CITY OF PARRAMATTA

CAPITAL PROJECTS
LANDSCAPE ARCHITECTURE

ARTHUR PHILLIP PARK

FINAL Strategic Masterplan | Revision B July 2021




ARTHUR PHILLIP PARK

DOCUMENT REGISTER

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MASTER PLAN REPORT

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TABLE OF CONTENTS

1.0 Introduction.....5
Project Background 6

2.0 Site Analysis.....7
Open Space & Attractions.....8
Transport Links & Broader Connections.....10
Existing Site Conditions.....11

3.0 Community & Engagement.....18
Introduction.....19
Findings & Insights.....20

4.0 Design Principles.....23

5.0 Masterplan.....27
Concept Masterplan.....28
Detailed Plan - Accessible Playground.....31
Detailed Plan - Future Water Play Playground.....32
Detailed Section - Future Water Play Playground.....32

6.0 Strategies.....35
Signage.....36
Furniture.....37
Materials Palette.....38
Parking.....39
Access & Lighting.....40
Planting Palette.....38

7.0 Appendices.....43

Appendix 01 - Traffic Study

1.0 INTRODUCTION

PROJECT BACKGROUND

Arthur Phillip Park is located in Northmead (Parramatta Ward). Redbank Road (northeast), Park Street (northwest) and Edward Street bound the Park (southwest).

The park is well used and well-loved by its local community of Northmead as well as neighbouring precincts of Westmead and Parramatta North Precinct.

The 2021 draft masterplan for Arthur Phillip Park renews the 2000 masterplan to improve and provide additional recreational and sporting facilities.

The 2021 masterplan responds to the existing site and its current uses as well as its surrounding context, connections and future social and recreational needs. As well as a detailed site analysis, this masterplan report draws upon the results of three phases of stakeholder engagement and community consultation.

Extensive understanding of existing and future community needs and an indepth understanding of site has informed the designed outcome of this masterplan report.

2.0 SITE ANALYSIS

SITE ANALYSIS

OPEN SPACE & ATTRACTIONS

Arthur Phillip Park is located in close proximity to Toongabbie creek and its adjoining parks and reserves. As well as these more naturalized public spaces there is also a network of small community parks and local playgrounds that are within walking distance of the masterplan site. Of these public space offerings, Arthur Phillip Park presents the most diversity in program and the largest range of attractions.

This hierarchy of public open space identifies Arthur Phillip Park as the primary green space destination within the local Northmead area. This reinforces the need for a thorough consideration of land use and programming within the park, to ensure that it is able to further develop its identity as a destination and a shared backyard for local residents.

LEGEND

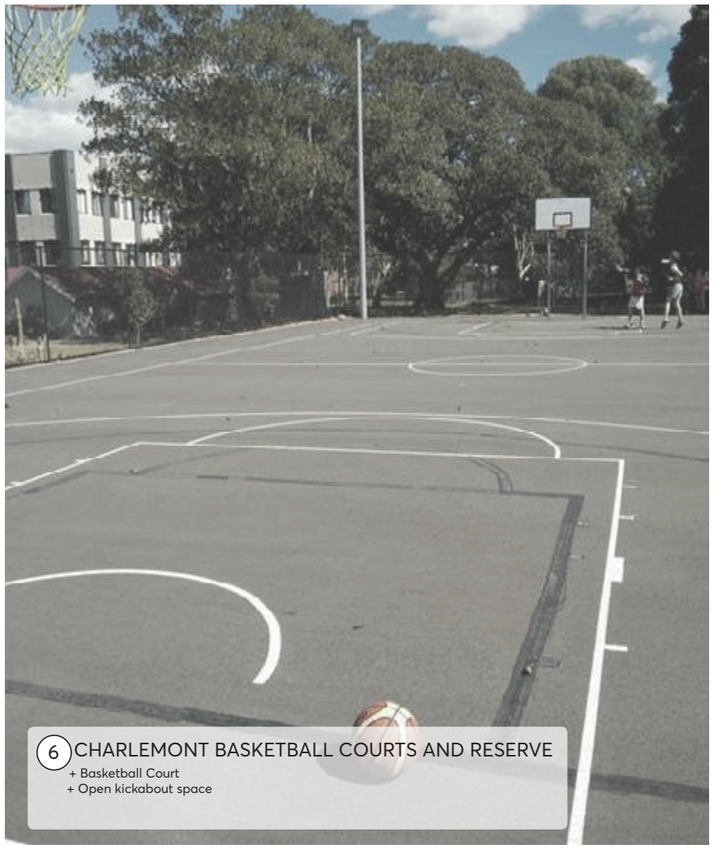
1	Arthur Phillip Park
2	Tartoola Reserve
3	Willsford Homes Playground
4	Hospital Farm Reserve
5	Robin Hood Park
6	Charlemont
7	Richill Park
8	Kilppert Park
9	Alice Watkins Reserve

SITE ANALYSIS

OPEN SPACE AND ATTRACTIONS

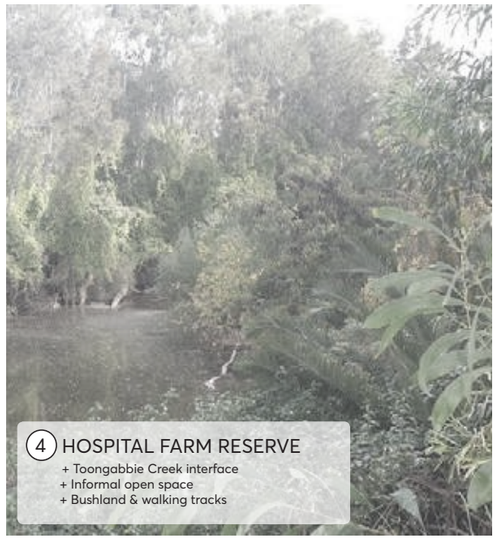
2 TARTOOLA RESERVE
+ Toongabbie Creek interface
+ Informal open space
+ Bushland & walking tracks

5 ROBIN HOOD PARK
+ Playground
+ Open kickabout space
+ Scooter track
+ Picnic setting



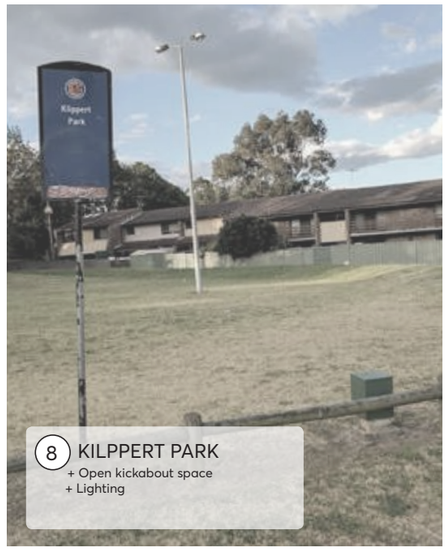
6 CHARLEMONT BASKETBALL COURTS AND RESERVE
+ Basketball Court
+ Open kickabout space

3 WILLSFORD HOMES PLAYGROUND
+ Playground
+ Open kickabout space
+ Scooter track
+ Seating



4 HOSPITAL FARM RESERVE
+ Toongabbie Creek interface
+ Informal open space
+ Bushland & walking tracks

7 RICHILL PARK
+ Playground
+ Open kickabout space
+ Scooter track
+ Seating



8 KILPPERT PARK
+ Open kickabout space
+ Lighting

9 ALICE WATKINS RESERVE
+ Local playground
+ Open kickabout space
+ Scooter track

SITE ANALYSIS

TRANSPORT LINKS AND BROADER CONNECTIONS

Arthur Phillip Park is located in close proximity to Toongabbie creek. This presents abundant opportunities to improve the park connection and integration within the existing network of walk-able and green corridors within the Northmead area. Arthur Phillip Park already forms a key destination within this network of active transport connections. This should be further supported by improved connections to and from the park.

These walk-able links have the potential to improve efficiency of movement within Northmead and increase local residents' engagement with their natural surroundings. Arthur Phillip Park is already well connected to its surrounds by an existing cycleway network that provides efficient links to key local destinations and beyond to neighbouring suburbs and local centres.

Most visitors travel to the park by car. The existing parking arrangement should be reviewed to ensure that the provision of parking spaces is able to accommodate future developments and improvements within the park.

LEGEND

- Existing cycleway
- Proposed cycleway extension
- Bus stop and bus route
- Project site

SITE ANALYSIS

EXISTING SITE CONDITIONS

The existing arrangement of Arthur Phillip Park includes: two rugby fields, a full size cricket wicket, sports amenities building and a small half-court basketball area.

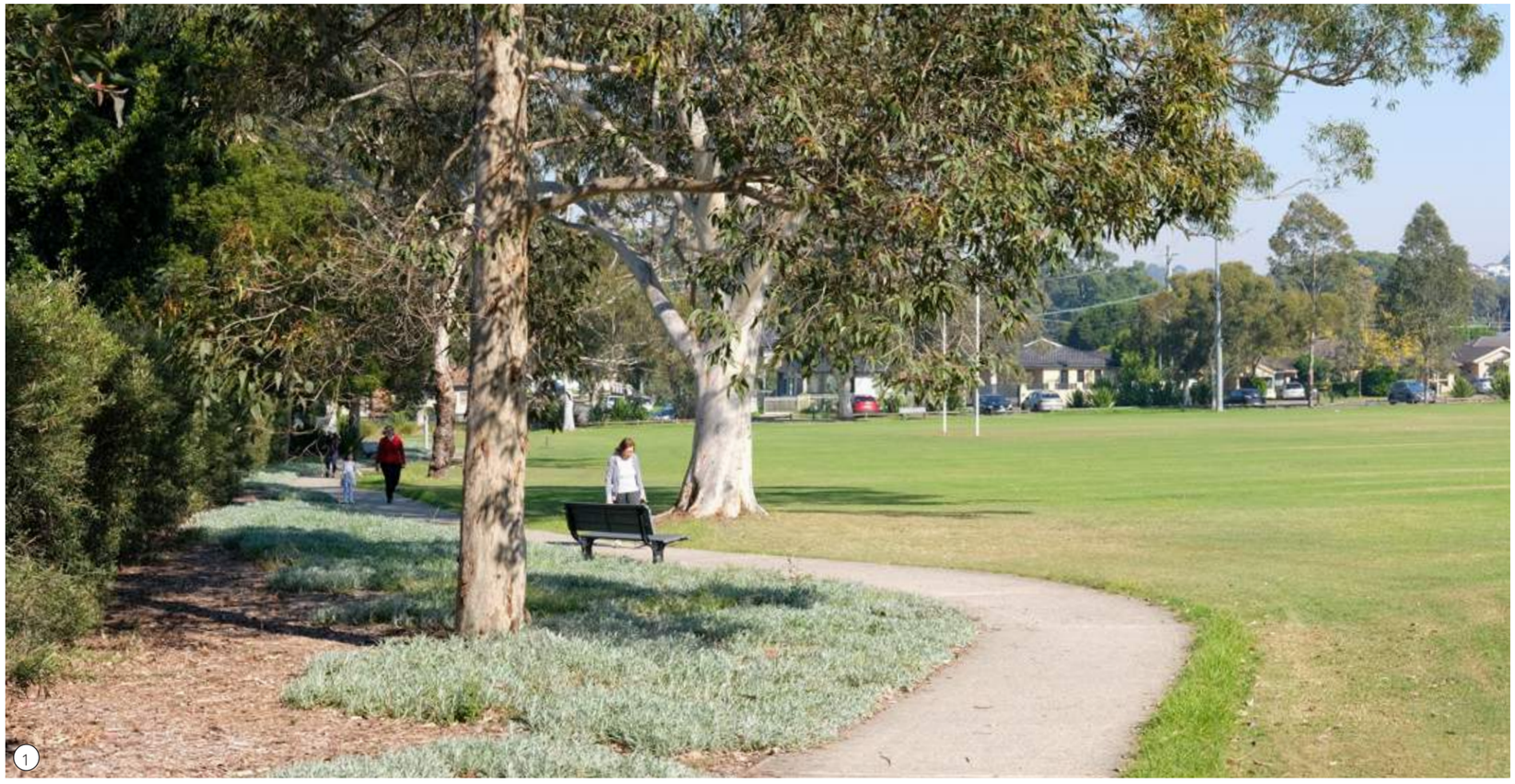
As a community destination, the park provides an abundance of open lawn areas, a well-used circuit path with three small fitness stations and well positioned park furniture. There is also a partially fenced local playground with natural shade and a range of play opportunities. The park is well used by the local community for leisure and exercise and provides social amenity in the form of barbecues and picnic shelters amongst a canopy of mature trees.

LEGEND

1	Full size cricket wicket
2	2x Rugby fields
3	Circuit path to field perimeter
4	90 Degree parking
5	Childcare centre with parking adjacent
6	Sports amenities building and public toilet
7	Local playground with basketball hit up court
8	Fitness stations
9	Barbecues and picnic shelters
	Interface with private residences
	Existing trees

SITE ANALYSIS

EXISTING SITE CONDITIONS



LEGEND

1	Circuit path to field perimeter
2	City of Parramatta standard furniture to circuit path at perimeter of field
3	Fitness stations
4	Fitness stations
5	Existing public toilet entrance to sports amenities building

SITE ANALYSIS

LEGEND

1	Climbing equipment within local-scale playground
2	City of Parramatta standard furniture to circuit path at perimeter of field
3	Basketball hit up court
4	Climbing equipment within local-scale playground
5	Existing drinking fountain

SITE ANALYSIS

EXISTING FACILITIES

SPORTS AMENITIES BUILDING

Facility Level	Local
Size	230m²
Observations	- Lack of passive surveillance to public toilet - Building is in good working order - Well located within the park - No universal access/BCA compliance as per current standards - Public toilet interface with playground can be significantly improved

CAR PARK

Facility Level	N/A
Size	~985m² (44 parking spaces)
Observations	- Parking spaces are not line marked and can be more clearly defined o improve organisation and effective use of space - Numerous timber bollard take up space that could otherwise be used for parking - Visitors regularly park around the perimeter of the site for extended periods of time. The master plan may consider timed parking as a means to increase parking availability around the proposed playground upgrade. - Large mature trees restrict potential to expand carpark

HALF COURT BASKETBALL COURTS

Facility Level	Local
Size	~170m²
Observations	- Well used and well located within the park. - Would be larger to enable a broader range of game play and variations of basketball or other informal sports - Lack of supporting amenities such as bench seating, drinking fountains etc - Can be better integrated with playground and built upon to provide a more substantial recreation offering for teenagers and young adults.

