14.2 PAYNEHAM MEMORIAL SWIMMING CENTRE REDEVELOPMENT

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FILE REFERENCE: qA75100
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PURPOSE OF REPORT

The purpose of this report is to present to the Council, the Schematic Design for the Payneham Memorial Swimming Centre Redevelopment Project so that the Project can progress to the Construction Documentation Stage and then out to tender and to seek the Council's approval to proceed with the replacement of the existing 50 metre main pool with a new 50 metre main pool.

BACKGROUND

As Elected Members will recall, at its meeting held on 3 August 2020, the Council considered a Confidential Tender Selection Report regarding Stage 2 of the refurbishment of the 50 metre main pool at the Payneham Memorial Swimming Centre. At that meeting, the Council resolved to defer consideration of the matter until the *Patterson Reserve Community & Recreation Precinct Masterplan* was presented to the Council for its consideration and approval.

On 21 April 2021, the *Patterson Reserve Community & Recreation Precinct Masterplan* was presented to the Council's Regional Capital Projects Committee. At that meeting the Committee resolved to endorse the Masterplan and recommended to the Council that the Masterplan be adopted. The resolution of the Committee also recommended that Stage 1 of the *Payneham Memorial Swimming Centre Redevelopment Project*, should comprise of the following elements:

- 50 metre main pool with provision for a solid cover;
- new semi-enclosed 25 metre outdoor Learners' Pool;
- new sports and leisure centre providing pool facilities and café, new gym/dry pool training, clubrooms and lettable function areas;
- new leisure pool with interactive water play and high platform water slides;
- the installation of shade, barbeques and picnic facilities on grassed embankment; and
- new plant room to service the 50m Pool, new 25m Learners' Pool and the aquatic recreation equipment and facilities.

The *Patterson Reserve Community & Recreation Precinct Masterplan* was subsequently endorsed by the Council at its meeting held on 3 May 2021. A copy of the Masterplan is contained in **Attachment A**.

While the *Patterson Reserve Community & Recreation Precinct Masterplan,* encompasses the *Payneham Memorial Swimming Centre*, *Patterson Reserve*, which is home to the East Torrens Baseball Club and the East Torrens Payneham Lacrosse Club, the *Payneham Youth Centre*, the *East Torrens Payneham Sports Clubrooms*, the *Payneham Library Complex* and the *Payneham Library Playground* and *Third Creek*, Stage 1 of the delivery comprises the redevelopment of the *Payneham Memorial Swimming Centre*.

As Elected Members may recall, at its meeting held on 26 October 2021, the Council resolved to award the contract for the Design Consultancy (detail design and construction documentation) for the redevelopment of the *Payneham Memorial Swimming Centre* to DWP-Hardy Milazzo. As part of the Design Consultancy, DWP - Hardy Milazzo is required to investigate and prepare documentation for both the refurbishment and reconstruction of the 50 metre main pool. The original intent was that the Council would go out to tender for both options and then make a decision. However, given that there is now sufficient information available to make a decision on this issue, the two (2) options are being presented to the Council in this report for its consideration. The costs and benefits in respect to both of these options are outlined in the Discussion section of this report.

RELEVANT STRATEGIC DIRECTIONS & POLICIES

A range of Council documents are relevant to this Project. These documents are briefly summarised below:

CityPlan 2030: Shaping Our Future
The Outcomes, Objectives and Strategies of the Council's *CityPlan2030: Shaping Our Future – Mid Term Review 2020* that are relevant to this Project are provided below:

Outcome 1: Social Equity – An inclusive, connected, accessible and friendly community.

- ***Objective 1.1: Convenient and accessible services, information and facilities.***
  Strategy 1.1.3: Design and provide safe, high-quality facilities and spaces for all people.

- ***Objective 1.4: A strong, healthy, resilient and inclusive community.***
  Strategy 1.4.1: Encourage physical activity and support mental health to achieve healthier lifestyles and well-being.

Open Space Strategy

The objective of the Council's *Open Space Strategy* is to enable the Council to pro-actively plan for open space and to ensure that there is equity in respect to access to useful open space and recreational facilities throughout the City. It also ensures that the Council's open space assets are maximised in respect to environmental management, public health and wellbeing, tourism and community capacity building.

The Council's *Open Space Strategy* designates the *Payneham Memorial Swimming Centre* as a Regional Level Facility, mainly due to its function as a formal recreation facility and appeal to a wide cross section of the community. This designation makes the *Payneham Memorial Swimming Centre* one of the most significant pieces of community and recreational open space facilities within the City of Norwood Payneham & St Peters.

Swimming Centres Long Term Strategy

The Council's *Swimming Centres Long Term Strategy*, which was adopted by the Council in December 2017, sets the future direction for both the *Norwood Swimming Centre* and the *Payneham Memorial Swimming Centre*.

The *Swimming Centres Long Term Strategy*, was developed following extensive consultation and engagement with the community to identify the future direction for both swimming facilities.

The objective behind the development of the Strategy is to:
- identify whether or not there was still a demand and/or need to retain both Swimming Centres; and
- to establish the framework upon which to base the future direction of both Centres, to ensure that both Swimming Centres are managed, maintained and developed in an effective manner to ensure that they remain contemporary and are able to meet the changing needs of the community in the future.

The Council's *Swimming Centres Long Term Strategy* recognises the unique character of both of the Council's Swimming Centres, the community which they serve and builds on the strengths of each facility. The Strategy also acknowledges the history and "*sense of place*" associated with both swimming centres, in particular recognising the cultural heritage of the *Norwood Swimming Centre* and the dynamic, vibrant public space opportunities at the *Payneham Memorial Swimming Centre*, *Patterson Reserve* and the other community and recreational uses within the Precinct.

The key components contained in the Strategy, which have been endorsed by the Council are set out below:

1. Retention of the two (2) outdoor pool facilities and focus on providing a diverse range of aquatic recreational opportunities with an emphasis on:
   - lap swimming;
   - swim coaching/squads;
   - learn to swim lessons (private, group and school);
   - recreational aquatic play;
   - aquatic fitness; and
   - community and family gatherings.

2. Development of a marketing and promotions plan that provides the community and visitors access to current information on the Council's aquatic recreation opportunities to ensure the longevity and success of the swimming facilities; and

3. Effectively developing and managing the two (2) Swimming Centres with a strong focus on on-going sustainability, customer experience and public safety.

Playgrounds Strategy

The Council's *Playgrounds Strategy* provides the long-term strategic direction for the provision and management of playgrounds within the City. More specifically, the *Playgrounds Strategy* identifies the key issues associated with each of the playgrounds throughout the City and outlines an integrated and strategic framework for the enhancement of these important community assets.

The *Playgrounds Strategy* establishes a hierarchy of playgrounds, which aims to achieve different levels of provision and the best use of resources. The hierarchy ranges from Regional and District level playgrounds, which cater to users from a wide geographic area and generally provide innovative, unique or higher standard play equipment and spaces, through to Neighbourhood and Local play opportunities, which generally cater for the surrounding local area and a smaller number of users. A playground's designated level in the hierarchy will ultimately determine the level of development and the quality of the playground.

The Payneham Library Playground is designated as a Level 3 Neighbourhood Playground, making it one (1) of nine (9) Neighbourhood Level playgrounds within the City. Designation as a Neighbourhood Level Playground assumes that the playground will cater for the local neighbourhood and will generally include standard rather than unique play equipment. However, its designation is more a reflection of its current elements rather than its location and role.

In respect to Payneham Library Playground, the *Playgrounds Strategy* identifies the lack of disability access, fencing too close to the play equipment and lack of connection with the Swimming Centre and Patterson Reserve as some of the key issues with the playground and its location. It recommends:

- increasing amount of seating; and
- considering whether a playground is better linked to Patterson Reserve and other sport and recreation facilities (eg Patterson Reserve or the Payneham Memorial Swimming Centre).

Given the playground's association with the adjoining regional level facilities and its proximity to other playgrounds, the Masterplan recommends that the playground be relocated and the existing site of the playground be used to expand the library carpark.

Public Health Plan

The *Public Health Plan* for the Eastern Region sets out the strategic directions to work towards delivering better living and better health. The implementation of the Masterplan should assist in achieving the directions of the *Public Health Plan*, particularly those under the theme of '*Environments for better health*', by creating attractive, more useable and stimulating reserves and recreational facilities. The objectives of this Project are to maximise the opportunities for active recreation and encourage greater physical activity, social interaction and social cohesion.

Eastern Region Climate Change Adaptation Plan

The *Eastern Region Climate Change Adaptation Plan* establishes a number of priorities for action, including increasing the areas of open space in key locations and increasing plantings in urban areas to create a greener, cooler space. The Masterplan includes provision to assist in reducing and mitigating the impacts of climate change through the planting of additional trees and the provision of more landscaping.

FINANCIAL AND BUDGET IMPLICATIONS

At its meeting held on 7 December 2020, the Council resolved to submit a grant funding application under the State Government's *Local Government Infrastructure Partnership Program* for the *Payneham Memorial Swimming Centre*. The preferred draft concept, as endorsed by the Council at its meeting held on 2 November 2020, was submitted as part of the application. As part of the application, the Council was also required to prepare and submit a Business Case. Copies of the Business Case have been previously provided to the Council.

On 22 March 2021, the Council was advised that it was successful in securing a grant of $5.6million for the *Payneham Memorial Swimming Centre Redevelopment Project*. Pursuant to the terms of the grant funding, the Council is required, as a minimum, to match the grant funding amount. To this end, as part of the Council's 2021-2022 Budget, the Council allocated a total project budget of $24 million (comprising of $5.6 million grant funding and $18.4 million as the Council's allocation).

It should be noted that the grant funding only applies to the aquatic based components of the Project, namely the 25 metre pool, the aquatic play equipment and the plant room. The grant funding does not apply to the proposed sports and leisure centre/administration building. Pursuant to the conditions under the *Local Government Infrastructure Partnership Program Grant,* the Council was unable to apply for grant funding for any component that has already been funded by the Council or any other State Government funding program. Therefore, whilst the refurbishment and/or reconstruction of the 50 metre main pool forms part of the redevelopment project, it does not form part of the elements identified in the *Local Government Infrastructure Partnership Program.* This means that the Council will need to fund the total cost of the 50 metre main pool regardless of whether it resolves to refurbish or rebuild the pool.

In order to establish the budget, the project was benchmarked against other similar proposed aquatic centre upgrade projects. Based upon the assessment at that time, a budget of $24 million was considered to be sufficient to cover the estimated costs for the development of the detail design and construction documentation, as well as the refurbishment of the main 50 metre main pool and associated infrastructure, the 25 metre pool, aquatic play equipment (including the slides), plant room, the sports and leisure centre/administration building, as well as all ancillary features such as fencing, outdoor furniture and landscaping.

Since the budget was established, there have been significant movements in the market and in the rate of escalation that is currently being applied by the construction industry. This suggests that the current budget may be insufficient or at the very least be put under pressure particularly when it is compared to similar projects such as the Salisbury Aquatic Centre Project, which has a similar footprint to the Payneham Memorial Swimming Centre and was recently tendered. The Salisbury Aquatic Centre Project, which was previously estimated at $24-$25 million is now expected to cost $30 million (based on a City of Salisbury media release). Further discussion on the market conditions, escalations and volatility are outlined later in this report.

At this stage, the total cost of the project, including the construction of a new pool is estimated to be $26,799,500. These costs only apply to the construction and do not include professional fees associated with the delivery of the project including the design consultants, environmental consultants and surveyors, which is estimated at an additional $1.2 million, bringing the total estimated cost of the Project to $27,999,500 – almost $4 million more than the original budget. It should also be noted that these are only first order cost estimates and therefore, are expected to change as the construction documentation is developed. Ultimately, the final test will be when the Project is released for tender.

The current estimates reflect a medium to high end product, which has been intentionally applied to differentiate the *Payneham Memorial Swimming Centre* from other aquatic facilities. Recognising the potential pressure on the budget, a first round of value management has been undertaken and will continue to be undertaken as the Project progresses in order to deliver the Project as close to the allocated budget as possible. However, by replacing the refurbishment of the 50 metre main pool with a new pool will incur an additional cost which was not factored into the original budget estimate. Notwithstanding this, constructing a new pool will deliver long term savings as the life expectancy of the pool increases by 25 years, from 25 years to 50 years and is recommended.

