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Mays Hill Precinct

Site Analysis and Aquatic Site Suitability Report

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Executive Summary

Parramatta is experiencing significant change as it transforms into Sydney's Central City and as a key focus for economic and cultural outcomes for Western Sydney – Australia's third largest economy and one of its fastest growing regions. Critical to the success of the Greater Parramatta and Olympic Peninsula (GPOP) investment corridor, significant infrastructure is being put in place to support major growth in employment, the economy, and housing, social and cultural needs. The expected outcome is to make Sydney easier to live in, more productive and with greater capacity for the continued population demands.

The City of Parramatta local government area in total is expected to double in population from 220,000 to almost 400,000 residents by 2036 with the addition of a substantial transient population of workers and students coming into the City each day. The Council is focused on providing services and facilities that support the livability of a great and vibrant city where local community growth will need to consider the broad diversity in cultural composition and their associated interests and needs.

To accommodate this growth in residents, workers and students, the success of the GPOP area will rely upon increased density in commercial and residential development, high levels of transport connectivity and the rollout of planned infrastructure. By 2036, a regional level population (approximately 200,000 residents) is expected to live within a 'local', highly walkable and accessible 3km radius of Parramatta Train Station. A further 90,000 to 100,000 workers and 35,000 students are also forecast to be located within that local catchment area. This will create pent-up demand for the provision of recreational spaces and activities and will require both a planning and behavioural change in the way space is used and people navigate the city. As capacity and development increases, private recreation space will become scarcer but also more necessary. High density living and working increases and places greater importance and dependency on public recreation offerings.

While the proposed redevelopment to create a new Western Sydney Stadium means the loss of a treasured community asset in the form of the Parramatta War Memorial Swimming Centre (PWMSC), it provides a timely opportunity to replace an aged facility with a new, contemporary leisure facility and range of services that reflect the evolving population of Parramatta. Such facilities are best placed to respond effectively to greater community demand and expectation for higher quality and greater diversity of service offerings,

Together with the NSW Government and Parramatta Park Trust, the City of Parramatta has identified the Mays Hill Precinct as the best possible location of a new, contemporary community leisure offering with capacity to service the rapidly evolving and expanding Parramatta community for 50 years and beyond.

To confirm the future use of the Mays Hill Precinct and how a new aquatics facility might be placed on the site, the NSW Government has funded a master plan for the precinct. This will occur in parallel to separate planning and investigations by Council on what capacity, function and level of service the community needs in a new facility, and consideration of financial implications of such a facility, including the capital and ongoing costs and how those costs might be funded by ratepayers and other sources.

dwp|suters, with a team of specialist sub-consultants, has been commissioned by the City of Parramatta to undertake Stage 1 of the master plan and prepare a report to determine whether or not the Mays Hill Precinct is a suitable location for an aquatic facility and, if it is, to identify possible sites within the Precinct that might be suitable to locate such a facility.

This report includes preliminary high level analysis of the Precinct, considers preferred locations within the Precinct for siting of an aquatic facility, and establishes draft site design principles that will guide future concept development.

The report will form Stage 1 of the precinct master plan lead by the Parramatta Park Trust, which will complete detailed analysis and community consultation to confirm the strategy for the entire precinct and final location for the new aquatics facility. In conjunction with the master plan, Council will proceed with concept development, community consultation and detailed feasibility investigations for the development of the aquatics facility that is aligned to community expectations and priorities.

Preferred locations are assessed against facility operational requirements, topography, heritage implications, impacts on landscape character, proximity to transport and infrastructure, and planning requirements. From this assessment, three options for development locations are identified.

As Council and the community have not yet confirmed what type of facility and features are to be included in a new facility, or what funding will be allocated to the project, the facility siting investigation includes analysis of footprints of three benchmark facility typologies to graphically represent an indicative scale of each facility typology on sites within the Precinct. Facility typologies have been determined by the broader project team to represent anticipated scale of facility reflective of preliminary benchmarking undertaken to date by the City of Parramatta and the consultant's industry experience. It is noted that significant consultation and demand analysis will occur during subsequent phases of project development, and that typologies adopted for use in this study are for determination of site suitability only.

The first typology is a base case scenario included to allow comparison of a like-for-like replacement of the existing PWMSC. The other typologies reflect a generic modern aquatic offering often considered in Australian urban settings, including indoor recreation facilities identified as being in short supply in Parramatta.

Facility typologies are as follows:

- Typology A: like for like replacement of existing outdoor facility
- Typology B: new outdoor 50m pool with contemporary indoor aquatic offering and gymnasium and group fitness rooms
- Typology C: as noted for Typology B, plus four indoor multi-purpose courts

Following review of impact of facility typologies on preferred siting locations, the study has determined that there are two sites within the Mays Hill Precinct that are suitable for locating a community aquatics and leisure facility:

- adjacent to Pitt Street in the south-east of the Precinct, and
- in the eastern corner of the former golf course, adjacent to the intersection of Park Parade and Argyle / Pitt Street

Fig 1.1 View from Governor's Avenue (ridgeline) across Parramatta High School playing fields to the Parramatta CBD beyond.

Fig 1.2 View from north of junction of Governor's and Jubilee Avenues across the former Parramatta golf course to the Parramatta CBD beyond.

1. Frame of Reference

The City of Parramatta Council is investigating options to develop a new aquatic facility, subsequent to the scheduled closure of the Parramatta War Memorial Swimming Centre (PWMSC) in March 2017. Council has acknowledged that it is an opportunity to redefine the provision of aquatics services to the community for the next 50 plus years and befit the rapidly changing transformation of Parramatta as Sydney's Central City.

The PWMSC was first opened in 1959 and has served the community for almost 60 years as a much loved and valued community asset. It has provided district and local services, including for recreational swimming, swimming competition, school carnivals and sport, learn to swim programs, water play and other related services. In 2009, a $9.8 million upgrade further enhanced what was considered to be one of largest and best quality outdoor facilities in Sydney. It has been located on land under the management of Parramatta Park Trust, adjacent to Parramatta Stadium and leased to Council.

In early 2016, the NSW Government announced the development of the new Western Sydney Stadium, replacing the Parramatta Stadium and requiring the relocation of the PWMSC.

With the closure of PWMSC, scheduled for March 2017, there will be a recognised scarcity of aquatic facilities within the Parramatta area. As a consequence of the pending closure, Council has explored opportunities to minimise the negative impacts of this closure through interim options with an eye to providing a long term solution that responds to the diverse recreation and leisure needs of Parramatta and the surrounding area.

Research supports that

- aquatic services are essential for the city
- design and planning for recreational facilities and services for the community should consider current and long term needs including expected service capacity for a population in growth mode.

Demand for recreation opportunities will increase significantly during this period due to population growth: by 2036, the residential population within 3km of the Parramatta CBD is forecast to double from 96,500 to around 200,000, while the workforce is expected to grow from 70,000 to 105,000, and secondary / tertiary student presence will grow to 35,000 from the current population of 20,000.

Leisure industry insights suggest that utilisation of aquatic facilities are typically (up to 80%) driven by people within a 3 to 5km radius of a facility, subject to favourable access and transport options. This correlates strongly with other insights which note that to meet people's busy lifestyles and influence greater daily and weekly participation in active recreation and healthy active lifestyles, facilities and services must be conveniently located within a 10 to 25 minute journey time of place of residence, work or education, or within the context of related commutes.

High density and populated cities increase the reliance upon pedestrian movements and public transport and put downward pressure on the use of private vehicles. With Parramatta growing as a city, the radial catchment area for an aquatic facility will likely decrease from 30 minutes by car to a maximum 25 minute walk and/or use of local public transport to the facility because there will be a sufficient resident and working population in the immediate vicinity.

Concurrent to this study, Council is undertaking other work to consider how best to provide the breadth and quality of services demanded and expected by its unique and diverse communities and which befits Parramatta's Central City status, as outlined in the Greater Sydney Commission's plans for Growing Sydney. Critically it must consider the range of opportunities available to determine the most effective means of providing those services and the best use of resources available with consideration of initial capital outlay for construction and financially sustainable operations.

The NSW Government announced on 22 June 2016 that the eastern end of the former Parramatta Golf Course (managed by the Parramatta Park Trust) had been identified to locate a new aquatics facility and that a feasibility study would be conducted to confirm the suitability of the site for an aquatics facility, and that a master plan would be developed to explore opportunities for the precinct to be upgraded and used for public use.

Parramatta Park is Crown Land situated adjacent to the Parramatta CBD and is under the management of the Parramatta Park Trust. The core part of Parramatta Park is home to the World Heritage listed Old Government House and Domain and has significant European and Aboriginal heritage significance. Today Parramatta Park welcomes about two million visitors annually providing recreational, cultural, major event and other opportunities.

Its southern precinct, known as the Mays Hill Precinct, is separated from the main core of Parramatta Park by the Western Rail Line and Park Parade. The precinct has been home to the former Parramatta Golf Course which closed in 2015. Mays Hill Precinct also includes sporting fields for Parramatta High School, general community open space and natural features.

The City of Parramatta Council and Parramatta Park Trust entered in to a Memorandum of Understanding on 21 October 2016 to work together to prepare the site suitability study and master plan for the entire Mays Hill Precinct.

The Study's objectives are to undertake a high level and predominately desktop analysis to:

- Provide base site analysis data for the Master Plan and Aquatic Site Suitability Study
- Investigate site options for a new aquatics centre within the Precinct
- Identify key opportunities, constraints, risks and challenges that inform potential feasibility of a site to accommodate a new aquatics centre
- Recommend a preferred site(s) and key implications
- Establish site design principles to inform future aquatic design and operation concept

It is anticipated that this report will:

- inform next steps of the Parramatta Park Trust led master plan for entire Precinct;
- identify and confirm the suitability of a preferred location(s) within the Precinct for a new aquatics centre;
- inform next steps of Council led detailed feasibility investigations and concept development to confirm a project and Council investment.

Facility siting analysis includes analysis of anticipated facility footprints within preferred locations to graphically represent likely scale of each facility typology within the Precinct. Facility typologies have been determined by the broader project team to represent anticipated scale of facility reflective of preliminary benchmarking undertaken to date by the City of Parramatta. It is noted that significant consultation and demand analysis will occur during subsequent phases of project development, and that typologies adopted for use in this study are for determination of site suitability only.

This analysis is not intended to indicate preferred planning models or functional arrangements. More detailed facility planning models to explore functional and operational requirements will be developed in the next phase of project development should a suitable site be identified within the Mays Hill Precinct.

Methodology

A methodology developed to achieve core project objectives includes two phases broken into the following key components:-

Phase 1 Precinct Analysis:

- Site investigations and Landscape / Urban Design analysis
- Desk top community usage analysis
- Town Planning analysis
- Review of Heritage requirements
- Desk top site sub-surface investigations
- Summary of opportunities and constraints based on precinct analysis

Phase 2 Site Suitability and Feasibility:

- Develop site assessment methodology
- Define generic facility typologies developed for assessment of site suitability
- Prepare high level concepts for nominated sites for each facility type
- Concept analysis

The project team has undertaken a review of background material provided by City of Parramatta. This report provides background analysis and develops site assessment criteria to inform the decision process of site selection within the Precinct.

We confirm that this analysis is not intended to indicate preferred planning models or functional arrangements. Functional and operational requirements will be developed in the next phase of project development when detailed consultation and further feasibility, needs and financial analysis is undertaken.

The opportunity to explore different facility configurations is taken when testing impact of positioning each of the typologies on potential sites within the Precinct. Detailed analysis of facility layout options will be explored and tested for operational and functional performance and to confirm an appropriate response to the urban and heritage context during the next phase of the project should Mays Hill Precinct be deemed to contain a suitable site for development of an aquatic facility.

Background Material

To inform the development of site selection criteria and facility typologies, the following contextual information was considered.

Parramatta Context

Parramatta's context is as follows:

- **The New Central:** Parramatta is the geographic and demographic heart of Greater Sydney. From Bondi to Penrith, Hornsby to Camden, its located at the crossroads of east and west.
- **Infrastructure Capital:** In excess of $10 billion of major infrastructure is coming to the Greater Parramatta area. This includes major roads, rail networks, schools, hospitals, stadiums and water infrastructure
- **Global Business Gateway:** Around 30% of Australia's top 500 businesses have an office in Parramatta in industries including healthcare, manufacturing, finance, scientific, retail and public administration. Employment in white collar jobs with higher disposable income is growing
- **Growing Population and Density:** Suburbs from Westmead to the Olympic Peninsula and Carlingford in the north are experiencing dramatic transformation and growth, denoted by predominately high and medium density residential development, making use of key transport, employment and cultural infrastructure
- **International Gateway and Diversity:** Half of all residents speak English as well as another language at home and over 44% of residents were born overseas
- **Accessibility:** Easily accessible by rail, bus, ferry and car. Parramatta will benefit from further planned or proposed infrastructure projects including Light Rail, fast train connection between CBD's, Western Sydney Airport at Badgery's Creek and the Westconnex Road project

Population Projections

It is projected that the City population will increase from an estimated 236,272 in 2016 to 397,339 in 2036. This equates to an overall projected increase of 161,067 or 68% in the period. It is specifically noted that the population of the Parramatta CBD area is currently projected to increase from 12,455 in 2016 to 34,632 in 2036, which is a 178% increase.

Given the location of the Mays Hill Precinct on the Cumberland Council border, it is identified that some residents in the Cumberland Council area will also form part of the catchment population. It is projected that the population of Cumberland Council will increase from 218,801 in 2016 to 296,848 in 2036. This equates to an overall increase of 78,047 or 36% in the period.

A 3.5km catchment from the centre of the Parramatta CBD is expect to see population increasing from approximately 123,000 people to in excess of 220,000 people between 2016 and 2036 or a 178% in the period. These changes will mean a regional scale population within a local catchment, noted for its very high density and implications for future lifestyles and needs.

Overview of the Existing Facility

The Parramatta War Memorial Swimming Centre is a large, outdoor only facility that provides district and local aquatics services. It includes four outdoor pools: diving/water polo pool, ten lane 50 metre pool, toddler's pool and a program/learn to swim pool together with two large slides. In addition, the facility also has large change rooms, large meeting room for training and meetings, dive tower, grand stand seating and café. The centre sits on a footprint of 21,500 square metres (28,000 square metres inclusive of 140 space car park) – which is a very large site for comparative facilities.

In 2009/2010, a $9.8 million refurbishment of the facility was completed, including improvement to the pool and visitor facilities. From this period annual attendance at the centre has grown steadily from 120,000 visitations per annum to 160,000 visitations per annum.

In 2015/2016 the total attendance dropped to 139,134 from 159,321 the previous year due to a one-off 4.5 month closure of the centre due to a significant plant repair required. Applying seasonally adjusted figures for the period affected by the closure, 2015/2016 would likely have reached between 170,000 and 180,000 visitations for the year.

The Key User Groups comprise of: workers (mainly CBD located), residents from within a 3 to 5 km radius, school students, families, people of all physical capabilities, older active participants and people from diverse cultural and linguistic backgrounds. A summary of the PWMSC activities is as follows:

- Casual lap swimmers, leisure/recreational users and members;
- Dolphin Swim School (Learnt to Swim programs – school and after school);
- School groups (more than 35 carnivals per year)
- Swimming and water polo clubs

Influences on Facility Typology and Services

Aquatics facilities and the services and features they provide, have changed from the traditional outdoor offering commonly built in Australia from the 1950's onwards. Whilst these pools are generally well loved by local communities, many have become expensive and arguably financially unsustainable to operate through aging infrastructure, inefficient operation and not meeting broader community expectations for service quality and recreation opportunities. In order to improve financial performance, community outcomes and usage, facilities have had to evolve. Further, as communities change in demographic make-up and needs, the provision of facilities and services to meet those needs could also be different.

Major trends in aquatic and leisure facility design include: the provision of dedicated learn to swim pools, enhanced water play areas, the provision of warm water pools for passive exercise and rehabilitation, a plan/concept applying universal design principles, inclusion of family and group change rooms, the inclusion of group meeting and social spaces, increased use of technology and the application of ecologically sustainable development (ESD) principles.

Outdoor pools remain relevant, particularly in Western Sydney where summer temperatures soar well over 25 °C (over 142 days in Parramatta on average) and the beach almost 40km away by road, providing a significant local destination to cool off and recreate.

Indoor aquatics facilities have also grown in popularity as they allow year round access in more comfortable conditions. Visitation in outdoor only aquatics facilities does drop off significantly in the colder months despite heating of pools at some centres.

Multipurpose aquatics and leisure facilities are often co-located with gymnasiums and fitness offerings, indoor multipurpose sports hall, sports-health-wellness suites and community spaces (such as small libraries, meeting rooms and child care facilities) where there is an identified need and it is cost effective and practical to do so. These opportunities often optimise the community benefits of such development through improved financial outcomes, more efficient development (e.g. shared infrastructure) and grouping of complementary services.

Modern multi-purpose aquatic and leisure centres servicing suitably sized catchments can draw significant annual visitation, such as Sutherland Aquatic Centre (in excess of 800,000 visits per annum and Hurstville Aquatic and Leisure Centre (in excess of 1 million per annum).

Industry guidelines conclude that a regional aquatics and leisure facility can be planned for every 100,000 to 150,000 residents (Aquatics and Recreation Victoria Guidelines).

Facility type and scale will be influenced by the forecast that within 20 years, a regional scale population will reside within a local walkable catchment of the Parramatta CBD with associated infrastructure and high density environment. Demand for facilities will be bolstered by the significant and growing number of workers and students who visit the CBD and surrounds each day. The way people will live may change and influence things like how people will travel and access facilities, how and when people will use those facilities, and market catchment.

Separate community consultation, needs assessment and detailed feasibility investigations will inform the preferred functions, scale and investment for any new facility. As a result, a number of facility typologies are considered within this report to establish indicative benchmarks in considering the suitability of sites for a new facility.

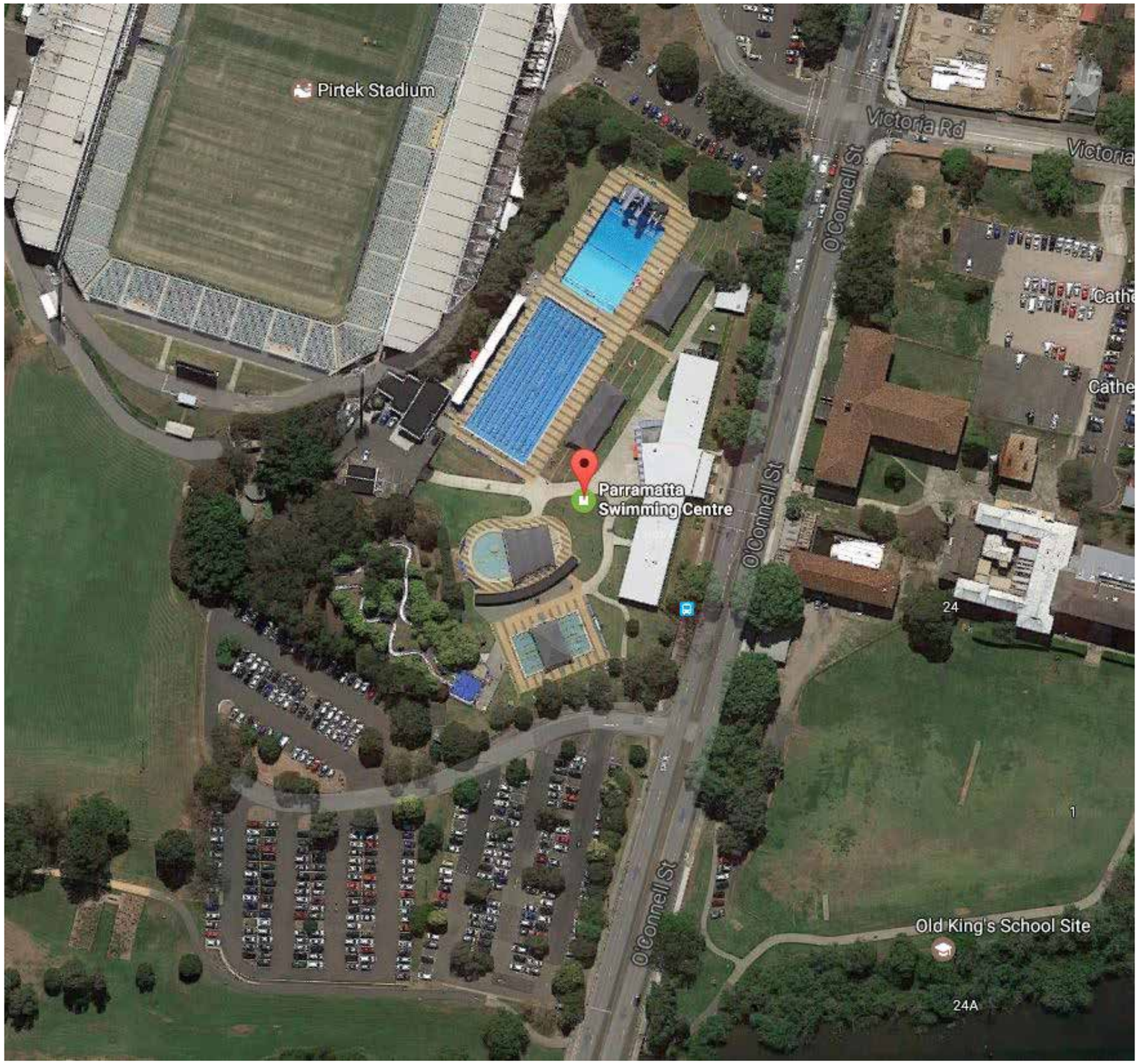


Fig 1.3 Aerial view of existing Parramatta War Memorial Swimming Centre.