PLAYGROUND

Facility Level	Local
Size	~300m²
Observations	- Partially fenced perimeter and natural shade - Close to public transport and off-street carpark - Direct access to public toilets - Suitable for ages <10 years - Outdated equipment which could be upgraded to better fit site requirements and serve a broader user group

SITE ANALYSIS

EXISTING FACILITIES

TENNIS COURTS

Facility Level	Local
Size	~10m² each (3 stations)
Observations	- Well located within the park - A very basic offering of singular fitness equipment stations. - Could be consolidated and increased upon to form larger outdoor gyms within the park - Could cater for a broader range of age groups and physical abilities.

PARK FURNITURE

Facility Level	Local
Size	N/A
Observations	- Basic provision of park furniture to circuit path - Good condition - Consider upgrading to provide more generous social settings in addition to bench seating

BBQ SHELTERS

Facility Level	Local
Size	2x BBQ , 3x picnic table
Observations	- Well positioned within the park - Small shelters provide space for small gatherings only - Potential to consolidate BBQ areas to provide larger sheltered spaces for groups and more flexible use.

CIRCUIT PATH

Facility Level	Local
Size	2.5m width x ~600m length
Observations	- Well used for exercise and leisure - Well connected at all entry points to the park - 2m width, however limited potential exists for widening without impeding onto sports fields.

SITE ANALYSIS

CONSTRAINTS

LEGEND

1	Existing building is ageing and presents limited amenity to adjacent playground. Public toilet offers limited potential for passive surveillance. Existing awning structure presence head clearance issues and obscure is views out to the park.
2	Gradient of existing field is steep and presents 5.6 m level change from North to South which limits potential sporting program.
3	Existing playground is aging and offers limited play value
4	Existing parking arrangement cannot be expanded due to presence of high value mature trees
5	Small fitness stations provide only one piece of equipment at each location
6	Informal basketball area is small which limits its functionality as a multi-use activity area
7	Existing circuit path is narrow and offers limited opportunities for additional activity

SITE ANALYSIS

OPPORTUNITIES

LEGEND

1	Upgrade building to improve interface with adjacent playground and visual permeability to public toilet. Review sports specific offering as part of building redesign process.
2	Introduce a 1 in 6 gradient in embankment to provide a flatter and more usable playing surface to sports fields
3	Upgrade playground to a district level facility with a range of play experiences suited to different age groups and all physical abilities
4	Activate existing circuit path with additional provisions of outdoor fitness stations and picnic areas as well as other social infrastructure, such as drinking fountains, bike racks and incidental nature play
5	Improve car parking with more clearly defined parking bays and by removing obstacles such as timber bollards to provide a small increase in parking numbers. Consider timed parking for Park Street frontage
6	Upgrade fitness stations to larger outdoor gym layouts with integrated seating walls and new shade tree plantings
7	Provide a larger and more flexible multi-use space for informal sports and activities

3.0 COMMUNITY & ENGAGEMENT

COMMUNITY & ENGAGEMENT

INTRODUCTION

City of Parramatta worked along side JOC consulting to undertake a three-phase engagement strategy to inform the development of the masterplan. The engagement strategy aimed to identify and understand key opportunities and needs for the future from the community's perspective.

Community engagement to inform the masterplan was devised across 3 phases to ensure that a comprehensive collection of data was collected.

Phase 1 (Ideation) – 4 December 2020 to 4 February 2021

Phase 2 (Co design) – 19 April 2021 to 10 May 2021

Phase 3 (Public exhibition) – 31 May to 25 June 2021

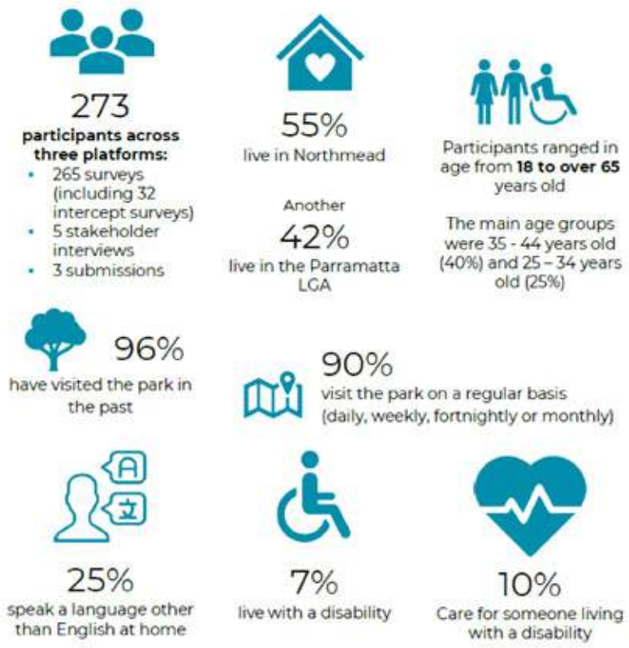
Data was collected through a number of channels including online and paper surveys, on-site intercept surveys stakeholder interviews, drop in sessions and social media and email.

The different mediums employed has ensured a well rounded input from sporting groups and users, local and district-wide casual users, and surrounding local residents. This was confirmed by the cross-section of participants responding.

This section of the report is intended to provide a brief overview of the key themes and community's priorities identified as the result of the engagement process. A comprehensive report for each of the three phases of engagement accompanies this report.

PHASE 1

WHO PARTICIPATED IN THE CONSULTATION?



*Demographic data captured in Phase 1 **

ENGAGING OUR COMMUNITY:

233 SURVEYS
5 STAKEHOLDER INTERVIEWS
23 IN-PARK SURVEYS
3 FORMAL SUBMISSION

INFORMING OUR COMMUNITY

SOCIAL MEDIA REACH: 28,440
WEBPAGE VISITS: 1,640
MAIL DISTRIBUTION: 826

FINDINGS & INSIGHTS

THE WALKING LOOP IS A HIT! (AND THE TOP PRIORITY FOR FURTHER IMPROVEMENT)
This was the most used facility in the park by 72% of respondents, and was what people liked most about the park. The community want to see further improvement to the loop such as widening, connections and seating rest stops, as well as associated shade trees and lighting. Shade trees and the walking/cycling loop were identified as the top two existing park elements for improvement.

MORE SHADE TREES ARE DESIRED IN THE RIGHT LOCATION
While this was identified as a top priority by respondents, there was also a strong theme of also retaining the large open field in the centre of the park through survey responses and stakeholder sports group feedback.

LIGHTING IS A PRIORITY, MORE SO FOR WALKERS AND INFORMAL USE
It was identified as the fourth highest community priority, over 25% of park users visit after 4pm (nearly half of weekday visitors) and the presence of walkers in the park after dark was identified in intercept and sporting group stakeholder surveys.

THE COMMUNITY DESIRES THE PARK TO BE A SOCIAL DESTINATION
One-quarter of park users visit with friends and one-third with their partner. Respondents indicated strongly that they would like to see more leisure and social activity opportunities.

WATER PLAY AND PLAY EQUIPMENT FOR A WIDER RANGE OF AGES ARE A PRIORITY
61% of respondents visit the park with their children and young families, the group that most respondents felt the park could better cater for. Playspace was rated a high priority for improvement. The community indicated they would like to see water play and traditional play. Feedback through intercept surveys indicated new facilities should cater for older children, teenagers and even adults.

CONTEMPORARY ALL ACCESS FACILITIES ARE IMPORTANT
Participation by carers and people with a disability (7% and 10% respectively) indicated the use of the park by people with a disability appears to be high. Feedback through the intercept survey was that play equipment is important, for adults as well. The facilities and amenities building scored low (below 10%) in the facilities liked or used and the sports groups indicated the amenities format was outdated and did not provide for women.

THE SPORTS FIELD IS UNDERUTILISED AND AN ISSUE FOR SPORTS
Only 30% of respondents use the open sporting field and it is only used for organised sports groups on Saturdays and some weekdays for training. The top priority across all sports groups was the levelling of the field, which would also likely increase its use by the wider community for informal sports and games.

WALKING AND CYCLING CONNECTIONS ARE A HIGHER PRIORITY THAN PARKING
Only half of visitors drive to the park and parking was not identified as a high priority (not in the top 4 and not featuring strongly in suggestions for improvement) nor an issue for sports groups interviewed. 56% of participants walk to the park and 14% cycle.

THE COMMUNITY VALUES FUNCTIONALITY OVER AESTHETICS
Feedback on the ranking of elements for play indicates a community preference towards the functional (water play, traditional play and space for leisure/social activities) over aesthetic outcomes (such as aboriginal and indigenous design or public art and creative play spaces). Though all scored high (3.47 or more out of 5).

THE PARK IS ALREADY BEGINNING TO SERVE AS A DISTRICT PARK
While 55% of survey participants lived in the local area of Northmead, 42% lived in the wider surrounding suburbs of Westmead, North Parramatta, Parramatta, Old Toongabbie, Constitution Hills and Winston Hills. With its walking look and sports field, Arthur Phillip Park is used by people in wider district.

PHASE 2

ENGAGING OUR COMMUNITY:

273 QR TRAIL SURVEYS

The exciting QR Trail method was a targeted engagement that would enable users to consider the future ofthe space that they were standing in, as they walked around the park. This method was aimed at capturing the ideas of park users who may not otherwise engage through Council's website

INFORMING OUR COMMUNITY:

SOCIAL MEDIA REACH: 46, 414
WEBPAGE VISITS: 1,306
MAIL DISTRIBUTION: 826

FINDINGS & INSIGHTS

Utilising the 10 priorities and considerations that were captured during the Phase 1 Engagement, the QR Trail exercises asked participants how they would like to see these key themes and ideas actionsed in Arthur Phillip Park.

These themes included:

A COLOURFUL AND EXCITING PLAY SPACE

- A play space defined by exciting play equipment and features for all ages
- Co-locating play spaces and park furniture

INCREASED CAPACITY OF THE PARK

- Adequate lighting for after dark use
- Providing rest stops and water coolers

AN INCLUSIVE SPACE

- Spaces and features that are designed for people of all ages and abilities

PLACES FOR GATHERING

- Picnics and barbeque areas to encourage socialising with family and friends
- Spaces that would better enable children's birthday parties and householdsized gatherings

AN ACTIVE SPACE

- Outdoor gym equipment, upgraded sporting facilities and regrading of the sports fields

A DRAFT MASTER PLAN RESPONDING TO COMMUNITY INPUT

Following the first 2 phases of community engagement, Council developed a draft Master Plan that aimed to respond to the needs and priorities captured during Phase 1, whilst adopting the ideas and themes that emerged during Phase 2.

The draft Master Plan clearly illustrated 8 key elements for the future of Arthur Phillip Park, which were directly derived from the earlier ideas and insights captured during the engagement.

PHASE 3

FINDINGS & INSIGHTS

The Phase 3 consultation involved publicly exhibiting the proposed draft Master Plan. The survey and park drop-in sessions sought community feedback to confirm that key priorities identified during earlier consultation were supported.

- The retention of all mature trees, and the need for strategic additional planting to provide shade on the Eastern side of the walking track.
- The importance of employing inclusive design and materials in all aspects of the park upgrades
- The need for further investigation and consultation to be undertaken prior to the regrading of the sports fields
- The importance of the inclusion of sport and recreational activities for all ages.
- The importance of upgrading the traffic study findings to reflect the park user needs of up to 4 hours parking

97%

SUPPORT THE MASTER PLAN

ENGAGING OUR COMMUNITY:

3 PARK DROP-IN SESSIONS
5 STAKEHOLDER INTERVIEWS
29 SUBMISSIONS

INFORMING OUR COMMUNITY:

SOCIAL MEDIA REACH:39,920
WEBPAGE VISITS: 1,528
MAIL DISTRIBUTION: 826

DESIGNING WITH THE COMMUNITY

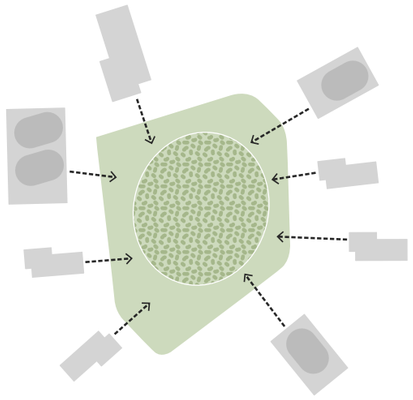
Guided by community feedback the Master Plan responds to the importance that the community places on the need for an inclusive, accessible play space and improving on existing social gathering spaces. Furthermore, the Master Plan acknowledges that the future Arthur Phillip Park should encourage people of all age groups and abilities to get active - a key to which will be the improvements to the much loved walking path and native park scape.

The masterplan acknowledges the value that the community places on green spaces, by retaining the mature trees within the park as well as planting additional trees aimed at providing greater shade.

4.0 DESIGN PRINCIPLES

DESIGN PRINCIPLES

The following design principles have been established as a product of the site analysis process, which was undertaken to identify opportunities and constraints associated with the ongoing management and improvement of Arthur Phillip Park. These principles have been integrated into the designed outcome proposed by the Master Plan Report.



CREATE AN INVITING, SHARED BACKYARD

Our backyards are shrinking. Many local residents reside in apartments and do have much more than a balcony. With this in mind, Council's open and green spaces need to take on many roles, and work harder to become places for people of all walks of life to enjoy, socialise and play.

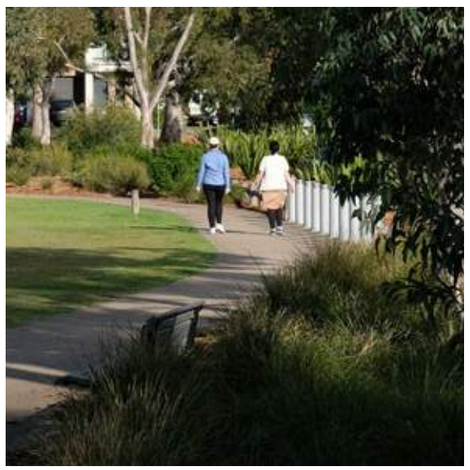
When local residents embrace a park, a sense of community is always present. The park is almost never empty and becomes a safe haven for play and recreation. It is the objective of the Arthur Phillip Park Master Plan to draw activity to the park so that it becomes a regular fixture in the daily lives and wellbeing of local residents.