A summary of the cost estimate for the *Payneham Memorial Swimming Centre Redevelopment Project,* based on the Detailed Cost Analysis Report prepared by WT Australia (the Cost Consultants) is contained in **Attachment B.** The cost estimate is based on a new 50 metre main pool. It also distinguishes between the elements that are included and the optional extras, which may or may not be included depending on the available budget.

The *Payneham Memorial Swimming Centre Redevelopment Project* is scheduled to be delivered over two (2) financial years, with the estimated expenditure being incurred as follows:

- 2021-2022 - $ 3.0 million
- 2022-2023 - $21.0 million

When a 15% escalation from January 2021 to April 2022 is applied to the original budget of $24 million, the estimated budget for the Project is now expected to be in the vicinity of $27.6 million. This escalated figure aligns with the first order cost estimate of $27,999,500 contained in **Attachment B**.

EXTERNAL ECONOMIC IMPLICATIONS

Market Conditions, Escalations & Volatility

Unfortunately, the trend of escalation, caused by a number of factors including the degree of saturation of subcontractor capacity and the availability of local and imported materials, is predicted to continue. During 2021, as a result of the Federal and State Government's COVID-19 stimulus funding, together with the significant volume of stimulus works in the market and the rising cost of materials have impacted significantly on construction costs.

Some of the key factors that are likely to impact on the cost of the *Payneham Memorial Swimming Centre Redevelopment Project* include:

- the increased price globally of base metals due to supply cost increases;
- timber and steel reinforcement supply shortages, primarily due to the substantial amount of work in the residential sector as well as material shortages;
- commercial construction tenders in the second half of 2021, showing an escalation close to 15% for the year; and
- Tender Returns in 2022, maintaining the inflated cost levels with no sign of decreasing at this stage.

In addition, the construction industry is experiencing significant supply chain delays, due to increases in shipping costs. The closed borders due to COVID 19, have also resulted in labour shortages, which is predicted to continue to be a significant variance within the trade contractor market. In addition, the fuel crisis and the war in the Ukraine, is now also contributing to an over inflated market.

Economic Benefits

Based on the economic analysis, which has been undertaken as part of the preparation of the Business Case, through an injection of $24 million, it is estimated that the Gross Regional Product will increase by $16.928 million. Contributing to this, is a direct increase in output of $24 million, 58.13 additional FTE jobs, $3.115 million more in wages and salaries and a boost in value-added of $6.373 million.

It is anticipated that this direct contribution to the economy, will deliver flow-on supply-chain effects in terms of local purchases of goods and services. It is estimated that these indirect impacts would result in a further increase to output valued at $16.342 million, 51.03 more FTE jobs, $3.584 million more paid in wages and salaries, and a gain of $6.431 million in terms of value-added.

The increase in direct and indirect output and the corresponding change in jobs in the economy, are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under the scenario are expected to further boost output by $7.199 million, employment by 24.25 FTE jobs, wages and salaries by $1.731 million, and value-added by $4.124 million.

Therefore, the total output is expected to rise by $47.541 million. Corresponding to this are anticipated increases in employment of 133.41 FTE jobs, $8.430 million wages and salaries, and $16.928 million in terms of value-added.

SOCIAL ISSUES

The *Payneham Memorial Swimming Centre* is a Regional Level swimming and recreation facility and is a very well utilised asset within the City. Upgrading the main pool and the swimming centre generally by adding additional elements, will ensure the longevity of this asset.

Patterson Reserve, in its own right, is also recognised as a Regional Level facility. The integration of these two (2) facilities through their staged upgrade (ie *Patterson Reserve* and *Payneham Memorial Swimming Centre*) together with the *Payneham Library* will reinforce the importance of swimming and recreational play in community life and the strategic role of the *Patterson Reserve Community & Recreational Precinct* in providing these facilities at a regional level.

CULTURAL ISSUES

The *Payneham Memorial Swimming Centre* has been a key feature in the cultural and historic fabric of this City for over fifty (50) years. Improving the facilities offered at the Centre will ensure that the *Payneham Memorial Swimming Centre* will continue to function as an important cultural and historic element.

ENVIRONMENTAL ISSUES

The proposed improvements to the *Payneham Memorial Swimming Centre* will deliver environment improvements by reducing water loss and hence water usage. It is estimated that the operational costs associated with the Swimming Centre will reduce the operational costs by approximately $40,000 per year.

The redevelopment of the buildings will ultimately reduce the carbon footprint from this facility. Environmental elements such as solar power, rainwater tanks etc will be incorporated into the design of facilities where possible and warranted.

RESOURCE ISSUES

Council staff will manage and oversee the consultants throughout the Project program, which as Elected Members will appreciate, will require a significant resource allocation from the organisation.

RISK MANAGEMENT

There is no significant risk with the development of the detail design and construction documentation, particularly if a decision is made to reconstruct the 50 metre main pool. However there is a significant risk if any of the decision making during the design stage of the Project is unnecessarily protracted. Should the Council resolve not to endorse the Schematic Design contained in **Attachment C**, there is a risk that the Project could be delayed, which could have consequences in relation to the grant funding.

COVID-19 IMPLICATIONS

At this stage, unless further restrictions are imposed by the State and/or Federal Governments, there are no known COVID-19 implications that would restrict the Detail Design and Construction Documentation from progressing, or for the proposed redevelopment work to be undertaken

CONSULTATION

- **Elected Members**
  The Council adopted the *Swimming Centres Long Term Strategy* on **4 December 2017**. The Council considered a Confidential Report on the Stage 1 Refurbishment at its meeting held on **29 May 2018**. In **March 2020**, an Elected Members Information Session was held regarding the preparation of Masterplans for the *Norwood Swimming Centre* and the *Payneham Memorial Swimming Centre*. On **3 August 2020**, the Council considered a Confidential Tender Selection Report on the *Payneham Memorial Swimming Centre* Main Pool – Stage 2 Refurbishment Project.

  A report outlining five (5) draft concepts was considered by the Council's *Regional Capital Projects Committee* on **27 October 2020**. The Committee's recommendations regarding the main pool at the *Payneham Memorial Swimming Centre* were considered and adopted by the Council at its meeting held on **9 November 2020**. A further report outlining the four (4) options available to the Council was considered by the Council's *Regional Capital Projects Committee* on **16 December 2020**. The Committee's recommendation regarding the preferred option was considered by the Council at its meeting held on **18 January 2021**.

  The *Regional Capital Projects Committee* considered the *Patterson Reserve Community & Recreational Precinct Masterplan* at its Meeting held on **21 April 2021**. The Council subsequently endorsed the Masterplan at its Meeting held on **3 May 2021**.

  On **26 October 2021**, the Council considered a Confidential Tender Selection Report on Payneham Memorial Swimming Centre Redevelopment – Design Consultants and appointed DWP-Hardy Milazzo as the Design Consultants to deliver the detail design and construction documentation.

  The Schematic Design contained in **Attachment C** was presented to the Council at an Information Session held on **15 March 2022**.

- **Community**
  It was originally proposed that once the draft Masterplan was developed, community consultation would be undertaken, however given the conditions/requirements of the grant funding to deliver the Project within a short timeframe and given that the Council undertook significant consultation as part of the development of the *Swimming Centres Long Term Strategy*, and given that the Masterplan is simply implementing the *Swimming Centres Long Term Strategy*, it was determined that community consultation on the Masterplan not be undertaken. Targeted consultation regarding specific elements with key stakeholders will be undertaken as required, as part of the detail design/design development stage of the Project.

- **Staff**
  General Manager, Corporate Services
  Manager, Swimming Centres
  Acting Manager, City Assets
  Project Manager
  Project Manager, City Projects
  Project Manager, Urban Design & Special Projects

- **Other Agencies**
  Not Applicable.

DISCUSSION

Schematic Design

At the Elected Members Information Session held on 15 March 2022, DWP-Hardy Milazzo Design Consultants presented the proposed Schematic Design for the *Payneham Memorial Swimming Centre* as contained in **Attachment C** to Elected Members. Whilst the Schematic Design is based on the Masterplan, it has evolved to ensure construction costs are within the allocated Project budget whilst at the same time, maximise operational efficiencies. The key differences between the Masterplan and the Schematic Design are outlined below:

- **Pavilion** – The Masterplan proposed a two (2) storey Pavilion. However, through the development of the Schematic Design, the Pavilion has been redesigned as a single storey Pavilion. This change will deliver both cost savings in construction as well as eliminate the cost of ongoing maintenance costs.

- **Semi-enclosed 25m Pool and Learn to Swim Pool** – In the Masterplan, the 25 metre pool and the Learn to Swim Pool were joined together. The proposed Scheme separates the two structures to enable greater supervision while at the same time, reducing the down time in the event that an incident occurs in one of the pools, which subsequently requires that body of water to be closed. Under current legislation, there is a requirement that each body of water (ie pool) has its own Filtration System, Disinfection System and Balance Tank, to enable isolation of the water body, should an incident occur. By separating the two water bodies only one will be closed down while cleaning and maintenance takes place.

  Another variation from the Masterplan is the transformation of the semi-enclosed 25 metre pool and Learners Pool to a fully enclosed indoor facility, thereby facilitating an extension to the operations of the facility from six (6) months to twelve (12) months of the year. This will change the operations of the swimming centre and there will likely be an increase in revenue as a result of these facilities being available year round.

- **Waterplay** – Two zero-depth play areas have been included as part of the Schematic Design, one is located in the Indoor Aquatic Facility and one is located outside, thereby increasing flexibility of use. The indoor zero depth play area is an additional element to the overall Masterplan and as part of the value management has been identified as an optional extra element that can be excluded should there be on-going pressure on the budget. The proposal is to design this facility for younger children with the proposed outdoor zero depth play area catering for older children.

  At this stage, the estimated cost of the indoor zero depth facility is $320,000 with the outdoor zero depth area estimated to cost in the order of $540,000.

- **50 metre Main Pool** - The Masterplan indicated provision for an optional roof over the entire 50 metre main pool. The current scheme has allowed for a retractable shade structure over the shallow end of the pool, with the infrastructure available to expand the roof at a later stage, should this be necessary. As a cost saving measure, the retractable roof could be changed to a fixed structure, which will assist in reducing the overall cost of the Project

- **High Platform Waterslides** - The Masterplan proposed access to the slides via the two storey pavilion building. With the proposed change to a single storey structure the slides are now proposed as a standalone component. The advantage of having the slides as a standalone feature is that they can be fenced off when they are not operational. The other advantage with the proposed location is the inclusion of vertical landscaping along the exterior of the staircase and platform of the waterslides, which adds another dimension to the landscape of the aquatic facilities.

  The intent is that two proposed slides will comprise of a body slide – generally for single users and a raft slide - which can carry multiple users at the same time. These together with the outdoor zero depth area will cater for the teenage market.

- **Plant room** – The location of the Plant Room has not changed and remans in the same location as proposed in the Masterplan, however access to this facility is now via the existing service access currently used by the Payneham Library thereby eliminating an additional access point off OG Road.

- **Increased carpark** - The Schematic Design includes the removal of the existing Playground and an extension to the Payneham Library Carpark. This is outside the scope of the Project and has been costed as an optional extra. However, given that the new facility is likely to attract a significant number of additional patrons, an increase in available carparking is critical to cater for the peak periods.

New Pool versus Refurbishment of 50 metre Main Pool

In order to address the ongoing water loss from the existing 50 metre main pool due to the age and condition of the infrastructure, the Council endorsed the refurbishment of the Main Pool as a matter of priority. Due to the extent of work required, it was decided that the refurbishment would be undertaken in two (2) stages, to minimise the interruption to the regular twenty-four (24) week swimming season.

At its meeting held on 29 May 2018, the Council appointed South Pacific Commercial Aquatics Pty Ltd for the fixed sum of $355,000 (final cost $388,000) to undertake the Payneham Memorial Swimming Centre Main Pool – Filtered Water Pipework Replacement, as Stage 1 in the refurbishment of the Main Pool. This stage of the Project included the replacement of the filtered water return pipe, which delivers clean filtered water to the main pool and the replacement of the "soiled" water return pipes, which takes water from the main pool back to the filtration system. This work was completed in October 2018.

