

**WILSON PARK PRECINCT ZONE 2
DESIGN SUMMARY**

City of Belmont

ecoscape

COPYRIGHT STATEMENT FOR:
Wilson Park Precinct Zone 2 Design Summary
Our Reference: 4812-23R4
Copyright © 1987-2023
Ecoscape (Australia) Pty Ltd
ABN 70 070 128 675

Except as permitted under the Copyright Act 1968 (Cth), the whole or any part of this document may not be reproduced by any process, electronic or otherwise, without the specific written permission of the copyright owner, Ecoscape (Australia) Pty Ltd. This includes microcopying, photocopying or recording of any parts of the report.

Revision	Author	QA Reviewer	Approved	Date
0 Draft	P Jordan	F Kotai	P Jordan	31.01.2024

Direct all inquiries to:
Ecoscape (Australia) Pty Ltd
Lvl 1 38 Adelaide Street, FREMANTLE (Walyalup) WA 6160
Whadjuk Boodja
Ph: (08) 9430 8955
Prepared for City of Belmont

This document should be cited as 'Ecoscape (2023) *Wilson Park Precinct Zone 2 50% Design Development Report*, prepared for City of Belmont

TABLE OF CONTENTS

- 1 Introduction.....2**
 - 1.1 Project Team 2
 - 1.2 Reference Documents.....2
- 2 Design Element Summary 3**
 - 2.1 Design Elements 3
 - 2.1.1 Town Square 3
 - 2.1.2 Promenade 3
 - 2.1.3 Playground 4
 - 2.1.4 Nature Play.....4
 - 2.1.5 Skate Spot.....4
 - 2.1.6 Pump Track 5
 - 2.1.7 Lighting & Electrical.....5
 - 2.1.8 Civil & Drainage.....6
 - 2.1.9 Tree Retention & Protection.....7
 - 2.1.10 Planting Strategy 7
 - 2.1.11 Irrigation.....8
 - 2.1.12 Public Artwork and Intepretive Signage 8

1 INTRODUCTION

This document provides a summary of the key design elements included in the Wilson Park Precinct Zone 2, Heart + Playground. The design has been developed to 50% technical completion and included resolution of the main elements of the Masterplan Concept including the Town Square, Promenade, Playground and Natureplay. Following review by the City of Belmont the design will be taken to full technical resolution suitable for tendering of the construction works.

1.1 PROJECT TEAM

Ecoscape is engaged by the City of Belmont as the lead Consultant for Wilson Park Precinct Zone 2. Ecoscape has engaged subcontractors to provide specialised services in the delivery of the project, including:

- + Alphazeta (hydraulic)
- + CADsult IDS (irrigation)
- + Donald Cant Watts Corke (quantity surveying)
- + ETC Solutions (electrical and lighting)
- + O'Brien Harrop Access (access review)
- + Playcheck (playground safety)
- + Porter Consulting Engineers (civil and drainage)
- + Skate Sculpture (skate design)
- + Talis Consultants (structural)
- + Three Chillies (pump track design).

The team has worked collaboratively to identify key issues and resolve with the objective of creating a vibrant public space for the local community that realises the vision explored and developed by the City/

1.2 REFERENCE DOCUMENTS

The following project documentation is referenced in this summary:

- + Ecoscape: Landscape documentation REV D, Landscape Material Schedule REV B and Public Art Strategy REV B
- + CADsult IDS: 50% DD Documentation REV A
- + Donald Cant Watts Corke: Wilson Park DD Estimate
- + ETC Solutions: DD documentation Rev A & B and Line diagrams
- + O'Brien Harrop Access: DD Access Report, January 2024
- + Porter Consulting Engineers: DD Documentation REV B
- + Skate Sculpture: Skate Spot Documentation.

2 DESIGN ELEMENT SUMMARY

2.1 DESIGN ELEMENTS

The Project Team have worked with City Staff on a design response that is grounded in the foundational work of the Masterplan in use, thematic and place identity. The intent is to create a public space that is welcoming, inclusive, safe and reflective of Rivervale's character by referencing its history whilst also delivering on the expectations of a contemporary public space suited to its users. The following key elements are included in the Stage 2 design.

