T.C.L

City of Norwood Payneham & St Peters

Patterson Reserve Community & Recreation Precinct

Masterplan Report

May 2021

Client:

City of Norwood Payneham & St Peters

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1.0 INTRODUCTION

The City of Norwood Payneham & St Peters is a dynamic and vibrant inner-urban municipality with a rich culture and history. In recent years, the City has experienced a net growth in population related to an increasing number of dwellings, albeit with decreasing household size. As part of its open space and recreational assets, the Council owns and operates two swimming facilities, the Norwood Swimming Centre, located in Kensington, and the Payneham Memorial Swimming Centre located in Felixstow. Whilst the Norwood Swimming Centre is generally surrounded by residential development, the Payneham Memorial Swimming Centre forms part of a larger recreational and community precinct, the Patterson Reserve Community and Recreation Precinct.

Although both Swimming Centres have served the community well over the years, the infrastructure at both centres is ageing and the trend towards aquatic recreational facilities has evolved significantly since their establishment. The community is now seeking a higher standard and expects a greater variety of recreational activities from each facility.

In light of these factors, the Council has resolved to undertake significant redevelopment of the Payneham Memorial Swimming Centre to ensure that it remains viable and continues to offer a high standard of aquatic recreational facilities to the community.

Payneham Memorial Swimming Centre

On average, the Payneham Memorial Swimming Centre attracts approximately 75,000 and 80,000 patrons during the swimming season, which runs from October through to mid-April.

The City of Norwood Payneham & St Peters has engaged the TCL consultant team to develop a detailed Masterplan for the future redevelopment of the Payneham Memorial Swimming Centre, as well as some guidance of opportunities to integrate the Centre within the wider Patterson Reserve Community and Recreation Precinct.

This report is a summary of the Masterplanning process undertaken and puts forward design proposals for the master planning of both the Centre and the Precinct.

The report assesses the site in detail by highlighting the current inherent strengths and weaknesses, such as its accessibility to users and general fitness for purpose.

The appendices also summarise the consultation undertaken by the Council.

Included in the Appendix is a copy of the report prepared by Aquatic One, which assesses the options and limitations for the redevelopment of the existing pool structures and associated plant and equipment.

2.0 CONTEXT

2.1 Site History

The proposal to construct a full-sized outdoor Olympic swimming pool in one of the then faster-growing urban areas in eastern Adelaide was first put forward in late 1964. Funds were obtained over the following years with the City of Payneham securing contributions from the local community through organisations such as the Payneham RSL and St Peters and Payneham Rotary Clubs, and a site in Felixstow adjacent Third Creek was acquired for the project.

The Payneham Memorial Swimming Pool was officially opened by Payneham Mayor, Max Redden, on 10 February 1968, and dedicated to honouring soldiers of the area who had served in combat. Playing fields, lawns and gardens were also developed on the site as a "joint recreation scheme" for the growing local population.

The Payneham Swimming Club was established at the pool when a club based at the Adelaide City Baths originally known as the 'Richardson's Industries Patriotic Club', and later the 'Chrysler Swimming Club', relocated to the newly opened pool following the demolition of the City Baths in 1969. The Club produced many champion swimmers through the seventies and more recently nurtured the talents of Olympic silver medallist Glen Beringen and Commonwealth Games gold medallist Martin Roberts.

2.2 Walking the Site

Identifying the characteristic attributes are best appreciated by walking the site, providing an important foundation to assess how each unique Masterplan strategy can reinforce and enhance the core positive qualities of the place, while ensuring site weaknesses are appropriately addressed. At Payneham Memorial Swimming Centre, the following qualities demand attention:

Sense of Arrival

- *The site lacks a strong sense of arrival due to the unassuming architecture of the buildings, the dominance of the featureless bituminised carpark surrounding the entry point, and minimal entrance signage.*
- *The site lacks a visual presence on its only street frontage along OG Road and signage is poor at the carpark entry.*

Community Facility

- *The Centre is popular with its local community and receives high visitation on hot summer days.*
- *The facility is affiliated with local suburban swimming clubs, and houses meeting rooms for club meetings.*
- *Baseball & Lacrosse Clubhouse is increasingly popular, with training and games on week nights and weekends.*

Parkland Setting

- *Generous wide open lawns surrounding the main pool and two children's pools create a strong parkland quality for the site, allowing good sightlines for supervision.*
- *A small number of large mature trees are located within the lawns providing good shade for pool users.*

Accessibility and Code Compliance

- *Upgrades to the main pool and associated buildings will form part of the development, improving pool accessibility and functionality.*
- *Accessible parking spaces in the carpark need to be reviewed for compliance with current standards.*
- *Baseball & Lacrosse Clubhouse require a review & upgrade of facilities.*

Aging and Underutilised Buildings

- *The Swimming Centre & Baseball / Lacrosse buildings are in average condition, are functional but eg. the Swim Centre offers opportunities to improvements the efficiency of staff operations, particularly in the entry, kiosk, first aid and storage spaces.*
- *Modernisation of the change room facilities is required to better accommodate regular family and school groups visitors.*

Fragmented Community Precinct

- *The Centre is located centrally within a precinct of fragmented community assets, including the Council library, a youth centre, a community primary school, a memorial garden and several sports fields and club facilities.*
- *Each facility operates independently of each other without any sense of being part of an integrated and connected community precinct.*

3.0 KEY DESIGN MOVES

In proposing the masterplan, a series of key design moves have been identified to guide further and more detailed planning and design.

The Patterson Reserve Community & Recreation Precinct

1. *Create a park entrance with an activated central axis.*
2. *Relocate and upgrade the Baseball and Lacrosse clubrooms along the central axis.*
3. *Maintain and protect significant trees.*
4. *Enhance the Third Creek corridor and connection to local path networks.*
5. *Provide adequate parking to meet a variety of needs.*

Payneham Memorial Swimming Centre

1. *Create a new entrance in a park setting.*
2. *Maintain an open-air/outdoor swimming experience for the community and its user groups.*
3. *Create a new two-storey Sports and Leisure Centre.*
4. *Consolidate a new 25m lap pool and learn to swim under a semi-enclosed roof for year-long use.*
5. *Extend the swimming centre water activities to entice teenagers and younger patrons.*
6. *Provide a diverse range of shade options for patrons.*
7. *Provide adequate parking to meet the needs of an enhanced facility.*

Precedent Images

The following images are examples of the desired character for the landscape, built form and aquatic elements that are envisioned for the Patterson Reserve Community & Recreation Precinct and Payneham Memorial Swimming Centre.














4.0 THE MASTERPLAN

4.1 The Patterson Reserve Community & Recreation Precinct

The Masterplan for the Patterson Reserve Precinct seeks to draw together several community assets within the area including the sports fields, play facilities, the Library, Youth Centre and the Payneham Memorial Swimming Centre. Seen holistically, new landscaping unifies the Third Creek culvert with a new axial pathway connecting OG Road to the centre of the precinct.

Highlighted by a large-scale sculptural marker at the OG Road site entry and the adjacent new entrance to the Swim Centre, the axial path features a relocated memorial garden and a new playground which replaces the existing playground adjacent to the library. At the pivotal location at the intersection of the path and Third Creek, is a new clubroom building with dedicated toilets, café, storage and broad decking across the creek culvert.

A new multilevel carpark services the reserve, its sports fields, and the new Swim Centre with approximately 250+ spaces, while retaining the existing form of the private open-air carparking off OG Road.

In the reserve, dated facilities have been demolished and relocated to the clubroom building, to increase the number and variety of playing fields. Significant trees across the reserve have been retained and provide shading for both park spaces and sports field audiences.

The demolition of the playground along Turner Street allows the off-street parking along Turner Street is to be increased and rationalised and new club change rooms and storage space to be provided.


T U R N E R S T
R O A D
O G
Existing library building, carparking increased and play-ground relocated
New pool plantroom, with access off OG Road
New 2-storey sports and leisure centre, providing pool facilities and cafe, new gym/dry pool training, clubrooms and lettable function areas
New entry marker and axial landscaped walkway con-necting to Patterson Reserve, incorporating new memorial garden and playground
Existing private carpark
New multilevel carpark building, (approx. 250+ spaces over 3 levels)
Existing Private Office Buildings
New off-street parking (approx. 35 spaces) with bridge connection to existing library carpark
Existing youth centre building
New sportsclub change facilities and storage building
New clubrooms, incorporating cafe, toilets and storage facilities, with suspended deck plaza area over culvert
Reorientated Patterson Reserve playing fields - existing clubrooms and carpark relocated to increase area for playing fields
Third Creek culvert (note: dashed line indicates conceptual scope of potential future widening and naturalisation of waterway)
Payneham Memorial Swimming Centre Project Area
0
25
50

4.2 Payneham Memorial Swimming Centre

The Payneham Memorial Swimming Centre is reordered to ensure the centre has a far greater street presence along OG Road alongside the Payneham Community Library.

A new two-storey sports and leisure centre building provides an administrative base and a range of new facilities. The new purpose-made, architecturally-designed building will be the central focus of the site as the single point of entry and exit, providing all change facilities, as well as a café, gym and dry pool training equipment, multisport clubrooms and lettable function areas, and a dedicated access point to the new water slides and other water park play activities incorporated into the site. A large overhanging roof form provides shelter and shade at the most active portion of the site and encloses a new 8-lane, 25m learn-to-swim pool along with dedicated school changerooms and all associated plant rooms and circulation spaces.

The existing 50m 8-lane lap pool is substantially upgraded, with an option to extend the roof form over the large pool in the future, providing year-round swim facilities to all pools.

High platform waterslides and multi-use water play facilities, including zero-depth splash pads for toddlers, provide a range of offerings for children and adults of all ages and abilities.

The 50m pool and play areas are surrounded by lawn and ornamental planting, creating a park setting within the wider open public reserve. The retained existing trees and new shelters and umbrellas allow for flexible shading options across the site.

Shade structures and barbeques on grassed embankment

New pool plantroom, with access off OG Road

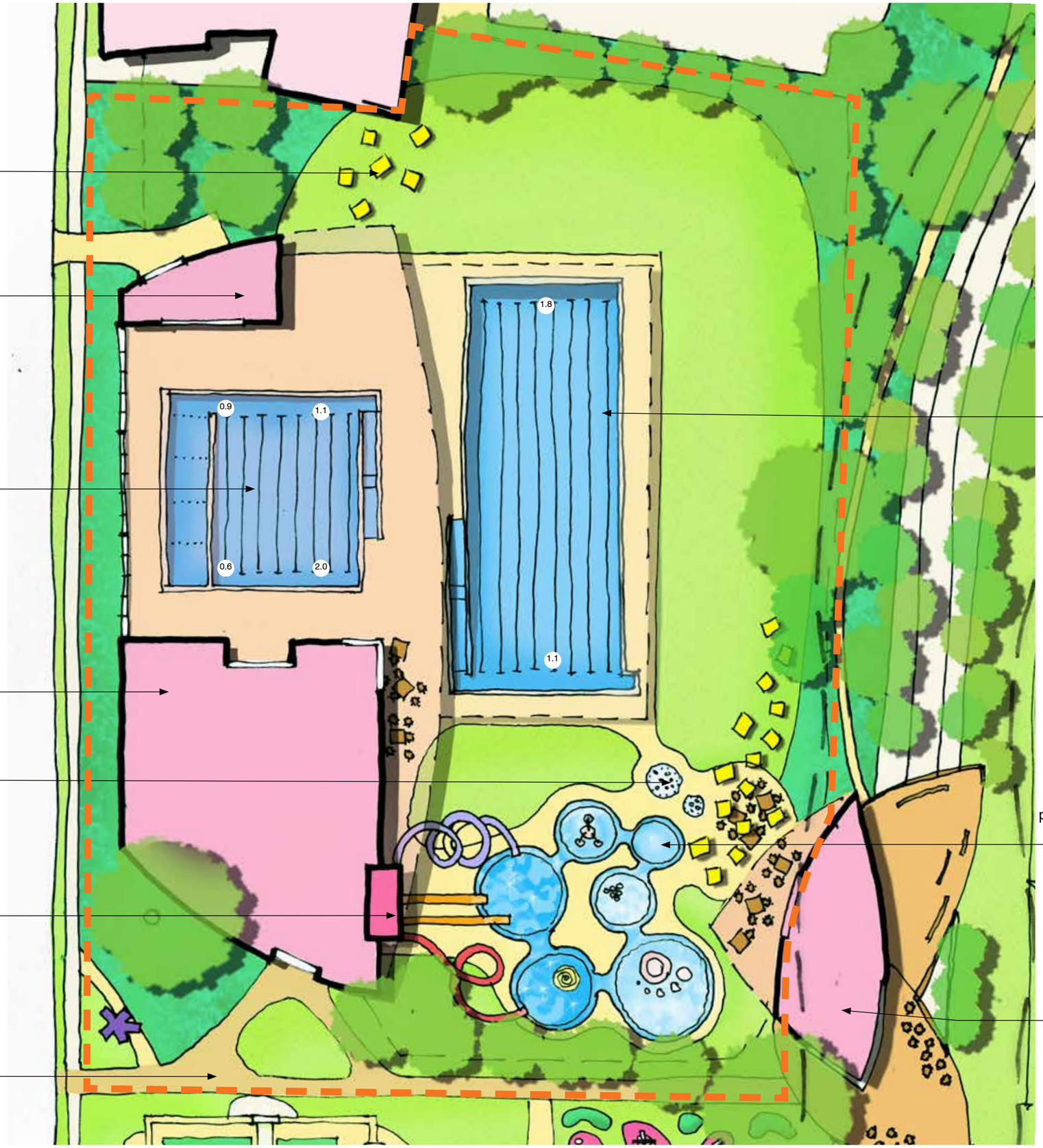
New semi-enclosed and roofed 25m 8-lane lap pool and learn-to-swim pools