Following completion of the Stage 1 works, the Council appointed consultants to undertake the preparation of the Detail Design and Construction Documentation for the remainder of the Main Pool Refurbishment Works (Stage 2), which included:

- the provision of appropriate disability access to the swimming pool;
- the replacement of the scum gutters with a wet deck entry;
- the installation of a new filtration system;
- the refurbishment of the plant room; and
- the re-tiling of the main pool.

The Consultants, led by Hames Sharley Architects, also included Crackerjack Consulting Engineers (Aquatic Engineers), BCAe (Electrical Consultants) and Rider Levett Bucknall (Cost Consultants).

The Construction Documentation for this work was completed in November 2019, with the intent that the Stage 2 refurbishment would commence following the end of the 2019-2020 season.

However, as outlined earlier in the Background Section of this Report, at its meeting held on 3 August 2020, the Council resolved to defer the consideration of the matter until the *Patterson Reserve Community & Recreation Precinct Masterplan* was presented to the Council for its consideration.

The Masterplan was subsequently presented and endorsed by the Council at its meeting held on 3 May 2021. The Masterplan recommended that the 50 metre main pool remain in its existing location. As illustrated in the Schematic Design contained in **Attachment C** and **Attachment D**, the location of the 50 metre main pool is proposed to remain unchanged, regardless of whether or not it is refurbished or built as new. Through the recent review which has been undertaken, the consultants have identified and investigated a number of alternative options. It was concluded that whilst there are a number of alternative options in terms of location and orientation, the existing location delivers an outcome that minimises any unnecessary costs.

Table 1 below provides a comparison between the refurbishment of the existing 50 metre main pool and the construction of a brand-new pool.

TABLE 1: COMPARISON BETWEEN REFURBISHMENT AND NEW 50 METRE MAIN POOL

REFURBISHED	NEW
Warranty	
25 years Maximum	**50 years Minimum (box and pour)**
Extend the life up to 25 years for a refurbished pool (this comes at a premium cost as existing pool shell will require extensive protection due to age. Tiling will require the maximum 25 year warranty period from tiling manufacturer / supplier again this comes at estimated cost uplift of 35% to 40% more.	This option also meets the design parameters for NCC Class 9b structures and easier certification. **Recommended.** *New (sprayed) pool shells which are designed for a minimum 25 years, not recommended as theses do not meet the design parameters for NCC Class 9b structures. Certification has to be split as a sprayed pool can only be certified for Class 10 building structure. **New (modular) pool shells are designed for a minimum 25 years on their shells, not recommended. Do not meet the design parameters for NCC class 9b structures. Certification has to be split as a modular pool can only be certified for Class 10 building structure.
Tiling	
Extended Program & Labour Costs	**Typically achieve 40 years plus**
There is a lot more time required to prepare surface finishes and joints in a refurbished pool, hence hidden costs on programming.	Tiling for a new (box and pour) will typically achieve 40 years plus although warranted for 15 years which gives the most cost-effective solution. Tiling for a new (sprayed) pool will typically achieve the life span of the design life although warranted for 15 years. Modular lined pools require relining every 10 years maximum. The most expensive system over 25 to 50 years.
Skills Market	
Limited Market	**Competitive | Cost-Effective Market**
Refurbishing a pool is extremely specialised and from a contractor perspective - very limited in skills market	New pool construction opens up the opportunity for more contractors as the construction process is simpler and therefore a more competitive cost-effective market.
Pipework	
Inefficient | Increased Risk	**Efficient | Low Risk**
When refurbishing a pool, you are creating more opportunity for human error just on detailing again due to the specialist nature of the works. Notwithstanding the increase in program / construction time.	When constructing a new pool all pipework etc can be cast in which has a number of advantages and risk mitigation allowances.

A detailed cost analysis of refurbishment versus construction was not undertaken when the Masterplan was prepared. However, as part of the Schematic Design, a detailed cost comparison of the two (2) options has now been undertaken. The net building cost estimate (cost of any demolition work and cost associated with construction associated with the pool shell only) for the refurbishment of the existing 50 metre main pool is $2.81 million (this is based on the tender submission that the Council received in 2020). In comparison, the construction of a new 50 metre main pool in the existing pit is estimated to cost $3.5 million (excluding GST). Again, this figure represents the cost of demolition and the cost of constructing the shell, it does not include any of the additional costs such as preliminary costs or site service upgrades. Whilst the difference between the cost of the two options is approximately $653,000, the benefits outweigh the cost differential, with the construction of a new pool delivering longevity as well as a contemporary asset with lower long-term maintenance costs. In short, it is the most practical and logical option

It should be noted that the option of constructing a new main pool was considered and discounted by the Council as part of the *Swimming Centre Review* and the subsequent *Swimming Centres Strategy*, which was adopted in December 2017. However, given the information that is now available and given that the cost estimates for the two (2) options are very similar, it is recommended that the Council once again consider the option of constructing a new pool as it will deliver a better outcome for the Council, the *Payneham Memorial Swimming Centre* and more broadly the precinct.

Eight Lanes Versus Ten Lanes

As part of the development of the Schematic Design, consideration has been given to whether or not there is any possibility of expanding the 50 metre main pool from an eight (8) lane pool to a ten (10) lane pool, as suggested by a couple of Elected Members. In respect to this option, a number of configurations have been considered noting that the position of the 50m main pool in all configurations is restricted by the Tree Protection Zone associated with the significant tree located on the eastern boundary of the property. This means that while some expansion towards the eastern edge of the 50m pool is possible, it is limited.

For the Council to pursue the construction of a new ten (10) lane main pool to replace the existing eight (8) lane main pool, then one of the following would need to occur:

- a reduction in the footprint of the new building, which will involve the wall between the 25m pool and 50m main pool being moved closer to the 25m pool. This will create the space required to enable the 50 metre main pool to be expanded to a ten (10) lane main pool comprising of 2.4 metre lanes; or

- leave the footprint of the pool hall building as proposed and encroach into the Tree Protection Zone. The Australian Standard recommends that any encroachment into the Tree Protection Zone of a significant tree should not exceed more than 10%. If a decision is made to encroach into the Tree Protection Zone, then an Arboricultural Impact Assessment is required to be undertaken: or

- a combination of the two (2) options above as depicted in **Attachment D**.

Expanding the width of the main pool to accommodate ten (10) lanes at 2.4 metres per lane, is estimated to cost an additional $819,000. This is mainly due to the additional costs associated with excavation and additional materials.

It is recognised that the construction of a ten (10) lane main pool will provide greater opportunity for simultaneous use of the pool. The additional lanes will enable swimming clubs together with learn to swim classes for more advanced learners, who have progressed past the 25m pool training, and casual lap swimmers to use the pool at the same time.

Whilst in theory a ten (10) lane main pool comprising of 2.4m lane widths will allow for a greater range of competitive events to be held at the Payneham Memorial Swimming Centre, the reality is that the demand may be limited given that the State Aquatic Centre at Marion was designed specifically to handle state and inter-state competitive events and has substantial spectator seating, media facilities and adequate changing facilities to manage multiple teams. Also, with the proposed $80 million rebuild of the North Adelaide Aquatic Centre as promised by the new State Government, it would be reasonable to assume that the primary competitive events to be hosted at Payneham will be school swimming carnivals and club competitions.

OPTIONS

Refurbishment versus New 50 metre Main Pool

In respect to the 50 metre main pool, the Council has two (2) options. It can either resolve to retain and refurbish the existing 50 metre main pool or demolish and reconstruct a new 50 metre pool. Notwithstanding that the difference in net building cost is approximately $653,000, the benefits of building a new pool far out-way the additional costs. For this reason the recommendation is to proceed with the reconstruction of a new 50 metre main pool.

Eight Lanes versus Ten Lanes

Should the Council resolve to progress with the construction of a new 50 metre main pool, then it will need to resolve whether it proceeds with the recommended eight (8) lanes or increase the size of the pool to ten (10) lanes. Given that the cost of the project is estimated to exceed the allocated budget and that cost management is being undertaken to try and identify cost savings, adding an additional $819,000 to the overall budget, which will deliver very little additional commercial or community benefit is not recommended. It is therefore recommended that the new 50 metre main pool be retained as an eight (8) lane pool as depicted in the Schematic Design contained in **Attachment C**.

Schematic Design

The Council can resolve to endorse the Schematic Design contained in **Attachment C** or **Attachment D** as the basis to progress to the preparation of the construction documentation, or alternatively amend and endorse the Schematic Design as the basis for the construction documentation. Given that significant consideration has been given to the all of the elements contained in the Schematic Design, it is recommended that the Council endorse the Schematic Design contained in **Attachment C** which proposes a new 50 metre main pool comprising of eight (8) lanes.

CONCLUSION

The Payneham Memorial Swimming Centre has been a significant Council asset and has served the community well for over fifty (50) years. During this time, limited maintenance and no investment has been provided and now for continued functionality with reduced public liability risk(s) an investment is required by the Council. The current situation is that the Main Pool is costing the Council a significant amount of money for operational costs, all of which has resulted from the lack of maintenance and upkeep. Investment is required to reduce both the operational costs and maintenance costs together with reducing public liability through the provision of a new contemporary facility that meets the needs of both the existing market and captures a new market.

COMMENTS

Based on the investigations that have been undertaken, it appears that the benefits of constructing a new pool 50 metre main pool far outweigh the cost savings associated with refurbishing the existing 50 metre main pool. Should the Council resolve to expand the 50 metre main pool from an eight (8) lane pool to a ten (10) lane pool, then the Council would need to increase the budget for this Project. Given the current market, the availability of the State Aquatic Centre in Marion and the proposed State Government investment for the North Adelaide Aquatic Centre and the Council's budgetary position, the additional $819,000 is not justified or indeed essential.

RECOMMENDATION 1

That pursuant to Section 90(2) and (3) of the *Local Government Act 1999* the Council orders that the public, with the exception of the Council staff present, be excluded from the meeting on the basis that the Council will receive, discuss and consider:

(d) commercial information of a confidential nature (not being a trade secret) the disclosure of which —
(i) could reasonably be expected to confer a commercial advantage on a third party; and
(ii) would, on balance, be contrary to the public interest;

and that the Council is satisfied that, in principle that the meeting should be conducted in a place open to the public, has been outweighed by the need to keep the receipt/discussion/consideration of the information confidential.

RECOMMENDATION 2

a. That the Council endorses the construction of a new 50 metre main pool at the Payneham Memorial Swimming Centre.

b. That the new 50 metre main pool at the Payneham Memorial Swimming Centre be retained as an eight (8) lane main pool as illustrated in **Attachment C**.

c. That the Schematic Design for the Payneham Memorial Swimming Centre contained in **Attachment C**, be endorsed as the basis of preparing the construction documentation.

RECOMMENDATION 3

Under Section 91(7) and (9) of the Local Government Act 1999 the Council orders that the report and discussion be kept confidential for a period not exceeding 12 months, after which time the order will be reviewed.

Cr Stock moved:

That pursuant to Section 90(2) and (3) of the Local Government Act 1999 the Council orders that the public, with the exception of the Council staff present [Chief Executive Officer, General Manager, Urban Services, General Manager, Urban Planning & Environment, General Manager, Governance & Community Affairs, General Manager, Corporate Services, Manager, Governance & Legal, Manager, Economic Development & Strategic Projects, Projects Manager, Manager, Urban Planning & Sustainability, Manager, Community Services, Project Manager, Assets, Communications Officer and Executive Assistant, Urban Services], be excluded from the meeting on the basis that the Council will receive, discuss and consider:

(d) commercial information of a confidential nature (not being a trade secret) the disclosure of which —
(i) could reasonably be expected to confer a commercial advantage on a third party; and
(ii) would, on balance, be contrary to the public interest;

and that the Council is satisfied that, in principle that the meeting should be conducted in a place open to the public, has been outweighed by the need to keep the receipt/discussion/consideration of the information confidential.

Seconded by Duke and carried unanimously

Cr Minney moved:

a. That the Council endorses the construction of a new 50 metre main pool at the Payneham Memorial Swimming Centre.

b. That the new 50 metre main pool at the Payneham Memorial Swimming Centre be a ten (10) lane main pool as per Attachment D.

c. That the Schematic Design for the Payneham Memorial Swimming Centre contained in Attachment D, be endorsed as the basis of preparing the construction documentation.

Seconded by Cr Sims and carried unanimously.