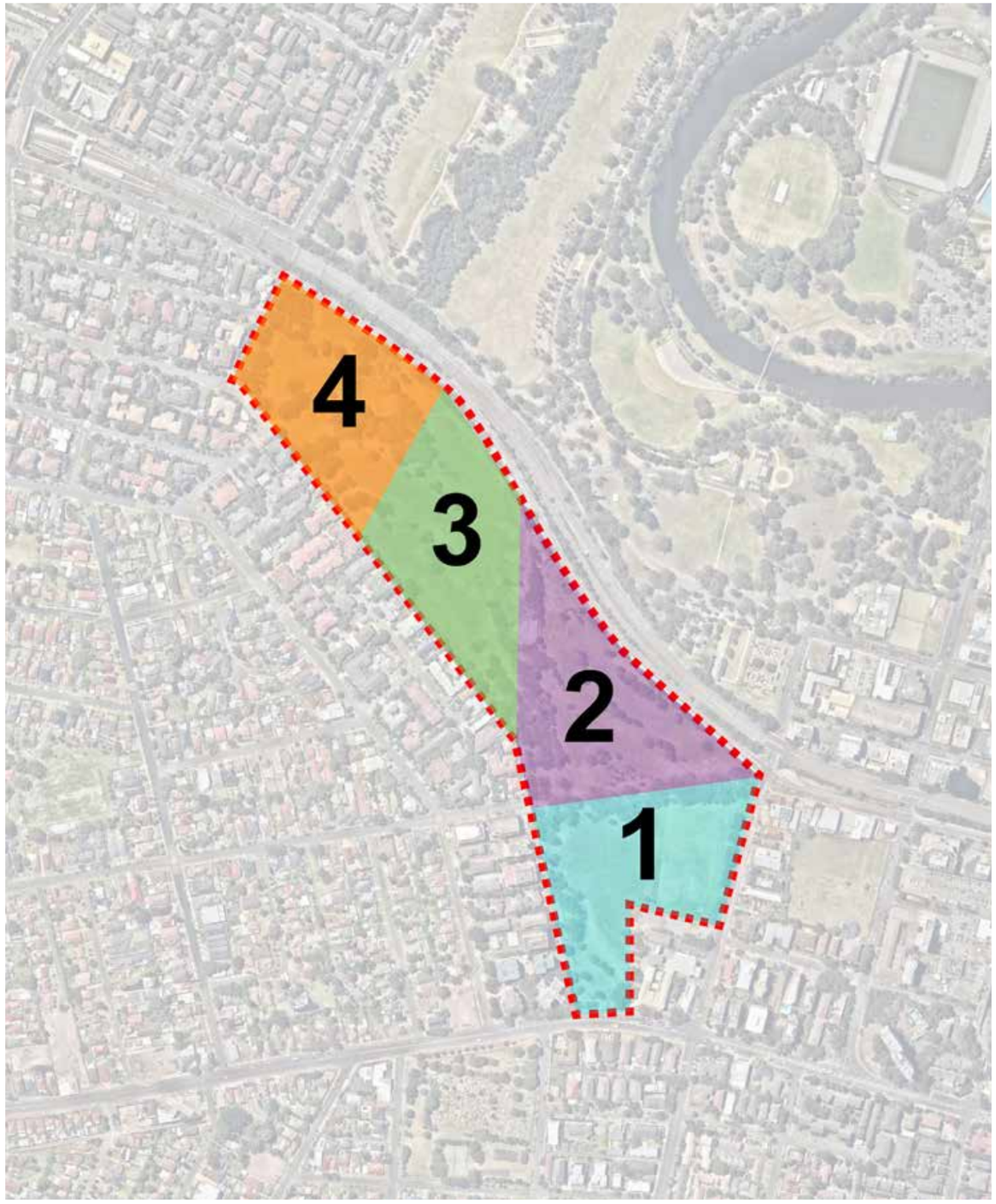


Fig 2.2.1 Connections to regional green spaces around Mays Hill Precinct. Map Source: Parramatta Green Grid Nov 2013 (NSW Government Architect's Office).

2. Precinct Analysis

In order to describe, analyse and assess various parts of Mays Hill Precinct, the Precinct has been divided into four zones:

Zone 1: southern extremity of the Precinct, extending from Jubilee Avenue south to the Great Western Highway, bounded by Governor's Avenue and low to medium density residential developments to the west and incorporating Parramatta High School benched playing field adjacent to Pitt Street to the east.

Zone 2: triangular portion of the site bounded by Jubilee Avenue to the south, Governors Avenue to the west, and Park Parade to the north-east, incorporating the south-eastern end of the former Parramatta Golf Course.

Zone 3: central portion of the site extending from Governor's Avenue to the east to within proximity of Domain Creek in the north-west, and bounded by Park Parade to the north-east and by low to medium density residential developments to the south-west, incorporating the north-western end of the former Parramatta Golf Course.

Zone 4: extending from the north-western end of Zone 3 to the northern end of Mays Hill Precinct, incorporating Domain Creek, bounded by Park Parade to the north-east and by low to medium density residential developments to the west and north.

While natural and man-made features have been used to divide the Precinct for the express purpose of describing, analysing and assessing the site, the opportunity to investigate potential aquatic facility locations crossing over zone boundaries was not ignored, nor was the opportunity to consider multiple siting locations within a zone.

2.1 Site Description

Mays Hill Precinct (MHP) is located within the City of Parramatta and is approximately 5-15 minutes walk from the Parramatta CBD area, and sits on the border with Cumberland Council to the south-west. It is the southern precinct to Parramatta Park and is separated from the main park by the train line running between Parramatta and Westmead stations. The site adjoins medium density housing on its southern boundary with private access to the Precinct.

The Precinct is approximately 20ha and is 1km long and 180m wide. Existing uses for the precinct include sport fields for the adjacent Parramatta High School in the southern end, while the northern and majority of MHP was home to the 9 hole Parramatta Golf Course which closed in 2015. This closure provides the opportunity for the precinct to be re-purposed as public open space with recreational facilities.

2.2 Existing Stakeholders and Users of the Precinct

Parramatta Park, and particularly Mays Hill Precinct, is used regularly by the broader Parramatta community. Fringed by residential properties with direct connection to parkland, the Precinct is a popular route for locals walking to and from the CBD, and for recreational walkers.

Playing fields for Parramatta High School extend into the precinct and are available beyond school hours and on weekends for recreational use. The Precinct's central location, adjacent to Parramatta's CBD, means its potential to become a recreational hub for Greater Parramatta, particularly the CBD and surrounds, is significant.

Parramatta Park Trust Consultation

The following information provides a summary of consultation undertaken with the Parramatta Park Trust.

- Parramatta Park Trust (PPT) is planning to develop a Master Plan for the Mays Hill Precinct of Parramatta Park, with the aim of completion in September 2017. The aim of the Master Plan is to activate the precinct for the community. Council shares this objective of better quality open space.
- The Mays Hill Precinct is part of Parramatta Park and is located on the southern side of the railway line. A site image of the Mays Hill Precinct is attached in Appendix C.
- General comments raised by the PPT are as follows:
  - There is very little site detail on the precinct due to the long tenure associated with the golf course and the location on the south side of the train line.
  - This component of the Parramatta Park site is state heritage listed.
  - The Mays Hill Precinct is the largest area of green open space in the City hence any development should be sensitive to the broader role, including regional context.
- Potential Planning Principles as identified by the PPT include:
  - Provide an integrated facility within a park precinct.
  - The connectivity in and out of the site is very important.
  - Heritage considerations are important.
  - The provision of trees and quality of landscape is important;
  - The need to minimise loss of open space;
  - The need to minimise the impact of the development on the remainder of the open space in the precinct including flexibility for other surrounding uses, and minimising visual impact of parking and 'back of house' operational infrastructure on the remainder of the site, with a strong preference for a building with no 'back door'.
- There is a very large catchment population close to the precinct with a growing residential area in the CBD and increased office space.

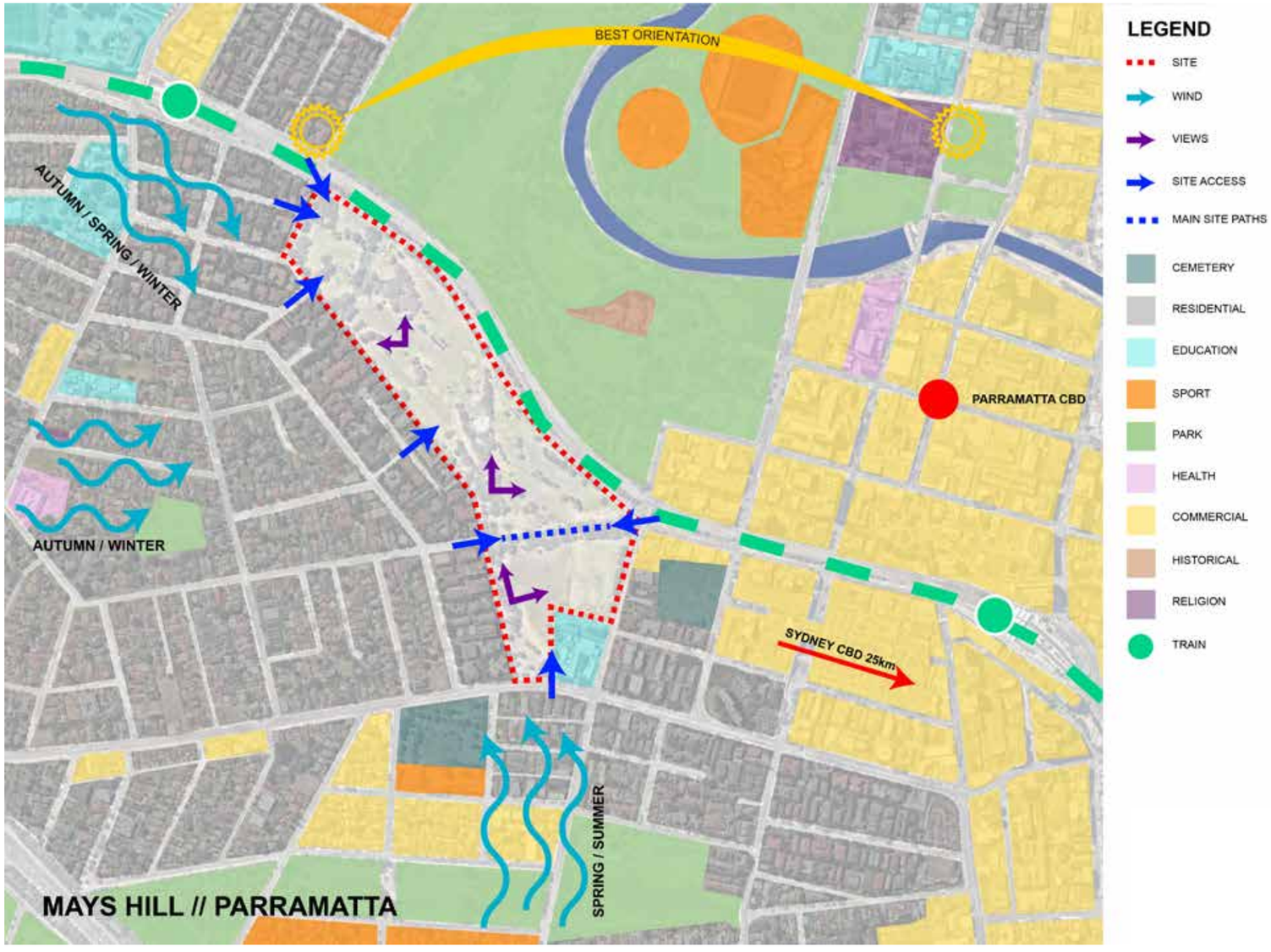
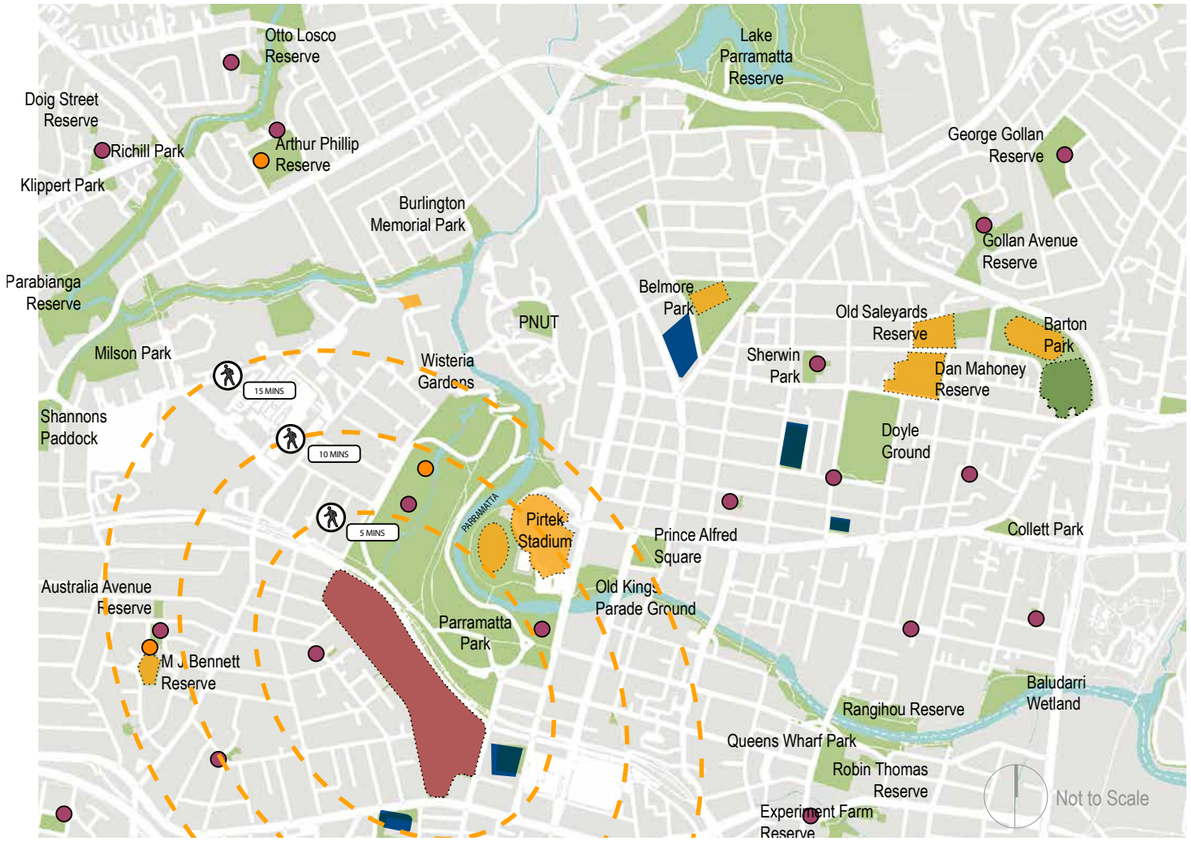


Fig 2.2.2 Site analysis diagram including broad land uses.



KEY

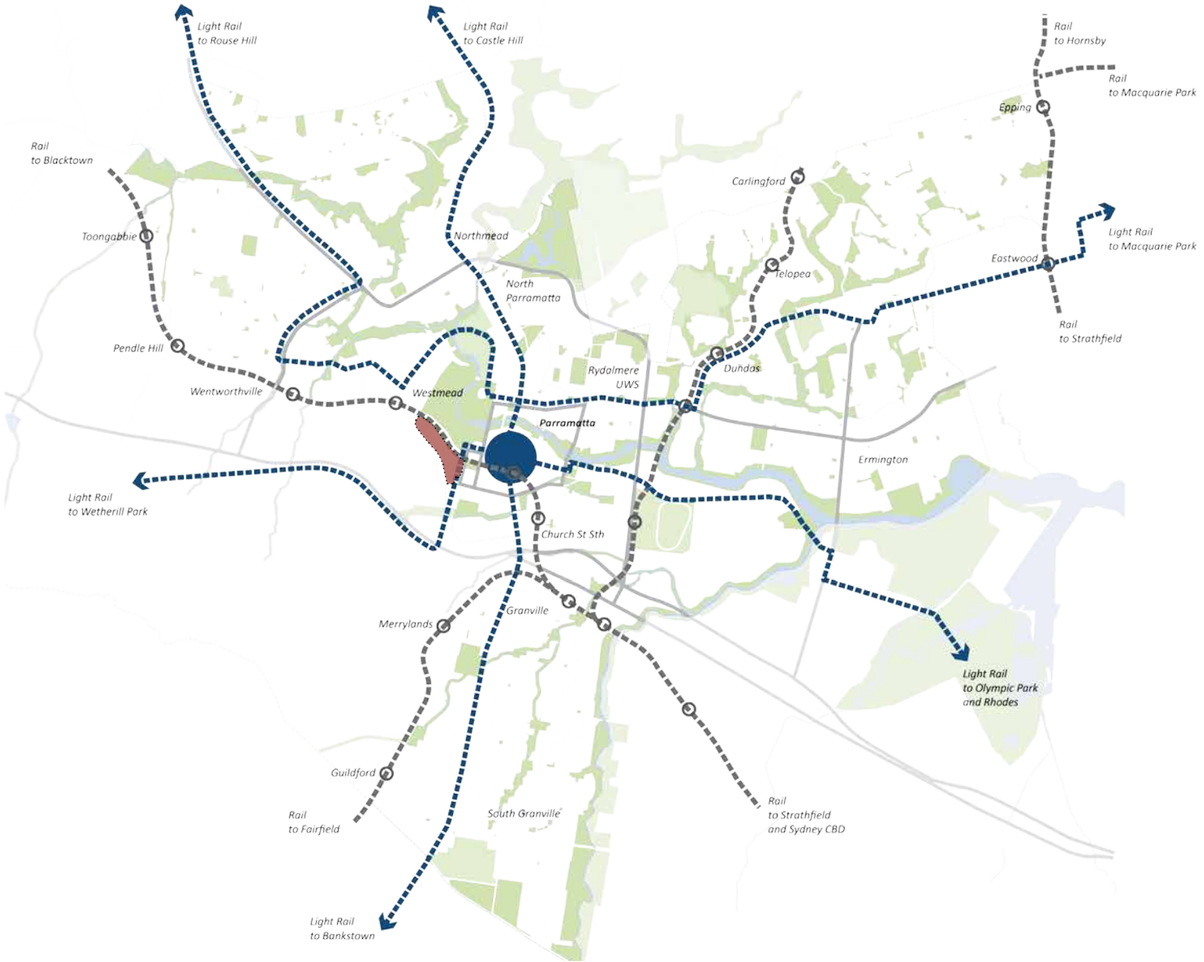
- Mays Hill Precinct Area
- Sports Ground
- Private Sport Facilities
- Informal Parkland
- Cemetery
- Urban Areas
- Playground
- Fitness Equipment
- 15 MINS — Typical walking times for access to the precinct

Fig 2.2.3 Existing recreation context diagram noting proximity of recreation spaces around the Mays Hill Precinct.