DESIGN PRINCIPLES

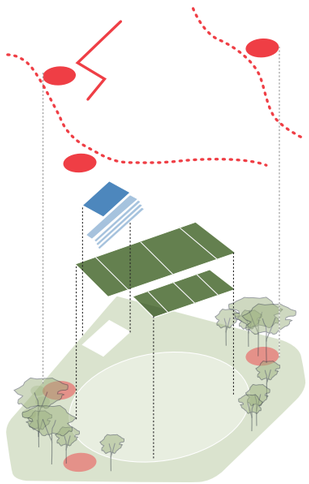
ESTABLISH AN ACTIVE SPACE FOR RECREATION AND LEISURE

Outdoor physical exercise is an excellent means to develop or improve mental and physical health. Arthur Phillip Park presents an opportunity to develop a community-focused park space, which offers a varied and well-rounded set of opportunities for physical exercise and social engagement.

Exercise opportunities should appeal to a full range of age groups and physical abilities. The Arthur Phillip masterplan builds upon the existing offering of a multi-functional circuit path and small fitness stations to create a destination that facilitates physical exercise, activity and recreation in a number of forms.



DESIGN PRINCIPLES



A LAYERED AND MULTI-FUNCTIONAL APPROACH TO PROGRAM

Arthur Phillip Park takes on a number of roles throughout an average day. It can be the platform for multiple sporting teams to train and compete, with hundreds of spectators coming and going on any given Saturday. It also provides social gathering spaces for families, couples and individuals to connect and play.

Weekday evenings may occasionally see the large groups of sporting teams returning for training, but could also support the individual – a quiet evening walking the dog or going for a run during night time hours. All these activities should be a safe and enjoyable experience. The masterplan design provides a flexible community focused space which is supportive of all visitors with all abilities catered for.

5.0 MASTERPLAN

ARTHUR PHILLIP PARK MASTER PLAN

The concept master plan for Arthur Phillip Park builds upon an existing offering of recreational program in the well-loved community park.

The master plan maintains the existing circuit path to the perimeter of the cricket pitch and two rugby fields. The community engagement process identified a number of opportunities for the improvement and embellishment of the circuit path through the addition of more substantial offerings of outdoor fitness equipment, furniture and picnic settings, as well as additional shade trees and other fixtures such as drinking fountains and bins to provide improved public amenity.

Regrading works are proposed for the north-western corner of the sports fields. This will assist in achieving a shallower gradient to the sports fields and improve the quality of the playing area without negatively impacting the surrounding landscape of the park. Further studies will be undertaken throughout a detailed design process to examine the most cost effective and site specific solution for the regrading of the field.

The existing playground is proposed to be upgraded to a district level play space with accessible play opportunities for a broad range of age groups.

As part of a staged delivery plan, council's initial concept plan for the playground will include a large nature play area. This space will include opportunities for children to engage with natural materials such as logs, balance beams, steppers, climbable boulders and cubby house structures.

As additional funding becomes available, council will seek to decommission the nature play area with the intent of providing a new nature based water playground.

Although the proposed playground is designed to be an accessible play space for users of all physical abilities, the accessible connections such as ramps, hard pathways and footbridges should not appear to be visually prominent components of the design. This approach shifts the focus away from disability and encourages all users to play together, ensuring that all areas of the playground are exciting engaging and challenging for everyone.

The playground includes two large outdoor BBQ areas both of which will address the open lawn area/playing field with in the park.

The existing amenities building is proposed to be upgraded. Upgrades to the building should facilitate an improved interface and relationship with the adjoining playground through the provision of an improved public toilet, which should include an accessible toilet to cater for all users of the park and playground. The building should also offer an improved arrangement for change rooms, storage space and a kiosk to meet the needs of local sporting teams. This building will be designed in collaboration with the community and sporting teams as part of the detailed design process that will precede the preparation of construction drawings for the project.

To serve the needs of the upgraded playground and sports fields, a non-destructive approach has been taken to the improvement of car parking around the perimeter of the park. All existing trees are proposed to be retained around the areas of car parking.

The car parking itself will be improved through the provision of clear line marking and the removal of timber bollards from parking spaces to ensure that the available space is utilised as efficiently as possible. This will result in a small increase in available parking spaces around the partner. Together with this approach, council will also examine the possibility of introducing timed parking of 2 to 3 hours along Park Street to better facilitate a turnover of parking that is appropriate to the parks function as a sporting field and as a future district playground.

Illustrations are indicative only and subject to detailed design development.

LEGEND

1	2 Rugby fields
2	1 Full size cricket wicket
3	Existing circuit path
4	Embellishments to circuit path including larger offerings of fitness equipment, social settings and bench seating
5	Proposed additional shade trees
6	Clearly line marked parking bays with potential timed parking to park
7	Graded embankment to provide improved crossfall gradient to sports field
8	New district level playground with perimeter fence informal sports court, accessible play opportunities bouldering wall and nature play area with potential for future water playground
9	Consolidated picnic areas with shelters picnic tables and BBQs
10	Existing trees to be retained
11	Proposed upgrade to sports amenities building with new accessible public toilet and sheltered outdoor space

Illustrations are indicative only and subject to detailed design development.

Illustrations are indicative only and subject to detailed design development.

DETAILED PLAN

ACCESSIBLE PLAYGROUND

LEGEND

1	Integrated seating edges
2	Proposed rubber softfall surfacing
3	Accessible ramp walkway to elevate users of all physical abilities to raise platforms and lookout spaces Raised bleacher seating to eastern edge of courts
4	Active embankment to encourage climbing sliding and nature play
5	Proposed bouldering wall
6	Circulation pathways
7	Fenced perimeter to playground with opening to address open lawn space
8	Informal sports area including basketball line marking and backboard table tennis table seating ages and other line marking to facilitate informal sports activities
9	Consolidated picnic areas with shelters picnic tables raised seating edges and barbecues
10	Textured mass planting understory with newly proposed tree plantings
11	Nature play area with large smooth finished timber logs static balance beams and steppers cubby houses and climbable boulders
12	Accessible link through nature play area. Includes on-grade cubby houses with sensory play experiences inside.
13	Proposed location for entry wall signage
Note	Following the acquisition of additional funding council suggests that the nature play area be decommissioned, with play elements such as balance beams steppers and cubby houses being relocated to other areas within Arthur Phillip Park with the intention of creating incidental nature Play experiences to the perimeter of the circuit path. Alternative locations in other parts could also be considered for the relocation and re-use of this equipment.

Illustrations are indicative only and subject to detailed design development.

ACCESSIBLE PLAYGROUND

Illustrations are indicative only and subject to detailed design development.

DETAILED PLAN

FUTURE WATER PLAY

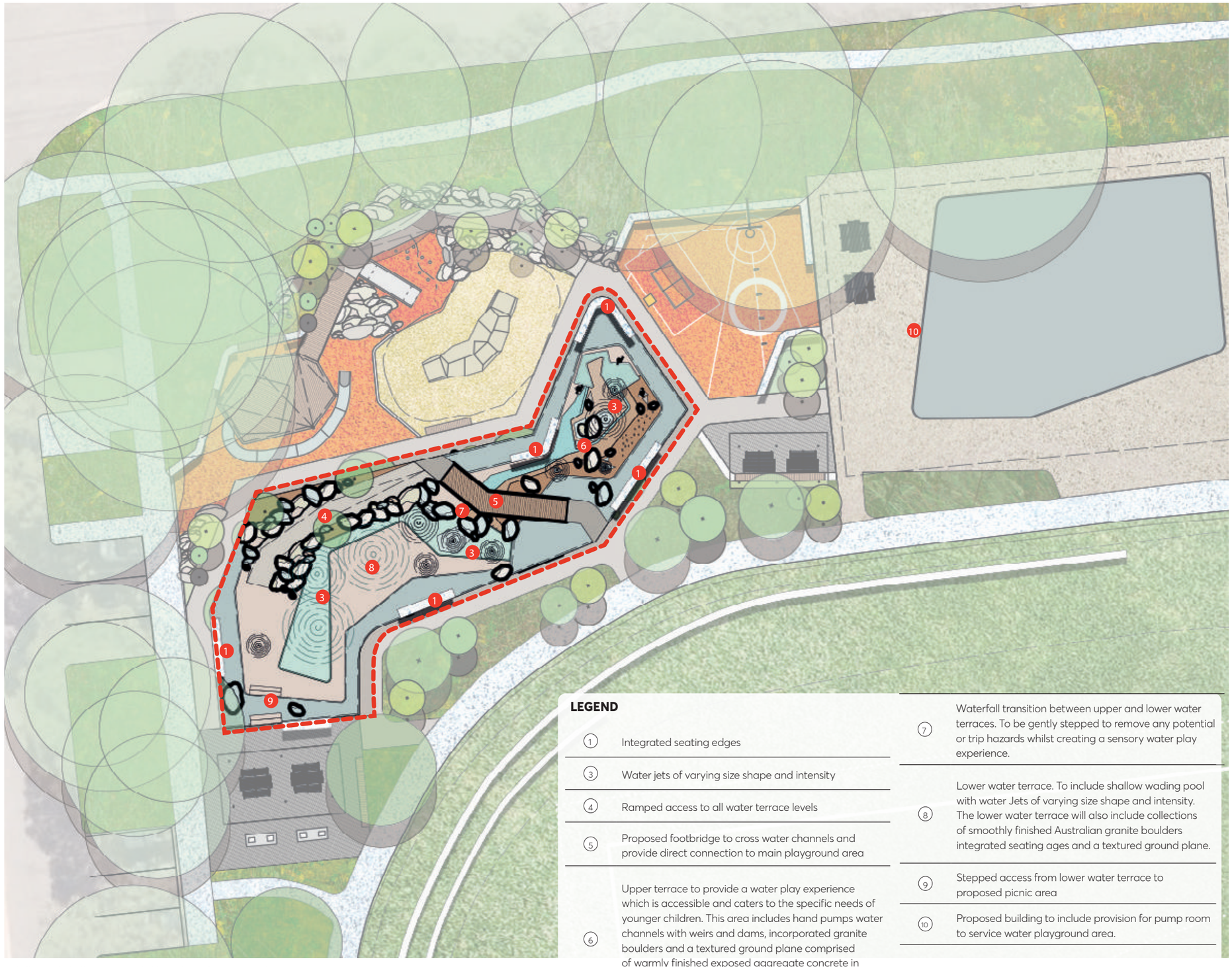
Following the acquisition of additional funding the nature play area can be decommissioned, with play elements such as balance beams steppers and cubby houses relocated to other areas within Arthur Phillip Park. This creates incidental nature play experiences to the perimeter of the circuit path. Alternative locations in other parts of the park could also be considered for the relocation and re-use of this equipment.

Following the decommissioning of the nature play area, a new water play playground is proposed to sit with in the same footprint of the broader place space layout.

The water play area will include a series of terraced platforms with splash pads, hand pumps, interactive water channels and water jets in a range of sizes. The water play area will also be fully accessible via a series of hidden ramps which provide accessible connections to all terraced spaces.

The water play area will be constructed from hardwearing materials such as textured exposed aggregate concrete, in combination with smooth concrete areas, raised concrete blocks imported Australian granite boulders and in situ concrete seating edges which will be integrated into the design.

All play areas proposed as part of the master plan will be certified by a qualified play certifier throughout the detailed design phase. All natural materials such as the proposed granite boulders and concrete blocks will be carefully installed and adjusted onsite to remove any possibility of finger or hand entrapment, as well as to remove any sharp edges or unsuitable rough surfaces.



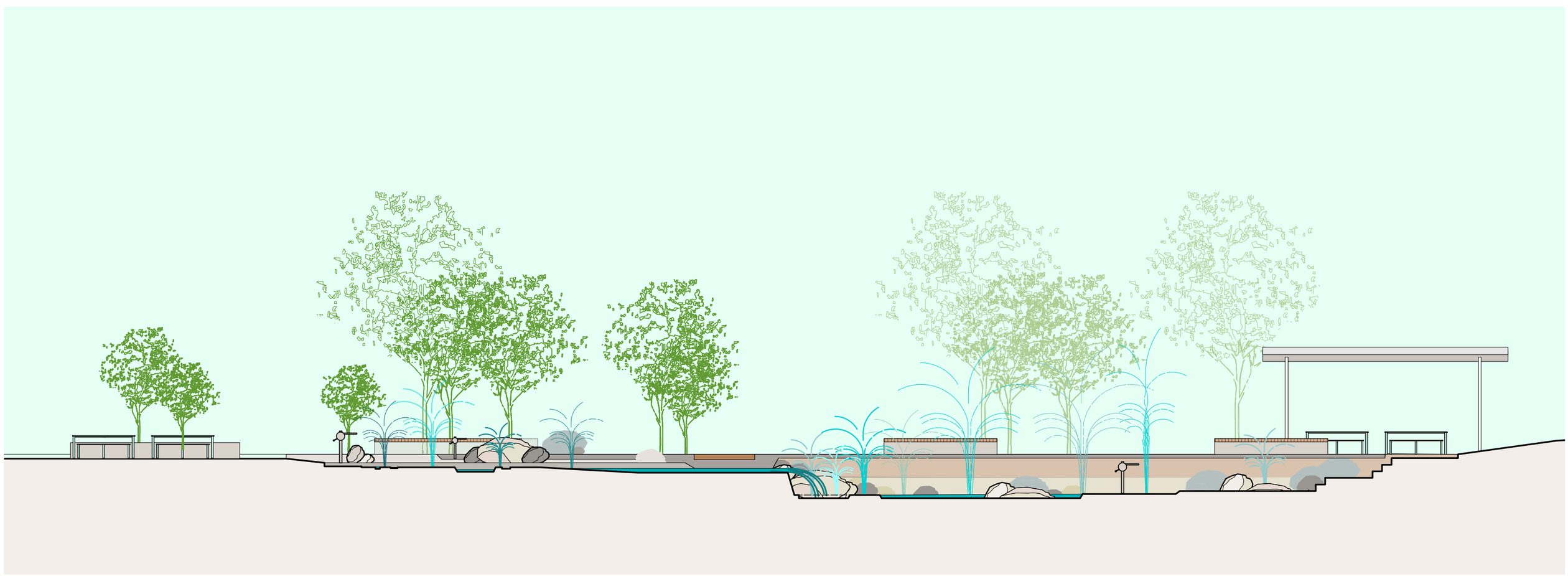
LEGEND

1	Integrated seating edges
3	Water jets of varying size shape and intensity
4	Ramped access to all water terrace levels
5	Proposed footbridge to cross water channels and provide direct connection to main playground area
6	Upper terrace to provide a water play experience which is accessible and caters to the specific needs of younger children. This area includes hand pumps water channels with weirs and dams, incorporated granite boulders and a textured ground plane comprised of warmly finished exposed aggregate concrete in combination with tonal concrete finishes and raised concrete blocks.
7	Waterfall transition between upper and lower water terraces. To be gently stepped to remove any potential or trip hazards whilst creating a sensory water play experience.
8	Lower water terrace. To include shallow wading pool with water Jets of varying size shape and intensity. The lower water terrace will also include collections of smoothly finished Australian granite boulders integrated seating ages and a textured ground plane.
9	Stepped access from lower water terrace to proposed picnic area
10	Proposed building to include provision for pump room to service water playground area.