New 2-storey sports and leisure centre, providing pool facilities, new gym/dry pool training, clubrooms and lettable function areas

Zero-depth splash pad

High platform water slides

Central landscaped walkway accessing swim centre, sports fields and public park, with sculptural marker at entry



Existing 50m pool upgraded in existing location (optional roof over shown dashed)

New leisure pools with interactive waterplay and high platform water slides integrated with building

New community multipurpose sports clubroom/cafe building servicing public park, sports clubs and swim centre, with shared kitchen and toilets, and decks over Third Creek to connect to sports fields

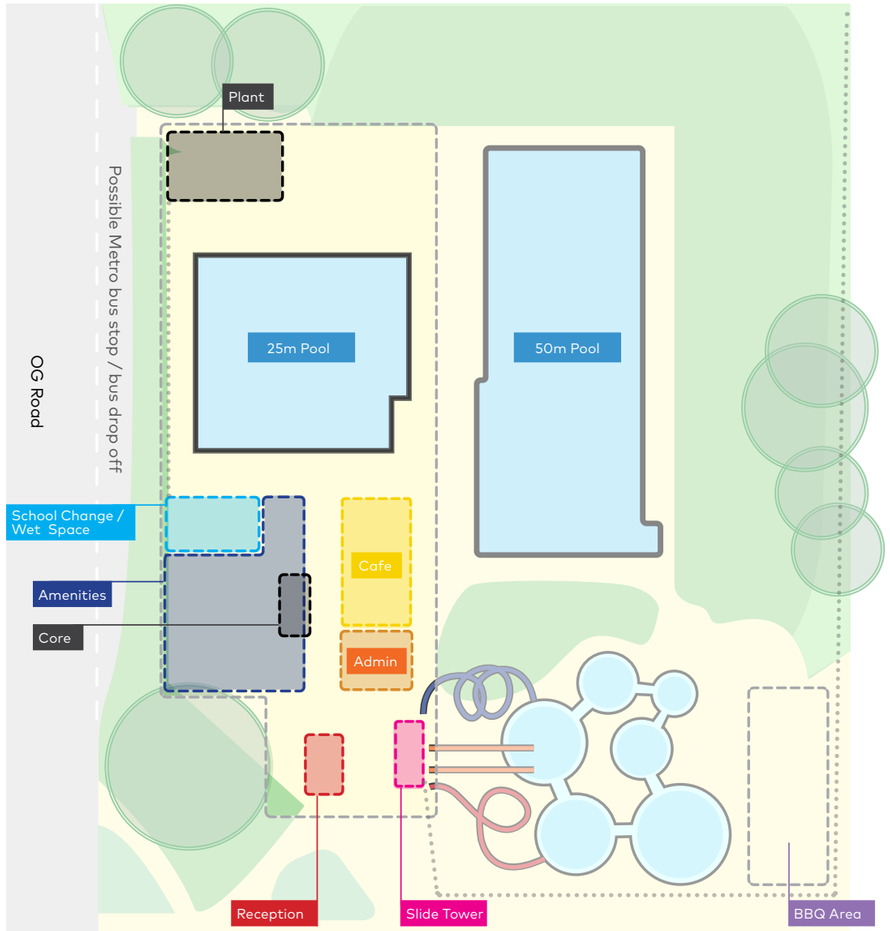
0 25 50

5.0 MASTERPLAN ELEMENTS

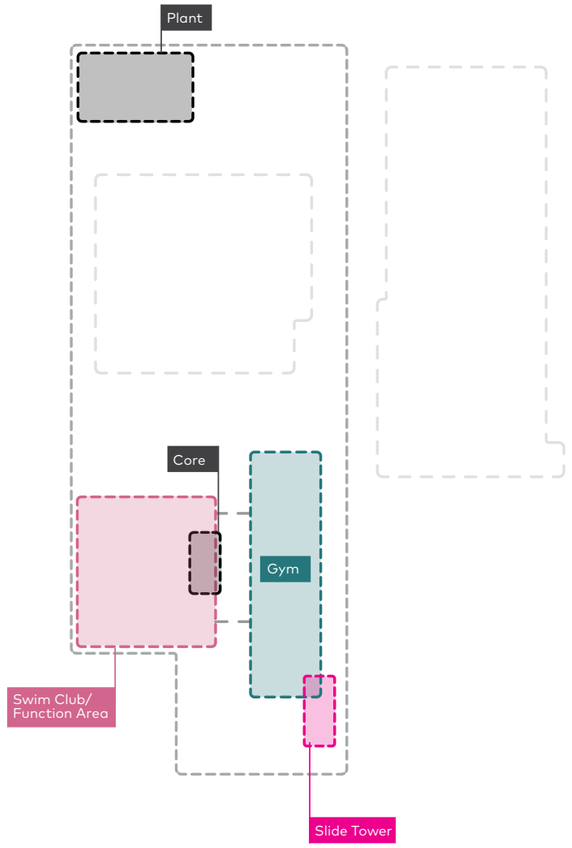
5.1 Architectural Schematic Spatial Arrangement

The following diagram provides a schematic floor plan arrangement for the proposed building facilities for both the ground floor and first floor. This is to be read in conjunction with the adjacent Building Area Analysis that provides approximate floor area requirements.

Ground Floor Plan



First Floor Plan



Building Area Analysis

**all areas approximate only*

Payneham Memorial Swimming Centre	
Existing facility	Area*
Entrance	115
Administration areas	63
Toilets and change room	350
Café and storage	125
Swimming club	118
External plant room (upgraded)	127
	898

Option B2	Area*
Steel framed car park 250 cars (G, 1 and 2)	6000
New external plant room	160
Double storey facility	1500
Entry (ground floor)	170
New toilets / change rooms (ground floor)	340
School change / wet function space (ground floor)	80
New café and storage	140
New hydrotherapy and gym facilities (first floor)	290
New swim club and letable function areas (first floor)	200
Outdoor terrace (first floor)	-
Slide tower	80
Storage	200
New roof cover for new 25m pool	1800
3m high Palisade fence to OG road	
	10960

5.2 Aquatic Elements

The aquatic elements intended for the facility are described in the following section. The general sizing, specifications or design intent of the elements have been obtained from the briefing information provided by the client.

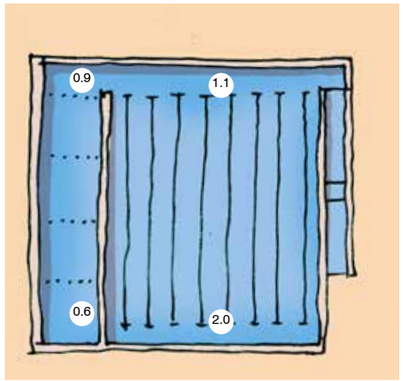
50m Pool

The 50m pool is an existing reinforced concrete lap pool, consisting of 8 swimming lanes. The pool is 1.1m deep at the shallow end, grading down to 1.8m at the deep end. Start blocks are placed at the deep end of the pool, with access provided through ladders along the side walls. No form of compliant disabled access if provided. The pool structure and finishes will be upgraded as part of an existing project, however the filtration equipment will be located in the new equipment room.

The general properties of the pool are as follows.

Element	Value	Comment
Length	50,275 mm	Obtained from the survey, the pool is a 55 yard pool
Width	18,500 mm	Obtained from the survey
WSA	930 m²	Nominal pool area
Depth	~1.5m	Average depth. Pool grades from 1.1m to 1.8m
Pool Volume	1,350m³	Nominal pool volume

25m Pool



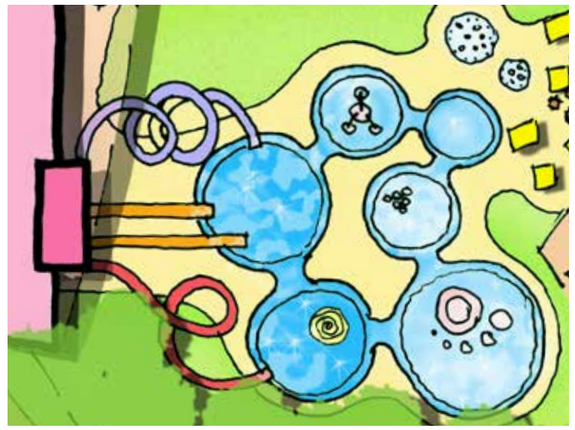
The 25m pool is a reinforced concrete multi-use pool, consisting of 8 lap lanes, 5 learn-to-swim areas and a disabled access ramp. The pool is 1.1m deep at the shallow end, grading down to 2.0m at the deep end.

The general properties of the pool are as follows.

Element	Value	Comment
Length	25m	Nominal pool length
Width	25m	Nominal width, consisting of 20m of lap lanes and 5m of LTS area. Dividing wall and ramp excluded
WSA	655 m²	Nominal pool area
Depth	~1.4m	Average depth
Pool Volume	885m³	Nominal pool volume

Leisure Pool / Water slides

The Leisure Pool is a combination of zero-depth splash pads, shallow water leisure pools and dry-deck runout waterslides. As the design of the waterplay is preliminary only, determining surface area statistics does not provide a large benefit at this point as filtration system sizes relate to feature flow instead. Typical feature flows are currently selected, with appropriate waterplay designs to be developed accordingly.



The general properties of the pool are as follows.

Element	Value	Comment
Nominal Size	750m²	Approximated from plan
Waterslide Flow	180 L/s	45 L/s per flume, four flumes
Waterplay Flow	50 L/s	Nominal flow for a variety of waterplay elements.

Water Treatment System

Introduction

The following section discusses the elements pertaining to the swimming pool's filtration, sanitation and circulation systems.

Water Treatment System Methodologies
There are numerous different swimming pool filtration, sanitation and circulation system options available; the correct system for a particular installation depends on several factors specific to each site and installation. The design is currently too preliminary to allow for accurate comparisons, however for the sake of equipment room sizing and services coordination, the types of equipment utilized are provided below.

Filtration System
Ultrafine Filtration

Figure 5: Typical commercial-grade ultrafine filter

A perlite-based ultrafine pool filter provides a high level of filtration performance, a moderate level of maintenance and a higher capital cost, however the capital cost can be balanced at times by the reduced footprint over sand filters. It involves coating a large number of small filter 'tubes' or 'candles' inside a pressure vessel with a thin (~10mm) coating of perlite filter media; a white powdered substances commonly used in agriculture. The perlite media mechanically removes particles from the pool water. The filter is 'regenerated' on a daily basis to redistribute the media inside the filter, and cleaned on a monthly basis by dislodging the media from the filter, discharging to sewer and vacuuming in new media.

Pumping System
Stainless steel end-suction centrifugal circulation pumps are proposed for this project, as they are commercial-grade, high-efficiency, suitable for the duties required and have a long lifespan. Pumps are to be fitted with seal flush kits to reduce the likelihood of detritus becoming lodged in the mechanical seal and interrupting lubrication.

All pumps drawing directly from unfiltered water sources (such as balance tanks or direct from pools) are fitted with pre-pump strainers to remove large suspended detritus and fibers prior to pumping. Pre-pump strainers are designed to be inspected as a daily item, reducing the likelihood of mechanical damage to pumps, while lowering the load on the filtration and sanitation systems. Pre-pump strainers to be used shall be of HDPE construction, with an SS316 basket for longevity and shall contain an inspection port to streamline daily inspections.