Mays Hill Precinct Site Visit

The project team undertook a site inspection early in the project program. Findings are summarised below.

- The Mays Hill Precinct is located to the west of the Parramatta CBD and the Cumberland Council local government area borders the south side of the precinct.
- Rail divides north from south with an underpass at Pitt Street and another further to the west, however this is exclusively for pedestrian/emergency services. As a result accessibility from the north may need to be maximised.
- Pitt Street (on the eastern side of the precinct) runs north south and is one way for cars but has a bus lane in opposite direction.
- Park Parade is on the northern side of the site, between the railway line and precinct, and is two-way single lane road with an additional dedicated bus lane.
- A range of residential accommodation, with apartments and houses, are located on the south side of site.
- There is a range of areas with trees and areas without trees throughout the precinct.
- A number of historical elements exist in the precinct including Mays Hill Gatehouses located in the southeast corner and northern end of the site.
- The site has a lot of undulation with higher points on the south east side hence residential view lines from these areas needs to be considered.
- A flat area field is located next to the school and is used by the school for recreational purposes. If this area of the site was to be considered, an alternate option for the school may be required.
- Due to proximity to the CBD the eastern part of the site is exposed to traffic noise.
- A pathway/access runs from the Pitt Street / Park Parade to the residential areas on the south.



LEGEND

- Mays Hill Precinct
- Open Space
- Existing Rail Network
- Proposed Light Rail Corridors
- Existing Major Roads
- Parramatta CBD

KEY POINTS

- Mays Hill Precinct will draw a wide range of users due to a large catchment area based on close proximity to Parramatta CBD and Westmead Train Station.
- Future light rail corridors will draw regional users from all directions to the Precinct.

Fig 2.3.1 Transport network context for Mays Hill Precinct. Map Source: Parramatta Green Grid Nov 2013 (NSW Government Architect's Office).

2.3 Landscape Analysis

Scale and Uses

The Precinct is approximately 20ha and is 1km long and 180m wide. Existing uses for the precinct include sport fields for the adjacent Parramatta High School in the southern end, while the northern and majority of MHP was home to the 9 hole Parramatta Golf Course which closed in 2015. This closure provides the opportunity for the precinct to become open to the public as open space with recreational facilities.

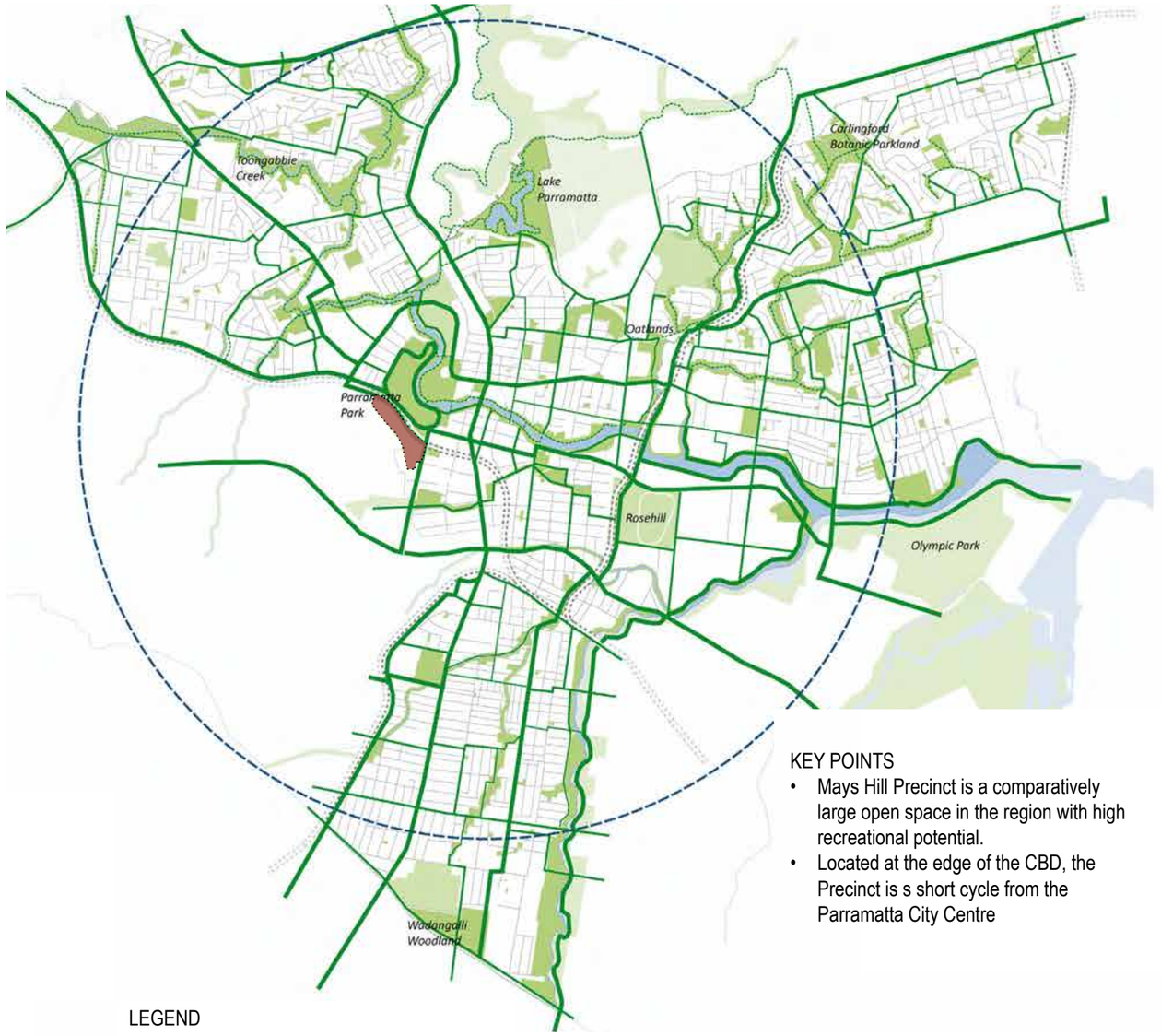
The eastern part of the Precinct has a close connection with the Parramatta CBD and is therefore more suited development of a medium to large scale community facility, the bulk of which is likely to be comparable to that of anticipated development along Pitt and Argyle Streets.

The presence of the raised playing field adjacent to Parramatta High School, and to a lesser degree the sculpting of the Precinct through Zones 2 and 3, establishes precedence for shaping of the natural landscape within the precinct to provide public recreation opportunities.

The natural environment through Zones 1, 2 and 3 has been shaped to suit the requirements of current usage (ie. to define fairways, greens, etc). A more natural environment is found in the northern extent of the site in Zone 4, particularly around Domain Creek.

From a Precinct-wide recreation planning perspective, it is considered appropriate that Zones 3 and 4 be retained for recreational open space and Zones 1 and 2 be allocated for larger scale facility development that enables opportunity for interface with the Parramatta CBD.

This strategy will allow a clear buffer to the residential properties to the west, and allow for filtered access to the Precinct from those residential areas via a future pedestrian / cycle circulation network that may connect uses within the Precinct to the Parramatta CBD to the east and to Westmead Station and medical precinct to the north-west.



Key Points..

Fig 2.3.3 Connections to regional green spaces around Mays Hill Precinct. Map Source: Parramatta Green Grid Nov 2013 (NSW Government Architect's Office).

Opportunities

Context

— Site offers ideal opportunity to provide for diverse recreation uses close to the CBD
— Precinct is well connected for walking, cycling and public transport
— Close physical connection to Parramatta Park
— Good connectivity to existing local community facilities

Access & Circulation

— Close pedestrian access from the CBD encouraging participation and activation
— CPTED planning principles to be considered for location of entry and public access points
— Rail corridor limits connection to the rest of Parramatta Park
— Park generally accessible for management vehicle
— Frontages with garden/ private access to the Precinct may require review/ regulation

Recreational Uses

— Sloped site within views ideal for passive uses
— Possible continued school uses shared with community on east of precinct
— Need for future building to have active interfaces within the park

Cultural Heritage & Natural Environments

— Existing trees provide some habitat
— Minimal native understorey limits ground level habitat
— Rail corridor separates precinct from the rest of Parramatta Park

Built Form & Infrastructure

— The level space of the former Golf Club house may suit future built form
— Sloped site may permit cascading built form
— Opportunity for north facing building with views

Image & Character

— Sloped site offers local and district views to the northeast
— Mature trees provide framework for established landscape to be adapted
— Site character lends itself to varying experiences and uses
— Park generally accessible for management vehicle

Management & Maintenance

— Vehicle access for maintenance is reasonable
— Sloped site may make for higher maintenance for turf areas
— Need to investigate possible site contamination

Site Selection Principles

Drawing on the foregoing summary of issues and opportunities, site selection should be based on the following five principles:

— Prioritise walking and cycling through circulation and parking
— Optimize public and private safety through clear lines of sight, casual surveillance and active frontages and streets
— Protect critical views between heritage sites and vegetated ridgelines
— Capitalize on topography and significant vegetation to integrate buildings in an established landscape
— Maximize indoor/outdoor relationships of the buildings to the landscape

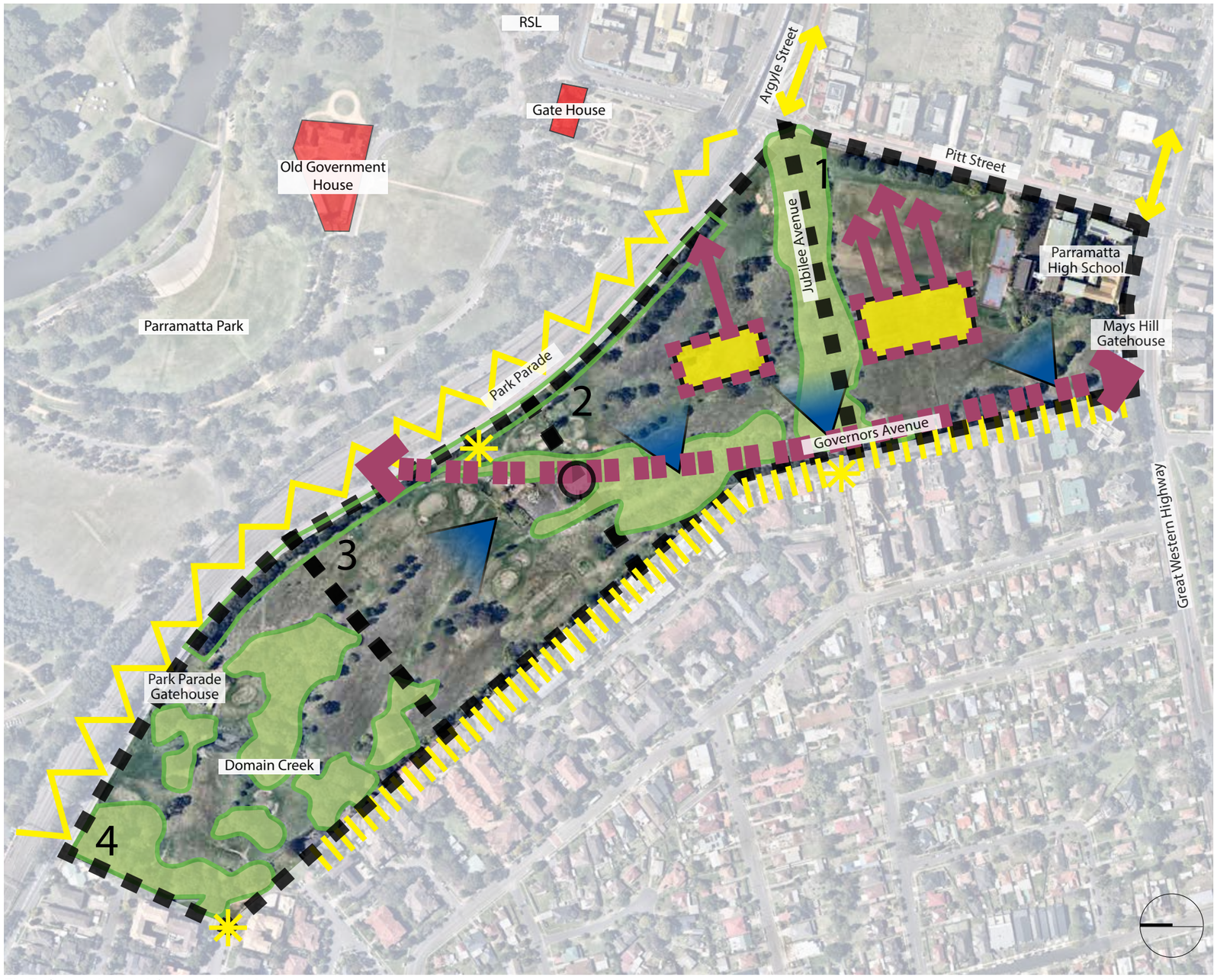


Fig 2.3.4 Connections to regional green spaces around Mays Hill Precinct. Map Source: Parramatta Green Grid Nov 2013 (NSW Government Architect's Office).

CLOUSTON associates

LEGEND

Access & Circulation / Maintenance

- Close pedestrian access to/ from CBD
- Rail corridor limits conncction to the rest of Parramatta Park
- Park generally accessible for management vehicle
- Rear garden/ private access to the Precinct may require review/ regulation
- Sloped site may make for higher maintenace for turf areas

Vegetation

- Existing trees provide some habitat
- Minimal native understory limits ground level habitat

Topography, Built Form & Infrastructure

- Sloped site may permit cascading built form and ideal for passive usage
- Opportunity for north facing building with views
- Level space may suit future built form
- Minimize disturbance to heritage ridgeline

Views & Vistas

- Sloped site offers local and district views to the northeast

Image & Landscape Character

- Precinct can be experienced in four discrete characters to future users:
  - 1 Elevated views with pre-established "community" ambience from high school usage
  - 2 Elevated views and close access to CBD
  - 3 Nested built form anchored within the centre of MHP
  - 4 Flat, quiet and nest area with extensive tree coverage

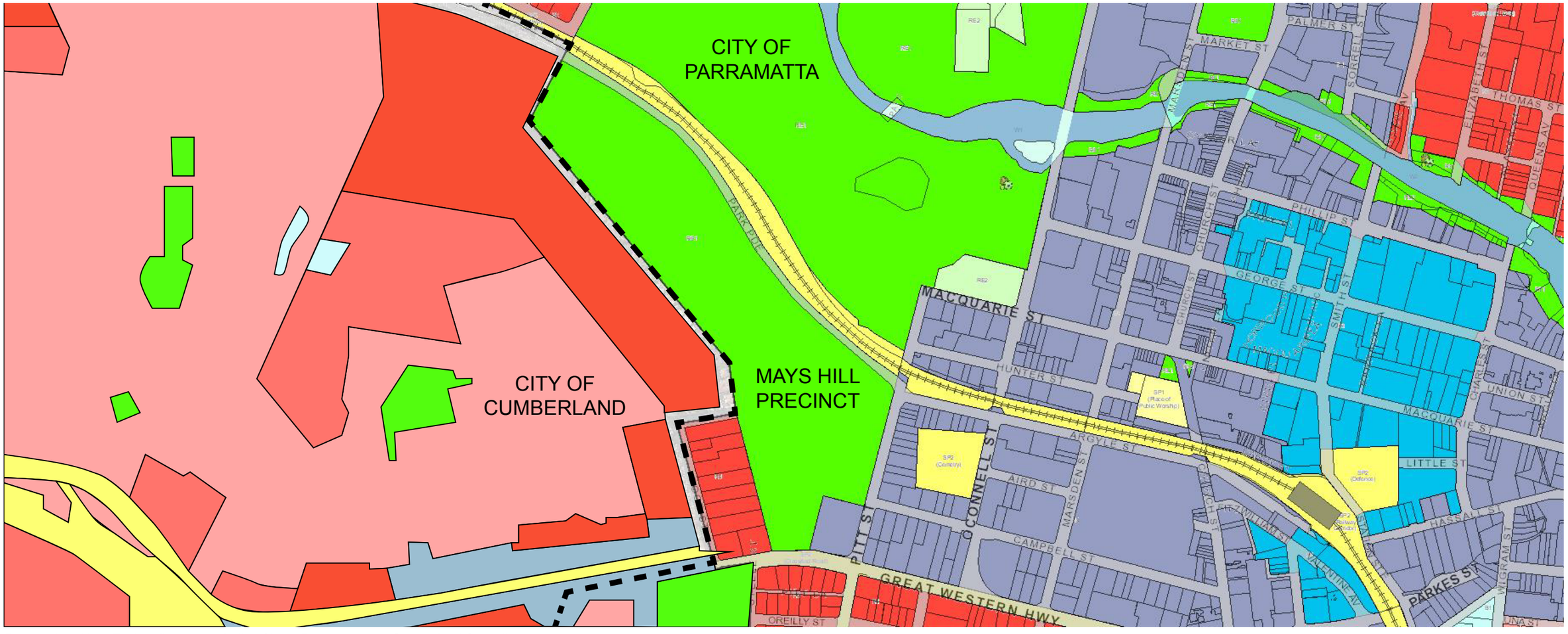


Fig 2.4.1 Land Use Zoning diagram, including City of Parramatta and Cumberland Council areas.

Land Zoning

- B1 Neighbourhood Centre
- B2 Local Centre
- B3 Commercial Core
- B4 Mixed Use
- B5 Business Development
- B6 Enterprise Corridor
- E2 Environmental Conservation
- E3 Environmental Management
- IN1 General Industrial
- IN2 Light Industrial
- IN3 Heavy Industrial
- R1 General Residential
- R2 Low Density Residential
- R3 Medium Density Residential
- R4 High Density Residential
- RE1 Public Recreation
- RE2 Private Recreation
- SP1 Special Activities
- SP2 Infrastructure
- W1 Natural Waterways
- W2 Recreational Waterways

2.4 Town Planning Analysis

Planning

Mays Hill Precinct is located on the south-western boundary of the City of Parramatta, bordering the City of Cumberland to the west and south-west. Mays Hill Precinct lies at the southern end of the broader Parramatta Park, and is separated from the remainder of the park by Park Parade and the metropolitan rail corridor running along the north-eastern edge of the Precinct.

Mays Hill Precinct is located within a Public Recreation (RE1) zone. It is bounded by a Mixed Use (B4) zone across Pitt Street to the south-east, and High Density Residential (R4) zones to the south and west (including sites in the neighbouring LGA). The broader Parramatta Park area to the north is also part of a Public Recreation (RE1) zone.

Parramatta Local Environmental Plan (LEP) 2011 and Parramatta Development Control Plan (DCP) 2011 apply to the site – that part of Parramatta Park to the south of the rail line known as 7A Park Parade and legally described as Lot 7055, DP 1074336. Part of the site borders the Cumberland Council LGA to which the Holroyd LEP 2013 applies. The following is a summary of the provisions of Parramatta LEP 2011, Parramatta DCP 2011 and Holroyd LEP 2013 that are relevant to the site.

Parramatta LEP 2011 and Holroyd LEP 2013

Parramatta Local Environment Plan 2011 (LEP) prescribes the following uses for land zoned as RE1 Public recreation.

Zone RE1 Public Recreation

1 Objectives of Zone

- To enable land to be used for public open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.
- To conserve, enhance and promote the natural assets and cultural heritage significance of Parramatta Park.
- To create a riverfront recreational opportunity that enables a high quality relationship between the built and natural environment.

2 Permitted without Consent

Environmental protection works; Flood mitigation works.

3 Permitted with Consent

Boat launching ramps; Boat sheds; Charter and tourism boating facilities; Community facilities; Environmental facilities; Information and education facilities; Jetties; Kiosks; Markets; Recreation areas, Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Restaurants or cafes; Roads; Take away food and drink premises; Water recreation structures; Water recycling facilities.

4 Prohibited

Any development not specified in item 2 or 3.

The LEP indicates that a community aquatic (and dry recreation) facility is generally permissible with the subject study area. Review of ancillary uses (café, consulting suites, and the like) will require further investigation within the parameters of the LEP and DCP when details of the intended facility provision are developed to preliminary concept level in a future phase of the project.