Illustrations are indicative only and subject to detailed design development.

DETAILED SECTION

FUTURE WATER PLAY

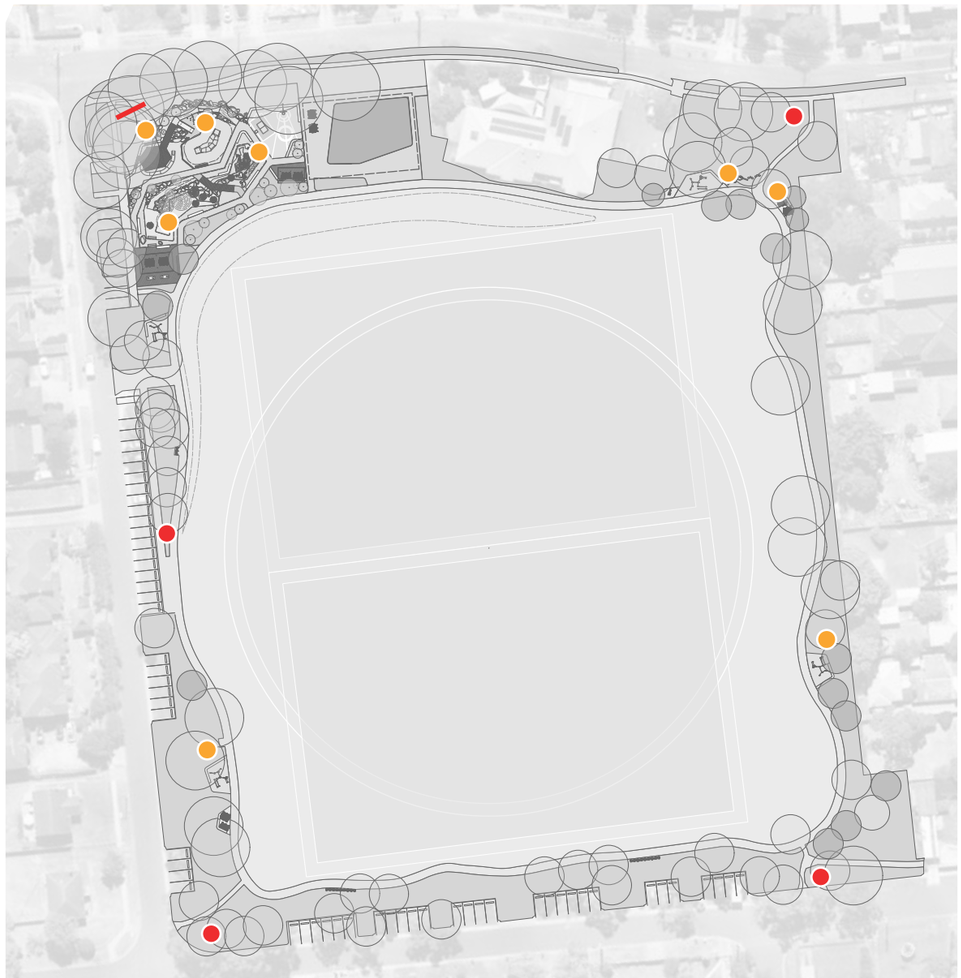


6.0 STRATEGIES

SIGNAGE STRATEGY

A signage strategy has been developed around a number of key principles including the improvement of way finding and legibility of circulation within the park and beyond to the local community. Park signage is proposed at all key entry points to the park with an entry wall located at the corner of Park Street and Redbank road (the Parks' most visible entrance). The existing park sight-lines and visual connectivity mean that passive way finding is already a successful means to facilitate way finding with in the park.

Interpretive and educational signage is proposed to highlight aspects of the sites character including its native flora and fauna as well as its history. This interpretive signage can be integrated into proposed activity nodes that are located around the circumference of the circuit path as well as within the playground as an interpretive element of a sensory play experience.



1. WAY-FINDING & ENTRY SIGNAGE
ASPECT Urban & Public

2. INTERPRETATIVE & EDUCATIONAL SIGNAGE
Deuce Design

3. INTERPRETATIVE & EDUCATIONAL SIGNAGE
Deuce Design

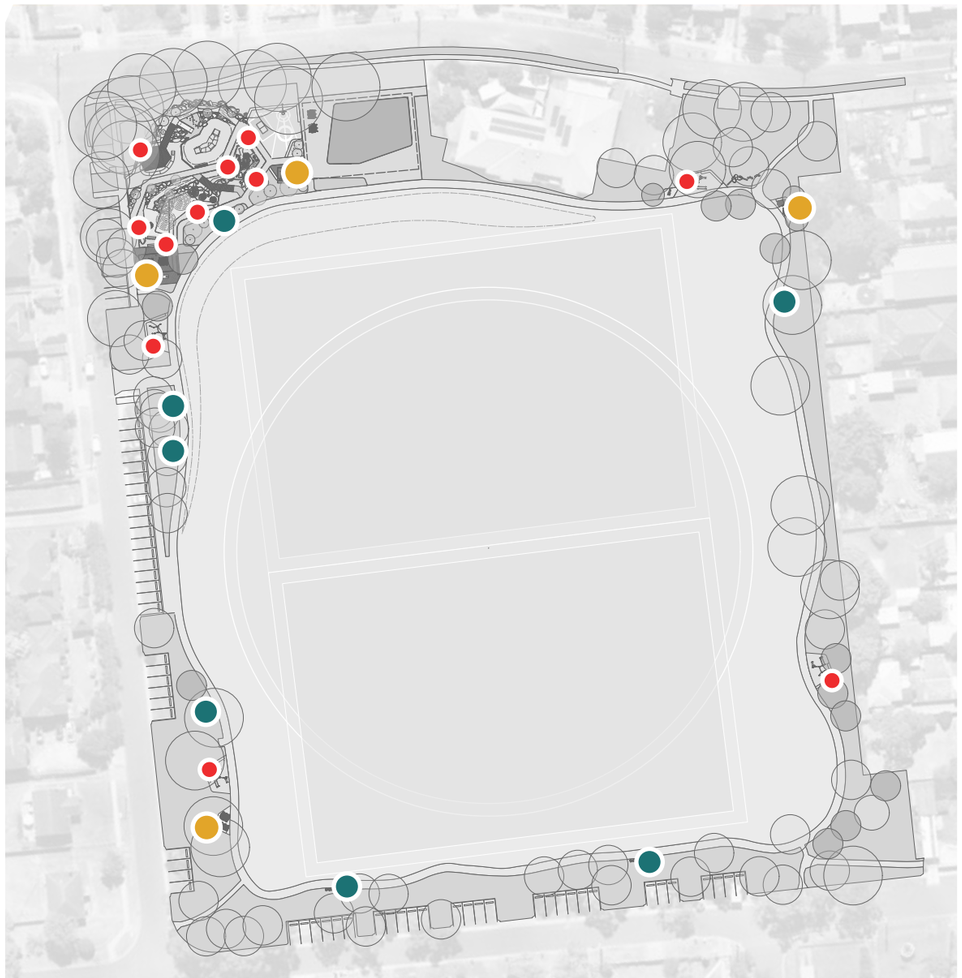
4. ENTRY WALL SIGNAGE
CAPITAL PROJECTS

PROPOSED FURNITURE SELECTIONS

Community feedback relating to park furniture and social settings prioritised moving away from the traditional park benches and picnic settings. Across the site integrated seating edges are proposed to tie into the design and provide incidental social settings within the park.

Seating ages and generous picnic areas have been integrated into the design of the playground area to facilitate supervision but also to encourage an active engagement between children and their parents or carers.

The furniture should read as a set with consistent materials colours and finishes creating a visual continuity between spaces. Spatially the new social settings should be generous and designed to accommodate groups of 4 or more people. All furniture should be durable in its design and should prioritise repeated elements and units to reduce maintenance requirements and improve efficiency of general upkeep.



CUSTOM FURNITURE ITEMS

RAISED SEATING EDGES

RAISED SEATING EDGES

PICNIC AREAS

BENCH SEATING

PROPOSED MATERIALS PALETTE

Materials palette has been developed to be both hard-wearing and sympathetic to the landscape setting of Arthur Phillip Park. Material should draw some inspiration from the mature Eucalyptus and Melaleuca tree plantings within the park. Tones and textures should be warm and inviting, whilst also keeping ongoing maintenance requirements to a minimum.

Around the proposed amenities building a combination of warm exposed aggregate concrete unit pavers and brick or stone feature paving creates a ground plane that responds to its natural setting amongst the trees. The playground should be naturalistic in its appearance, with bold and colourful highlights contrasting against natural materials such as stone and Australian hardwood timber. Consideration should be given to the establishment of a consistent colour palette across all new interventions with in the park.

Around the circuit path and it's planted edges materials should be paired back to allow the texture colour and form of the existing and proposed vegetation to create a more naturalized setting.

PROPOSED MATERIALS SELECTIONS

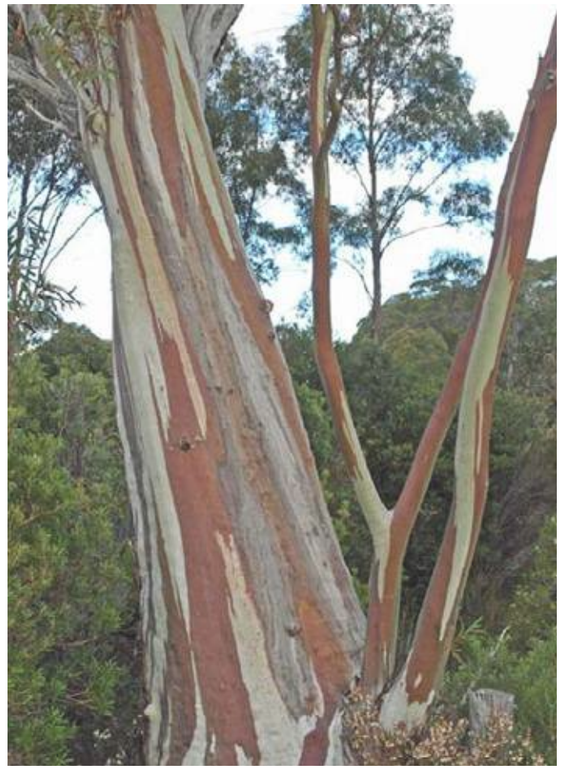
EXISTING TREES
To inform materials selections

EXPOSED AGGREGATE CONCRETE PAVING
Throughout proposed works

GRANITE STONE AND CONCRETE HARDSCAPE
Proposed waterplay areas

PLEXIPAVE SPORTS SURFACING
Informal basketball hit up area

WARM, TONAL RUBBER SOFTFALL
Playground



EXISTING TREES
To inform materials selections

AUSTRALIAN HARDWOOD TIMBER
To Amenities Building

CONCRETE/TIMBER SEATING EDGES
Throughout

TIMBER ELEMENTS WITH PAINTED HIGHLIGHTS
Playground/throughout

SANDSTONE BOULDERS
Playground

LAYERED NATIVE PLANTING
Throughout

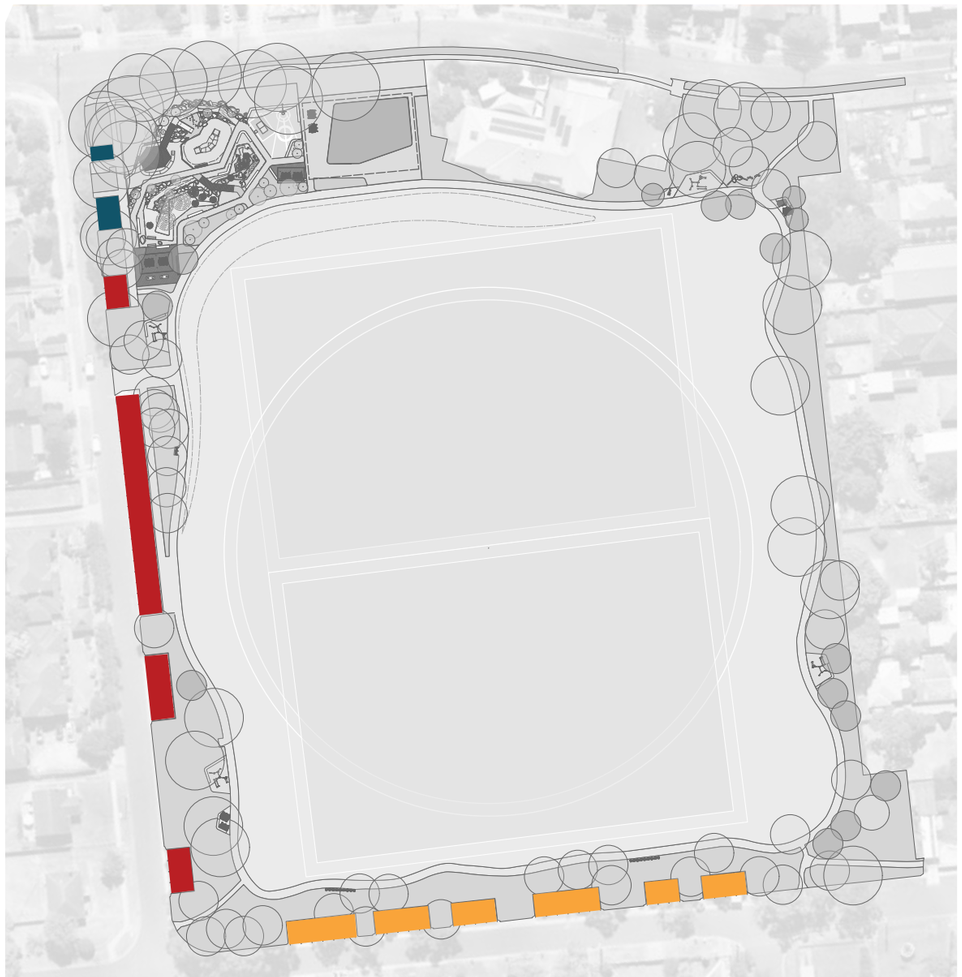
PARKING

There is limited scope to significantly increase the number of available parking spaces to the sites perimeter. Parking on Park Street and Edward Street is very well used, both by visitors to the park and surrounding workers.

