CITY OF PARRAMATTA

CAPITAL PROJECTS
LANDSCAPE ARCHITECTURE

BINALONG PARK

FINAL Strategic Masterplan | Revision B July 2021



BINALONG PARK

DOCUMENT REGISTER

REVISION	ISSUED FOR:	DATE	PREPARED / CHECKED
A	DRAFT for Internal Review	07.05.2021	TA/AC/MT
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MASTER PLAN REPORT

Prepared by CAPITAL PROJECTS
Prepared for PLACE SERVICES

CONTACT

placeservices@cityofparramatta.nsw.gov.au

126 Church Street
Parramatta, NSW
Australia, 2150

TABLE OF CONTENTS

1.0 INTRODUCTION

PROJECT BACKGROUND

The Binalong Park master plan focuses on the area identified by the property boundary. The immediate surroundings the park are bound by a mix of residential and educational properties and to the west by Binalong Road.

The current uses and facilities of the park include four sports fields, three cricket wickets, cricket nets with two lanes, two tennis court, three netball courts, one basketball court, local playground, 104 space car park and two small amenities buildings servicing the tennis courts and sports fields.

The Binalong Park master plan provides a long-term future vision and statutory requirement to fund new recreational facilities and amenities.

Proposed improvements to Binalong Park will provide much needed additional open and recreational space to support community wellbeing and active sporting programs.

The design proposal outlined by this masterplan considers a broad and thorough analysis of the existing site and its surrounds as well as the specific needs of the community as identified by a rigorous consultation process.

2.0 SITE ANALYSIS

SITE ANALYSIS

OPEN SPACE & ATTRACTIONS

An analysis of the areas surrounding Binalong Park identifies a lack of district scale public open space offerings and public sports facilities within an 800 metre or 10 minute walking radius of the park.

The areas of Toongabbie and Old Toongabbie both offer a number of local scale parks, local playgrounds and smaller pocket parks amongst the areas of suburban residential dwellings.

Sue Savage Reserve and McCoy Park present themselves as larger offerings of public open space. From these larger public parks, Binalong Park presents a clear opportunity to establish itself as a multifunctional community hub for Toongabbie.

LEGEND

1	Binalong Park
2	Gallery Gardens tennis courts & playground
3	Wilimot Reserve
4	Ambrose Hallen Park
5	Sue Savage Reserve/Reynolds Park
6	Rausch Street Reserve
7	Palestine Park
8	Peachtree Avenue Reserve

SITE ANALYSIS

OPEN SPACE AND ATTRACTIONS

2 GALLERY GARDENS
+ Playground
+ Tennis Courts
+ Bushland & walking tracks
+ Picnic tables

5 SUE SAVAGE RESERVE
+ Playground
+ Multi-use court
+ Picnic areas
+ Bike Paths
+ Open lawn

3 WILLMOT RESERVE
+ Playground
+ Open lawn area
+ Picnic tables

4 AMBROSE HALLEN RESERVE
+ Playground
+ Tennis Courts
+ Playground
+ Tennis Courts

6 RAUSCH ST. RESERVE
+ Playground

7 PALESTINE PARK
+ Local playground
+ Scooter track

SITE ANALYSIS

TRANSPORT LINKS AND BROADER CONNECTIONS

Binalong Park is well positioned within the existing public transport network with multiple bus stops positioned along Binalong road and 5 bus stop locations within a 400m walking radius of the site.

The existing network of on street cycle ways means that Binalong Park is well integrated into the broader bicycle network of the Toongabbie area. Proposed additions to the cycleway as proposed by the Parramatta bike plan will further support active transport connections to the site.

LEGEND

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

SITE ANALYSIS

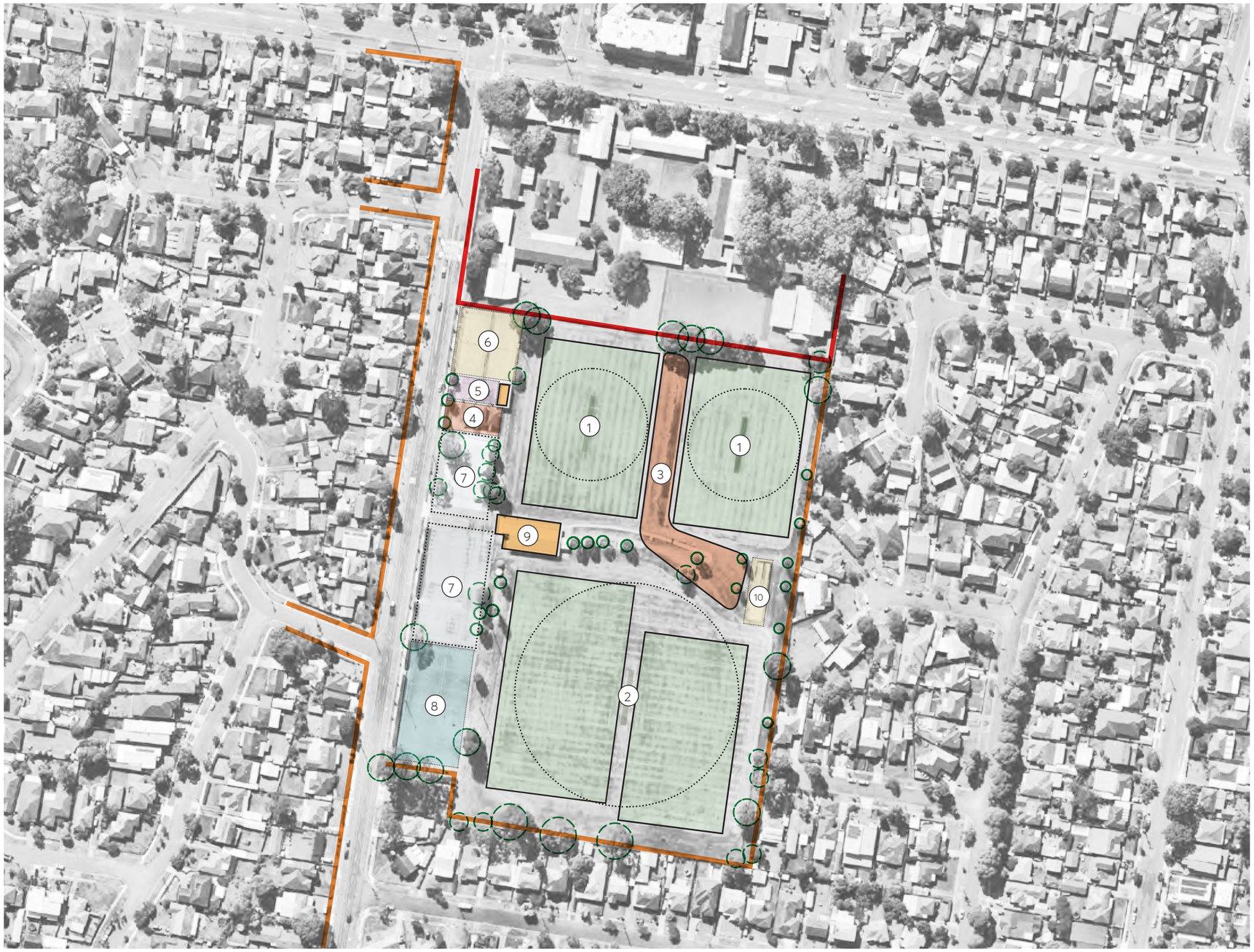
EXISTING SITE CONDITIONS

The park's existing layout includes two junior soccer fields with junior cricket pitches, two full sized soccer fields with a full size cricket pitch, a local scale playground with shade sail and fenced perimeter as well as two tennis courts, three netball and one basketball court.

The park has two sports amenities buildings, two lane cricket nets and a car park with 104 parking spaces. The park directly interfaces with private residential properties to the south and to the eastern boundary. To the north, the park has a direct interface with Toongabbie Public School where the boundary of the park is fenced with gated access to the school.

LEGEND

1	2x soccer fields with junior cricket pitches
2	2x soccer fields with full size cricket wicket
3	Steep embankment between fields 1 & 2
4	Local scale playground
5	Sheltered seating area to address tennis courts
6	2x tennis courts
7	Carpark and overflow carpark xxx spots
8	Netball & basketball courts
9	Sports amenities building
10	2 lane cricket net
	Interface with adjacent public school
	Interface with private residences
	Existing trees

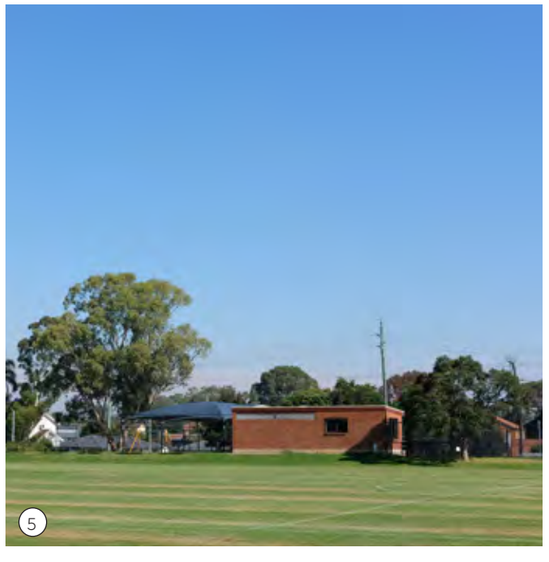


SITE ANALYSIS

EXISTING SITE CONDITIONS

LEGEND

1	Local playground with perimeter fence and shade sail
2	City of Parramatta standard furniture to perimeter of field
3	Carpark area, painted with reflective cooling coating
4	Secondary park accessway from Merryl Avenue
5	Existing tennis amenities building



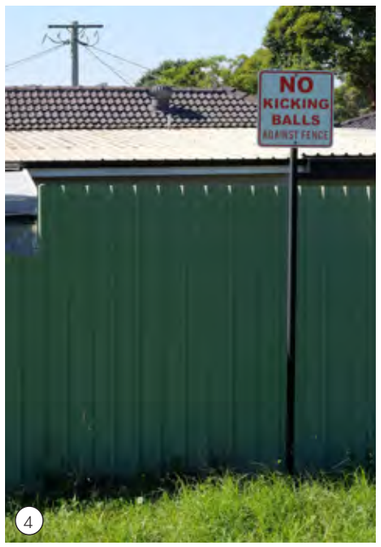
1

2

LEGEND

1	Embankment to surrounds of north-eastern field
2	Tennis courts
3	CoP standard furniture to perimeter of field
4	Fence at interface with private residential properties
5	Sheltered spectators areas

3



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SITE ANALYSIS

EXISTING FACILITIES

SPORTS AMENITIES BUILDING

Facility Level	Local
Size	~445m²
Observations	- No public toilet access - Building is in good working order - Centrally located within the park - Creates visual seperation between the two field areas - No universal access/BCA compliance as per current standards - Serves the needs of sporting teams but offers little to the broader community

CAR PARK

Facility Level	N/A
Size	~3000m² (104 parking spaces)
Observations	- Confirmed to be a suitable number of parking spaces for current and future applications - Highly reflective, very hot in summer - Central location within the park creates division between active program and increases risk of incidents - Entry/exit point is signposted but not line marked. - Current layout is inefficient and could accomodate the same or more parking spaces inside a smaller footprint. - Access to site for accessible parking spaces can be vastly improved.