Recreation facilities (indoor), Recreation facilities (major) and Recreation facilities (outdoor) are defined as follows in Parramatta LEP 2011:

- recreation facility (indoor) means a building or place used predominantly for indoor recreation, whether or not operated for the purposes of gain, including a squash court, indoor swimming pool, gymnasium, table tennis centre, health studio, bowling alley, ice rink or any other building or place of a like character used for indoor recreation, but does not include an entertainment facility, a recreation facility (major) or a registered club.
- recreation facility (major) means a building or place used for large-scale sporting or recreation activities that are attended by large numbers of people whether regularly or periodically, and includes theme parks, sports stadiums, showgrounds, racecourses and motor racing tracks.
- recreation facility (outdoor) means a building or place (other than a recreation area) used predominantly for outdoor recreation, whether or not operated for the purposes of gain, including a golf course, golf driving range, mini-golf centre, tennis court, paint-ball centre, lawn bowling green, outdoor swimming pool, equestrian centre, skate board ramp, go-kart track, rifle range, water-ski centre or any other building or place of a like character used for outdoor recreation (including any ancillary buildings), but does not include an entertainment facility or a recreation facility (major).

Based on the available information, it is considered that the land use characteristics and effects of the proposed aquatic complex are likely to fit the definition of recreation facility (outdoor). The proposed aquatic centre could include elements of uses permitted with consent such as indoor recreation facilities and a cafe or restaurant as well as ancillary activities.

Height of Buildings

The site is subject to a nil height limit in Parramatta LEP 2011. Adjoining land to the west under Parramatta LEP 2011 is subject to a 20m height limit and that under Holroyd LEP 2011 is subject to a lower height limit of 15m. Land adjacent the south eastern boundary of the site on the eastern side of Pitt Street and to the north of Campbell Street is the subject to a height limit of 10m. This land also adjoins St Johns Cemetery. Land adjoining the south eastern corner of the site and to the south of Campbell Street is subject to a height limit of 28m.

Floor Space Ratio

In Parramatta LEP 2011 the site is subject to a nil Floor Space Ratio (FSR). Adjoining land to the west under Parramatta LEP 2011 is subject to an FSR of 1.7:1 and an FSR of 1.2:1 in Holroyd LEP 2011. Land adjacent the south eastern boundary of the site on the eastern side of Pitt Street and to the north of Campbell Street is the subject to an FSR of 1.5:1. Land adjoining the south eastern corner of the site and to the south of Campbell Street is subject to an FSR of 3.5:1.

Heritage

The Statutory Planning Context specific to Parramatta Park is discussed in detail in the Heritage section of this report. The study area is within the boundary regulated by The Parramatta Park Trust Act 2001 (NSW), which currently has legislative control for the administration and management of Parramatta Park.

The site is heritage listed of state significance in Schedule 5 Environmental heritage of Parramatta LEP 2011 as follows:

Parramatta	Parramatta Park and old government house	O'Connell Street	Lot 369, DP 752058; Lots 7054 and 7055, DP 1074335	State	I00596

The site is also included on the State Heritage Register.

Adjoining the western boundary of the site there are five items listed in Schedule 5 Environmental heritage of Holroyd LEP 2013 as follows:

Westmead	"Allengreen", Federation bungalow	1 Amos Street (also known as 14 The Park or 1 Thomas May Place)	Lot 4, DP 15214	Local	I145
Westmead	Federation residence	20 Lichen Place (also known as 20 The Park)	Lot 2, DP 523943	Local	I155
Westmead	Inter-war (Mediterranean influences) apartment block	15–17 The Park (also known as 15–17 Thomas May Place)	Lot 765, DP 884317	Local	I166
Westmead	Attached residence	29 Parkside Lane (also known as 29 The Park)	Lot 1, DP 37436	Local	I164
Westmead	Attached residence	30 Parkside Lane (also known as 30 The Park)	Lot 2, DP 37436	Local	I165

Parramatta DCP 2011

The site is included within the Parramatta City Centre, as shown in Figure 4.3.3.1 of the DCP. The following provisions from the DCP are relevant.

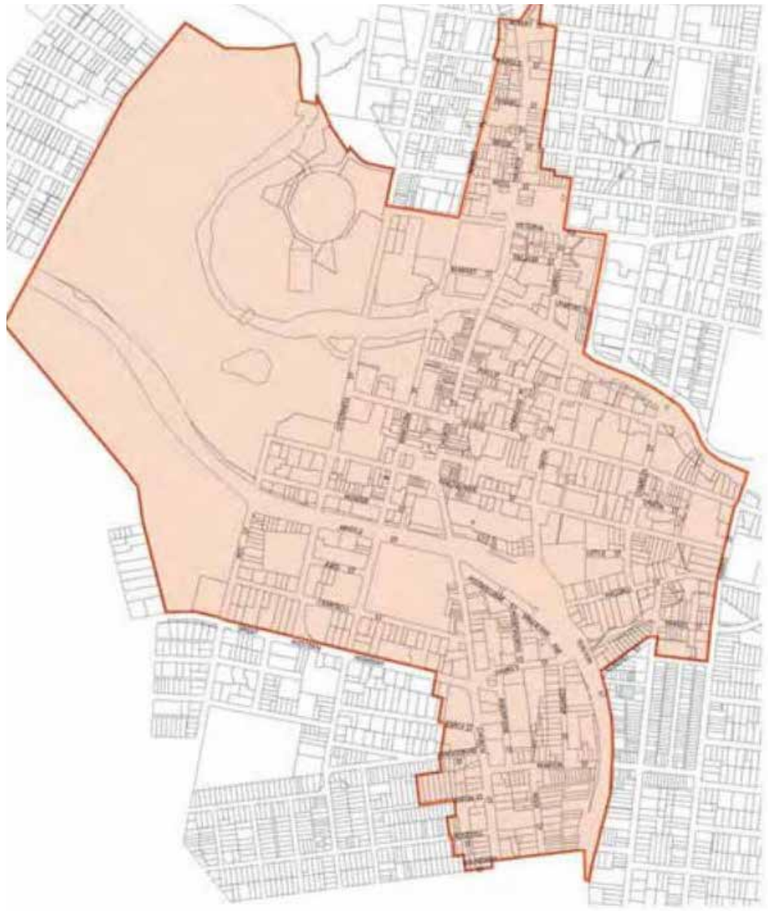


Figure 2.4.2 Extract from Parramatta DCP 2011 – (DCP Fig 4.3.3.1) Parramatta City Centre

Views and View Corridors

Section 4.3.3.4 of the DCP contains a number of provisions to protect views. Listed is:

Identified View 8. The view from Marys (Mays) Hill across Parramatta's City Centre to distant hills. The view has significance as: Key historic viewing point from the highest point of Parramatta Park with best views of the city in the river valley, glimpses to hills behind the city between buildings. This view is shown in Figure 2.4.3 below.

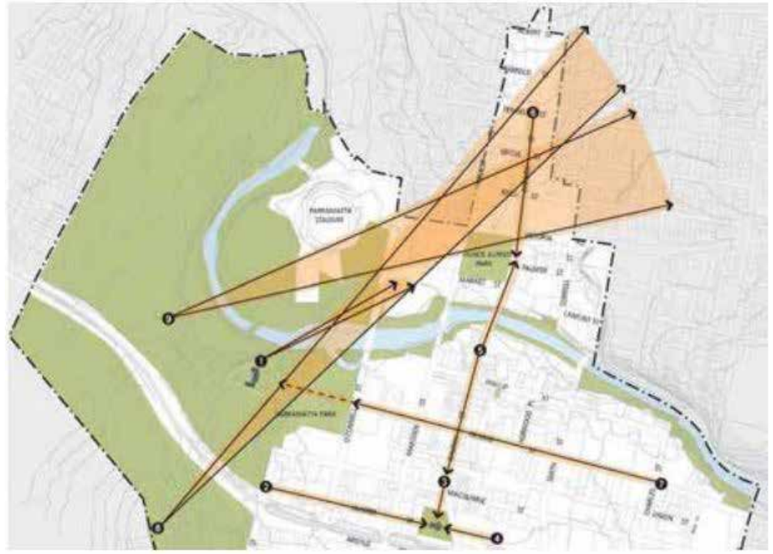


Figure 2.4.3 Extract from Parramatta DCP 2011 – (DCP Fig 4.3.3.4) Historic Views

The following controls are included in the DCP to protect views:

Controls

C.1 Views shown in Figure 2.4.3 (DCP Figure 4.3.3.4) are to be protected in the planning and design of development.

C.2 Align buildings to maximise and frame view corridors between buildings.

C.3 Carefully consider tree selection to provide views along streets and keep under storey planting low where possible.

C.4 Site analysis must address views with the planning and design of building forms taking into account existing topography, vegetation and surrounding development.

Park Edge

The DCP includes extensive provisions in Section 4.3.3.7 Special Areas C to protect the eastern edge of Parramatta Park arising from the inclusion of Parramatta's Old Government House and Domain (OGHD) on the UNESCO World Heritage List.

It is noted that the site, that part of Parramatta Park to the south of the rail line, is not included within the World Heritage listing or the World Heritage Buffer. The Park Edge Special Area shown in Figure 2.4.4 below from the DCP (DCP Figure 4.3.3.7.6) does not cover or affect the subject site.

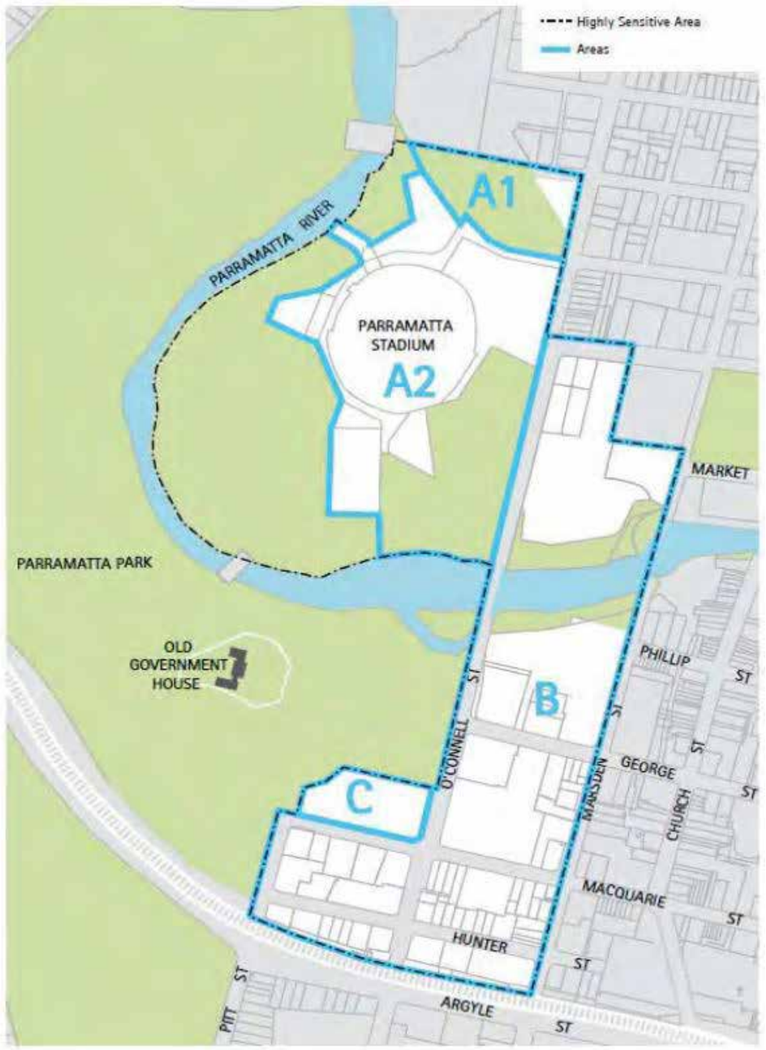


Figure 2.4.4 Extract from Parramatta DCP 2011 – (DCP Fig 4.3.3.7.6) Park Edge Highly Sensitive Area

Aboriginal Cultural Heritage

Section 3.5.3 of Parramatta DCP 2011 requires appropriate consideration to be given to the impact of development on known or potential Aboriginal archaeological sites or sites of cultural significance. An Aboriginal heritage assessment is required for properties identified as Medium Sensitivity or High Sensitivity in the DCP and for properties within an area of known Aboriginal social / historical association.

The Aboriginal Sensitivity Map in Appendix 11 of Parramatta DCP 2011 identifies the site as having moderate sensitivity on the Aboriginal Sensitivity Map.

Planning Proposal for the Parramatta CBD

On 11 April 2016, Council adopted a draft Planning Proposal for the Parramatta CBD to seek a Gateway Determination from the NSW Department of Planning and Environment.

Height limits are generally not shown for properties in the Parramatta CBD under the draft Planning Proposal. However, a 20m (6 storeys) height limit is shown for land adjacent the eastern boundary of the site and on the north and west sides of St Johns Cemetery. Land to the south of St Johns Cemetery is subject to an 80m (26 storeys) height limit.

Land adjacent the eastern boundary of the site and on the north and west sides of St Johns Cemetery retains an FSR of 1.5:1. Land adjoining the south eastern corner of the site and on the north side of Campbell Street fronting St John's Cemetery is subject to an FSR of 6:1.

It should be noted that hand identified in the DCP as Park Edge Area retains current height and FSR controls.

Heritage Interface Study

A heritage study of Parramatta CBD interface areas is currently being undertaken. However, interface areas identified in the study brief are not in the vicinity of the subject site, being located in the northern and south eastern parts of the CBD.

Development Processes

The proposed aquatic centre constitutes development as defined by the NSW Environmental Planning and Assessment Act (EP&A Act) 1979 and therefore requires consent under Part 4 of the Act.

As the site is heritage listed of State significance and included on the State Heritage Register consent will also be required under Section 57 of the Heritage Act 1977 to carry out any development on the land.

Consequently, any development application would be treated as 'integrated development' requiring the Office of Environment and Heritage to issue its 'General Terms of Approval' for the project, prior to its separate approval under the Heritage Act 1977.

As the proposed development is likely to exceed a value of $5 million it will need to be determined by the Joint Regional Planning Panel (JRPP) as provided for by Schedule 4A of the EP&A Act.

State Environmental Planning Policy (Infrastructure) 2007

Clause 65 (2) of State Environmental Planning Policy (Infrastructure) 2007 provides that under Division 12 Parks and other public reserves, development for any purpose may be carried out without consent:

(b) on trust lands within the meaning of the Parramatta Park Trust Act 2001, by or on behalf of Parramatta Park Trust.

Under the Parramatta Park Trust Act 2001, the Trust under Clause 7 (1) may permit the use of the whole or any part of the Trust lands for activities of a recreational, historical, scientific, educational and cultural heritage nature. Clause 15 provides that the Trust must prepare a plan of management for trust lands that will contain a detailed written scheme of operations proposed to be undertaken in relation to trust lands.

Park lands, by virtue of Schedule 1 of the Parramatta Park Trust Act 2001 is understood to include the subject site. However, the Parramatta Park Trust is limited to permitting activities of a recreational nature in line with its management plan on trust lands. The proposed aquatics centre is not identified in a plan of management and therefore could not be permitted by the Trust via the terms of this Policy.

State Significant Development

Consideration has been given whether the project may be State significant development (SSD) under Section 89C of the EP&A Act if it meets relevant criteria. within State Environmental Planning Policy (State and regional development) 2011.

Clause 13 Cultural, recreation and tourist facilities of Schedule 1 to the SEPP provide that development that has a capital investment value of more than $30 million for one of a number of purposes including recreation facilities (major) is State significant development.

As discussed, the proposed aquatics centre is considered to fall within the definition of recreation facilities (outdoor) and not recreation facilities major. Therefore, the project is not likely to be considered as SSD. Assessment as a SSD will need to be considered once concept design is developed.

Implications of Planning Controls and Processes

Based on the information available and the land use assessment undertaken it is considered that the proposed aquatic complex would:

- Be defined as a recreation activity (outdoor) and be permitted with consent in the RE1 Zone.
- Need to meet the objective to conserve, enhance and promote the natural assets and cultural heritage significance of Parramatta Park.
- Need to ensure that it does not affect the heritage significance of Parramatta Park and the five adjoining heritage listed items in the Cumberland Council LGA.
- Need to protect the identified view from Mays Hill across Parramatta's City Centre to distant hills.
- Require an Aboriginal heritage assessment.
- Require consent under both the EP&A Act and the Heritage Act 1977 and would be treated as 'integrated development'.

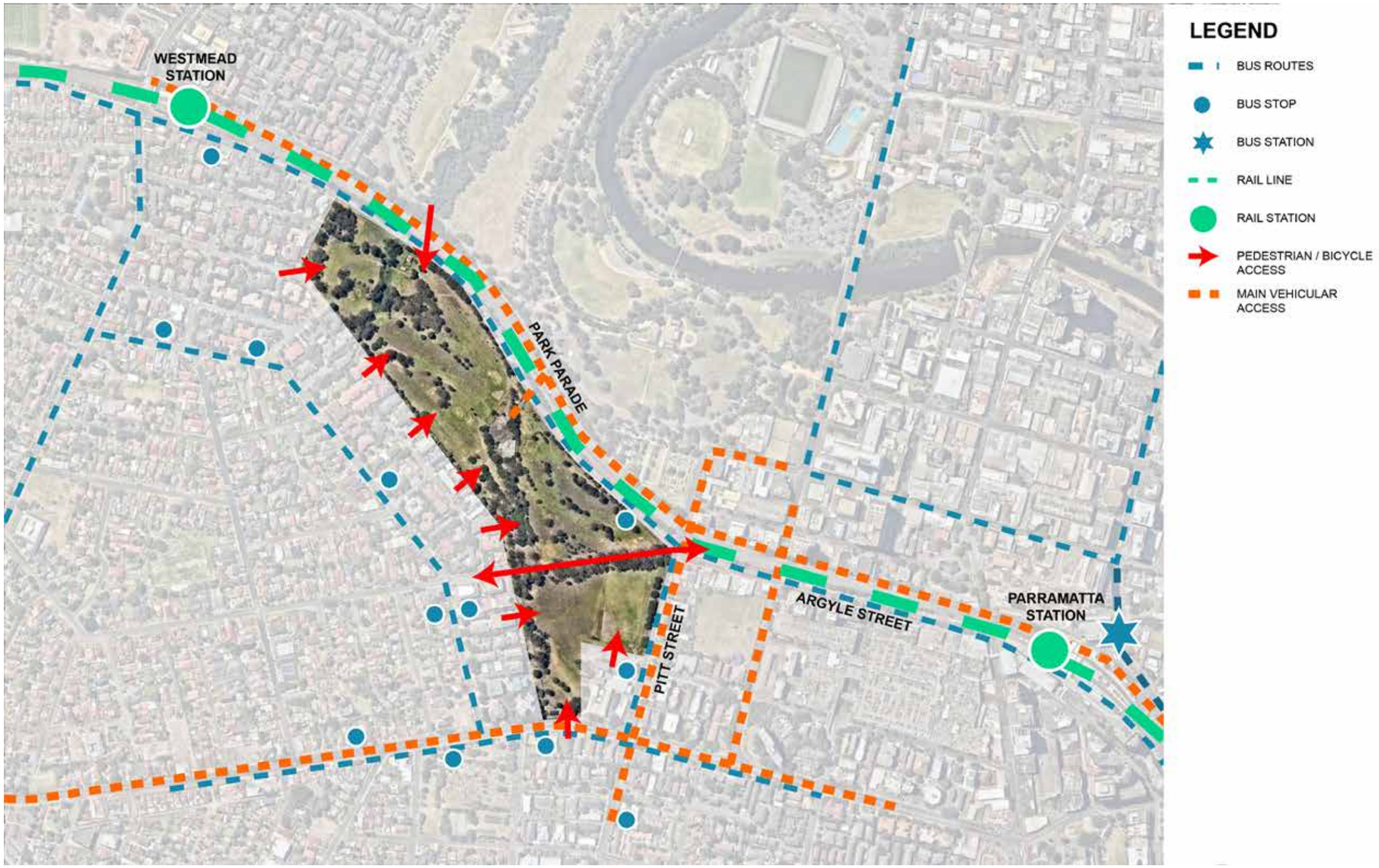


Fig 2.5.1 Site access and transport analysis.