Sanitation System Concept
The recommended sanitation system for this pool consists of three primary elements; a chlorine dosing system, a pH correction system and an automatic water chemistry controller.

Controller
Providing an automatic water chemistry controller is critical to ensure consistent water quality parameters in the pool. This is a device which continually measures the chlorine and pH levels of the pool water, and then automatically regulates the operation of the chlorinator and pH correction equipment. There are a wide range of automatic water chemistry controllers available, however the key features recommended for the controller are;

- Measurement of free available chlorine;
- Integrated flow switch to prevent dosing in to a static system;
- Continual measurement and dosing control;
- Multiple replaceable probes (instead of a single combined probe);
- Alarm and fault warnings;

Providing a web-module or similar integrated connection to allow the controller to SMS or email out when it detects a fault (such as a low chlorine warning) is a useful feature as well, especially in scenarios where the pool is only visited daily for maintenance.

Chlorinator
The chlorine dosing system provides the primary oxidizer for the swimming pool to sanitize the system.
A liquid chlorine dosing system is proposed for this project, due to the low capital cost, high capacity and simple maintenance. These systems involve a dosing pump and a storage tank of liquid sodium hypochlorite (chlorine). The liquid is pumped from the tank and delivered in to the returning filtered water stream. The system is simple, cheap and easy to maintain, however does involve storing a corrosive liquid. Additionally liquid chlorine must be continually purchased and refilled, nominally on a weekly or fortnightly basis. Suitable risk mitigation measures must be adopted to ensure safety is maintained.

pH Correction Equipment
The pH of the pool water plays a significant part in the effectiveness of the sanitizer used. Continual pH correction equipment is required to ensure a stable pH level.

A dry acid dosing system (sodium bisulphate) is proposed for this project, due to the low capital cost, moderate maintenance and reduction in associated risks when compared to a liquid system, such as reduced fumes and reduced spill potential. These systems involve a dosing pump drawing from a mixing tank, where dry sodium bisulphate powder is added and mixed with water to form a liquid acid. The liquid is pumped from the tank and delivered in to the returning filtered water stream. The system is simple, relatively cheap and easy to maintain, however does require regular refilling of the tank. The acid is also not compatible with liquid chlorine, so must be kept separate with the potential for mixture of the substances reduced. The acid storage must be continually purchased and refilled, nominally on a weekly or fortnightly basis. Suitable risk mitigation measures must be adopted to ensure safety is maintained.

UV System
As the 25m pool is an indoors pool in an air conditioned space, ongoing control of combined chlorine levels is important to maintain good water quality as well as detectable minimizing smells from the pools. It is recommended to provide the filtration system with a medium-pressure UV unit to assist in this regard.

Heating System
Heating for the pool is proposed via dedicated pool heat pumps, where heat energy is taken from the atmosphere by passing large volumes of air through a refrigerant process, and transferring it to the pool water. This provides the best outcome for lifecycle cost of the system. While the capital cost of heat pumps is high, heating is a major operational cost for pools and the major energy savings offered by the refrigerant process far outweigh the initial expense in a relatively short period of time. Heat pump footprint requirements, noise emission and air circulation requirements must be closely considered.

Where mains-source heater units are provided (such as heat pumps or gas heaters), thermal pool blankets are required in accordance with the energy efficiency requirements of the current edition of the National Construction Code. For the thermal calculations, it's assumed that the blankets will have a minimum R value of 0.13 and will be used when the pools are closed.
EQUIPMENT ROOM SPATIAL ALLOWANCES

Equipment Room Spatial Allowances

Based on the preliminary design, a nominal equipment room spatial plan has been developed. The plan involves four key elements:

1. Primary pool equipment room, housing the majority of the pumping, filtration and sanitation equipment.
2. Secondary leisure pool circulation room, located at the base of the waterslide start tower that house the waterslide and leisure pool circulation pumps.
3. External heater court
4. External truck bund for chlorine deliveries, as well as a truck turning bay as trucks must be able to drive out forwards from chemical delivery bunds.

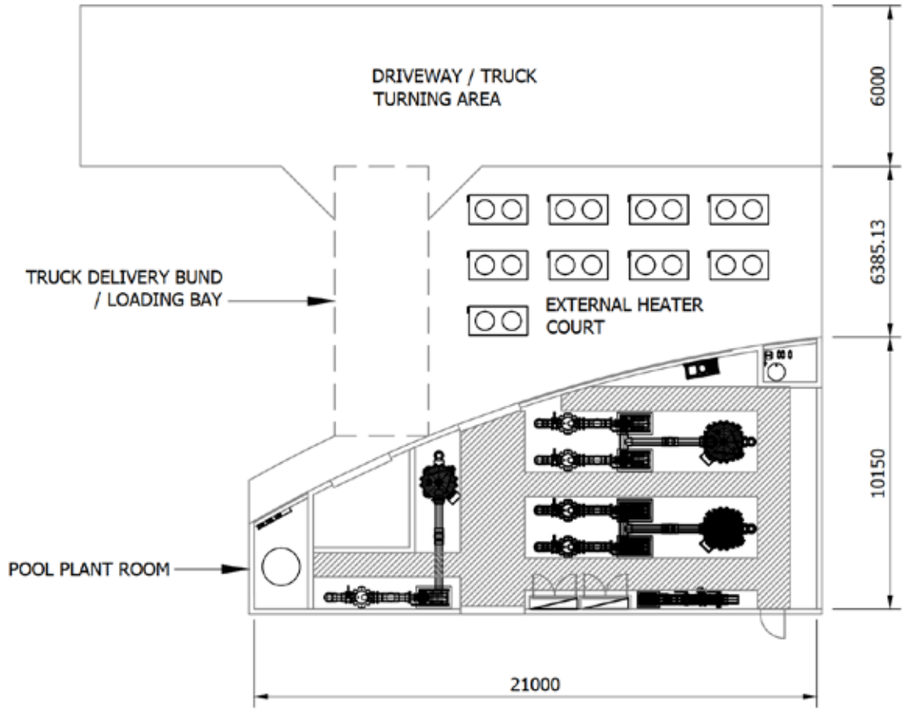


Figure 6: Overall Equipment Area Plan

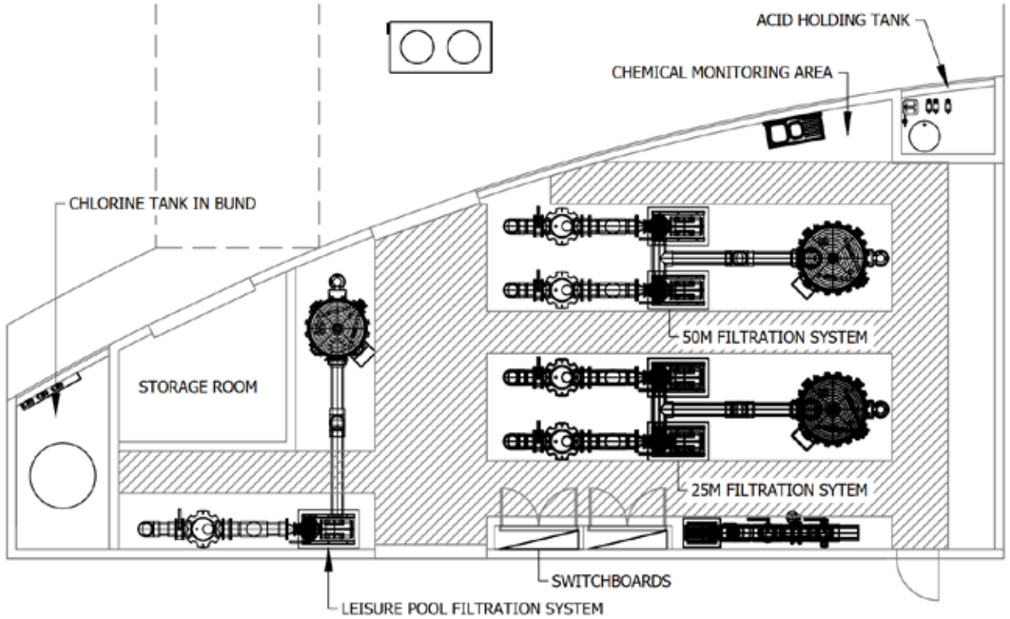


Figure 7: Pool Plant Room General Plan

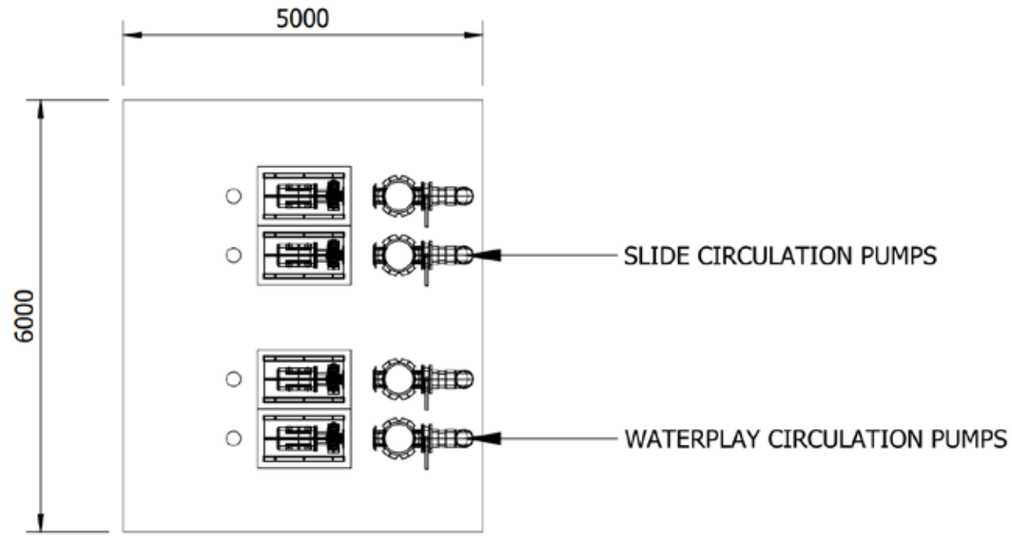


Figure 8: Leisure Pool Local Pumping Room

Key notes of consideration for the plant spatial allowance are as follows:

- The layout shown is minimum sizing required; if more length of width is available, then it is advisable to include to provide a spacious plant room.
- A minimum vertical clearance of 4,100mm is required inside the pool plant room to fit in the required filters and associated pipework.
- Access to the room is currently provided by 2400w roller doors to the loading area and 25m concourse, with a personnel door to the pool concourse also. This is nominal only, and additional access may be required.
- Three storage areas are provided within the layout of the room; one for liquid chlorine, one for acid and one for incidental chemicals. No storage area is provided for pool blankets, pool cleaning equipment etc.
- A backwash holding tank is currently not shown, and will likely be constructed below the ground as an extension of the 25m pool balance tank.
- The size of the driveway and truck bund is nominal only for general magnitude sizing, and will require Architectural input to confirm suitability.

Preliminary Services Coordination

Preliminary designs to allow for high-level coordination of the required mains services have been undertaken. The results are provided within this section. It must be noted that whilst every attempt is made to be accurate, all the loads, quantities and the like provided in this section are preliminary only for the purpose of general magnitude review. Aquatic One reserves the right to review and update the values as the design develops.

Electrical Load

The pool contractor will provide a pool control panel / switchboard in the pool plant room, which in turn will provide power and control to all the recirculation equipment associated with the pool water treatment system. The pool control panel will power and control all the filtration, sanitation and heating equipment pertaining to the pool. The anticipated electrical loads for the system is provided in the table below.

Element	Nominal Draw
Pool Filtration Systems	280A Three Phase
Pool Heating Systems	700A Three Phase
Leisure Feature Pumps	170A Three Phase

The above power draws are peak power figures based on the nominal motor/equipment motor sizes or stated power draw figures, and include a 20% preliminary-stage design oversize. Actual experienced loads may be lower, however a more detailed design is required to facilitate.
Ancillary elements to be provided by the electrical contractor and covered in the electrical consultant's documentation include:

- General power outlets in the equipment room;
- General lighting in the equipment room;
- General power around the pool area itself for the connection of cleaning equipment;
- Equipotential bonding of conductive items in the pool area as per AS3000

Mains Water Load

The pools are supplied with automatic top-ups to maintain minimum water levels in the system. The nominal size of a mains water connection to be provided to the pool equipment room through an RPZ protected source is provided below. The hydraulic contractor is to provide this connection to the pool equipment room, finished at an isolation valve. The pool contractor will continue the connection to the pool systems including the provision of all water level sensing equipment and actuated valves.