NETBALL & BASKETBALL COURTS

Facility Level	Local
Size	~2300m² (4 courts)
Observations	- Basketball is located within close proximity to private residences. Reported noise issue. - Disconnected from other park facilities - Lack of supporting amenities such as bench seating, drinking fountains, spectators areas etc. - Can accomodate a wider range of sporting program

PLAYGROUND

Facility Level	Local
Size	~400m²
Observations	- Fenced perimeter and shade canopy - Close to public transport and off-street carpark - No 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	~1500m² (2 courts with spectators area)
Observations	- Acess to tennis courts via fenced and gated playground area. - Courts in good condition and well maintained - Amentities building is located immediately adjacent but is not publicly accessible - Limited space for 'spill out' and no potential training areas to immediate surrounds.

TENNIS AMENITIES BUILDING

Facility Level	Local
Size	~60m²
Observations	- Recently refurbished - Location immediately adjacent tennis courts allows for convenient access during game play and training. - Amentities building is not publicly accessible - Building can be better integrated into site topography to remove the need for ramps. - Building can provide amenity for multiple program.

CRICKET NETS

Facility Level	Local
Size	2 lanes
Observations	- Very well used - Potential to increase from 2 lanes to 3 - Location does not relate to other program within the park. Location is isolated and lacks potential for passive surveilance - Location can be reviewed to allow for potential lighting and night training.

SPECTATORS SEATING

Facility Level	Local
Size	N/A
Observations	- Centrally located within the park with potential to view game play on both sides of the park - Elevated position provides improved aspect, however mounding creates visual barrier across the park and seperates the two fields - limited accessibility. The sheltered spaces are not accessible via a concrete pathway.

SITE ANALYSIS

CONSTRAINTS

LEGEND

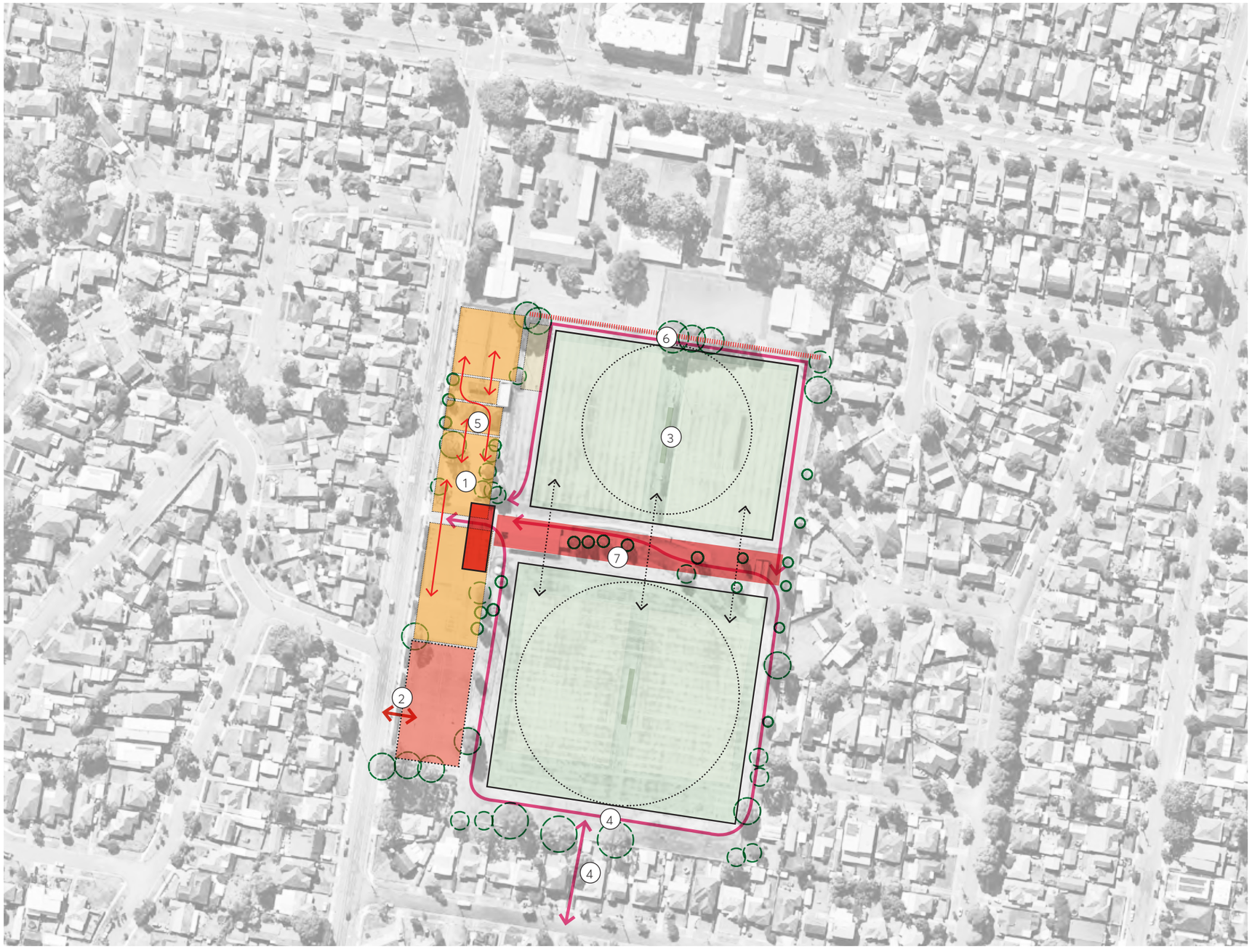
1	Separate amenities buildings. No public toilet access
2	Steep embankment separates sports fields and divivdes the park
3	Active areas of the park's western edge are split in two by the existing carpark
4	2 lane cricket nets separated from other park facilities
5	Park has limited interface with Binalong Road. Entry and exit points can be more clearly marked to prevent potential incidents.
6	Park is separated from the school adjacent with aging barbed wire fencing.
7	Pedestrian connections do not offer an accessible means for movement within the park.
8	Amenities building, mounding and cricket nets all contribute to the divison of the park into multiple sections.

SITE ANALYSIS

OPPORTUNITIES

LEGEND

1	Potential to rearrange western edge of park to promote consolidation of public attractors and active program. Move carpark to southern end of site.
2	Improve simplicity and legibility of vehicular movements to Binalong Road.
3	Import fill to create a an even playing field across fields 1 & 2 which can accomodate a full sized cricket pitch and two soccer fields.
4	Improve accessibility and create new circuit path connections to perimeter of site.
5	Upgrade and improve existing playground
6	Improve interface between school and park
7	Create communal spaces and spectator zones to central spine. Allow free movement and visual permeability across the park



3.0 COMMUNITY & ENGAGEMENT

COMMUNITY & ENGAGEMENT

INTRODUCTION

City of Parramatta worked along side KJA consulting to undertake a three-phase engagement strategy. The engagement strategy aimed to identify and understand improvement opportunities and future recreational and social needs from the community's perspective. Community consultation to inform the development of the masterplan was delivered across 3 phases to ensure that a comprehensive collection of data was collected.

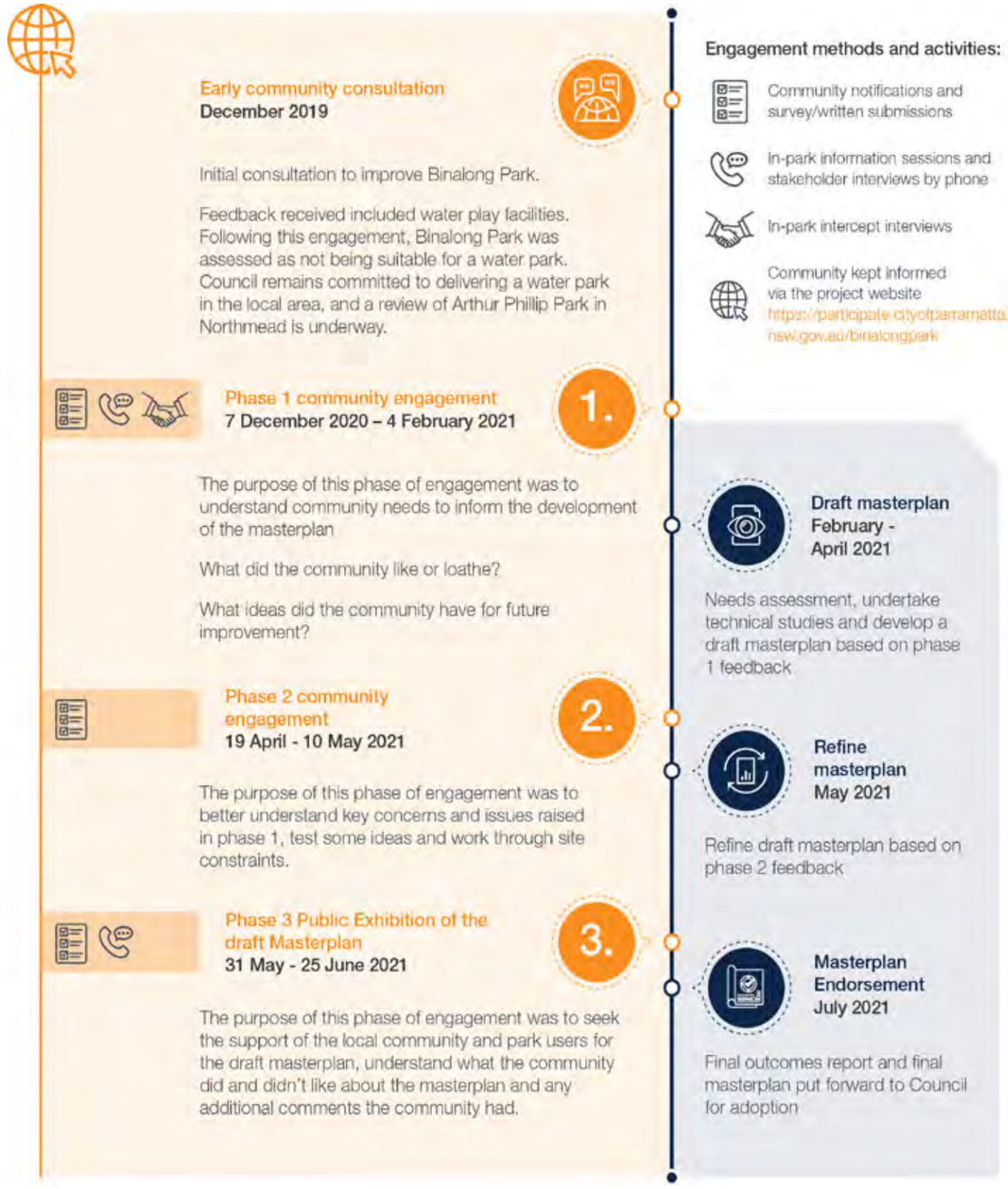
Phase 1 (Understand the site) – 4 December 2020 to 4 February 2021

Phase 2 (Issues and mitigation options) – 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 is 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.



COMMUNITY & ENGAGEMENT

PHASE 1

FINDINGS & INSIGHTS

During phase one of the engagement process a number of consistent themes emerged from each of engagement channels. This information supported the community's aspiration to see Binalong Park grow into a local sporting hub that is simultaneously able to function as a multi-purpose community hub with a diverse offering of program. The community supported engagement themes which focused on function, accessibility and safety.

