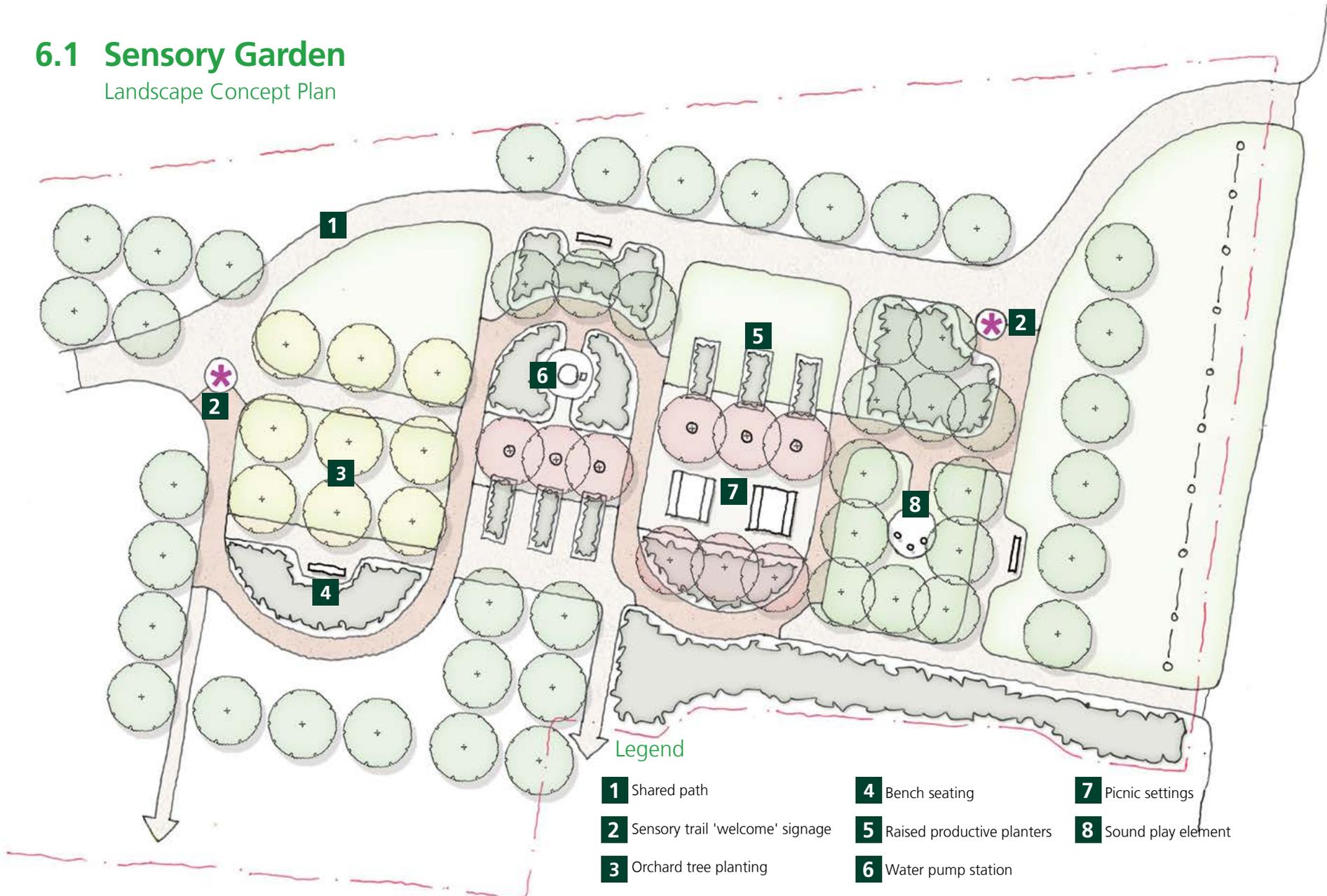


6.0 Activity Space Concept Design



6.1 Sensory Garden

Landscape Concept Plan



Artist impression only. Design is subject to further consultation with Nadrasca and consideration for the amenity of other neighbouring properties..

Indicative Landscape Imagery



Figure 21: *Community Garden Plots*



Figure 22: *Sensory Garden*



Figure 23: *Sensory Garden*



Figure 24: *Sound Tube*



Figure 25: *Drums*



Figure 26: *Water Pump*



Figure 27: *Raised Planter Bed*



6.2 Central Activity Space

Landscape Concept Plan



Legend

- | | |
|---|---|
| 1 Shared path | 5 Picnic area with settings, shelters and BBQs |
| 2 Activity Space 'welcome' signage | 6 Potential celebratory space |
| 3 Nature play space | 7 BMX pump track |
| 4 Net play structure | |

Artist impression only. Activity space design is subject to further engagement with Traditional Owners and on-ground / construction industry conditions.