Pool	Make-up Size
All pools	DN50

Additional water supply requirements include:

- Plant Room – DN12 water supply to the sink
- Plant Room – DN25 tepid water supply to the safety shower
- Plant Room – General hose cocks in the equipment room for maintenance
- Pool Concourse – General hose cocks around the water elements for cleaning and maintenance purposes

Stormwater Load

Outdoor pools are subject to stormwater loading. Whilst small incidental amounts of rainfall can typically be retained within the system, under constant or large rainfall, pool water will be discharged from the Leisure Pool system through a gravity overflow, to prevent the pool system from flooding. Anticipated maximum flows, nominal overflow pipe sizes and approximate locations of the overflows are nominated in the table below.

Pool	Nominal Flow	Nominal Pipe Size	Location
Leisure Pool	35 L/s	DN225	Balance Tank

The hydraulic contractor is to provide appropriate connection points, into which the pool contractor will discharge their overflows. Suitable location for discharge (eg, stormwater vs sewer) depends on the requirements of the local water authority and the project specifics, and is to be confirmed by the hydraulic consultant.

In addition to this, all stormwater not landing in the pools (such as on concourses) must be directed away from the pools and captured separately. As for the 25m pool, it is not subjected to rainfall. It is still recommended to provide an overflow from the pool, to prevent the pool from flooding and causing damage to surrounding elements in the event that the make-up system fails in the open position. The overflow need only be 50mm in size, and whether it discharges to sewer or stormwater will depend on local authority requirements. The hydraulic consultant is to confirm.

Sewer Load

The pool filtration systems primary interaction with the sewerage system onsite are as follows:

- Filter backwash cleaning cycle, where volumes of water are expelled to sewer from the filters;
- Floor wastes in each equipment room, capturing flow from spills or incidental leaks;
- General trade wastes around each equipment room for incidental flows from air relief valves, pressure relief valves and the like. It's anticipated that each equipment room will require at least one tundish.
- Trade waste for each heater unit, to capture condensate drains from the heaters.
- Pool drainage points, to allow the pools to be drained under gravity for maintenance. Location of the drains is typically provided near the pool itself, depending on appropriate levels and access.

During filter cleaning cycles, the filter volume is dumped into an on-site storage tank, where it is then pumped to sewer at a controlled rate. A tundish in the equipment room capable of receiving pool filter waste water containing perlite it to be provided by the hydraulic contractor, rated at 1 L/s.
The local water authority will require consultation to determine what acceptable limits are appropriate for this site for discharging chlorinated water to the sewerage and stormwater systems.

Ventilation

Ventilation will be required to the following primary areas:

- Pool plant room – sufficient mechanical ventilation to maintain air quality and temperature in accordance with local OSH legislation and NCC requirements. This is often provided at a nominal flow rate of 10 room air volume changes per hour, however is subject to review by the Mechanical Consultant.
- Balance tanks – nominal 100mm vent pipe to atmosphere
- Chemical storage room – As required to ensure chemical fumes are extracted to the building exterior.
- Heat pump – As the heat pumps are located externally, no additional ventilation is required. The potential noise impact of the heat pumps on neighboring areas must be considered.

5.3 Engineering

Several items relating to civil, geotechnical and traffic engineering design will need to be considered in the detail design stage of the Project. These have been itemised below.

Civil
As the site is directly adjacent to Third Creek, any new buildings will need to be above the 1 in 100 year flooding event (typically finished floor levels are set at least 300 mm above this level). FMG has reviewed the existing flooding information and the eastern sports fields do flood during larger events. It should also be noted that the masterplan indicates an option for the creek to return to a more natural creek, which will likely impact the flooding risk to the adjacent buildings. This will need to be further investigated once the flood naturalisation plans are further developed.

During the redesign, subsurface drainage for the sports fields can also be considered to better drain these areas. The subsurface drainage will reduce the likelihood of the pitches to become waterlogged and unusable.

To reduce the impact on the environment, it is recommended that stormwater from carparks etc. which may be likely to incidental oil spills, be directed to some form of treatment (GPT / oily water separator) prior to discharge to the Council's stormwater infrastructure.

Geotechnical
Due to the location of the site, it is likely that the entire site is situated on reactive to highly reactive clays, but a full geotechnical study would be required to determine this as the close proximity to the creek may indicate that the site may be more alluvial in nature. Highly reactive clays expand with the addition of moisture and contract as the soil dries. This is further exacerbated with the inclusion of trees around the site infrastructure. The impact of reactive soils is that structural and civil elements need to be designed to take this into account.

The level of the watertable will also need to be determined in the geotechnical investigation as this may affect the design of civil and structural elements.

Traffic
The site is located adjacent to OG Road, which is under the care and control of the Department of Infrastructure and Transport (DIT). As this is the case, a Traffic Impact Statement is likely to be required if new carparks etc. are to be constructed. This is due to the increase in traffic demand that will be generated, which may cause impacts on queuing along in OG Road, even if the carparks are accessed via Turner street. Additionally, any new relocated bus stop will need to be worked through with DIT.

Other items – access, trees and recycled water
The existing site has poor access for ambulant patrons. An example of this is the lack of conforming disabled parking close to the entrance of the facility. These items should be improved and addressed as part of the next design phase of the project.

With regard to trees, there appear to be several regulated and significant trees on site. An arborist report needs to be considered to determine the impact of these trees on the future development.

Recycled water is supplied to the Patterson Reserve and Payneham Memorial Swimming Centre for irrigation purposes. The recycled water is drawn from the Third and Fourth Creek outlets to the River Torrens and treated prior to pumping and distribution through ERA water's pipe network. Recycled water should continue to be used for irrigation purposes.

6.0 APPENDICES

A **Analysis of Payneham Memorial Swimming Centre Site**

A.1 Landscape Site Analysis

A.2 Comparative Analysis

A.3 Site Inspection Report

B **Past Consultation Outcomes**

C **Draft Masterplan Options**

Appendix A | Analysis of Payneham Memorial Swimming Centre Site

Appendix A.1 I
Landscape Site Analysis

Functional Areas

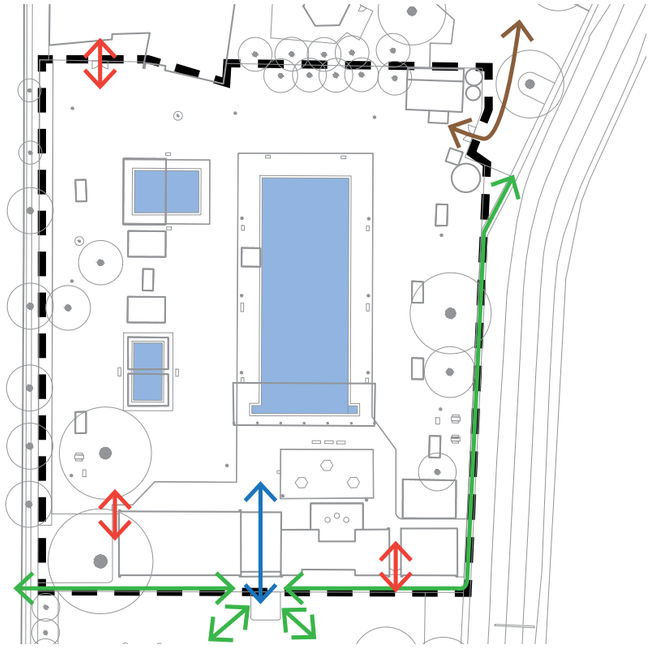
The Centre features a major building spine along the southern boundary of the site with major visitor facilities consolidated together. Plant buildings and related equipment has been built on the north eastern corner of the site where maintenance vehicles can easily access the compound via the library carpark.

- Plant Equipment
- Changing Rooms
- Ticketing
- Offices / Staff Facilities
- First Aid
- Storage
- Kitchen / Kiosk
- Swim Club

Access

Access into the Centre is through the central entry foyer / ticketing area - allowing ease of surveillance and staffing. Service access is provided on the southern and north western sides of the site, while a maintenance gate is provided in the north eastern corner which adjoins the library carpark for plantroom maintenance and deliveries. Pathways on the western and eastern sides of the site provide access to bus drop off and an adjacent public off-street carpark respectively.

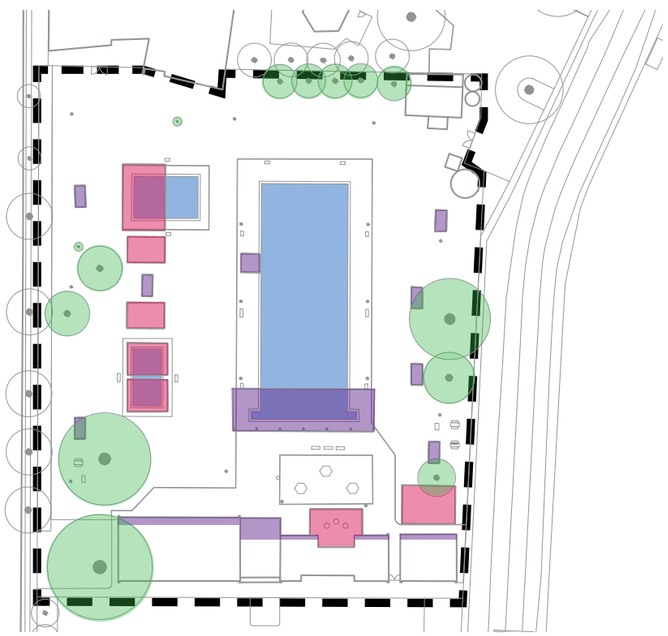
- Maintenance
- Public
- Service / Staff
- Links to carparking and bus drop off



Shade & Shelter

The Centre provides many shading options throughout the site. Advanced trees dot the site, while an arrangement of impermeable and semi-permeable shade structures line the eastern and western lawns. All the pools feature some form of shade structure, while the primary building spine has breakout areas that feature extended shade areas.

- Tree Shade 1280m²
- Permeable Shade 525m²
- Impermeable Shade 389m²

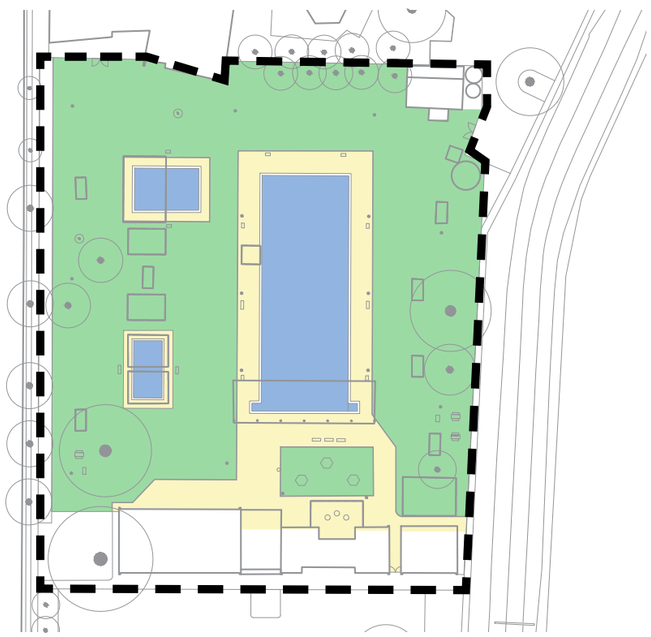


Surfaces

The site features generous grassed areas and concrete paved concourse around pools and buildings.

The perimeter lawns are relatively open and popular especially during summer, and offer good opportunities for events to occur.

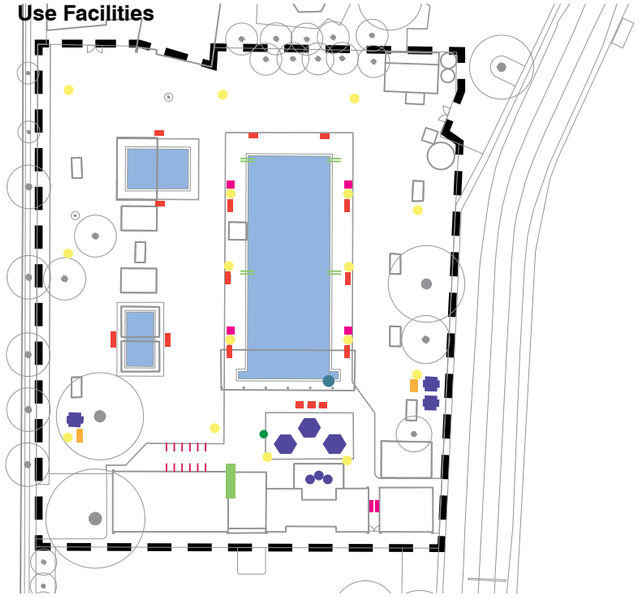
- Pavement - 1600m²
- Grass - 5700m²



Use Facilities

Site fixtures have been scattered around the site in a reactive way. There is little consistency in colour, form or style between all the items.