1,715 visitors viewed the project page 2,052 times

79,242 impressions on social media, viewed by 26,737 people

4 contributions via Instagram

5 stakeholder interviews with sporting clubs: Pendle Hill Cricket Club, Mark Cowper Tennis Coaching, Parramatta District Cricket Association, Pendle Hill Football Club, Starlight Netball Club

30 in-park intercept interviews

374 online and hardcopy surveys completed

Users of Binalong Park love:

- Access to sporting activities
- The location and accessibility of the park
- The opportunity for families to play together
- The overall use of space

Users of Binalong Park want:

- More trees, parking and play equipment
- Maintenance for existing equipment and facilities
- New amenities such as more sporting activities, a café and better safety measures

Key themes and feedback:

Car parking:
There is strong support to increase the number of car park spaces, and to change the car park configuration. This is due to the demand for parking during peak use and concern for the safety of drivers and pedestrians. Cost and potential crowding during peak times were raised as the most common objections. Other suggestions include opening the second car park more frequently to support demand for parking, and upgrading the signage and car park markings.

Amenities:
General park users are supportive of plan to combine the two amenities buildings into one. However, some of the targeted stakeholder groups prefer two separate toilet facilities, noting it reduces crowding during organised sport training and events. Several general park users commented that the toilet facilities were usually locked during their visit.

Indoor meeting space:
Organised users of the park such as Starlight Netball Club, Pendle Hill Football Club and Pendle Hill Cricket Club would use a meeting space regularly. For general park users this option had a lower level of priority.

Storage:
Storage would be welcome and used by most sports clubs.

Lighting:
Some users of the park raised lighting of the courts, car park and cricket pitch as an issue or opportunity. Upgraded lighting should be considered in the masterplan.

Seating and shade:
Park users would like additional shaded seating areas and more trees.

Additional exercise and play equipment:
A walking/circuit track and adult exercise equipment would be supported. A bigger playground with more play equipment for a broader range of ages was suggested by parents and children using the playground.

COMMUNITY & ENGAGEMENT

PHASE 2

FINDINGS & INSIGHTS

The purpose of the phase 2 community engagement was to better understand key concerns and issues raised in phase 1, further understand site constraints and identify opportunities for improvement to inform the draft masterplan.

THE FIVE THEMES EXPLORED WERE:

1. Park and site access: overall respondents were supportive of Council's suggestions to improve park and site access through the installation of a circuit path, improved levels of the fields, a DDA compliant accessible toilet, and a DDA compliant building.

2. Parking and traffic: overall respondents relatively agreed with Council's suggestions to improve parking and traffic by reconfiguring carparking to improve traffic flow and sight lines, and to improve the entrance and exit to the carpark. The suggestion for timed parking on Binalong Road was not supported and will not be introduced without further community consultation.

3. Park layout: overall, respondents were supportive of Council's suggestions to improve the park layout through co-locating courts, combining amenities buildings and planting more trees.

4. Variety of activities: overall, respondents were supportive of Council's suggestions to improve the variety of activities offered at Binalong Park through more social spaces, adult fitness stations, multipurpose courts and a new district playground.

5. Safety: overall, respondents were supportive of Council's suggestions to improve safety at Binalong Park through the relocation of the car park, improved pedestrian flow to recreational spaces, and parkway lighting.

1,916 visitors viewed the project page 2,325 times

119,610 impressions on social media, viewed by 32,537 people

165 contributions via the online survey

1 written email submission was received

COMMUNITY & ENGAGEMENT

PHASE 3

FINDINGS & INSIGHTS

Key themes from the feedback gathered during the public exhibition include:

- Lighting to enable night time organised sports games and recreational use, improved safety and better sightlines into the park
- Car park location, configuration, capacity, improved safety and accessibility
- Improved and accessible toilets and amenities for all park visitors
- Adult exercise equipment and a circuit path
- A large playground for all ages
- Shaded areas, seating and shelter for park visitors and spectators
- Improved and increased facilities for sports clubs and groups
- Variety of sports catered for by the proposed multi-use sports courts and their compatibility Fencing and drainage to mitigate neighbour impacts

1,386 visitors to the webpage with 1,746 views

93,431 impressions on social media, viewed by 25,991 people

39 online submissions

28 visitors across three in-park drop-in sessions held on:
- Saturday 12 June 9am – 11am
- Thursday 17 June 3pm – 5pm
- Saturday 19 June 2021 2pm – 4pm

3 email submissions

7 stakeholder interviews conducted

Endorsement of the masterplan
July 2021

Masterplan endorsed by City of Parramatta Council

The Binalong Park masterplan is a long term document and funding for detailed design and construction is not yet secured. An adopted masterplan provides Council with a shovel ready plan to apply for State and Federal grant funding where applicable.

Develop draft Concept Plan

As funding becomes available Council will engage relevant specialists i.e. a sports field designer, architect, civil and structural engineers to develop a draft concept plan to understand the spatial requirements of the sports and recreational amenities and inform any construction requirements. The concept plan development identifies the finishes, materials and embellishments that will be used i.e. fence materials, playground equipment etc.

Community consultation

The draft concept plan will be subject to further community consultation before progressing to detailed documentation and consequent construction.

Council will engage further with the community to finalise the draft concept plan to for each upgraded or new component of the park such as the playground, community building, carpark, sport fields and multipurpose courts.

Implementation

As funding becomes available, implementation of the masterplan and subsequent concept plans may be staged if appropriate.

COMMUNITY & ENGAGEMENT

AN INFORMED DESIGN RESPONSE

Indoor meeting/social spaces

Organised users of the park would use a meeting space regularly. For general park users this option had a lower level of priority.

In the Draft Master Plan a **multi-function community space** can provide alternative recreational activities such as yoga/karate classes, birthday parties, and music lesson rooms.

An **upgraded tennis amenities** building, compliant with the Disability Discrimination Act, will include a kitchenette, public toilet and picnic areas.

Lighting

Lighting and park safety was a concern for the community. Some users of the park raised lighting of the courts, car park and cricket pitch as an issue or opportunity.

A **lighting strategy** is included in the Draft Master Plan. It highlights significant adjustments to the topography of the park to remove areas of low visibility and to sight lines across the park.

Floodlighting is shown in indicative locations around the sports fields, multi-use courts, tennis courts and cricket nets to ensure that all areas of the park are well-lit for night games or training.

Pole top lighting is proposed for the car park area and circulation paths surrounding the new playground.

Lighting from the proposed building's awning would provide well-lit and covered spaces to better facilitate night and day usage of community facilities such as the public toilet and multi-function community space.

Storage

Storage would be welcome and used by most sports clubs.

Two **storage areas** are identified in the Draft Master Plan at 50m² and 40m² each contained in the two new public amenities buildings.

Seating and shade

Park users would like additional shaded seating areas and more trees.

A central band of **public seating**, including picnic tables, seating edges, bleachers and sheltered areas are proposed in the Draft Master Plan adjacent to both fields.

Shade sails and **raised seating** edges are incorporated into the youth plaza and playground.

New trees also proposed to frame the proposed circuit path walkway. Additional shade trees are proposed to the spectator's area, 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.

Amenities

General park users were supportive of the idea to combine the two amenities buildings into one. However, some of the targeted stakeholder groups preferred two separate toilet facilities, noting it reduces crowding during organised sport training and events. Several general park users commented that the toilet facilities were usually locked during their visit.

Two new public amenities buildings are included in the Draft Master Plan to reduce crowding. The northern public amenities building includes a public toilet, 50m² sports storage area, and a referee's room. The southern public amenities buildings includes a kiosk, two unisex change rooms, 40m² sports storage area, community store, and the multi-function community space. The upgraded tennis amenities building to retain its toilet facility.

Car parking

Strong support to increase the number of car park spaces and to change the car park configuration. This is due to the demand for parking during peak use and concern for the safety of drivers and pedestrians. Cost and potential crowding during peak times were raised as the most common objections. Other suggestions include opening the second car park more frequently to support demand for parking, and upgrading the signage and car park markings.

In the Draft Master Plan the **carpark** is relocated to reduce congestion at the corner of Binalong Road and Fitzwilliam Road.
A separate entrance and exit have been included to improve car park circulation and provide an opportunity for a school drop-off zone, enabling students to enter the school via a pathway to the back entrance.

Additional Exercise and play equipment

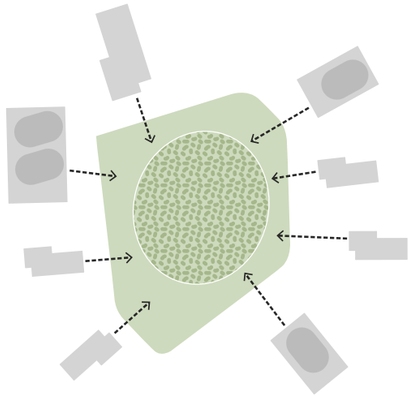
Many park users requested a variety of play and social activities. A walking/circuit track and adult exercise equipment would be supported. A bigger playground with more play equipment for a broader range of ages was suggested by parents and children using the playground.

In the Draft Master Plan a **circuit path** and **fitness station** is included to support the fitness and wellbeing of the community, in addition to a larger district **playground and youth plaza** with activities for different age groups and abilities. The playground and youth plaza includes a bouldering wall, table tennis, nature play, and more.

4.0 DESIGN PRINCIPLES

DESIGN PRINCIPLES

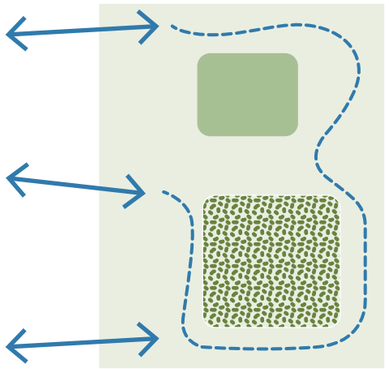
The following design principles have been established as a product of the site analysis process, which was undertaken to identify opportunities and constraints associated with the ongoing management and improvement of Binalong Park. These principles have been integrated into the designed outcome proposed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



CREATE A DESTINATION WITH SOMETHING FOR EVERYONE

The Binalong Park masterplan seeks to build a multifunctional and engaging social and recreational community hub. As a district level facility, Binalong Park should support and engage with a number of age groups and facilitate sports that are organised and informal. By providing something for users across a full range of age groups, physical ability and personal interests, Binalong Park will facilitate a full 7 days per week of activity and recreation. Facilities have been designed to enable organised sport, should simultaneously lend themselves two informal and unorganised sport and recreation applications.

