

Awa is the life blood... Life is precious...



Palmerston North City Aquatic Facilities and Water-based Recreation Needs Assessment

August 2023 version 2

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1. Glossary of terms

Aquatic curriculum: the New Zealand Curriculum expects that all students will have had opportunities to learn basic aquatic skills by the end of year six (end of primary school).

Community access: includes the ability to use aquatic and water-based recreation facilities at acceptable times, for an affordable price and within an acceptable drive time or public transport distance has been assessed.

Demand: is the quantity of aquatic space that the community is willing and able to use.

Need: is the gap in demand for and access (or not) to current aquatic and water-based recreation facilities that are suitable to a diverse range of people to undertake their necessary or desired aquatic activity.

Pool: is any water retaining structure, wholly or partially of artificial construction and generally having a circulation and filtration system, designed for recreational, training, or therapeutic swimming.

Report: used to describe this document.

RSFP 2018: Manawatū-Whanganui Regional Sport Facility Plan 2018

Sport Pool: Any pool that is used regularly for aquatic sports training or competition.

The Draft 2023 Strategy: Sport New Zealand National Aquatic Facilities Strategy 2023 [DRAFT]. Note the Draft 2023 Strategy was being developed at the same time as this Needs Assessment.

Water-based recreation: Play, recreation, sport, or other activities that takes place in recreational water such as rivers, lakes and coastal waters. Examples include swimming, canoeing, waka ama, canoe polo, diving, boating and fishing.

Water-based recreation facility: Includes any facility associated with water-based recreation that has some form of Local Authority built asset, this includes pools, launch ramps, jetties, structures, and steps providing access to water.

2. Executive summary

Palmerston North City Council (PNCC) has requested an assessment of the current and future aquatic facility needs for Palmerston North City (the City).

Water-based recreation facility provision plays an important role in the safety, health, and wellbeing of the Palmerston North community. The City has a network of water-based recreation facilities that are used by the community for developing aquatic safety skills, improving health, and for water recreation and sport activities. The community need and demand for future aquatic facilities and water-based recreation provisions must be determined. This Aquatic Facilities and Water-based Recreation Needs Assessment (Needs Assessment) is a foundational document for aquatic facility planning.

The Needs Assessment is stage one of PNCC's Long Term Plan (Programme #1889 – Aquatic facilities and water recreation preliminary feasibility study/needs assessment). Stage two is feasibility assessment of the options identified in this report.

The City is growing meaning our facilities need to cater for both participation and competitive water-based activities. These activities are estimated to account for 11.4% and 1.3% of the City's population respectively.

The population is set to increase by 25,000 people by 2053 and of that, 47% will be those aged over 65. Up to 7,500 new dwellings are proposed over the next 50 years within identified urban growth areas.

Residents are involved in a variety of aquatic activities with water safety competence a priority for any aquatic networks provision and wider recreation activities flowing from this. The community participation across all water-based recreation activity in the city is 11.4% and there is room for improving people's participation in physical activity given that 30.3% of the city's residents are identified as inactive¹.

The aquatic sport club membership subset of the population for Palmerston North is an important user group of aquatic and water-based recreation facilities, they equate to approximately 1.26% of the overall population.

The City's facilities for water-based recreation include both a network of swimming pools and natural bodies of water.

Natural bodies of water: The Manawatū Awa and Hokowhitu Lagoon are the natural bodies of water within the city, but it is acknowledged that beaches, rivers and other natural bodies of water within a drive from the City are used by residents and therefore considered in this investigation.

Pools: There is a network of pool facilities that serve a wide range of community needs. The network includes the council, school, and other private facilities. While it is important to understand the area of pool water available, the type of pool water, and the purpose it serves, is a critical consideration. The pools in the network were evaluated based on availability to the community to determine the City's pool water area.

The Sport New Zealand National Aquatic Facilities Strategy 2023 [DRAFT] (The Draft 2023 Strategy) determines there is no need for additional international or national level event facilities for

¹ The Sport New Zealand's Insights Tool

swimming and diving sports. However, water polo does have gaps in their event facility provision at a national level. Any event focus facility development is to be district or possibly a regional level specification facility.

The City has **33m² pool water area per 1,000 population** and the Sport New Zealand National Aquatic Facilities Strategy 2023 [DRAFT] (The Draft 2023 Strategy) has determined the national measure guideline for demand of pool water area in New Zealand is **26m² per 1,000 population**. The Draft 2023 Strategy guidance is to be overlay the national measure with local factors, to then determine the required amount and type of pool water space for the City.

For Palmerston North City the supply versus the national demand for pool water is presented in Figure 1.

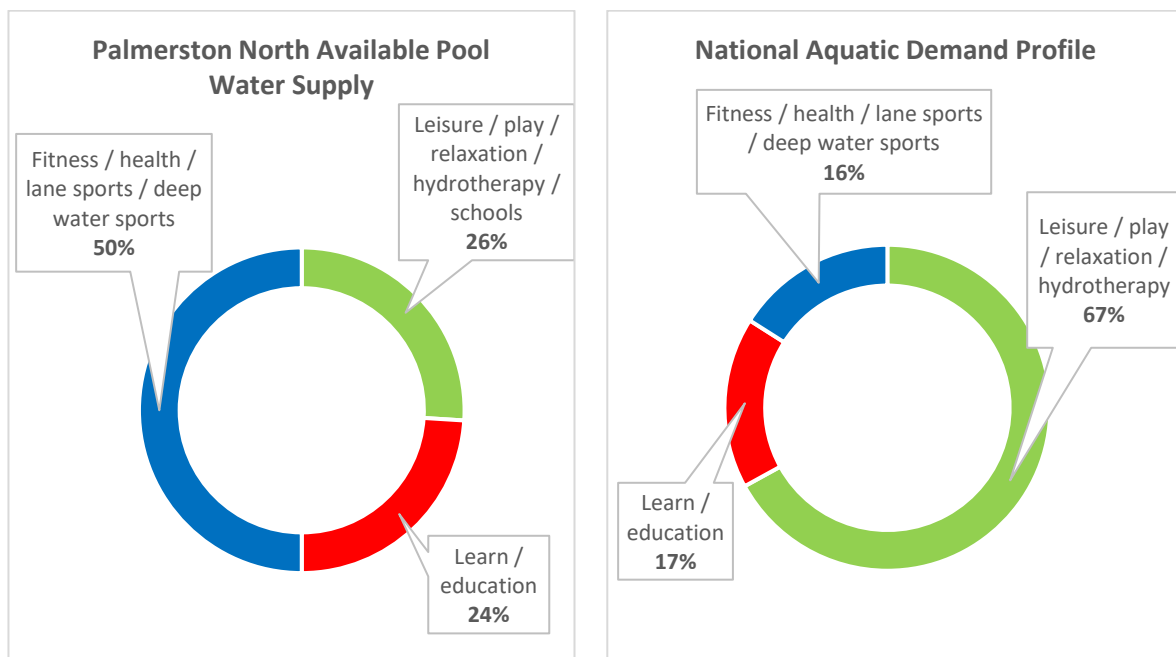


Figure 1 - City pool water supply v national demand.

Comparing the City’s supply with the national demand profile, more pool water should be allocated for leisure/play/relaxation/hydrotherapy and less for fitness/health/lane sports/deep water sports and learning/education (e.g. learn-to-swim).

The greatest demand is for leisure/ play, relaxation and hydrotherapy pool water. Closing the gap in provision requires a network delivery that seeks to more closely match the left diagram with the National Demand Profile on the right. To address the imbalance a shift to provide more leisure / play / relaxation / hydrotherapy water space is required.

Engagement with a range of people concluded that the current needs across our network supports the Draft 2023 Strategy demand profile with need for hydrotherapy pools and access for particular demographic groups.

Stakeholder engagement helped to draw key conclusions about the current needs of an aquatics network. These were:

- There is a critical lack of hydrotherapy provision.

- Provision focused on supporting Māori, Pacific people's and multi-cultural community access should be prioritised.
- There is a lack of deep-water provision for some sports, particularly for water polo.
- More water provision for education / learn-to-swim based aquatic facilities would be supported.
- Specific provision for more fitness / health and leisure / play would support general community group demographics such as senior citizens, people with disabilities, and young adults / rangatahi.
- Swim club peak time schedules are a clear barrier to expansion of club activities and offerings, and these schedules impact the network capacity for all users.

A range of opportunities are recommended to better balance out the type of pool water to meet the demand for participation and competitive swimming and other water-based activities.

A suite of options were considered. The priority is to meet the imbalance of pool water type ahead of other demands. The recommended options are:

Table 1 – Summarised options recommended for implementation or specific investigation (see section 10).

<i>Immediate opportunities</i>
<ul style="list-style-type: none"> • Council policy setting options for scheduling of casual swimming lane space in public pools • Morning pool space optimised for sports groups
<i>Partnership low investment opportunities – 2023-2026</i>
<ul style="list-style-type: none"> • Summer school pool access is encouraged and where appropriate resourced in partnership • Network resilience support for the current indoor school pools available for community use • Leveraging Council's pool management contract to improve technical capability and capacity across the network • Leveraging resources to develop an asset upgrade and renewals programme across the pools network • Hokowhitu Lagoon water quality, weed management and improvement to stormwater inflow • Network resilience through strategic investment in upgrades selected to school pool facilities
<i>Significant investment opportunities – 2027 beyond</i>
<ul style="list-style-type: none"> • Lido 50m pool enclosure with a roof structure • Lake opportunities – access to or purchase of privately owned ex-quarry lake/s • Demolish the current Lido 25m indoor pool and replace with a 50m indoor pool facility • Explore the development of an artificial Canoe Polo outdoor courts facility • New local level, multipurpose pool facility as the city grows (Kākātangiata urban growth area)

While these options support addressing the imbalance of pool water type they also provide for capacity growth in competitive swimming activities.

To meet demand all operational and upgrade/repurpose options are to be explored before developing new facilities.

3. Introduction

This report presents an assessment of needs for the City’s aquatic and water-based recreation facilities network (aquatics network). It provides a detailed inventory of the City’s facilities (community accessible and non-accessible assets within the network) and determines the current and future trends to understand what provision is required for all those entities that invest in aquatic facilities.

The Needs Assessment has been led by the Palmerston North City Council (the Council) in partnership with Sport Manawatū. The Council intends to achieve community wellbeing and to do so needs to plan its infrastructure investment over the next 10 – 30 years. It supports Council’s strategic goal to *‘be one of the most active communities in New Zealand’*, and Sport Manawatū’s purpose *‘to empower, engage and promote the health and well-being of our communities through play, active recreation, and sport’*. Sport Manawatū seeks to achieve a balance across Play, Active Recreation and Sport participation opportunities.

Specifically, this Needs Assessment has identified the need for, timing of, and the type of public aquatic facilities or key steps required to enable an appropriate aquatics network for the City to meet need and demand. Recommendations are provided as a staged strategic approach aimed to deliver an accessible and equitable network of aquatics provision.

3.1 Strategic context

This Needs Assessment is part of a wider Council process that began in 2018 to support work identified in the Manawatū-Whanganui Regional Sport Facility Plan 2018 (RSFP 2018) and subsequent review of the Palmerston North section of the RSFP 2018 in October 2022. Figure 2 below demonstrates the planning steps leading to the Needs Assessment.

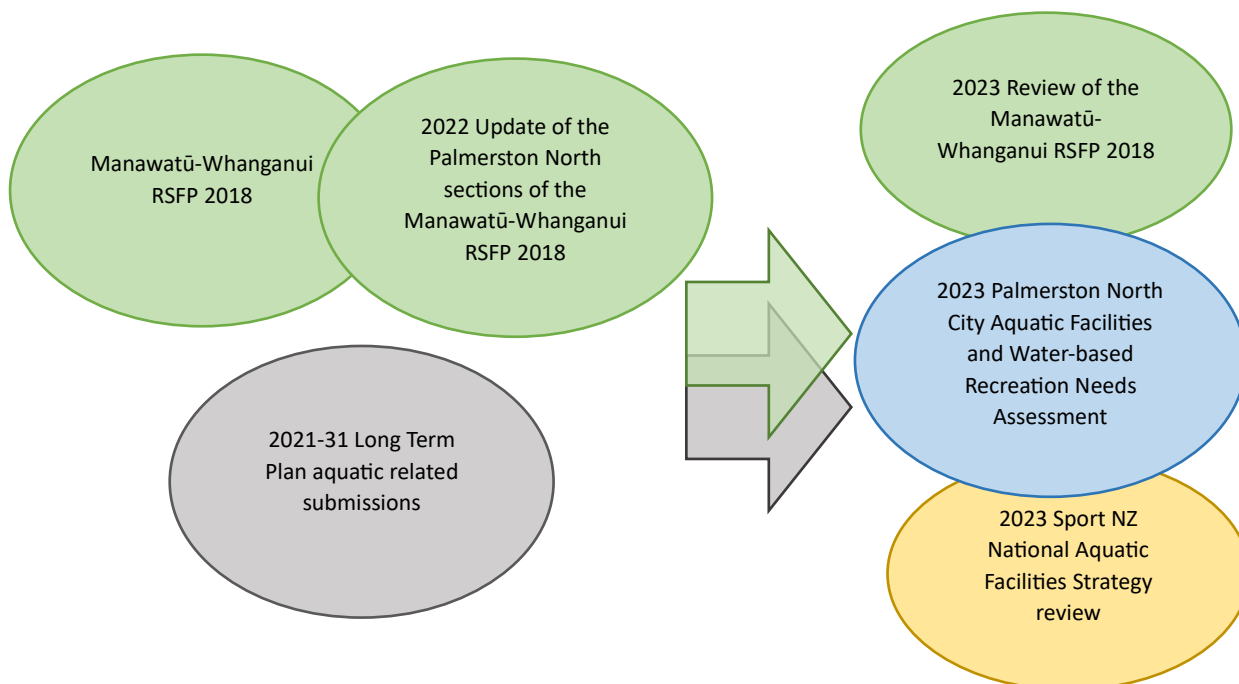


Figure 2 - Planning stages leading to the Needs Assessment.

This Needs Assessment was identified in the Council’s Long Term Plan as stage one of two planning stages to identify the City’s aquatic needs provision. Stage two (not included in this report) will focus on any feasibility assessments identified for specific aquatic provision.

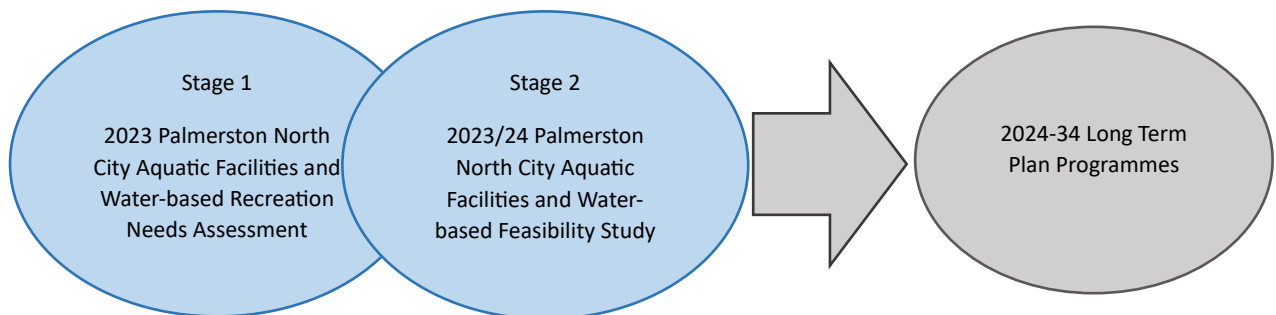


Figure 3 - Steps to informing the 2024-34 Long Term Plan Programmes.

Palmerston North City Council has key strategic documents that guide what is considered to ensure that any decisions made on future aquatic facilities provision align with the goals for the City. It is also critical that decision making is consistent with wider national and regional strategies so that potential options in the future are supported by both funders and the relevant sport and community organisations associated with aquatic and water-based recreation activities. Key documents are outlined in Appendix 4: Document review list.

3.2 Purpose of the Needs Assessment

The City requires a plan for its future aquatic and water-based recreation facilities provision to ensure enough of the right infrastructure is available for its community to access and use. With the most recent drownings in 2022 both locally² and an increase nationally³, swim competency is as important as ever for the community to focus on.

An aquatics network seeks to provide residents with the opportunity to develop lifelong water safety skills, and enjoy water-based recreation, sport or health activities, whether that is in a controlled pool environment or in a natural water body. Fundamentally, it is about an individual gaining the knowledge and awareness to assess their own competency in the water and determine the level of risk associated with entering any body of water.

This needs assessment developed a key goal to understand aquatics provision and seeks to contribute:

To providing opportunities in Palmerston North for everyone to enjoy aquatic activities safely and equitably.

This goal helps to inform decisions on the options available to the Council to explore.

² <https://www.stuff.co.nz/manawatu-standard/news/130886351/one-year-on-from-the-first-of-palmerston-norths-two-double-drownings>

³ In 2021 the fatalities rate was 1.76, up from the five-year average of 1.67 (source: <https://www.watersafetynz.org/drowning-insights#:~:text=In%202021%20there%20were%2091,five%20year%20average%20of%201.67>).

3.3 Needs assessment objectives

The key objectives of this assessment have been reframed from the Request for Proposal (RFP) to answer the following key questions:

1. What changes does Council need to make to its operational policies to increase the use and access to current aquatic and water-based recreation facilities?
2. Does Council need to invest in current or new indoor and outdoor aquatic or water-based recreational facility(s) to serve the community's future water and recreation needs over the next 10 – 30 years and beyond?
3. Providing value for money, what type of facilities will best meet the community's water and recreational needs?
4. What strategic and operational change is needed to meet any additional capacity requirements such as timetable solutions and cost estimates for future capital works programmes to inform future investment in aquatic and water-based recreation facilities. When do these changes need to be made to ensure the network delivers any identified community need?

The options identified in this Needs Assessment will inform stage two, the Feasibility Assessment. The Feasibility Assessment will focus on the recommended options proposed in this report to determine whether they are financially viable and acceptable by the community.

The Feasibility Assessment will:

- formalise how the option/facility will meet the need;
- refine and assess option/facility proposed;
- provide technical requirements;
- outline option/facility development costs
- outline strengths, weaknesses, opportunities and threats to the proposed option/facility;
- indicate timeframes;

3.4 Scope of the needs assessment

The scope of work is multi-faceted in how the facilities are understood (pool, aquatic and water-based recreation facilities). It considers the type of water and space required to deliver a range of activities while meeting the diversity of user needs within the Palmerston North community demographic. It is limited to the built aquatic facilities and their associated assets such as pools and also includes physical structures that support water-based sport and active recreation in natural water bodies. The scope therefore extends to the users of the facilities and structures⁴.

Specific opportunities identified in the PNCC Regional Sport Facility Plan Review Final Draft Report 2022 were also considered:

- Covering the outdoor 50m pool at the Lido Aquatic Centre for winter use.
- Investigating additional permanent pool space for Palmerston North, in particular:
 - Lane pool (min. 2m depth)
 - Warm water pool (hydrotherapy)
 - Additional leisure pool space

⁴ The users of the natural bodies of water did not include boating or fishing participants.

3.5 Methodology

This Needs Assessment focused on understanding the aquatics network and diverse user group activities. It also identified barriers to use and solutions to enable the delivery of aquatic provision to meet the needs of the Palmerston North community.

All aquatic facilities were included within the inventory to present a complete picture of the network whether it was available to the public or not. This included school pools, private organisation facilities such as the Linton Military Camp Pool, the Hospital Hydrotherapy pool and has made reference to, but not explicitly calculated private pools and retirement village facilities (see Appendix 3: Needs Assessment methodology).

Key considerations of need include the ability for people to access and afford to use the aquatics network. Community *access* includes the ability to use aquatic and water-based recreation facilities at acceptable times, for an affordable price and within an acceptable drive time or public transport distance.

To determine the appropriate options to improve the provision of aquatic facilities, a set of criteria (see Appendix 15: Options assessment criteria Appendix 3: Needs Assessment methodology) has been designed to select the appropriate options for further investigation or deployment. These are based on the key findings, principles, and provision indicators from the Draft 2023 Strategy, the RSFP 2018 and a Palmerston North City context.

This project was delivered in three phases:

1. Discovery - information gathering.
2. Aquatic and water-based recreational facilities network analysis and user need assessment.
3. Report writing and review process.

“A preliminary task in planning a community sport and recreation facility is its alignment with or inclusion in a wider local or regional strategic sport and recreation plan. A sport and recreation plan identifies existing facilities and services, the broad recreation needs of the community and the action required to meet identified needs”⁵.

The full methodology is detailed in Appendix 3: Needs Assessment methodology.

⁵ Sport New Zealand Community Sport and Recreation Facilities Development Guide 2016

4. Project context

This section contextualises the assessment within the Palmerston North City setting. It considers the physical catchment, and associated features, its community profile and the wider strategic ambitions for city.

4.1 Palmerston North City aquatic and water-based recreation context

4.1.1 Catchment boundary and context

The catchment is the boundary of Palmerston North City.

The physical catchment and its key features can influence how people use and access aquatic facilities or natural water bodies for water-based activities. Important insights into people's relationship between controlled water bodies such as pools and their transition to natural water body environment such as rivers, lakes and the ocean can help to understand where water safety measures can be made.