Indicative Landscape Imagery



Figure 28: *Bunurong Memorial Park*



Figure 29: *Northern Park & Playground*



Figure 30: *Strathewen Bushfire Memorial*



Figure 31: *Nest Swing*



Figure 32: *Net 'Hammock'*



Figure 33: *Net Structure with Accessible Elements*

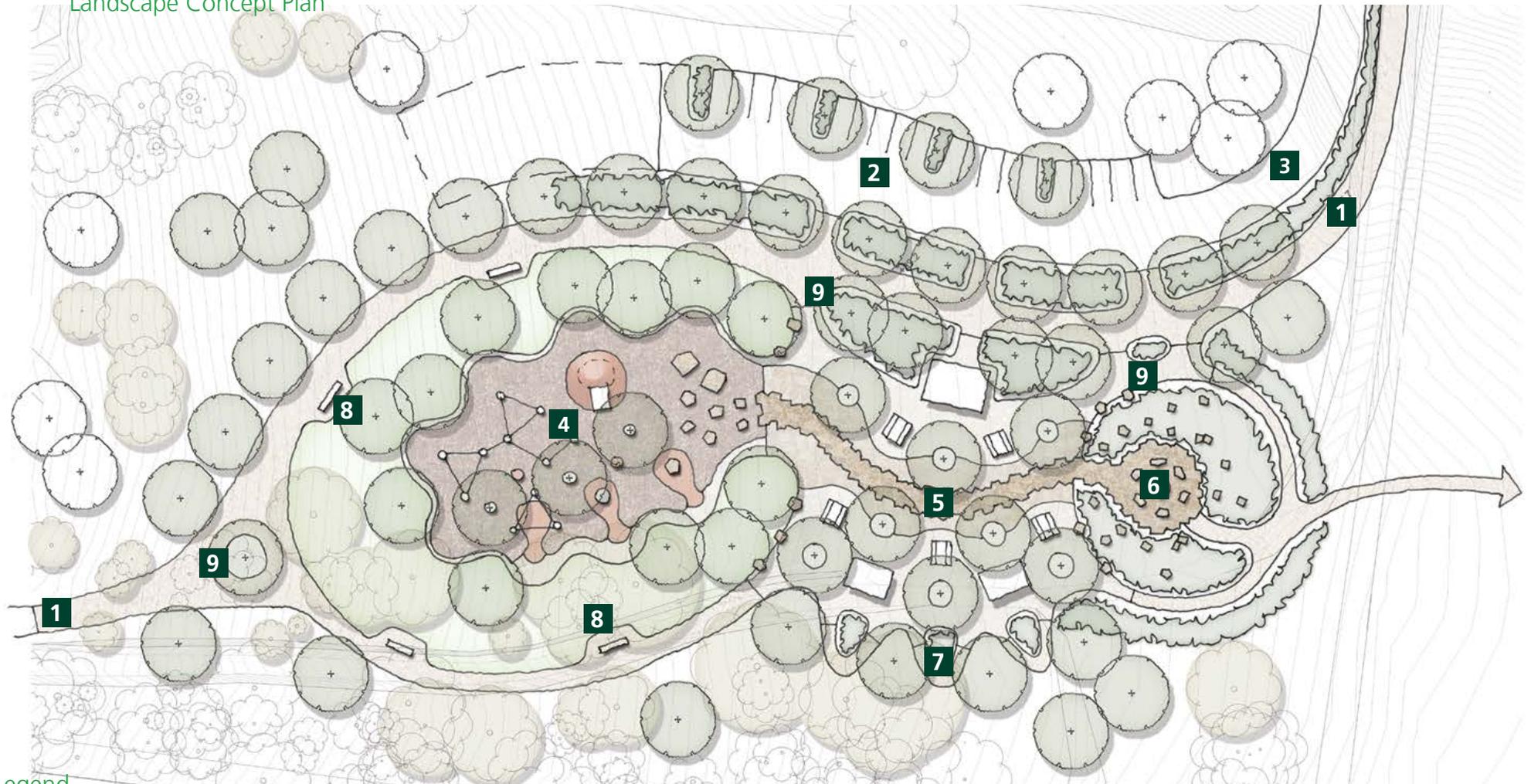


Figure 34: *Timber Sculptural Totems*



6.3 Eastern Activity Space

Landscape Concept Plan



Legend

- | | | | | |
|----------------------|-------------------------------------|---|-------------------------------------|---|
| 1 Shared path | 3 Driveway from Boronia Road | 5 Picnic area with settings, shelters and BBQs | 7 Raised productive planters | 9 Activity Space 'welcome' signage |
| 2 Carpark | 4 Nature playspace | 6 Potential celebratory space | 8 Bench seating | |

Artist impression only. Activity space design is subject to further engagement with Traditional Owners and on-ground / construction industry conditions.

Indicative Landscape Imagery



Figure 35: *Informal Relaxed, Curved Geometry*



Figure 36: *'Fluid', Relaxed Geometry Representing Waterways*



Figure 37: *Raised Horticultural/ Educational Plot with Seating*



Figure 38: *Ornamental Stone Paving*



Figure 39: *Accessible Nest Swing*



Figure 40: *Felled Timber Nature Play Elements*



Figure 41: *Softfall Mound & Slide*





Bellbird Dell Reserve boardwalk crossing
Healesville Freeway Reserve

BRIDGE
LOAD
LIMIT
2.5t
GROSS



7.0 Storytelling and Wayfinding Principles

The project seeks to provide information and storytelling through interpretative wayfinding elements within the four precincts identified in Section 2.11: active, horticultural, ecological, and historic. Signage will detail the ecological and historic features of the park, proposed themes may include:

- Significant fauna species such as the Gang Gang Cockatoos, Kookaburra, Eastern Banjo Frog and Short-Beaked Echidna
- Ecological areas, community gardens and planting initiatives
- Historic heritage and community.