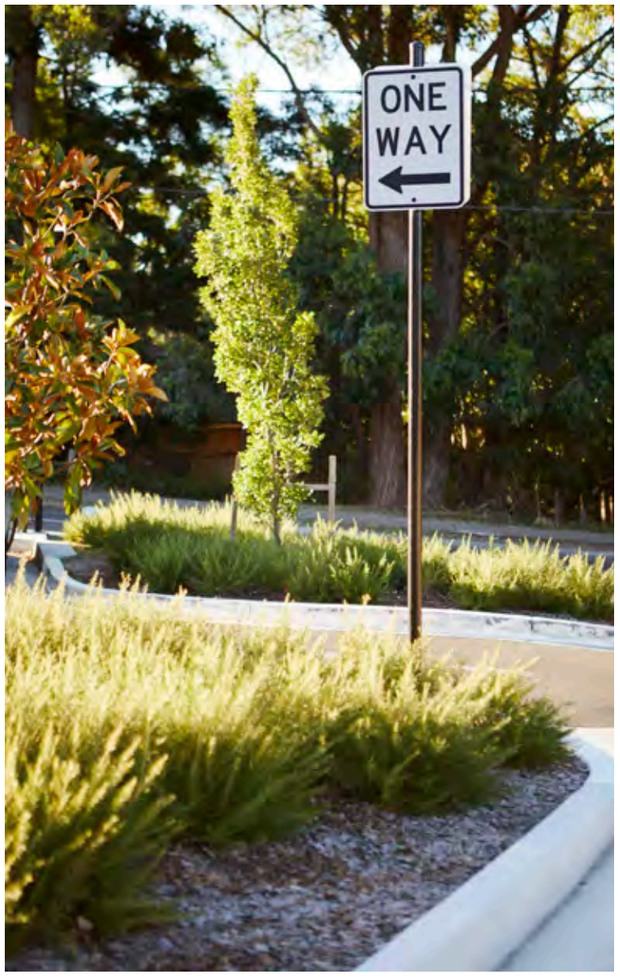
DESIGN PRINCIPLES

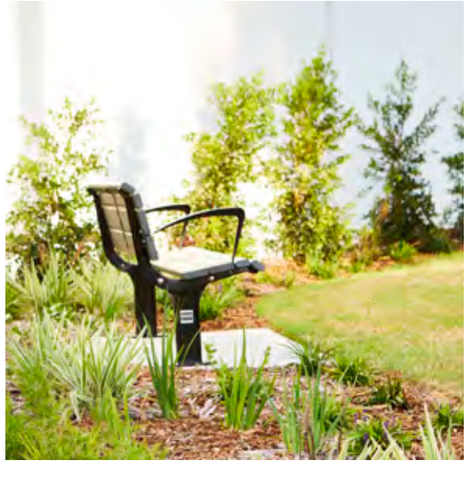


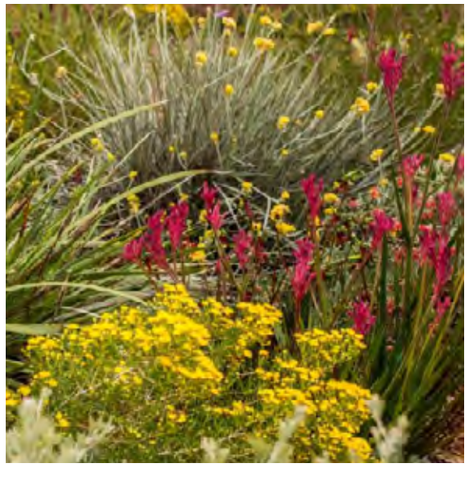
A SAFE ACCESSIBLE AND ENGAGING PUBLIC PARK

An active and visible public park is a safe park. The master plan for Binalong Park prioritises the establishment of clear sight lines and visual connections into and across the park. This application of basic crime prevention through environmental design principles seeks to ensure Binalong parks safety to all users throughout night and day activity. Park and building accessibility should adhere to current BCA* and DDA** regulations. New connections and facilities should be able to be enjoyed by visitors of all physical capabilities. Current issues surrounding traffic flow and clarity of movement within the car park spaces can be improved through the development of clear and legible signage, line marking and a revised car park arrangement.

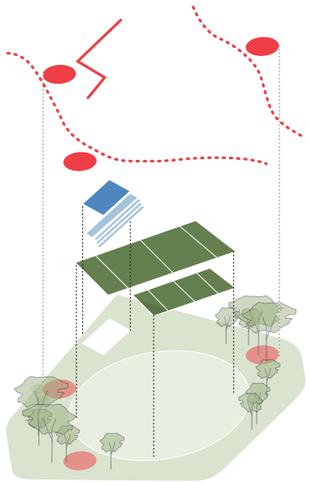
*BCA - Building Code of Australia
**DDA - Disability Discrimination Act







DESIGN PRINCIPLES



A LAYERED AND MULTI-FUNCTIONAL APPROACH TO PROGRAM

The Binalong Park masterplan seeks to build a multifunctional and engaging community recreation and social hub. As a district level facility, Binalong Park should support and engage with a number of age groups and facilitate program both organised and informal. By providing something for users across a full range of age groups, physical ability and personal interests, Binalong Park will facilitate a full 7 days per week of activity and recreation. Facilities designed to enable organised sport should simultaneously lend themselves two informal and unorganised sport and recreation applications.

5.0 MASTERPLAN

BINALONG PARK MASTER PLAN

The concept master plan for Binalong Park improves upon the already diverse offering of recreational and social amenities with the intent of transforming the park into a multi functional and engaging community hub.

As part of the upgrade, the sport field to the north-eastern corner of the site is raised to become level with the other two sports fields.
To achieve this outcome a retaining structure is required to the north-eastern corner of the site. Regrading the site will allow for greater flexibility of use, enhance walkable connections throughout the park and significantly improve visual connections and sight lines across the site.

The western edge of the park is transformed to reposition the car park to the south-western corner of the site. This allows for a clearer and more direct relationship between the areas of active recreational program within the park.
The multi-use courts are re-positioned to enable a direct interface with the tennis courts in their existing position and share amenities such as picnic tables, seating edges and sheltered spaces between their respective user groups.

The existing playground is upgraded to cater for a broader range of age groups with new equipment proposed within a setting that is fenced and shaded in a similar fashion to the existing playground.

Two sports amenities buildings are proposed to provide a direct and accessible interface with all of the programmed areas of the park.
A smaller tennis amenities building (no 14) includes a kitchenette, toilet picnic tables and outdoor sheltered areas.

A new larger amenities building (no 3) addresses both sports fields and proposes that sports focused amenities such as change rooms, kiosks and referees rooms are positioned to its eastern façade. Community focused facilities including a public toilet and new flexible multi-use community room(s) are positioned on the Western facade of the building. This enables a direct relationship with the new playground,multi-use courts and other community offerings within the park.

The public toilet is positioned to the northern end of the building to provide a more direct and on grade connection to the multi-use courts and further north to the tennis courts.

A central band of public seating, including picnic tables, seating edges, bleachers and sheltered areas forms a spectator's area for both fields. The central band forms part of a circuit path that encompasses the perimeter of both sports fields. It includes an offering of outdoor fitness equipment shade trees textured understorey planting and other amenities such as drinking fountains and bins.

LEGEND

1	Tennis courts
2	Four multi use sports courts. Linemarking for multi use sports courts to be designed in collaboration with local sporting teams during detailed design phase.
3	New amenities building with multi use community hall and public toilet
4	Youth Plaza with seating edges table tennis and informal recreation activities
5	Raised bleacher seating edges to multi-use court
6	Sheltered seating areas for spectating to multi-use court and sports field
7	New playground for all ages
8	Proposed car park with 92 parking spaces including 2 accessible parking spaces
9	Spectator seating to field perimeter
10	Proposed circuit path to field
11	Upgrade of cricket pitch.
12	Proposed retaining wall structure to Northeast corner of site. Terraced sandstone blockwork construction with textured planting to reduce visual impact and provide additional privacy to adjacent properties
13	3 Lane cricket net
14	Proposed tennis building with kitchenette, toilet, tables and outdoor sheltered area.
15	Central spectators area with picnic tables, fitness stations, bleacher seating and water stations
16	Emergency vehicle access

Illustrations are indicative only and subject to detailed design development.

Illustrations are indicative only and subject to detailed design development.

Illustrations are indicative only and subject to detailed design development.

DETAILED PLAN

PLAYGROUND AND YOUTH PLAZA

LEGEND

1	Youth Plaza with seating edges table tennis and informal recreation activities
2	Shade sails to youth Plaza and playground
3	Fenced perimeter to playground
4	Covered area with outdoor meeting/picnic space
5	Proposed bouldering wall
6	Proposed play embankment with slides and climbing obstacles
7	Traditional play structure
8	Nature Play and climbing obstacles
9	Proposed triple swing
10	Raised seating edges
11	Proposed trees and gardens to playground perimeter
12	Seating area as interface with multi-use courts
13	Main park entrance
14	Footpath as interface with proposed car park
15	Covered area provided by building awning

Illustrations are indicative only and subject to detailed design development.

DETAILED PLAN

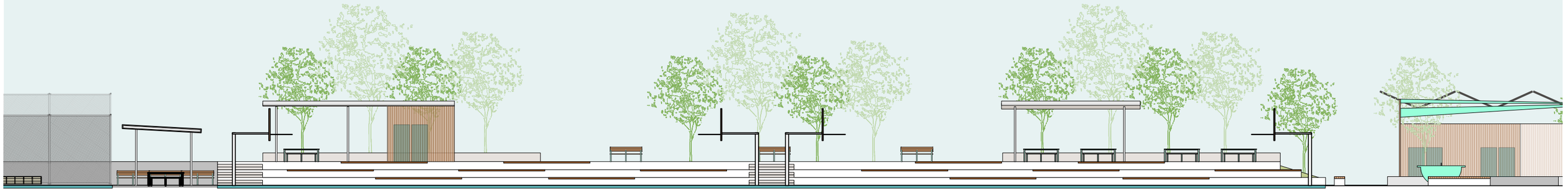
MULTI-USE SPORTS COURTS

LEGEND

1	Four multi use courts capable of accommodating netball basketball and other informal/unorganised sports
2	Long bench seats to Southern edge of courts
3	Raised bleacher seating to eastern edge of courts
4	Covered areas with picnic tables & seating edges
5	Proposed shade trees with mass planted under storey
6	Proposed seating edges to provide vantage point for spectators
7	Proposed picnic tables and sheltered spaces at interface with tennis courts
8	Proposed tennis building with kitchenette, toilet, tables and outdoor sheltered area.

Illustrations are indicative only and subject to detailed design development.

DETAILED SECTION



Illustrations are indicative only and subject to detailed design development.

Binalong Park Master Plan

DETAILED PLAN

SOUTHERN CAR PARK

LEGEND

1	Proposed car park with 92 parking spaces including two accessible parking spaces.
2	Proposed tree plantings with mass planted under storey
3	Proposed access pathway
4	Consolidated entry with clear line marking and signage at crossing point
5	Consolidated exit with clear line marking and signage at crossing point
6	Emergency vehicle access

Illustrations are indicative only and subject to detailed design development.

DETAILED PLAN

INDICATIVE BUILDING LAYOUT

The proposed layout for the building allows for community focused amenities such as the public toilet and the multi-function community space to address the public recreation facilities and outdoor meeting areas. Sport specific amenities such as the change rooms kiosk referees room and two sports storage areas face the playing fields to the east of the building.