2.1.1 TOWN SQUARE

The Town Square is located in the northern part of the Zone 2 project site between Gerring Court and the existing sump area. The design intent of the Town Square is to provide a facility to accommodate organised events with attendance of ~100 people, while also providing a space for informal gathering and use on non-event days.

The centre of the Town Square is a paved plaza, connected to the Promenade on the western edge and bordered by a seating-height wall on the eastern side enclosing the space. The eastern portion of the Plaza is covered by a large, circular custom shade shelter. This shelter provides shade for performers and attendees at events, and its roof is also used as a canvas for public art. The shelter will be fitted with service connections to support events (e.g. power, lighting, communications).

Either side of the plaza, open areas of turf are provided for additional viewing and event space. Seating walls border the space for additional informal seating, and benches with backs provide a more accessible seating option.

The existing automated toilet block is retained on the northern side of the Town Square. It is accessed from the Promenade and separated from the Town Square by a seating wall, which will allow it to be removed in future without affecting the design of the Town Square.

2.1.2 PROMENADE

The Promenade runs in a straight line from the corner of Kooyong Road / Gerring Court to Surrey Road. The design intent of the Promenade is to create a clear and accessible pedestrian path through the site, from which the other elements of the site can be accessed.

The Promenade is a minimum 5m width along its length. Paving treatments vary, with feature paving and patterning at transition zones and entries to the site, and plainer finishes elsewhere.

The wide Promenade also provides access to the site for authorised vehicles. The existing emergency vehicle access off Gerring Court is maintained, and (bollarded) maintenance vehicle access is also available via the Surrey Road entrance. The promenade has been graded to allow an average 2% fall along its length and crossfalls corresponding to the overland flow path. The grading solution is optimal create a high-quality civic pedestrian experience and to avoid significant earthworks, or disturbance of existing site soil in a Registered site. A low point is created adjacent to the playground where stormwater runoff is expected to accumulate requiring a drainage solution to avoid discharging into the playground. A planted area is planned for the location and is seen as a WSUD opportunity to be resolved in further design development.

2.1.3 PLAYGROUND

The Wilson Park Playground covers an area of approximately 1000 square metres in the centre of the precinct site, with direct access from the Promenade and Gerring Court parking.

The design reflects the riverine theme interpreted throughout the site. Coloured rubber softfall forms a flowing inclusive access path, connecting between varied pieces of playground equipment including an inclusive access carousel and basket swing.

The playground features two large towers, designed to imitate a sedge-like form, providing levels of play opportunities to accommodate different abilities and ages. An elevated rope tunnel creates an adventurous pathway connecting the two towers, allowing children to travel between towers at height, weaving through the branches of Jacaranda trees. The playground offers equipment including a bouldering element, viking swing, traditional and basket swing, inclusive carousel, as well as scattered nature pathways that encourage exploration and imaginative play. A sand play space is tucked between two picnic nodes to the north of the playground extents, catered to a younger age group located to aid ease of supervision.

In addition to referencing the river, the Aboriginal consultation resulted in a number of ideas and inspiration for the playground including the use of native animals as climbing elements or carved elements. These could be prepared by a nature play equipment provider or an artist who specialises in carving. The Rackali *Hydromys chrysogaster* Native Water Rat is a dynamic mammal that lived in the river towards Guilford and is found throughout the south-west region. The design team aims to use the Rackali as inspiration due to its riverine habitat and familiarity to Aboriginal people throughout the South-west. This will be included in further development of the playground and can be discussed with Aboriginal stakeholders.

2.1.4 NATURE PLAY

The Nature Play space draws on riverbank elements of jetties and boardwalk, creating an accessible raised play area amongst existing trees. This area is aimed at a younger age group with equipment including a slide, tunnel bridge, steppers and musical/sensory equipment. Logs and ropes are used to create a more unstructured play experience. Materials used in the Nature Play area are predominantly natural: timber and stone.