Cr Dottore moved:

Under Section 91(7) and (9) of the Local Government Act 1999 the Council orders that the report, Attachment B and discussion be kept confidential for a period not exceeding 12 months, after which time the order will be reviewed.

Seconded by Cr Knoblauch and carried unanimously.

Attachment A

Confidential

Payneham Memorial Swimming Centre Redevelopment

City of Norwood Payneham & St Peters
175 The Parade, Norwood SA 5067

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City of Norwood Payneham & St Peters

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

City of Norwood Payneham & St Peters
175 The Parade,
Norwood SA 5067

Authors:

TCL
109 Grote Street,
Adelaide SA 5000

Report No: A2003 Patterson Reserve Community & Recreation Precinct

Rev	Description	Date	By	Checked	Approved
1	Draft Issue	03.03.21	PA/AL/SB	AL	SB
2	Revised Draft Report	31.03.21	PA/AL	AL	DS
3	Final Draft Report	12.04.21	AL	AL	DS
4	Approved Report	13.05.21	AL	AL	DS

CONTENTS

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.*

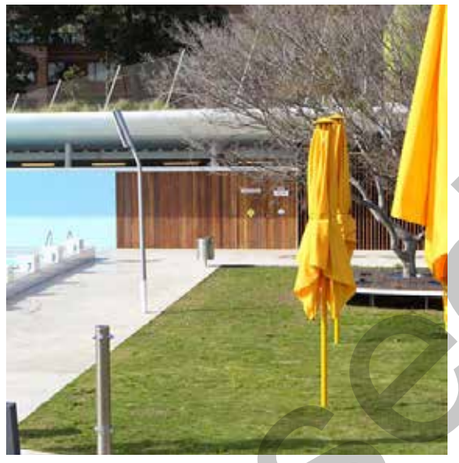
Payneham Memorial Swimming Centre

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.

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)

Payneham Memorial Swimming Centre Project Area

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)

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

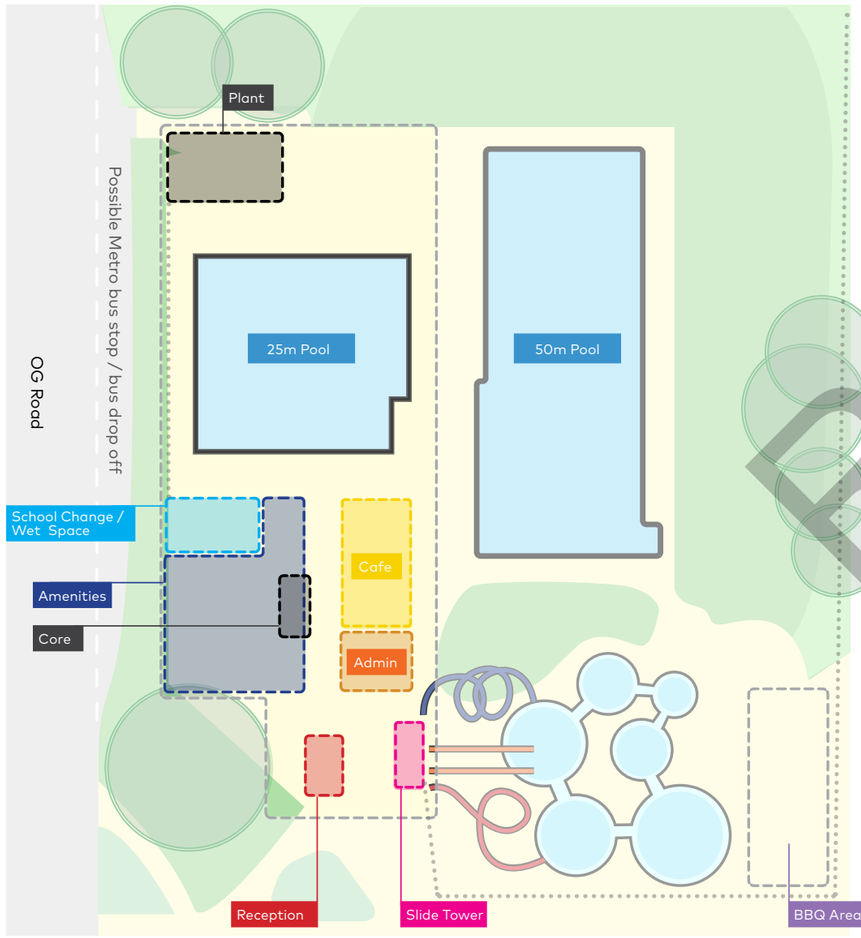
0 25 50

5.0 MASTERPLAN ELEMENTS

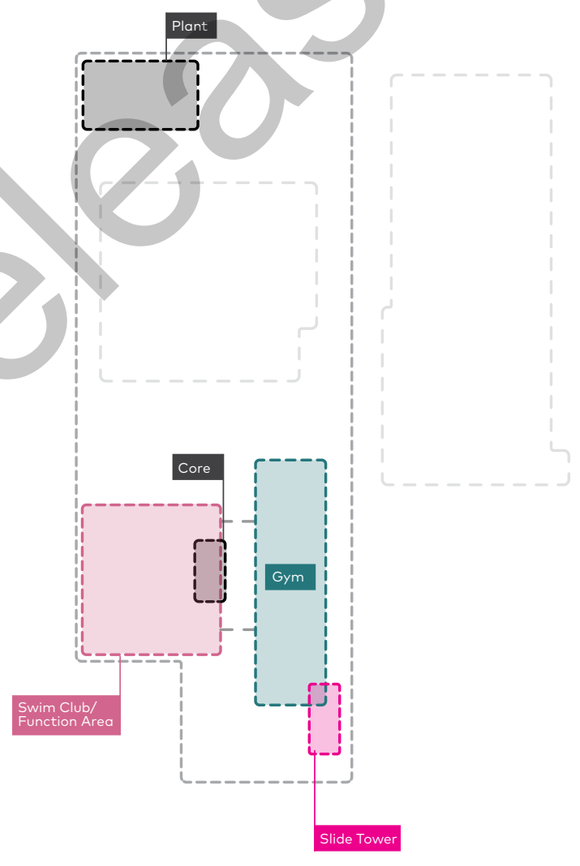
5.1 Architectural Schematic Spatial Arrangement

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.

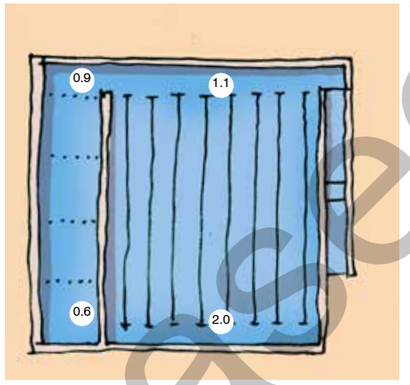
50m Pool

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



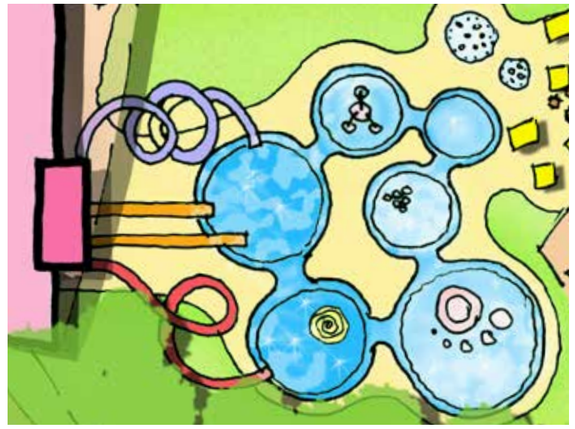
The 25m pool is a reinforced concrete multi-use pool, consisting of 8 lap lanes, 5 learn-to-swim areas and a disabled access ramp. The pool is 1.1m deep at the shallow end, grading down to 2.0m at the deep end.

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.

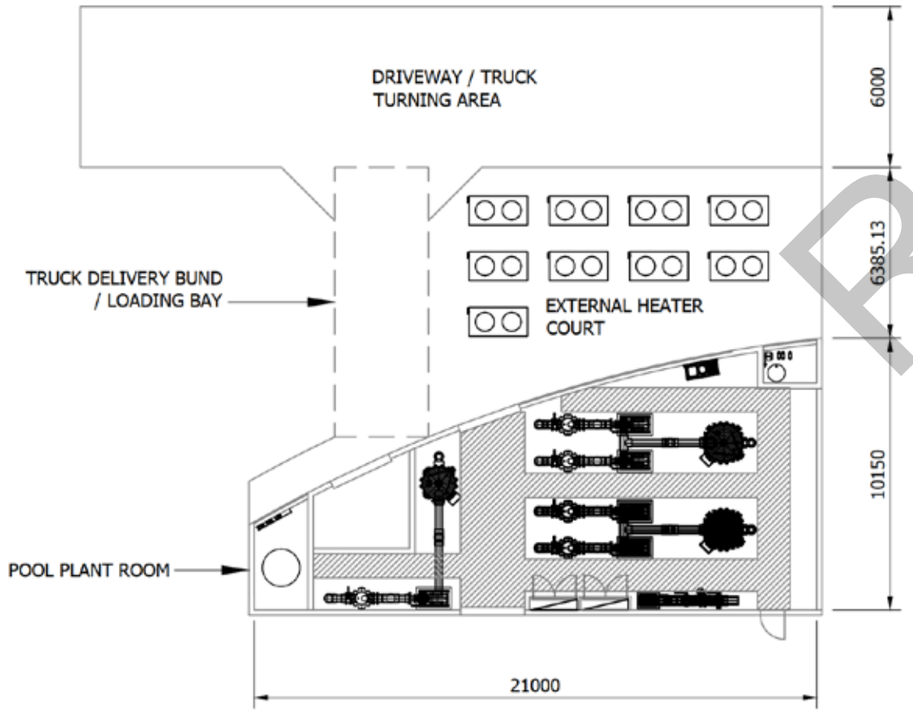


Figure 6: Overall Equipment Area Plan

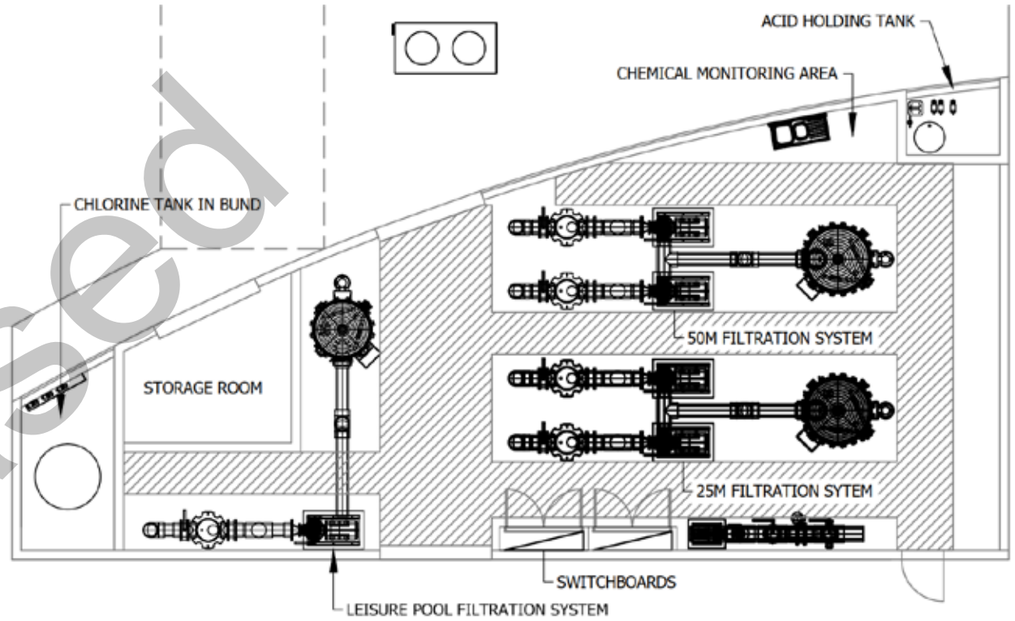


Figure 7: Pool Plant Room General Plan

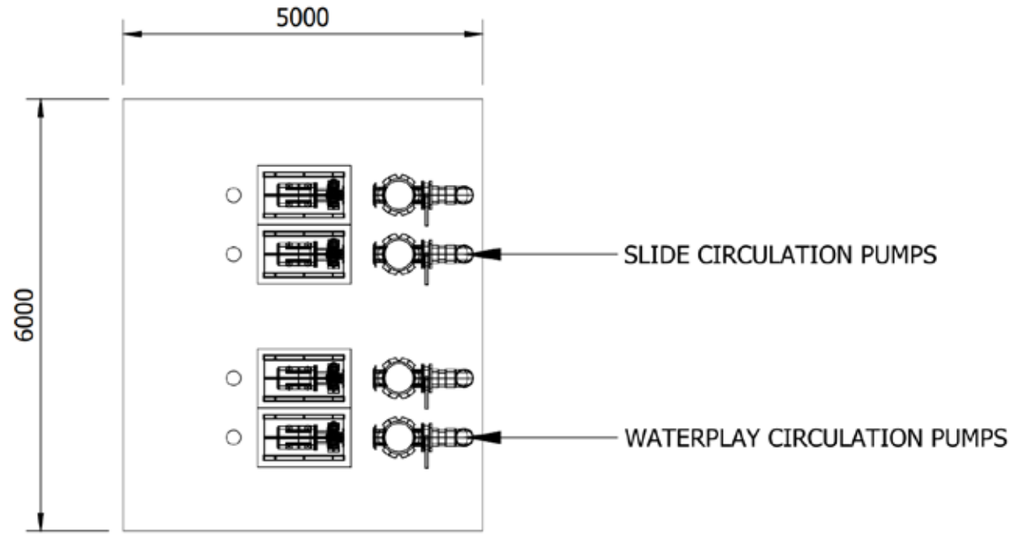


Figure 8: Leisure Pool Local Pumping Room

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

- 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.
- 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

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

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.