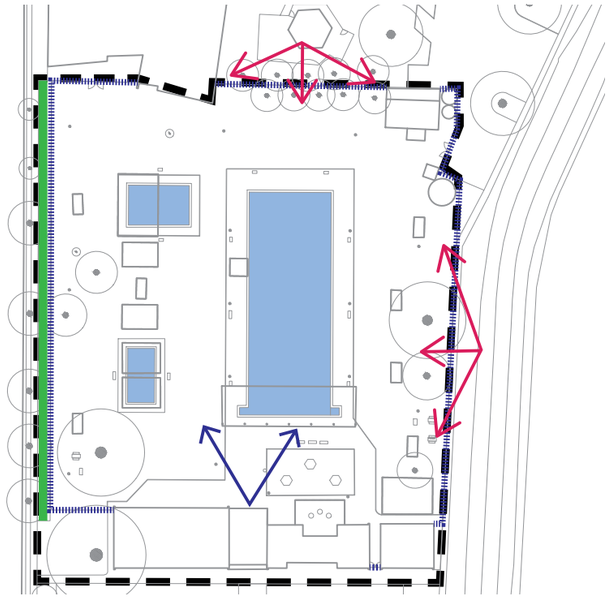
- Seat / Bench
- Picnic Setting
- Light Pole
- Water Fountain
- Bike Rack
- Pool Access Lift
- Pool Ladder / Step
- Bins



Views & Boundaries

Views within the Centre are largely uninterrupted, with little vegetation or structures to obstruct views across the site. The tall hedge on the western boundary provides a visual barrier to OG Road, while on the eastern side a permeable 'cyclone' fence provides unobscured views to the vegetation and footpath alongside the Third Creek culvert. The open fence fails to prevent overlooking views into the site along the eastern side.

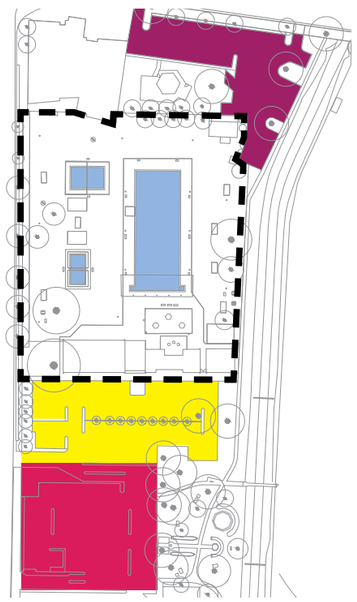
- Framed View
- Overlooking
- Visual Barrier
- Permeable Fence



Carparking

Dedicated off-street parking for the Centre is provided on the southern side of the property. On the northern side a public carpark associated with the library is often used as overflow parking by pool patrons. There is a lack of definition between this carpark and an adjacent private carpark which creates confusion for pool patrons.

- Dedicated Off-Street Parking
  - 2 accessible parks
  - 93 standard parks
- Nearby Public Off-Street Parking
  - 2 accessible parks
  - 64 standard parks
- Private Carpark (not accessible to pool patrons)



Appendix A.2 | Comparative Analysis

Facilities provided at swim centres are varied across the state and country. The following pages provide an easy-reference review of the types of facilities available at a variety of different swim centres across Adelaide and Australia, to assist understanding the sorts of opportunities available at Payneham, or a gap in the offerings provided in the local leisure market.

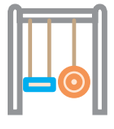

Sauna


Character


Sustainable


Natural Shade


Outdoor Swimming


Playground


Sauna


Sports / Gym


Shade Structures


Barbeque


Indoor Swimming


Aquatic Sports


Learn to Swim


Community


Coaching


Spa


Slides


Splashpad


Lap Swimming


Aquatic Fitness

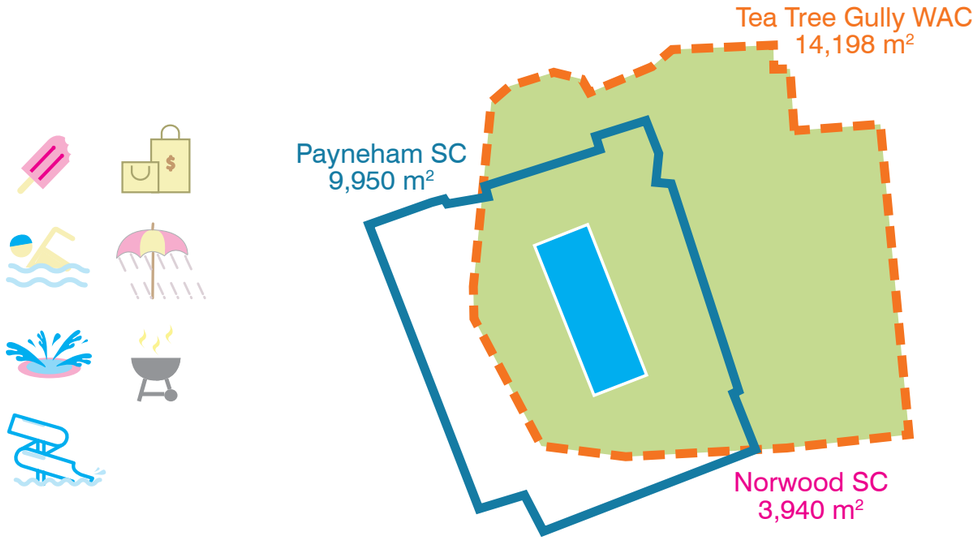

Accessible


Kiosk


Staff

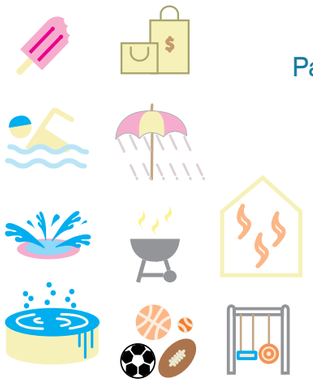
Tea Tree Gully Waterworld Aquatic Centre

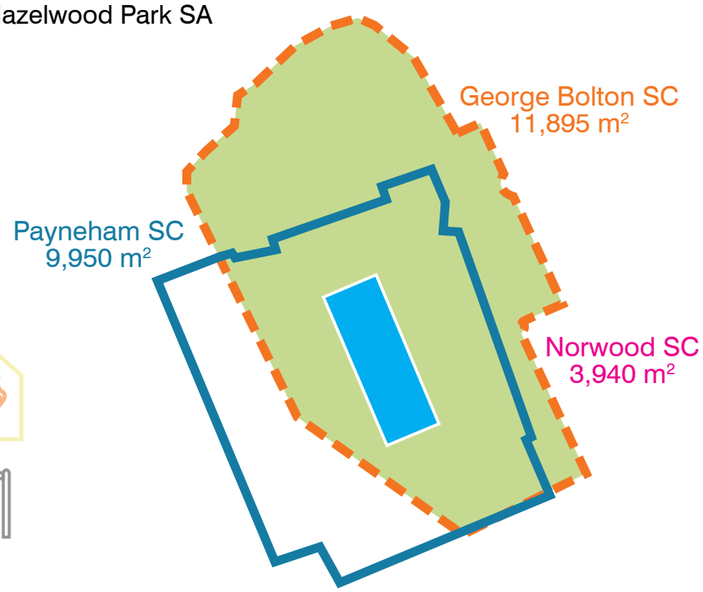
Golden Grove Road, Ridgehaven SA



George Bolton Swimming Centre Burnside

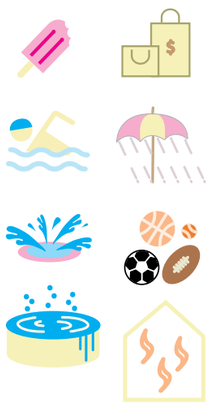
Howard Terrace, B26, Hazelwood Park SA

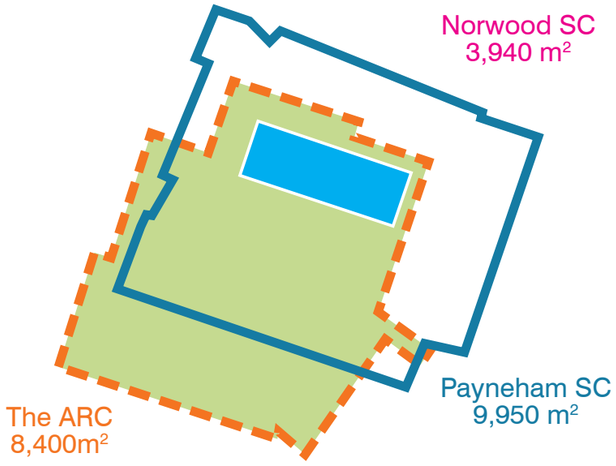




The ARC Campbelltown

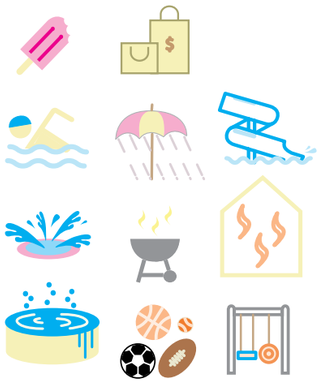
19 Kenwyn Drive, Campbelltown SA
Car park numbers: 250