2.5 Site Access & Transport

Transport

Located on the south-western fringe of the Parramatta CBD, the Mays Hill Precinct is well serviced by public transport, the road network and pedestrian and cycling routes.

Heavy and Light Rail

The south-eastern portion of the Precinct adjacent to the intersection of Pitt and Argyle Streets is approximately 500m from Parramatta Station, while the north-western tip of the Precinct, Park Parade becomes Alexandra Avenue, is only 200-250m from Westmead Station.

Planning and finalisation of routes for light rail is underway by Transport NSW and is understood to be well progressed. It is anticipated that the subject site will be within a 5-8 minute walk of the central route through Parramatta, with detailed location of stops to be confirmed in the near future. Construction of the light rail network is expected to commence in 2018.

Bus

A number of metropolitan bus routes pass the south-eastern section of the Mays Hill Precinct, particularly along the Pitt Street and Park Parade T-ways and the Great Western Highway. Park Parade T-way includes stops located near the intersection with Argyle Street, and to the north-west closer to Westmead Station.

Preliminary advice provided by Roads and Maritime Services (RMS) indicates that the Park Parade T-way is proposed for widening in the short to medium-term which will require a widening from 9.5m at its narrowest point to 13.5m, and an additional 1.5m widening for any service relocations required and a further 3.5m widening for implementation of a shared footpath along the south-western side of Park Parade. These widenings will mean a 9-10m off-set to the northern edge of the Mays Hill Precinct along Park Parade.

The Parramatta Interchange receives over 50 bus services from local and regional destinations. The Interchange is located adjacent Parramatta Train Station and is likewise a 10 minute walk to the Mays Hill Precinct and/or able to connect to other transport options to the Precinct.

The Parramatta Shuttle Bus is a free service providing a loop throughout the CBD. Currently it stops at Westfield's Shopping Centre and Macquarie Street West. These stops are within a 5 minute walk of the eastern edge of the Mays Hill Precinct and the loop takes approximately 25 minutes to complete. Future route changes may be possible to enhance connections to the Precinct.

Road

Road access to the Precinct is via the existing (former) golf course driveway off Park Parade along the north-eastern edge of the site and via Amos Street from the west. Parramatta High School, on the southern edge of the Precinct is access via Pitt Street to the east of the site.

In addition to Park Parade and Pitt Street, the Great Western Highway passes the southern edge of the Mays Hill Precinct, providing a connection to the Western Motorway. Connections to the Parramatta CBD are provided via an underpass on Pitt Street below the elevated rail line, and along Argyle Street to the east.

Pedestrian / Cycling

Pedestrian connection to the site is provided from the CBD to the east via Macquarie and Hunter Streets connecting to Pitt Street to the north east, and via Argyle and Campbell Streets to the east.

Pedestrian connection to and from the remainder of Parramatta Park is inhibited by the elevated rail line and Park Parade to the north-east of the site, with the only connection being the pedestrian underpass located near the Park Parade Gatehouse at the northern end of the Precinct.

Pedestrian access is provided directly from residential properties along the south-western edge of the Precinct, and from Priddle, Oakes and Amos Streets and at limited points from Good Street further to the west and south-west. Access from the south is via the Mays Hill Gatehouse off the Great Western Highway.

The rail corridor disconnects the cycling network through Parramatta Park from the Mays Hill Precinct, limiting bicycle access to pedestrian routes and the road network.

Transport Trends

While there is a preference for private car use in Sydney today, the significant increase in residential and workforce populations over the next 20 plus years, and the limited available space for expansion of the road network, will require cultural shift in attitudes to transport. Public transport, including bus, rail and light rail services will become critical, as will delivery of high-level amenity pedestrian and cycle networks.

It is therefore important that any future community recreation provision within the Mays Hill Precinct is easily accessible via public transport and supported by pleasant and safe pedestrian networks.

Fig 2.6.1 Heritage analysis summary diagram, noting key features and significant view lines
(viewlines derived from analysis by GML Heritage of Planisphere Technical Report 2012 by Urbis, Parramatta DCP 2011)

2.6 Heritage Considerations

2.6.1 Introduction

Key heritage issues have been reviewed via broad desk top analysis including consideration of a range of opportunities and constraints related to Aboriginal archaeology, historical archaeology, built heritage and cultural landscape values.

This report does not provide a significance assessment of any Aboriginal sites, places and/or values. This project does not follow the Office of Environment and Heritage (OEH) guidelines for Aboriginal community consultation. We note that the Parramatta Golf Clubhouse was not inspected.

This report does not contain new primary research or detailed assessments of archaeological potential and heritage values. The advice provided below is based on previous archaeological and heritage assessments, including:

- Parramatta Park Archaeological Zoning Plan prepared by Godden Mackay Logan in 1995;
- Archaeological Zoning Plan for Parramatta Park, prepared by Robert V J Varmin in 1997;
- Parramatta Historical Archaeological Landscape Management Study, prepared by Godden Mackay Logan in 2000.

2.6.2 Summary

Mays Hill Precinct provides an important natural buffer zone to Parramatta Park and Old Government House, a place of World heritage value. However, Mays Hill is not located within the World heritage inscribed area or its buffer zone, and the considerable physical separation between the two areas may provide an opportunity to reactivate the Precinct and establish recreational uses for the local community. Mays Hill Precinct is located within the State Heritage Register curtilage for Parramatta Park.

The parkland setting has been historically used for recreational purposes. This includes the establishment of the golf course in the early twentieth-century. From a heritage perspective, provided that impacts to heritage values can be avoided and/or mitigated, this past history of recreation means that an aquatic facility may be a compatible use within this cultural landscape. Municipal pools in Sydney are frequently located in comparable parkland settings and public open spaces. These are places at which communities have gathered to relax, exercise and enjoy recreational activities in open outdoor settings.

Careful design and management will be critical in the development of a new aquatics centre. Ongoing heritage advice will also need to be provided in order to mitigate any potential heritage impacts. A range of further assessments for Aboriginal and historical archaeology and heritage will be required, as outlined in Section 9.1. The precise assessments and approvals which are likely to be required will depend on the preferred site for the new development, its design, and the nature and extent of the potential heritage impacts arising. Any ground disturbance in areas of archaeological potential will be subject to provisions of the National Parks & Wildlife Act and the Heritage Act.

The scale, footprint, visual dominance, setbacks from existing built heritage items and historic access routes identified in this report must be thoughtfully considered and assessed as part of any new development on the site. Proposed new development should seek to sympathetically integrate into its setting, and to protect historic views and vistas identified in this report and associated reference materials.

The surrounding topography of the Mays Hill Precinct must be considered, as any new built form located on the ridgelines has the potential to be visually prominent, and to have an impact upon Old Government House and the Domain's setting and surrounding open landscape.

The two gatehouses, Mays Hill Gatehouse and the Park Parade Gatehouse, define historic entry points and are significant built heritage items within the precinct. Any new development which would adversely impact the cottages and associated carriage loop should be avoided. Curtilages which conserve the significance of the gatehouses should be maintained, and opportunities to interpret the historic access patterns and routes through the park could be explored. Opportunities to enhance the sense of arrival from the Great Western Highway on the southern boundary of the site should also be explored.

The detailed design and construction of any new development in the State Heritage Register listed area of Mays Hill Precinct will need to be handled sensitively. Issues of character, scale, form, siting, materials, colour and detailing will require careful resolution as part of any proposed development. The construction methodology will also require thoughtful planning to minimise any ground disturbance in areas of archaeological sensitivity. Given the sensitive heritage context of the site, works adjacent to built and landscape heritage items identified in this report should be subject to careful design to ensure adverse impacts are minimised. Any new work should seek to retain and conserve existing heritage items, including an appropriate curtilage and setting.

a. Research and Reference Material

There has been a large body of research prepared on the built heritage of Parramatta Park. One of the most comprehensive studies was conducted by Brian McDonald and Associates in 1987. This study saw the preparation of descriptions, significance assessments, measured drawings and works schedules for the following buildings and monuments: Macquarie Street Gatehouse, Western Domain (Queens Road) Gatehouse, Rangers Cottage, Governor's Dairy, Southern Domain (Mays Hill) Gatehouse, Fences and Gates, Observatory Remnants and Memorial, Boer War Memorial and cannons, Bath House Pavilion, Bandstand, Boundary Stone, WE Hart Memorial, Lady Fitzroy Memorial, Obelisk, and the Old Government House Commemoration Stone.

A companion document to the volume on built heritage was the Historic Landscape Study by Brian McDonald with Craig Burton (1987). These documents are key reference documents for understanding the built and landscape heritage of Parramatta Park and should be reviewed prior to any design development for a new aquatic centre.

Several conservation management plans and assessments have also been prepared for individual buildings and monuments. These include a conservation plan for the Park Parade Gatehouse and stone work assessment of the stone monuments on the ridgeline and the boundary stone.

A full Conservation Management Plan has not been completed for Mays Hill Gatehouse however a condition report was prepared in 2008 prior to works to the building. This document addresses the significance of the buildings and provides conservation policies.

There are also several Aboriginal and historical archaeological reports for Parramatta Park that contain research and information relevant to the study area.

These reports and their policies and recommendations should continue to form the basis for managing individual built heritage items within the Mays Hill Precinct and the reports should be updated as necessary.

The clubhouse was recently demolished. It was a simple structure with a combination of cladding (much of which has been removed). While the modern clubhouse was not inspected at close range, it is clear that the modern structure did not form part of the original 1902 plan (realised by Clark), nor does it hold aesthetic significance or make a positive contribution to the overall precinct.

2.6.3 Potential Development Zones and Tolerance for Change

Based on the research and findings of this report, potential development zones have been identified within the Mays Hill Precinct. The location of the zones has been informed by the preliminary desktop assessment of archaeological potential, the cultural heritage significance of the various areas, items and features within the precinct and key views.

The table below sets out the gradings of 'tolerance to change' and explains their application to the Mays Hill Precinct.

Tolerance for Change	Application to Mays Hill Precinct
Low Tolerance (Little or no change possible)	The key attributes of this area embody the heritage significance of the precinct and its contribution to the site. Any aspects that would impact these key attributes would detract from the heritage values of the site and would adversely affect the cultural landscape. This area of the site retains a high degree of intactness with minor alterations that do not detract from the significance of the site. The key attributes and significant views should be retained and conserved.
Moderate tolerance (Minor changes possible)	The key attributes of this area only partly embody the heritage significance of the site. Some change is unlikely to significantly impact on the ability to interpret the cultural landscape or detract from its heritage values. The key attributes should be retained and conserved however there is greater opportunity for change, with less adverse impact.
High Tolerance (Considerable changes possible)	The key attributes of this area embody little of the heritage values of Mays Hill Precinct due to previous modification. Therefore, considerable change is unlikely to significantly impact the interpretation of this cultural landscape.

Table 2.6.3 Tolerance for Change and Application to Mays Hill Precinct

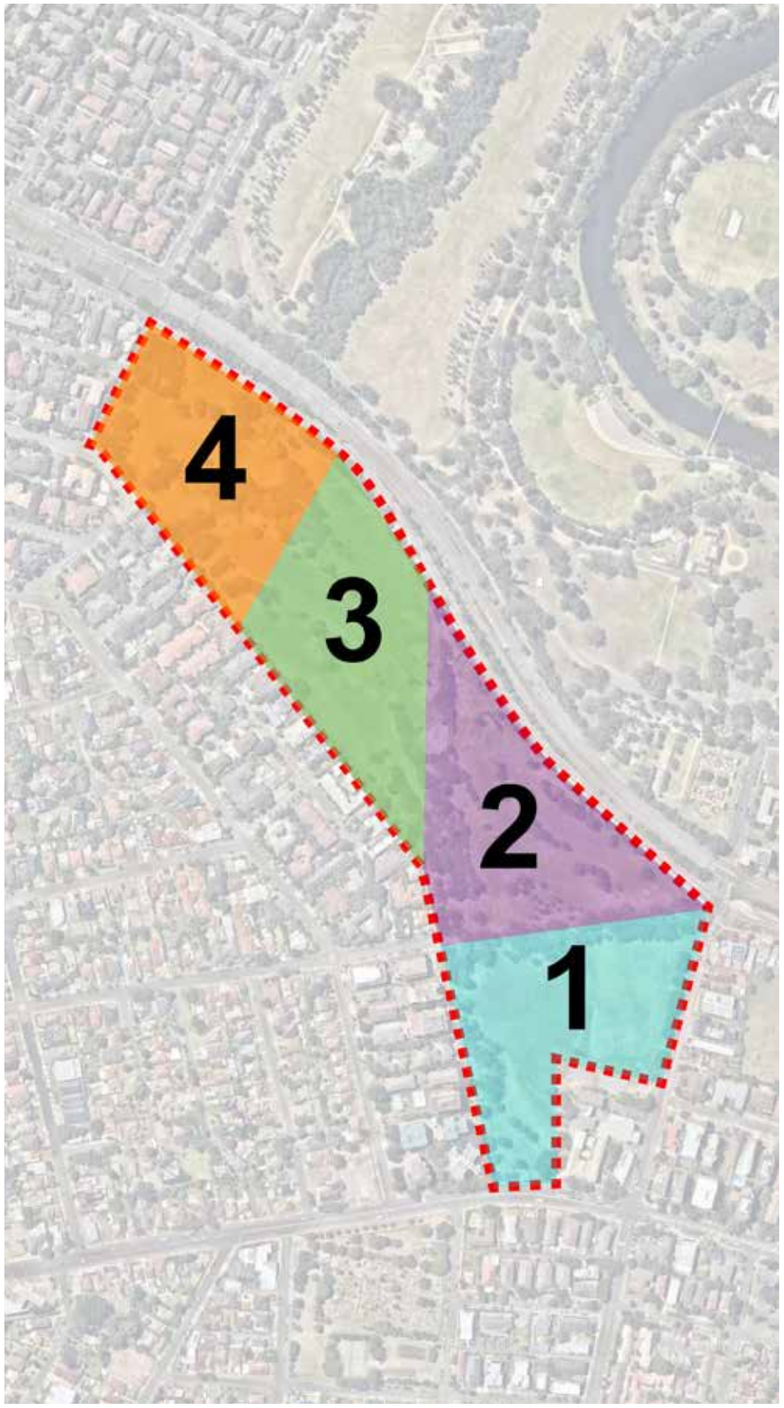


Fig 2.6.3 Connections to regional green spaces around Mays Hill Precinct. Map Source: Parramatta Green Grid Nov 2013 (NSW Government Architect's Office).

Zone 1—Playing Fields North of Parramatta High School

Zone One lies to the north of Parramatta High School, and is bound by Pitt Street to the east and Park Parade to the north.

The eastern section of Zone One is potentially a location with a higher tolerance to change than some other parts of the study area. This area has been assessed as having moderate Aboriginal and high historical archaeological sensitivity, but more detailed assessment is required to refine and determine the archaeological potential in this area.

If development were to occur in the Zone One area marked as having high Aboriginal archaeological (Figure 5.3 GML sub-report) or historical archaeological sensitivity (Figure 6.1 GML sub-report), then it would likely be subject to detailed conditions and requirements for management of the archaeology, including mitigation of any potential impacts.

If development was to occur within this eastern section of Zone One, an adequate setting for the Mays Hill Gatehouse, which is located on the southern boundary of the site, would be required. Any new development should provide an appropriate physical and visual curtilage to ensure the significance of heritage is conserved.

The western portion of Zone One is sensitive due to its location on the ridgeline, elevated views to Government Domain and the Parramatta CBD, as well as views to and from the Mays Hill Gatehouse, an item of State heritage significance. This portion of Zone One therefore has a lower tolerance to change and its key attributes and significant views should be retained and conserved.

Zone 2—Land Bound by Governor's Avenue and Jubilee Avenue

Zone Two is bound by two significant pedestrian thoroughfares - Governors Avenue and Jubilee Avenue.

Together, these thoroughfares express a spatial geometry that contributes to the distinctive landscape character within the study area. Development in this zone has the potential to have an impact upon the character of the open space, early geometry and historic alignment of Mays Hill Precinct. It may be possible to manage and mitigate potential heritage impacts through careful design and management.

While Jubilee Avenue is not considered to have the same level of archaeological sensitivity as Governor's Avenue, it remains an early thoroughfare visible in the 1904 site plan and 1928 aerial photograph (Figure 3.6 and Figure 3.7 GML sub-report). Jubilee Avenue has landmark quality as a mature tree-lined corridor which continues the original street alignment of Amos Street on the southern boundary of the site, to the corner of Pitt and Argyle Street in the north-east. This area is identified as having moderate Aboriginal and historical archaeological sensitivity (Figure 5.3 and Figure 6.1). An archaeological assessment is required to refine and determine the archaeological potential in this area.

The outer edges of Zone 2 have a lower tolerance to change. Careful siting and sensitive design would be essential to ensure heritage values are not adversely impacted. If any development were proposed near the perimeter of Zone 2, further detailed assessment and ongoing heritage advice would be required in order to mitigate impacts on heritage values. Mitigation strategies may include the provision of a sufficient landscape buffer and setback from the main thoroughfares and Park Parade to the north.

Careful consideration of form, bulk, scale and materiality will also be a key factor in assessing potential impacts of any new development here. For example, the use of transparent, light-weight materials to allow a high degree of visual permeability would be favourable. Alternatively, concept and design development could consider outdoor aquatic facilities that are well integrated into the park landscape setting. Colours and textures should echo the land form and not impact the open parkland setting.

Screening of a new facility should be considered in order to enhance the pedestrian experience, as well as the visual link between Mays Hill Precinct and Government Domain.

Future development should also consider reinstatement of landscape elements previously removed, and the enhancement of the pedestrian experience through other interpretive measures.

Zone 3—Former Golf Course

Within this zone the tolerance for change is variable. Generally, the siting of an aquatic facility would be appropriate in areas that have previously been used for recreation and have been subject to prior development. The former use of the site as a golf course was sympathetic to the open cultural landscape. The design of any aquatic facility would need to be sympathetic to the open landscape character and visually recessive.

The southwestern section of Zone Three, towards the boundary of Mays Hill, is an area that has a high tolerance to change, and may be one of the more suitable locations for development from a heritage perspective. This area has been assessed as having moderate Aboriginal and historical archaeological sensitivity. An archaeological assessment will be required to refine and determine the archaeological potential in this area.

If development was to proceed in the areas of Zone Three marked as having high Aboriginal archaeological (Figure 5.3 GML sub-report) or historical archaeological sensitivity, the requirements and consent conditions may be detailed (Figure 6.1 GML sub-report).

Development in the northern part of Zone Three would reduce the buffer zone and connection with Government Domain to the north. It may also impede on views to significant built heritage items in Government Domain, such as Boer's Memorial, Governor's Bath House (former), and Old Government House. While existing views to these items are obscured by mature trees along the rail corridor, there is potential to enhance them through clearing and appropriate siting of new works.

Zone 4—Northwest of Domain Creek

Most of Zone Four been identified as a possible location for development. This area has been assessed as having moderate Aboriginal and historical archaeological sensitivity, but an archaeological assessment is required in order to properly establish potential. The requirements and conditions for archaeology will be dependent upon the findings of the archaeological assessment.

Locating new works along in the northern and western parts of this Zone would also ensure that any development has an appropriate physical and visual curtilage for items of heritage significance.

2.7 Sub-Surface Conditions

Golder Associates were engaged to provide geotechnical consulting input to dwp|suters for the development of the Mays Hill Precinct Site Suitability Report.

Reference Material

Assessment of the precinct is based on a review of the following publicly available information:

- Penrith 1:100,000 scale Geological Series Sheet 9030 (Edition 1) 1991
- Aerial imagery available from SixMaps
- Contaminated Sites registers:
  - Environmental Protection Agency (EPA): List of NSW contaminated sites notified to the EPA
  - Environmental Protection Agency: Contaminated Land Record of Notices
- Readily available geotechnical reports from a search of public records
- Site walkover limited to publicly accessible areas of the site

Regional Geology

The Penrith 1:100,000 scale Geological Series Sheet 9030 (Edition 1) 1991 shows the site to be underlain by basement rocks of the Wianamatta group. Two geological units are mapped within the site, namely:

- Rwa: dark grey to black claystone-siltstone and fine sandstone-siltstone laminate
- Rwm: fine to medium grained quartz-lithic sandstone

The Penrith 1:100,000 scale soli landscape map identifies the site as being underlain by the residual Blaxland soil landscape (REbt). The Department of Infrastructure, Planning and Natural Resources Salinity Potential in Western Sydney maps (2002) identify the site as having a moderate salinity potential. Localised filling was observed during site observations.