Through ongoing collaboration with Traditional Owners, the interpretive signage elements will detail Wurundjeri storytelling and history. This may include information on significant floral and fauna species, waterways, gathering spaces and traditional practices. In addition to the information expressed in the interpretative signage, sculptural elements will further express key themes and establish cultural spaces within the park.

Regulatory and directional signage will be included to highlight the proposed design features, such as playgrounds, bathroom facilities, picnic areas, sporting and community facilities, and Bellbird Dell Reserve.



7.1 Signage and Wayfinding Methodology

Reference Material

- Parks Victoria Signage Manual V1.2 (2020)
- Healesville Freeway Reserve Historical and Cultural Mapping, Greenshoot Consulting (2022)
- Concept Design Traditional Owner Consultation Insights Report, Greenshoot Consulting (2022)
- Community consultation documents
- Parks Victoria's 'Shaping Our Future' Strategic Plan

Design Objectives

The wayfinding strategy has a focus on First Nations storytelling, educational opportunities, sustainability and accessibility. The objectives of the signage and wayfinding design are to:

- provide clear navigation along trails within the park, connecting key points of interest
- create a safe, welcoming and memorable experience through implementing a universally accessible approach
- encourage opportunities for exploration and pedagogical experiences
- celebrate First Nations culture and local post-settlement elements, providing opportunities to learn from and celebrate local histories
- ensure the approach is sensitive to the site's environment, neighbours and community through providing a light touch approach.

Signage and Wayfinding Design Approach

- signage is to be located at key entry points, including car park entries, to notate clear access into the park
- directional wayfinding elements are to be focused at decision points and gathering spaces to aid navigation
- spaces for First Nations sculptural elements will be provided at main entry locations and within activity centers
- pictographs are to be provided on key instructional signage where possible
- maps will be provided at key entry points to assist with navigation and understanding the path network hierarchy
- Bellbird Dell Reserve signage will be retained where practicable
- City of Whitehorse logo is to be placed on any signage located in Council managed land.

7.2 Signage Content Themes

Signage Content Themes

The signage content has been developed in response to site heritage, ecology, and landscape characteristics. Indigenous content is to be developed in collaboration with Greenshoot Consulting. Content may include:

- Recreational Precinct
 - Wurundjeri Woi-wurrung storytelling - significant figures including Jaga Jaga, Simon Wonga, William Barak and Auntie Jessie Hunter
 - location of the park on Country and the meaning of the park's proposed name
 - broad historic overview of urbanisation, transport in the surrounding area and history of the park's land use.
- Horticultural Precinct
 - First Nations knowledge systems and storytelling including Caring for Country principles, Firestick burning practices and stone-based industry
 - ecological Vegetation Classes, which include Valley Heathy Woodland and Swampy Riparian Complex
 - cultivation of the land through and the role of the agriculture industry in Nunawading and contemporary sustainable agriculture practices
 - Nunawading Community Gardens and its history as the first formal community garden in Australia
- Ecological Precinct
 - Indigenous flora and bush tucker species and their uses in First Nations culture such as the murnong (yam daisy) and firestick burning practices
 - fauna including possums, emu, kangaroo, reptiles and birds and their relationship with Wurundjeri Woi-wurrung Practices [A4.7]
 - local fauna species such as Tawny Frogmouths, Rainbow Lorikeets, Grey-headed Flying-foxes, Gang Gang Cockatoos, Kookaburra, Eastern Banjo Frogs and Short-Beaked Echidna including their habitats and life cycles [A4.7].
- Historic Precinct
 - markers in the landscape including local Scar Trees and stone artifacts as well as Songlines, travel and trade in the area
 - water systems as places of connection, including the Dandenong Creek. As well as information on eel harvesting seasons and tools
 - acknowledge Nethercote Orchard and the history of orchards as the primary industry from the 1870s as well as heritage elements such as the old stables
 - woodcutters and charcoal burners harvesting the densely timbered native bushland and access into park from old Woodcutter tracks.



7.3 Signage Families

Proposed Interpretative Typologies

The indicative interpretative signage elements are as per the Parks Victoria Signage Guidelines.



A1.2 Minor Entry Sign



A2.1 Boundary Straddle



A4.5 Multi-directional

2000mm

1500mm

1000mm

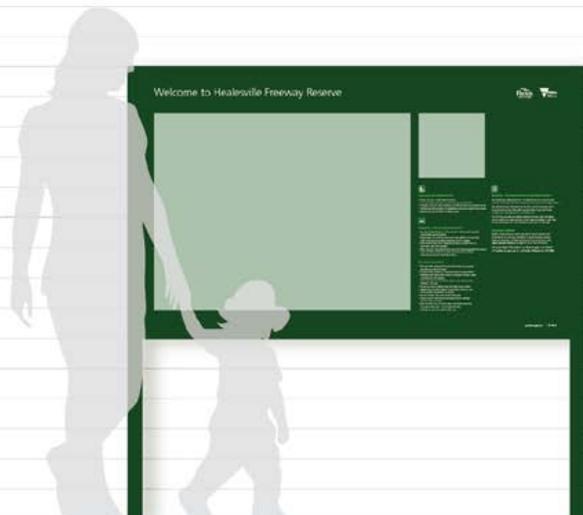
500mm



A4.7 Interpretive Sign



A8.2 Information Board with Map



A8.3 Small Information Board



7.4 Indicative Signage Location Plan

The proposed locations for wayfinding and signage elements are focused around main entry points, key decision points, and activity centres.