Palmerston North City is located within the Horizons Regional catchment. It is an inland city within the rohe of Rangitāne o Manawatū Iwi (Rangitāne).

4.1.2 Natural water bodies

Being a landlocked city, the Manawatū River plays an important role as the community's major water body feature that runs through the city, however, it is known to be changeable water body that has seen fatalities when high flows have occurred in recent years.

Manawatū Awa

There are multiple informal locations where people may access the river, however, most physical structures support the swimming of dogs for exercise, walking alongside and standing near to the river, rather than encouraging entry to the water body.



Figure 4 – Okatia Steps⁶

Hokowhitu Lagoon

The Hokowhitu Lagoon is located near to the Manawatū River and was once connected to the main river network. It was also once an important fishery for Rangitāne with a thriving eel population⁷.

⁶ Photo source: <https://blogisthmus.wordpress.com/2014/05/14/manawatu-river-enhancements/>

⁷ Source: <https://www.pncc.govt.nz/Parks-recreation/Parks-and-reserves/Hokowhitu-Lagoon>

There is an artesian bore drilled into an underground aquifer which supplies the lagoon with additional water through the summer months when water cannot be taken from the river. The water quality has decreased over time due to various untreated stormwater points into the lagoon resulting in poor its long-term water quality⁸. Due to water quality issues and presence of water fowl, it is not deemed suitable for swimming.

The Hokowhitu Lagoon is used for a variety of “on the water” recreational activities. It has three permanent canoe polo courts installed with a fourth temporary one able to be added for larger events. It is also the home of the Palmerston North Canoe Club with its club rooms and storage in the Chalet next to the lagoon.



Figure 5 – Hokowhitu Lagoon jetties.

4.1.3 Drive times and transportation

The city is approximately 36km drive to the nearest beach, Himatangi Beach and other popular locations including Foxton Beach and Waitārere Beach.

The city itself is reasonably flat and compact in relation to travelling to and from facilities. It has a cycle network with shared pathways and designated cycle lanes. There is a bus service that runs frequently within the city, and out to Ashhurst and Feilding.

The needs assessment catchment focuses on facilities within the city boundary itself as the local catchment, however, facilities within 20-minute drive have been identified to understand the wider reach of facilities within the region.






Massey University and the Linton Military Camp (the Camp) are unique features of the city make-up, particularly as the Camp has a pool facility and the University attracts new people to the city each year who may be less aware of the risks associated with the natural water bodies.

⁸ Source: <https://www.lawa.org.nz/explore-data/manawat%C5%AB-whanganui-region/swimming/hokowhitu-lagoon-at-the-walkbridge/swimsite>

4.2 Palmerston North community demographics

Population and demographic trends have an impact on the aquatic network demand and influence what the future facility provision needs. Table 2 presents the key demographic highlights projected to occur for the City and the impact these will have on sport and recreation (further detail is documented in Appendix 6: Palmerston North demographic trend detail).

Table 2 - Demographic change to 2053 summary.

	Demographic Highlight	Impact on Aquatic Sport and Recreation
	<p>The population of Palmerston North was 91,800 in 2023. The city is expected to experience growth of 25,000 people by 2053. This is an increase of 28.6%.</p>	<p>An increase in the total number of people wishing to participate in aquatic activities.</p>
	<p>2053 population distribution across the City will be considered should Council proceed to feasibility stage, when undertaking site analysis.</p>	<p>Future aquatic facility developments need to consider where the future population will be and what level of mobility people have to travel around the district to participate.</p>
	<p>The population of Palmerston North City is aging. By 2053 it is expected those aged 65 and over will make up 22% of the population.</p>	<p>More demand for indoor recreation and social spaces by this cohort, along with the types of activities they wish to participate in such as aqua jogging, aqua exercise, mobility classes.</p> <p>A requirement for aquatic facilities that are accessible and offer warm water. Consideration also needs to be given to accommodating the social needs of participants.</p>
	<p>By 2053 it is expected that the population of Palmerston North will be more evenly distributed across all age groups.</p>	<p>The varying aquatic needs of the whole population need to be considered when planning future aquatic developments. The range of aquatic components needs to reflect the community needs.</p>
	<p>The population of Palmerston North is expected to become more ethnically diverse. By 2053 the populations of those identifying as Asian, Pacific People and Māori are expected to increase by 96%, 68% and 64% respectively.</p>	<p>The participation preferences of various ethnic groups can vary. A focus on migrant and refugee community provision that facilitates learn-to-swim programmes may influence aquatic facility demand in the future.</p>

4.3 Future growth areas

There are two significant growth areas identified in Palmerston North City which will influence both the number of people living there and where they will be living in the future.

Aokautere urban growth area

Aokautere is a large block of land (Figure 6) and much of the land has already been built on, in an ad-hoc manner. The structure plan seeks to create a blueprint to create more cohesive planning for the remaining undeveloped land to provide a more liveable place for its residents⁹.

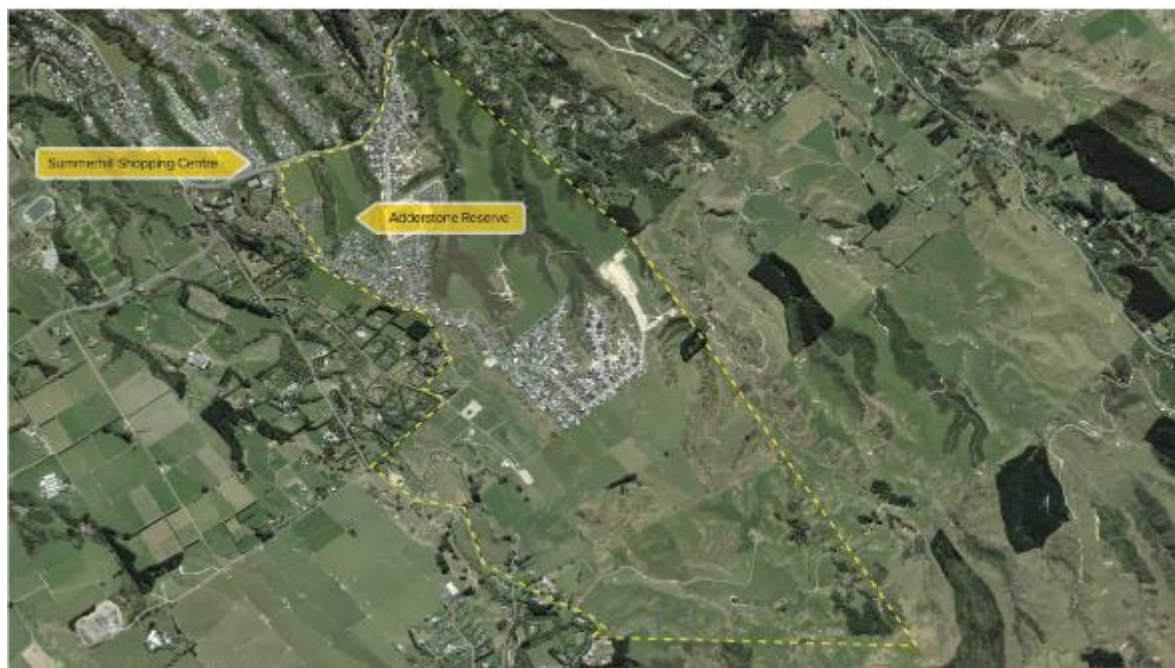


Figure 6 - Aokautere urban growth area

Kākātangiata urban growth area

Kākātangiata is a proposed urban growth area, designated for rezoning next to Palmerston North's western boundary (Figure 7). This is identified for medium to long term growth and development may occur anywhere from 10 – 50 years into the future. However, 220 homes have already been provided for through Plan Change C: Kikiwhenua residential area¹⁰.

Kākātangiata proposes up to 6,500 new dwellings in total and seeks to avoid ad-hoc development by planning for community needs now within the proposed masterplan¹¹. The proposal has not identified specific aquatic facility provision; however, its vision is for a highly integrated walkable community and a school will likely be required to serve the increased population for the area¹².

⁹ Source: <https://www.pncc.govt.nz/Council/Official-documents/District-Plan/Proposed-Plan-Change-G>

¹⁰ Source: <https://www.pncc.govt.nz/Council/Official-documents/District-Plan/Plan-Change-C>

¹¹ Source: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/<https://www.pncc.govt.nz/files/assets/public/documents/council/district-plan/kakatangiata/residents-forums/ka-ka-tangiata-summary-slideshow-june-2021.pdf>

¹² Source: <https://www.pncc.govt.nz/Council/Official-documents/District-Plan/Kakatangiata-urban-growth-area>



Figure 7 - Kākātangiata urban growth area.

4.4 Summary

The Palmerston North physical catchment is defined by the City boundaries and is a regionally significant city. It has a mostly flat topography, land locked with a significant river flowing through it. The following key insights from this context section are:

Key insight: The Manawatū Awa is a prominent natural water body within the city but is known for being a dangerous place to swim. Although not openly promoted for use, competency in swimming, and gaining knowledge and awareness of risk in natural water bodies will remain critical skills to encourage for all residents of Palmerston North into the future.

Key insight: The Hokowhitu Lagoon was once connected to the Manawatū River, but now has poor water quality due to the lack of flow and heavy rain fall can result in contaminants entering the water. Improved water quality would provide greater access to free natural water bodies for swimming, sport and recreation.

Key insight: The Palmerston North City population is set to grow by over 22,000 people by 2053 and of that, more than 50% will be those aged over 65, meaning an increased demand for warmer water and hydrotherapy facilities in the future.

Key insight: Up to 7,500 new dwellings are proposed over the next 50 years within identified urban growth areas. Aquatic provision to serve the future development areas will be required.

5. Water-based recreation trends

The trends for water-based play, recreation and sport are considered in two contexts; population activity levels, and sport membership levels.

General aquatic activity trends - National and regional water-recreation trends were sourced from Sport New Zealand's Insights Tool. The research collated population data and information on behaviours and trends relevant to aquatic and water-based recreation facility users.

Aquatic sport trends - The other available source of aquatic sport information and trends comes from sport organisation membership data. While it represents a subset of the population it can be used to understand the penetration it has to the relation to the total population. The national aquatic sport membership information was sourced for the sports that are currently using the Palmerston North City aquatic facilities network. Investigation into possible future aquatic sports users was not conducted.

Sport participation includes training activity and competitive events. It is to be noted that the facility requirement for training is not the same as it is for formal competition events. Training facilities do not require spectator capacity, a surveyed pool/court (officially measured to meet international specifications), or the auxiliary features required for competition.

5.1 Water-based recreation and sport participation trends – City

The trends of most interest for this Needs Assessment are those for the City of Palmerston North. (National and regional data is included in Appendix 7: Water-based recreation and sport participation data). The general population information captures all users where the sport membership information is for a subset of the population and for Palmerston North that equates to approximately 1.24 percent of the population as captured in Table 3.

Table 3 – Palmerston North City water-based sports clubs' trends and population activity levels.

Activity ¹³	Membership 2018	Membership 2022	Trend increase/decrease	2022 Membership as a percentage of 2023 Population (91,800)
Palmerston North City Swimming Clubs (x4)	435 ¹⁴	384 ¹⁵	-11.7%	0.42%
Kiwi Canoe Polo Club	314	291	-7.3%	0.32%
Palmerston North Canoe Club	182	202	+11%	0.22%
Palmerston North Surf Lifesaving Club	25	12	-52%	0.01%
Manawatū Tri Club	199	166	-16.6%	0.18%
Manawatū Water Polo	108	101	-6.5%	0.11%
Total	1238	1144	-8.5	1.26%

¹³ Note: waka ama is limited to Manukura School and some of Palmerston North Canoe Club paddlers.

¹⁴ A total of 540 registered members inclusive of swimmers, club learn to swim participants, swim volunteers, administrators, coaches and officials.

¹⁵ A total of 541 registered members inclusive of swimmers, club learn to swim participants, swim volunteers, administrators, coaches and officials.

The four Palmerston North City Swimming Clubs are: Dannevirke Swimming Club, Ice Breaker Swimming Club, Kiwi West Swimming Club, and Palmerston North Amateur Swimming Club. Swimming Manawatū includes an additional eight clubs in their jurisdiction who attend events in the City but do not train or regularly swim in the facilities. Across all 12 clubs, including all members the membership has grown by 105 members (11%) between 2018 and 2022.

5.1.1 General aquatic activity trends - City

Sport New Zealand's Insights Tool data¹⁶ identifies that swimming participation in Palmerston North is below the national average at 11.4% (national average 13.5%).¹⁷

Swimming was ranked as the 8th most popular activity in the City. In context Walking for sport or leisure was 1st at 48.4%. Concerningly the 2nd ranked activity was Inactivity at 30.3% (national average 25.8%).

5.1.2 Aquatic sport trends - city

With the exception of the Palmerston North Canoe Club the membership of aquatic sports has declined from 2018 to 2022. Across the membership of all clubs the decline has been 8.5%¹⁸.

The City's population has grown by 5.5% over this period meaning the net impact of the aquatic sport membership decline trend is greater than the raw number suggests.

5.2 Summary

The Palmerston North water-based general aquatic activity trends is important to help understand the likely demand for the full population and potential options and solutions to deliver an appropriate aquatic facilities network. The aquatic sport trends provide guidance on the sport focused facility needs. The following key insights from this context section are:

Key insight: The general aquatic activity participation across all water-based recreation activity in the City has been on a general decline as a percentage of the population. The population growth is increasing at a great rate resulting in increased water-based activity across the general population.

Key insight: There is room for improvement in all physical activity participation given there are estimated as being 30.3% of the City's residents identifying as inactive.

Key insight: The aquatic sports membership has been on a general decline in the City against the population growth.

Key insight: Current aquatic sports membership in total equates to approximately 1.26% of the City's population.

¹⁶ The Sport New Zealand's Insights Tool data assessed 18 April 2023.

¹⁷ The term "swimming" has likely been interpreted in a range of ways from competitive sport swimming through to playing in a domestic pool.

¹⁸ It has been assumed that there are no individuals with multiple club memberships.

6. Supply assessment: Water-based recreation facilities network provision

The supply assessment required a network wide assessment of water-based recreation facilities.

Importantly, the key questions regarding supply are:

1. Does the network have enough facilities spread equitably across Palmerston North for people to access for their given need?
2. Is there access to the right types of provision within the network for people to equitably access for their given need?
3. What is the age and condition of the current network?

This section answers the questions listed noting there were limited details of the age and condition of the facilities. Condition assessments will be required at the Feasibility Assessment stage.

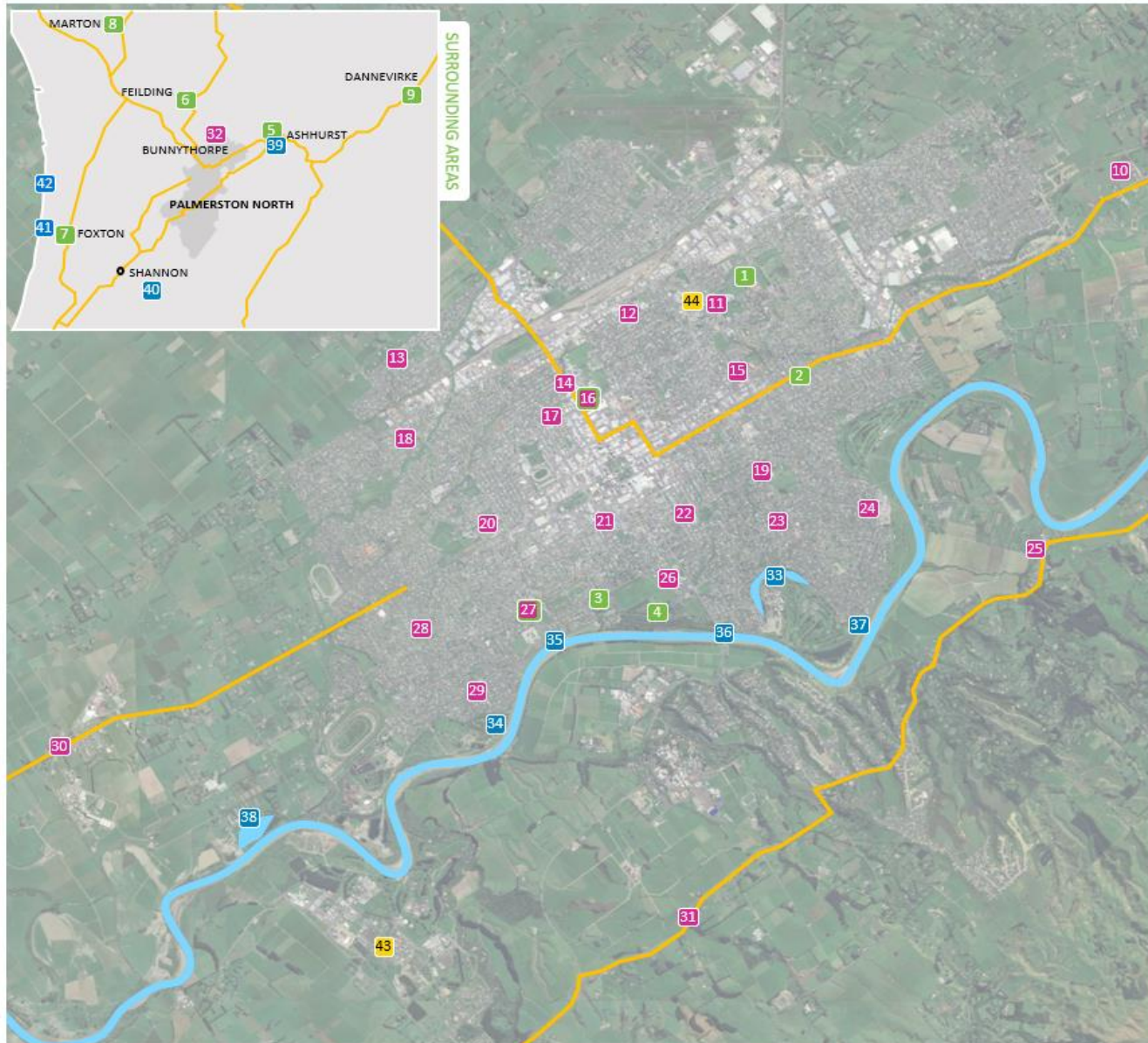
6.1 The water-based recreation planning context

Water-based facilities are expensive to operate and maintain. The water-based facilities network is complex and building water-based facilities is a generational investment that must have considerable weight given to any decision, especially if a new build is being proposed¹⁹. Therefore, it is critical to take time to assess the need in a robust way and make strategic decisions that will enable the greatest number of people to use and enjoy the network of facilities provided for a range of activities.

6.1.1 The Palmerston North City water-based facilities network

The network of water-based facilities in Palmerston North includes a range of council, education, and private pools along with natural bodies of water. This is presented in the Palmerston North and Surrounding Areas Pool and Water Recreation/Sport Facilities map, (see Figure 8).

¹⁹ Sport New Zealand National Aquatic Facilities Strategy 2023 [DRAFT]



Community accessible water recreation facilities

- | | | | |
|--|---------------------------------------------|--|--------------------------------------------|
| | 1. Freyberg Community Pool | | 6. Makino Aquatic Centre
20-25 mins |
| | 2. Memorial Park Splash Pad & Paddling Pool | | 7. Off the Loop Wake Park
30-35 mins |
| | 3. Lido Aquatic Centre | | 8. Marton Swim Centre
40-45 mins |
| | 4. Victoria Esplanade Paddling Pool | | 9. Wai Splash Community Pool
50-70 mins |
| | 5. Splashhurst Community Pool
15-20 mins | | |

School pools

- | | | | |
|--|---------------------------|--|--------------------------|
| | 10. Whakarongo | | 22. College St Normal |
| | 11. St Mary's | | 23. St James' |
| | 12. Russell St | | 24. Winchester |
| | 13. Cloverlea | | 25. Aokautere |
| | 14. Queen Elizabeth | | 26. P. North Girls' High |
| | 15. Terrace End | | 27. West End |
| | 16. P. North Boys' High | | 28. Awapuni |
| | 17. Central Normal | | 29. Riverdale |
| | 18. Te Kura o Wairau | | 30. Longburn |
| | 19. Hokowhitu | | 31. Turitea |
| | 20. Our Lady of Lourdes | | 32. Bunnythorpe |
| | 21. P. North Intermediate | | |

Natural bodies of water

- | | | | |
|--|----------------------------------------------------------------|--|-----------------------------------|
| | 33. Hokowhitu Lagoon | | 42. Himatangi Beach
30-35 mins |
| | 34. Manawatū Awa – Ahimate Reserve | | |
| | 35. Manawatū Awa – Dittmer Drive access steps | | |
| | 36. Manawatū Awa – Fitzherbert St access steps | | |
| | 37. Manawatū Awa – Albert St | | |
| | 38. Walkers/Shirriff's Road Lake | | |
| | 39. Manawatū Awa/Pohangina Awa – Ashhurst Domain
15-20 mins | | |
| | 40. Mangahao White Water Park
30-35 mins | | |
| | 41. Foxton Beach
35-40 mins | | |

Private Pools

- | | | | |
|--|----------------------------------|--|--------------------------------|
| | 43. Linton Army Camp (Kupe Pool) | | 44. Hospital hydrotherapy pool |
|--|----------------------------------|--|--------------------------------|

Legend: — State highways — River/body of water Swimming Splash depth Recreation/sport Therapy

= community accessible
 = limited community access

Figure 8 – Palmerston North City's water-based facilities network.