An independent traffic study identified the potential to improve the efficiency of the existing parking arrangement by removing timber bollards from the parking areas and installing clear and legible line marking to define parking spaces. This would allow for a small improvement to the number of available parking spaces around the site, with around 5 parking spaces to be gained without the need for expensive civil works, kerb realignment or the removal of existing trees.

The canopy made up of large mature trees around the parks perimeter has been identified as a valuable asset to the park and should be preserved throughout any improvements to the provision of parking to service the park.

To improve the efficiency of parking ahead of the establishment of a new district playground within the park, parking to Park Street may be considered for 2 to 3 hour time to parking signage. This would increase the turnover and availability of parking within a close proximity to the new playground whilst allowing parking to the Edward Street boundary to remain as potential longer-term parking for workers and residents.



LEGEND

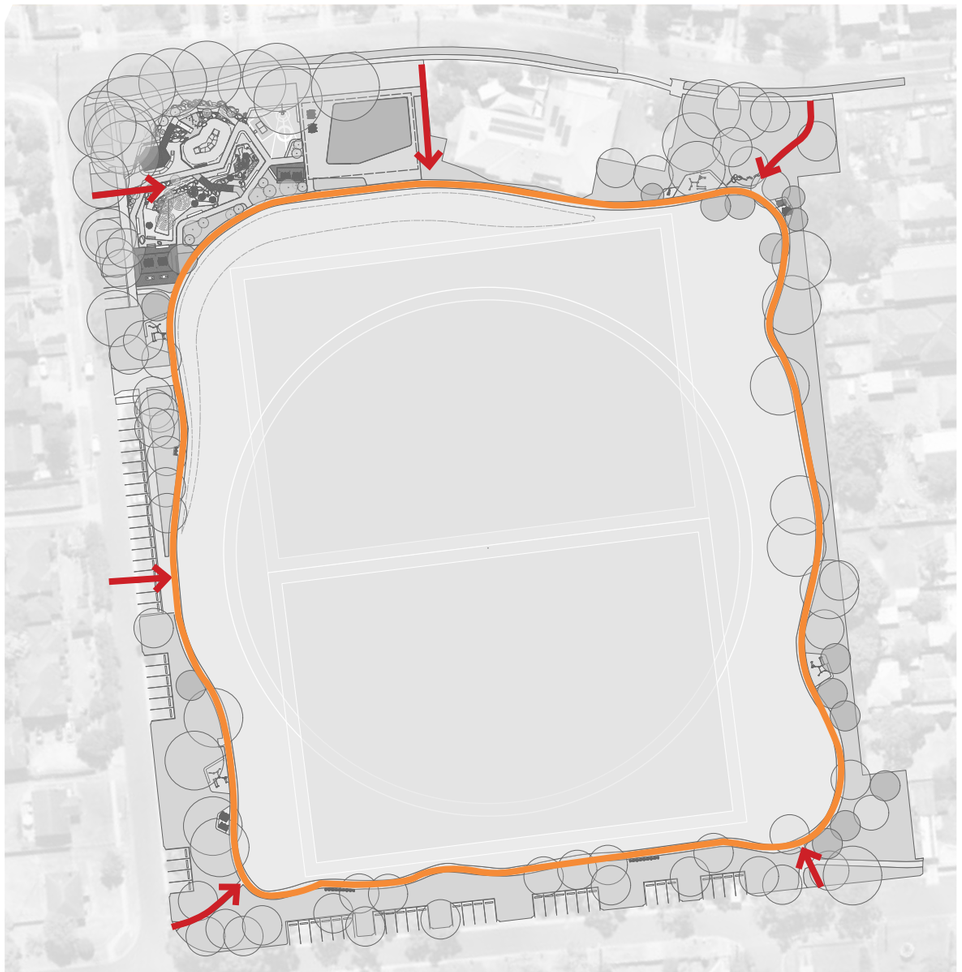
- 30 proposed standard parking spaces (TIMED 2-3 HR)
- 3 proposed accessible parking spaces
- 28 proposed standard parking spaces (NO LIMIT)

Note: Carpark design to be developed further during detailed design phase in collaboration with traffic engineer. Additional parking study to be undertaken to assess suitability of parking numbers during soccer/winter sports seasons. Design to be amended according to study results.

ACCESS & CIRCULATION

The existing circuit path is well-loved and has been fully embraced by the local community. Improvements to access and circulation within the park would come from the clear signposting of Park entry points as well as the distribution of engaging activity nodes around the circumference of the circuit path. This would encourage all areas of the park to become active and increase overall engagement with the space.

The circuit path has the potential to tie in with broader walkable connections to Toongabbie creek and other local green space destinations.



LEGEND

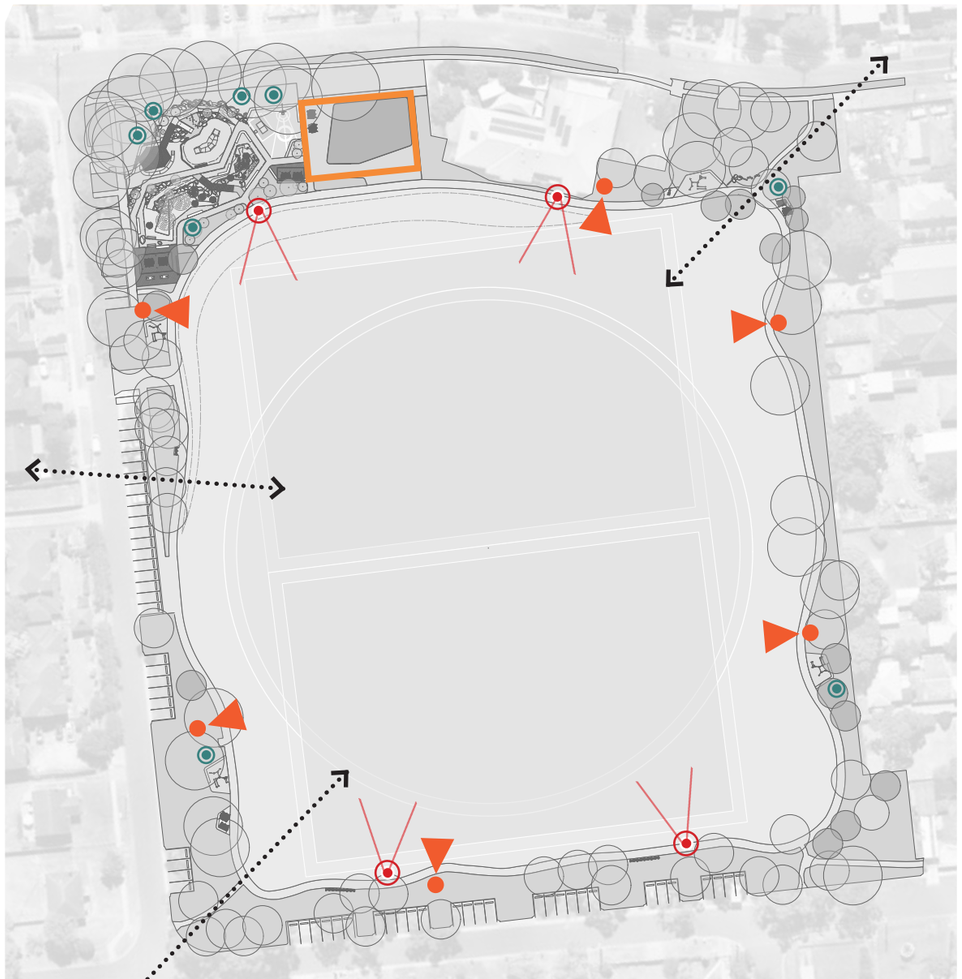
- Existing circuit path
- Park entry points

LIGHTING & CPTED

The masterplan report proposes to retain the existing sports floodlighting to the two fields and cricket pitch. To encourage night and day activation of the circuit path and the activity nodes located to its perimeter pole top lighting is proposed for considered locations around the park.

The proposed building should provide a well-lit and covered area to serve as a gathering area for visitors to the park and local sporting teams during night-time practice and training.

Besides flat topography already lends itself well to visual permeability and provides clear sight lines to all areas of the park. This should be maintained as part of the master plan's design proposal.



LEGEND

- Flood lighting to fields
- Pole top lighting
- Uplighting and feature lighting
- Lighting to building
- Sight lines

PROPOSED PLANTING PALETTE

A planting palette has been designed to reflect the species indigenous and endemic to the Northmead area. New planting works would be undertaken in conjunction with an ongoing approach to compliment the existing park species. In the areas surrounding points of interest within the park, such as the surrounds of the amenities building and the upgraded playground, native species are proposed to be used in conjunction with exotic species to create an attractive and textural under storey planting condition.

New tree plantings are also proposed to frame the existing walkway. Additional shade trees are proposed to the embankment on the northern edge of the park, as well as around the perimeter of the new playground. All tree plantings, including both existing and proposed trees should be crown lifted where appropriate to improve sight lines and passive surveillance across the park.

TREE PLANTING

Eucalyptus saligna

Eucalyptus fibrosa

Glochidion ferdinandi
Cheese Tree

Lophostemon Confertus
Brush Box

MASS PLANTING/UNDERSTOREY PLANTING

Leucopogon juniperinus
Prickly Beard-Heath

Brachyscome daisies
Mauve Bliss

Adenanthos cuneatus
Jug Flower

Grevillea alpinia x rosmarinifolia
Grevillea Bonnie Prince Charlie

Lomandra longifolia
Basket grass

Lepidosperma laterale
Variable Swordsedge

Asplenium Victoria
Bird's Nest Fern

Goodenia ovata
Gold Cover

Viola hederacea
Viola Baby Blue

Grevillia lanigera
Grevillia Mt Tamboritha

Poa poiformis
Kingsdale Grass

Liriope muscari
Liriope Isabella

Westringia fruticosa
Native Rosemary

Doryanthes excelsa
Gymea lily

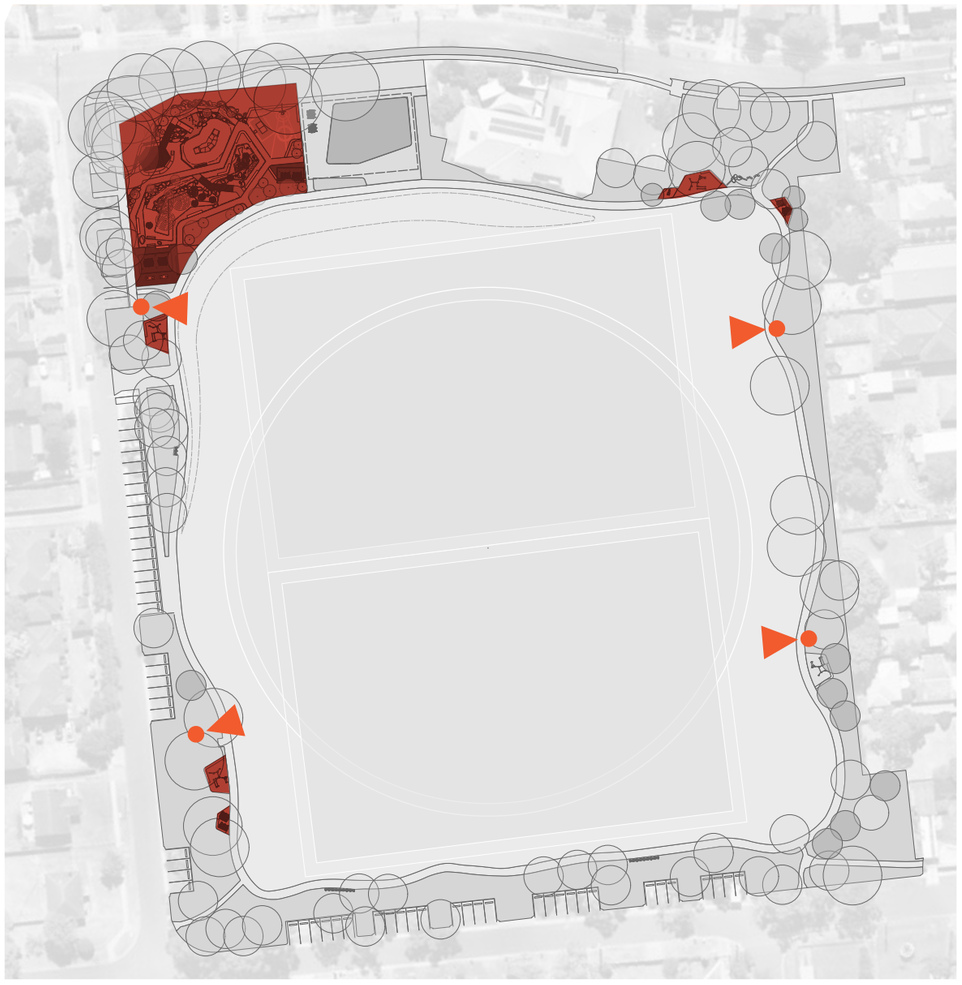
STAGED IMPLEMENTATION

The masterplan proposes a staged implementation process for the delivery of the park upgrades outlined in the report. Delivery of stage 1 will be undertaken during the 2021 to 2022 calendar year. Stage 2 works are proposed to be undertaken in 2025 and are subject to funding availability.