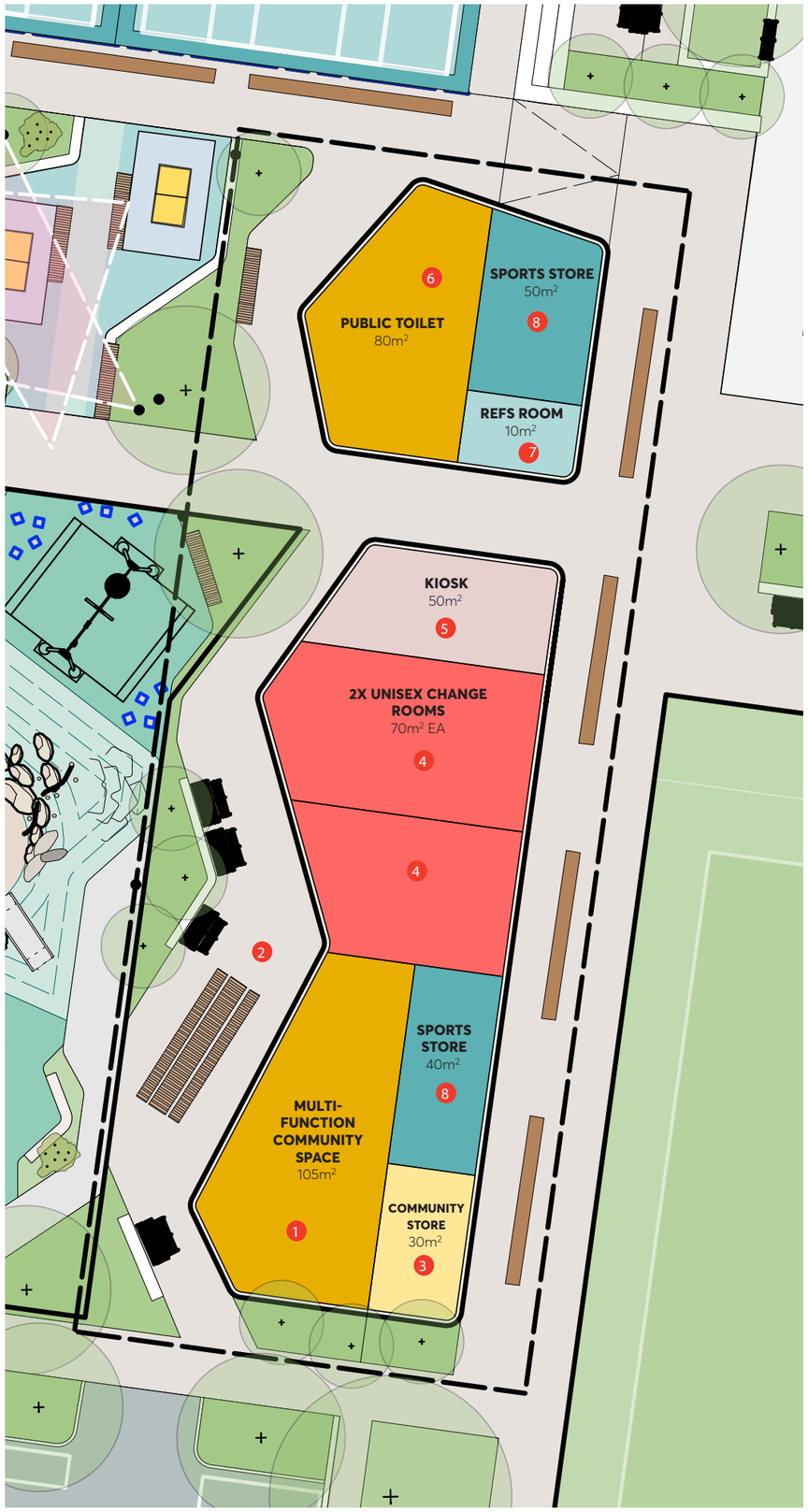
The building offers a large covered outdoor space to its perimeter comprised of areas for spectators informal seating edges and it outdoor meeting space.

This building design is indicative only and should be revised and further developed buy an architect as part of the detailed design process that would precede the preparation of construction documentation for this project.

LEGEND

1. Proposed community hall /multifunctional indoor spaces
2. Covered outdoor meeting area
3. Kiosk storage
4. Unisex change rooms
5. Kiosk
6. Publicly accessible toilet
7. Referees room and additional sports storage
8. Sports storage

Binalong Park Master Plan



Illustrations are indicative only and subject to detailed design development.

PRECEDENT IMAGERY

LIZARD LOG AMENITIES BUILDING
CHROFI

CENTENTIAL PARK AMENITIES
Lahznimmo

WETERN SYDNEY PARKLANDS AMENITIES
Stanic harding

TAMARAMA KIOSK AND CHANGE ROOM
Lahznimmo

SOMERVILLE PARK AMENITIES
Sam Crawford Architects

6.0 STRATEGIES

SIGNAGE STRATEGY

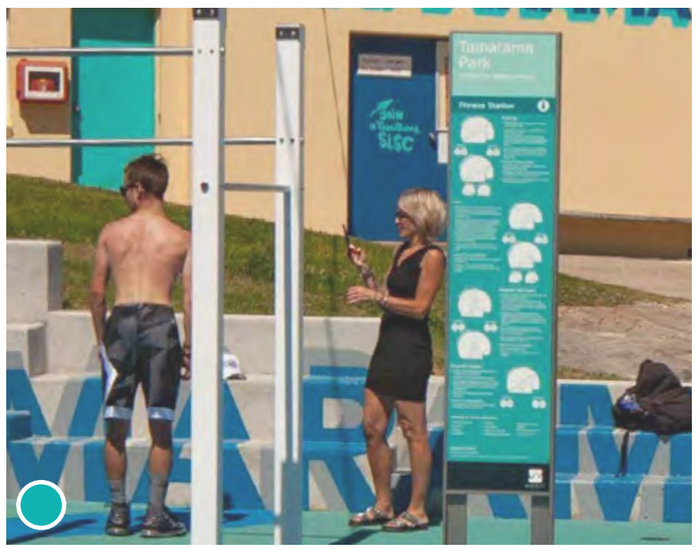
A signage strategy has been developed based on a number of key principles, including improving way-finding and circulation within the park and the local community, provision of instruction for park equipment and to provide education relating to the regeneration of park flora and fauna.

Signage will be developed from the City of Parramatta design standards, with colours, materials and finishes informed by the unique character of the site, its native flora and fauna and history.

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

2. INTERPRETATIVE & EDUCATIONAL SIGNAGE
Deuce Design

3. INTERPRETATIVE & EDUCATIONAL SIGNAGE
Deuce Design



4. INSTRUCTIONAL SIGNAGE TO FITNESS STATIONS

PROPOSED FURNITURE SELECTIONS

A combination of custom furniture and off the shelf items is proposed for Binalong Park. Around the amenities building and playground, a suite of custom furniture is to be designed to meet the needs of the large groups associated with sporting teams and visitors to the playground. This seating should be long and generous, with bench seats and seating edges designed for groups of 4 or more people. The furniture should read as a set, with consistent materials and coloured finishes creating a visual continuity between spaces.

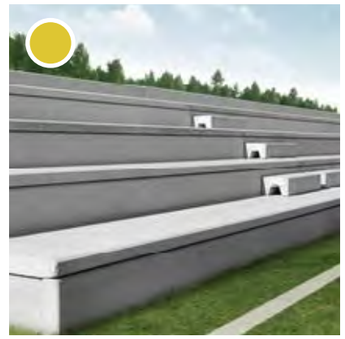
To the remainder of the park, a number of instances of furniture is proposed to improve the potential for spectating and respite along key connections within the park. For ease of maintenance, this furniture would be installed as the City of Parramatta standard furniture suite.

CUSTOM FURNITURE ITEMS

1. CUSTOM STEEL & TIMBER FURNITURE

2. RAISED SEATING EDGES

3. COMMUNAL BENCH SEATING



4. CONCRETE SEATING STEPS

CoP STANDARD SEATS

2. CITY OF PARRAMATTA STANDARD PARK SEATING

PROPOSED MATERIALS PALETTE

A materials palette has been developed to be both hard wearing and sympathetic to the landscape setting of Binalong Park. Materials have been chosen for their neutral tones and natural warmth, as well as for their high level of comfort and ongoing performance. In the high traffic areas surrounding the amenities building and playground, a sealed, hard wearing concrete with warm aggregate and/or concrete unit paver finish is proposed. To compliment this neutral base, new fixtures and furniture is proposed to be constructed from powder coated steel and Australian hard wood timber. Powder coating finishes should match those of the building to provide a visual continuity across the site.

PROPOSED MATERIALS SELECTIONS

WOOD CHIP MULCH
To areas of planting and low traffic areas of playground

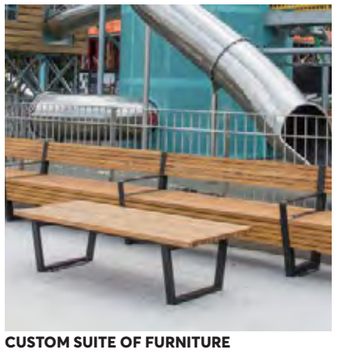
EXPOSED AGGREGATE CONCRETE PAVING
Areas Surrounding Amenities Building

CONCRETE UNIT PAVER
Areas Surrounding Amenities Building

INSITU CONCRETE SEATING WALL
Eastern edge of multi use courts

WARM, TONAL RUBBER SOFTFALL
Playground

AUSTRALIAN HARDWOOD TIMBER
To Amenities Building



CUSTOM SUITE OF FURNITURE
Throughout

PLEXIPAVE SPORTS SURFACING
Playground

SANDSTONE BOULDERS
To edges of proposed pathway

LAYERED NATIVE PLANTING
Throughout

PARKING

Car parking at Binalong Park must provide sufficient numbers of parking spaces to allow for flexibility in its use as a sporting hub and community destination. Binalong Park has 3 cricket pitches and 4 soccer fields. This allows for multiple games to be played simultaneously. Most visitors to the park arrive by car, placing pressure on the spatial demands of the carpark. The park must also be able to function as a community destination when not in use for organised sports events or training. With this in mind, the carpark should be located in such a position that it does not present an obstacle for circulation within the park.

The master plan proposes that the carpark be moved to the south-western corner of the site. This allows for the carpark to remain at an appropriate size to accommodate a similar number of parking spaces to the existing arrangement, however reduces the need for visitors to walk through the carpark when moving from one programmed space to another.

This proposal also allows for vehicle movements to be moved further away from congestion typically seen at the intersection of Binalong and Fitzwilliam Road. This reduces near car parking related incidences in the more active areas of the site to the north-western corner.

An independent survey of car parking and traffic safety identified that there was 104 parking spaces, with 2 being accessible parking spaces within the existing Binalong Park carpark. On street car parking provided an additional 215 parking spaces in the streets immediately surrounding the park. After assessing the use of the park during week days and weekends (summer sports/cricket), it was was deemed that there was neither the opportunity nor an actual need to increase the number of offstreet parking spaces within the park's current arrangement.

The design proposal provides 92 off street parking spaces, with a provision of 2 accessible parking spaces. On street parking spaces remain unchanged as a result of the proposal.

LEGEND

- 92 proposed standard parking spaces
- 2 proposed accessible parking spaces
- Carpark driveway access

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.