6.2 City wide water-based facilities network

To understand the provision of water-based facilities for the City, the facility type and the need it serves must be defined. From this the context, the current City supply can be presented and assessed against the needs of the population.

The research into the pools network has sought to provide an understanding of the availability of the pool space across the City. The intent is to determine the water-based recreation water space available for the different purposes. To do this a two phased approach has been applied:

1. Understanding the available pool space by the purpose of use; and
2. Understanding scheduling of the pool spaces that have regular community access and which are used for multiple purposes (Council managed pools, community pools, and the school pools used by the community)

6.2.1 Council pool facilities

Table 4 - Palmerston North City Council's pool facilities.

Facility description	Facility uses	Community access and cost	Key activity provision
Lido Aquatic Centre			
<p>A Council swimming pool aquatic facility in Palmerston North City.</p> <p>A "destination" aquatic centre with a wide variety of water-based facilities to meet a wide water-based activity demand.</p>	<p>Leisure pool</p> <p>25m pool (6 lanes)</p> <p>Dive well (summer)</p> <p>Outdoor slides (summer)</p> <p>Indoor hydro slides</p> <p>50m outdoor pool (7 lanes) (summer)</p>	<p>Managed under contract by CLM.</p> <p>Adult pool entry, \$6.00;</p> <p>Child pool entry, \$5.00;</p> <p>Children 4 years and under (this includes up to two children and one adult supervisor), Free.</p>	<p><u>Sport:</u> competitive swimming</p> <p><u>Leisure/ play:</u> splash pads and open pool space</p> <p><u>Relaxation:</u> Spa and sauna</p> <p><u>Learn/ education:</u> Learn-to-swim programme</p> <p><u>Fitness/ health:</u> casual lane swimming</p>
Freyberg Community Pool			
<p>A Council swimming pool water-based facility located on Ministry of Education land.</p> <p>The Freyberg High School and Community Trust invested in the facility when it was built.</p> <p>The school entered a deed of agreement with Council to enable priority booking</p>	<p>25m pool (6 lanes)</p> <p>Learn-to-swim pool</p>	<p>The school has rights to book the pool for two hours per day during the school term.</p> <p>Managed under contract by CLM.</p> <p>Entry fees as per Lido Aquatic Centre.</p>	<p><u>Sport:</u> competitive swimming, canoe polo, water polo</p> <p><u>Leisure/ play:</u> open pool space</p> <p><u>Fitness/ health:</u> casual lane swimming</p> <p><u>Learn/ education:</u> learn-to-swim program</p>

Facility description	Facility uses	Community access and cost	Key activity provision
access and a reduced school use rate			
Splashhurst Community Pool			
A Council swimming pool water-based facility located on Ministry of Education land. Council was gifted the pool by the school when the school did not have the ability to invest in the pool to reopen it. The Ashhurst School entered an agreement with Council to enable ongoing school access to the pool.	25m pool (5 lanes)	The school has rights to use the pool from 9.30am to 1pm Monday to Thursday during the school term. Managed under contract by CLM. Entry fees as per Lido Aquatic Centre.	<u>Leisure/ play:</u> open pool space <u>Learn/ education:</u> learn-to-swim programme <u>Fitness/ health:</u> casual lane swimming
Memorial Park Splash Pad and Paddling Pool			
Council owned seasonal water-based fun/play facility.	Splash pad water features and paddling pool situated in the reserve with a range of other public recreational amenities.	Free access	<u>Leisure/ play:</u> splash pads, paddling and wading
Victoria Esplanade Paddling Pool			
Council owned seasonal water-based fun/play facility.	Paddling pool situated in the reserve with a range of other public recreational amenities.	Free access	<u>Leisure/ play:</u> paddling and wading

NOTE: The entry fees detailed above are the maximum individual rates – there are alternative rates for pre-paid multiple individual visits and group bookings.

6.2.2 School pools network

Indoor school pool facilities - There are two school pools that contribute to the supply of sport pool provision, **Palmerston North Boys High School** and **West End School Pool**. Both have had periods of closure due to plant failures and one (West End School) has building leaking issues.

Both pools are aging, Palmerston North Boys High School pool was built in 1999 and West End School Pool in 1972. If they were to no longer exist the displacement of all the pool activity would either cause some activity to cease all together e.g. school swimming due to transport expense and time, or additional pressure on the rest of the sports pools within the network.

Other school pools in the network are listed below. These pools range from small Primary school pools through to the imperial 33.3 yard Secondary school pools. Most are used only for their own school water-based activity, but some are used for limited community access.

Limited community access pools:

- Aokautere School
- Longburn School
- Russell Street School
- St James School (P North)
- Winchester School (P North)

Own use pools:

- | | |
|---------------------------------------|---------------------------------|
| • Awapuni School (P North) | • Palmerston North Intermediate |
| • Bunnythorpe School | • Queen Elizabeth College |
| • Central Normal School | • Riverdale School |
| • Cloverlea School | • St Mary's School (P North) |
| • College Street Normal School | • Te Kura o Wairau |
| • Hokowhitu School | • Terrace End School |
| • Our Lady of Lourdes School | • Turitea School |
| • Palmerston North Girls' High School | • Whakarongo School |

While the community access is limited for the school pool network it is still a significant contributor to the City's water-based facility provision. If these pools were to disappear from the network, it would result in two negative outcomes for the City:

1. The school water-based activity and community use would be displaced into the other available pools; and/or
2. Schools would cease to deliver water competence education as it becomes too difficult (cost, organise transport, additional time out of the classroom etc.) and the community use may also cease.

It is to be noted that the schools with pools that responded to the school's survey, all have the desire to retain their pool facilities. Some will require investment in plant and possibly the pools themselves to extend their life and retain them into the future.

6.2.3 Other public or privately-owned pools

Table 5 - Palmerston North City's public or privately-owned pools.

Facility description	Facility uses	Community access and cost	Key activity provision
Linton Military Camp (Kupe Pool)			
A 25-metre indoor heated pool and a swim teaching pool ²⁰ .	Its primary purpose is for soldiers aquatic training and to remain fit. It is also for the camp residents to use and to have children's swimming lessons. Civilian use has been available over the years, but this has reduced in recent times and is subject to camp lockdowns so is not reliable for regular civilian activity.	No public access Effectively no community access	<u>Sport:</u> swimming and training. <u>Learn/education:</u> Learn-to-swim
Te Whatu Ora - Health New Zealand MidCentral District hydrotherapy pool			
This is a small pool at a warmer water temperature based on the Hospital grounds.	It is only accessible for in and outpatient rehabilitation. Used for rehabilitation.	No public access Effectively no community access	<u>Hydrotherapy</u> : Patient use

²⁰ Appendix to the Council Recreation Needs Assessment 2005 (Appendix Four: Other Major Providers, p.133)

6.2.4 Understanding the available pool space

The metric investigated is the area of pool space against the purpose of the space. The total pool area must consider the type of user and when the users primarily use the water space. For example, the Lido Aquatic Centre 25m lane pool is used for learn / education, fitness / health, and sport lanes / court and each of these have times that suit the different users.

To provide a realistic estimate of available space by purpose there are several other factors to consider. Based on the following factors a full time equivalent (FTE) availability value has been estimated to determine the actual area of water by purpose.

- **Peak time pressure** for community access facilities – lane pools and learn-to-swim programme pools have peak times where the demand occurs. This has been identified as 6-7.30am and 3.30-8pm for lane pools, and 9-12am and 3.30-6pm for learn-to-swim programme pools. If a pool is available for this period, it is determined as 100% FTE. Hydrotherapy pools are assumed to have their peak times during the day between 9am and 5pm. If a pool is available for this period, it is determined as 100% FTE.
- **Seasonality** – for pools that are outdoors it is assumed that they are available for the summer months. Outdoor school pools are assumed to be available for use 25%²¹ of the year. The Lido Aquatic Centre 50m and Dive pools are assumed to be available for use 42% of the year.
- **Multiple use of spaces** – where a pool space is used for multiple purposes the available space is spread across the percentage of time for each activity. For example, the Lido Aquatic Centre 25m lane pool is used for learn / education approximately 10%, fitness / health²² 45%, and sport lanes / court 45%.
- **Approved access limitation** – the Linton Military Camp Pool and the Te Whatu Ora - Health New Zealand MidCentral District hydrotherapy pool are listed but it is assumed they are not available for community access (0% FTE).
- Where there is **no peak time pressure, seasonality, or multi-use** the full pool space area is counted (100% FTE).

6.2.5 The scheduling of the pool spaces

The three Council facilities and the two indoor school facilities that are available for community use provided the scheduled times for the different types of activity. The information about pool space scheduling for multi-use pools has been collated to provide a picture of the available space utilisation currently and to understand the pressure periods (see Appendix 10: Community available pool scheduling information).

What this indicates is:

- There is demand pressure through the winter months in the afternoon/evening peak time (3.30-8pm) for lane pools (noting that there is availability at the Splashhurst Facility).
- There is available lane space in the three Council facilities during the morning peak time (6-7.30am).

²¹ Sport New Zealand National Aquatic Facilities Strategy 2023 [DRAFT].

²² Includes casual public swimming time under Council policy with CLM.

- In summertime the demand in the evening peak time eases due to the Lido Aquatic Centre 50m lane pool being available for both club/squad use and casual public swimming.
- The demand for learn-to-swim pools varies from term time to non-term time due the use of school pools during the day. The Lido, Freyberg, and West End facilities serve the learn-to-swim demand 100% of the available time in the afternoon peak time (3.30-6pm), while the morning peak time (9-12am) has some availability.
- Opportunity for hosting swimming events is limited to the low demand times to reduce the impact on other users.

6.2.6 The City's pool provision

After analysing total pool area, type of pool, and estimated availability for community use (see Appendix 9: Community available pool area) the resulting available pool area by type has been calculated as presented in Table 6.

Table 6 – Estimated Palmerston North pool water area by purpose and availability.

Purpose	Total Area m ²	Total Area m ² per 1,000 Residents	Community Available Area m ²	FTE Area Available m ² per 1,000 Residents
Relaxation	23	0.25	23	0.25
Hydrotherapy	120	1.31	27	0.29
Learn / education	1,369	17.20	466	5.07
Leisure / play	3,761	15.90	805	8.77
Fitness / health	2,500	27.23	709	7.72
Sport lanes / court	2,800	30.50	857	9.33
Sport Depth 1	800	8.71	45	0.49
Sport Depth 2	168	1.83	71	0.77
Schools	2,301	25.06	39	0.42
TOTAL	7,186²³	78.28²⁴	3,040	33.12

Palmerston North City has 33m² available water area per 1,000 population. This compares to Manawatū-Whanganui of 38m² and the national average of 26m². The distribution of the total pool by water type is presented in Figure 9. The distribution of the pool water area by water type and availability is presented in Figure 10.

²³ Note where there are pools that have multiple purposes they have been counted as the whole pool area against each purpose, so this total does not equal the sum of the values above.

²⁴ Note where there are pools that have multiple purposes they have been counted as the whole pool area against each purpose, so this total does not equal the sum of the values above.

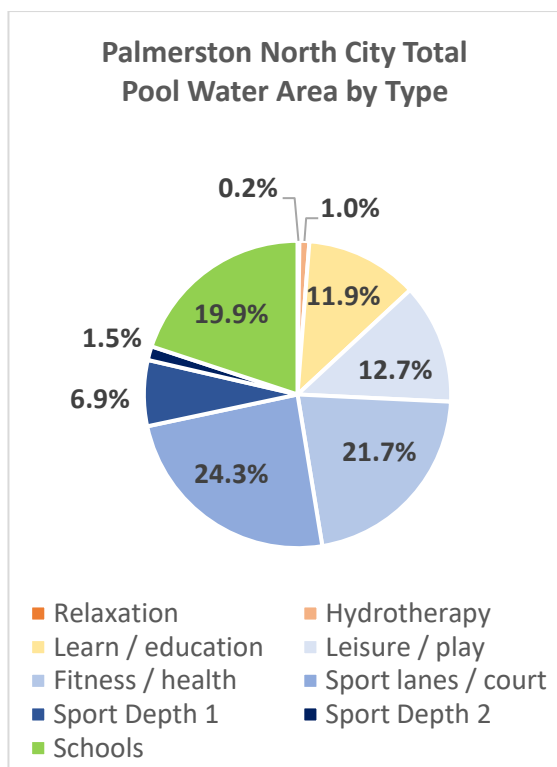


Figure 9 - Palmerston North City total pool water area

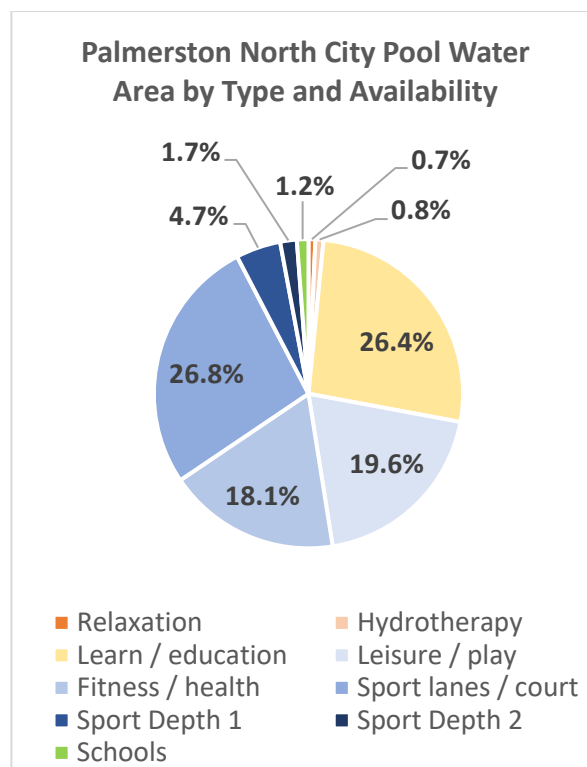


Figure 10 - Palmerston North City pool water area by type and availability.

This available pool area across the network will be used to understand the current provision available in context with the demand.

The way the City's pool facilities provide for the purpose is presented in Table 7.

Key

	Mostly serves the purpose
	Partially serves the purpose
	Mostly does not serve the purpose

Table 7 – Pool purpose distribution by facility.

Facility	Relaxation	Hydrotherapy	Learn / education	Leisure / play	Fitness / health /	Lane/court sports	Deep water sports 1	Deep water sports 2
Lido Aquatic Centre								
Freyberg Community Pool								
Splashhurst Community Pool								
Palmerston North Boys' High School Pool								
West End School (P North)								
Memorial Park splash pad and shallow pool								

Facility	Relaxation	Hydrotherapy	Learn / education	Leisure / play	Fitness / health /	Lane/court sports	Deep water sports 1	Deep water sports 2
Victoria Esplanade paddling pool	Red	Red	Red	Green	Red	Red	Red	Red
21 Outdoor/Seasonal School Pools	Red	Red	Red	Yellow	Red	Red	Red	Red

It is clear that the Lido Aquatic Centre provides the widest range of water-based recreation purpose. Freyberg and Splashhurst Community Pools provide the next level of diversity in pool purpose. The schools and outdoor council play facilities provide focused provision.

6.2.7 Pool event facilities

There are no regional event facilities in the City for the sports of swimming, and water polo. Diving, underwater hockey, and artistic swimming do not have local sports organisations to need event facilities. The closest regional event facilities are:

- Wellington Regional Aquatic Centre, Kilbirnie, Wellington (105-115 minutes' drive).
- Hawke's Bay Regional Aquatic Centre, Hastings (135-150 minutes' drive).

Canoe polo has a regional event facility (Hokowhitu Lagoon) in the City and there is a national event facility in Hawke's Bay 135-150 minutes' drive away.

6.2.8 Condition of the pool facilities

The next level of understanding of the pools network is the condition of the facilities and the remaining life and/or what is required to extend the life to retain the network. The information available for this Needs Assessment was limited and the starting point is the age of the facilities (see Appendix 11: Age of the city pool network). Table 21 provides high-level context but a detailed assessment of each facility and its components is required to determine the current state and the investment requirements into the future.

6.3 The water-based recreation facilities network

It is natural to automatically default to the perception that the Council pool facilities are the network of pools across a City. That is because these pools are the more visible and accessible for the general population. However, if the complete pool network is considered and the needs it serves, it becomes obvious that there is a layered and more complex picture to understand before pool provision decisions are made.

The RSFP 2018 and the Draft 2023 Strategy both highlight that provision through the Ministry of Education, Swim Schools, private trusts, retirement villages, hot pool/spa facilities etc. all play a role in meeting water-based recreation demand.

This Needs Assessment defines the pool facilities in terms of water-based recreation purpose.

6.3.1 Water-based recreation purpose

The primary purpose of a pool is determined by two fundamental elements: dimensions and water temperature. Similar principles apply to natural bodies of water however in most cases the temperature fluctuates with the seasonal change and the dimensional change is primarily depth.

The Draft 2023 Strategy has provided guidance on the categories of pool type:

Relaxation:	To accommodate relaxation (spas or similar) - Pool water space for users to soak and relax.
Hydrotherapy:	To serve water-based movement therapy and mobility needs (Excludes specialist medical therapy needs) - Pool water space for users to complete the range of motion activities. Depth appropriate.
Learn / education:	To enable development of water safety skills and swimming capability - pool water space for delivery of services in water skills capability. Depth appropriate to ability/ age.
Leisure / play:	To accommodate casual water play, and fun - pool water space and features that provide fun and safe water-based recreation experiences. Graduated challenge level to accommodate competence and confidence levels.
Fitness / health / lane sports:	To allow for water-based activity for health and fitness outcomes - pool water space for aqua jogging, aerobics, reduced gravity walking, and lane swimming.
Deep water sports:	To accommodate competitive deep water sports training and competition - pool water space that has depth appropriate to perform the skills for the deep-water sport activities and sufficient area for the sport specifications.

This Report has added a level of differentiation for the lane pool activities to provide specific reference to sport swimming as that has been highlighted as a concern for users. It has also provided differentiation for the deep water pool types to acknowledge that there is a difference between a pool suitable for activities like Water Polo and Underwater Hockey compared with activities requiring deeper water for activities like Artistic Swimming and Diving.

School pools have also been identified separately so they can be seen as an independent set of facilities.

Sport lane / court:	To accommodate more serious lane swimmers and competitive squad/ team training and competition - pool water space that has lanes and sufficient depth for dive entry and tumble turns.
Sport Depth 1 (2m-2.2m):	To accommodate competitive deep water sports training and competition - pool water space that has depth appropriate to perform the skills for the deep-water sport activities and sufficient area for the sport specifications for example Water Polo and Underwater Hockey.

Sport Depth 2: (>4m) Deep water activities)	To accommodate competitive deep water sports training and competition - pool water space that has depth appropriate to perform the skills for the deep-water sport activities and sufficient area for the sport specifications for example Artistic Swimming and Diving.
School	Generally, to accommodate access to pool water for fun and fitness – pool space is generally shallow depth, unheated and seasonal. Note: the exceptions of West End School Pool and Palmerston North Boys High School.

Water temperature

The influence of water temperature is critical for the type of use of water-based recreation facilities. It is often not understood by non-pool users and even pool users are often only aware of the water temperature suitable for their needs. Table 8 demonstrates what temperatures match the pool purpose.

Table 8 – Temperature by type of use, and water-based facility/activity examples.

Water Temp.	Purpose	Examples
36-38 °C	Relaxation	Destination hot pool facilities, and Council pool facilities.
32-35°C	Hydrotherapy	Council pool facilities, destination hot pool facilities, private trust owned pools, retirement villages, and Health NZ therapy pools.
29-32°C	Learn / education	Private swim schools, and Council learn-to-swim facilities.
	Leisure / play	Zero depth water play spaces, shallow leisure pool, wave pools, hydro slides, lazy rivers, and bombing pools, school pools ²⁵ .
26-29°C	Fitness / health	Council, community pool facilities, private trust owned pools, hotel and commercial pool facilities, and some school pools.
25-28°C	Sport lanes / court	Sports of: Swimming, Surf Life saving, Canoe Polo, and Triathlon.
	Sport Depth 1 (2m-2.2m)	Sports of: Artistic Swimming, Water Polo, Underwater Hockey. Scuba Diving
	Sport Depth 2 (>2.2m) Deep water activities)	Sports of: Artistic Swimming, and Diving. Scuba Diving

The temperatures are not exclusive to the activities but more a guide for planning. For example, fitness / health swimming can occur in warmer water or cooler water but would not occur at the relaxation temperatures. Similarly, relaxation activity is unlikely to occur at the sport temperatures.

²⁵ School pools have been considered as both “Leisure / play” and “Fitness / health” purposes due to the community access to the pools. That community use is generally for a fun or fitness swim during the summer months.

Dimensions:

The dimensions of length and width are the common indicators, but the depth is also critical. See Table 9 for an example of how depth of a pool influences its appropriateness for the types of activities:

Table 9 – Example of depth influence on pool purpose

Appropriateness	25m eight lane pool at 0.9m to 1.1m deep	25m eight lane pool at 1.2m to 2.1m deep
Suitable	Learn / education Leisure / play	Sport lanes / court Sport Depth 1 (training) Fitness / health
Possible use	Fitness / health Hydrotherapy Relaxation	Learn / education Leisure/ play Sport Depth 1 and 2 Relaxation
Not suitable	Sport Depth 1 and 2	Sport Depth 1 (competition) and 2

6.4 Natural bodies of water facilities

As outlined in the catchment context above, the Hokowhitu Lagoon and the Manawatū River are key natural water bodies. They facilitate some water-based recreational activities. The coastal beaches are also a connection to water-based activities such as surf lifesaving. The scope of this Needs Assessment relates to any built structure that facilitates active recreation in the natural water bodies.