The staged implementation of the masterplan seeks to ensure the ongoing operation of Arthur Phillip Park as a community destination and multi-use sports field. Works are proposed to be sequential in nature and to remove the possibility of sacrificial or abortive works. The timing of the staged delivery process will consider all users of the park including organised seasonal sport.

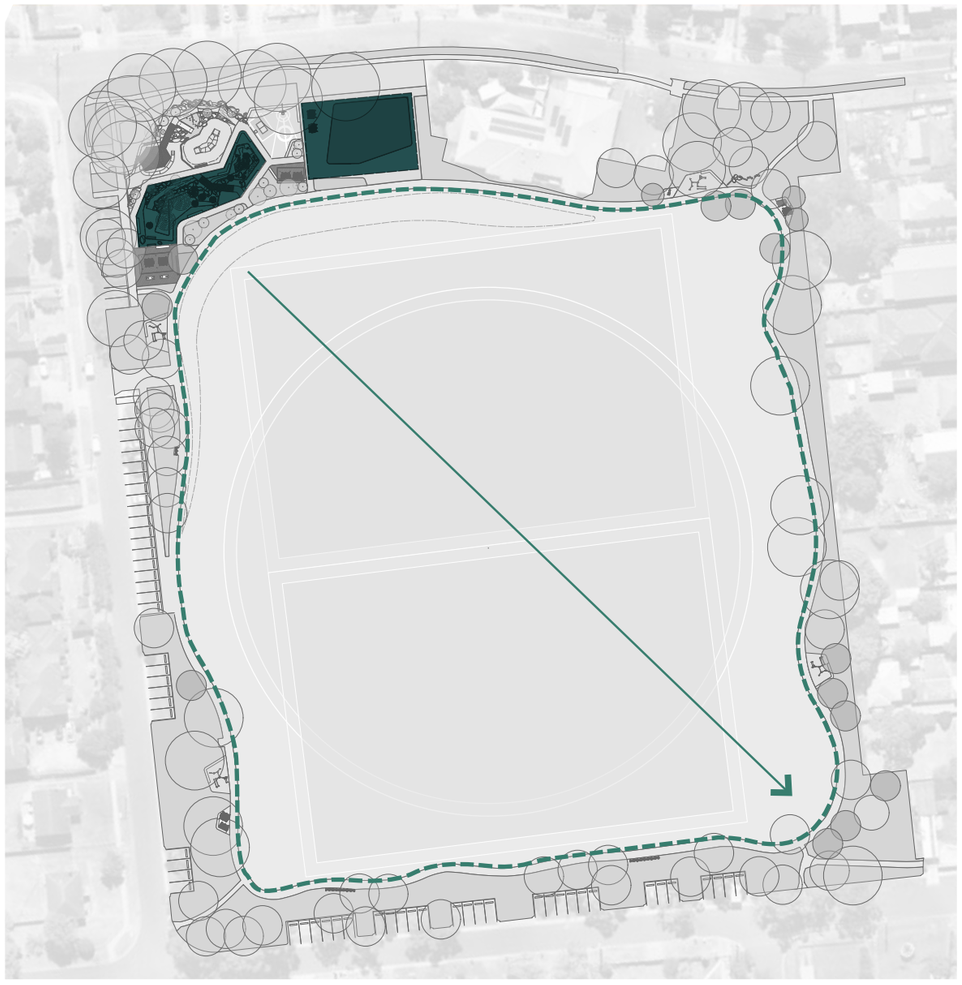
STAGE 01 - 2021/2022

- District playground (including accessible play, nature play space, ½ court basketball)
- Picnic and BBQ areas, seating, water fountains, waste bins
- Pathway lighting bike parking
- Landscaping and tree planting



STAGE 02 - 2025 (SUBJECT TO FUNDING AVAILABILITY)

- Design and construct a water play facility
- Upgrade the existing sportsfield
- Improve park connectivity/ parking where relevant.



7.0 APPENDICES

Parking Assessment Study focused on ensuring adequate car parking for the proposed future public amenities within Arthur Phillip Park, in Northmead, NSW

April 2021

City of Parramatta

Traffic Engineering Centre

Our clients are our partners

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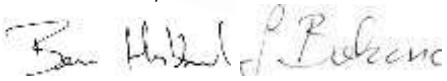
Revision	Details	Date	Amended By
A		19.04.2021.	ZB

Author: Zoran Bakovic,.....

Signed: 

Reviewer: Ben Hubbard, Snezana Bakovic.....

Signed: 

Approved by: Zoran Bakovic.....

Signed: 

Date: 17 April 2021.....

Distribution: City of Parramatta; Traffic Engineering Centre (file).....

Please note that when viewed electronically this document may contain pages that have been intentionally left blank. These blank pages may occur because in consideration of the environment and for your convenience, this document has been set up so that it can be printed correctly in double-sided format.

Contents

Page number

1. Introduction **1**

2. Study area **3**

3. Appreciation of the project and study requirements **6**

4. Car parking availability **7**

4.1 Off-street parking 7

4.2 On-street, kerbside parking 15

4.3 Total number of parking spaces 15

5. Parking accumulations survey **16**

5.1 Parking survey results - weekday 17

5.2 Parking survey results - weekend 20

6. How to increase the number of parking space **23**

7. Assessment of the future parking demand based on the authority parking requirements, and recommendations on how a potential increase in parking demand could be accommodated in the immediate focus area **27**

8. Traffic and Road safety assessment **28**

9. Summary conclusions **33**

1. Introduction

Traffic Engineering Centre was commissioned by City of Parramatta to undertake a parking study focused on ensuring adequate car parking for the proposed future public amenities within Arthur Phillip Park, in Northmead, NSW.

The study was to demonstrate that parking demand generated by proposed future uses could be satisfied by the existing on-street and off-street parking facilities, located adjacent to the park.

Figures 1.1 & 1.2 shows the image outlining the focus area for the study, and road network within the study area, respectively.

Figure 1.1: Study area (highlighted area) - Locality map
(Source: City of Parramatta)

Figure 1.2: Road netwrok within the study area - Locality map
(Source: nearmap)

2. Study area

The study area is cantered on the Arthur Phillip Park, in Northmead, NSW (refer to Figure 2.1 and photo 2.1).

The Arthur Phillip Park currently incorporates 1 (one) cricket ground, a playground for kids (refer to Photo 2.2), and a childcare centre (refer to Photo 2.3).

The main vehicular access route to the study area, and consequently the park and its amenities, is via Redbank Road, and then Park Street and Edward Street (refer to Figure 2.1).

Figure 2.1: Traffic management and locality map
(Source: City of Parramatta; Sketch; Traffic Engineering Centre Pty Ltd)

Photo 2.1: Some of the parking, within the study area
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 2.2: Playground, located within the study area
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 2.3: Childcare centre, located within the study area
(Photo: Traffic Engineering Centre Pty Ltd)

3. Appreciation of the project and study requirements

City of Parramatta (Council) has engaged Traffic Engineering Centre to undertake a study focused on ensuring adequate car parking for proposed future public amenities within Arthur Phillip Park, in Northmead, NSW. The Council is currently working through a master planning process for Arthur Park to inform future projects and developments.

Council required a detailed report that will clearly inform its project team in relation to the parking impact, parking requirements and related issues that are relevant to the proposed development.

The particular study tasks include (but are not limited to):

- Existing parking numbers – total number of on-street and off-street parking in the immediate focus area
- Current occupation of parking spaces during the following key times:
    - Weekday, from 7.00am to 6.00pm (inclusive of childcare pick up at around 5.00-5.30pm)
    - Saturday – summer season sports, between 8.00am and 5.00pm

Data has been represented and summarised using graphs or charts as it was required by the Council.

In addition, the study provides:

- A summary of safety issues and concerns from a traffic standpoint
- High-level recommendations as to how an increase in parking demand (due to new district [playground and other park upgrades) could be accommodated in the immediate focus area (sketches, diagrams, etc. as required to communicate design intent)

These key deliverables have been compiled into this comprehensive report.

4. Car parking availability

4.1 Off-street parking

The majority of both off-street and on-street (kerb side) parking spaces are not properly marked so the approximate number of available off-street parking spaces was calculated by dividing the length of the indented parking bays (refer to Photos 4.2 to 4.13, and 4.15 to 4.20), by the minimum required width of a frequently used parking space at an angle of 90^0 which is a width of 2.5m (refer to 'User Class 2', as per Figure 2.2 of the AS 2890.1:2004).

In addition, the approximate number of parallel parking spaces off Edward Street (refer to Photo 4.14) was calculated by dividing the length of the parking bay, by length of a typical parallel parking bay of 6.1m, as per Figure 2.5 of the AS 2890.1:2004.

Based on the measurements taken at the site, and the above calculations, there are in total **73 off-street parking spaces** located either within or adjacent to the Arthur Phillip Park or within a short walking distance of up to 100m from the park (refer to Figure 4.2, and Photos 4.1 to 4.20).

Figure 4.1: Locations of permanent off-street parking withing the study area and adjacent to the Arthur Phillip Park
(Source: Nearmap)

Figure 4.2: Number of permanent off-street parking per a section, withing the study area and adjacent to the Arthur Phillip Park
(Source: Nearmap)

Photo 4.1: Location #1, adjacent to the Childcare Centre: 10 (ten) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.2: Location #2, unformal parking off Redbank Road: 6 (six) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.3: Location #3: 1 (one) off-street parking space for people with disabilities
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.4: Location #4: 3 (three) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.5: Location #5: 3 (three) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.7: Location #6, Section 1: 3 (three) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.8: Location #6, Section 2: 4 (four) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.9: Location #6, Section 3: 4 (four) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.10: Location #6, Section 4: 4 (four) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.11: Location #6, Section 5: 3 (three) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.12: Location #7: 6 (six) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.13: Location #8: 4 (four) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.14: Location #9: 3 (three) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

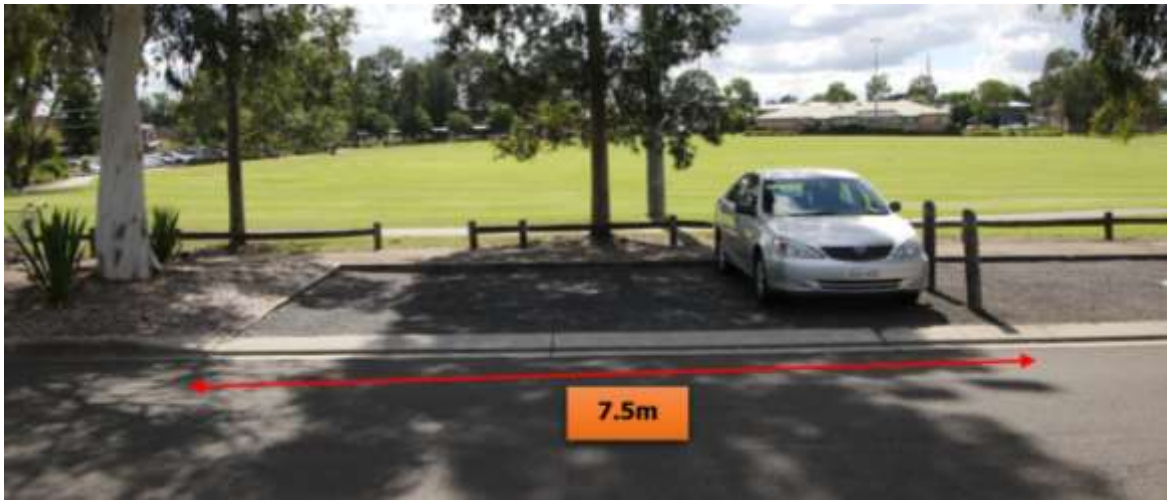


Photo 4.15: Location #10, Section 1: 3 (three) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.16: Location #10, Section 2: 2 (two) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

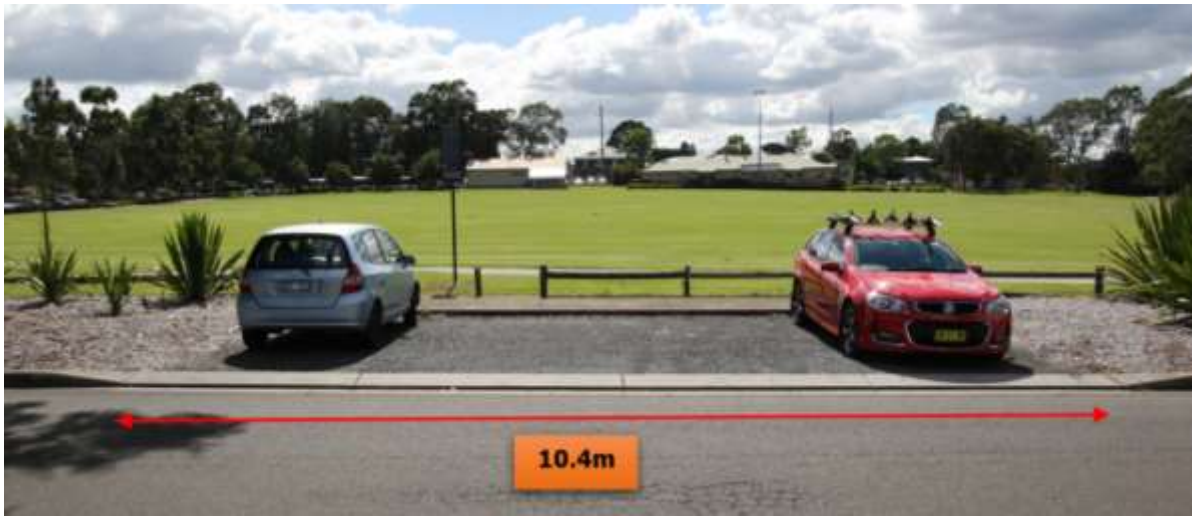


Photo 4.17: Location #11: 4 (four) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.18: Location #12, Section 1: 3 (three) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.19: Location #12, Section 2: 3 (three) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.20: Location #13: 4 (four) off-street parking spaces
(Photo: Traffic Engineering Centre Pty Ltd)

4.2 On-street, kerbside parking

Approximate number of available on-street parking spaces was calculated based on the measurements of the kerbside length, available for accommodating the on-street parking, and then dividing that length with the length of a typical intermediate parallel parking bay, of a minimum 6.0m [for a low traffic volume street and low parking turnover], as per AS 2890.5-1993.