A review of readily available geotechnical reports did not identify any reports within the footprint of the site. Site investigations undertaken at Wentworthville Station (within the area mapped as Geological unit Rwa, approximately 1.7km to the north-west), identifies clay materials overlying low strength claystone-siltstone. Rock strengths materials tend to increase with depth in borehole logs at the Wentworthville Station site. This is consistent with the typical weathering profile of the materials underlying the Mays Hill site. Pending site specific intrusive investigations, we would expect to see a similar profile at the site, namely:

- Fill materials associated with landscaping / embankment construction (varying depths); overlying
- Stiff to very stiff clayey residual materials (3-5m depth); overlying
- Weathered siltstone, claystone or sandstone of extremely low to low strength increasing in strength with depth.

Attachment A: Site plan showing key site features

Fig 2.7.1 Mays Hill Precinct existing surface conditions.

Attachment C: Reproduction of Penrith 1:100,000 scale Geological Series Sheet 9030 (Ed tion 1) 1991

Fig 2.7.2 Mays Hill Precinct anticipated sub-surface conditions.

Site Observations

Site observations were made during a walkover of publicly accessible areas of the site. The site generally follows the natural landform of the area. The landform generally dips from southwest to northeast, toward the railway line with the exception of the localized fill embankments. The majority of the golf course site (Zones 2, 3 & 4) shows evidence of surface disturbance.

At the south eastern corner of the site (Zone 1), a sports field is located on an embankment of approximately 4-6m height. To the northern end of the site (Zone 4), an overland flow path crosses the site flowing from southwest to northeast. This flow path widens into a wetland near the centre of the site. Structures associated with the golf course were under demolition during the site visit.

Geotechnical Considerations

Geotechnical considerations are set out in detail in the Golders Associate report. In summary, and subject to detailed investigations, findings are as follows:

- Building Foundations – Zone 1: Class P site as per AS2879-2011 due to extensive filling (requires further detailed investigation); Zone 2-4: Class M site as per AS2879-2011 (dependent on structural loads, pad footings or piled foundations likely to be suitable).
- Material re-use – Zone 1: fill materials unknown; Zone 2-4: top soil could be removed prior to bulk excavation and stock-piled for re-use as general fill only.
- Stability of Excavations – all Zones: excavations in fill or residual materials will require battering or stabilization, deep excavation in rock will likely require shorting or permanent retaining.
- Rock Excavation – all Zones: excavations on site are likely to encounter shale and sandstone laminate bedrock, rock excavation methods including rock sawing, pneumatic hammering and other standard rock excavation methods are likely to be required.
- Groundwater Management – Zone 1-3: groundwater levels not confirmed, subsurface water may impact design of basement retention; Zone 4: overland flow path requires management, subsurface water may impact design of basement retention, particularly near overland flow path.

Contamination Risk

A preliminary review of registers maintained by the EPA did not identify any sites notified to the EPA as potentially contaminated or sites with a notice issued by the EPA under the Contaminated Land Management Act (1997) in the vicinity of the site. However, this does not preclude the presence of contamination at, or in the vicinity of, the site. The areas of increased risk for contamination at the site are likely to be:

- Storage sheds associated with the golf course operations where pesticides, fuel and other potential contaminants are likely to have been stored;
- Potential underground storage tanks at the site;
- Locations of existing or recently demolished structures on the site;
- Fill areas where imported materials present an elevated risk of contaminated materials being transported to the site;
- Creek lines where upstream activities or previous filling may have resulted in contamination.

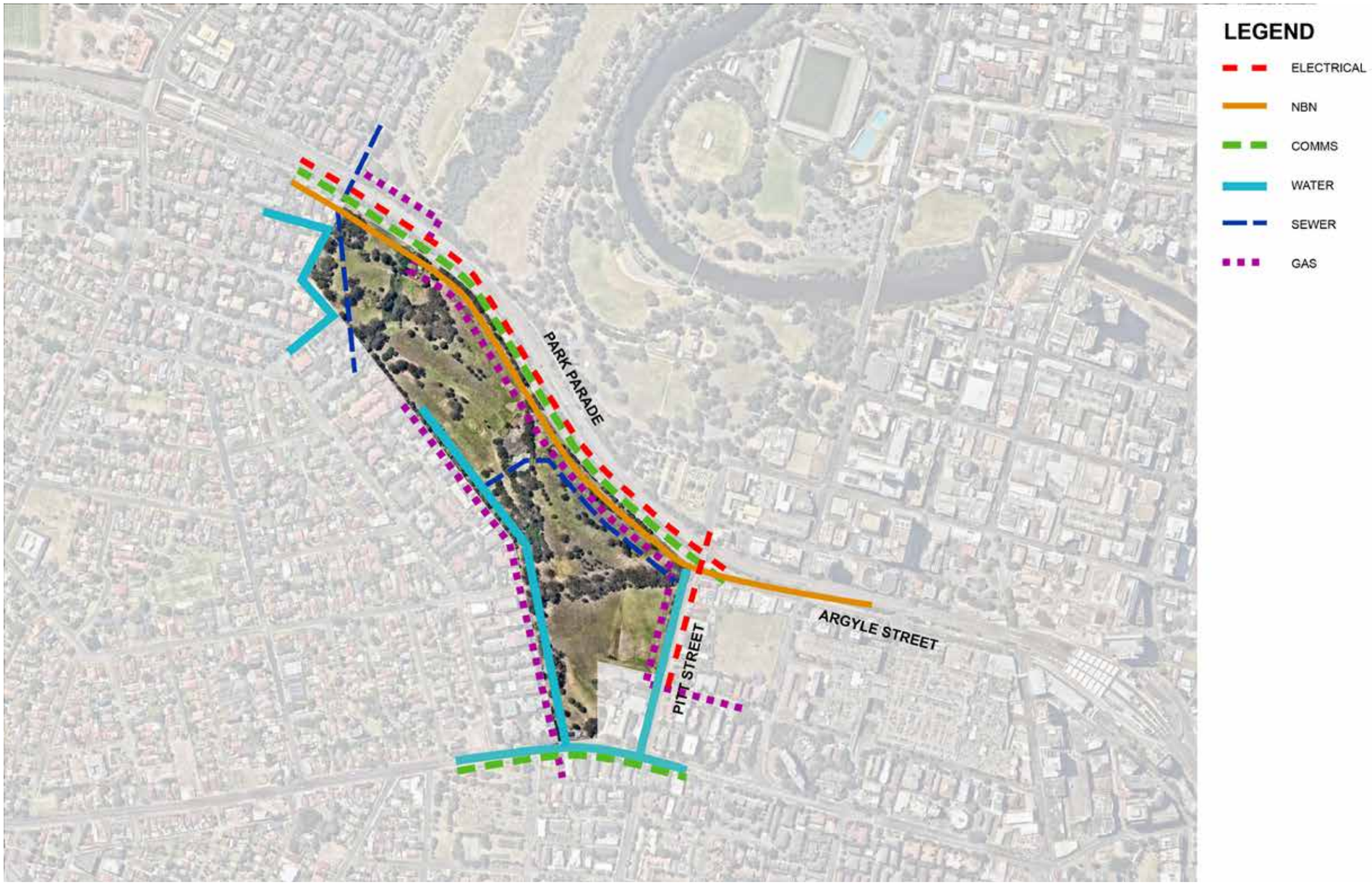


Fig 2.8.1 Utility infrastructure analysis.

2.8 Utility Infrastructure

A desk top analysis of existing utility infrastructure within the Mays Hill Precinct has been undertaken to determine potential for connection to, and capacity of, basic building services for preferred development sites.

The investigation of the existing engineering services installation involved:

- Desktop review of supply authority record drawings (DBYD) for the following services
  - Power – Endeavour Energy / Integral Energy
  - Telecomms – Telstra / Mipela / NBN / Optus
  - Water – Sydney Water
  - Sewer – Sydney Water
  - Gas – Jemena
- Review of feature survey information.
- Review of client provided information.

The investigation did not include:

- Detailed investigation of Precinct / existing services.
- Possible defects contained in inaccessible sections of the existing installation.
- Verification of plant and system capabilities and operation.
- Measurement of air and water flow rates and temperatures, electrical loadings, switchboard temperatures, and the like.

2.8.1 Electrical Services

The Precinct is served by an in-ground electrical service route along Pitt Street, between Great Western Highway and Macquarie Street, before turning to run along Park Parade.

There is a junction point at the intersection of Pitt Street and Park Parade, from which an in-ground high voltage service is routed along Park Parade. This service continues along Park Parade, into Alexandra Avenue before heading in a southerly direction to serve a kiosk substation between Alexandra Avenue and Bailey Street.

The in-ground high voltage service along Park Parade serves an existing kiosk substation No. 28609, located on Park Parade, close to the entrance to the former Parramatta Golf Club.

An overhead transmission line appears to be present along the Park Parade side of the site. The service emanates from a transmission pole located on the opposite side of Argyle Street, before crossing the Argyle Street / Park Parade intersection in a westerly direction. The overhead service is routed along the northern side of the Precinct, however, it is set back within the site boundary ranging from approximately 12m in the area of the entrance to the former Golf Club to approximately 26m in the north west corner of the site. The Endeavour Energy record information indicates a ducted in-ground service along Park Parade, but does not indicate the overhead service on its records. The Integral Energy record information is also not immediately clear on the details of this overhead cable route.

Electrical infrastructure on the southern side of the Precinct is generally residential in nature, with kiosk substations located in strategic positions to serve low density residential and medium density loads along Great Western Highway.

Electrical infrastructure on the eastern and western sides of the Precinct is generally residential in nature, with kiosk substations located in strategic positions to serve low density residential and medium density apartment loads.

Development Considerations

The existing kiosk substation 28609 appears to be of approximately 500kVA capacity and it is not anticipated to have sufficient spare capacity for an aquatic facility development.

It is recommended that, in the next phase of design, Endeavour Energy be consulted regarding the availability of spare capacity in the high voltage service along Park Parade and Pitt Street to determine if any network modifications would be required to facilitate the electrical supply required for an aquatic facility development, such that the cost associated with any network modification costs can be understood.

At present, with high voltage services appearing to be present in both Park Parade and Pitt Street, all three potential siting options appear to be close to a potential network connection point for a dedicated substation for the development, although the final connection point is subject to the supply authority.

2.8.2 Telecommunications Services

National Broadband Network

The National Broadband Network (NBN) has an in-ground duct and pit route along the south side of Park Parade, which runs along the northern side of the Precinct, before crossing to Argyle Street.

The service is routed outside of the site boundary and does not appear to be impacted significantly by any of the preferred siting locations.

Additional in-ground conduits and access pits shall be required to extend the existing network to the selected siting location, to allow fibre optic services to be reticulated to the facility.

No NBN service is shown along Pitt Street side of the Precinct, as such Zone 1 would require the longest extension of the NBN network to facilitate the provision of NBN services to the proposed facility.

Due care should be taken in the event of any works which may affect the service along Park Parade, such as the creation of a new site entrance, or the like.

Optus

Optus fibre optic services are present along Park Parade and Pitt Street. The records indicate that this is a major fibre service of national significance and as such due care should be taken in the event of any works in the area.

The service appears to be an in-ground duct route with periodic access pits. The service along Park Parade runs on the site side of the parade, while the Pitt Street service runs along the opposite side of the street, relative to the site.

The service is routed outside of the site boundary and does not appear to be impacted significantly by any of the preferred siting locations.

Additional in-ground conduits and access pits shall be required to extend the existing network to the preferred siting location, to allow fibre optic services to be reticulated to the facility.

Provision of services to any of the three siting locations appear to be feasible due to the presence of services in both Park Parade and Pitt Street, however, modifications and extensions shall be required to extend services to the final location to suit the project.

Due care should be taken in the event of any works which may affect the service along Park Parade, such as the creation of a new site entrance, or the like.

Uecomm

Uecomm, part of the Optus Business Group, has a major in-ground fibre service running along Park Parade, which runs along the northern side of the Precinct, before crossing to Argyle Street.

Fiber assets are also indicated along Great Western Highway on the southern border of the Precinct.

The service is routed outside of the site boundary and does not appear to be impacted significantly by any of the preferred siting locations.

Additional in-ground conduits and access pits shall be required to extend the existing network to the preferred siting location, to allow fibre optic services to be reticulated to the facility.

Due care should be taken in the event of any works which may affect the service along Park Parade, such as the creation of a new site entrance, or the like.

Pipe Networks

Pipe networks record information indicates no active Telstra services ducts in the vicinity of the Precinct. Detailed site investigation and surveys of existing services are recommended during subsequent design phases of the project to verify locations of services prior to commencement of any works.

2.8.3 Hydraulic Services

Water Supply

The Mays Hill Precinct study area is serviced by the following authority water mains:

- A 100mm Cast Iron Cement Lined (CICL) water main along the western edge of the site (the ridgeline), this main runs largely within the site and is not under existing roadways.
- A 150mm Ductile Iron Cement Lined (DICL) water main along the southern edge of the site. This water main is laid within the road reserve of the Great Western Highway
- A 225mm CICL water main along the eastern edge of the site. This water main is laid within the road reserve of Pitt Street.

The existing 100mm CICL water mains along the western and southern edge of the Precinct are located on the opposite side to the preferred locations for facility development. Using these mains for the proposed facility will require large amounts of trenching and pipe laying works. In addition, the capacity of the 100mm water mains is unlikely to be sufficient for an aquatic facility.

The 225mm water main is more likely to have capacity to serve an aquatic facility development but is remote from Zones 3 and 4.

Assessment of capacity and works required for the extension of water supply to the preferred facility location will need to be undertaken in future design stages.

Sewer Infrastructure

The Precinct is served by two main sewer lines:

- A 225mm Salt Glazed Ware (SGW) sewer main that enters the Precinct at Clive Lane and travels north east before running east along the rail reserve on the northern boundary of the Precinct. There appear to be two existing maintenance shafts / pits, an existing sewer branch (presumably to serve existing buildings within the site) and a vent shaft on the length of pipework within the proposed site.
- An existing sewer main enters the Precinct to the south of Oakes St and runs north within the Precinct at the far northwest corner. The sewer main is a combination of 300 Vitreous Clay (VC) and 375 Reinforced Concrete (RC) pipework. DBYD records indicate that this sewer line has been rehabilitated and relined at some point in the past. As such the sewer line is likely to contain sections of plastic pipe ‘sleeved’ within the existing VC and RC pipe. Three maintenance shafts/pits are visible on the DBYD but there is no evidence of existing sewer connections with the Precinct to this line.

There is no existing sewer within Pitt Street.

Development considerations:

- Zone 1 is remote from both existing sewer lines that exist with the Precinct, connecting to either of the existing sewer lines would involve significant trenching and pipe laying works.
- Zone 2 is close to both the existing sewer line to the north of the site and the 225mm SGW sewer that crosses the site. Connecting to the sewer to the north may require works within the rail reserve and would need to be appropriately coordinated. Connection to the 225mm SGW pipework is also possible but would also likely require extensive trenching works.
- Zones 3 and 4 are in close proximity to the 225mm SGW sewer line to the north of the site. As with Zone 2, the connection works may take place within the rail reserve and would require appropriate coordination.

2.8.4 Gas Services

The Precinct is served by two gas infrastructure mains:

- A network level gas main that is laid along the eastern boundary of the Precinct. This gas main appears to be within the site boundary.
- A secondary (high pressure) gas main is laid along the northern boundary of the Precinct. The gas main is laid within the rail reserve.

While the Precinct has good access to gas network infrastructure the gas mains along the southern / western edge of the site are in a different network area and municipal zoning to the preferred locations of the facility which may present complications when applications for gas supply are submitted.

The alternative option would be to make a connection to the secondary main to the north of the Precinct. This connection would likely require a larger than normal gas meter and regulator enclosure as the secondary main is noted as being at high pressure (1050kPa). In addition, works within the rail reserve would need to be appropriately coordinated.

Zones	Operational & functional suitability / viability	Topography & Sub-surface	Landscape character and integration	Heritage	Transport & Infrastructure	Town Planning
Zone 1 	— accessibility / proximity to catchment — available land / dimensions to suit anticipated facility footprint — likely to require relocation of Parramatta High School playing field	— partial burial of the facility required (Typologies B & C), cascading outdoor pools required for Typology A — risk associated with removal of fill below Parramatta High School playing field — sub-surface conditions appear to be reasonable (pending detailed investigations) — circulation level transitions required but likely to be manageable for Typologies B & C, may be inhibiting for Typology A	— strong potential for active engagement with streetscape — strong potential for safe, vibrant open public spaces connecting facility to CBD edge — potential for development with limited impact on landscape character — minimal impact on Mays Hill Precinct open space — potential for pedestrian and cycleway connections within the Precinct	— possible heritage impact	— adjacent to road networks and busways, good connection to pedestrian and cycleways, close proximity to rail and future light rail — good access to power, gas, water, sewer	— minimal impact on adjacent properties — likely activation of Pitt Street to provide strong urban interface with CBD
Zone 2 	— accessibility / proximity to catchment — available land / dimensions to suit anticipated facility footprint	— partial burial of the facility required (Typologies B & C), cascading outdoor pools required for Typology A — some risk associated with removal of fill around bunkers, greens and tees of former golf course — sub-surface conditions appear to be reasonable (pending detailed investigations) — circulation level transitions required but likely to be manageable for Typologies B & C, may be inhibiting for Typology A	— strong potential for active engagement with streetscape — strong potential for safe, vibrant open public spaces connecting facility to CBD edge — some impact on landscape character, will be minimised if substantially buried / integrated with landscape — greater perceived impact on Mays Hill Precinct open space, will be minimised if substantially buried — potential for pedestrian and cycleway connections within the Precinct	— possible heritage impact on views to and from Old Government House, though may be reduced where buried within the landscape — likely impact on open space between Governor's and Jubilee Avenues — impact associated with disturbance of golf course	— adjacent to road networks and busways, good connection to pedestrian and cycleways, close proximity to rail and future light rail — good access to power, communications, gas, water, sewer	— minimal impact on adjacent properties
Zone 3 	— available land / dimensions to suit anticipated facility footprint — comparatively remote from catchment	— comparatively level site — sub-surface conditions appear to be reasonable (pending detailed investigations)	— likely to be remote from streetscape — significant impact on landscape character / Mays Hill Precinct open space – large built volumes located in centre of public open space — potential for pedestrian and cycleway connections within the Precinct	— minimal heritage impact, with exception of disturbance of re-aligned Governor's Avenue to provide access from Park Parade	— adjacent to road network and busway, some connection to pedestrian and cycleways — possible impact on local road network — comparatively remote from rail — comparatively remote from power, communications, gas, water, sewer	— potential impact on adjacent properties through light and noise spill — significant disturbance of amenity
Zone 4 	— insufficient land / dimensions to suit anticipated facility footprint — comparatively remote from catchment	— comparatively level site — existing natural water course limits available developable space — sub-surface conditions subject to detailed investigations, particularly around natural water course	— impact on landscape character / Mays Hill Precinct open space – large built volumes located in public open space — likely disturbance of natural water course — potential for pedestrian and cycleway connections within the Precinct	— minimal heritage impact, with exception of disturbance of re-aligned Governor's Avenue to provide access from Park Parade — likely heritage impact associated with disturbance of natural water course	— adjacent to road network and busway, some connection to pedestrian and cycleways — possible impact on local road network — comparatively remote from rail — reasonable proximity to power, communications, gas, water, sewer	— potential impact on adjacent properties through light and noise spill — significant disturbance of amenity

2.9 Opportunities & Constraints

Relative merits of each zone as a development site have been assessed against assessment criteria to establish strengths, weakness, opportunities and threats for each area of the site.

As part of the assessment methodology, a number of core site planning principles were established to guide the preferred site selection process; these include:

- avoid development of built structures along ridge lines (ie. Governors Avenue);
- avoid development in proximity to Domain Creek at the northern end of the site;
- avoid development strategies that interfere with the amenity and open space around the Mays Hill and Park Parade Gatehouses;
- avoid development strategies that may reduce the significance of Jubilee Avenue as a tree-lined pedestrian connection between Argyle Street and Amos Street.