To understand the provision of recreational facilities for natural bodies of water a similar approach has been applied.

1. Understanding the available natural bodies of water space by the purpose of use and users; and
2. The scheduling of the natural bodies of water spaces that have regular community access (Hokowhitu Lagoon)

Natural water body facilities are listed in Table 10 and their location were identified earlier in Figure 8.

The city currently has infrastructure investment at the Hokowhitu Lagoon and at points on the Manawatū Awa to enable access. As detailed in Table 10.

Table 10 – Palmerston North City’s natural bodies of water based recreation facilities.

Location description	Facility description	Community access and cost	Key activity provision
Hokowhitu Lagoon structures			
A shallow riverine (oxbow) lake adjacent to the Manawatū River located within a Council managed reserve.	There are a variety of rock lined edge ramps and jetties for canoe polo access. The Chalet provides the Palmerston North Canoe Club with club rooms and storage underneath.	Free access	<u>Sport:</u> canoe polo, canoe sports, waka ama. <u>Play/ leisure:</u> boating and fresh water angling.
Manawatū Awa - Ahimate Reserve			
Ahimate Reserve a Council managed reserve.	It includes gravel beach access, historic/cultural site, events and activity area.	Free access	<u>Play/ leisure:</u> swimming/ wading in the river.
Manawatū Awa - Dittmer Drive access steps			
Located with access from Dittmer Drive, it is a Council managed reserve.	It includes concrete structure and steps providing access to water edge past rock lining.	Free access	<u>Play/ leisure:</u> wading in the river.
Manawatū Awa - Fitzherbert Bridge access steps			
Located near Fitzherbert Bridge, it is a Council managed reserve.	It includes concrete structure and steps providing access to water edge past rock lining.	Free access	<u>Play/ leisure:</u> wading in the river.
Manawatū Awa / Pohangina Awa - Ashhurst Domain			
Located at Ashhurst Domain, a Council managed reserve.	Includes gravel beach access (though prone to erosion) – formally popular 4 wheel drive access.	Free access	<u>Play/ leisure:</u> wading in the river.
Manawatū Awa - Albert St			
Located with access from Albert St, a Council managed reserve.	It includes gravel beach access, adjacent historic/ cultural site, events and activity area.	Free access	<u>Play/ leisure:</u> wading in the river.

6.4.1 Understanding the available natural bodies of water space

There is no data available for how natural bodies of water are used beyond the sport training and event activity on the lagoon. There is no casual recreational use information as there is no managed point of entry or access. Securing this data would require observation studies capturing user activity by type, time and across a year. This is not within the scope of this Needs Assessment so the approach to determining availability is based on risk and space limitations.

For the natural bodies of water, a limiting factor is safety and the management of risk. For the Manawatū Awa the risks include the flow and volume of the water, hidden hazards below the water, and the water quality i.e. any harmful microbiological concerns.

Hokowhitu Lagoon is a little different in that there are less risks given the water is still, however the hidden hazards below the water, and the water quality still apply. It is also different to the Manawatū Awa as there are three permanent canoe polo courts set up restricting the use of that area for other lagoon users. During large canoe polo events a fourth court is set up.

Having the canoe polo courts permanently located limits the area available for canoe sports, waka ama, and other vessel-based recreational activities. As shown in Figure 11, the canoe polo courts to the right of the footbridge at the top of Figure 11, effectively divide the lagoon in half at its widest point. Other canoe sports, Waka Ama and recreational users limit themselves to the water space to the left of the footbridge.



Figure 11 - Hokowhitu Lagoon²⁶

Hokowhitu lagoon serves a large stormwater catchment. All the inflow points are not known. Significant upgrades to sewers and stormwater systems in the area, and infiltration traps are needed to improve quality of stormwater entering the lagoon. Council proactively manages the bore – the pump, through telemetry and the bird population. Weed management is being considered by Horizons Regional Council.

²⁶ Photo sourced from the Manawatū River Leaders Accord website:
<https://www.manawaturiver.co.nz/2018/12/04/spotlight-on-the-ferry-reserve-wetland/>

Horizons Regional Council conduct regular water quality monitoring for public contact recreation and provide guidance on swimming suitability.

Hokowhitu Lagoon – “This lake is monitored for public contact recreation on a weekly basis from 1 November through to 30 April for the presence of bacteria (measured as E. coli) and cyanobacteria (blue-green algae)”²⁷.

Manawatū Awa - Ahimate Reserve – “This swim spot gets deep quickly, has a strong current, and changes frequently and therefore is potentially unsafe. Children need to be closely supervised and anybody entering the water should check for hazards such as unstable cliffs and sunken logs. For this reason, we ask users to take caution and swim within their abilities”²⁸.

Manawatū Awa - Fitzherbert Bridge – “In summer it is suitable for swimming after at least three days of no rainfall and if the river is clear”²⁹.

6.4.2 The scheduling of the natural bodies of water space

There is no scheduling of the Manawatū Awa and it is available whenever someone wants to use it. Similarly, with Hokowhitu Lagoon there is no scheduling but rather designated areas. When the canoe polo courts are in full use during events the activity deters other users.

6.5 Summary

To plan for water-based facility provision, the full network of water-based facilities needs to be understood. Palmerston North has a distribution of water-based facilities across the City as shown in the Palmerston North and Surrounding Areas Pool and Water Recreation/Sport Facilities map (Figure 8).

The following key insights from this context section are:

Key insight: The water-based facilities network includes a range of pool types, owned mainly between Council and the Ministry of Education. The Council pools are publicly available. School pools are generally limited to school use only, or some limited community availability.

Key insight: Planning for a complete and accessible water-based facilities network can be complex and must take a robust and considered approach to meet the changing needs of community and address the demand in the network.

Key insight: The type of water, temperature and ownership of facility influences what access and provision a user group has to undertake their given activity.

Key insight: There are a range of council owned, school and private water-based facilities and natural water bodies that serve as spaces for user groups to undertake their given activity, however, the degree of access and availability in the network when groups need to use them can create peak times and barriers to use.

²⁷ [Land, Air, Water Aotearoa \(LAWA\) - Hokowhitu Lagoon at The Chalet](#)

²⁸ [Land, Air, Water Aotearoa \(LAWA\) - Manawatū at u/s COUNCIL STP \(Waitoetoe Park\)](#)

²⁹ [Land, Air, Water Aotearoa \(LAWA\) - Manawatū River at Fitzherbert Bridge](#)

7. Gap analysis

This section investigates the demand drivers for an appropriate water-based recreation network for the City and then considers how the current network matches the demand. It will answer the question:

What are the gaps in supply to meet demand?

7.1 National Strategy demand guidance (pools)

Palmerston North City water-based recreation facilities are connected into a wider network of facilities. When it comes to the access for users to participate at the various levels of sport and recreation events the network perspective is required. The Draft 2023 Strategy has provided guidance for Regional and City/District facility planning.

7.1.1 The Draft 2023 Strategy – General guidance

Regional and city/district planning is to focus on the Local / Sub-district and District/City/Sub Regional levels of provision (for full descriptions see Appendix 12: The Draft 2023 Strategy hierarchy descriptions).

The Draft 2023 Strategy states swimming and diving sports do not require additional international or national level event facilities as there are enough to serve the event needs now and into the future³⁰.

7.1.2 The Draft 2023 Strategy – pool water space demand

The Draft 2023 Strategy used a process of demand modelling using a wide range of New Zealand data sources³¹. The Draft 2023 Strategy identifies a high-level measure, a demand profile, and a suite of indicators to guide planning for appropriate pool facility provision.

The raw measure for pool water area required is **26m² per 1,000 population**. This measure cannot be taken on face value as the only indicator of water-based recreation water space provision. The guidance for considering the facility supply has also been provided in terms of area of water by type. The Draft 2023 Strategy has categorised pool water type into three categories and determined the percentage breakdown of the water by type (see Table 11 and Figure 12).

Table 11 - The Draft 2023 Strategy demand guidance by pool water type.

Pool Type	National Demand Profile
Leisure / play / relaxation / hydrotherapy (<i>includes community access to school pools</i> ³²)	67%
Learn / education (<i>excludes school pools</i> ³³)	17%
Fitness / health / lane sports / deep water sports	16%

³⁰ In May 2023 the New Zealand Olympic Committee announced its interest in hosting the 2034 Commonwealth Games. For an aquatic facility to meet the standards there would need to be two indoor 50m pools adjacent to each other. Recent and near future World or Commonwealth games events have taken a temporary pool facility approach specifically for the event rather than building permanent pool facilities. This avoids construction costs and legacy operational cost.

³¹ See Appendix 14: The Draft 2023 Strategy data sources.

³² School pools have been considered as “Leisure / play” purpose due to the community access to the pools that allow community use is generally for a swim during the summer months.

³³ The school pool education time data was not available to analyse the education contribution.

As Table 11 demonstrates the greatest demand is for leisure / play / relaxation / hydrotherapy water space. Learn / education and fitness / health / lane sports / deep water sport are a near balance on the remainder.

The Draft 2023 Strategy directs planners at regional, and city/district level to investigate the localised provision requirements and influences and not use the national pool water area measure as a singular guide.

The indicators recommended to consider are:

1. **Current facility supply** by type in catchment network.
2. **Current diversity of offerings / opportunities present** (for participating in water-based active recreation and sport).
3. **Current participation** in water-based active recreation and sport (penetration rates of core water-based sports).
4. **Future participation** in water-based active recreation and sport.
5. **Total catchment population current and forecast with specific segment focuses:**
 - a. **Proportion / total tamariki/children and rangitahi/youth** in catchment population.
 - b. **Proportion / total 65+** in catchment population.
 - c. **Deprivation level** of catchment population.
 - d. **Ethnicity** of catchment population.
6. **One-way travel time** (geographic accessibility).

The first four indicators have been considered through the supply and demand analysis. Indicators 5 and 6 are considered further in section 8 User group needs assessment.

7.2 Pools supply versus demand

Palmerston North City has **33m²** available water area per 1,000 population compared to the Draft 2023 Strategy measure of **26m²**. By consolidating the supply analysis of pool types used in Section 6 to match the Draft 2023 Strategy demand categories the imbalance of provision can be seen when you compare the current available supply against the national water-based recreation demand profile see Figure 12 with Figure 13.

Note: the methodology to determine the national water-based recreation demand profile was a bespoke data analysis model that included the following steps:

1. Conversion of NZ sport participation data from 'Active NZ Sports and Activities tables 2021' (participation rates for individual sports) into a current combined national aquatic participation rate.
2. Addressing gaps in pool use not included in the survey - using ActiveXchange's³⁴ integrated data from aquatic facilities. To arrive at an estimated total aquatic activity demand person estimate (and visit estimate).
3. Use of the SNZ Facilities Planning Tool database to provide an up to date estimate on nationwide pools (m²) supply (factoring in access restrictions to estimate 'full time equivalents' (FTEs). Participation (usage) capacity per m² was estimated using ActiveXchange's integrated data on actual pool usage levels and with a 'comfort factor' what pools can typically accommodate. This takes into account peak/off-peak usage patterns.

³⁴ ActiveXchange is an international data intelligence service provider for the sport, fitness and recreation industry.

- The supply was then assessed alongside the overall forecast demand levels to reach a per capita level of current provision and provide a gap assessment estimate.

A Palmerston North City level demand analysis using this methodology was not completed due to the additional resource required and the timing of the project in parallel with the development of the Draft 2023 Strategy. As a default the national demand indicators have been used.

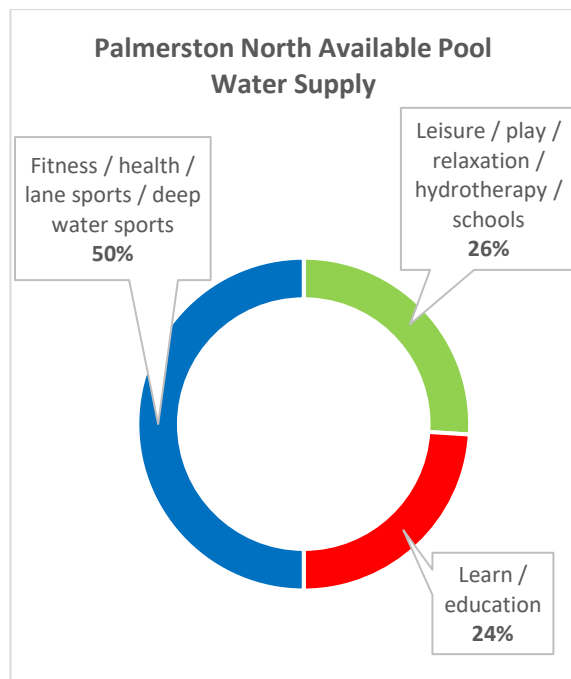


Figure 12 - City available pool water supply.

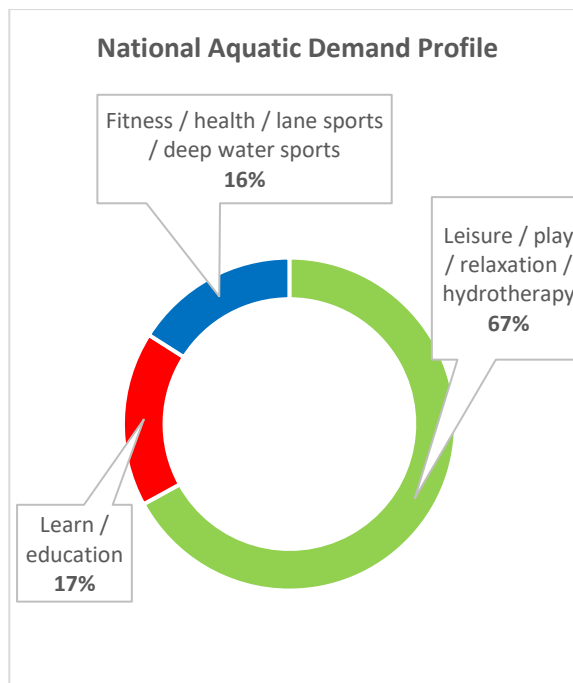


Figure 13 - National pool water demand profile.

When compared with the national water-based recreation demand profile, the existing Palmerston North water-based recreation network provides:

- A high proportion of fitness / health / lane sports / deep water sports space.
- A higher proportion of learn / education water space.
- A low proportion of leisure / play / relaxation / hydrotherapy water space.

There is a clear imbalance and a migration to leisure / play / relaxation / hydrotherapy water space is required. How this is addressed will require a range of interventions over time. This imbalance is consistent with the regional imbalance trends across the country as identified in the Draft 2023 Strategy.

To consider the future demand requirements the population growth has been projected against the demand area by percentage in Table 12.

Table 12 - Pool water area supply compared to demand projection over time.

Year	Population	Leisure / play / relaxation / hydrotherapy / schools area (m ²)	Learn / education area (m ²)	Fitness / health / lane sports / deep water sports area (m ²)	Total Area (m ²)
2023 Supply (actual)	91,800	791	730	1520	3,040
FTE Demand					

Year	Population	Leisure / play / relaxation / hydrotherapy / schools area (m ²)	Learn / education area (m ²)	Fitness / health / lane sports / deep water sports area (m ²)	Total Area (m ²)
2023	91,800	1661	421	397	2479
FTE Projected Demand					
2033	103,122	1865	473	445	2784
2043	110,921	2007	509	479	2995
2053	116,789	2113	536	505	3153

This shows that with the projected population growth the City is still going to have an imbalance in the supply of water-based recreation facility space unless there are changes to these nationally-derived proportions (as shown in Figure 13). By 2053 there will also be a demand for greater pool water area than is currently available.

7.3 Natural bodies of water

Unlike pools there is no national strategy guidance on provision of natural bodies of water for recreation purposes. The approach to determining demand is based on risk management and space provision.

7.3.1 Natural bodies of water - event demand

The potential events that were identified through the Discovery phase included:

- Races on the river – kayak, canoe, rafting and other vessel based events.
- Canoe polo events on the lagoon.
- Fun days on the lagoon.

The Manawatū Awa-based events are few and are dictated by the condition of the river and the weather. The lagoon has limited vessel event opportunity due to its length. It could be used for more family recreation events similar to the Junior Fishing Promotion Day held in October 2022 by Manawatū Freshwater Anglers Club in conjunction with Fish and Game New Zealand.

More canoe polo events could occur in Palmerston North including national level events, however the water space and quality are the limitation.

7.3.2 Natural bodies of water - space demand

In terms of the Manawatū Awa the demand is to be limited to on-water activity rather than in-water. Swimming in the Manawatū Awa is discouraged due to the safety risks. There are no participation demand guidelines to consider.

Canoe Polo permanently occupies an area of the lagoon. This restricts uses of this area of the lagoon by other user groups. Other vessel sports and recreational activities generally require lengths of water space to make it worthwhile for the user. Currently the canoe polo courts congest the lagoon near its middle (at its widest) making a distance of approximately 575m from the western end to the courts. Without the Canoe Polo courts the distance increases to approximately 780m before the lagoon begins to narrow, or a little over 1,000m end to end.

Finding an alternative location for the canoe polo courts would reduce any demand conflicts. It is recommended to secure current use data to understand the relocation approach.

7.4 Gap analysis summary

In consideration of the demand guidance and information the following summaries address the gaps in supply to meet demand.

7.4.1 Pools

In terms of available water space Palmerston North has more than the national guideline area for the population, however there is an imbalance in the type of pool spaces available.

1. There is demand for a greater proportion of leisure / play / relaxation / hydrotherapy water space.
2. There is an over representative proportion of fitness / health / lane sports / deep water sports space.
3. There is a higher proportion of learn / education water space.

To address the imbalance a migration to leisure / play / relaxation / hydrotherapy water space is required.

In terms of event facility provision there are identified gaps in provision for national (international) water polo and underwater hockey facilities in New Zealand. A very strong, independent business case endorsed by the National Sports Organisation/s would be required if Palmerston North City wished to compete to secure Central Government funding to build a national (international) level facility for these sports.

There may be a case for a swimming facility capable of hosting regional events for swimming and water polo, if a new large scale pool facility inclusive of leisure / play / relaxation / hydrotherapy water space is to be built in the future, but it would need to include spectator seating capacity that increases construction costs for no additional pool space.

In terms of City level event provision, the Lido Aquatic Centre and Freyberg Community Pool can accommodate the need. It is access to sufficient time to complete the event programme that needs to be addressed.

7.4.2 Natural bodies of water

The Manawatū Awa is to continue to be promoted and managed as an “on-the-water” recreational resource and “in-the-water” activity discouraged.

The option to relocate the canoe polo facility requires objective evidence of current user impacts and demand. A strong business case endorsed by the Canoe Polo New Zealand would be required if Palmerston North City wished to build a national (international) level facility.

8. User group needs assessment

This section presents the results of the user group needs assessment component which was informed primarily from the stakeholder engagement and cross referenced with the gap analysis (supply and demand) information outlined above. It identifies user needs to further layer the needs assessment and help inform the network provision options in Section 9 below. The full set of stakeholder themes are included in Appendix 5: Stakeholder engagement.

There were seventeen user groups identified in the water-based recreation facilities network that were in scope to engage with through this investigation. Table 13 provides the list of the user groups and their identified key pool water type needs.

The stakeholder's list is represented by sports organisations proportionately higher than other user groups due to the nature of sport having an organisational structure system. Public users are generally individual users that do not belong to a group. Securing individual perspectives was limited as public consultation was not included within the scope of this project.

Table 13 - User group assessment water type needs.

User group	Key pool water type needs
Water-based safety skill users	Learn/ education
Canoe polo	Sport
Casual swimmers	Fitness/ health; leisure / play
Club swimming	Sport
Diving	Sport
Learn-to-swim	Learn/ education
Māori, pacific people's and multi-cultural community	Fitness/ health; leisure / play
People with disabilities	Fitness/ health; leisure / play
Relaxation users	Relaxation
Senior citizens	Hydrotherapy; leisure / play
Surf life saving	Sport
Triathlon clubs	Sport
Underwater hockey	Sport
Users seeking rehabilitation	Hydrotherapy
Waka ama	Sport
Water polo	Sport
Young adults/ rangatahi	Leisure/ play

The key results from the user groups needs assessment analysis were:

- There is a critical lack of hydrotherapy provision.
- Provision focused on supporting Māori, pacific people's and multi-cultural community access should be prioritised, particularly in the fitness/ health and leisure / play type pools and natural bodies of water.
- There is a lack of deep-water provision for some sports, particularly for water polo who have limited provision at the depth required to support this user group. Canoe polo could also utilise a deep-water facility to support their large club numbers.
- More water provision for education/ learn and to swim facilities would be supported by the community need for learn-to-swim programmes.

- Specific provision for more fitness/ health and leisure/ play would support general community group demographics such as senior citizens, people with disabilities, and young adults/ rangatahi.
- Swim club peak time schedules are a clear barrier to expansion of club activities and offerings, and these schedules impact the network capacity for all users.