According to the same Standard, the length of the end space, where a vehicle may enter or leave the space directly [as it is the case here] is 5.4m minimum.

By applying this methodology, and based on the measurements taken within the study area, the number of available on-street parking spaces were as follow:

- Redbank Road: **0** on-street parking, between 6.00am and 7.00pm, on weekday
  ≈ **17** on-street parking spaces, on weekends
- Park Street: ≈ **28** on-street parking spaces, every day
- Edward Street: ≈ **38** on-street parking spaces, every day
- Christine Street: ≈ **11** on-street parking spaces, every day

4.3 Total number of parking spaces

The parking facilities comprise:

- **73** off-street car parking spaces (every day)
- **77** on-street kerb side parking spaces on Redbank Road, Park Street, Edward Street, and Christine Street (weekdays)
- **94** on-street kerb side parking spaces on Redbank Road, Park Street, Edward Street, and Christine Street (weekends)

Note: Approximate number of available on-street, unrestricted parking spaces, was calculated by dividing the kerbside length, available for accommodating the on-street parking (refer to Figure 4.1), with length of a typical intermediate parallel parking bay, of a minimum 6.0m [for a low traffic volume street and low parking turnover], as per AS 2890.5-1993.

According to the same Standard, the length of the end space, where a vehicle may enter or leave the space directly [as it is the case here] is 5.4m minimum.

5. Parking accumulations survey

To review the parking arrangement and parking within the Arthur Phillip Park centred study area, a 15-minute interval parking accumulation survey was undertaken:

- on Friday, 5 March 2021, between 7.00am and 6.00pm, and
- on Saturday, 6 March 2021, between 8.00am and 5.00pm

(**Note:** Figure 5.1 shows the surveyed zones. **Zones 7, 10,** and **11**, represent the number of vehicles parked on both side of that particular section of a street. **Zone 1** represents the number of parked vehicles dedicated to the **Childcare facility**.)

Figure 5.1: Surveyed zones
(Source: Nearmap)

5.1 Parking survey results - weekday

Table 5.1 shows parking accumulation survey results for **Friday** 5 March 2021, between 7:00am and 6:00pm. The data was collected during the cricket season, with no games played on the Friday.

Table 5.1: Friday, 5 March 2021: Number of occupied, total, and vacant parking spaces (7:00am – 6:00pm)

Time	1	2	3	4	5	6	7	8	9	10	Occupied	Total	Vacant
7.00am	**3**	1	0	7	1	3	9	0	3	5	32	**150**	118
7.15am	**3**	1	0	7	1	3	9	0	3	5	32	**150**	118
7.30am	**3**	1	0	8	1	3	9	0	3	5	33	**150**	117
7.45am	**3**	1	0	8	1	3	9	0	3	5	33	**150**	117
8.00am	**3**	2	0	9	2	3	7	0	3	5	34	**150**	116
8.15am	**3**	3	0	14	3	3	6	0	3	5	40	**150**	110
8.30am	**4**	3	0	14	4	3	6	0	3	5	42	**150**	108
8.45am	**7**	4	0	15	5	3	6	0	3	5	48	**150**	102
9.00am	**5**	4	0	16	5	3	6	0	3	5	47	**150**	103
9.15am	**6**	4	0	22	6	3	7	0	2	4	54	**150**	96
9.30am	**6**	4	0	22	8	3	8	0	2	4	57	**150**	93
9.45am	**6**	4	0	26	8	3	10	0	2	4	63	**150**	87
10.00am	**5**	4	0	24	7	5	12	0	3	4	64	**150**	86
10.15am	**7**	5	0	19	4	5	10	0	3	4	57	**150**	93
10.30am	**7**	5	0	16	4	5	10	0	3	4	54	**150**	96
10.45am	**6**	5	0	17	5	5	10	0	2	4	54	**150**	96
11.00am	**7**	5	0	17	4	5	10	0	3	5	56	**150**	94
11.15am	**7**	5	0	17	4	5	10	0	3	5	56	**150**	94
11.30am	**7**	5	0	17	5	5	11	0	3	5	58	**150**	92
11.45am	**7**	5	0	17	5	5	11	0	3	5	58	**150**	92
12.00pm	**7**	5	0	17	4	4	9	0	2	4	52	**150**	98
12.15pm	**7**	5	0	17	4	4	9	0	2	4	52	**150**	98
12.30pm	**7**	5	0	17	4	4	9	0	2	4	52	**150**	98
12.45pm	**6**	5	0	18	5	5	7	0	2	4	52	**150**	98
1.00pm	**8**	5	0	17	4	4	7	0	1	4	50	**150**	100
1.15pm	**8**	5	0	17	4	4	7	0	1	4	50	**150**	100
1.30pm	**7**	5	0	17	4	4	7	0	1	4	49	**150**	101
1.45pm	**6**	5	0	17	4	4	7	0	1	4	48	**150**	102
2.00pm	**6**	5	0	19	5	3	7	0	1	4	50	**150**	100
2.15pm	**6**	5	0	19	5	3	6	0	1	4	49	**150**	101
2.30pm	**6**	5	0	18	5	3	6	0	1	4	48	**150**	102
2.45pm	**5**	5	0	18	4	3	6	0	1	4	46	**150**	104
3.00pm	**7**	5	0	16	5	2	8	0	1	4	48	**150**	102
3.15pm	**8**	5	0	16	5	2	8	0	1	4	49	**150**	101
3.30pm	**4**	5	0	15	5	2	8	0	2	4	45	**150**	105
3.45pm	**3**	5	0	13	5	2	8	0	2	4	42	**150**	108
4.00pm	**5**	5	0	14	4	2	6	0	1	4	41	**150**	109
4.15pm	**6**	4	0	14	4	2	7	0	1	4	42	**150**	108
4.30pm	**4**	4	0	15	2	2	7	0	1	4	39	**150**	111
4.45pm	**6**	4	0	12	2	2	7	0	1	4	38	**150**	112
5.00pm	**3**	5	0	12	1	2	6	0	1	4	34	**150**	116
5.15pm	**2**	5	0	10	1	2	6	0	3	4	33	**150**	117

5.30pm	**3**	5	0	10	2	2	5	0	3	4	34	**150**	116
5.45pm	**1**	4	0	11	2	2	5	0	3	4	32	**150**	118

Graph 5.1: Number of vacant parking spaces - Friday 5 March 2021, between 7:00am and 6:00pm

The parking accumulation survey results reveal the following:

Friday - 5 March 2021, between 7.00am and 6.00pm

- there were always a significant **number of vacant parking spaces** both off-street and on-street (**between 86 and 118**) located within the study area, adjacent to the Arthur Phillip Park (refer to Table 5.1 & Graph 5.1)
- as all accounted parking spaces are located adjacent to or within less than 100m from the park, it suggests that there is plenty of spare parking spaces available to be utilised by additional vehicles likely to be generated by some future proposed development within the study area
- in all likelihood and foreseen circumstances, the future parking demand, likely to be generated by a new district playground and other proposed park upgrades, would be met with the existing number of parking spaces
- off-street car park, adjacent to the Childcare facility, was never fully occupied during the entire survey (refer to Table 5.1, and Photos 5.1 to 5.4)

Photo 5.1: Childcare Centre's car park occupancy at 4.20pm
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 5.2: Childcare Centre's car park occupancy at 4.40pm
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 5.3: Childcare Centre's car park occupancy at 5.10pm
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 5.4: Childcare Centre's car park occupancy at 5.25pm
(Photo: Traffic Engineering Centre Pty Ltd)

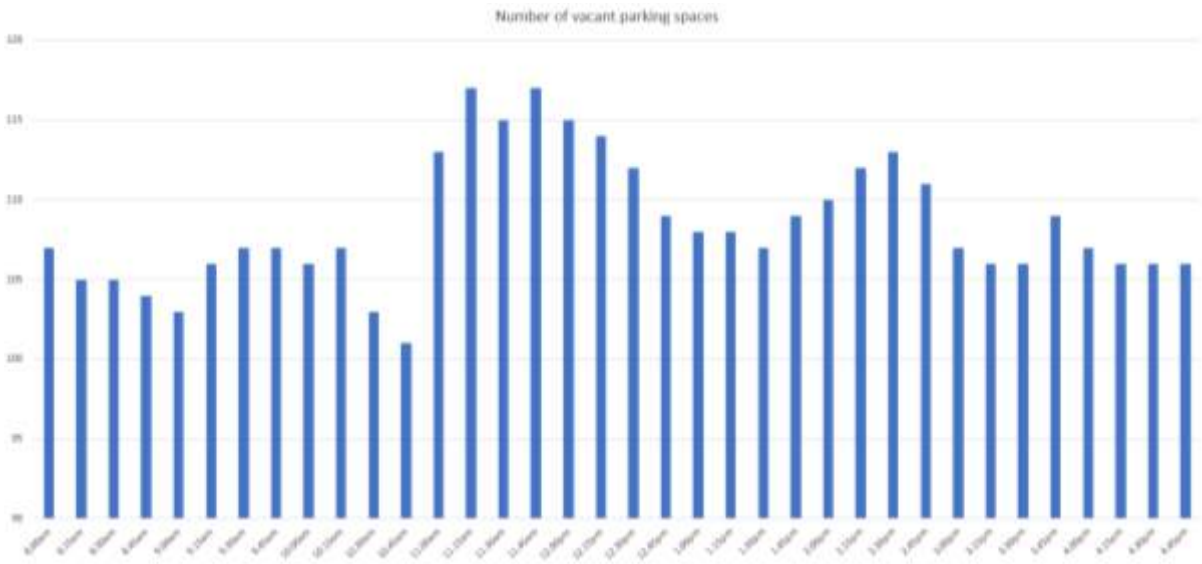
5.2 Parking survey results - weekend

Table 5.2 shows parking accumulation survey results for **Saturday** 6 March 2021, between 8:00am and 4:00pm. The data was collected during the cricket season, with a couple of games played on that day.

Table 5.2: Saturday, 6 March 2021: Number of occupied, total, and vacant parking spaces (8:00am – 5:00pm)

Time	1	2	3	4	5	6	7	8	9	10	Occupied	Total	Vacant
8.00am	**5**	4	1	20	1	1	5	0	2	3	43	**150**	107
8.15am	**5**	4	1	21	1	1	5	0	2	3	45	**150**	105
8.30am	**5**	5	2	20	2	1	5	0	2	3	45	**150**	105
8.45am	**5**	5	2	20	2	1	5	0	2	3	46	**150**	104
9.00am	**5**	5	3	20	2	2	4	0	1	4	47	**150**	103
9.15am	**5**	5	4	20	2	2	4	0	1	4	44	**150**	106
9.30am	**5**	5	4	18	1	2	4	0	1	4	43	**150**	107
9.45am	**5**	5	3	18	1	2	4	0	1	4	43	**150**	107
10.00am	**4**	5	3	18	1	3	4	0	1	4	44	**150**	106
10.15am	**4**	5	3	18	2	3	4	0	1	4	43	**150**	107
10.30am	**5**	5	3	16	2	3	4	0	1	4	47	**150**	103
10.45am	**4**	5	3	20	3	3	4	0	1	4	49	**150**	101
11.00am	**4**	5	3	20	4	3	6	0	1	3	37	**150**	113
11.15am	**2**	4	3	8	7	3	6	0	1	3	33	**150**	117
11.30am	**2**	4	3	5	6	3	6	0	1	3	35	**150**	115
11.45am	**2**	4	3	6	6	3	6	1	1	3	33	**150**	117
12.00pm	**2**	4	2	6	6	3	6	0	1	3	35	**150**	115
12.15pm	**3**	4	2	7	6	3	6	0	1	3	36	**150**	114
12.30pm	**5**	4	2	8	5	3	5	0	1	3	38	**150**	112
12.45pm	**6**	4	4	9	5	3	4	0	1	2	41	**150**	109
1.00pm	**6**	4	5	13	4	3	3	0	1	2	42	**150**	108
1.15pm	**6**	4	5	13	3	3	3	0	3	2	42	**150**	108
1.30pm	**7**	4	5	13	2	3	3	0	3	2	43	**150**	107
1.45pm	**7**	4	5	14	2	3	3	0	3	2	41	**150**	109

2.00pm	**7**	4	5	12	2	3	3	0	3	2	40	**150**	110
2.15pm	**6**	4	5	12	2	3	3	0	3	2	38	**150**	112
2.30pm	**6**	4	3	11	2	3	4	0	3	2	37	**150**	113
2.45pm	**6**	4	3	10	2	3	4	0	3	2	39	**150**	111
3.00pm	**6**	4	3	13	2	3	4	0	2	2	43	**150**	107
3.15pm	**6**	4	4	14	2	2	5	1	2	3	44	**150**	106
3.30pm	**6**	4	4	14	3	2	5	1	2	3	44	**150**	106
3.45pm	**6**	4	4	14	3	2	5	1	2	3	41	**150**	109
4.00pm	**6**	4	3	13	2	3	4	1	2	3	43	**150**	107
4.15pm	**6**	4	4	14	2	2	5	1	2	3	44	**150**	106
4.30pm	**6**	4	4	14	3	2	5	1	2	3	44	**150**	106
4.45pm	**6**	4	4	14	3	2	5	1	2	3	44	**150**	106



Graph 5.2: Number of vacant parking spaces – Saturday 6 March 2021, between 8:00am and 5:00pm

Saturday - 6 March 2021, between 8.00am and 5.00pm

The parking accumulation survey results reveal the following:

- there were always a significant number of vacant parking spaces, both off-street and on-street (between 101 and 117) located within the study area, adjacent to the Arthur Phillip Park (refer to Table 5.2 and Graph 5.2).
- the observed occasional abrupt increase in the number of the vacant parking spaces, between 10.45am and 11.00am, coincides with the end of the first cricket game on the day (refer to Photo 5.5).
- in the same manner, an abrupt decrease in the number of vacant parking spaces, between 2.30pm and 3.00pm, coincided with the start of the second cricket game of the day (refer to Photo 5.6).

- in all likelihood and foreseen circumstances, the future parking demand, likely to be generated by a new district playground and other proposed park upgrades, would be met with the existing number of parking spaces.

Photo 5.5
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 5.6
(Photo: Traffic Engineering Centre Pty Ltd)

6. How to increase the number of parking space

At the moment, most of the off-street parking bays include some wooden posts that split the bays into several sections. In addition, parking spaces are not marked (refer to Photos 6.1 to 6.10).