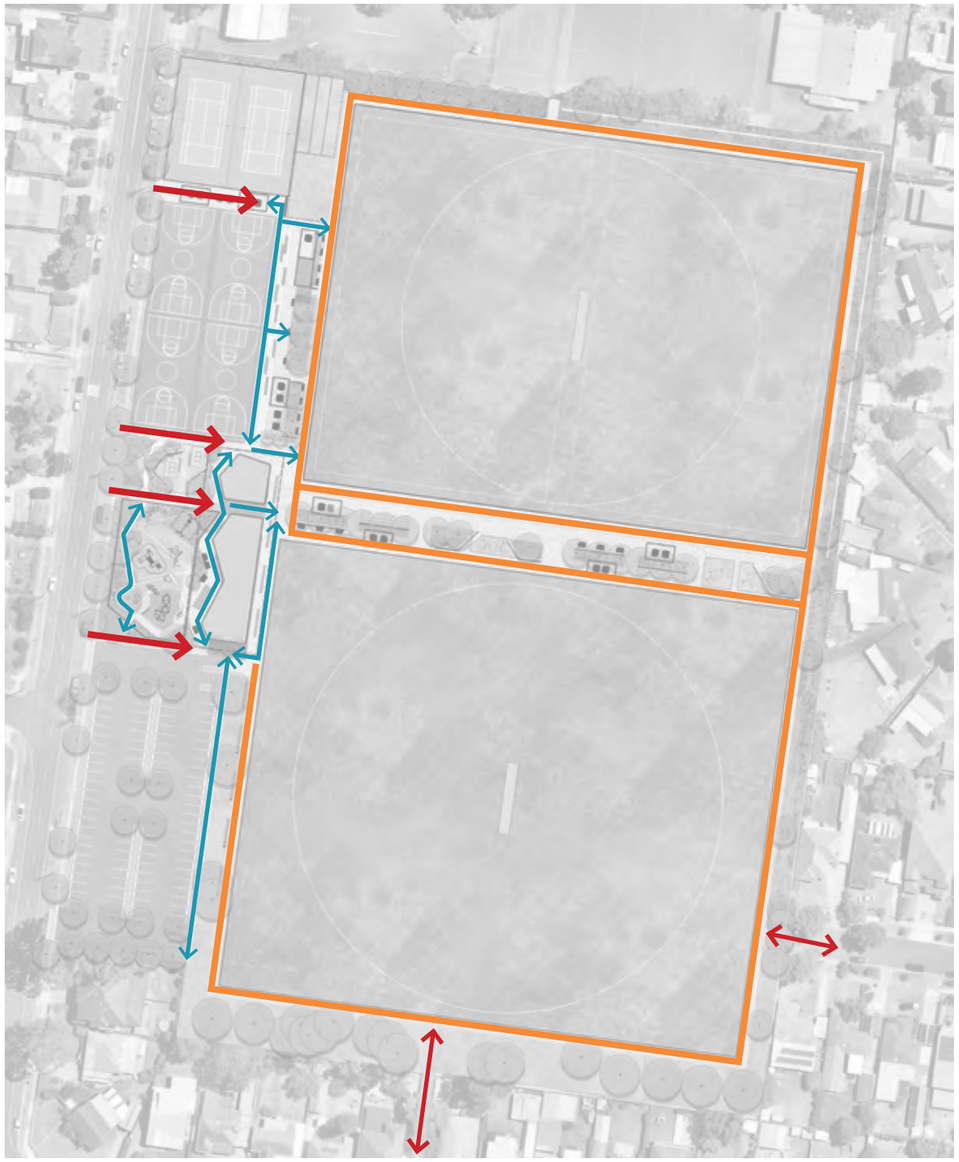
ACCESS & CIRCULATION

The masterplan report seeks to establish a clear hierarchy of access circulation paths within Binalong Park. The Park's interface with Binalong road is significantly improved through the establishment of four clearly marked entry points. The main entry to the park invites visitors to enter through the core of the new community and sports amenities building and onto a central spectator's area.

Within the western portion of the park, smaller circulation parts provide ease of access to all program areas. These connections allow visitors to navigate the site without interacting with or moving through the proposed car park. This presents a significant improvement to pedestrian safety and encourages visitors to engage withmore than one of the active areas to the parks Western edge.

Secondary entry points to the parks south and eastern edges should also be clearly signposted and reviewed to ensure pedestrian safety and passive surveillance.

A 3m wide circuit path is proposed to encompass the perimeter of the playing fields. A central spine supports the circuit path in becoming a recreational destination for its local community by providing outdoor fitness stations, seating and other public amenity such as drinking fountains and bike racks.



LEGEND

- Proposed circuit path
- Internal circulation path
- Park entry points

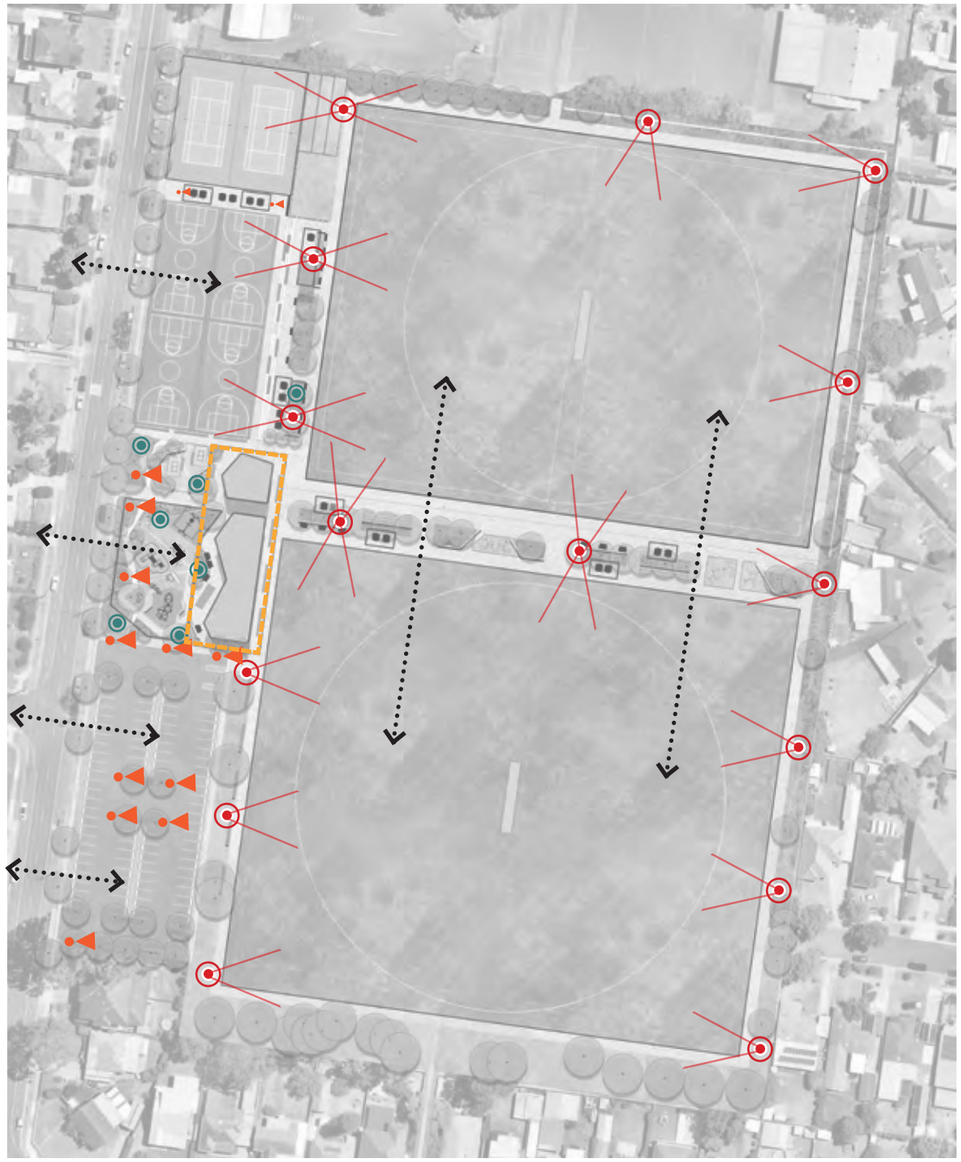
LIGHTING & CPTED

Through significant adjustments to the sites topography, the masterplan report seeks to remove areas of low visibility and improved visual permeability and sight lines across the site. This is achieved by raising the north-eastern most field to be flush with the other three playing fields. Central mounding is proposed to be flattened to improve access and visual connections across the site.

Floodlighting to fields is shown in indicative locations to ensure that all areas of the site are well lit for night games or training. This lighting should extend to the multi-use court areas, tennis courts and cricket nets to allow for night and day use.

Pole top lighting is proposed to the car park area and circulation paths surrounding the new playground. Lighting from the proposed building's awning would provide well-lit and covered spaces to better facilitate night and day usage of community facilities such as the public toilet and multi-function community hall.

The lighting design should be revisited and further developed by a specialist lighting engineer throughout the detailed design process. This would precede the preparation of construction documentation for this project.



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 include species indigenous and endemic to the Toongabbie area. 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 understorey planting condition.

New tree plantings will further enhance the parks regeneration, with new trees also proposed to frame the proposed circuit path walkway. Additional shade trees are proposed to the spectators area, 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

Glycine microphylla
Small-leaf Glycine

Hibbertia aspera ssp. aspera
Rough Guniea Flower

Clematis glycinoides
Headache Vine

Lomandra longifolia
Basket grass

Lepidosperma laterale
Variable Swordsedge

Gahnia sieberiana
Sword Grass

Philotheca myoporoides
Native Wax Flower

Hardenbergia violacea
Happy Wanderer

Kunzea ericoides
White Tea Tree

Poa labillardieri
Tussock Grass

Dianella caerulea 'Little Jess'
Little Jess

Westringia fruticosa
Native Rosemary

Anigozanthos Var.
Kangaroo Paw

6.0 APPENDICES

Parking Assessment Study focused on ensuring adequate car parking for the proposed future public amenities within Binalong Park, in Old Toongabbie, NSW

April 2021

City of Parramatta

Traffic Engineering Centre
Our clients are our partners

Traffic Engineering Centre Pty Ltd
ABN 81 153 403 199

Suite 8, 2 Kochia Lane
Lindfield NSW 2070
PO Box 261
Lindfield NSW 2070
Australia
Telephone +61 2 9880 7606
Mobile +61 (0)424 277 612
Email zoran@trafficengineeringcentre.com

Website www.trafficengineeringcentre.com

Traffic Engineering Centre
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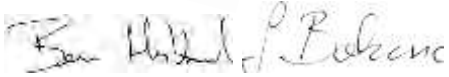
Revision	Details	Date	Amended By

Author: Zoran Bakovic,.....

Signed: 

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

Signed: 

Approved by: Zoran Bakovic.....

Signed: 

Date: 26 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

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 Binalong Park, in Old Toongabbie, 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 show 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 network within the study area - Locality map
(Source: nearmap)

2. Study area

The study area is cantered on Binalong Park, in Old Toongabbie, NSW (refer to Figure 2.1 and Photos 2.1 to 2.7).

The Binalong Park currently incorporates 3 (three) cricket grounds, 3 (three) netball courts (refer to Photo 2.6 and Figure 2.2), 1 (one) basketball court, and a playground for kids, with the Toongable Public School adjacent to the study area (refer to Photo 2.7).

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

Figure 2.1: Traffic management locality map
(Source: nearmap)

Photo 2.1: Vehicular access to the Binalong Park, off Binalong Road
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 2.2: One of at least three cricket grounds located within the study area
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 2.3:The southern of the two off-street car parks, located within the study area
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 2.4: The northern of the two off-street car parks, located within the study area
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 2.5: A playground located within the study area, adjacent to the northern car park
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 2.6: One (1) basketball court and three (3) netball courts located within the study area
(Photo: Traffic Engineering Centre Pty Ltd)

Figure 2.2
(Source: nearmap)

Photo 2.7: Toongable Public School, adjacent to 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 Binalong Park, in Old Toongabbie, NSW. The Council is currently working through a master planning process for Binalong Park to inform future projects and developments.