9. Water-based recreation facilities provision options

This section considers the options available as solutions for the City to reduce the demand gaps of water-based recreation facilities. It firstly considers the types of solutions available. It then considers the options that have been identified, including previous proposals to Sport Manawatū and Council, and other options identified through the Discovery Phase of this project. The options are detailed at a high level, matching up with the demand and need they can serve.

The Draft 2023 Strategy provides the following guidance for water-based facility planning which also can be applied to water-based recreation facilities associated to natural bodies of water:

1. *Regional and City/District analysis is required to understand how to evolve the current supply.*
2. *Better use / access to what we have in the current network*
3. *Create or increase leisure / play / relaxation / hydrotherapy water space*
 - a. *Convert - repurpose / reimagine suitable current pools*
 - b. *Optimise - where practical extend life and/or expand suitable facilities to meet unmet demand*
 - c. *Rationalise – replace to better meet demand*
 - d. *Gap filling - where no existing facility, build a new facility.*

This Needs Assessment Report accounts for point 1. Points 2 and 3 are addressed by the consideration of the options in this section. The options resulting in New Build (capital) projects in Section 9.4 are prioritised as described in point 3.

9.1 Options assessment considerations

The instinctive approach to filling gaps in a facility network is to build more facilities. However, as noted earlier, water-based recreation facilities and particularly pools are very costly to build and operate. The approach needs to start with what we have now and how can we better use the infrastructure and previous investment. When these types of options are exhausted is when planning can progress through to the last level of provision, build new.

Solution types that this Needs Assessment has considered are:

1. Operational practices – focusing on the way facilities are accessed and managed to provide better delivery to address demand and user needs.
2. Upgrading/repurposing current infrastructure – reimagining the current built structures and adapting them to meet the current and future demand.
3. Build new – addressing clear demand gaps where the current supply cannot serve.

Several options had been proposed prior by various groups or through the RSFP 2018 to consider as solutions to help improve the water-based recreation network. These and other options are detailed below in Section 9.2.

To determine the options to improve the provision of water-based recreation facilities a set of criteria have been designed to select the appropriate options for further investigation or deployment. These are based on the key findings, principles, and provision indicators from the Sport New Zealand National Aquatic Facilities Strategy 2023 [DRAFT], the RSFP 2018 and a Palmerston North City context (see Appendix 15: Options assessment criteria)

9.2 OPTIONS – Operations

During the Discovery Phase the Council facilities received the most attention when it came to the barriers to meeting demand. It was also acknowledged that some of the school pools in the network are underutilised³⁵, so the options presented here are network focused.

9.2.1 Policy setting options for public pools scheduling

CLM manage the Council pool facilities under contract. A council policy setting requires CLM to maintain five lanes for casual public swimming across the three facilities during public opening hours (Lido two lanes, Freyberg two lanes, Splashhurst one lane).

As noted in 6.2.5 the analysis of scheduling of the pool spaces demonstrates there is peak time availability in the three Council pools. Splashhurst Community Pool has a lot of vacant time morning and evening, Freyberg Community Pool and Lido Aquatic Centre have availability in the morning, however the sports clubs do not find the mornings as convenient as the evenings. There is an opportunity for Council to ease demand pressure in evening times by changing the casual public swimming lane policy.

Option Brief Description	Responsible	Estimated costs
<p>Council reset the policy in one of the following ways:</p> <ol style="list-style-type: none"> 1. Remove the contractual requirement to hold public casual lane space completely i.e. there is no dedicated casual public lane space. 2. Only reserve public casual lane space during times when there is low booking demand i.e. the morning peak times maximising the use of the water space. 3. Retain the five-lane requirement but distribute across the network to accommodate the high demand periods. 4. Reduce the number of public casual swimming lanes at the Lido and Freyberg during peak booking demand times to 1. 5. Combinations of 2 and 4 	Council in conjunction with CLM	Undetermined. Note: it may generate less or greater income.

Note: while it is not related to lanes space during the peak demand times, to address the limited event access for City level swimming events there should also be engagement between CLM and Swimming Manawatū to seek full day access several times per year.

9.2.2 Morning pool space optimised for sports groups

There is peak time availability in the Council pools in the mornings. There is an opportunity for Sport Manawatū and Council/CLM to work with the sports user groups to better use the morning pool space.

³⁵ Schools have limited/excluded community access due to concerns of vandalism, repair costs, administration costs, and school community safety (child protection).

Option Brief Description	Responsible	Estimated costs
Sports user groups are encouraged to use the available pool space in the mornings at the Council facilities.	Sport Manawatū in conjunction with Council.	Undetermined. Note: it may generate less or greater income.

9.2.3 School pool access during the summer months

Outdoor, seasonal school pools are operational during the time of the year when the demand for leisure / play water space is at its highest. They are located in the community with local catchments (see CASE STUDY: Hamilton City Partner Pools Programme – school pool access initiative).

Option Brief Description	Responsible	Estimated costs
School pools that do (five currently) or could (16) allow community access or opportunity for other schools to use their pools are to be encouraged to continue. A pool network resilience funding scheme is introduced. The principles to underpin school pool grants should include but may not be limited to: <ul style="list-style-type: none"> Enabling school pools to remain open and available to other schools, and the community. Applying an equitable approach for all schools. 	Sport Manawatū as the facilitator. Ministry of Education, and individual schools. Council as an enabler.	Very pool specific. Shared cost opportunity.

Option Brief Description	Responsible	Estimated costs
School pools strategically selected by location and pool facility features are made available for the community to use outside school hours, during the summer months. It will require developing safe practice procedures, increased water quality management, supervision requirements etc.	Individual schools, and Ministry of Education. Sport Manawatū could be a facilitator. Council as an enabler.	Very pool specific. Shared cost opportunity.

9.2.4 Network resilience - current indoor school pools

As detailed in 6.2.2, Palmerston North Boys High School and West End School Pool both have formal community access arrangements that contribute to the provision to meet the sport and learn / education demand. In the immediate term there is need to retain these pools and the sport users' access to them.

Option Brief Description	Responsible	Estimated costs
<p>Capital - Grant or loan made available to the two current school pools that formally enable community access. These grants are to support the renewal of the plant and building.</p>	<p>Council, Palmerston North Boys High School, and West End Aquatic Trust. Ministry of Education is an enabler. Sport Manawatū could be a facilitator.</p>	<p>To be determined for each facility.</p>

What must be acknowledged is that the situations for both school pools are different and therefore a bespoke set of support options will be required for each.

Palmerston North Boys High School Pool

Serves a school and community need but is showing signs of aging. Proactive approach to ensure the pool remains operational and should be one of the first schools to be partnered with under the pool network resilience grants' regime.

West End School Pool

Similar to Palmerston North Boys High School Pool, the West End School Pool serves both the school and community need however the community activity is far greater. The building is aging and will require some asset renewal works in the near future.

A significant difference with the West End School Pool is that the land is Ministry of Education owned but the building is community owned through a Trust (West End Aquatic Trust). The asset renewals fall on the Trust, which it is not equipped to address.

9.2.5 Leveraging Council's pool management contract

Technical capability and capacity are limited across all the pools in the network. It is undesirable to have any pool disappear from the provision network and one of the contributing factors to closures is the ability for schools to adequately resource pool operations ensuring safe water quality management.

Option Brief Description	Responsible	Estimated costs
<p>A “Pools Network Forum” is introduced that includes the pool operators from all the pools. This will provide a peer support network enabling all pool operators to lift their knowledge, experience and therefore their performance. Proposed initiatives the Pools Network Forum could implement are:</p> <ul style="list-style-type: none"> • Host regular meetings/workshops – at least annual. • CLM hosts a water treatment course for staff and invites network pool volunteers/caretakers. • Create a buying power network³⁶ • With technology advancements in the future there may be opportunity to centrally monitor water quality across the network if chemical control systems are upgraded to be consistent across the network. 	<p>Sport Manawatū as the facilitator. Council³⁷, CLM, and the individual schools as the enablers.</p>	<p>Dependent on level of deployment and uptake of the network.</p>

9.2.6 Leveraging resources across the pools network

Asset management and renewals planning across the network will ensure long term resilience.

Option Brief Description	Responsible	Estimated costs
<p>Collectively a network asset upgrade and renewals programme is developed. This can then enable:</p> <ul style="list-style-type: none"> • shared investment where there is shared use of water-based recreation facilities. • plant and building upgrades occurring in a planned manner rather than when there is a failure, ensuring the whole network is more resilient. 	<p>Sport Manawatū as the facilitator. Council, Ministry of Education, and the individual schools as the enablers.</p>	<p>Dependent on level of deployment and uptake of the network.</p>

9.2.7 Hokowhitu Lagoon water quality

The greatest risk to continued use of the Hokowhitu Lagoon is water quality and weed management. Hokowhitu lagoon serves a large stormwater catchment. All the inflow points are not known. Significant upgrades to sewers and stormwater systems in the area, and infiltration traps are needed to improve quality of stormwater entering the lagoon.

³⁶ CLM to procure group wide goods and services, collective water testing services, and share expertise.

³⁷ This will require additional internal resource in terms of time for the appropriately qualified and skilled personnel through the CLM contract.

Option Brief Description	Responsible	Estimated costs
The current water quality management programme is continued to address water flow (bore volumes management). Additional weed management, wildlife management (bird waste) etc.	Council as funder, Horizons and Rangitāne as partners.	To be determined
Investment in improving the quality of stormwater entering the lagoon from the surrounding residential area.	Council as funder, Horizons as partner.	To be determined

9.3 OPTIONS – Upgrading/repurposing current infrastructure

There are opportunities to consider making the most out of the current water-based recreation facility infrastructure. Several have been proposed in recent years but none have occurred. Some are school facility related and others are focused on the Lido Aquatic Centre.

“There would be some benefit in considering a 25m facility or upgrading some school pools and assisting to make them accessible for aquatic clubs.” Dale Johnson, Head of Participation & Events, Swimming New Zealand.

9.3.1 Network resilience - strategic school pool investment

As detailed in 6.2.2, there are several school pools across the City. Some of these are fortuitously located to provide a localised level of provision for the City. There is opportunity for a strategic approach to significantly increase provision that contributes to the provision to meet the learn / education need alongside sport training and fitness users (see CASE STUDY: Wellington City Council – investment programme to upgrade school pools, and CASE STUDY: Green Family Taradale Pool (Napier) - school community pool).

Option Brief Description	Responsible	Estimated costs
Upgrade selected school pool facilities. Enclose, insulate, ventilate, and heat pools making them all-year-round facilities that can serve school learning for multiple schools during the day and learn-to-swim in the evenings. If the pool has suitable dimensions, it may also serve fitness / health, and sport lanes / court demand.	Individual schools, and Ministry of Education. Sport Manawatū could be a facilitator. Council as an enabler.	To be determined for each facility. Likely range would be \$750,000 to \$1.5m depending on the scale of the identified pool.

Note: This is where the proposal to enclose the Queen Elizabeth College pools would be considered.

During the Discovery Phase there was one school pool that demonstrated strong potential in the attributes it has: Hokowhitu School Pool. It is located on a Council reserve, it has car parking adjacent meaning there is access capability without going through the school grounds, and there are other schools nearby it can serve. Further investigation is required to determine suitability and appetite of the school board to consider the opportunity.

Another School Pool identified with positive attributes is Palmerston North Normal Intermediate School.

9.3.2 Lido 50m pool enclosure – fitness, leisure and sports training facility

The current outdoor 50m pool is used as a training pool for sports in the evenings and a summer leisure pool during the day. It is not suitable for installing timing panels that are required for recording swim events and registering record times.

Option Brief Description	Responsible	Estimated costs
<p>Enclosing the pool with a roof structure and introducing air handling for internal climate control will create an all-year-round pool for swim training (water temperature of 26-27°C). Designed as an effective thermal envelope enclosure that has a thermal rating suitable for minimising temperature loss.</p> <p>Noted enhancements required for suitability:</p> <ul style="list-style-type: none"> • Upgrade the reticulation system and raise the pool water level (advised to install a pool liner) – the pool is old (built in 1966). • Install toilets, basic changing rooms, and poolside showers. These additional facilities will be required to ensure the new enclosed facility has the appropriate services available. It will also enable the pool to be managed as a stand-alone programmed facility i.e. closed to casual use at times there is no outdoor casual public swimming demand. <p>Enhancements to improve suitability, lifespan, and versatility:</p> <ul style="list-style-type: none"> • Eight Lanes – the pool is currently seven lanes at approximately 2.4m wide. If the lanes were reduced to 2.1m it could become an eight-lane pool for training purposes. • Install a submersible and dividable, mechanical bulkhead to allow the pool to be split into two water spaces when required. This would provide water space versatility (see Appendix 17: Lido 50m pool enclosure option additional information). • Retrofit timing the pool to accommodate timing panels. 	<p>Council as an enabler.</p>	<p>CLM 2021 LTP Submission enclosure proposal³⁸ \$1.8m capital cost and \$95,000 per annum operational expenditure. Enhancements need to be assessed and priced.</p>

³⁸ Renders from the submission are presented in Appendix 17: Lido 50m pool enclosure option additional information.

9.3.3 Lake opportunities

The Walkers/Shirriffs Road Lake (refer Figure 8) provides a possible medium to long term solution for outdoor water-based recreational pursuits. The Walkers/Shirriffs Road Lake is a privately owned ex-quarry lake that has over the years had water-based recreation activities occurring there. The size and depth is suitable for a range of recreation activities.

Option Brief Description	Responsible	Estimated costs
Securing access by arrangement with the owner has been investigated and should continue to be as opportunities arise. The option of purchase is one that Council would be advised to consider if the property became available for sale.	Council as an enabler.	Agreed access expense – undetermined. Purchase price unknown.

Option Brief Description	Responsible	Estimated costs
There may be other quarry lake opportunities that Council would be advised to investigate and make preliminary enquiry about the future intentions of the current owners.	Council as an enabler.	Agreed access expense – undetermined. Purchase price unknown.

9.4 OPTIONS – New build

Only after all operational and upgrade options have been explored to meet the demand should new build options be considered. Given the scale of the capital and whole of life expenditure the right new build option/s require detailed investigation.

A key planning consideration where a new build involves replacing a current pool is the timing to make the most of the additional capacity in the network during the summer months.

9.4.1 Lido 25m Indoor Pool upgrade to a 50m Indoor Pool – fitness, leisure and sports training and events facility

The current indoor 25m pool is used as a multi-use pool. Its size is suitable for many water-based recreation activities.

Option Brief Description	Responsible	Estimated costs
<p>Demolish the 25m pool and rebuild a 51.5m pool and include a 1.5m wide movable bulkhead to offer flexibility and options for use of the pool space. It would offer additional swimming space for the peak demand times. It would also provide a regional level event facility.</p> <p>Multi-use enhancements:</p> <ul style="list-style-type: none">• Deep water – one end to be deeper to provide water polo a space for training and district/regional level competition.• Spectator seating – to support local and district level swimming, and water polo events.	<p>Council as an enabler.</p>	<p>\$30m - \$40m capital pending specifications. Additional operational expenditure of \$800,000-1.1m per annum pending on how the facility is managed.</p>

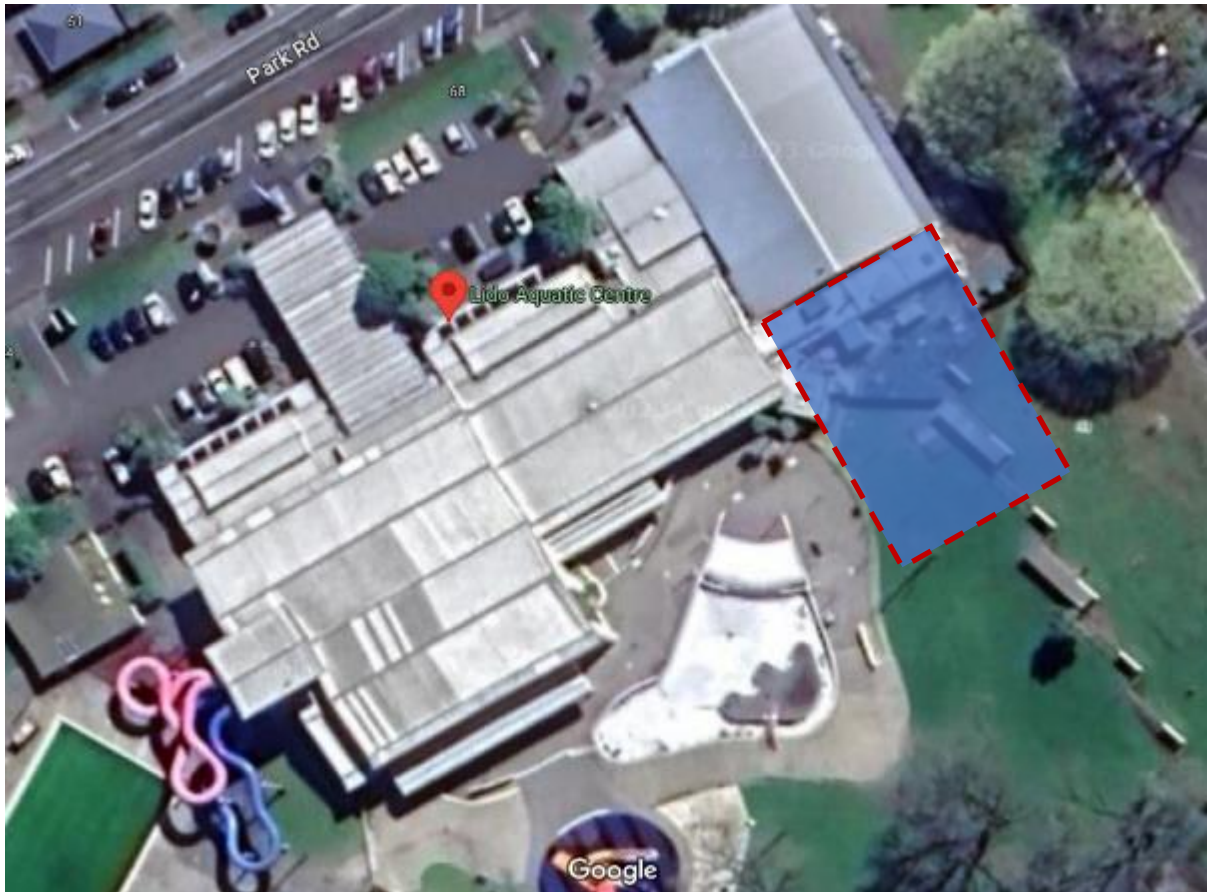


Figure 14 - Indicative building site of a 50m pool replacement of the Lido 25m pool.

9.4.2 Lido new 50m Pool – fitness, leisure and sports training and events facility

As there is no need for additional national or international level swimming facilities, any new 50m pool in Palmerston North will need to serve fitness, leisure and sports training and regional or below level events. A new 50m pool facility would likely incur increased capital cost and would have significantly greater operational costs if located as a stand alone facility (see CASE STUDY: Hawke's Bay Regional Aquatic Centre, Hastings - performance sport facility).

Option Brief Description	Responsible	Estimated costs
<p>Demolish the outdoor 50m pool and rebuild a 51.5m pool. It would be a 51.5m long, eight to ten lane, and include a 1.5m wide movable bulkhead to offer flexibility and options for use of the pool space. It would have a deep end (2.2m) suitable for water polo and should include a movable floor if the full length is at the full depth. Spectator seating to support local and district level swimming, and water polo events.</p> <p>It would offer additional swimming space for the peak demand times. It would also provide a regional level event facility.</p> <p>Note: the fate of the dive well will require consideration in the feasibility process i.e. include it in the new building, demolish it entirely, or other option.</p>	<p>Council as an enabler.</p>	<p>\$30m - \$40m capital pending specifications. Additional operational expenditure of \$800,000-1.1m per annum pending on how the facility is managed.</p>

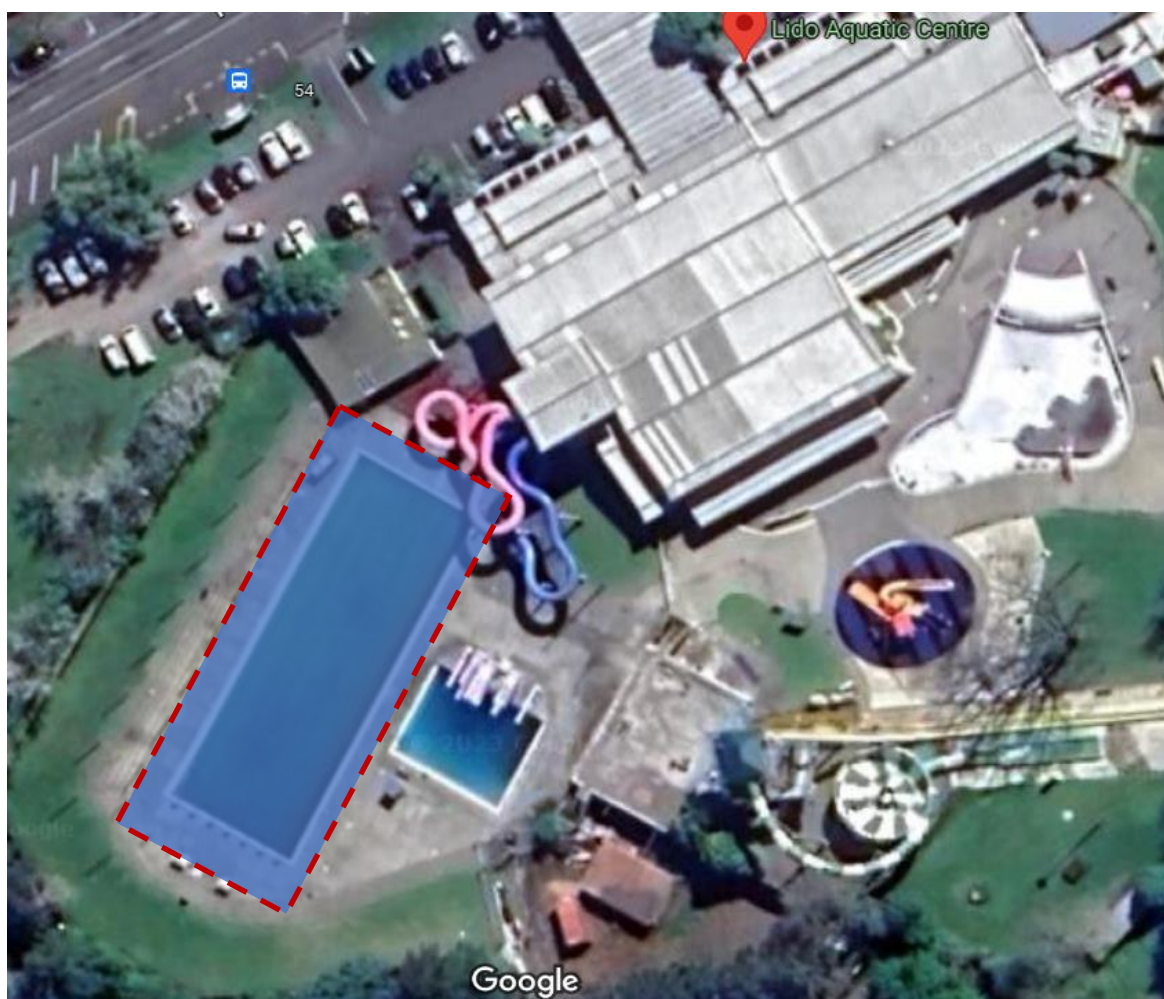


Figure 15 - Indicative building site of a 50m pool replacement of the Lido outdoor 50m pool.