Fig 2.10.1 Potential development zone – Viability – operational and functional suitability

Fig 2.10.2 Potential development zone – Topography.

Fig 2.10.3 Potential development zone – Heritage.

Fig 2.10.4 Potential development zone – Landscape Character.

Fig 2.10.5 Potential development zone – Transport & Infrastructure.

Fig 2.10.6 Potential development zone – Town Planning.

Fig 2.10.7 Consolidated site analysis diagram indicating areas of potential development within the mays Hill Precinct.

Fig 2.10.8 Preferred site locations.

3. Site Assessment

3.1 Summary of Findings

Through preliminary site analysis, a number of key site criteria have been identified to enable assessment of relative merits of each of the potential aquatic facility development zones. These criteria, to be used in analysis of preferred facility locations, include:

Viability – Operational & Functional Suitability

Accessibility and proximity to the catchment is critical if the proposed aquatic facility is to be socially, environmentally and economically sustainable. The site must allow an aquatic facility to be efficiently configured with convenient access for patrons, but also for servicing. Site amenity, safety accessibility are critical if the facility is to encourage broader participation within the community. Scale and complementary components might also influence viability through efficiencies, revenue opportunities and/or greater social outcomes.

Topography & Sub-surface Conditions

Relatively level or flat sites are more suited to outdoor aquatic facilities, however, sloping sites provide opportunity for indoor aquatic facilities to be partially buried to reduce their bulk, scale and visual impact within a precinct. Sub-surface conditions, soil profile and presence of contamination can significantly impact initial capital costs.

Landscape

The Mays Hill Precinct is an area of well-established landscape character, the degree to which the development of a contemporary aquatic centre impacts on that character will be determined by the location within the Precinct and the scale of the facility.

Heritage

It is understood that any development within the Mays Hill Precinct will be subject to critical heritage assessment, however, the degree to which a potential aquatic facility development will be limited in scale and exposure due to heritage constraints will vary depending on location and likely impact on features of known heritage significance.

Transport & Infrastructure

Proximity of the facility to the road network, public transport and pedestrian and cycle ways is critical if the proposed aquatic facility is to be easily and equitably accessible, while proximity to the road network is just as critical for servicing and maintenance of the facility. Aquatic facilities require access to energy, communications, water supply and waste disposal systems; there are increased operational efficiencies where mains supplies are within close proximity to the facility.

Town Planning

It is critical that Town Planning controls allow the development of an aquatic facility of capacity and of a scale appropriate to meet the demands of the local community. Furthermore, it is important that the facility is appropriately placed and designed with consideration for surrounding land uses

Following assessment of key criteria, more favourable areas for aquatic facility development have been mapped on the adjacent Precinct plans. When overlaid to create a consolidated map of favourable aquatic facility development locations, three locations are identified for further investigation.

Suitability of each of these locations for the siting of varying aquatic facility typologies is explored in the next section of this study.

Fig 3.1 View from Governor's Avenue (ridgeline) across the former Parramatta golf course to the Parramatta CBD beyond.

Fig 3.2 View from corner of Pitt Street and Park Parade up Jubilee Avenue, with the former Parramatta golf course to the right and benched Parramatta High School playing field to the left.

3.2 Site Assessment Methodology

Assessment criteria established to determine site suitability include the following:

Viability

In order for the facility to be sustainable and for it to achieve the social or community objectives established, the facility must be accessible by all and must provide a level of amenity that reflects the expectations and aspirations of the community. The preferred site must have capacity for the facility to be planned to achieve core operational efficiencies.

The preferred site for an aquatic facility must have sufficient space and good access to infrastructure to enable it to be planned efficiently and well serviced. This will require that site boundaries reflect the scale of development anticipated, and that the site is accessible for development and operation so as to allow efficient development of key facility components within reasonable budgetary parameters – key site features or characteristics can have a significant influence on the manner in which a facility is constructed and operated.

Proximity to local catchment (residential and professional) will be critical to encourage participation by the expanding residential and workplace populations, and for connection to public transport. As part of the connection to the CBD, consideration should be given to improving the pedestrian experience between the heart of the city and the Mays Hill Precinct, particularly along Argyle and Pitt Streets.

In addition to determining the appropriate scale of core components within an aquatics facility, the option to co-locate or integrate complementary recreational, community or commercial components in to a facility may provide greater efficiencies, revenue opportunities (that might offset operational costs), and/or greater social benefits.

Assessment of viability is based on the project team's experience in design, delivery and operation of facilities of a similar scale. Viability will be explored further and in greater detail as part of the Feasibility Study to occur as a subsequent and separate phase of the facility planning process.

Site Conditions

Topography of the site will impact patron accessibility and amenity. It will also influence capital costs and operational efficiencies, and therefore sustainability.

A development site with good sub-surface conditions will be preferred over a site with poor ground conditions to reduce capital costs. More specifically, the preferred site will present sound founding materials and an absence of contaminated matter.

Heritage

The preferred site should enable development of an aquatic facility with minimal impact on the key heritage values of Government House and the broader Parramatta Park precinct.

Ecological

Development of the proposed facility will require a sensitive approach to the existing natural environment, being particularly mindful of a desire to retain native or remnant habitat where possible. Similarly, the preferred site should provide opportunity for establishment of outdoor recreation spaces (aquatic and fitness) that can be integrated within the park environment.

Transport & Infrastructure

Patron access, particularly from the Parramatta CBD and local train stations, is of paramount importance. The preferred development site must have potential for creation of strong connection to local pedestrian and cycle networks.

Recreation facilities require regular servicing for maintenance and operations (consumables). In addition, group access for teams, students and community groups must be catered for, requiring adequate space for bus set down and turn-around.

Proximity to, load capacity and availability of infrastructure will be critical. A site that is remote from existing services infrastructure will draw higher capital development costs to cover connection to existing utilities / mains.

Town Planning

The Mays Hill precinct is lined by residential development along its south-west edge. Consideration must be given to any likely impact on those residences that may be caused by the development of a community leisure facility. Impacts may include increased traffic, waste or acoustic outputs.

The preferred site must afford opportunity for development of an aquatic facility within the requirements of the planning scheme and that delivers the participatory and active living objectives of broader State Government health and wellbeing policies.

4. Site Suitability

4.1 Facility Typologies

Facility typologies have been determined by the broader project team to represent anticipated scale of facility reflective of preliminary benchmarking undertaken to date by the City of Parramatta.

Council is concurrently undertaking a review of aquatic needs and industry trends. This study does not presume a recommended typology at this stage as determination of facility components will be subject to consultation with the community and further feasibility, detailed needs analysis and financial analysis.

Therefore, this analysis is not intended to indicate preferred planning models or functional arrangements. More detailed facility planning models to explore functional and operational requirements will be developed in the next phase of project development should a suitable site be identified within the Mays Hill Precinct.

This study considers three options in regards to scale and facility typology. These typologies, resulting from industry benchmarking, assume variations on a generic modern aquatic offering often considered in Australian urban settings including collocation of indoor recreation facilities recently identified as being in short supply in Parramatta.

The existing outdoor facility (PWMSC) is included as a baseline.

Facility typologies are defined below:

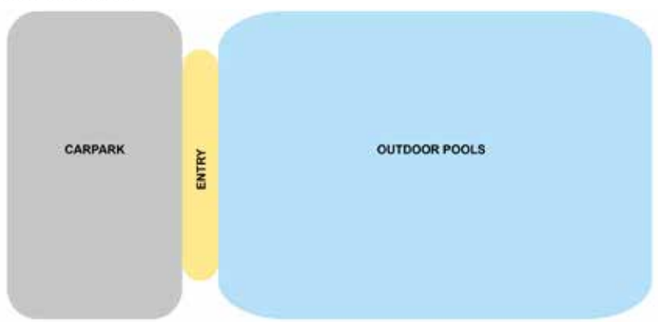
A. Outdoor only 'traditional' swimming centre with district services (equivalent of existing PWMSC), including:

- outdoor 50m competition pool with adequate seating and grassed areas surrounding the pool to cater for school swimming carnivals and club events
- outdoor learn-to-swim / program pool
- outdoor leisure pool
- outdoor diving pool and dive tower would be considered as an optional provision
- associated entry and kiosk, administration space, change rooms and plant buildings

Indicative areas as follows:

Outdoor pools and surrounding recreation space	14,000 sqm
Foyer / Café / Administration / First Aid	300 sqm
Change Rooms	240 sqm
Storage / Plant	450 sqm
On-grade Car Park	6,000 sqm
Total indoor area approximately	1,000 sqm.
Total outdoor area approximately	20,000 sqm.

Comparatively smaller indoor footprint limits opportunity for car park provision to be buried below structures.



Typology A Footprint

Indicative facility footprint for benchmarking purposes only.

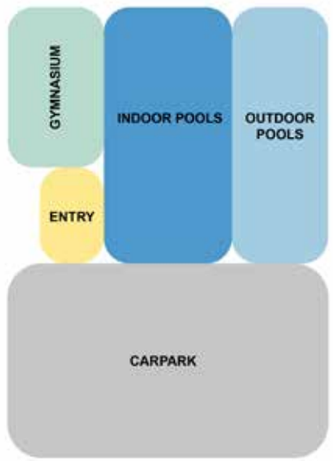
B. Modern indoor-outdoor aquatic facility with complementary gymnasium and group exercise rooms, café and crèche at suitable scale to meet the current and future needs of the community. Inclusive of potential commercial uses such as wellness suites (typically provided in modern aquatic facilities) and to enhance financial sustainability and meet changing community needs. Additional community facilities such as child care, meeting rooms and other facility components may also be considered.

Aquatic components to include

- outdoor 50m competition pool with adequate seating and grassed areas surrounding the pool to cater for school swimming carnivals and club events
- indoor 25m pool
- indoor learn-to-swim
- indoor leisure pool
- indoor warm water program pool
- indoor spa / sauna / steam

Indicative built areas as follows:

Outdoor 50m pool and surrounding recreation space	4,000 sqm
Indoor pool hall	3,600 sqm
Foyer / Café / Administration / First Aid	800 sqm
Creche / Community Meeting Rooms	400 sqm
Change Rooms	500 sqm
Storage / Plant	750 sqm
Gymnasium / Group Exercise / Dry Change	1,500 sqm
Consulting Suites	200 sqm
Basement Car Park (below pool hall)	4,000 sqm
Total indoor area approximately	12,000 sqm
Total outdoor area approximately	4,000 sqm
	(on-grade car park not considered).



Typology B Footprint

Indicative facility footprint for benchmarking purposes only.

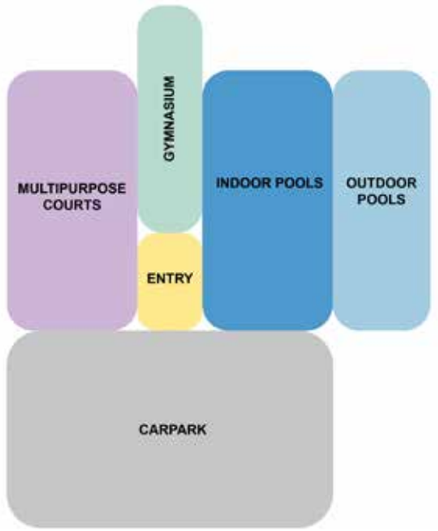
C. Option B, as noted above, with the addition of four indoor multi-purpose courts.

Indicative built areas as follows:

Outdoor 50m pool and surrounding recreation space	4,000 sqm
Indoor pool hall	3,600 sqm
Foyer / Café / Administration / First Aid	800 sqm
Creche / Community Meeting Rooms	400 sqm
Change Rooms	500 sqm
Storage / Plant	750 sqm
Gymnasium / Group Exercise / Dry Change	1,500 sqm
Consulting Suites	200 sqm
Stadium / Change	3,500 sqm
Basement Car Park (below pool hall / courts)	4,000 sqm
Total indoor area approximately	16,000 sq.
Total outdoor area approximately	4,000 sqm
	(on-grade car park not considered).

As noted above, the external space and on-grade car parking requirements for Typology A represent a direct replication of the existing PWMSC. Basement car parking has been assumed for Typologies B and C due to the anticipated visual impact of on-grade car park adjacent to a significant aquatic facility.

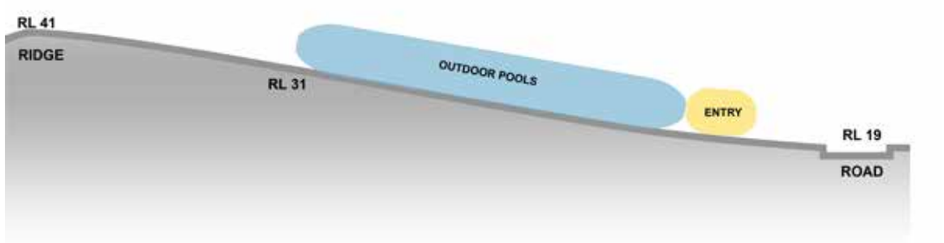
External space requirements for Typologies B and C are assumed to include an outdoor 50m pool and sufficient curtilage for comfortable accommodation of up to 800-1,000 event spectators and participants. Although bulk and scale of these facility typologies may be considerable, the sloped nature of much of Mays Hill Precinct provides opportunity for these larger scale typologies to be partially or substantially buried in the landscape to minimise visual impact. In doing this, more complex facilities with greater floor area may, indeed, appear to have a less significant impact on landscape character and vistas than a predominantly outdoor facility.



Typology C Footprint

Indicative facility footprint for benchmarking purposes only.

LOCATION 1 – ZONE 1



Indicative facility footprint and sectional arrangement diagram for benchmarking purposes only.

Site + Typology Options Analysis

The three development typologies have been located on each of the three preferred locations to determine suitability and development potential.

Facility siting analysis includes analysis of anticipated facility footprints within preferred locations to graphically represent likely scale of each facility typology within the Precinct. This analysis is not intended to indicate preferred planning models or functional arrangements. More detailed facility planning models to explore functional and operational requirements will be developed in the next phase of project development should a suitable site be identified within the Mays Hill Precinct.

Strengths, weaknesses, opportunities and threats for each development option are considered below.

LOCATION 1 – ZONE 1

TYPOLOGY A

Approx. 1,000 sqm internal space, 14,000 sqm external space.

Max. height approx. 5m.

Existing site consists of a level playing field and steep filled embankment. Adjacent to Pitt Street and Parramatta High School.

Proposal includes low scale building on Pitt Street with outdoor pools stepping up the site to the west. On-grade car park stepping with the site with access from Pitt Street.

Strengths	Weaknesses	Opportunities	Threats
— Proximity to catchment / market — Proximity to public transport and infrastructure — Minimal impact on existing open space — Favourable landscape character outcome — Comparatively minimal ecological impact — Connection to / activation of Jubilee Avenue — Planning impact minimal: no impact on views from adjacent properties along ridgeline to the west — Strong street address close to Parramatta CBD	— Site conditions not ideal; accessibility to outdoor pools from entry could be problematic due to likely requirement to provide extensive external ramping — Facility typology replaces existing provision, inconsistent with market demand / contemporary expectations	— Outdoor pools cascade down site — Share car park capacity with existing high school — Enables retention of appropriate space for development of community open space / formal playing fields within the precinct	— Viability of facility typology is questionable — On-grade car park impact on landscape character / amenity — Site conditions not ideal: requires disposal of fill forming existing playing field — Development in zone of sensitive heritage nature presents some risk

LOCATION 1 – ZONE 1

TYPOLOGY B

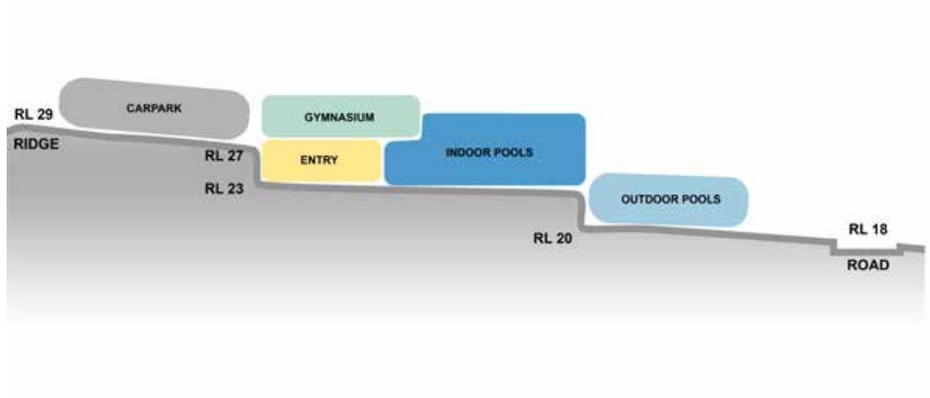
Approx. 8,500 sqm internal space, 4,000 sqm external space.

Max. height approx. 10m (partially buried).

Existing site consists of a level playing field and steep filled embankment. Adjacent to Pitt Street and Parramatta High School.

Proposal includes new large scale building on Pitt Street including partially buried indoor pools with dry fitness spaces above wet change, and outdoor pools stepping down the site to the north adjacent to Jubilee Avenue. On-grade car park to the south (adjacent Parramatta High School) stepping with the site with access from Pitt Street.

Strengths	Weaknesses	Opportunities	Threats
— Likely to be viable: indoor leisure provision within close proximity to catchment / market — Proximity to public transport and infrastructure — Connection to / activation of Jubilee Avenue — Comparatively minimal ecological impact — Planning impact minimal: no impact on views from adjacent properties along ridgeline to the west — Strong street address close to Parramatta CBD	— Some impact on existing open space	— Indoor pool hall may be partially sunken into site to limit impact on views from adjacent properties along ridgeline to the west, and to improve circulation between changes in level — Share car park capacity with existing high school — Enables retention of appropriate space for development of community open space / formal playing fields within the precinct	— On-grade car park impact on landscape character / amenity — Site conditions not ideal: requires disposal of fill forming existing playing field — Development in zone of sensitive heritage nature presents some risk



Indicative facility footprint and sectional arrangement diagram for benchmarking purposes only.

LOCATION 1 – ZONE 1

TYPOLOGY C

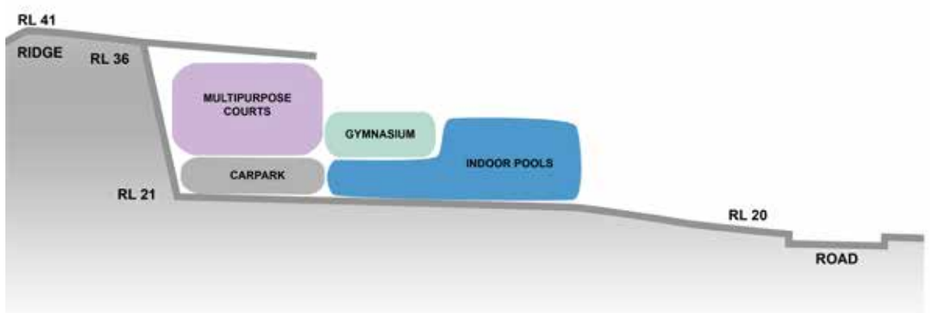
Approx. 12,000 sqm internal space, 4,000 sqm external space.

Max. height approx. 12m (substantially buried).

Existing site consists of a level playing field and steep filled embankment. Adjacent to Pitt Street and Parramatta High School.

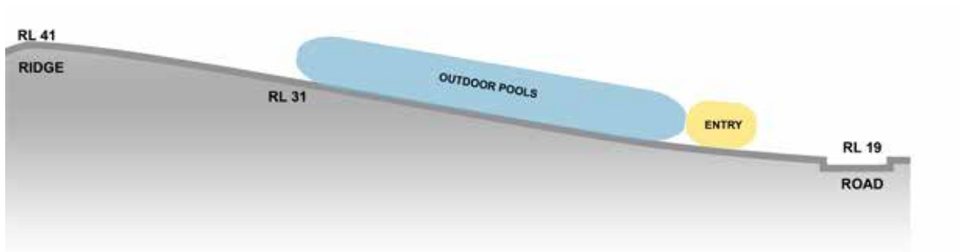
Proposal includes new large scale building on Pitt Street including buried car park and multi-purpose indoor courts with landscape roof over, partially buried indoor pools with dry fitness spaces above wet change, and outdoor pools stepping down the site to the north adjacent to Jubilee Avenue. Access to basement car park off Pitt Street.