The entry to the nature play area will include an array of log steppers flush with the gravel paving to pay homage to the Hampton's Cheeses that was identified in the Master Plan as inspiration for the play space.

The back of the existing hit-up wall is utilised as a climbing wall through the introduction of holds and softfall surfacing beneath. As with the nature play, the climbing wall is expected to be used by younger children.

An area of lawn will be provided along the Surrey Road edge, providing a comfortable space for carers to sit. A low fence is provided along the road interface to reduce the likelihood of a child moving into the road/parking environment. A gate in the fence provides access to the existing bore and cabinet for maintenance purposes.

2.1.5 SKATE SPOT

The Wilson Park Skate Spot is 30m long and consists of lower-level obstacles for a casual roll and skill development.

A 900mm bank and quarter pipe are located at each end of the park to start the run or turn around and continue the flow. The centre of the park consists of an 8m slappy curb, 5m flat rail and a 300mm raised central island. The centre island has banks on each end to roll up and over, a hubba ledge, and across/down rail. The centre island edges are vertical faces, creating perfect 300mm high grindable edges.

The Skate Spot is much smaller than the Belmont Skate Park and is ideal for learning and developing skills on the smaller scale obstacles but still allows more advanced users to perform more technical tricks.

2.1.6 PUMP TRACK

The Pump Track design has been prepared by Three Chillies design. It is an easy to intermediate type track that has a continuous rideable surface suitable for BMX, mountain bikes and smaller wheeled craft. The track consists of berms and rollers in a figure 8 configuration offering a range of riding directions and experiences. The track is co-located with the skate spot to share the shade and seating elements. Low chain-link fencing on the Surrey Road side of the track will provide a barrier to the footpath.

The anticipated construction method for the pumptrack is the same as that for the track at Forster Park (the track is however a smaller scale). The track surface material is polymer stabilised earth laid over mounds formed from clean fill sub-base. The earth used for the surface is low clay content to avoid cracking and the track is finished with concrete edging to minimise maintenance.

2.1.7 LIGHTING & ELECTRICAL

Lighting and Electrical design and advice has been provided by ETC Solutions. ETC's two key tasks have included the design for upgrades to the power supply, including preparation and submission of documents to Western Power and preparation of the electrical design for zone 2. The electrical design includes lighting and power for the new activities in the area and provision for CCTV Security.

Power upgrades

ETC has prepared documentation (Application 1 – Zone 3 and Application 2 – Zone 2) indicating the proposed new power demands and associated City of Belmont electrical supply upgrade works which was submitted to Western Power in mid-January 2024

The power load summaries tabled are based on preliminary Landscape Architectural plans provided by Ecoscape L1-1 & L1-2 (02/10/2023) and ETC's preliminary load forecast. Due to the level of detail the forecast loads may change as the detail design progresses. An amended demand will need to be lodged with Western Power, which can be done using the existing application.

The optimal design outcome for the project is for the existing transformer (500KVA) on the corner of Campbell and Kooyong Road to be upgraded (to nominally 1000KVA) to support the additional capacity required for both Zone 2 & 3 power supplies at Wilson Park. However, this will be subject to a Western Power network assessment which will have a lead time of several months following application. A backup location has been planned spatially, located adjacent to the Promenade on Gerring Court, which is shown on the Zone 3 Application. While a location away from the Promenade is preferred due to the visual impact of the installation, the location is constrained by the requirement for the installation to be within Electrical Zone 3 and accessible by maintenance vehicles.

Existing electrical services, according to the Jurovich survey (05/09/2023) show the new netball electrical and communications to Zone 3 switchboard are located beneath proposed landscape elements in the nature play site. The location of these services must be considered when designing footing depths.

Electrical design

The lighting and power design has been provided in two packages:

- + the draft 50% Design Development package prepared in mid-December 2023 to confirm lighting design lux levels and luminaire types
- + the final 50% Design Development package prepared in January 2024, which reflects selections agreed with the City.