9.4.3 Canoe Polo courts facility

To provide a managed body of water suitable for canoe polo and some other water-based recreational activities an artificial canoe polo pond facility similar to the Hawke’s Bay canoe polo facility is a possible medium to long term solution.

Option Brief Description	Responsible	Estimated costs
<p>A new artificial canoe polo pond large enough for three/four canoe polo courts.</p> <p>This will enable more court space located adjacent to the indoor canoe polo training facility.</p> <p>Several site options have been proposed and these will require site assessment:</p> <ul style="list-style-type: none"> • Skoglund Park adjacent to Freyberg Community Pool • Bare land sites along the Manawatū river • Private land purchase 	<p>Sport Manawatū as the facilitator.</p> <p>Council, Ministry of Education, and Horizons as enablers.</p>	<p>\$1-1.5m capital.</p> <p>Operational expenditure to be estimated at feasibility stage.</p>



Figure 16 Hawke's Bay Canoe Polo facility.

9.4.4 New local level pool facility – multi-use facility

As the City grows there will be a growth in need for access to water-based recreation space. This will be an opportunity to add a new local level pool facility to the network and provide network resilience (see CASE STUDY: Albany Stadium Pool, Auckland – leisure facility).

“There would be some benefit in considering a 25m facility or upgrading some school pools and assisting to make them accessible for aquatic clubs.” Dale Johnson, Head of Participation & Events, Swimming New Zealand.

Option Brief Description	Responsible	Estimated costs
<p>A new multi pool facility is constructed within the Kākātangiata urban growth area (6,500 dwellings) and consideration given to Aokautere urban growth area (1,000 dwellings).</p> <p>A partnership approach with Ministry of Education, Council, and other possible partners given the development will likely require additional school/s</p> <p>A new facility will include water space for Relaxation, Hydrotherapy, learn / education, leisure / play, fitness / and sport (training).</p>	<p>Sport Manawatū as the facilitator. Ministry of Education, and Council as an enabler.</p>	<p>\$25m - \$35m capital pending site, and specifications. Operational expenditure of \$800,000-1.1m per annum pending on how the facility is managed.</p>

Option Brief Description	Responsible	Estimated costs
<p>The 2017 proposal to Council by St Peter's College is an option to serve a residential catchment that does not have a school pool that can be available for community access.</p> <p>The specifications would need to be changed from a 50m sport pool, to a local level multi pool facility.</p>	<p>Sport Manawatū as the facilitator. St Peter's College, Ministry of Education, and Council as enablers.</p>	<p>\$20m - \$30m capital pending site, and specifications. Operational expenditure of \$800,000-1.1m per annum pending on how the facility is managed.</p>

Note: St Peter's College did not respond to enquiry if the school still had plans for a pool.

10. Recommendations

The recommendations are based on the options that will contribute to increasing the capacity for leisure / play / relaxation / hydrotherapy water space in the network, and then assessed against the four requirements of (full descriptions are in Appendix 15: Options assessment criteria):

- DEMAND REQUIREMENTS - Achieves demand focus
- STRATEGIC REQUIREMENTS - Achieves future focus
- COMMUNITY REQUIREMENTS - Serves the community need
- SUSTAINABILITY REQUIREMENTS – Environmental and Financial
- WATER-BASED RECREATION FACILITY REQUIREMENTS – Physical attributes

The recommended options are categorised as those that can be done immediately without the need for the feasibility study, those that do not require capital investment but may need operational investment and/or partnership development, and those that require significant capital investment and feasibility / business case assessment.

10.1.1 Immediate opportunities

Options	Next Steps
<p><i>Policy setting options for public pools scheduling</i></p> <p>The Council can reconsider the level of public access to swimming lanes at the Council pool facilities to address sports user group demand during peak periods.</p>	<p>Officers provide advice to Council on options for the level of provision for casual lane swimmers.</p>
<p><i>Morning pool space optimised for sports groups</i></p> <p>Sport Manawatū and Council work with the sports user groups to facilitate increased morning facility use.</p>	<p>Sport Manawatū facilitates engagement with clubs</p>

Note: these options do not contribute to increasing the capacity for leisure / play / relaxation / hydrotherapy water space but they both support maximising pool water space and are sustainable.

10.1.2 Partnership low investment opportunities – 2023-2026

Options	Next Steps
<p><i>School pool access during summer months</i></p> <p>Sport Manawatū and Council work with the selected schools they identify in the higher need areas and provide them support to be available for community access.</p> <p>A pool network resilience funding scheme is introduced for those schools that will allow community use of their pools.</p>	<p>Sport Manawatū facilitates engagement with schools in higher deprivation areas and determines the need for support. If the need is realised with Council establishes a pool network resilience funding scheme. Consider a \$10,000 provision per school.</p>
<p><i>Leveraging Council's pool management contract</i></p> <p>Council engages with CLM and schools with pools to determine the needs and resource support required for CLM to provide the schools with.</p>	<p>Council and CLM agree on the scope of support. Council invites schools to confirm the support they require. Council and CLM enter into an agreement for the support programme</p>

Options	Next Steps
<p><i>Leveraging resources across the pools network</i> Sport Manawatū, Council, and the Ministry of Education collectively develop a network asset upgrade and renewals programme for school facilities with community use.</p>	<p>Sport Manawatū and Council meet with the Ministry of Education to seek agreement to develop a programme of investment for school facilities with community use.</p>
<p><i>Hokowhitu Lagoon water quality</i> The water quality management programme is continued with additional focus on weed management and wildlife management. Investment in improving the quality of stormwater entering the lagoon from the surrounding residential area.</p>	<p>Council progresses and extends the water quality management programme.</p> <p>Council progresses the investigation into stormwater management options and develops a plan to improve water quality.</p>
<p><i>Network resilience - strategic school pool investment</i> Sport Manawatū and Council work with the appropriate schools (two) to seek the opportunity to develop current seasonal school pools into all year-round community accessible pools.</p>	<p>Sport Manawatū facilitates engagement with the schools and Council to determine the desire and commitment for pools to be upgraded. If the desire and commitment is secured Sport Manawatū provides guidance to the school for governance/management, and funding. Council is to consider support available for the school (project and ongoing).</p>

10.1.3 Significant investment opportunities – 2027 beyond

Options	Next Steps
<p><i>Lido 50m pool enclosure – fitness, leisure and sports training facility</i> Retaining the current Lido 50m outdoor pool but extending its use and life by enclosing and upgrading the pool and plant.</p>	<p>Feasibility assessment is completed</p>
<p><i>Lake opportunities</i> Council investigates opportunities for the future access and/or purchase of artificial lakes.</p>	<p>Council engages with owners to identify desire and opportunity. Feasibility assessment is completed for the opportunities as they are identified.</p>
<p><i>Lido 25m Indoor Pool replacement – fitness, leisure and sports training and events facility</i> Demolish the 25m pool and rebuild a 50m pool with flexibility and options for use of the pool space.</p>	<p>Feasibility assessment is completed</p>
<p><i>Canoe Polo courts facility</i> Relocate the canoe polo courts to a man-made facility (see Hawke’s Bay Canoe Polo case study as an example of man-made facility).</p>	<p>Feasibility assessment is completed</p>

Options	Next Steps
<p><i>New local level pool facility – multi-use facility</i> A new facility to be located in a growth area of the City. The facility would be designed to meet the priority demand requirements.</p>	<p>Feasibility assessment is completed</p>

10.1.4 Excluded options:

Network resilience - current indoor school pools

- Has no contribution to leisure / play / relaxation / hydrotherapy water space.
- It caters for a small segment of the community.

Lido new 50m Pool – fitness, leisure and sports training and events facility.

- Has low level of contribution to leisure / play / relaxation / hydrotherapy water space.
- This is a low sustainability solution – high capital, carbon and operational costs.
- It caters for a small segment of the community.

Appendix 1: Case studies

CASE STUDY: Hamilton City Partner Pools Programme – school pool access initiative

Have had a Partner Pools Programme for over 15 years. It is led and supported by Hamilton City Council and includes five seasonal pools (three schools and the University of Waikato). The Partner Pools open their facilities to the community and charge an admission fee. The Partner Pools are required to be PoolSafe accredited which provides a third party endorsement of safe practices. Hamilton City Council provide operational support in the form of safe practice procedure set-up, lifeguard training, pool plant and water quality management operational advice.

CASE STUDY: Wellington City Council – investment programme to upgrade school pools

A capital investment approach to school pools was implemented in Wellington City, School Pools Partnership Fund. Investment from 2011 through to 2019 has seen seven school pools enclosed or upgraded to offer increased community access in strategic areas of the city. A “Localism” approach.

CASE STUDY: Green Family Taradale Pool (Napier) - school community pool

An indoor 25m by 9m lane pool, 0.9m deep to 1.8m suitable for a range of ages. It operates all-year-round providing school water-based education through the school term and private learn-to-swim classes after school and on Saturdays. It is operated by Dolphin Academy and it serves four local primary schools, an intermediate, and high school for the Water Skills For Life and other programmes. There is a swim club based there using the pool mornings and evenings.

CASE STUDY: Hawke's Bay Canoe Polo facility, Hastings.

\$1.1m construction cost opened in February 2020.

A four court canoe polo facility that can also be used for small boat and swimming activities. It hosts regional and national event and is the base for Hawke’s Bay Canoe Polo. The facility is fully fenced for safety and security. Its water level is maintained by a bore water supply.

It is solely a sport facility.

CASE STUDY: Hawke's Bay Regional Aquatic Centre, Hastings - performance sport facility

\$32m construction cost opened in September 2022.

It is a high-performance sport facility with a 51.5m x 25m (10 lane) FINA compliant competition pool at 2.2m depth and 27°C with a 1.5m movable bulkhead for long (50m) and short (25m) course event hosting. It has a 25m x 15m (6 lane) FINA compliant warm-up pool at 1.0m - 1.35m deep and 29°C. It includes two endless hydrotherapy pools. It is adjacent to the 60 bed Avery Hostel, and EIT Institute of Sport and Health that are separate buildings with their own capital costs. The EIT Institute of

Sport and Health includes a community gym, a café, a high-performance training gym and indoor single basketball/netball training court, and a sport and health clinic.

It is operated by a private Trust. It is a national (international) event facility. It is used as a training facility for the four Hawke's Bay swimming clubs, the newly formed water polo club, TriHB, and a surf lifesaving club. The sport swimming peak times are 5.30-7.30am and 5.30-8pm with most lanes booked for sport training every week day³⁹.

The non-sport related activity is predominantly in the 25m pool due to its depth. The 25m pool is used for learn-to-swim, water safety education, casual water-based activity, aqua aerobics and other similar activities. The 50m pool is used by casual fitness swimmers and for some of the water safety programming.

It has a total of approximately 1,870m² of water space 69% is categorised as fitness / health / lane sports / deep water sports space, 20% is learn-to-swim / education water space, and 11% / play / relaxation / hydrotherapy water space.

CASE STUDY: Albany Stadium Pool, Auckland – leisure facility

\$19m construction cost opened in January 2017.

It is a leisure facility with a 380 m² varied depth (0.8m to 2.5m deep) leisure pool at 30°C, a 57 m² zero-depth splash pad with interactive play features, a spa at 38°C, and a 185 m² beach entry to 0.5m deep kids' pool with interactive play features at 31°C. A separate but adjoined 20m x 15m varied depth (0.8m to 1.5m) lap pool for 'learn-to-swim' at 31°C. It also includes a fitness centre with a separate group activity studio.

It is a council operated facility. There is no sport use of the water space. It has a total of approximately 922m² of water space 67% is categorised as play / relaxation / hydrotherapy water space, and 33% is learn-to-swim / education water space.

³⁹ Facility Manager provided a facility week schedule.

Appendix 2: Background to the needs assessment⁴⁰

Manawatū-Whanganui Regional Sport Facility Plan 2018 (RSFP 2018)

- Purpose:** Provided a high level, network wide and strategic framework for regional sport and recreation facility planning in Manawatū-Whanganui.
- Recommendation:** Undertake a scheduling analysis across the local network. If demand at peak use periods remains then undertake an options assessment for increasing aquatic capacity (e.g. accessing new pool space, potentially in partnership). This would potentially free recreational use of Council pools and structured swimming/water sports into school partnership pools.
- Strategically review the overall network to identify long term infrastructure needs (this could include development of a ‘recreational pools’ plan that examines casual use of school facilities in across the city and include entering into facility partnerships with targeted schools to ensure enhanced quality community access.
- Assess current facilities for potential future changes in use due to the aging population.

Palmerston North City Council Long-term Plan 2021/31

- Purpose:** Outlines how Palmerston North want to develop the city by setting out projects, services and their budgets over a 10-year period.
- Recommendation:** 1899-Aquatic facilities and water recreation preliminary feasibility study/needs assessment.

Review of Palmerston North Sections of the RSFP 2018 (Developed in 2022)

- Purpose:** PNCC signalled a need for up-to-date information to lead into planned facility-specific needs assessments with more certainty. PNCC has also indicated a desire for a “firmer view on what is required in the city.
- Recommendation:** Proceed with the planned review of the aquatics network in Palmerston North.

Current work: Needs Assessment

- Purpose:** A needs assessment investigates and verifies the need and demand for a given community facility. In the context of this assessment, a city-wide analysis has been undertaken on aquatic facilities provision including engagement with key stakeholders to help determine user needs, demand for and potential options and solutions to enable the aquatic network provision.
- Recommendation:** This needs assessment will form the bases of future feasibility projects that are identified needs for the community.

⁴⁰ These documents have been relied upon to help inform this project and are understood to be accurate and complete. The authors of this report have the right to update our assessment and report in line with any changes within the listed documents.

Appendix 3: Needs Assessment methodology

The assessment methodology is outlined below:

Assessment

Supply	<p>A comprehensive review and inventory of the aquatic and water-based recreation facilities network supply was completed. Not all bodies of water are suitable for the type of activities the community wish to undertake. For example, underwater hockey needs a much deeper pool than those who want to learn-to-swim. Therefore, the amount of pool space available does not appropriately reflect the provision of need for the variety of users in the network. Supply was determined through the total inventory of facilities in the network, and then calculated against what percentage of the network was accessible to the community.</p>
Demand	<p>Population and other demographic trends, organised sport trends and wider city trends including the network contribution to the City's strategic goals were determined alongside stakeholder group needs to understand what demand this network will need to cater for now and into the future.</p> <p>By applying the guidance from the Draft 2023 Strategy to the current type and pool water area in Palmerston North, the demand can be determined. This is cross referenced with the distribution and identified community groups needs collated to represent of the city's network demand.</p>
Analysis	<p>Section 6.2 provides a more comprehensive breakdown of the criteria used to assess water bodies, which includes the traditional ratio of square metres of space per number of people but differentiated by water temperatures and depths suitable for different types of activities.</p> <p>The supply and demand of aquatic provision was completed through a gap analysis of community need to determine what key changes were required, and suggested priority needs be better enable the aquatics network within the priority of need.</p>
Options and Solutions	<p>Access, equity and affordability are critical to delivering an appropriate aquatics network. A staged approach was developed as a series of recommendations to enable the aquatic network capacity and capability to meet user needs over the next 10 – 30 years. This involves a range of solutions, strategically proposed for Council to consider under three categories of solution: operational practices, upgrading/ repurposing current, and build new.</p>

PHASE 1: Discovery - information gathering

This Needs Assessment involved a mixed methods research approach, whereby a range of techniques were used to build robust and confident data sets. Both qualitative (views and words) and quantitative (statistical numbers) data sets were cross referenced through obtaining various sources of information to verify the community need.

This mixed methods research approach helped to establish facts, verify anecdotal issues raised and build a picture of the most current information on water-based recreation facilities. This information was then used to undertake the needs assessment analysis⁴¹.

General aquatic activity trends - National and regional water-recreation trends were sourced from Sport New Zealand's Insights Tool⁴². The research collated population data and information on behaviours and trends relevant to aquatic and water-based recreation facility users.

Aquatic sport trends - The other available source of aquatic sport information and trends comes from sport organisation membership data. While it represents a subset of the population it can be used to understand the penetration it has to the relation to the total population. The national aquatic sport membership information was sourced for the sports that are currently using the Palmerston North City aquatic facilities network. Investigation into possible future aquatic sports users was not conducted.

The indicators of particular consideration for the assessment are:

- Total catchment population
- Current facility supply in water-based recreation facilities network
- Current diversity of offerings/ opportunities present (for participating in water-based active recreation and sport)
- Current participation in water-based active recreation and sport
- Future participation in water-based active recreation and sport
- Proportion/ total tamariki and rangitahi in catchment population
- Proportion/ total 65+ in catchment population
- Ethnicity of catchment population

The information gathering methods were:

Secondary data review

Relevant strategic and planning documentation and previous engagement information were reviewed to ensure the project was contextualised within the wider strategic setting and to recognise its place within a larger process that Council is undertaking on water-based facilities provision (outlined above in 0).

A full list of the reviewed documents and an outline of their relevance is provided in Appendix 4: Document review list.

Stakeholder engagement

Previous work undertaken on aquatic facilities provision has been completed for Palmerston North City. Therefore, many conversations with key stakeholders had already begun. This project reviewed all previous meeting minutes and information from prior engagement to ensure only new information was obtained or expanded upon.

⁴¹ Research data must be understood in its current context and represents a snapshot in time.

⁴² The data is collated from the following sources: Statistics NZ, Active NZ survey (Sport NZ), School Sport New Zealand sports participation data, Ministry of Education, Ministry of Health, and Nielsen Research. The Sport New Zealand's Insights Tool data has a statistical margin of error based on sample sizes that needs to be considered. The margin of error is published by region and for Manawatū-Whanganui the margins for 2021 are: Adults +/- 3.4% and Young People +/- 7.5% (source: Sport New Zealand Active NZ and Active NZ Young People Technical report for data collected in 2021, June 2022).

A Communications and Engagement Plan was developed to manage the range of stakeholders engaged with and outlined the various methods used to obtain data and information. It did not involve wider public consultation. The engagement targeted those with a specific interest in aquatic or water-based recreation facilities or a particular community group was engaged to help inform and guide the project understanding.

The key engagement methods involved:

- Surveys and email responses.
- Key informant, semi-structured interviews (in person or online).
- Group workshops (in person or online).

Site visits and observation

Site visits to key aquatic facilities and natural water body areas were undertaken to gain a deeper appreciation for the facilities, and their surrounding environment. Site visits occurred during May 2023. The following facilities were visited:

- The Lido Aquatic Centre
- Memorial Park splash pad and shallow pool
- Victoria Esplanade paddling pool
- Freyberg Community Pool
- Splashhurst Community Pool
- West End School Pool
- Palmerston North Boys' High School Pool
- Hokowhitu Lagoon
- Manawatū Awa

Data analysis

Where available, usage data were obtained on facilities usage, operations, and trend data to inform the gaps and capacity analysis process. The data was cross referenced with qualitative information to inform the key project objectives.

PHASE 2: Aquatic and water-based recreation facilities network analysis

Using the data and information drawn from the Discovery Phase, a comprehensive analysis of the supply and demand (needs assessment) was completed to understand the network.