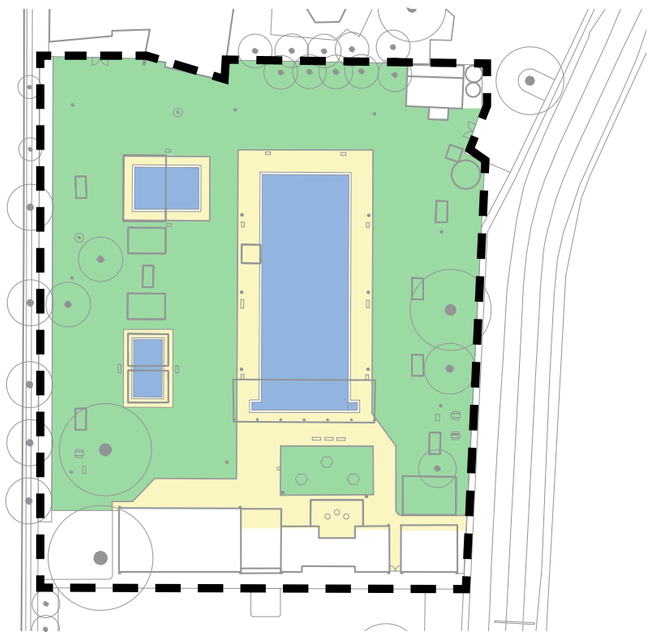
- Maintenance
- Public
- Service / Staff
- Links to carparking and bus drop off

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.

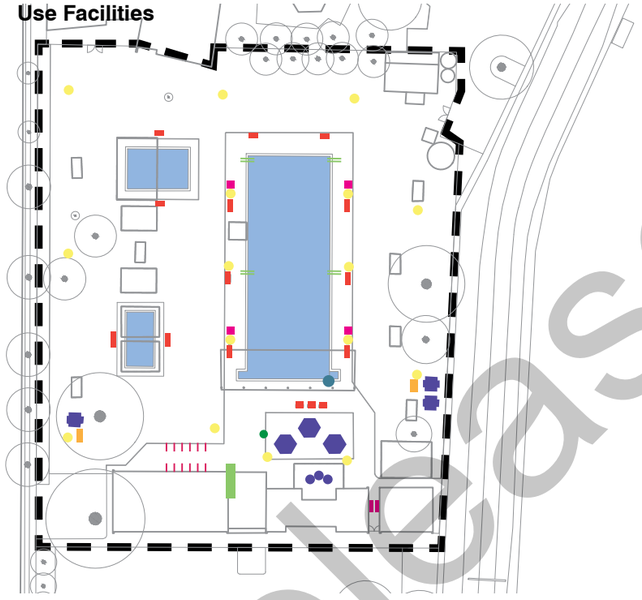
- Pavement - 1600m²
- Grass - 5700m²



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.

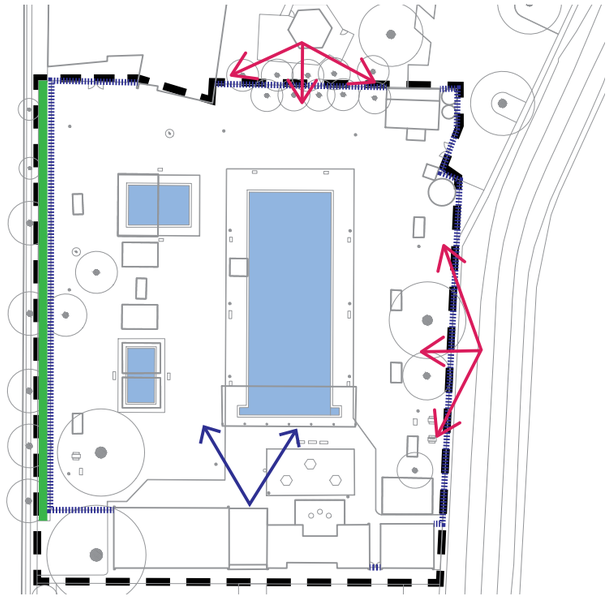
- Seat / Bench
- Picnic Setting
- Light Pole
- Water Fountain
- Bike Rack
- Pool Access Lift
- Pool Ladder / Step
- Bins



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.

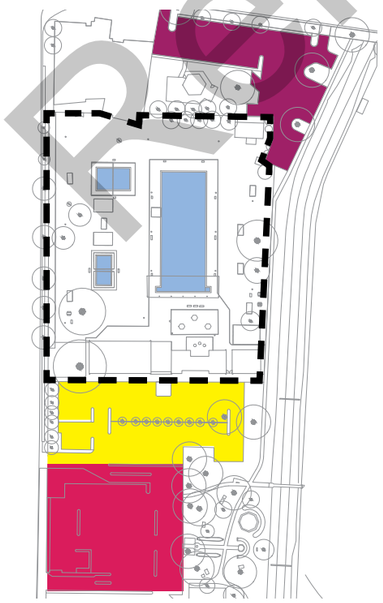
- Framed View
- Overlooking
- Visual Barrier
- Permeable Fence



Carparking

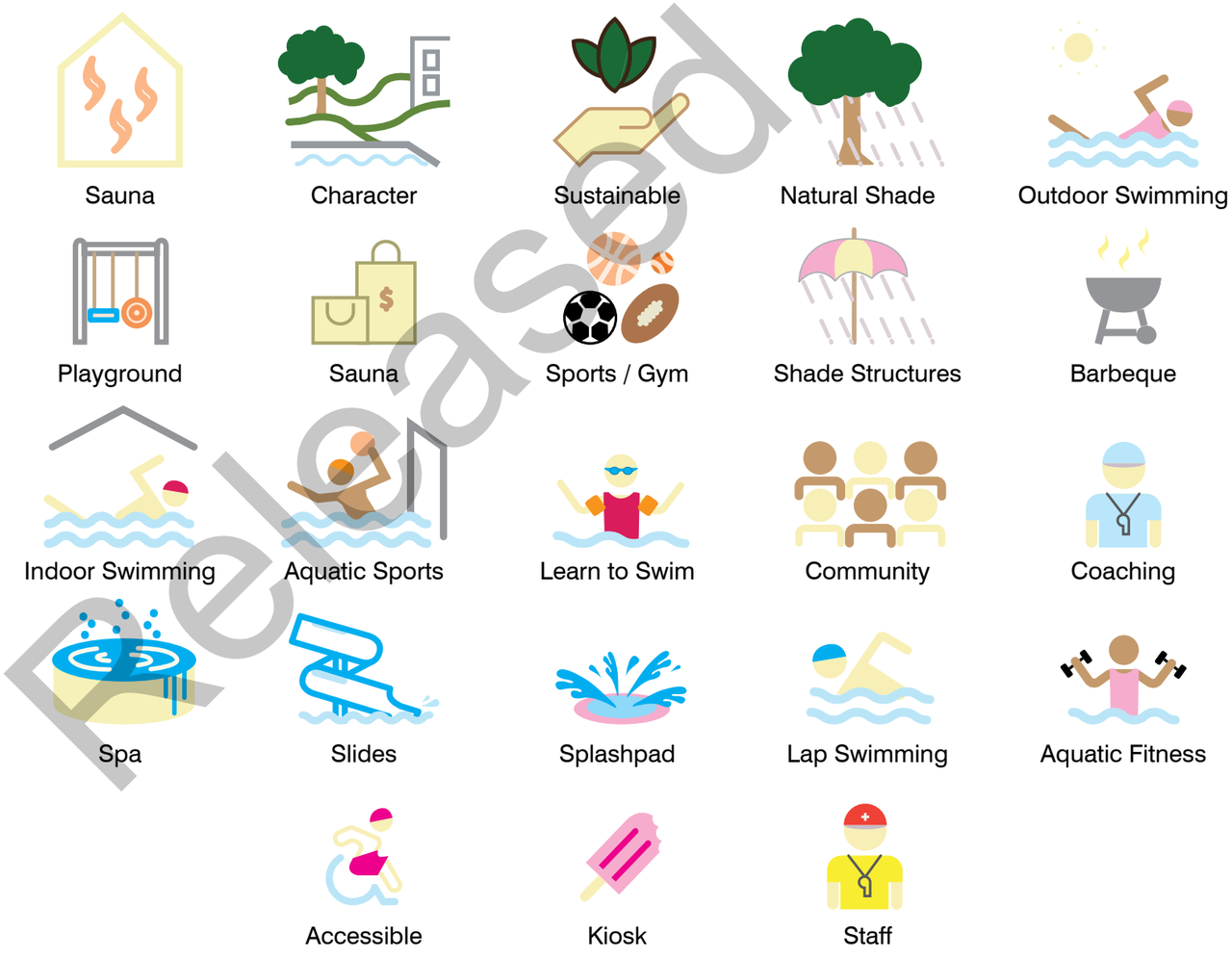
Dedicated off-street parking for the Centre is provided on the southern side of the property. On the northern side a public carpark associated with the library is often used as overflow parking by pool patrons. There is a lack of definition between this carpark and an adjacent private carpark which creates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