Regulatory and directional signage provides clear and concise information to direct users between destinations and facilities within the park. Signs are placed at key intersections and points of interest.

Interpretive signage has been placed throughout the park in response to the precinct theme and

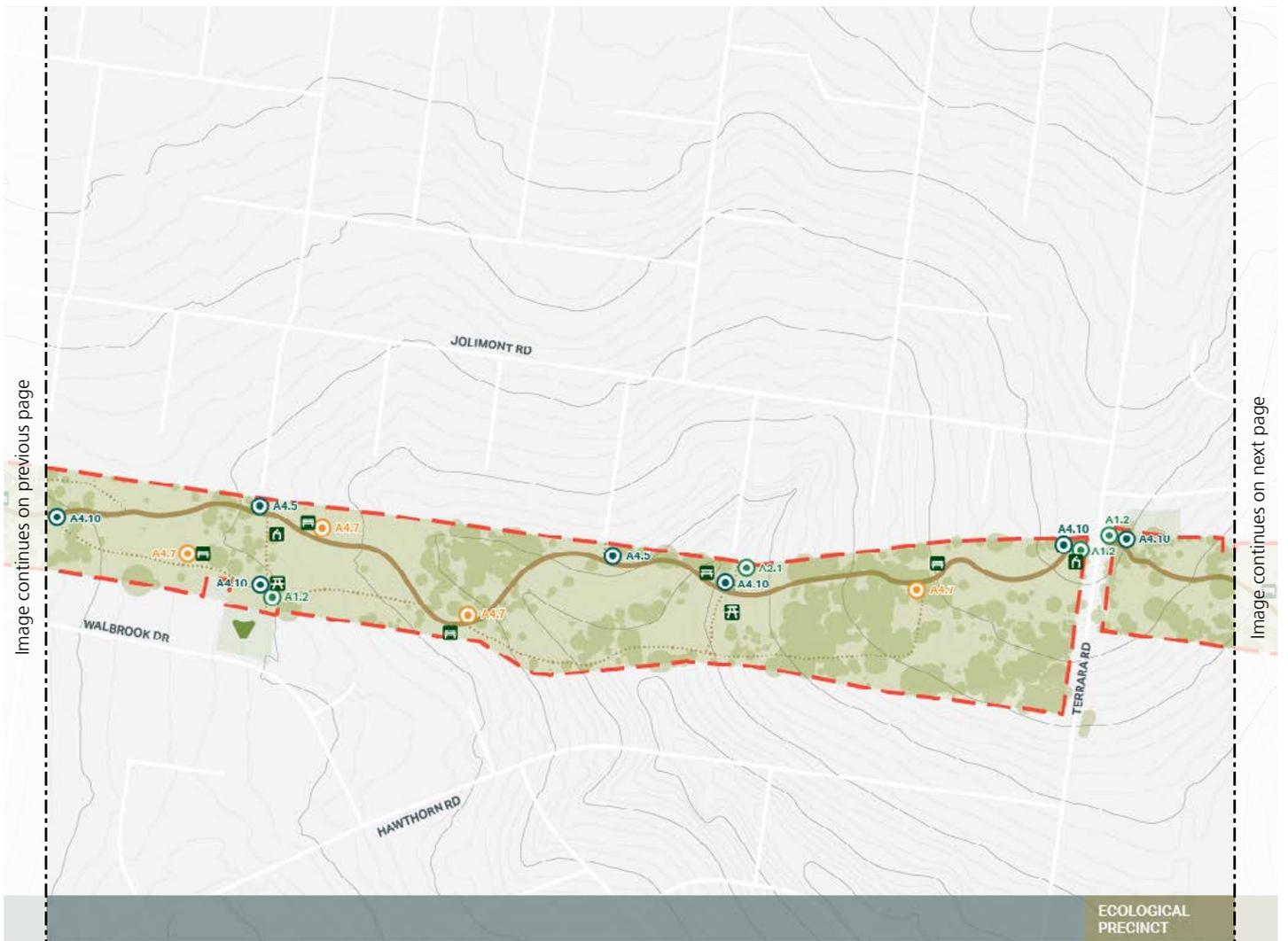
incorporates both Wurundjeri Woi-wurrung and non-indigenous storytelling, historic features, and ecological species.

A sculptural entry sign has been proposed at the eastern entry, within the proposed activity space. The space assigned for the ceremonial sculptural element may be subject to change following further discussion with Wurundjeri Woi-wurrung Elders.