While the purpose of these wooden poles is not clear, their presence, combined with the lack of the marked parking spaces, result in the parking bays not being fully utilised. It is observed that, the number of parked vehicles per an off-street parking bay is less that the bay's actual capacity, because of the wooden poles and the fact that the parking spaces are not marked (refer to Photos 6.1 to 6.4, and Photos 6.9 & 6.10).

Photo 6.1
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 6.2
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 6.3
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 6.4
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 6.5
(Photo: Traffic Engineering Centre Pty Ltd)

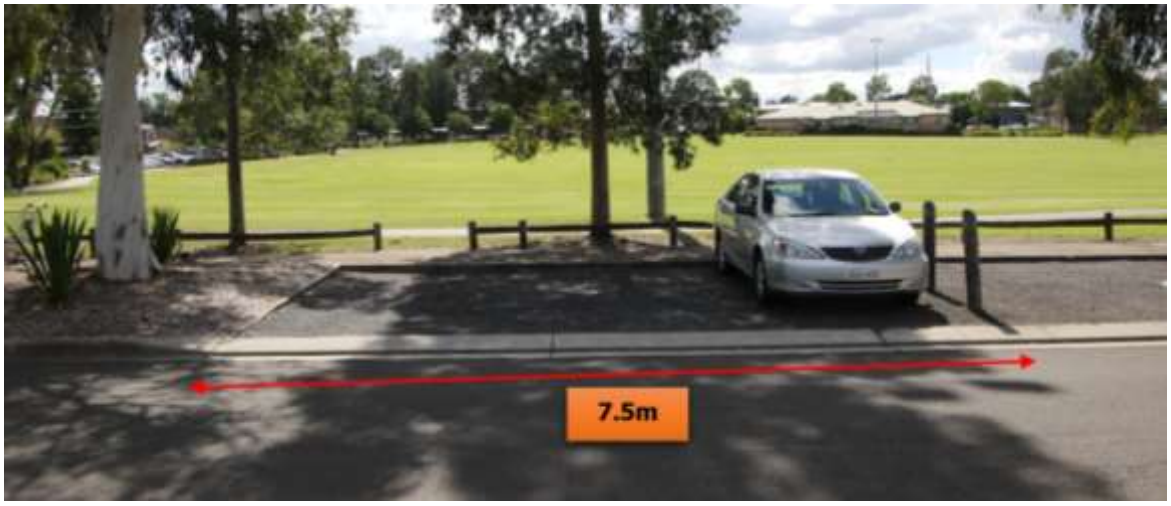


Photo 6.6
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 6.7
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 6.8
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 6.9
(Photo: Traffic Engineering Centre Pty Ltd)

To increase the utilisation of the existing off-street parking bays, and, in the process, the number of vehicles parked into them [by at least 20%], Traffic Engineering Centre proposes two simple measures (refer to Photo 6.10 & Photomontage 6.11):

- remove the wooden posts from the off-street parking bays
- mark the parking spaces as per AS2890.1:2004, Clause 2.4 and where the length of the parking bay is not a whole division of 2.5m undertake minor localized widening to provide a whole number of parking spaces.

Photo 6.10: An example of the current situation
(Photo: Traffic Engineering Centre Pty Ltd)

Photomontage 6.11: An example of the proposed solution
(Photo & Sketch: Traffic Engineering Centre Pty Ltd)

7. Assessment of the future parking demand based on the authority parking requirements, and recommendations on how a potential increase in parking demand could be accommodated in the immediate focus area

Based on the parking survey results discussed in detail in Chapter 5 of this Report, Traffic Engineering Centre is of the opinion that, at least 86 and up to 118 vacant parking spaces are available at any given time and located adjacent to or within less than 100m from the park.

These spaces are likely to meet the needs of most use cases for a district playground for the foreseeable future.

Parking demand is highly dependent on land use, availability of public transport and connectivity to active travel networks. The parking demand for sport fields can vary greatly depending on the types of sports taking place.

For example, cricket tends to attract a low parking demand as the game typically attracts a low number of spectators and last for several hours. However, because of the equipment required to play the game most cricketers will travel by car. On the contrary, soccer and AFL, particularly at the junior level, can attract a high number of participants for a short duration but a higher proportion will travel by modes other than the car.

The potential for additional parking demand [as the result of a proposed development] can be calculated by using the minimum car parking rates, listed in Table 3.6.2.3 of the Parramatta Development Control Plan (2011).

The total calculated future parking demand can then be discounted by 86 parking spaces and the difference will be the net parking demand that would need to be met by the development (or put another way the net parking impact).

8. Traffic and Road safety assessment

The currently observed low volume and low traffic speed environment on the local road network adjacent to the Arthur Phillip Park present no obvious traffic safety issues associated with the current low-traffic volume-generating use.

However, there is several other traffic safety issues, as it follows:

- **Contradicting messages on a couple of 'No Stopping' signs on Redbank Road**

The boundary between the adjacent 'No stopping' zones on Redbank Road's eastern side are not clearly defined. Therefore, it is not clear where the stopping prohibited at all the time, and where it is prohibited only between 6.00am and 7.00pm Monday to Friday (refer to Photo 8.1).

Consequently, it results in a misleading message to drivers, so that some vehicles could be parked too close to the intersection with the Cumberland Highway, thus increasing the risk of collision.

Remedial measure: A couple of 'No Stopping' signs should be installed between the two existing signs, where each of the new signs would point toward its respective pair. In such a way, the specific 'No stopping' zones would be clearly defined, and the subsequent collision risk, as the result of a vehicle being parked too close to the intersection] would be significantly reduced or even eliminated.

Photo 8.1: Eastern side of Redbank Road, looking toward the intersection with Cumberland Highway
(Photo: Traffic Engineering Centre Pty Ltd)

- **Damaged signage**

A number of parking-associated signage is either damaged or faded so that their message is either hardly visible/readable or not visible/readable at all (refer to Photos 8.2 to 8.4).

Remedial measure: Replace the damaged and faded signs with the new ones, so to enhance the traffic/road safety within the study area.

Photo 8.2
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 8.3
(Photo: Traffic Engineering Centre Pty Ltd)

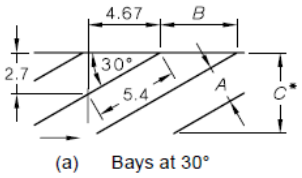
Photo 8.4
(Photo: Traffic Engineering Centre Pty Ltd)

- **Potential conflict between on-street parked vehicles on Park Street, and egress manoeuvring off-street parked vehicles**

Once the vehicles are parked kerbside on Park Street, the effective aisle width, associated with the off-street 90^0 parking bays, is reduced from 6.7m down to only 5.0m (refer to Photo 8.5).

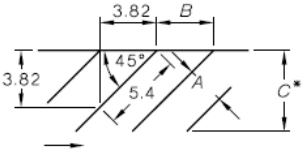
The available aisle width of only 5.0m is 0.8m shorter than the minimum required aisle width as per AS2890.1:2004, Clause 2.4, Figure 2.2.9 (refer to Figure 2.2).

Photo 8.5: Available aisle width on Park Street associated with the off-street 90^0 parking bays
(Photo & measurements: Traffic Engineering Centre Pty Ltd)



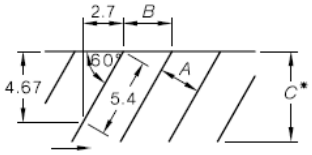
(a) Bays at 30°

User class (Note 1)	A (Notes 2 & 3)	B	C_1	C_2	C_3	Aisle width
1,1A	2.1	4.2	4.4	4.1	4.5	3.1
2	2.3	4.6	4.4	4.1	4.7	3.0
3	2.5	5.0	4.4	4.1	4.9	2.9
3A	2.5	5.0	4.4	4.1	4.9	3.45



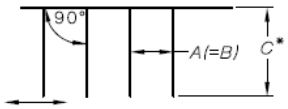
(b) Bays at 45°

User class (Note 1)	A (Note 3)	B	C_1	C_2	C_3	Aisle width
1,1A	2.4	3.4	5.2	4.8	5.5	3.9
2	2.5	3.5	5.2	4.8	5.6	3.7
3	2.6	3.7	5.2	4.8	5.7	3.5
3A	2.6	3.7	5.2	4.8	5.7	4.2
4	(See Note 5)					



(c) Bays at 60°

User class (Note 1)	A (Note 3)	B	C_1	C_2	C_3	Aisle width
1,1A	2.4	2.75	5.7	5.1	5.9	4.9
2	2.5	2.90	5.7	5.1	6.0	4.6
3	2.6	3.00	5.7	5.1	6.0	4.3
3A	2.6	3.00	5.7	5.1	6.0	5.1
4	(See Note 5)					



(d) Bays at 90°

User class (Note 1)	A (Note 3)	B	C_1	C_2	C_3	Aisle width (Note 4)
1	2.4	2.4	5.4	4.8	5.4	6.2
1A	2.4	2.4	5.4	4.8	5.4	5.8
2	2.5	2.5	5.4	4.8	5.4	5.8
3	2.6	2.6	5.4	4.8	5.4	5.8
3A	2.6	2.6	5.4	4.8	5.4	6.6
3A	2.7	2.7	5.4	4.8	5.4	6.2
4	(See Note 5)					

*Dimension C is selected as follows (see Note 6):
C1—where parking is to a wall or high kerb not allowing any overhang.
C2—where parking is to a low kerb which allows 600 mm overhang in accordance with Clause 2.4.1(a)(i).
C3—where parking is controlled by wheelstops installed at right angles to the direction of parking, or where the ends of parking spaces form a sawtooth pattern, e.g. as shown in the upper half of Figure 2.4(b).

For Notes—see over.

DIMENSIONS IN METRES

FIGURE 2.2 LAYOUTS FOR ANGLE PARKING SPACES

Consequently, drivers of the egress vehicles reversing from the off-street 90^0 parking bays were observed to take more than 3-point turn in their attempt to complete the egress manoeuvre without colliding with a kerbside parked vehicle.

Remedial measure: Either Further monitoring or establish 'No Parking' zones on the northern side of Park Street, at the sections where vehicles would attempt to park in or pull out the 90^0 off-street parking bays.

- **Potential conflict <u>between</u> ingress and [especially] egress vehicles from an unformal and un-marked off-street 90^0 parking buy located off Redbank Road, <u>and</u> pedestrians walking on the adjacent pedestrian footpath**

There is potential for the conflict between ingress and [especially] egress vehicles from an unformal and un-marked off-street car parking buy located off Redbank Road, and pedestrians walking on the adjacent pedestrian footpath (refer to Photos 8.6 & 8.7).

Photo 8.6
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 8.7
(Photo: Traffic Engineering Centre Pty Ltd)

Remedial measure: To reduce the chance for a collision between an egress vehicle and a pedestrian walking on the footpath, the unformal and un-marked off-street 900 parking buy should be sealed, and 6 (six) available parking spaces marked as per AS2890.1:2004, Clause 2.4.

Also, it should be signposted that only 'rear-end in' parking is permitted, so that the driver of an egress vehicle would be in a much better position to observe a pedestrian walking on the adjacent footpath so to avoid the conflict with the pedestrian.

9. Summary conclusions

Traffic Engineering Centre was commissioned by City of Parramatta to undertake a parking study focused on ensuring adequate car parking for possible future public amenities within Arthur Phillip Park, in Northmead, NSW.

The study showed that at least 86 parking spaces are available for use adjacent to or within 100m of the park. Any development of the park that would generate less than a need for an addition 86 parking spaces could be satisfied by the existing on-street and off-street parking facilities, located adjacent to the park and so would have no impact on parking supply.

This analysis was based sample surveys of the parking arrangement and parking demand within the Arthur Phillip Park centred study area, in Northmead, NSW.

To review the parking arrangement and parking within the Arthur Phillip Park centred study area, a 15-minute interval parking accumulation survey was undertaken:

- on Friday, 5 March 2021, between 7.00am and 6.00pm, and
- on Saturday, 6 March 2021, between 8.00am and 5.00pm

The survey results indicate that there were always a significant number of vacant parking spaces, both off-street and on-street (between 86 and 118) located within the study area, adjacent to the Arthur Phillip Park.

To increase the utilisation of the existing off-street parking bays, and, in the process, the number of vehicles parked into them [by at least 20%], Traffic Engineering Centre proposes two simple measures:

- remove the wooden posts from the off-street parking bays
- mark the parking spaces as per AS2890.1:2004, Clause 2.4 and widen the parking bay to be a whole division of 2.5m.

When developing the park the project team should be mindful of the future use cases and use Table 3.6.2.3 of the Parramatta Development Control Plan (2011) to calculate total future parking requirement. Provided that the future use does not increase in demand for parking more than an additional 98 vehicles no impact to parking demand is likely.

Considering the observed low volumes of the traffic on the local road network adjacent to the Arthur Phillip Park, no traffic safety issues associated with the proposed low-volume-generating development were observed during the site inspection.

However, there is several other traffic safety issues, as it follows:

- Contradicting message on a couple of 'No Stopping' signs on Redbank Road (Remedial measure: A couple of 'No Stopping' signs should be installed between the two existing signs, where each of the new signs would point toward its respective pair).
- Damaged signage (Remedial measure: Replace the damaged and faded signs with the new ones, so to enhance the traffic/road safety within the study aera).

- Conflict between on-street parked vehicles on Park Street, and egress manoeuvring off-street parked vehicles (Remedial measure: Either Further monitoring or establish 'No Parking' zones on the norther side of Park Street, at the sections where vehicles would attempt to park in or pull out the 90^0 off-street parking bays).

- Potential conflict between ingress and [especially] egress vehicles from an unformal and un-marked off-street 900 parking buy located off Redbank Road, and pedestrians walking on the adjacent pedestrian footpath (Remedial measure: To reduce the chance for a collision between an egress vehicle and a pedestrian walking on the footpath, the unformal and un-marked off-street 900 parking buy should be sealed, and 6 (six) available parking spaces marked as per AS2890.1:2004, Clause 2.4.Also, it should be signposted that only 'rear-end in' parking is permitted, so that the driver of an egress vehicle would be in a much better position to observe a pedestrian walking on the adjacent footpath so to avoid the conflict with the pedestrian).