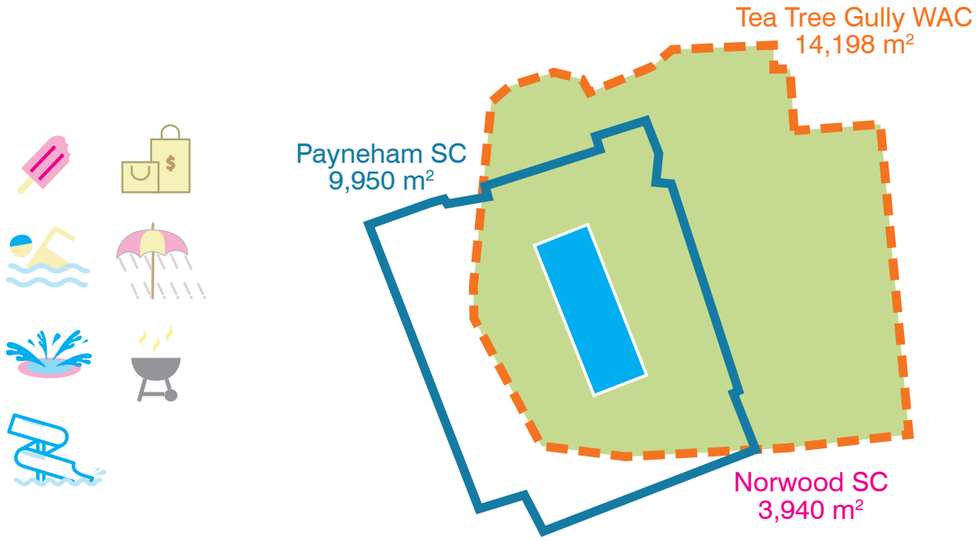
Appendix A.2 | Comparative Analysis

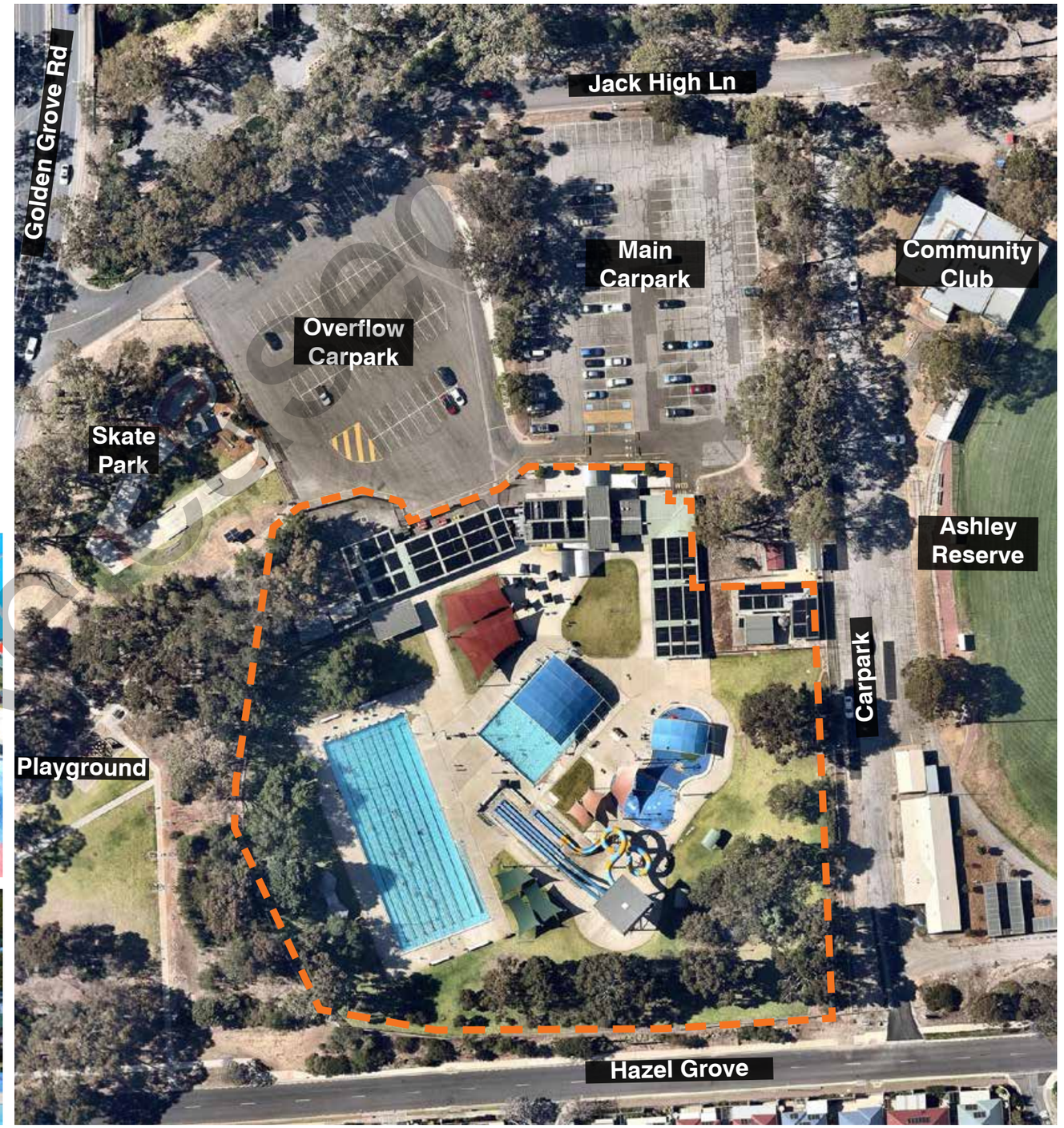
Facilities provided at swim centres are varied across the state and country. The following pages provide an easy-reference review of the types of facilities available at a variety of different swim centres across Adelaide and Australia, to assist understanding the sorts of opportunities available at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



Tea Tree Gully Waterworld Aquatic Centre

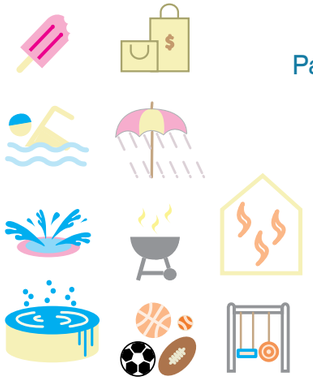
Golden Grove Road, Ridgehaven SA





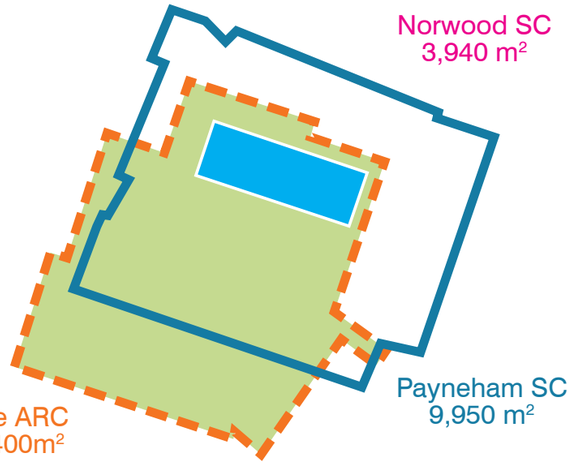
George Bolton Swimming Centre Burnside

Howard Terrace, B26, Hazelwood Park SA



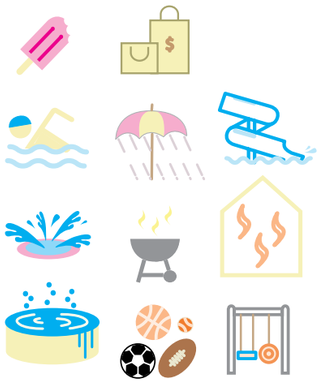
The ARC Campbelltown

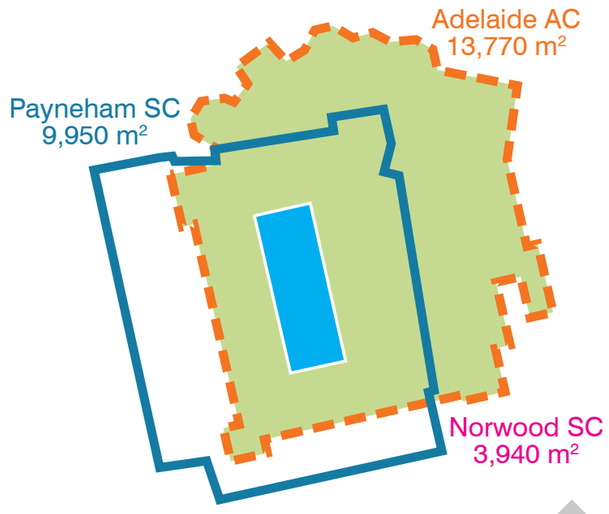
19 Kenwyn Drive, Campbelltown SA
Car park numbers: 250