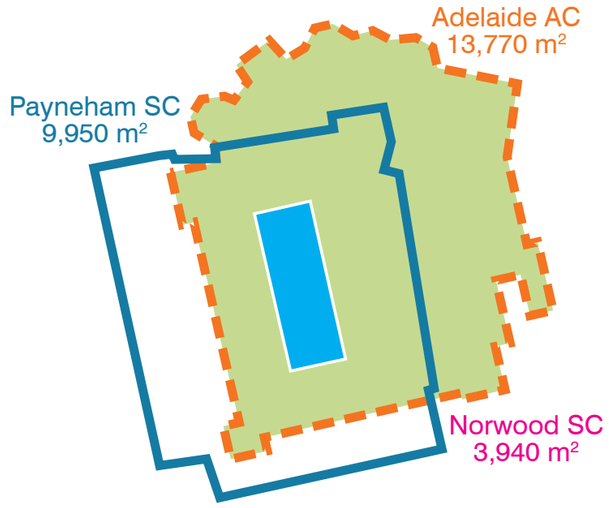


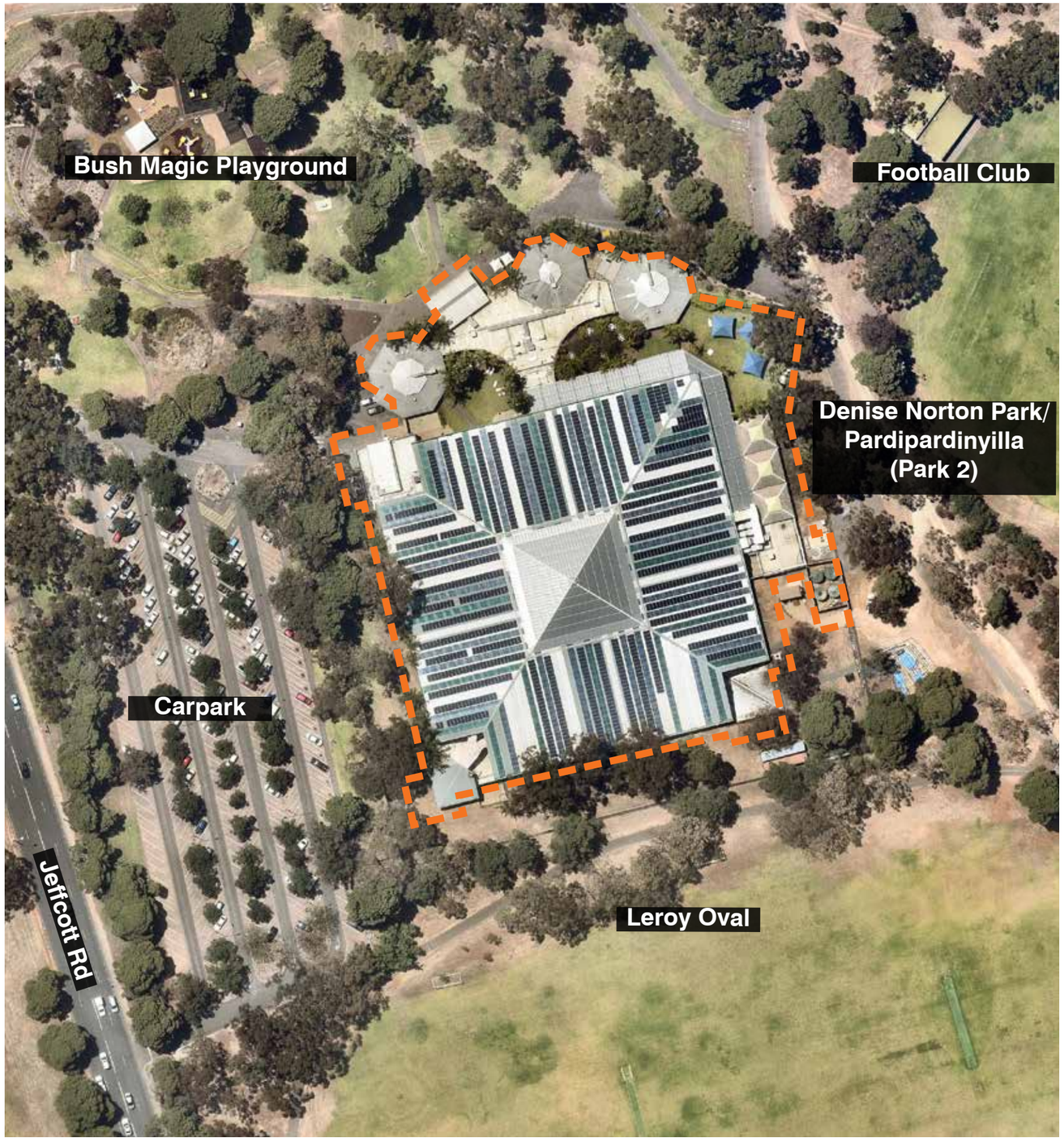


Adelaide Aquatics Centre

Jeffcott Road, North Adelaide SA
Car park numbers: 400

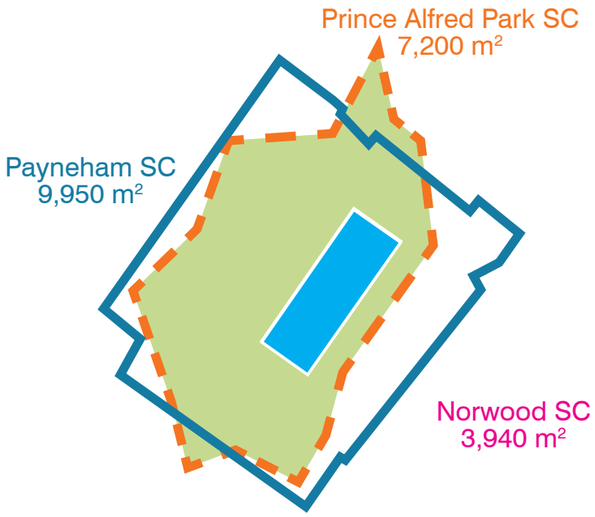


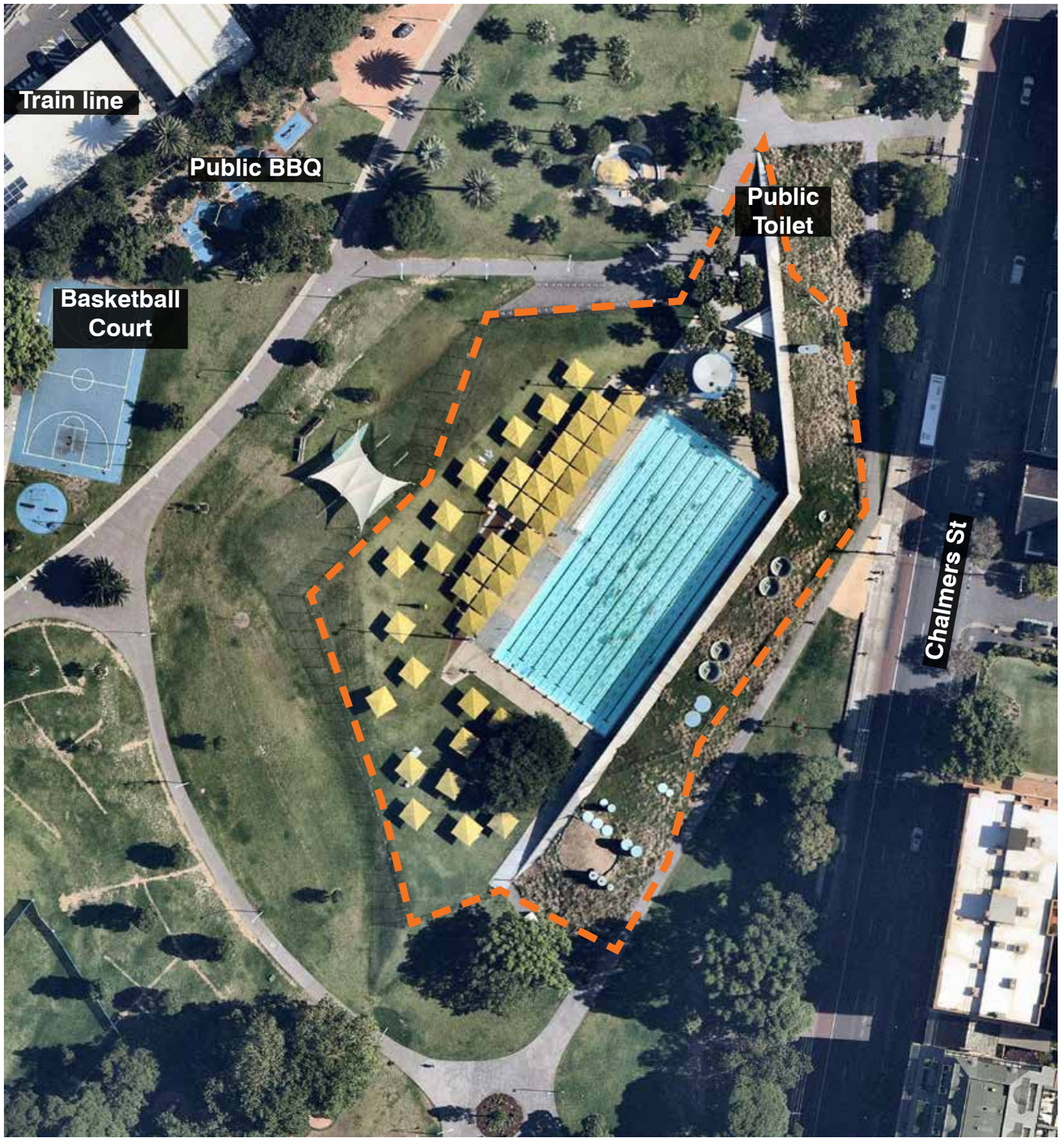




Prince Alfred Park Swimming Centre

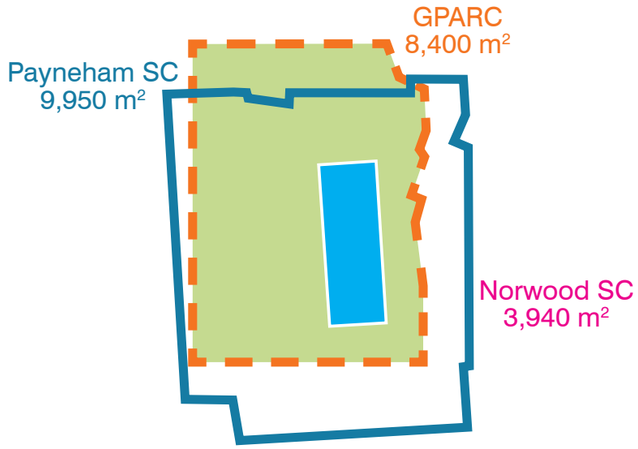
105 Chalmers St, Surry Hills NSW

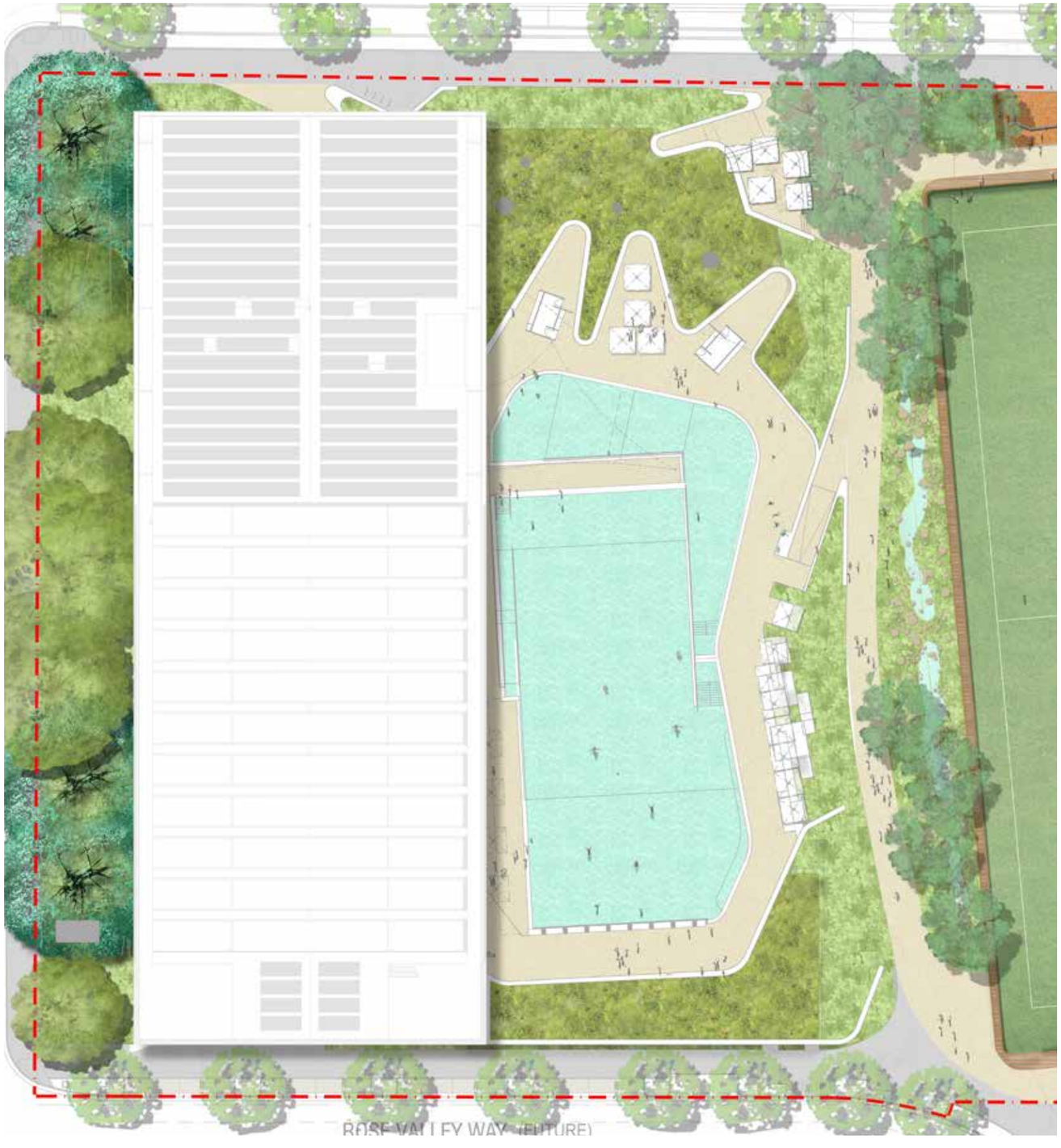




Gunyama Park Aquatic and Recreation Centre

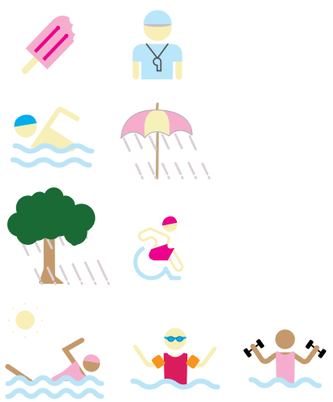
17 Zetland Avenue, Zetland NSW

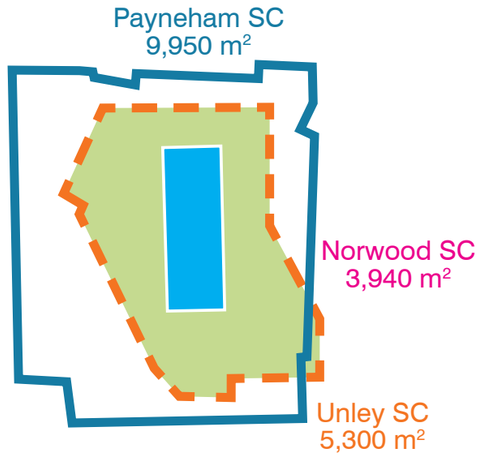




Unley Swimming Centre

Ethel Street, Forestville SA
Car park numbers: 100





Site Inspection Report

AQ1-0073-DR2, REVISION A

Payneham Swimming Centre

T.C.L

PROJECT DETAILS

Project:	**Payneham Swimming Centre**
Area:	Overall
Client:	T.C.L
Reference:	AQ1-0073-DR2, Revision A