Key components of the analysis included:

- An inventory and map of existing facilities infrastructure.
- An assessment of the inventory against the Draft 2023 Strategy provision guidance.
- An analysis of public access to all pools, including the role of publicly and privately owned facilities.
- An analysis on the impact of future school pool closures on the pool network capacity.
- An analysis of the demand for future provision.
- An assessment on facilities provisional need against the established demand.
- An assessment of the options (including risks and benefits) to improving aquatics provision⁴³ including identified pool development proposals submitted.

⁴³ As outlined in the 'Aquatics' section of the city review of the Regional Sports Facility Plan 2018

PHASE 3: Report and review process

The final deliverable of the Needs Assessment is the content in this report. It has undergone various review processes.

Project limitations and exclusions

Limitations

This needs assessment has used the most comprehensive data and information available to the consultants at the time.

Raw data such as participation numbers, activity trends and booking schedules have been limited to those supplied directly by facility operators, clubs and sports code organisations. It has not been further validated.

Measures have been taken to ensure that anecdotal comments have been cross referenced against raw data, observations and through engaging with multiple sources to build an understanding of the aquatic network context.

Best practice guidance both nationally and internationally including case studies and guidance documents have been drawn upon to further validate recommended options and solutions, however, a limitation to this assessment is options and solutions have not been re-tested with stakeholders or the wider community due to time, budget and scope of this needs assessment. Options and proposed solutions will be revisited at the feasibility stage.

Public consultation was not included within the scope of this project. Therefore, the stakeholder engagement was represented by sports organisations proportionately higher than other user groups due to the nature of sport having an organisational structure system. Public users are generally individual users that do not belong to a group.

Timeframes and budget are also limiting factors to this assessment as the start was delayed and the wide range and number of stakeholders associated with the entire aquatic and water-based recreation facilities network in the city has meant that engagement with some groups was short and limited to one engagement. In addition, public consultation was not included within the scope of this assessment, however, submissions from the LTP were reviewed.

Exclusions to the facilities assessment

Domestic Pools - The percentage of consented domestic pools per household in Palmerston North City is 1.88%⁴⁴ (or 0.69% of the population) is served by a domestic pool, so would therefore suggest minimal influence on the need for publicly provided leisure / play pool facilities. Noting that non-consented pools are not included and there are growing options of “temporary” pools for residents to erect themselves for summer recreational purposes.

Domestic Hot Tubs and Spa Pools - The percentage of consented domestic hot tubs and spa pools per household in Palmerston North City is 0.34%⁴⁵ (or 0.13% of the population) is served by a

⁴⁴ There are 655 consented domestic pools in Palmerston North City and 34,800 households (Palmerston North City Council Population and household projections).

⁴⁵ There are 118 consented domestic hot tubs and spa pools in Palmerston North City and 34,800 households (Palmerston North City Council Population and household projections).

domestic hot tubs and spa pools, so would therefore suggest minimal influence on the need for publicly provided relaxation and hydrotherapy pool facilities.

Destination hot pool facilities – there are none in Palmerston North City.

Retirement Villages - These are deemed to be domestic pools at a similar per population rate and are excluded from the network assessment.

Hotel and commercial pool facilities - These are visitor focused facilities and do not provide sufficient network contribution to be included in the pools network.

Appendix 4: Document review list

Background/contributing resources

Sport New Zealand National Aquatic Facilities Strategy 2023 [DRAFT]
Manawatū-Whanganui Regional Sport Facilities Plan Summary Report 2018
Manawatū-Whanganui Regional Sport Facilities Plan Reference Report 2018
Parks and Reserves Asset Management Plan 2020
Palmerston North City Council Active Communities Plan 2021-31
2021-31 Long Term Plan aquatic related submissions
2022 Update of the Palmerston North sections of the Manawatū-Whanganui RSFS 2018
2023 Review of the Manawatū-Whanganui RSFS 2018
Community Places Research Report 2022
Palmerston North City Council Recreation Needs Assessment 2005
2023 Sport NZ National Aquatic Facilities Strategy review
Palmerston North City Council Asset Management Plan 2021-31
2022 Water Safety New Zealand Annual Drowning Report
Council Facility Reports by CLM various dates

Proposals received by Sport Manawatū/Council

Manawatū Kiwi Canoe Polo Facility Concept Outline 2022
St Peters pool deputation 2017
Lido 50m enclosure concept proposal 2021

Appendix 5: Stakeholder engagement

The Project Steering Group and the Project Team developed a list Stakeholders with an interest in Water Recreation in Palmerston North. This list was extended as further organisations were identified during the Discovery Phase.

Methods for engagement

Online interview: Utilising online methods for engagement such as Zoom or Teams provided efficiency and allowed greater adaptability for engaging with participants during times that work best for them.

In person hui: In person hui for selected participants and combined with visits to facilities.

Survey: A survey allowed for standard and targeted information to be obtained by a larger number of organisations or groups.

Engagement completed:

Organisation/group	Engagement completed
Rangitāne o Manawatū	In person hui and surveyed
Swimming Manawatū	Online interview
Manawatū Kiwi Canoe Polo Club	In person hui
Ice Breaker Aquatics (based PNBHS pool)	Online interview
Kiwi West Aquatics (West End School Pool)	In person hui
Hilton Brown (West End School Pool)	Online interview
Palmerston North Amateur Swimming Club	Emailed commentary received in lieu of online interview
Dannevirke Amateur Swimming Club	Online interview
Manawatū Triathlon Club	Online interview
Palmerston North Surf Lifesaving Club	Online interview
Manawatū Water Polo	Online interview
Manukura Waka ama	Online interview
CLM	In person hui
Palmerston North Boy's High School	In person hui
Sport Manawatū	Interview
Manawatū Marine Boating Club	Surveyed
Palmerston North Canoe Club	Online interview

Organisation/group	Engagement completed
Water Safety NZ	Surveyed
Ministry of Education (Regional Office)	Online interview
All schools	Surveyed
Manawatū District Council	Surveyed
Horowhenua District Council	Surveyed
Rangitikei District Council	Surveyed
Tararua District Council	Surveyed
Horizons regional Council	Surveyed
Massey University	Online interview
Swimming NZ	Surveyed
Waterpolo NZ	Surveyed
Diving NZ	Surveyed
Underwater Hockey NZ	Online interview
Sport NZ	Surveyed
Manawatū Multicultural Council	Surveyed
Council	
Elected Members	In person hui and surveyed
Youth Council	In person hui and surveyed
Disability Reference Group	In person hui and surveyed
Pasifika Reference Group	In person hui and surveyed
Seniors Reference Group	In person hui and surveyed
PNCC Parks Team	In person hui
Youth Space	Surveyed

Stakeholder engagement feedback themes

Use of facilities:

The pool facilities are used for a range of activities such as exercise, recreation, sport and for well-being.

Learning important swimming skills was an essential reason for using pool facilities.

Pool facilities are used to varying degrees, some people do not use pools at all, while others regular users.

Beaches, streams and rivers around the region are also used.

Values:

Safety - access to safe places to swim and enjoy recreating was an important value for both built aquatic facilities and natural water bodies.

Social engagement - aquatic facilities as places for social connection is highly valued by the community.

Diversity, equity, and inclusion / Accessibility - feeling safe to access and move about the facilities is very important.

Personal achievement – competency development, health and wellbeing improvements, competitive recognition is important.

Availability – of water space during peak times is very important for some users.

Barriers:

Physical access into the water – was a key barrier to using pool facilities for a range of users.

Cost - is a barrier to access to the facilities / services / programmes for children and/or families particularly from low socioeconomic backgrounds.

Congested times - facilities that are too busy can be a barrier to use including a lack of pool space for specific activities.

Suitability of water – for example warmer water for hydrotherapy, depth of water for some sports, all year-round space for some sports.

Needs and opportunity:

Family friendly opportunities are important when thinking about the network.

Design of facilities such as slope of floors/pool entry ramps, mobility access such as ramps, noise management and other functional uses can enable greater pool use.

Providing for our most vulnerable communities ensures everyone can safely access, use and enjoy aquatic facilities.

Provision:

- All year-round
- Warm water, and
- Deep water for sport.

Providing other associated activities such as the gym and café, as the Lido Aquatic Centre does, is an opportunity to increase use and improve the user experience.

Cultural:

Rangitāne hold a deep connection to the awa, who are traditionally 'river people' and which is part of their identity.

The awa must be respected as a taonga (a treasured symbol of tribal values/identity)

The Manawatū awa has always been dangerous and water safety is critical to continue to enjoy it.

Water competency and understanding of risk around the awa is a priority.

Water competency varies for immigrants and there are barriers to learning, particularly for youth and older adults who may not feel comfortable in Learn-to-swim programmes or in conventional pool facility spaces (for example if women and men are unable to swim at the same time in some cultures).

Rangitāne's relationship to the natural environment is strong so places to congregate for activities and experience across generations is highly valued.

Waka ama is a popular sport but is limited by water space in Palmerston North.

Recreational:

When entering any water body, a key theme for recreational users was a need to understand their water competence and assessing the risk before deciding whether to enter the water or not.

There is greater demand over summer which limits aquatic facility availability.

There is a lack of accessibility and inclusive facilities in the current available network, especially for more vulnerable groups creating a latent demand (demand that is unserved or suppressed).

The beaches and natural water bodies such as tributary streams and rivers are popular with youth

Manawatū Awa is very limited in its contribution to meeting recreational needs and many people recognise it is unsafe to swim in.

Health:

There is limited suitable pool space for hydrotherapy and mobility needs

Mobility programmes are limited due to lack of pool space

There are barriers to accessing pool space in peak times

Disability access is poor and limited to certain pools

Sensory (such as noise, light, surfaces) and physical safety from other users can be an issue and concern for children and adults with autism spectrum disorder/learning disabilities using aquatic facilities.

Sport:

Seasonal pools/natural bodies of water are too cold for much of the year.

While there is pool lane space available across the council facilities in peak times there are barriers of distance and time.

Water polo and underwater hockey lack suitable deeper water and an available facility for training or events.

Full size Canoe Polo courts are only available over summer.

There is no suitable all-year long course (50m) swim training and event facility.

There is limited access to a short course (25m) event facility to host events and limited spectator seating.

Triathlon's biggest challenge is securing safe cycling circuits near a body of water.

Swimming NZ and Dive NZ, and do not require additional international or national level event facilities. Water Polo NZ and Under Water Hockey NZ do have gaps international or national level event facility provision.

Swimming clubs are unable to deliver learn-to-swim from council facilities.

The Manawatū Awa is too volatile for regular sports training and when it is suitable it is too shallow for some (eg Waka Ama).

There is demand for more still, flat water for aquatic vessel sports.

Appendix 6: Palmerston North demographic trend detail

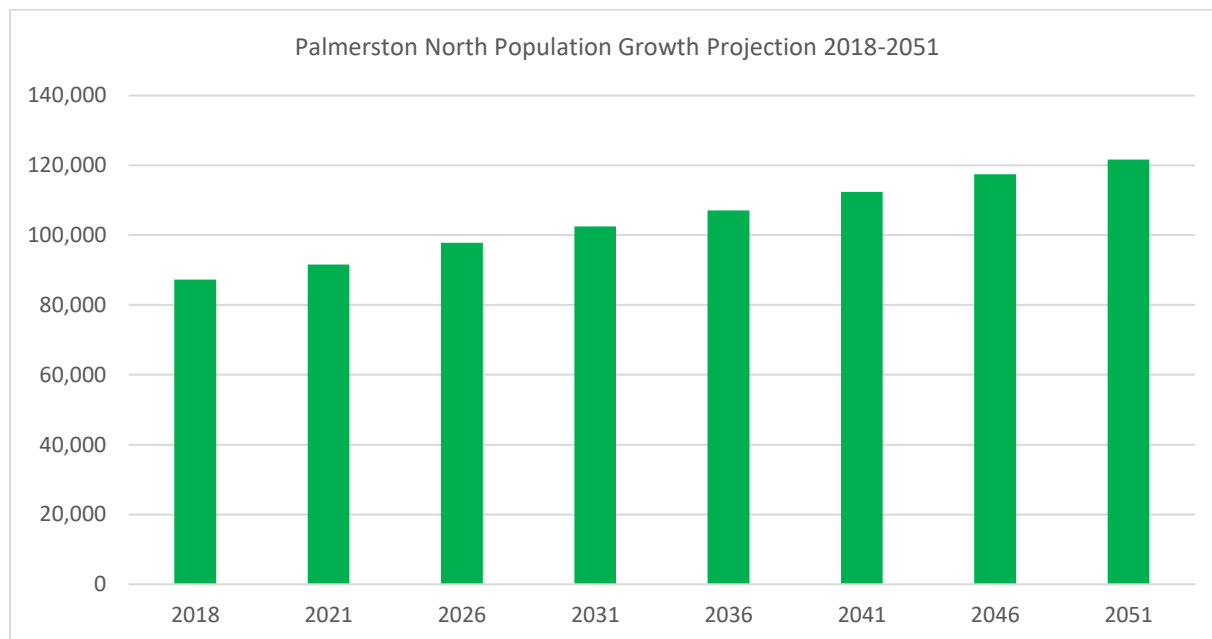


Figure 17 - Projected Palmerston North City population change⁴⁶

Age Group Population Projections

The younger age groups are expected to experience moderate growth of between 1 and 11% (45 people to just over 780 people) in the 30 years to 2053. At the same time the 40–64-year age group is projected to increase by over 6,500 people or 25%, while the group aged 65 and over is projected to see a significant increase of 80% or over 11,000 people.

Table 14 - Palmerston North City Age Group Projections⁴⁷

	2023	2028	2033	2038	2043	2048	2053	Change 2023-2053	% Change 2023-2053
0-4 years	5816	5951	6088	6069	6124	6214	6238	423	7%
5-9 years	6131	5883	6094	6222	6203	6244	6313	181	3%
10-14 years	6233	6175	5920	6126	6256	6237	6278	45	1%
15-19 years	6878	7673	7608	7347	7553	7681	7661	783	11%
20-39 years	28100	28170	28499	28742	30167	30773	30690	2590	9%
40-64 years	26639	27282	29524	30941	31354	32324	33347	6708	25%
65 plus	14603	17310	19388	21753	23264	24653	26262	11659	80%

⁴⁶ Source Infometrics medium (2020) plus adjustment for NPS – PNCC

⁴⁷ Palmerston North City Population and Household Projections May 2023

Age Group Distribution

In 2023 there was a reasonably even distribution of population in the 0-19 year, 20-39 year and 40-64 year age groups but less people in the 65 plus age group. By 2053 it is expected that the population of Palmerston North will be more evenly distributed across all age groups.

Table 15 - Age Group Distribution⁴⁸

	2023	2053
0-19 years	27%	23%
20-39 years	30%	26%
40-64 years	28%	29%
65 plus	15%	22%

Palmerston North City Ethnic Profile

While the population of Palmerston North City was predominantly European or Other in 2023 it is expected to become more ethnically diverse in the 30 years to 2053. The populations of those identifying as Asian, Pacific People and Māori are expected to increase by 96%, 68% and 64% respectively. It is expected the population of those identifying as Asian will increase by nearly 13,500 people and that of those identifying as Māori by nearly 12,500 people while the population of Pacific People is expected to increase by just over 4,000 people. At the same time the population of those identifying as European or other is expected to increase by 12% or 8,600 people.

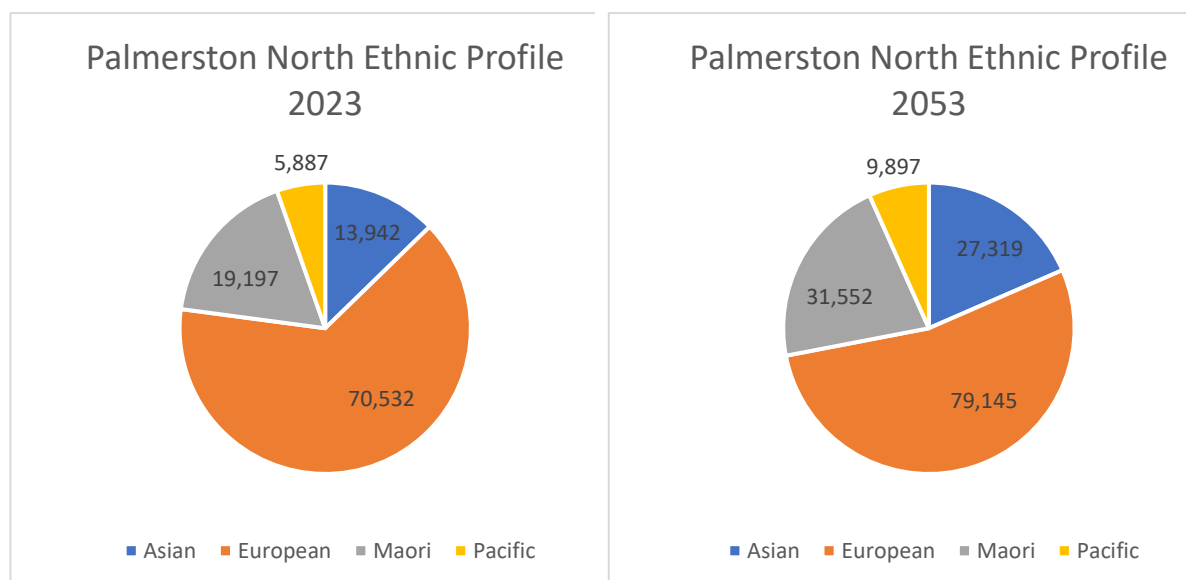


Figure 18 - Palmerston North Ethnic Profile 2023 and 2053⁴⁹

⁴⁸ Palmerston North City Population and Household Projections May 2023

⁴⁹ Palmerston North City Population and Household Projections May 2023. Note people can identify by more than one ethnicity.

Appendix 7: Water-based recreation and sport participation data

General water-based recreation activity trends - national

The Sport New Zealand's Insights Tool data for participation trend from 2011 to 2020 indicates a general decline for most water-based recreation and sport activities, with only surf life-saving increasing its participation.

The population over this period has grown by 16% meaning the net impact of the general water-based recreation activity decline trend is minimal on the growing need for provision for water-based recreation activity.

Table 16 - Sport New Zealand's Insights Tool national water-based recreation activity trends³⁸.

Activity ⁵⁰	National Participation %	Nation's change in participation 2011-2020 ⁵¹ %
Swimming ⁵²	13.5	-2
Canoeing/Kayaking	1.1	-
Surf life saving	0.3	0.2
Waka Ama	0.3	-
Water Polo	0.3	-
Multisport / Triathlon / Duathlon	0.2	-0.5
Aquarobics	0.1	-

Nationally swimming participation has declined.

Note: The data is reported as generalised categories, for example, canoe polo is included in Canoeing/Kayaking.

Water-based sport trends - national

National water-based sports organisations membership trend information from 2018 to 2022 varies by sport. Swimming surf life saving and triathlon have had growth, where waka ama and water polo have had declines.

Table 17 - National sports organisations five-year trends.

Sport Organisation ⁵³	Membership 2018	Membership 2022	Trend increase/decrease	Percent of 2022 Population (5,127,400 ⁵⁴)
Swimming New Zealand ⁵⁵	18,730	16,322	-12.6%	0.4%

⁵⁰ There was no trend data available for canoeing/kayaking, aquarobics, waka ama, or water polo.

⁵¹ Based on the Sport New Zealand's Insights Tool responses for "Participated in last year".

⁵² The respondents interpretation of what the term "swimming" refers to is likely to be broad and could range from competitive sport swimming through to playing in a domestic pool.

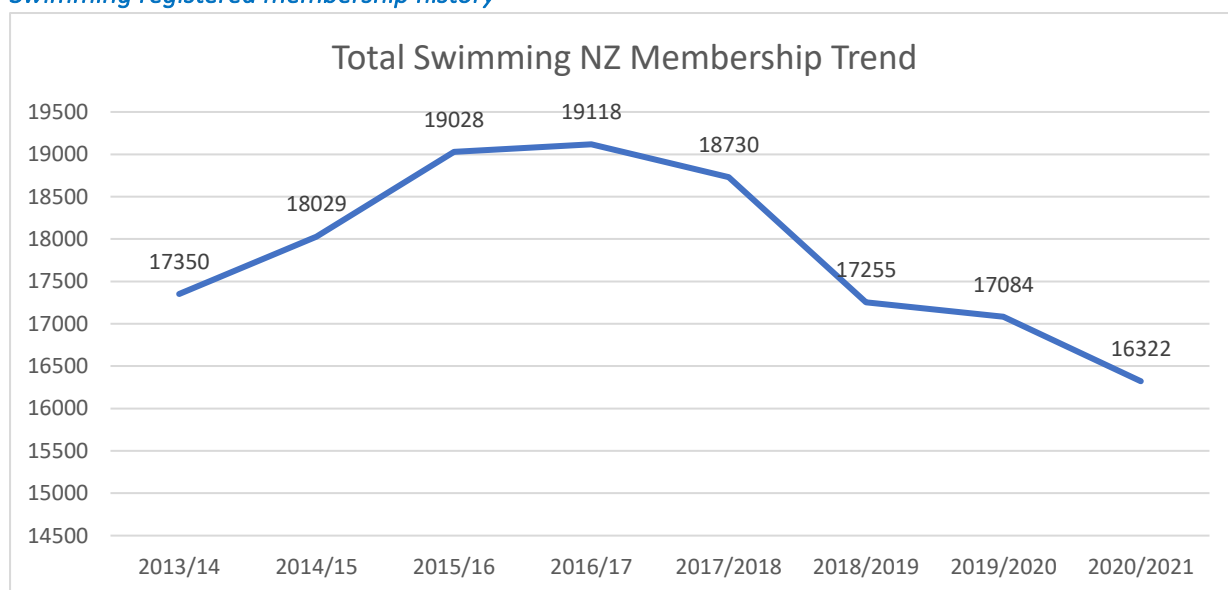
⁵³ Canoe Polo New Zealand nor Canoe Racing New Zealand national data was available at the time of writing.