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Figure 41.01: Signage and Wayfinding Sign Location Plan



ECOLOGICAL
PRECINCT

- WAYFINDING ELEMENTS**
-  Proposed Toilet Block
 -  Proposed Park Bench
 -  Proposed Drinking Fountain
 -  Proposed Habitat Boxes
 -  Entry Sign
 -  Interpretative Sign
 -  Directional Sign
 -  Regulatory Sign



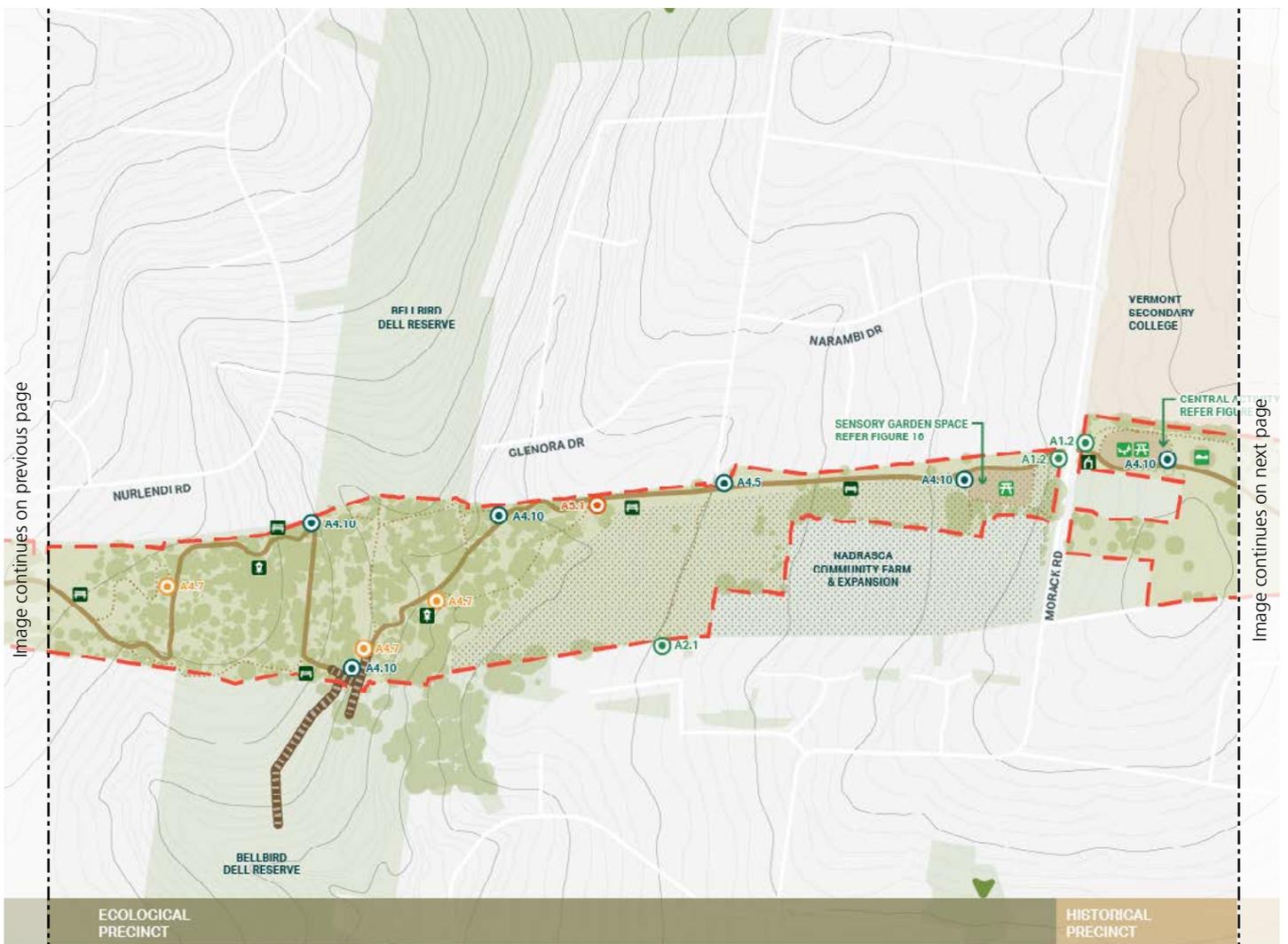


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LEGEND

- | | | |
|--|--|---------------------------|
| Proposed Carpark | Nadrasca Community Farm & Expansion Area | Existing Local Playground |
| Parks, Open Space and Recreational; Trees | Proposed Primary Pathway | Proposed Playground |
| Schools and Education Facilities | Proposed Secondary Pathway | Proposed Pump Track |
| Water areas | Boardwalk | Proposed Picnic Area |
| City of Whitehorse Proposed Davy Lane Precinct | Asphalt Road | |

Figure 41.02: Signage and Wayfinding Sign Location Plan



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HISTORICAL
PRECINCT

WAYFINDING ELEMENTS

-  Proposed Toilet Block
-  Proposed Park Bench
-  Proposed Drinking Fountain
-  Proposed Habitat Boxes

-  Entry Sign
-  Interpretative Sign
-  Directional Sign
-  Regulatory Sign



7.5 Activity Spaces Signage

Signage type is indicative only, content to be developed in collaboration with Greenshoot Consulting

Nadrasca Farm Sensory Garden Space

Indigenous flora and bush tucker species and their uses in First Nations culture such as the murnong (yam daisy) and firestick burning practices [A4.7]

Nunawading Community Gardens and its history as the first formal community garden in Australia [A4.7]