REVISION SCHEDULE

Revision	Date	Description	By
A	31/01/20	For Review	LB

SUMMARY

Figure 1: Payneham Swimming Centre (Courtesy Google Maps, 2020)

The Payneham Swimming Centre is a publically accessible swimming centre located in Felixstow, South Australia. Constructed in 1968, the centre contains an 8-lane 50m lap swimming pool, a medium-depth learner pool and a shallow kids wading pool. The centre is aging, and has been targeted for refurbishment to maintain operation of the facility. Aquatic One has been engaged by T.C.L to review the centre from an aquatics perspective and provide input in to options and limitations for the redevelopment. Redevelopment works on some of the aquatic elements onsite including the 50m pool, learner pool and filtration systems are engaged to be undertaken later this year. The target of the masterplanning works is to look beyond this period.

Aquatic One's scope of work focuses primarily around the swimming pool water treatment systems, structures and finishes. Whilst elements such as the building structure materials, mechanical ventilation and pool structure systems may be touched on, they are generally excluded from the scope of works.

SYSTEM DESCRIPTIONS

A representative from Aquatic One attended site on 23rd January 2020 to undertake an inspection of the existing aquatic elements. General descriptions of the aquatic elements are provided below.

50M POOL

Figure 2: 50m Pool

General Description

The 50m pool is a reinforced concrete lap pool, consisting of 8 swimming lanes. The pool is 1.1m deep at the shallow end, grading down to 1.8m at the deep end. Start blocks are placed at the deep end of the pool, with access provided through ladders along the side walls. No form of compliant disabled access if provided. Large light fittings are placed along one side of the pool. The pool is finished with commercial pool tiles.

Water Circulation

Filtered water is delivered to the pool through a series of floor returns along the length of the pool. Soiled water is removed through scum gutter channels to the length of each side wall, flowing to the combined balance tank under the equipment room floor.

Filtration System

All three pools are currently serviced by a single filtration system onsite, located in a plant room in the north-eastern corner of site. This system is targeted for replacement as part of the works, resulting in the provision of a new ultrafine filtration system for the 50m pool and another for the Learner's pool. This second system is apparently designed to be suitable for use on a larger 25m lap pool at a later date, but is being ramped down to operate with the Learner's Pool in the interim period.

LEARNER'S POOL

Figure 3: Learner Pool

General Description

The Leisure Pool is a small rectangular pool, located to the west of the deep end of the 50m pool. The pool is 600mm deep at both ends, sloping to 900mm deep in the middle. The pool is fully tiled throughout.

Water Circulation

Filtered water is delivered to a series of floor returns across the centre of the pool. Soiled water overflows scum gutters at each end of the pool, flowing back to the common system balance tank.

WADING POOL

Figure 4: Wading Pool

General Description

The Wading Pool is a small rectangular pool, located to the west of the shallow end of the 50m pool. The pool is shallow, and fully tiled throughout.

Water Circulation

Filtered water is delivered to a series of floor returns across the centre of the pool. Soiled water overflows scum gutters at each end of the pool, flowing back to the common system balance tank.

SITE OBSERVATIONS

50M POOL GENERAL ITEMS

Figure 5: 50m Pool Entry Steps

Observations

Key observations from the inspection are as follows:

- The pool circulation system is poor. The gutters were flooring towards the end, and the single row of floor returns does not provide good circulation in an 8-lane pool.
- The current scum gutter system presents an ankle entrapment risk.
- No form of compliant disabled access is provided.
- Movement in the pool concourse is observed, with the operators reporting notable leaking from the pool.

The redevelopment works proposed for the pool are understood to be targeted to address the above items. Plans of the works have not yet been sighted.

Additional Photographs

Figure 6: 50m Scum Gutter Removal system

Figure 7: Scum gutter outlets at ends of channel

LEARNER POOL GENERAL ITEMS

Figure 8: Learner Pool

Observations

Key observations from the inspection are as follows:

- The scum gutter system presents a risk of ankle entrapment to patrons.
- The high walls to the pool present a non-compliant access point, requiring patrons to step up approximately 400mm on to the hob to access the pool ladders.

It's understood that the pool is not receiving significant works during the redevelopment. As a result, issues with the pool will generally not be addressed at this point in time.

Additional Photographs

Figure 9: Step up to pool hob

Figure 10: Floor returns in pool

WADING POOL GENERAL ITEMS

Figure 11: Wading Pool

Observations

The wading pool is very dated, and contains notable structural failure. The northern end of the pool has sunk approximately 50mm, with the operators blocking the outlets from this end of the pool to encourage water flow over both ends. The tiling is the original tiling, and is in poor condition.

It's understood that this pool is being demolished as part of the refurbishment works, so no further commentary is provided.

Additional Photographs

Figure 12: Movement in pool structure at central joint

Figure 13: Concourse subsidence in corner of pool

COMBINED POOL FILTRATION SYSTEM

Figure 14: Gravity Filter Wall

Observations

The filtration system is undersized and outdated for the facility, and presents several non-conformances with current standards. It's understood that these items are to be addressed through the replacement of the filtration system and reconfiguration of the chemical storage systems in the upcoming redevelopment works. No further commentary is provided.

DISCUSSION

NON-CONFORMANCES WITH CURRENT STANDARDS

For the Payneham Swimming Centre, the target for development has been focused around increasing teenage patronage and presenting a modern aquatic centre. The currently planned development works are understood to address the primary non-conformances of the pools, including:

- Lack of disabled access to the 50m pool;
- Poor circulation in the 50m pool;
- Combined filtration system;
- Sinking structure and poor condition of the wading pool;
- Overall swimming pool construction and water flow system designs, resulting in poor water circulation, with the exception of the Learner's Pool;
- Equipment room layouts, system sizing and locations.

As only the aquatic elements are being redeveloped, non-conformances with the rest of the centre such as bathroom access are not being addressed.

NEW MULTI-FUNCTION POOL

The operators have expressed a desire for the next stage of works to contain a multi-use indoor pool, allowing for year-round learn to swim classes and general swimming. Key aspects of this pool include:

- 25m lap length;
- 8 lanes;
- Combined leisure pool with spray features;
- Indoor location in a climate controlled environment, allowing year-round use;
- Good sight lines from the entry kiosk to increase supervision potential.

The current development works include for the provision of a new filtration system suitable for this future multi-function pool, however discussions with the facility operator indicates that the proposed filtration system may only be suitable for a 6 lane 20m pool. A final plan for the multi-function pool should be developed and compared against the current filtration system design to ensure suitability.

HEATING SYSTEM

Currently, the facility is heated using gas-fired pool heaters. It's understood that a gas heating system is to remain as part of the development. Typically speaking,

whilst the capital cost is cheaper, gas heating has a higher whole-of-life cost than electric heat pump heating due to the lower energy efficiency of a gas heater. When a pool is seasonal and not used in winter, the benefits of a heat pump system are reduced, however if the facility is to go to year-round operation, adoption of electric heat pumps should be considered.

POOL RISK CLASSIFICATIONS VS LOCATION

Currently, the facility contains intrinsic risks built in to the facility from its general layout. The learner's pool has low visibility due to the high edge of the pool and contains water deep enough to warrant as a drowning risk, however is located at a point farthest from the kiosk. During periods of low patronage when only two staff members are on, maintaining a constant visual observation of this pool is difficult.

When undertaking masterplanning activities for the new centre, strong consideration must be given towards connectivity between high risk facilities and points of natural supervision.

WATERSLIDES

One suggested element from the previous masterplanning was the integration of high waterslides in to the facility. Waterslides can be inviting elements to patrons, popular during peak periods, however present several challenges;

- Slides involved the uncontrolled movement of patrons, introducing intrinsic risk in to a facility.
- Observation and patron control is required for tall commercial slides to minimize the potential for collisions. This increases operator requirements, typically involving at least two operators being required during slide periods.
- The slides are a costly element from a capital perspective and consume notable footprint onsite, however have a relatively low patron soakage compared to waterplays and pools.

This is not to say slides are not suitable, however due consideration should be given the ensuring they are the best fit. South Australian Aquatic and Leisure Centre has had a series of waterslides installed since 2012 and is located approximately 20km from Payneham; it would be prudent to obtain feedback from them as to how successful their slides have been.

YOUTH INTEGRATION

One target of the redevelopment is to attract the younger teens in to the facility. Zero-depth waterplays and splashpads are typically targeted more towards younger patrons, as well as aquativity structures. Deeper leisure / lagoon waters with aquatic activities may be considered suitable for the young teen market.

Jamberoo Action Park is an aquatic amusement park located 1 hour south of Sydney. The facility hosts a variety of different aquatic elements, including commercial waterslides, lazy rivers, jumping pools, a wave pool, slippery logs and the like. The facility is popular with a wide variety of patrons, however appears to resonate with teenagers. Engaging with the facility to obtain feedback on which facilities teenagers utilize the most may be prudent to target the direction for the development.

Based on purely visual considerations when visiting the facility previously, some of the more popular elements with teenagers includes the large commercial waterslides (each element costing approximately $5m), the lazy river and 'The Rock'; a deep leisure pool fitted with medium-drop slides and a jumping ledge. As with any aquatic amusement device style attraction, additional risks are introduced, however an element such as a lagoon pool with a lazy river attached may provide a large patron soakage attractive to teenagers whilst still providing elements usable by all ages.

GENERAL SITE CONSIDERATIONS

In addition to the pool elements, the following items were identified for consideration during the inspection.

Bus Parking

Busses are regularly dropping patrons off to the facility for school events. Currently the busses park on OG road, with children walking along the road to access the entrance. As part of the development it may be an option to relocate the facility entry area and provide a buss pull-off area for safer unloading.

Main Facilities Building

The aquatic centre is a part of a larger community hub, involving the baseball club over the creek and the library at the northern end of the centre. Each node of the hub is provided with separate car parking, facilities and entry points.

Tying the nodes together with common spaces has been discussed as a potential option. Some of these elements include:

- Reconstructing the aquatic centre entry and facilities building to sit at the opposite end of the site, sharing the carparking with the library and allowing for a connecting pathway to the baseball fields to be provided.
- Integrating clubhouse facilities for the baseball field in to the new facilities building.
- Providing a wide open space spanning the existing stormwater culvert to open connectivity between the three centres. The current narrow access bridge is unwelcoming and adds little value, delivering people to the back of a playing field.
- Provision of separate income-inviting elements such as café's, gyms or sports shops to activate the area.
- Access to change and bathroom facilities across the park.