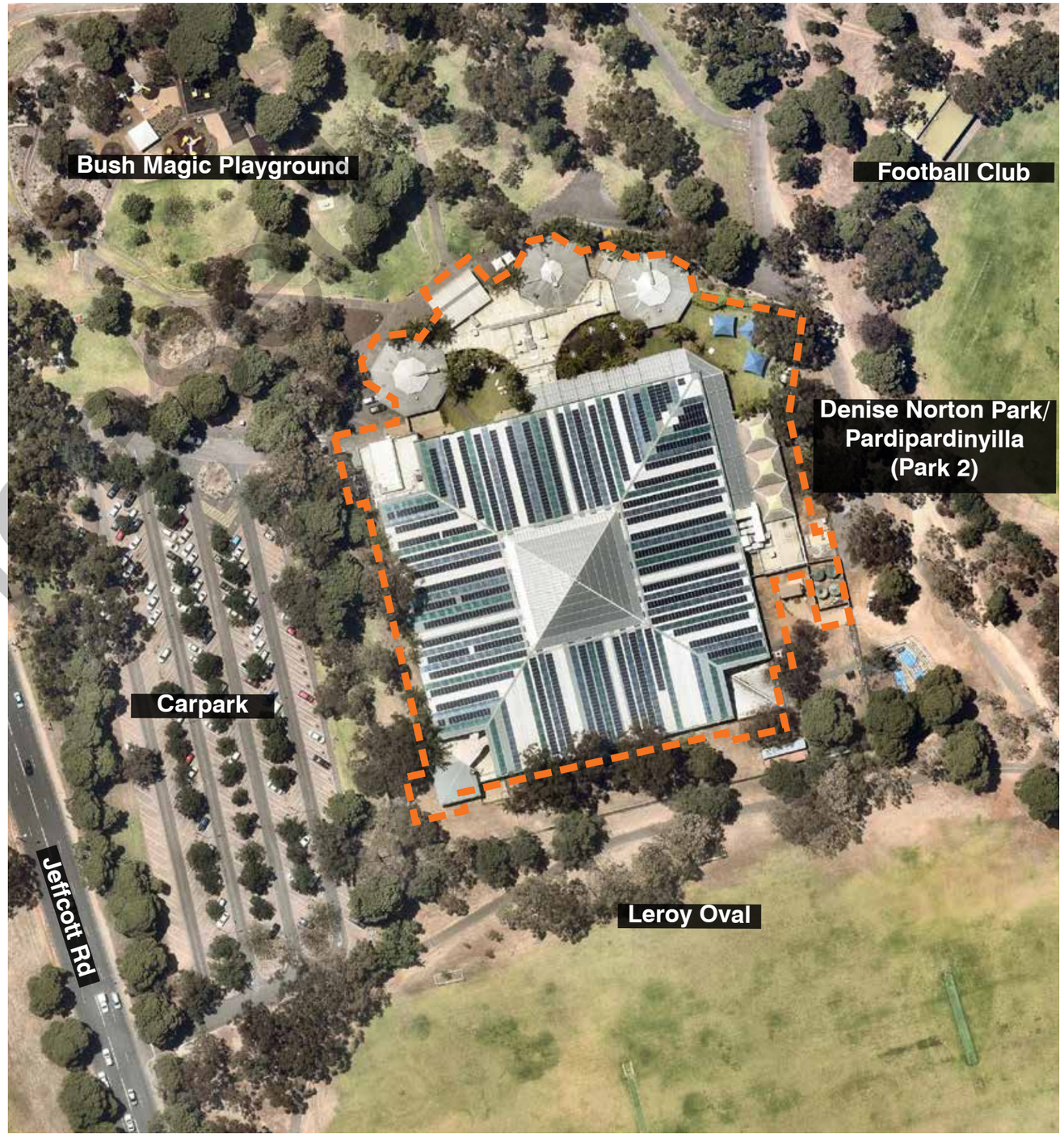


Adelaide Aquatics Centre

Jeffcott Road, North Adelaide SA
Car park numbers: 400

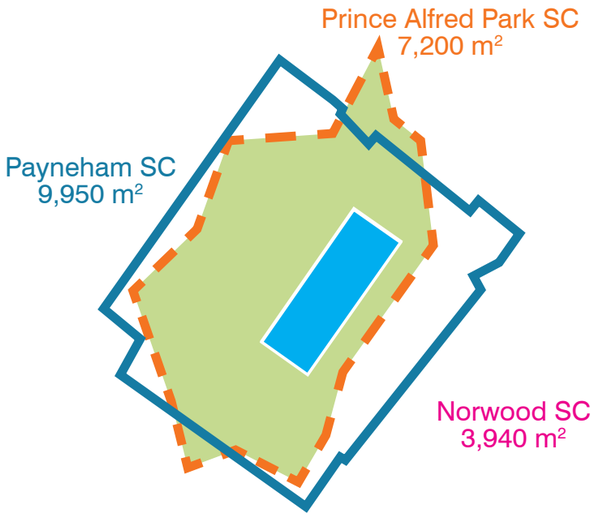


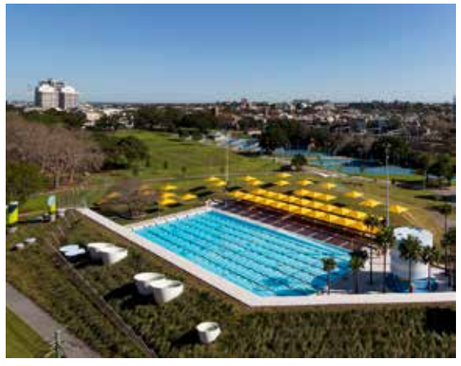




Prince Alfred Park Swimming Centre

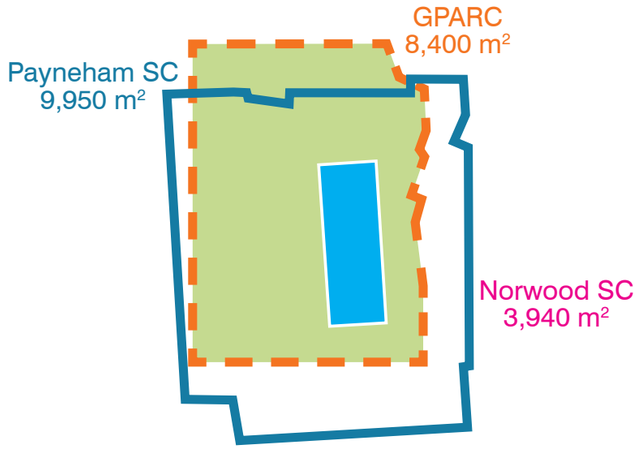
105 Chalmers St, Surry Hills NSW





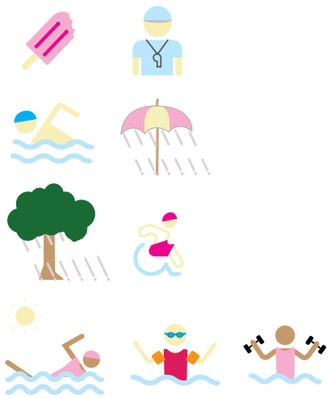
Gunyama Park Aquatic and Recreation Centre

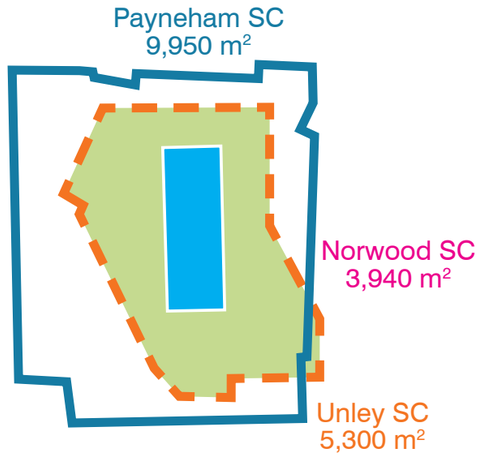
17 Zetland Avenue, Zetland NSW



Unley Swimming Centre

Ethel Street, Forestville SA
Car park numbers: 100





aquaticone

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

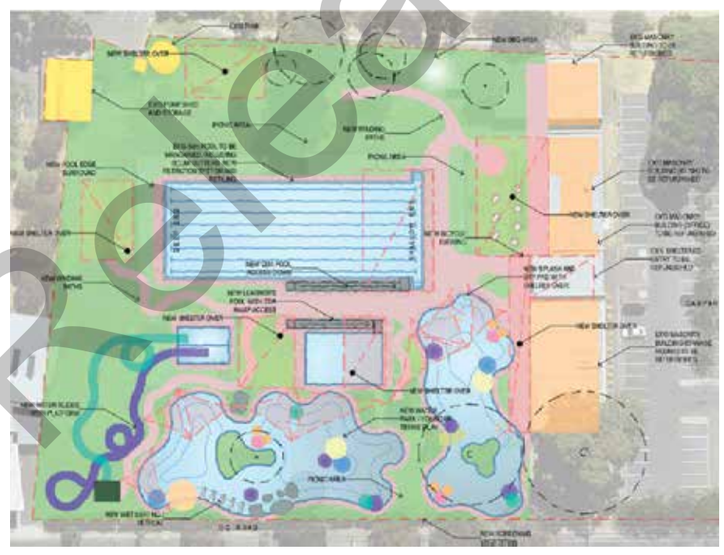
Public partication in the consultation program:

- 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

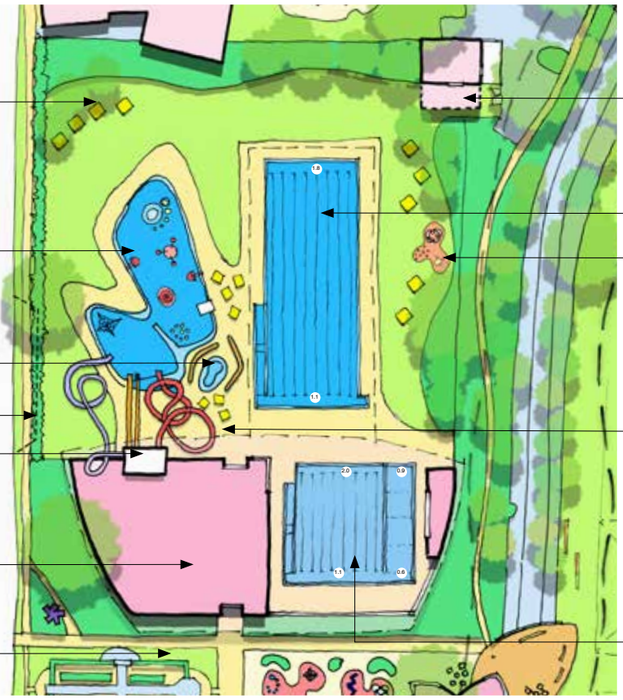
New sports club change facilities and storage

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

109 Grote Street
Adelaide, SA 5000
Australia

T: +61 8 8223 7533
E: adel@tcl.net.au

tcl.net.au

Attachment B

Confidential

Payneham Memorial Swimming Centre Redevelopment

City of Norwood Payneham & St Peters
175 The Parade, Norwood SA 5067

Telephone 8366 4555
Facsimile 8332 6338
Email townhall@npsp.sa.gov.au
Website www.npsp.sa.gov.au

City of Norwood Payneham & St Peters

PAYNEHAM MEMORIAL SWIMMING CENTRE REDEVELOPMENT - SCHEMATIC DESIGN COST ESTIMATE	
BUDGET: NEW 50 METRE POOL	**26-Apr-22**
CONTAMINATED SOIL REMOVAL	$200,000
DEMOLITION	$350,000
PAVILION	$3,750,000
50 M POOL NEW OPTION	$3,500,000
RETRACTABLE SHADE STRUCTURE 50m	$244,500
25 M POOL	$1,950,000
LEARN TO SWIM POOL	$800,000
EXTERNAL ZERO DEPTH PLAY AREA	$540,000
POOL HALL	$6,700,000
WATER SLIDES	$1,700,000
PLANT ROOM	$1,900,000
SITE FURNITURE	$162,000
SITE SERVICES	$195,000
LANDSCAPING	$590,000.00
FENCING & GATES	$100,000
CONSTRUCTION TOTAL	**$22,681,500**
PRELIMINARIES	$2,377,000
OVERHEADS / MARGIN	$1,046,000
TOTAL TENDER ESTIMATE	**$26,104,500**
CONSTRUCTION CONTINGENCY	$500,000
SITE SERVICES UPGRADES	$195,000
TOTAL CONSTRUCTION	**$26,799,500**
PROFESSIONAL FEES / CHARGES	**$1,200,000**
TOTAL PROJECT ESTIMATE	**$27,999,500**
Grant	**$5,600,000**
Council Contribution	**$22,399,500**
50 METRE POOL OPTIONS	
Refurbish existing Pool	**-$653,000**
Total Project Estimate	**$27,346,500**
10 Lane Pool	**$819,000**
Total Project Estimate	**$28,818,500**
ADDITIONAL OPTIONAL EXTRAS	
Internal zero depth play area	$320,000
Uplighting OG Road façade	$25,000
Uplighting Significant Trees	$10,000
Library Car Park	$88,000
Internal Planter boxes	$150,000
TOTAL	**$593,000**
ESCALATION	
Original Budget (Grant & Council Contribution)	$24,000,000
Escalation from January 2021 to April 2022 increase 15%	$3,600,000
Escalated Budget	**$27,600,000**

Attachment C

Confidential

Payneham Memorial Swimming Centre Redevelopment

City of Norwood Payneham & St Peters
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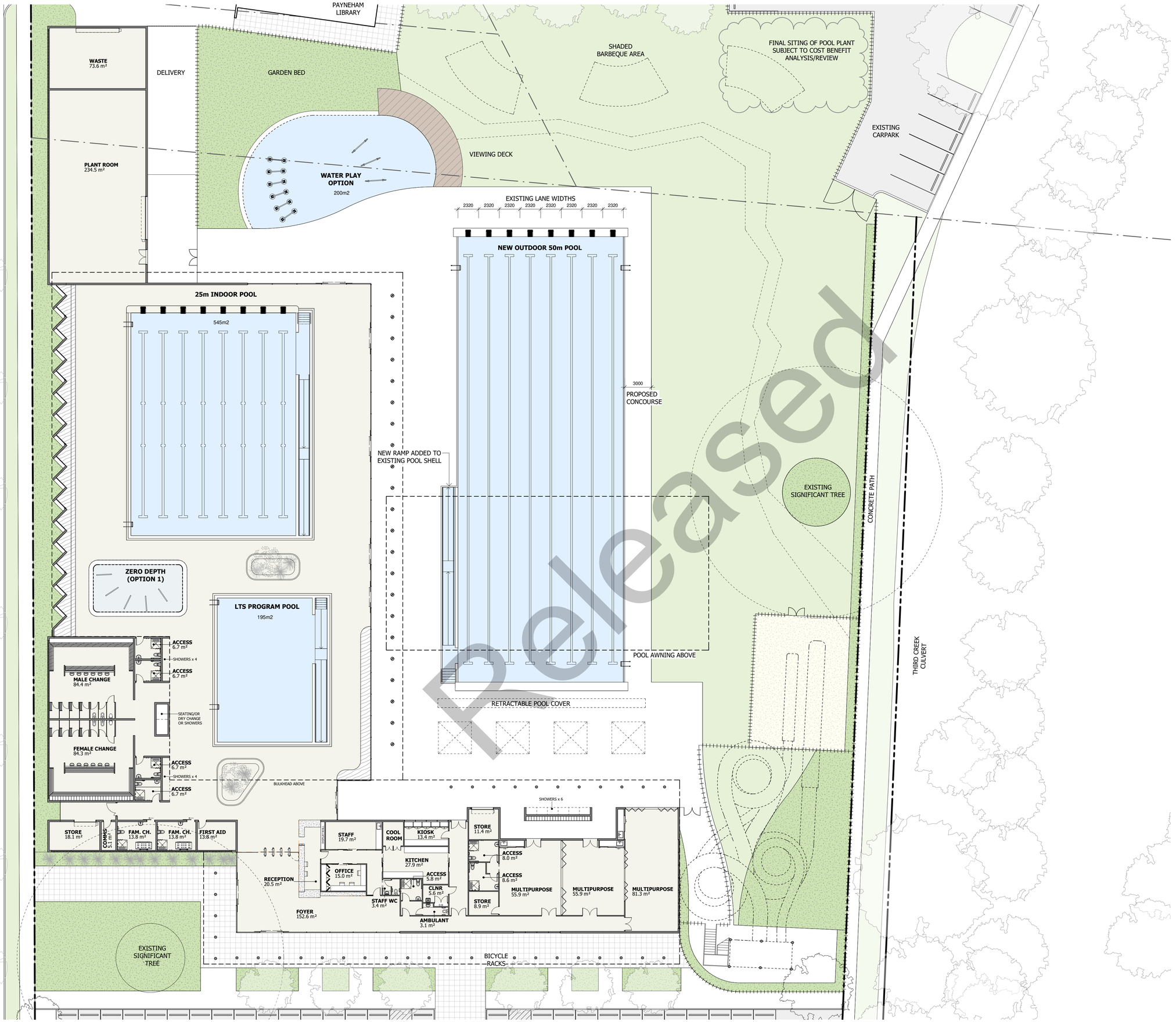
Website www.npsp.sa.gov.au