Stenciling elements throughout the path network to reflect the themes of the activity space [S1.4]

Central Activity Space

- Fauna including possums, emu, kangaroo, reptiles and birds and their relationship with Wurundjeri Practices [A4.7]
- Local fauna species on the site such as Tawny Frogmouths, Rainbow Lorikeets and Grey-headed Flying-foxes, their habitats and life cycles [A4.7]
- Woodcutters and charcoal burners harvesting the densely timbered native bushland [A4.7]
- Potential location for celebratory gathering space [S1.3]

Eastern Activity Space

- Markers in the Landscape including local Scar Trees and stone artefacts as well as Songlines, travel and trade in the area [A4.7]
- Acknowledge Nethercote Orchard and the history of orchards as the primary industry from 1870s as well as heritage elements such as the old stables. [A4.7]
- Potential locations for sculptural elements [S1.1]
- Location on Country [S1.2]

Nadrasca Farm Sensory Garden Space

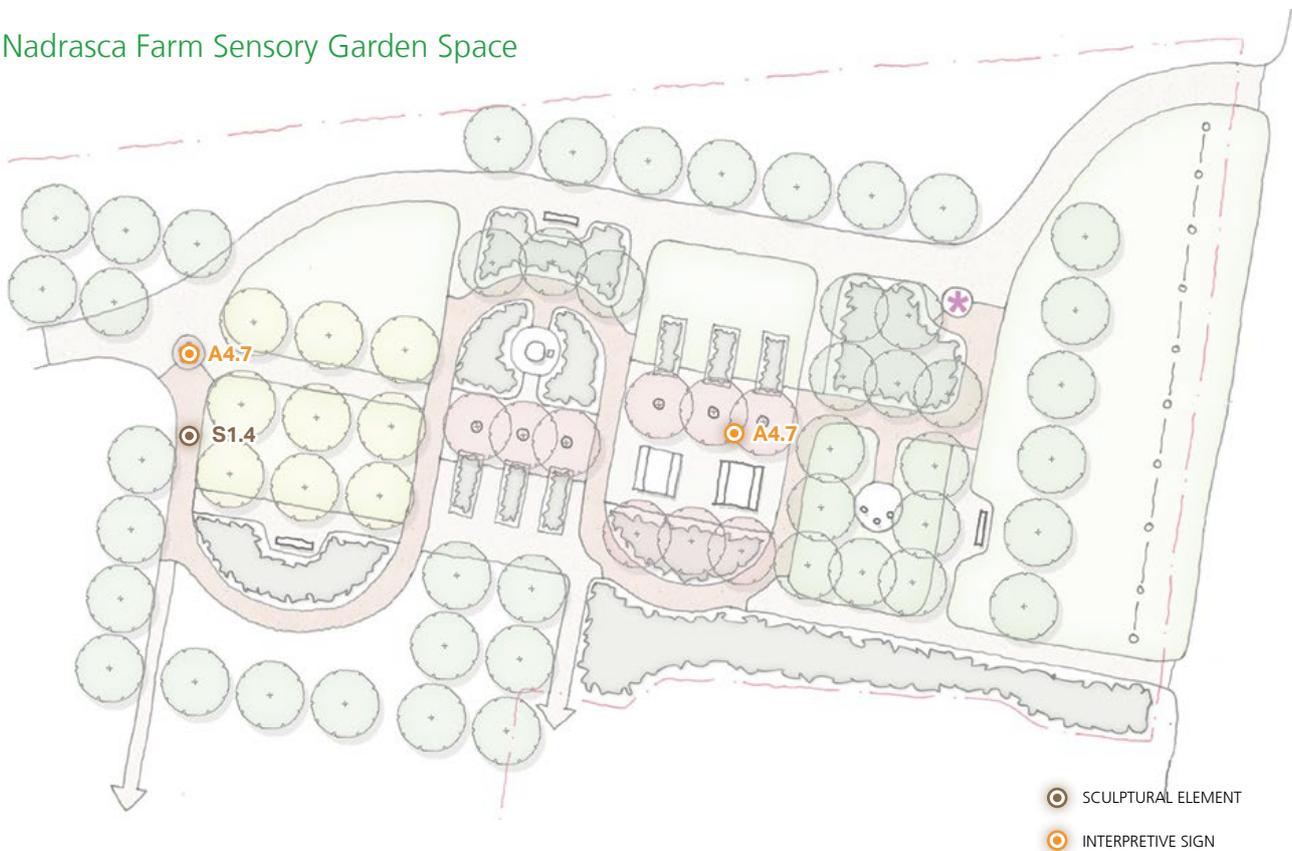


Figure 42: Sensory Garden Space Indicative Signage Plan

Central Activity Space

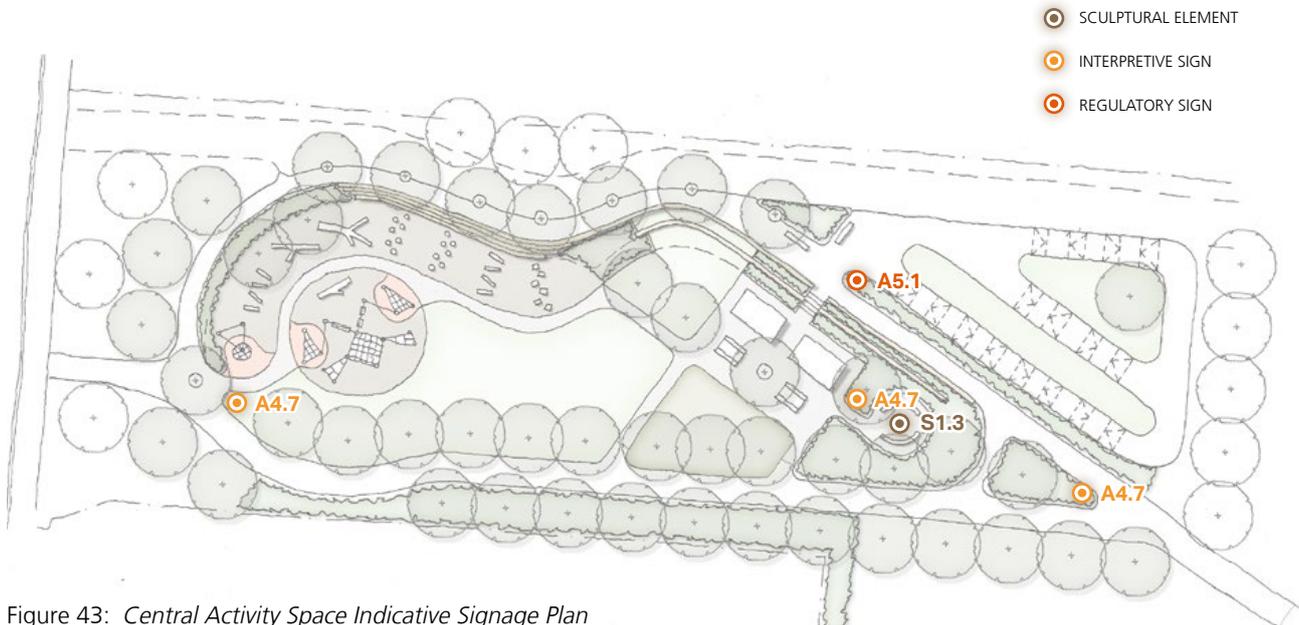


Figure 43: Central Activity Space Indicative Signage Plan

Eastern Activity Space

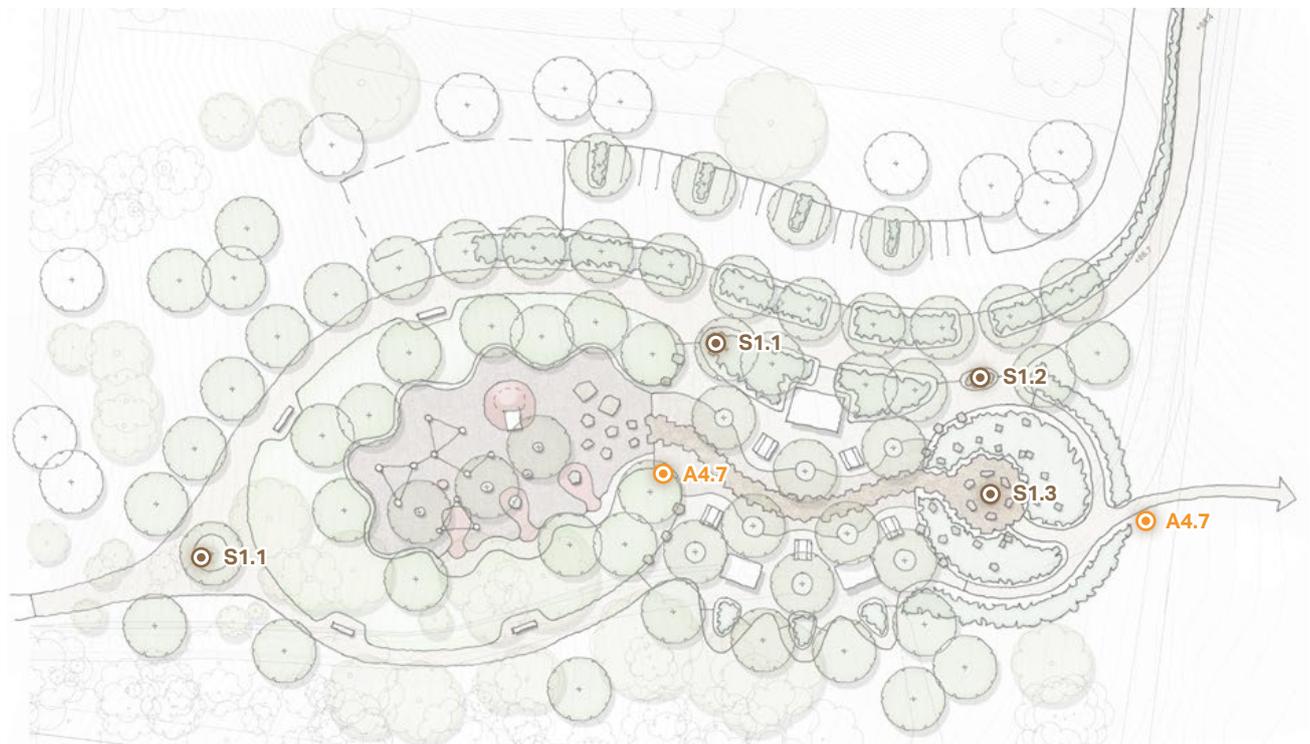


Figure 44: Eastern Activity Space Indicative Signage Plan





Gravel path, Davy Lane Reserve
Healesville Freeway Reserve



8.0 Materials and Fixtures



8.1 Furniture and Fixtures

The furniture and fixtures proposed for the reserve have been selected from the Parks Victoria Campgrounds Design and Facilities Manual. These elements aim to create a familiar identity across the site while providing opportunities to reflect the local site conditions and character.