Skate and pump track facilities are typically lit to 50-100lux minimum as per BMX Australia recommendations and the Public Skatepark Development guidelines. This is a high level of illumination to facilitate safe use at

night (i.e. sunset to 9 - 10pm, aligned with netball court lighting). Following discussion with the City, a 100 lux lighting standard has been applied to the Skate Spot and Pump Track, which will be provided by pole mounted floodlights. Avoiding light spill to adjacent properties will be a key consideration in the on-going lighting design and may require further evaluation as the design progresses.

Feature lighting of key elements such as the Town Square shade shelter and major artworks will be included, subject to further detail as the design progresses. Provision for artwork lighting is included as conduits for future power. Requirements for feature lighting of artworks should be relayed from the artists to the design team to ensure the appropriate luminaries can be documented.

CCTV

Design of the CCTV security system will be provided by the City's Contractor and be based on the pole location and available camera mounting configurations. To enable this, ETC have liaised with the City's contractor, Zenien, on communications, conduit/pits and 240v power supply for the CCTV. Broadly this has included discussion on:

- + An overview of the City's system requirements including network distribution to assist ETC's design and coordination of a trunk communications conduit and pit system to suit and terminate adjacent their system distribution node/enclosure, as applicable.
- + Details of any 3rd Party telecommunications customer service leading connection, so conduit provision (typically from road reserve to a customer comms distribution node, if applicable)
- + CCTV cabling type and termination method (type, size and IP rating) at poles. to ensure suitable conduit capacity / sizing as well as the appropriate cable termination accommodation/space inside each pole base.
- + Confirmation of CCTV camera locations. The current design includes conduit and permits mounting of CCTV to all light poles for flexibility and future expansion, if required.

Confirmation is required as whether the CCTV camera types require onboard image stabilisation system capable of clear imaging with light pole deflection, typically up to max 15mm at the 3.5m mounting height at wind speed up to 100km/hr. Generally, if CCTV camera image stabilisation systems are not included then dedicated more rigid CCTV poles capable of minimum deflection are required as part of the City's installation, rather than the more cost-effective use of light poles for mounting currently proposed.

2.1.8 CIVIL & DRAINAGE

The Civil and Drainage component has been designed by Porter Consulting Engineers (PCE). This includes updates to Gerring Court parking and kerb lines, the new Promenade's connection to Surrey Road and stormwater drainage throughout the site. The civil design input also included a review of existing site conditions and review of the site grading plan prepared by Ecoscape. PCE's also provided advice on access requirements for the netball courts, knowledge which came from their role as lead consultant on stage 1 of the project.

Design of Gerring Court is the most significant area of civil design scope and includes the realignment of parking bays from angle parking to parallel parking, adjustment of kerbs and drainage and provision of access to the netball courts. Pavement updates are limited to the alignment of the bays which will be completed in red asphalt.

The number of bays on Gerring Court has been modified from 34 standard angle bays to 9 standard angle bays. The two access bays for the Robinson Netball Centre have been realigned parallel and designed to meet DDA requirements. Additionally, three standard angle bays adjacent to the proposed playground will be changed to two access bays with a central clear zone to provide access to the park amenities. Line marking of all parking will be included in accordance with Australian Standards.

2.1.9 TREE RETENTION & PROTECTION

The existing mature trees are a valuable asset for the site. The proposed Zone 2 design aims to maximise retention of trees with 32 trees retained within the project boundary, and only one marked for removal due to its location interrupting a key design element, a *Eucalyptus leucoxylon* in the alignment of the Promenade.

Ecoscape met on site with the City of Belmont arborist on 24 January 2024 to discuss works around existing trees. Measures discussed included requirement to follow the City's Arboricultural Method Statement (AMS) which would include soil-vac of root zones where excavation and boxing out is proposed near to Structural Root Zones (SRZ) and use of gravel as a sub-base below new kerb and pavement in Tree Protection Zones installed to the CoB standard detail. City arborist staff will also inspect temporary fencing of Tree Protection Zones (TPZ) prior to works occurring and provide signage for the contractor to use for the duration of the works. The City's arborist will liaise with the project Superintendent and advise on site instructions regarding trees during construction.