The 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
    - 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

There are two off-street car parks within the study area with access off Binalong Road (refer to Photos 4.1 to 4.3, and Figures 4.1 to 4.3).

Photo 4.1: The northern off-street car park (25 parking spaces)
(Photo: Traffic Engineering Centre Pty Ltd)

Figure 4.1: The number of off-street parking spaces (25) within the northern car park
(Source: nearmap)

Photo 4.2: The southern off-street car park (79 parking spaces)
(Photo: Traffic Engineering Centre Pty Ltd)

Figure 4.2: The number of off-street parking spaces (79) within the southern car park
(Source: nearmap)

Photo 4.3: Vehicular access to the Binalong Park, located off Binalong Road
(Photo: Traffic Engineering Centre Pty Ltd)

Figure 4.3: Vehicular access to the Binalong Park, and the 2 (two) off-street car parks
(Source: nearmap)

Based on the observation and subsequent counting taken at the site, there are in total 104 off-street parking spaces located adjacent to the Binalong Park (refer to Figures 4.4 & 4.5, and Photos 4.1 & 4.2).

Figure 4.4: Locations of permanent off-street parking, adjacent to the Binalong Park
(Source: Nearmap)

Figure 4.5: Number of permanent off-street parking spaces per a section, adjacent to the Binalong Park
(Source: Nearmap)

4.2 On-street, kerbside parking

In addition to the vehicular access (discussed in detail in Chapter 4.1), there are also 3 (three) pedestrian accesses to the Binalong Park from:

1. Binalong Street (refer to Photo 4.4, and Figure 4.6)

Photo 4.4: Pedestrian access to the Binalong Park, from Binalong Road
(Photo: Traffic Engineering Centre Pty Ltd)

2. Merryl Avenue (refer to Photo 4.5, and Figure 4.6)

Photo 4.5: Pedestrian access to the Binalong Park, from Merryl Avenue
(Photo: Traffic Engineering Centre Pty Ltd)

3. Oval Street (refer to Photo 4.6, and Figure 4.6)

Photo 4.6: Pedestrian access to the Binalong Park, from Oval Street
(Photo: Traffic Engineering Centre Pty Ltd)

Figure 4.6: Three (3) pedestrian accesses to the Binalong Park

Due to that, and as observed during the parking survey, the Figure 4.7 shows the streets where, realistically speaking, the on-street, kerbside parking could occur as the result of the use of the Binalong Park.

Figure 4.7: On-street parking areas, adjacent to the Binalong Park
(Source: Nearmap)

The 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:

- Binalong Road: ≈ 73 on-street parking spaces, every day (refer to Photos 4.7 & 4.8)

- Henson Street: ≈ 11 on-street parking spaces, every day (refer to Photo 4.9)
- Merryl Street: ≈ 67 on-street parking spaces, every day (refer to Photo 4.10 to 4.12)
- Nulang Street ≈ 43 on-street parking spaces, every day (refer to Photo 4.13)
- Oval Street: ≈ 21 on-street parking spaces, every day (refer to Photo 4.14)

Photo 4.7: On-street parking on Binalong Road – looking southbound from the vehicular access to the Binalong Park
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.8: On-street parking on Binalong Road – looking nothbound from the vehicular access to the Binalong Park
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.9: On-street parking on Henson Street – looking from Binalong Road
(Photo: Traffic Engineering Centre Pty Ltd)

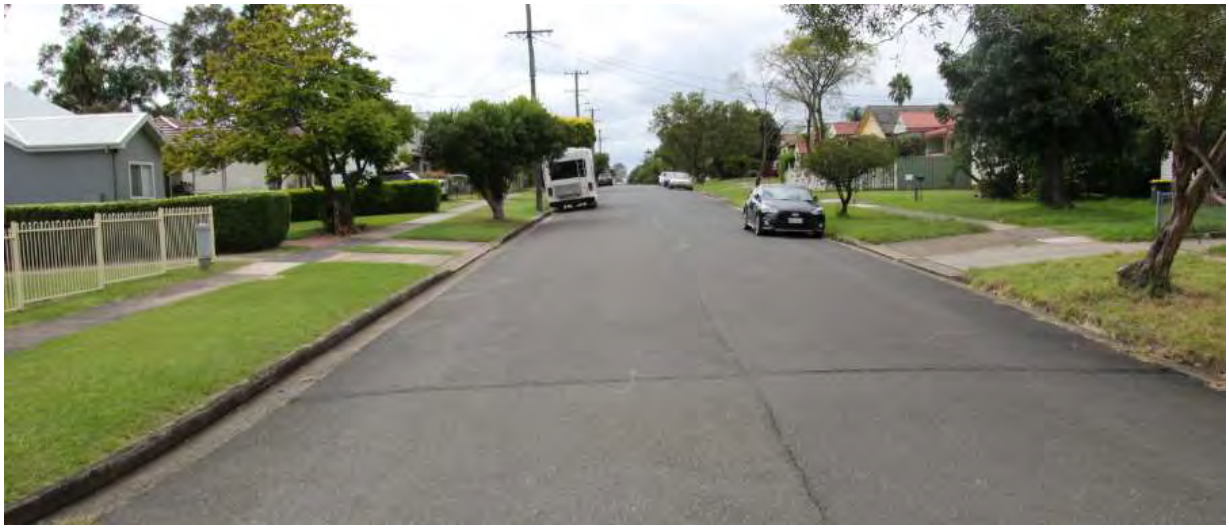


Photo 4.10: On-street parking on Merryl Street – looking eastbound, from Binalong Road
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.11: On-street parking on Merryl Street – looking eastbound
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.12: On-street parking on Merryl Street – looking eastbound, toward the corner with Nulang Street
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.13: On-street parking on Nulang Street – looking northbound, from the corner with Merryl Street
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 4.14: On-street parking on Oval Street – looking westbound, from Nulang Street
(Photo: Traffic Engineering Centre Pty Ltd)

4.3 Total number of parking spaces

There is a total of 319 parking spaces adjacent to the Binalong Park, of which:

- 104 off-street car parking spaces, located within the two off-street car parks (every day)
- 215 on-street kerb side parking spaces on Binalong Road, Henson Street, Merryl Street, Nulang Street, and Oval Street (every day)

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 Binalong Park centered study area, a 15-minute interval parking accumulation survey was undertaken (refer to Figures 5.1 & 5.2):

- on Thursday, 11 March 2021, between 7.00am and 6.00pm, and
- on Saturday, 13 March 2021, between 8.00am and 5.00pm

Figure 5.1: Surveyed zones
(Source: Nearmap)

Figure 5.2: Number of available parking spaces
(Source: Nearmap)

Note: Figure 5.1 shows the surveyed zones. Zones 1 & 2 the number of vehicles parked within the off-street car parks, while the Zones 3 to 7, represent the number of vehicles parked on both side of that particular section of a street.

Figure 5.2 shows the number of available parking spaces – the number of the off-street parking spaces is shown in red, while the number of the on-street parking spaces is shown in blue.

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5.1 Parking survey results - weekday

Table 5.1 shows parking accumulation survey results for Thusrday 11 March 2021, between 7:00am and 6:00pm. The data was collected during the cricket season, with no games played on the day of the survey (Thursday).

Table 5.1: Thursday 11 March 2021: Number of occupied, total, and vacant parking spaces (7:00am – 6:00pm)

Time	1	2	Occup.	Total	Vacant	3	4	5	6	7	Occup.	Total	Vacant	TOTAL vacant
7.00am	10	0	10	104	94	6	3	11	5	6	31	215	184	278
7.15am	10	0	10	104	94	5	3	11	2	6	27	215	188	282
7.30am	10	2	12	104	92	6	3	11	2	6	28	215	187	279
7.45am	6	2	8	104	96	6	3	9	1	5	24	215	191	287
8.00am	6	2	8	104	96	10	3	10	2	5	30	215	185	281
8.15am	3	2	5	104	99	11	2	10	1	5	29	215	186	285
8.30am	2	4	6	104	98	8	2	8	1	5	24	215	191	289
8.45am	7	4	11	104	93	11	2	8	1	4	26	215	189	282
9.00am	5	4	9	104	95	15	1	8	2	4	30	215	185	280
9.15am	6	3	9	104	95	6	1	8	2	4	21	215	194	289
9.30am	3	2	5	104	99	6	2	8	1	4	21	215	194	293
9.45am	2	2	4	104	100	6	2	8	1	4	21	215	194	294
10.00am	3	2	5	104	99	7	2	10	3	5	27	215	188	287
10.15am	2	0	2	104	102	7	2	9	2	4	24	215	191	293
10.30am	3	0	3	104	101	5	4	9	2	4	24	215	191	292
10.45am	2	2	4	104	100	6	4	10	3	4	27	215	188	288
11.00am	2	4	6	104	98	5	3	9	2	5	24	215	191	289
11.15am	2	4	6	104	98	5	3	9	2	5	24	215	191	289
11.30am	2	4	6	104	98	5	3	9	2	5	24	215	191	289
11.45am	2	4	6	104	98	5	3	9	2	4	23	215	192	290
12.00pm	2	2	4	104	100	8	3	6	2	3	22	215	193	293
12.15pm	3	1	4	104	100	9	3	6	2	2	22	215	193	293
12.30pm	3	1	4	104	100	10	2	6	2	2	22	215	193	293
12.45pm	2	2	4	104	100	9	3	6	2	2	22	215	193	293
1.00pm	2	0	2	104	102	8	3	7	1	3	22	215	193	295
1.15pm	4	0	4	104	100	9	4	7	1	3	24	215	191	291
1.30pm	5	0	5	104	99	10	3	7	1	3	24	215	191	290
1.45pm	5	0	5	104	99	11	3	7	1	3	25	215	190	289
2.00pm	5	2	7	104	97	11	3	5	1	1	21	215	194	291
2.15pm	5	2	7	104	97	12	2	5	1	1	21	215	194	291
2.30pm	3	1	4	104	100	14	3	5	1	1	24	215	191	291
2.45pm	11	1	12	104	92	18	3	5	0	2	28	215	187	279
3.00pm	20	2	22	104	82	29	3	5	0	4	41	215	174	256
3.15pm	25	3	28	104	76	31	3	6	1	4	45	215	170	246
3.30pm	15	3	18	104	86	14	3	6	1	4	28	215	187	273
3.45pm	14	6	20	104	84	6	33	6	1	4	50	215	165	249
4.00pm	13	2	15	104	89	7	3	7	2	4	23	215	192	281
4.15pm	9	2	11	104	93	6	3	7	2	4	22	215	193	286
4.30pm	7	1	8	104	96	5	3	7	2	5	22	215	193	289
4.45pm	6	1	7	104	97	6	3	8	2	5	24	215	191	288
5.00pm	3	1	4	104	100	6	3	8	3	5	25	215	190	290

5.15pm	3	0	3	104	101	6	3	9	3	5	26	215	189	290
5.30pm	2	0	2	104	102	6	3	9	3	5	26	215	189	291
5.45pm	1	0	1	104	103	6	3	9	3	5	26	215	189	292

Graph 5.1: Number of vacant parking spaces (red: on-street; blue: off-street), on Thursday, 11 March 2021, between 7:00am and 6:00pm

The parking accumulation survey results reveal the following:

Thursday, 11 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 278 and 292) located within the study area, adjacent to the Binalong Park (refer to Table 5.1 & Graph 5.1)

- The only [non-significant] drop in the number of vacant parking spaces (between 249 and 279), occurred in the afternoon, between 2.45pm and 3.45pm, when parents parked in both car parks as well as on the adjacent section of Binalong Road, while waiting to pick up their kids from the Toongabbie Public School (refer to Photos 5.1 & 5.2).