Renewable energy harvesting is proposed via the use of solar BBQs and solar pole top lights. The use of these items are subject to product availability and project budget.



Figure 45: *Parks Victoria BBQ Shelter*

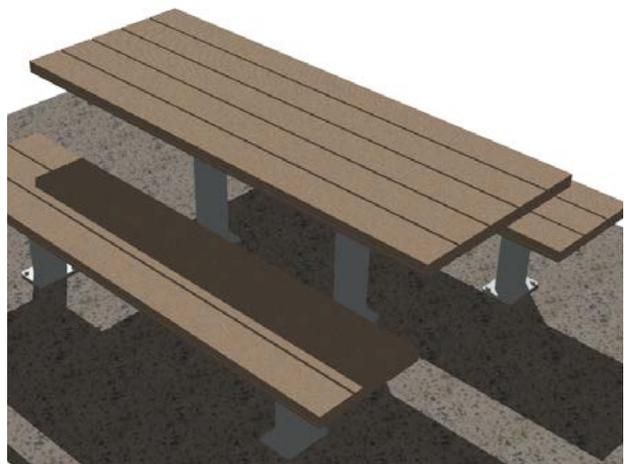


Figure 46: *Parks Victoria Picnic Setting*



Figure 47: *Parks Victoria Backed Seat*

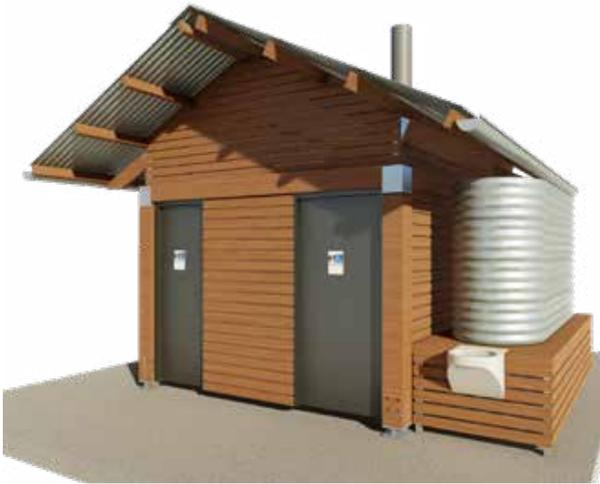


Figure 48: *Gable Double Toilet Timber Frame*



Figure 51: *Haven Urban Edge Prospect Accessible Drinking Fountain with Dog Bowl*



Figure 49: *BBQ (Solar Powered)*



Figure 52: *Standard Bike Hoop*



Figure 50: *Path Lighting (Solar Powered)*



Figure 53: *Habitat Boxes*



8.2 Pavement Materials

Pavement materials proposed throughout the reserve will reflect natural surfaces. The type will respond to the location and function of the space. Material usage will be rationalised into a legible hierarchy depending on their intended function and desired location.

The shared path will provide a visually recessive, yet distinct colour and texture. The shared path will utilise a cement stabiliser within its profile to protect its structural integrity against erosion.

Activity spaces including playscapes and picnic areas may use feature pavement. These may include special treatments such as coloured concrete pigments, aggregates and surface finishes (subject to stakeholder engagement as well as project budget).



Figure 56: Shared Path Pavement: *Granitic Gravel with Cement Stabiliser*



Figure 54: Potential Activity Node Pavement: *Plain Grey Concrete Pavement*



Figure 57: Potential Activity Node Pavement: *Coloured Concrete Pavement with Salt Finish*



Figure 55: Potential Activity Node Pavement: *Coloured Concrete Pavement with Lightly Exposed Aggregate*



Figure 58: Potential Carpark Pavement: *Typical asphalt pavement*

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8.3 Playscape Components

The project aims to provide nature-based playscapes with approximately play elements in each. The space will offer a wide range of developmental benefits for children and adults of all-abilities. Playscapes are designed to bring children into nature but can also include 'traditional' playground elements.

The playscape design components aim to offer multiple opportunities for gathering or singular use, whether it be consolidated or dispersed passive or active recreational activities. The components will encourage play instances for social interaction through a variety of natural and manufactured play devices including formal or informal programmed elements.



Figure 61: *Net Play*



Figure 59: *Dual Swing Set with Flat and Toddler Cradle*



Figure 62: *In-Ground Spinner*



Figure 60: *Nest Swing*



Figure 63: *Slide*



Figure 64: *Sensory Garden*



Figure 67: *Felled Timber Play Logs*



Figure 65: *Rope Structures*



Figure 68: *Timber Steppers*



Figure 66: *Play Boulders*



Figure 69: *Timber Balance beams*





View from Above Eastern end of
Healesville Freeway Reserve