City of Norwood Payneham & St Peters



PROPOSED FLOOR PLAN - 8 LANE POOL OPTION
1 : 200

C1

Notes

INTERNAL AREAS	
SPACE	AREA
ADMIN	141.3 m²
FOYER	152.6 m²
MULTI-PURPOSE	193.1 m²
PLANT	308.2 m²
POOL HALL	2164.5 m²
	2959.6 m²

LANDSCAPING SCHEDULE	
TYPES	AREA
LAWNED AREAS	2445.2 m²
EXTERNAL DECKING	42.9 m²
EXTERNAL PAVERS	375.4 m²
CONCRETE PAVING	1844.3 m²
SOFTFALL	160.6 m²
GARDEN BED	1120.5 m²

TOTAL SITE AREA: 10516m²

SCHEMATIC DESIGN
NOT TO BE USED DURING CONSTRUCTION

Issue	Description	Date	Chk	Auth
E	Revised Concept	26/04/2022		
D	Revised Concept	12/04/2022		
C	Revised Concept for Costing	04/04/2022		
B	Revised Concept for Costing	01/04/2022		
A	Revised Concept	08/03/2022		

Architect/ Designer
dwp
www.dwp.com

Client
CITY OF NORWOOD PAYNEHAM AND ST PETERS

Project
PAYNEHAM POOL REDEVELOPMENT

Location
194 O G Rd,
Felixstow SA 5070

Project Number
21-0255

Drawing
PROPOSED FLOOR PLAN - 8 LANE POOL OPTION

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Date Printed 27/04/2022 1:14:01 PM
Drawing Number AA1004
Issue E

File Name: BIM 360://21-0255_Payneham Pool Redevelopment/21-0255-AR-PPR-R20.rvt

PROPOSED FLOOR PLAN - NORTH CARPARK
1 : 200

SCHEMATIC DESIGN
NOT TO BE USED DURING CONSTRUCTION

Issue	Description	Date	Chk	Auth

Architect/ Designer
dwp
www.dwp.com

Client
CITY OF NORWOOD PAYNEHAM AND ST PETERS

Project
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Location
194 O G Rd,
Felixstow SA 5070

Project Number
21-0255

Drawing
PROPOSED NORTH CARPARK PLAN

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Drawing Number AA1005
Issue

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WEST ELEVATION (O.G ROAD)
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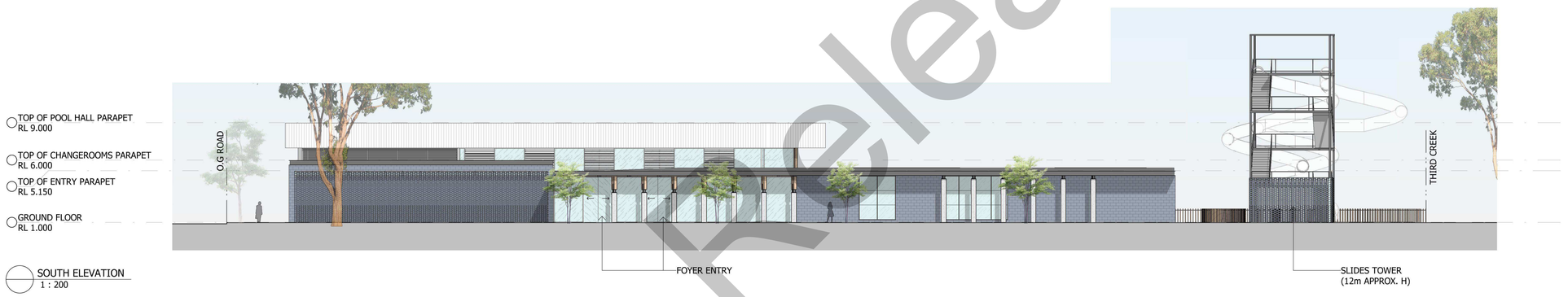
EAST ELEVATION
1 : 200



SOUTH ELEVATION
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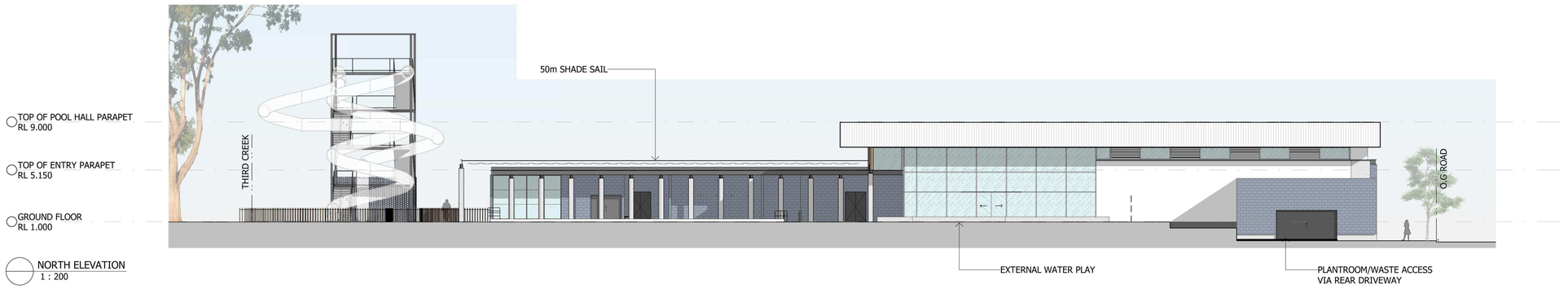

NORTH ELEVATION
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Notes

SCHEMATIC DESIGN
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Issue	Description	Date	Chk	Auth
A	Revised Concept	26/04/2022		

Architect/ Designer
dwp
www.dwp.com

Client
CITY OF NORWOOD PAYNEHAM AND ST PETERS

Project
PAYNEHAM POOL REDEVELOPMENT

Location
194 O G Rd,
Felixstow SA 5070

Project Number
21-0255

Drawing
ELEVATIONS

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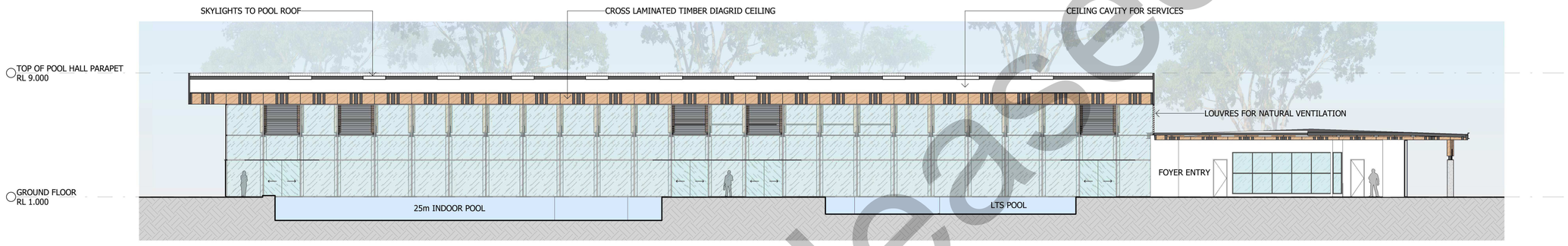

SECTION 01
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SCHEMATIC DESIGN
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Issue	Description	Date	Chk	Auth
A	Revised Concept	26/04/2022		

Architect/ Designer
dwp
www.dwp.com

Client
CITY OF NORWOOD PAYNEHAM AND ST PETERS

Project
PAYNEHAM POOL REDEVELOPMENT

Location
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Felixstow SA 5070

Project Number
21-0255

Drawing
SECTION

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Drawing Number
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Attachment D

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Payneham Memorial Swimming Centre Redevelopment

City of Norwood Payneham & St Peters
175 The Parade, Norwood SA 5067

Telephone 8366 4555
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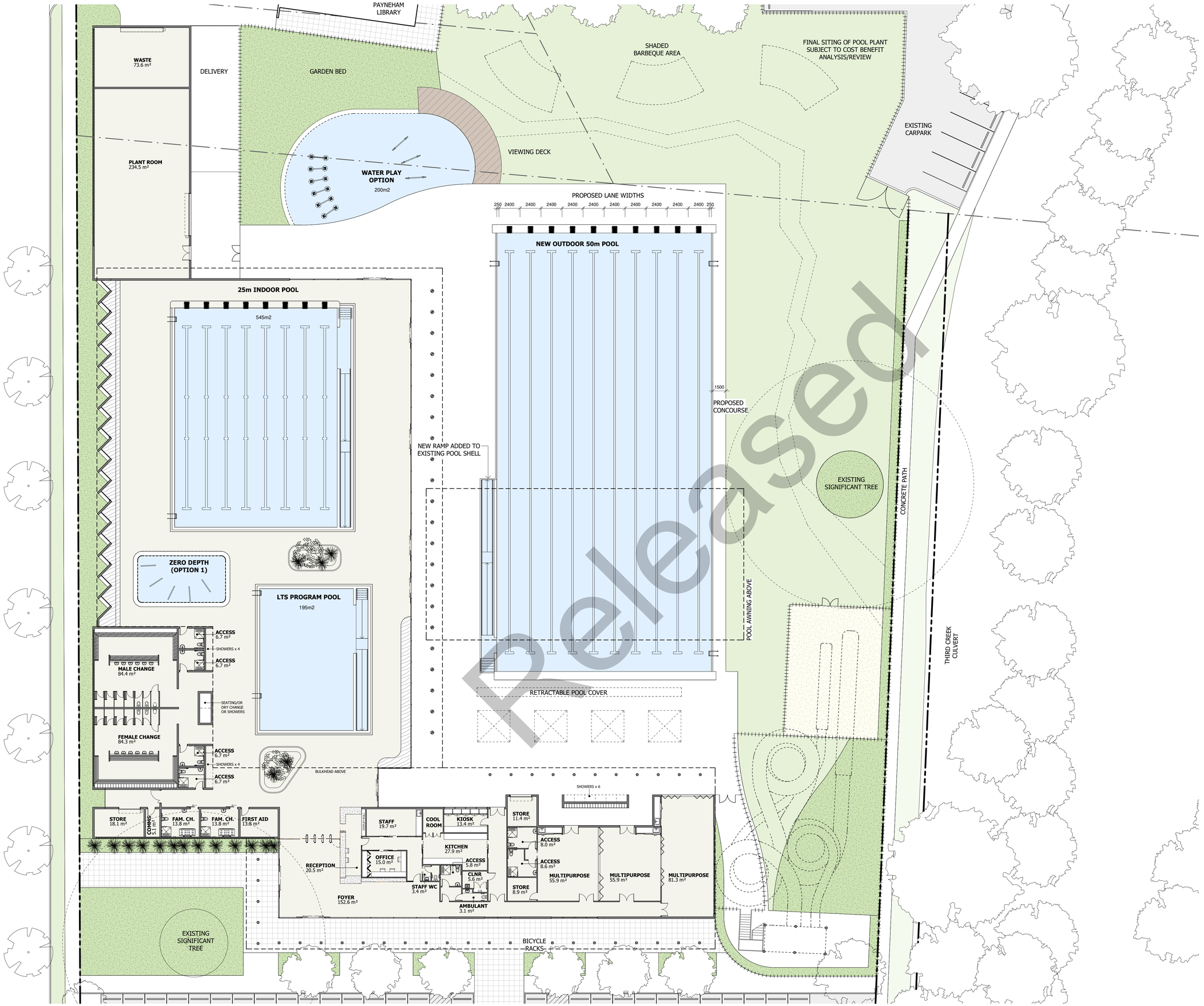
City of Norwood Payneham & St Peters



PROPOSED FLOOR PLAN - 10 LANE POOL OPTION
1 : 200

D

Notes

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SCHEMATIC DESIGN
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Issue	Description	Date	Chk	Auth

Architect/ Designer
dwp
www.dwp.com

Client
CITY OF NORWOOD PAYNEHAM AND ST PETERS

Project
PAYNEHAM POOL REDEVELOPMENT

Location
194 O G Rd,
Felixstow SA 5070

Project Number
21-0255

Drawing
PROPOSED FLOOR PLAN - 10 LANE POOL OPTION

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Issue

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