Existing Melaleucas and Eucalypts between the Town Square site and adjacent drainage sump (The Hollow) may require minor pruning and one Melaleuca in proximity to proposed shelter extends out from retaining wall creating a potential fall risk if climbed on which is more likely due to increased public use. This tree may need to be removed with a replacement tree planted in its place.

The current playground design has a net bridge spanning across two towers between the canopy of the Jacarandas. Following a site measure the proposal looks achievable if the walkway is between approx. 2.5m and 3.2m with a width of 1.2. The City has provided support in principle and will review further detail to be provided by Ecoscape.

Playground structures in proximity to trees are to avoid using continuous strip footings. These will be designed with blob footings or 'Surefoot' post supports to minimise impact on the root systems.

It is recommended that existing trees are monitored following the construction phase to confirm that the works have not adversely impacted their health and identify remediation methods if required.

2.1.10 PLANTING STRATEGY

The planting strategy is based on the principles of the Recommended Design, with additional input coming from the Aboriginal Consultation undertaken in 2023. This includes working with the existing tree canopy to reinforce the site character and landscape connections, and selection of plant species to reflect the Rivervale location.

Trees

Tree section for the Promenade will include *Jacaranda mimosifolia* to tie-in with the existing trees on Gerring Court and create an avenue effect connecting through the site. Three existing Jacarandas in the playground were considered for relocation to provide more space for the play equipment, with the trees to be used in the avenue planting, however this is not being perused in the current design.

Trees in other locations throughout the site are expected to be Eucalypt species from Western Australia's southwest to reflect connections with Noongar Country. The Aboriginal consultation revealed a significant number of families in Rivervale originate from the Great Southern and to the north of Perth and the families (Moort) could be reflected in the tree selection. The Zone 2 area has limited space for additional tree planting so it is recommended that this concept could inform Zone 3 greenspace, and be extended into the Hollow. Participants at the Aboriginal consultation did not support the planting of more Jacarandas due to their exotic status, so this initiative could be used to build accord with the local community.

Trees will be specified in more advanced sizes to achieve a site presence on installation. This will include 500L install sizes for Jacaranda specimens and 200L install sizes for Eucalypts. Trees will be irrigated by bubblers and installed with stake supports.

Shrubs and groundcovers

The strategy for mass planting aims to celebrate the Noongar Six-Seasons, which was raised by participants in the Aboriginal consultation sessions. The site has been divided into six parts, each with plant mixes that reflect one of the Six Seasons through flowering local native species. Interpretive signage will be installed at the Promenade entry points to explain the species selection and the Six Seasons. There is potential for the planting mixes to be used in Zone 3 of the project where there are broader available for planting.

Mass planting green stock is expected to be 130mm pot sizes and planted areas will be irrigated.

2.1.11 IRRIGATION

Irrigation is expected to be used for all new planting, trees and turf. Project irrigation consultants Cadsult IDS have liaised with the City's irrigation staff to confirm supply and details of the existing bore and irrigation system. No as-constructed drawings for the site were available, however some mainline infrastructure and the bore location were picked up in the Jurovich survey (05/09/2023).

The Zone 2 irrigation will be connected to the existing bore and controller located on the reserve near to Surrey Road. Irrigation types (e.g. sprays or drippers, possible filtration) is to be discussed and confirmed as part of further design development.

The existing bore is located near to the nature play location and it is recommended that an enclosure be provided to it, to avoid potential injury in the event of a child playing on it. Further liaison with the City's irrigation staff is required to confirm an acceptable enclosure type and identify maintenance access requirements.

2.1.12 PUBLIC ARTWORK AND INTERPRETIVE SIGNAGE

Public artwork and interpretation signage will form part of the completed Zone 2 works. These will be guided by the *Public Artwork Strategy* prepared for the project. Artwork is expected to explore themes that relate to the site including Noongar heritage and culture and the history of Rivervale. The Strategy recommends for artwork content be contributed by a range of sources including established artists and community participation. The artworks are expected to be prepared and installed during the construction phase for Zone 2 and will require close coordination during the contract documentation phase of the project.