Strengths	Weaknesses	Opportunities	Threats
— Strong likelihood of the facility being viable: indoor leisure provision within close proximity to catchment / market — Proximity to public transport and infrastructure — Connection to / activation of Jubilee Avenue — Planning impact minimal: no impact on views from adjacent properties along ridgeline to the west, with multi-purpose courts buried within existing topography — Strong street address close to Parramatta CBD	— Inadequate space for on-grade car park — Impact on existing open space — Comparatively greater ecological impact — Impact on views from adjacent properties along ridgeline to the west unless multi-purpose courts are sunken into slope	— Use site conditions to advantage: indoor multi-purpose courts may be partially sunken into site to limit impact on views from adjacent properties along ridgeline to the west — Car park located below indoor multi-purpose courts to limit impact on landscape character / amenity — Share car park capacity with existing high school — Enables retention of appropriate space for development of community open space / formal playing fields within the precinct	— Cost to locate car park below multi-purpose courts / pool hall — Site conditions not ideal: requires disposal of fill forming existing playing field — Development in zone of sensitive heritage nature presents some risk



Indicative facility footprint and sectional arrangement diagram for benchmarking purposes only.

LOCATION 2 – ZONE 2



Indicative facility footprint and sectional arrangement diagram for benchmarking purposes only.

LOCATION 2 – ZONE 2

TYPOLOGY A

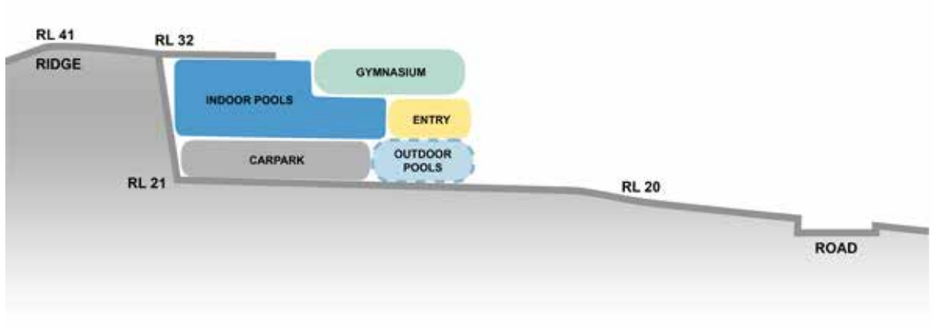
Approx. 1,000 sqm internal space, 14,000 sqm external space.

Max. height approx. 5m.

Existing site consists of lightly sloping former golf course features, with slope increasing to the west. Adjacent to Park Parade and intersection with Pitt & Argyle Streets.

Proposal includes low scale building on Park Parade with outdoor pools stepping up the site to the west. On-grade car park stepping with incline of Park Parade with access from Park Parade.

Strengths	Weaknesses	Opportunities	Threats
— Proximity to catchment / market — Proximity to public transport and infrastructure — Minimal impact on existing open space — Favourable landscape character outcome — Comparatively minimal ecological impact — Connection to / activation of Jubilee Avenue — Planning impact minimal: no impact on views from adjacent properties along ridgeline to the west — Strong street address close to Parramatta CBD — Enables retention of open space and playing field adjacent to high school	— Site conditions not ideal; accessibility to outdoor pools from entry could be problematic due to likely requirement to provide extensive external ramping — Facility typology replaces existing provision, inconsistent with market demand / contemporary expectations	— Outdoor pools cascade down site — Enables retention of appropriate space for development of community open space / formal playing fields within the precinct	— Viability of facility typology is questionable — On-grade car park impact on landscape character / amenity — Development in zone considered to be important open space from a heritage perspective, though building bulk will be obscured by raised railway



Indicative facility footprint and sectional arrangement diagram for benchmarking purposes only.

LOCATION 2 – ZONE 2

TYPOLOGY B

Approx. 8,500 sqm internal space, 4,000 sqm external space.

Max. height approx. 10m (partially buried).

Existing site consists of lightly sloping former golf course features, with slope increasing to the west. Adjacent to Park Parade and intersection with Pitt & Argyle Streets.

Proposal includes new large scale building on Park Parade including partially buried indoor pools with dry fitness spaces above wet change, and outdoor pools stepping down the site to the east adjacent to Jubilee Avenue. On-grade car park stepping with incline of Park Parade with access from Park Parade.

Strengths	Weaknesses	Opportunities	Threats
— Likely to be viable: indoor leisure provision within close proximity to catchment / market — Proximity to public transport and infrastructure — Connection to / activation of Jubilee Avenue — Planning impact minimal: no impact on views from adjacent properties along ridgeline to the west — Strong street address close to Parramatta CBD — Enables retention of open space and playing field adjacent to high school	— Impact on existing open space	— Indoor pool hall may be partially sunken into site to limit impact on views from adjacent properties along ridgeline to the west, to improve circulation between changes in level, and to limit impact on views to the site from Parramatta Park — Enables retention of appropriate space for development of community open space / formal playing fields within the precinct	— On-grade car park impact on landscape character / amenity — Development in zone considered to be important open space from a heritage perspective, though building bulk will be obscured by raised railway

LOCATION 2 – ZONE 2

TYPOLOGY C

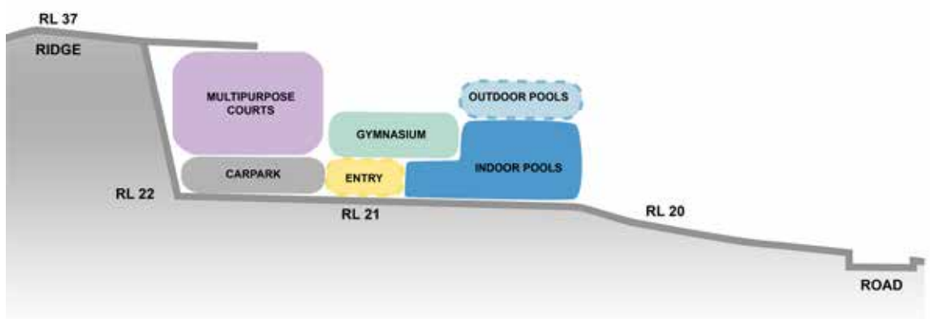
Approx. 12,000 sqm internal space, 4,000 sqm external space.

Max. height approx. 12m.

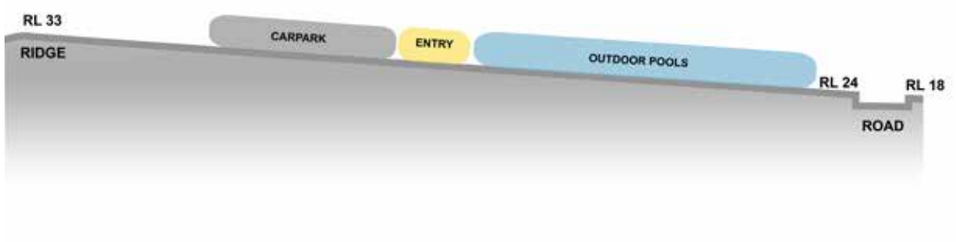
Existing site consists of lightly sloping former golf course features, with slope increasing to the west. Adjacent to Park Parade and intersection with Pitt & Argyle Streets.

Proposal includes new large scale building on Park Parade including buried car park and multi-purpose indoor courts with landscape roof over, indoor pools stepping up along Park Parade with dry fitness spaces above wet change behind, and outdoor pools stepping up the site to the north further along Park Parade. Access to basement car park off Park Parade.

Strengths	Weaknesses	Opportunities	Threats
— Strong likelihood of the facility being viable: indoor leisure provision within close proximity to catchment / market — Proximity to public transport and infrastructure — Connection to / activation of Jubilee Avenue — Planning impact minimal: no impact on views from adjacent properties along ridgeline to the west — Strong street address close to Parramatta CBD — Enables retention of open space and playing field adjacent to high school	— Some impact on existing open space	— Use site conditions to advantage: indoor multi-purpose courts may be partially sunken into site to limit impact on views from adjacent properties along ridgeline to the west — Car park located below indoor multi-purpose courts to limit impact on landscape character / amenity — Indoor and outdoor pools may cascade down site to activate Park Parade — Enables retention of appropriate space for development of community open space / formal playing fields within the precinct	— Cost to locate car park below multi-purpose courts — Development in zone considered to be important open space from a heritage perspective, though building bulk will be obscured by raised railway



Indicative facility footprint and sectional arrangement diagram for benchmarking purposes only.



Indicative facility footprint and sectional arrangement diagram for benchmarking purposes only.

LOCATION 3 – ZONE 3

TYPOLOGY A

Approx. 1,000 sqm internal space, 14,000 sqm external space.

Max. height approx. 5m.

Existing site consists of lightly sloping former golf course features. Adjacent to Park Parade.

Proposal includes low scale building set back from Park Parade with outdoor pools to the west. On-grade car park off Park Parade.

Strengths	Weaknesses	Opportunities	Threats
— Minimal impact on existing open space — Favourable landscape character outcome — Comparatively minimal ecological impact — Site conditions reasonable — Planning impact minimal: no impact on views from adjacent properties along ridgeline to the west — Low heritage impact — Enables retention of open space and playing field adjacent to high school	— Viability risk: comparatively remote from catchment / market — Limited street presence — Comparatively remote from public transport — Comparatively remote from key utility infrastructure — Facility typology replaces existing provision, inconsistent with market demand / contemporary expectations	— Strong potential to develop ‘pool in the park’ character	— Viability of facility typology is questionable — On-grade car park impact on landscape character / amenity — Limits potential for development of community open space / formal playing fields within the precinct

LOCATION 3 – ZONE 3

TYPOLOGY B

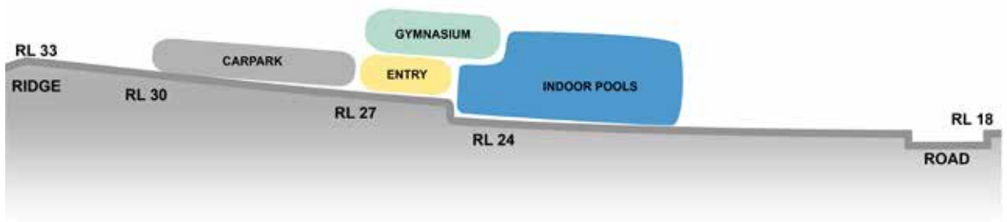
Approx. 8,500 sqm internal space, 4,000 sqm external space.

Max. height approx. 10m.

Existing site consists of lightly sloping former golf course features. Adjacent to Park Parade.

Proposal includes new large scale building set back from Park Parade including indoor pools with dry fitness spaces above wet change, and outdoor pools to the north-east adjacent to Park Parade. On-grade car park off Park Parade.

Strengths	Weaknesses	Opportunities	Threats
— Planning impact minimal: limited impact, if any, on views from adjacent properties along ridgeline to the west — Low heritage impact — Site conditions reasonable	— Impact on existing open space – facility of significant scale / bulk likely to divide the precinct — Viability risk: comparatively remote from catchment / market — Limited street presence — Comparatively remote from public transport — Comparatively remote from key utility infrastructure	— Vistas to parkland setting from indoor pools	— Planning impact: likely impact of acoustic amenity on adjacent properties to the west — On-grade car park impact on landscape character / amenity — Limits potential for development of community open space / formal playing fields within the precinct



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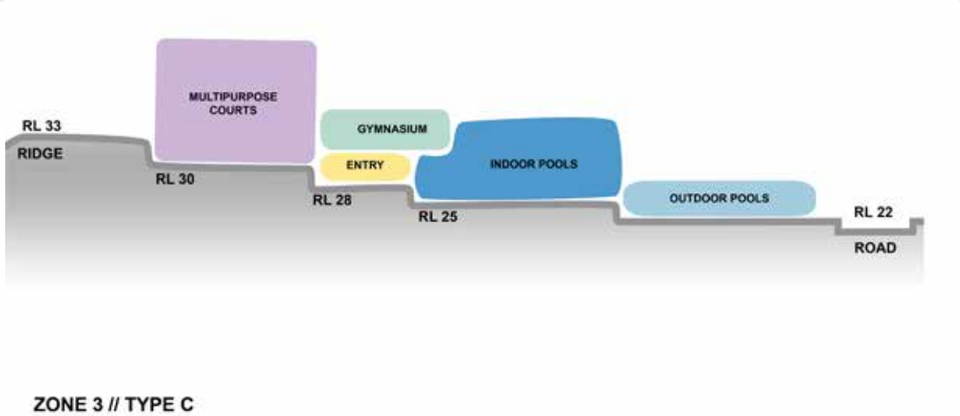

Indicative facility footprint and sectional arrangement diagram for benchmarking purposes only.

LOCATION 3 – ZONE 3

TYPOLOGY C

Approx. 12,000 sqm internal space, 4,000 sqm external space.

Max. height approx. 12m.

Existing site consists of lightly sloping former golf course features. Adjacent to Park Parade.

Proposal includes new large scale building set back from Park Parade including indoor multi-purpose courts, indoor pools with dry fitness spaces above wet change, and outdoor pools to the north-west adjacent to Park Parade. On-grade car park off Park Parade.

Option to locate car park below indoor multi-purpose courts.

Strengths	Weaknesses	Opportunities	Threats
— Planning impact minimal: limited impact, if any, on views from adjacent properties along ridgeline to the west — Low heritage impact — Site conditions reasonable	— Impact on existing open space – facility of significant scale / bulk likely to divide the precinct — Viability risk: comparatively remote from catchment / market — Limited street presence — Comparatively remote from public transport — Comparatively remote from key utility infrastructure	— Vistas to parkland setting from indoor pools — Car park located below indoor multi-purpose courts to limit impact on landscape character / amenity	— Planning impact: likely impact of acoustic amenity on adjacent properties to the west — On-grade car park impact on landscape character / amenity — Limits potential for development of community open space / formal playing fields within the precinct

SUMMARY OF ANALYSIS	LOCATION 1	LOCATION 2	LOCATION 3
 Aquatic facility typologies have been located on each of the preferred locations to determine suitability to accommodate an aquatic facility.	**Highly Suitable** Operational viability of facility typologies very likely. Proximity to catchment, infrastructure and transport. Opportunity to activate Pitt Street with urban edge. Comparatively limited (perceived) impact on open space of Mays Hill Precinct. Bury bulky components into hill to preserve amenity. Remote from residential properties. Possible heritage implications. Requires relocation of Parramatta High School playing fields to elsewhere in the Precinct. Costs associated with substantially sinking facility into fill.	**Highly Suitable** Operational viability of facility typologies very likely. Proximity to catchment, infrastructure and transport. Bury bulky components into hill to preserve amenity. Remote from residential properties. Likely to have some impact on open space of Mays Hill Precinct. Possible heritage implications. Costs associated with substantially sinking facility into fill.	**Moderately Suitable** Unlikely to have significant heritage implications. Operational viability of facility typologies questionable. Comparatively remote from catchment, infrastructure, transport. Likely to have significant impact on open space of Mays Hill Precinct, large scale volume not able to be buried. Likely to have impact (noise, amenity) on adjacent residential properties due to the requirement to be set back from Park Parade (re-aligned Governor's Avenue).

5. Conclusion

Analysis of the three nominated locations within the Mays Hill precinct indicates that both Locations 1 and 2 (in Zones 1 and 2) are suitable for the siting of an aquatic facility. The sloping nature of Locations 1 and 2 will present construction and cost challenges, however, the slope also provide opportunity for larger scale typologies to be partially or substantially buried in the landscape to minimise visual impact within the precinct. In doing this, more complex facilities with greater floor area may, indeed, appear to have a less significant impact on landscape character and vistas than a predominantly outdoor facility.

Further and detailed site studies are now required to confirm the feasibility of developing an aquatic facility in each of these locations. The feasibility phase will investigate key assessment criteria, including heritage impacts, traffic and infrastructure requirements in greater detail. It is anticipated the feasibility study will involve needs analysis and community consultation in conjunction with Stage 2 of the Parramatta Park Trust master plan process. Outcomes from the Feasibility Study will include confirmation of a preferred site within the precinct, detailed assessment of planning requirements, an established area schedule setting out scale of required facility components, preliminary concept plans including general arrangement drawings and indicative modelling to determine layout and physical scale, and preliminary cost information including capital development costs and ongoing operational cost modelling. The Feasibility study may also consider management strategies and funding models for the aquatic facility.

This Site Suitability Study has generated a number of key design parameters for consideration during future phases of planning for a contemporary community aquatic facility within Mays Hill Precinct.

1. Aquatic facility development should occur so as not to disrupt or disturb key heritage features, including ridgelines, water courses, Governor's and Jubilee Avenues and the Gateways.
2. Aquatic facility development should occur so as to limit impact on views across the precinct, and to the precinct, particularly from places of significant heritage value.
3. Visual and physical permeability is to be carefully considered to encourage interaction with and participation by a broad representation of the community.
4. Minimise loss of, and impact on, open space across the Precinct.
5. Aquatic facility development should occur within close proximity to public transport and so as to be accessible for the community, the facility should establish an identifiable presence on the edge of the Mays Hill Precinct.
6. Where possible, aquatic facility development should take advantage of topographical conditions to minimise bulk and scale of the facility, and to minimise impact on landscape character.
7. On-grade car parking, other than short-term set down and pick-up spaces, is to be avoided where possible.

Location 1 is considered suitable due to its high likelihood of a facility on this site being viable from service delivery and operational perspectives.

- the site is within close proximity to the Parramatta CBD, and therefore, a key catchment area;
- there is potential to create a strong street address / presence on Pitt Street, and indeed has the potential to generate or accelerate further development / regeneration along Pitt Street;
- there is opportunity for the considerable bulk of the facility (if Typologies B or C were pursued) to be visually aligned with the Pitt Street curtilage, reducing the perceived impact on the open space of the Mays Hill Precinct;
- the site is within close proximity to public transport and key service infrastructure;
- nestling the bulk of the facility into the topography (if Typologies B or C were pursued) will mean limited impact on existing open space, and on views across the site from properties to the west (the car park may then be located below the indoor multi-purpose courts to limit impact on landscape character and amenity);
- this development option creates an opportunity to provide enhancement to the broader precinct via locating the outdoor pool and associated spaces to create a strong connection to and activation of Jubilee Avenue;
- this development option enables retention of appropriate space for development of community open space and formal playing fields within the precinct.

While a facility of this size will have some impact on the character and extent of open space in the Mays Hill Precinct, this location is considered one of the more suitable and more feasible of the alternatives investigated during the course of this study. We note that there will be reasonably onerous approval requirements with specific regard to heritage, as would be the case with most sites through Mays Hill.

Potential issues with this site include the need to relocate sporting fields elsewhere within the precinct, mitigating any other impacts and concerns in regards to the operation of the adjacent school, and the cost implications of likely contamination (to be confirmed) within the fill underneath the school oval.

Location 2 is considered suitable due to its high likelihood of a facility on this site being viable from service delivery and operational perspectives.

- the site is within close proximity to the Parramatta CBD, and therefore, a key catchment area;
- there is potential to create a strong street address / presence at the junction of Park Parade and Pitt Street, including creation of a public plaza as a forecourt to the facility;
- the site is within close proximity to public transport and key service infrastructure;
- nestling the bulk of the facility into the topography (if Typologies B or C were pursued) will mean limited impact on existing open space, and on views across the site from properties to the west (the car park may then be located below the indoor multi-purpose courts to limit impact on landscape character and amenity);
- this development option creates an opportunity to provide enhancement to the broader precinct via a strong connection to and activation of Jubilee Avenue;
- the indoor and/or outdoor pools may cascade down site to activate Park Parade;
- this development option enables retention of appropriate space for development of community open space and formal playing fields within the precinct.

While a facility of this size will have some impact on the character and extent of open space in the Mays Hill Precinct, this location is considered one of the more suitable and more feasible of the alternatives investigated during the course of this study. We note that there will be reasonably onerous approval requirements with specific regard to heritage, as would be the case with most sites through Mays Hill.

This site may be easier to develop more quickly, independent from other issues such as co-location with schools and relocation of playing fields.