Photo 5.1
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 5.2
(Photo: Traffic Engineering Centre Pty Ltd)

- 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.

- Even during the PM peak parking demand, associated with the nearby primary school, there was at least 76 vacant off-street parking spaces, and 170 vacant on-street parking spaces (in total, 246 vacant parking spaces - refer to Table 5.1 and Figure 5.1).

- 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

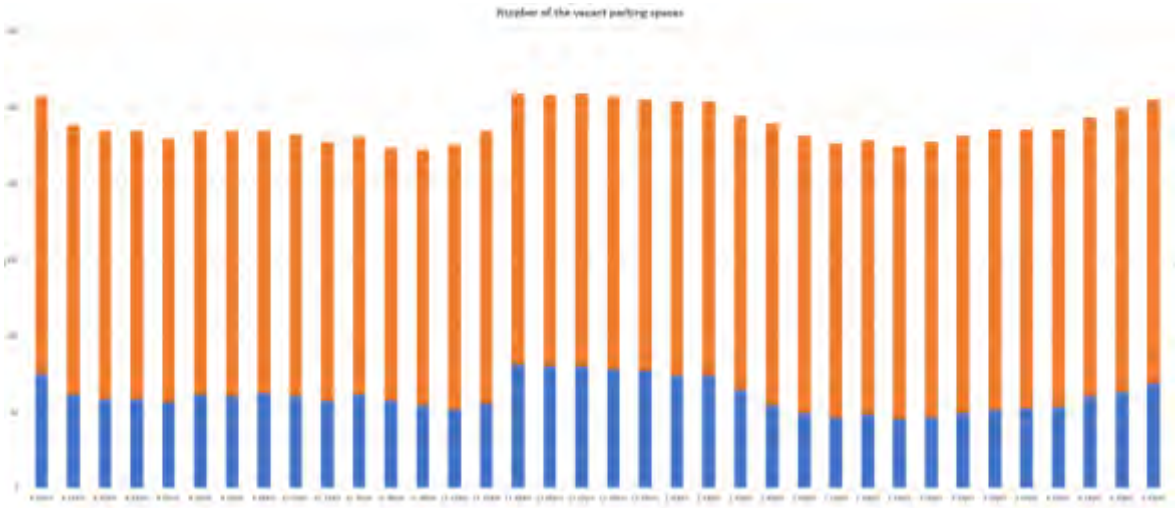
- Neither the off-street car park parking facilities, within the Binalong Park, nor on-street parking facilities adjacent to the park, were never fully occupied during the entire survey (refer to Table 5.1).

5.2 Parking survey results - weekend

Table 5.2 shows parking accumulation survey results for Saturday 13 March 2021, between 8:00am and 5:00pm. The data was collected during the cricket season, with a couple of games played on that day.

Table 5.1: Saturday, 13 March 2021: Number of occupied, total, and vacant parking spaces (8:00am – 5:00pm)

Time	1	2	Occup.	Total	Vacant	3	4	5	6	7	Occup.	Total	Vacant	TOTAL vacant
8.00am	13	16	29	104	75	7	2	11	7	6	33	215	182	257
8.15am	23	20	43	104	61	9	3	12	8	6	38	215	177	238
8.30am	23	23	46	104	58	11	3	12	7	6	39	215	176	234
8.45am	20	26	46	104	58	11	3	12	7	6	39	215	176	234
9.00am	24	24	48	104	56	15	3	11	6	7	42	215	173	229
9.15am	18	25	43	104	61	13	3	11	7	8	42	215	173	234
9.30am	20	24	44	104	60	11	3	11	7	9	41	215	174	234
9.45am	19	23	42	104	62	14	2	11	7	9	43	215	172	234
10.00am	19	25	44	104	60	13	3	11	7	9	43	215	172	232
10.15am	19	28	47	104	57	13	3	13	8	8	45	215	170	227
10.30am	18	25	43	104	61	15	3	14	7	7	46	215	169	230
10.45am	18	29	47	104	57	17	3	14	7	8	49	215	166	223
11.00am	20	30	50	104	54	14	3	13	9	8	47	215	168	222
11.15am	22	31	53	104	51	10	3	13	6	9	41	215	174	225
11.30am	20	29	49	104	55	7	3	11	6	9	36	215	179	234
11.45am	13	10	23	104	81	8	3	11	6	9	37	215	178	259
12.00pm	12	12	24	104	80	8	3	10	7	9	37	215	178	258
12.15pm	12	12	24	104	80	7	3	11	6	9	36	215	179	259
12.30pm	11	15	26	104	78	7	3	10	7	9	36	215	179	257
12.45pm	10	17	27	104	77	7	3	10	8	9	37	215	178	255
1.00pm	10	20	30	104	74	5	2	10	9	9	35	215	180	254
1.15pm	10	20	30	104	74	5	2	10	9	9	35	215	180	254
1.30pm	16	24	40	104	64	6	2	10	8	9	35	215	180	244
1.45pm	22	28	50	104	54	6	2	7	8	7	30	215	185	239
2.00pm	22	33	55	104	49	5	2	14	5	7	33	215	182	231
2.15pm	22	36	58	104	46	9	2	12	5	7	35	215	180	226
2.30pm	23	33	56	104	48	10	2	11	5	7	35	215	180	228
2.45pm	24	35	59	104	45	11	2	11	5	7	36	215	179	224
3.00pm	23	35	58	104	46	10	2	10	5	7	34	215	181	227
3.15pm	22	33	55	104	49	9	3	10	4	7	33	215	182	231
3.30pm	20	33	53	104	51	9	3	9	4	6	31	215	184	235
3.45pm	20	32	52	104	52	9	3	10	4	6	32	215	183	235
4.00pm	20	31	51	104	53	8	3	12	4	6	33	215	182	235
4.15pm	19	25	44	104	60	7	3	11	5	6	32	215	183	243
4.30pm	18	23	41	104	63	6	3	10	5	5	29	215	186	249
4.45pm	14	21	35	104	69	6	3	10	5	5	29	215	186	255



Graph 5.2: Number of vacant parking spaces (red: on-street; blue: off-street), on Saturday, 13 March 2021, between 8:00am and 5:00pm

Saturday, 13 March 2021, between 8.00am and 5.00pm

The parking accumulation survey results reveal the following:

- The survey was undertaken on the day where cricket games were played on all three cricket grounds (refer to Photos 5.3 to 5.5).

Photo 5.3
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 5.4
(Photo: Traffic Engineering Centre Pty Ltd)

Photo 5.5
(Photo: Traffic Engineering Centre Pty Ltd)

- there was always a significant number of vacant parking spaces, both off-street and on-street (between 222 and 259) located within the study area, or adjacent to the Bilanong Park (refer to Table 5.2 and Graph 5.2)

- the observed occasional abrupt increase in the number of vacant parking spaces, between 11.45am and 12.00pm, coincides with the end of the first round of cricket games on the day

- in the same manner, an abrupt decrease in the number of vacant parking spaces, between 2.00pm and 3.00pm, coincided with the start of the second cricket game of the day

- even during the peak parking demand, associated with the cricket games, there was at least 45 vacant off-street parking spaces, and 179 vacant on-street parking spaces (in total, 224 vacant parking spaces - refer to Table 5.1 and Figure 5.1)

- 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

6. How to increase the number of parking space

At the moment, there is neither an opportunity nor an actual need to increase the number of off-street parking spaces.

However, the line markings in the southern car park are faded, not clearly visible, and even quite confusing, as, seemingly, the car park's lime markings are painted over a sealed area previously used as a netball court (refer to Photos 6.1 to 6.3).

In addition, there is so-called crocodile cracking throughout the southern car park (refer to Photos 6.4 & 6.5), which is caused by fatigue failure of the HMA surface (or stabilized base) under repeated traffic load. The cracks are an indicator of structural failure, which would allow moisture infiltration so that t surface may further deteriorate and result into potholes.

Therefore, after the fatigue cracked pavement is investigated [to determine the root cause of failure] and subsequently resealed, the car-park's line marking should be repainted.

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)

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 222 and up to 295 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 any proposed development within the park 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).

Any development of the park that would generate less than a need for an additional 222 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.

8. Traffic and Road safety assessment

The currently observed low volume and low traffic speed environment on the local road network adjacent to the Binalong 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:

- **Faded 'GIVE WAY' sign, the lack of 'GIVE WAY' line, and the lack of 'GIVE WAY TO PEDESTRIANS' sign at the exit from the car parks**

One of the two 'GIVE WAY' signs at the car park's exit is faded, while the associated 'GIVE WAY' line is missing (refer to Photo 8.1).

In addition, 'GIVE WAY TO PEDESTRIANS' signs are also missing, so to face the egress drivers to alert them about the potential conflict with pedestrians on the footpath, adjacent to the car park's exit.

Remedial measure: Replace the damaged 'GIVE WAY' sign; paint a 'GIVE WAY' line; and instal 'GIVE WAY TO PEDESTRIANS' at the exit driveway, under the 'GIVE WAY' signs.

Photo 8.1: Vehicular exit from the Binalong Park
(Photo: Traffic Engineering Centre Pty Ltd)

- **Lack of '10km speed limit' (R4**-1) sign at the access driveway, facing the ingress drivers

A '10km speed limit' (R4-1) sign may be used at the access driveway to indicate the general speed limit desired in the car parks (refer to Photo 8.2).

Remedial measure: Install '10km speed limit' (R4-1) sign at the car parks' access driveway.

Photo 8.2: Vehicular access driveway to the Binalong Park
(Photo: Traffic Engineering Centre Pty Ltd)

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 Binalong Park, in Old Toongabbie, NSW.

The study showed that at least 222 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 additional 222 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 on sample surveys of the parking arrangement and parking demand within the Binalong Park-centred study area, in Old Toongabbie, NSW.

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

- on Thursday, 11 March 2021, between 7.00am and 6.00pm, and
- on Saturday, 13 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 222 and 292) located within the study area, adjacent to the Binalong Park.

At the moment, there is neither an opportunity nor an actual need to increase the number of off-street parking spaces. However, the line markings in the southern car park are faded, not clearly visible, and even quite confusing, as, seemingly, the car park's lime markings are painted over a sealed area previously used as a netball court. In addition, there is so-called crocodile cracking throughout the southern car park. Therefore, after the fatigue cracked pavement is investigated [to determine the root cause of failure] and subsequently resealed, the car-park's line marking should be repainted.

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 the total future parking requirement. Provided that the future use does not increase in demand for parking more than an additional 222 vehicles, no impact to parking demand is likely.

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

However, there are several other traffic safety issues, as follows:

- Faded 'GIVE WAY' sign, the lack of 'GIVE WAY' line, and the lack of 'GIVE WAY TO PEDESTRIANS' sign at the exit from the car parks (Remedial measure: Replace the damaged 'GIVE WAY' sign; paint a 'GIVE WAY' line; and install 'GIVE WAY TO PEDESTRIANS' at the exit driveway, under the 'GIVE WAY' signs).
- Lack of '10km speed limit' (R4-1) sign at the access driveway, facing the ingress drivers (Remedial measure: Install '10km speed limit' (R4-1) sign at the car parks' access driveway).