Appendix B |
Past Consultation Outcomes

A six week consultation period between Wednesday 1 March 2017 and Sunday 9 April 2017 was undertaken by the City of Norwood Payneham and St. Peters.
This process involved:

- Advertisements placed in local Messenger newspapers
- Promotional posters placed at both Swimming Centre, on the Parade, and at each of the Customer Service Centres
- A dedicated page on the Council's website provided access to:
  - Options fact sheets outlining each of the proposals
  - Concept design drawings
  - Question and answer page
  - On-line feedback form
- Information sessions held at Swimming Centre
- Hard copy feedback forms
- Dedicated email contact address
- Concept Designs on display at Swimming Centre and Norwood Town Hall

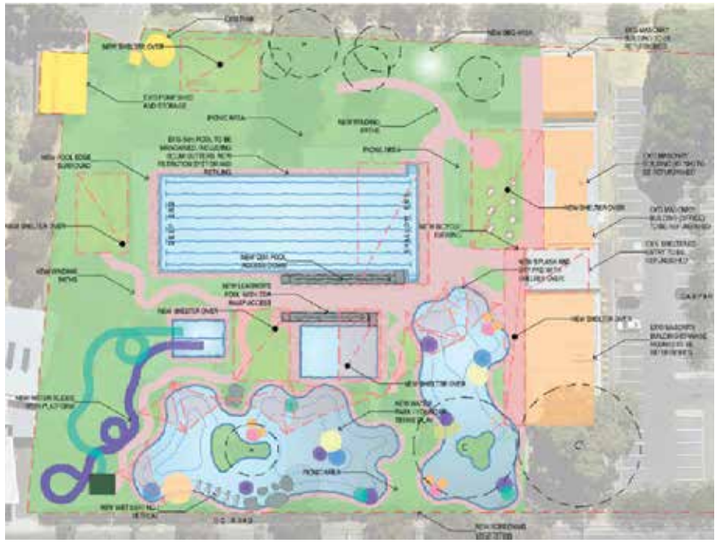
Public partication in the consultation program:

- Information sessions - Payneham Memorial: 15 attended
- 176 submissions were recieved on-line, by email or feedback form

Extracted from the City of Norwood Payneham & St Peters "Swimming Centres Long Term Strategy"
Swimming Centres Review "Redevelopment Options Consultation for Norwood Swimming Center and Payneham Memorial Swimming Centre"

Payneham Memorial Swimming Centre
(one option only)

- Refurbishment of the existing 50 metre outdoor swimming pool plus a teaching/ learners pool to meet the swimming lesson market.
- Replacing the toddler's pool with an interactive splash pad.
- New interactive water park targeting to the teenage recreational market.
- An inflatable obstacle course to complement the water play park
- Additional shade and the upgrade of dry land facilities.



Consultation Results

Key outcomes of the community engagement and consultation program were:

1. The Council's current two pool strategy was supported by 97% of respondents.

2. 92% of respondents were supportive of the proposed redevelopment option of the Payneham Memorial Swimming Centre.

3. Support for the Norwood Swimming Centre redevelopment options were:
   Option 1: Complete Redevelopment - 12%
   Option 2: Minor maintenance of the main pool - 32%
   Option 3: Major refurbishment of the main pool - 57%

4. Major points noted in the feedback relating to Norwood Swimming Centre were:

- Strong emphasis on retention of a 50 metre pool
- Primary use of Norwood is for lap swimming and that primary focus of lap swimming needs to be retained
- Some of the respondents who support the retention of the 50 metre pool also want to see splash play elements
- Retention of the history of the Swimming Centre needs to be retained

5. Based on these comments, the preferred option was *Option 3 - Major refurbishment of the main pool*, which proposed:

- Lining the existing pool shell with heavy duty steel or fibreglass (e.g. Myrtha pool) lining
- Re-configuring of the filtration system, including installation of a new plant room
- Replacement of the balance tank, to bring it up to the minimum standard
- Provision of ramp access for persons with disabilities to the swimming pool
- Replacement of the Learners/Teaching pool, with a larger pool, which will include a beach entry to enable disabled access
- An inflatable obstacle course, to be used on weekends and school holidays
- Installation of additional shade, barbeque and picnic facilities
- Refurbish existing amenities buildings, consistent with the site's heritage

Key Stakeholder Groups:

- Swimming Lessons Providers
- Regular User Groups
- Carnival User Groups
- Occasional Pool Users Groups
- Residents Associations

Extracted from the City of Norwood Payneham & St Peters "Swimming Centres Long Term Strategy"
Swimming Centres Review "Redevelopment Options Consultation for Norwood Swimming Center and Payneham Memorial Swimming Centre"

Appendix C |
Draft Masterplan Options

Five draft Masterplan options for the Patterson Reserve Community & Recreational Precinct and the Payneham Memorial Swimming Centre were developed for the Council's consideration. Options A revitalises the existing buildings and facilities, which would result in the least amount of change and cost to the Council. Options B1 and B2 propose a new main building adjacent to OG Road with different locations and configurations for the aquatic facilities and plantrooms. Options C1 and C2 further rethink the location and configuration of buildings and aquatic facilities along Turner Street and OG Road, resulting in the greatest amount of investment for the council.

Draft Masterplan Option A

Option A - Reserve Site

Option A - Pool Site

Draft Masterplan Option B1

Option B1 - Reserve Site

Existing library building, carpark and playground

OPTION : indented bus lay-by off OG Road

New 2-storey sports and leisure centre, providing pool facilities and cafe, new gym/dry pool training, multisport clubrooms (incl. baseball and lacrosse) and lettable function areas

New entry marker and axial landscaped walkway connecting to Patterson Reserve, incorporating new memorial garden and playground

Existing private carpark

New multilevel carpark building, (approx. 250+ spaces over 3 levels)

New off-street parking (approx. 35 spaces) with bridge connection to existing library carpark

Existing youth centre building

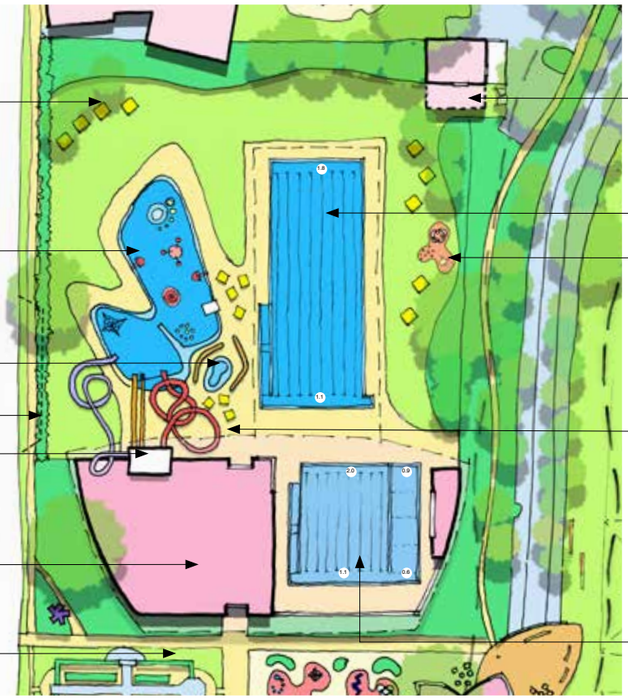
New sports club change facilities and storage

Reorientated Patterson Reserve playing fields - existing clubrooms and carpark relocated to increase area for playing fields

New community kiosk building (attached to carpark building), with cafe, toilets and storage facilities, with suspended deck plaza area over culvert

Third Creek culvert (note: dashed line indicates conceptual scope of potential future widening and naturalisation of waterway)

Option B1 - Pool Site



Shade structures and barbeques on grassed embankment

New leisure pool with interactive waterplay

Zero-depth splash pad

OPTION : indented bus lay-by off OG Road

High platform water slides

New 2-storey sports and leisure centre, providing pool facilities and cafe, new gym / dry pool training, clubrooms and lettable function areas

Central landscaped walkway accessing swim centre, sports fields and public park, with sculptural marker at entry

Existing plantroom upgraded with increased area as required

Existing 50m pool upgraded in existing location (optional roof over shown dashed)

Play equipment

Cafe and outdoor dining area

New semi-enclosed and roofed 25m 8-lane lap pool and learn-to-swim pools

0 25 50

Draft Masterplan Option B2

Option B2 - Reserve Site

Existing library building, carparking increased and playground relocated

New pool plantroom, with access off OG Road

New 2-storey sports and leisure centre, providing pool facilities and cafe, new gym/dry pool training, multisport clubrooms (incl. baseball and lacrosse) and lettable function areas

New entry marker and axial landscaped walkway connecting to Patterson Reserve, incorporating new memorial garden and playground

Existing private carpark

New multilevel carpark building, (approx. 250+ spaces over 3 levels)

New off-street parking (approx. 35 spaces) with bridge connection to existing library carpark

Existing youth centre building

New community kiosk building, incorporating dual-sided cafe, toilets and storage facilities, with suspended deck plaza area over culvert

Reorientated Patterson Reserve playing fields - existing clubrooms and carpark relocated to increase area for playing fields

Third Creek culvert (note: dashed line indicates conceptual scope of potential future widening and naturalisation of waterway)

Option B2 - Pool Site

Shade structures and barbeques on grassed embankment

New pool plantroom, with access off OG Road

New semi-enclosed and roofed 25m 8-lane lap pool and learn-to-swim pools

New 2-storey sports and leisure centre, providing pool facilities, new gym/dry pool training, multisport clubrooms (incl. baseball and lacrosse) and lettable function areas

Zero-depth splash pad

High platform water slides

Central landscaped walkway accessing swim centre, sports fields and public park, with sculptural marker at entry

Existing 50m pool upgraded in existing location (optional roof over shown dashed)

New leisure pools with interactive waterplay and high platform water slides integrated with building

New community multipurpose sports clubroom/cafe building servicing public park, sports clubs and swim centre, with shared kitchen and toilets, and decks over Third Creek to connect to sports fields

0 25 50

Draft Masterplan Option C1

Option C1 - Reserve Site

Existing library building, existing carpark and playground relocated

New 2-storey community centre with pool facilities and undercover off-street parking (approx 150 spaces over two levels). Building incorporates swimming centre and clubrooms, relocated youth centre, an urban plaza with skate bowl, sports courts and public art

OPTION : Indented bus lay-by off OG Road

Reduced off-street parking at this location (approx. 30 spaces), servicing upgraded memorial park and new 'waterhole' playground

Existing private carpark

New sports clubrooms, with cafe facilities, storage, indoor training and lettable function rooms

New multilevel carpark building (approx. 180 spaces over 3 levels)

Reorientated Patterson Reserve playing fields - existing clubrooms and carpark relocated to increase area for playing fields

New bridge structure over culvert

Upgraded memorial park incorporating new 'nature play' playground with 'water holes' waterplay, climbing structures, etc.

New community kiosk building, with toilets and storage areas and bridge structure over culvert

Third Creek culvert (note: dashed line indicates conceptual scope of potential future widening and naturalisation of waterway)

Option C1 - Pool Site

New semi-enclosed and roofed 25m 8-lane lap pool and learn-to-swim pools

OPTION : Indented bus lay-by off OG Road

Shade structures and barbeques

Play equipment

Zero depth splash pad

New themed 'waterholes' water park with high platform water slides and interactive waterplay

New public parkland on site of existing buildings and carpark

New 2-storey community centre with swim centre entry, undercover off-street parking and pool plantroom at ground level, pool changeroom facilities, swimming club rooms, gym/dry pool training, relocated youth centre, cafe and lettable function rooms

Cafe and outdoor dining area

Existing 50m pool upgraded in existing location (options: roof over and rebuild pool with shallow end near to entry)

Shade structures and barbeques

New bridge structure over culvert

0 25 50

Draft Masterplan Option C2

Option C2 - Reserve Site

Existing Library building

New swim centre, providing pool facilities and cafe, gym / day pool training, clubrooms and lettable function areas

OPTION : Indented bus lay-by off OG Road

New multilevel carpark building with plant room at ground level (approx. 180 spaces over 3 levels)

New axial landscaped walkway connecting to Patterson Reserve incorporating new memorial garden

Redevelopment of public park including upgraded Memorial Park and new active playground with climbing structures, interactive sculptures, skate bowl and other active recreation facilities

Existing private carpark

New offstreet carpark (approx. 30 spaces)

Existing Youth Centre building

New sports club clubrooms, with cafe facilities, storage, indoor training and lettable function rooms

New decked bridge over Third Creek culvert

New community kiosk building, with toilets and storage areas and bridge structure over culvert

Reorientated Patterson Reserve playing fields - existing clubrooms and carpark relocated and playing field area increased

Third Creek culvert

Option C2 - Pool Site

New leisure pools with high platform water slides and interactive waterplay

New swim centre, providing pool facilities and cafe, gym / dry pool training, clubrooms and lettable function areas

Toddler splash pad

Play equipment

New semi-enclosed and roofed 25m lap pool (8 lanes)

Location of existing 50m pool (shown dashed)

Boundary fence

OPTION : Indented bus lay-by off OG Road

New location for 50m pool

New multilevel carpark building with plantroom at ground level (approx. 180 spaces over 3 levels)

0 25 50

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