⁵⁴ Sourced from www.stats.govt.nz

⁵⁵ Swimming New Zealand membership numbers include swimmers, club learn to swim participants, swim volunteers, administrators, coaches and officials.

Sport Organisation ⁵³	Membership 2018	Membership 2022	Trend increase/decrease	Percent of 2022 Population (5,127,400 ⁵⁴)
Surf Life Saving New Zealand	18,642	18,691	+0.3%	0.4%
Triathlon New Zealand (TriNZ)	2,068	2,000+ ⁵⁶	Undefined	
Waka Ama New Zealand	5,202	3,403	-34.6%	0.1%
Water polo New Zealand	3,871	2,647	-31.6%	0.1%

Swimming registered membership history



Source: Swimming New Zealand Annual reports.

Water Polo registered membership 2022

	Open Men	Open Women	Under 19 Boys	Under 19 Girls	Under 12 Boys	Under 12 Girls	TOTAL
New Zealand	226	142	907	706	389	277	2647

Canoe Polo

No National data readily available.

Surf life saving

4,369 registered members in 2022, from 5,246 in 2018. A 16.7% decline

Source: Surf Life Saving New Zealand Annual reports.

⁵⁶ The TriNZ 2022 annual report does not give a defined total membership but states “2,000+ Paid Tribe members. Annual TRIBE membership numbers have continued to grow year-on-year.”

Multisport / Triathlon / Duathlon

2,000+ registered members in 2022, from 2,068 in 2018. No trend information available. The 2022 report only states “2,000+ Paid Tribe members. Annual TRIBE membership numbers have continued to grow year-on-year.”

Source: Surf Life Saving New Zealand Annual reports.

Waka Ama

3,403 registered members in 2022, from 5,202 in 2018

Source: Waka Ama New Zealand Annual reports.

General water-based recreation activity trends – region

The Sport New Zealand’s Insights Tool data for Manawatū-Whanganui participation trend from 2011 to 2020 indicates a decline for most water-based recreation and sport activities (at a rate higher than the national levels).

The net influence against population growth is minimal on the growing need for provision for water-based recreation activity.

The 2020 sport and recreation trend data is aggregated at the Manawatū-Whanganui regional level and the category is combined swimming/diving so is less focused for Palmerston North analysis. There is also limited data for trends in several the smaller sports.

Table 18 - Sport New Zealand’s Insights Tool Manawatū-Whanganui water-based recreation activity trends⁵⁸.

Activity ⁵⁷	Region’s change in participation 2011-2020 ⁵⁸ %	Nation’s change in participation 2011-2020%
Swimming ⁵⁹	-3	-2
Surf life saving	1	0.2
Multisport / Triathlon / Duathlon	-2	-0.5

As presented in Table 18, Manawatū-Whanganui region is declining at a rate higher than the national decline for participation in swimming, and multisport / triathlon / duathlon. Surf life-saving has increased ahead of the national trend.

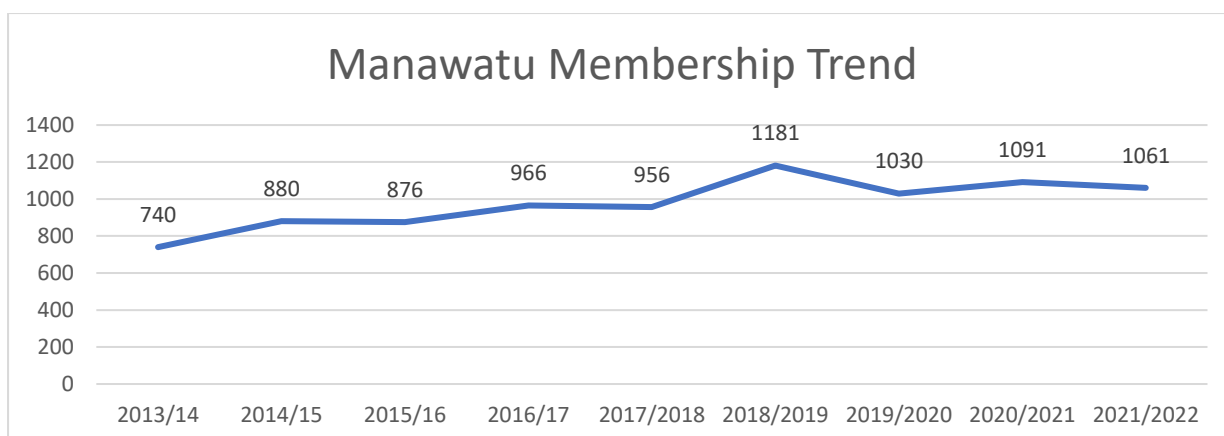
Water-based sport trends – region

The trend data for all water-based sports across the region was limited however data was available for all swimming shows consistent growth for a total of 11% from 2018 to 2022.

⁵⁷ There was no trend data available for Canoeing/Kayaking, Aquarobics, Waka Ama, or Water Polo.

⁵⁸ Based on the Sport New Zealand’s Insights Tool responses for “Participated in last year”.

⁵⁹ The respondents interpretation of what the term “swimming” refers to is likely to be broad and could range from competitive sport swimming through to playing in a domestic pool.



Source: Swimming Manawatū Annual reports.

General water-based recreation activity trends - city

Table 19 - Sport New Zealand's Insights Tool Palmerston North City water-based recreation activity trends³⁸.

Activity	City's Rank in sport and recreation participation	City's Participation %
<i>For context: Walking for sport or leisure</i>	1	48.4
<i>For context: Inactive</i>	2	30.3
Swimming	8	11.4
Canoeing/Kayaking	40	0.9
Surf life saving	43	0.8
Aquarobics	58	0.3
Multisport / Triathlon / Duathlon	62	0.2
Waka Ama and Water Polo	69	0

It can be seen that there are inconsistencies with the primary research information. For example, the data suggests that there is no water polo or waka ama participation in the City where it is clear there is.

Water-based sport trends – City

The sport membership data sourced from the various sports organisations provides the sport membership trends.

Swimming clubs:

Palmerston North Clubs	Competitive	Club	Recreational	Learn-to-swim	Swimmers	Vol/Admin/Friend	Coach	Officials	Total
									2022
Dannevirke	33	28	7	48		19	5	13	153
Ice Breaker	49	40	0	0		19	4	19	131
Kiwi West	32	17	52	0		9	4	39	153
Palm Nth	18	20	31	9		11	4	11	104
TOTAL	132	105	90	57	384	58	17	82	541

Palmerston North Clubs	Competitive	Club	Recreational	Learn-to-swim	Swimmers	Vol/Admin/Friend	Coach	Officials	Total
									2018
Dannevirke	46	44	0	17		3	2	17	129
Ice Breaker	24	87	0	6		3	2	12	134
Kiwi West	59	19	1	5		3	12	34	133
Palm Nth	40	42	35	10		1	8	8	144
TOTAL	169	192	36	38	435	10	24	71	540

Source: Swimming Manawatū Annual reports.

Water Polo registered membership 2022

	Open Men	Open Women	Under 19 Boys	Under 19 Girls	Under 12 Boys	Under 12 Girls	TOTAL
Manawatū	13	5	30	25	10	4	101

Manawatū water polo had 101 registered members in 2022, from 108 in 2018. A 6.5% decline.

Source: Waterpolo New Zealand Annual reports.

Canoe Polo

Kiwi Canoe Polo Club had 291 registered members in 2022, from 314 in 2018. A 7.3% decline.

Source: Kiwi Canoe Polo Club provided information.

Surf life saving

Palmerston North Surf Life Saving Club had 12 registered members in 2022, from 25 in 2018. A 52% decline.

Source: Palmerston North Surf Lifesaving Club provided information.

Multisport / Triathlon / Duathlon

Manawatū Tri Club had 166 registered members in 2022, from 199 in 2018. A 52% decline.

Source: Manawatū Tri Club provided information.

Waka Ama

No city level data was available.

Appendix 8: Palmerston North City water-based facility network inventory

Facility	Status	Facility type	Street number name	suburb	town_or_city
Freyberg Community Pool	Existing Pool	Community Pool	33 Thames Street	Roslyn	Palmerston North
Memorial Park splash pad and shallow pool	Existing Pool	Splash depth	Main Street	Terrace End	Palmerston North
Victoria Esplanade paddling pool	Existing Pool	Splash depth	1 Palm Drive	West End	Palmerston North
Lido Aquatic Centre	Existing Pool	PNCC Pool	62 Park Road	West End	Palmerston North
Linton Army Camp	Existing Pool	Private Pool	Puttick Road	Linton Camp	Palmerston North
Palmerston North Boys' High School Pool	Existing Pool	School Pool	Wellesbourne Street	Palmerston North Central	Palmerston North
West End School (P North)	Existing Pool	School Pool	196 College Street	West End	Palmerston North
Splashhurst Community Pool	Existing Pool	Community Pool	97 Stanford Street North	Ashurst	Palmerston North
Te Whatu Ora - Health New Zealand MidCentral District hydrotherapy pool	Existing Pool	Private Pool	50 Ruahine Street	Roslyn	Palmerston North
Aokautere School	Existing Pool	School Pool	169 Fitzherbert East Road	Aokautere	Palmerston North
Awapuni School (P.North)	Existing Pool	School Pool	18 Rochester Street	Awapuni	Palmerston North
Bunnythorpe School	Existing Pool	School Pool	5 Baring Street		Bunnythorpe
Central Normal School	Existing Pool	School Pool	201 Featherston Street		Palmerston North
Cloverlea School	Existing Pool	School Pool	55 Herbert Avenue	Cloverlea	Palmerston North
College Street Normal School	Existing Pool	School Pool	402 College Street	Hokowhitu	Palmerston North
Hokowhitu School	Existing Pool	School Pool	227 Albert Street	Hokowhitu	Palmerston North
Longburn School	Existing Pool	School Pool	Carey Street	Longburn	Palmerston North
Our Lady of Lourdes School	Existing Pool	School Pool	96 Shamrock Street	Takaro	Palmerston North
Palmerston North Girls' High School	Existing Pool	School Pool	238 Fitzherbert Avenue	West End	Palmerston North
Palmerston North Intermediate	Existing Pool	School Pool	56 Linton Street	West End	Palmerston North
Queen Elizabeth College	Existing Pool	School Pool	352 Rangitikei Street	Central	Palmerston North
Riverdale School	Existing Pool	School Pool	95 Slacks Road	Awapuni	Palmerston North
Russell Street School	Existing Pool	School Pool	25 Russell Street		Palmerston North
St James School (P North)	Existing Pool	School Pool	304 Albert Street	Hokowhitu	Palmerston North
St Mary's School (P North)	Existing Pool	School Pool	69A Ruahine Street	Roslyn	Palmerston North

Facility	Status	Facility type	Street number name	suburb	town_or_city
Te Kura o Wairau	Existing Pool	School Pool	45 Somerset Crescent	Highbury	Palmerston North
Terrace End School	Existing Pool	School Pool	201 Ruahine Street	Roslyn	Palmerston North
Turitea School	Existing Pool	School Pool	208 Old West Road		Turitea
Whakarongo School	Existing Pool	School Pool	17 Stoney Creek Road	Whakarongo	Palmerston North
Winchester School (P North)	Existing Pool	School Pool	552 Ruahine Street	Hokowhitu	Palmerston North
Makino Aquatic Centre	Existing Pool	MDC Pool	Council Place	Feilding	Feilding
Makino Aquatic Centre	Existing Pool	MDC Pool	Council Place	Feilding	Feilding
Marton Swim Centre	Existing Pool	RDC Pool	23 - 29 Hereford St	Marton	Marton
WaiSplash	Existing Pool	Community Pool	35 York Street	Dannevirke	Dannevirke
Hokowhitu Lagoon	Existing natural body	Lake/lagoon/river	24 Centennial Drive	Hokowhitu	Palmerston North
Manawatū Awa - Ahimate Reserve	Existing natural body	Lake/lagoon/river			Palmerston North
Manawatū Awa - Dittmer Drive access steps	Existing natural body	Lake/lagoon/river			Palmerston North
Manawatū Awa - Fitzherbert Bridge access steps	Existing natural body	Lake/lagoon/river			Palmerston North
Manawatū Awa - Ashhurst Domain	Existing natural body	Lake/lagoon/river			Palmerston North
Manawatū Awa - Albert St	Existing natural body	Lake/lagoon/river			Palmerston North
Manawatū Awa - Te Motu O Poutoa	Opportunity natural body	Lake/lagoon/river			Palmerston North
Walkers/Shirriffs Road Lake	Opportunity natural body	Lake/lagoon/river	Walkers Road	Longburn	Palmerston North
Freyberg High School Pit – adjacent to Skoglund Park	Opportunity natural body	Lake/lagoon/river	Thames Street	Roslyn	Palmerston North
Other Quarry ponds/lakes	Opportunity natural body	Lake/lagoon/river			Palmerston North
Mangahao White Water Park	Existing natural body	Lake/lagoon/river	356 Mangahao Road	Mangaore	Shannon
OFF THE LOOP Wake Park	Existing natural body	Lake/lagoon/river	10 Stewart Street		Foxton

Appendix 9: Community available pool area

Table 20 - City wide pool provision by pool purpose presenting the applied FTE factor.

Estimated FTE area (m2)	Purpose	Facilities within the city network	Total Area	FTE Factor	FTE Area	FTE Rationale
23	Relaxation	Lido Aquatic Centre spas - indoor.	23	100%	23	Full availability during opening hours.
27	Hydrotherapy	Lido Aquatic Centre learn-to-swim pool - indoor.	90	30%	27	Based on availability during the hydrotherapy peak hours
		Te Whatu Ora - Health New Zealand MidCentral District hydrotherapy pool - indoor.	30	0%	0	Restricted to patient use.
842	Learn / education	Lido Aquatic Centre learn to swim pool - indoor.	90	100%	90	Full availability peak learn-to-swim hours.
		Lido Aquatic Centre 25m lane pool - indoor.	313	10%	31	Based on scheduled time.
		Freyberg Community Pool lane pool - indoor.	313	15%	47	Full availability peak learn-to-swim hours.
		Freyberg Community Pool learn to swim pool - indoor.	120	100%	120	Based on scheduled time.
		Splashhurst Community Pool lane pool - indoor.	250	10%	25	Full availability peak learn-to-swim hours.
		Splashhurst Community Pool learn to swim pool - indoor.	50	100%	50	Based on scheduled time.
		West End School Pool learn to swim pool - indoor.	72	80%	58	Based on scheduled time.
		West End School 25m Pool - indoor.	300	15%	45	Based on scheduled time.
		Linton Military Camp Pool learn to swim pool - indoor.	72	0%	0	Restricted to military use.
805	Leisure/ play	Lido Aquatic Centre leisure pool - indoor.	400	90%	360	Based on classes also held in the pool.
		Lido Aquatic Centre leisure pool - outdoor.	320	42%	134	Open for five months
		Memorial Park splash pad - outdoor.	240	42%	101	Open for five months
		Memorial Park splash shallow pool - outdoor.	300	42%	126	Open for five months
		Victoria Esplanade paddling pool - outdoor.	200	42%	84	Open for five months

Estimated FTE area (m2)	Purpose	Facilities within the city network	Total Area	FTE Factor	FTE Area	FTE Rationale
709	Fitness/ health	Lido Aquatic Centre 25m lane pool - indoor.	313	40%	125	Based on two lanes available at all times
		Lido Aquatic Centre 50m lane pool - outdoor.	825	42%	347	Open for five months
		Freyberg Community Pool lane pool - indoor.	313	40%	125	Based on two lanes available at all times
		Splashhurst Community Pool lane pool - indoor.	250	45%	113	Based on one lane available at time outside school scheduled times over 6 days
		West End School 25m Pool - indoor.	300	0%	0	Based on no casual swim time availability
		Linton Military Camp Pool - indoor.	500	0%	0	Restricted to military use.
857	Sport lanes / court	Lido Aquatic Centre 25m lane pool - indoor.	313	45%	141	Based on scheduled time.
		Lido Aquatic Centre 50m lane pool - outdoor.	825	7%	58	Based on scheduled time.
		Freyberg Community Pool lane pool - indoor.	313	45%	141	Based on scheduled time.
		Splashhurst Community Pool lane pool - indoor.	250	45%	113	Based on scheduled time.
		West End School 25m Pool - indoor.	300	85%	255	Based on scheduled time.
		Palmerston North Boys High School - indoor.	300	50%	150	Based on scheduled time.
45	Sport Depth 1 (2m-2.2m)	In part - Palmerston North Boys High School - indoor.	300	15%	45	Based on scheduled time and 30% of the pool suitable
		In part - Linton Military Camp Pool - indoor.	500	0%	0	Restricted to military use.
71	Sport Depth 2 (>2.2m) Deep water activities)	Lido dive pool - outdoor.	168	42%	71	Open for five months
39	Schools	All other school pools - outdoor with community access.	385	10%	39	FTE multiplier from the Strategy - no individual school information available
		All other school pools - outdoor without community access.	1916	0%	0	No community access

Appendix 10: Community available pool scheduling information

To understand the utilisation of the pools the three Council facilities and the two indoor school facilities that are available for community use provided the scheduled times for the different types of activity.

The schedules presented in the following figures cover a normal winter week (the time of year the indoor pools are under the most demand), and a normal summer week. The facilities shared the scheduling for a summer and winter holiday week, but this information is not presented here as it does not demonstrate any pressure demand times.

The coloured blocks represent different activity purposes:

Orange = lanes available for casual public swimming

Blue = lanes booked for swim club/squad training

Yellow = lanes or space booked for programmed learn-to-swim or water safety education

Green = lanes or space booked for other regular water-based recreation activity

Note: one off and irregular bookings are not presented here however for the Lido Aquatic Centre particularly, and less so for the Freyberg Community Pool, there is significant booked time for one off or short programmes.

Normal Winter week lane pools (term time)

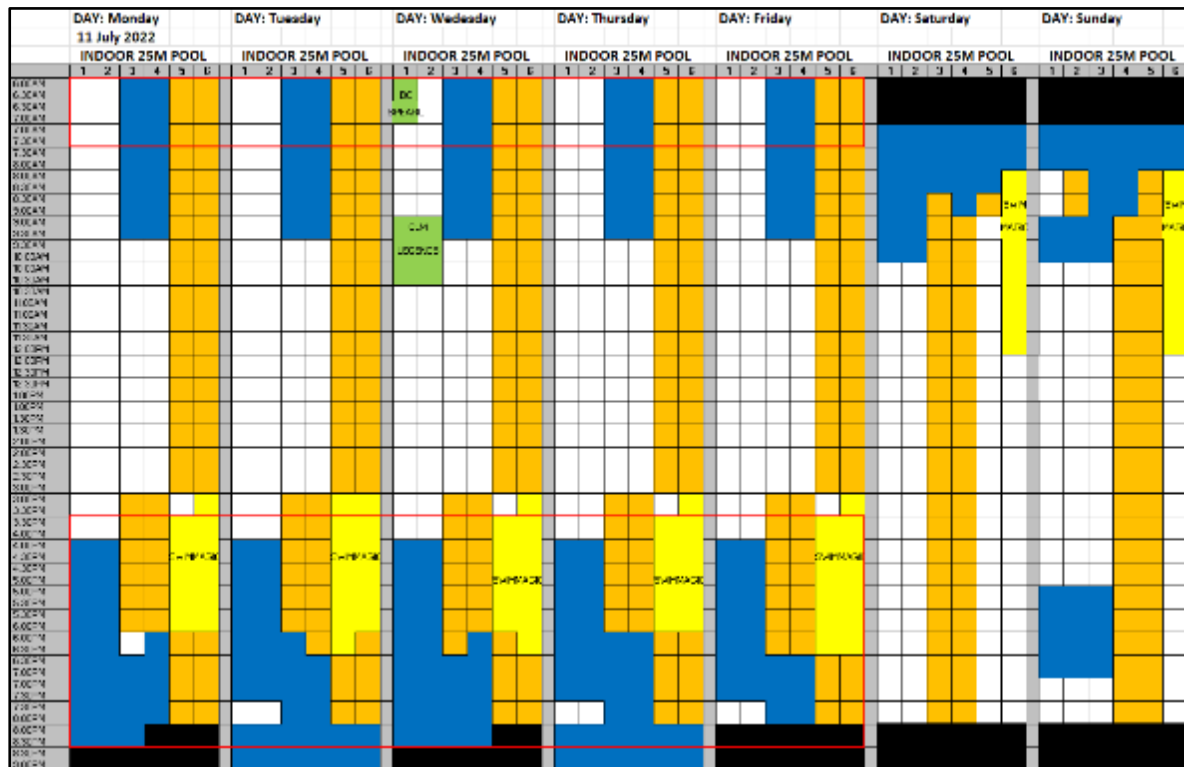


Figure 19 Lido Aquatic Centre 25m pool

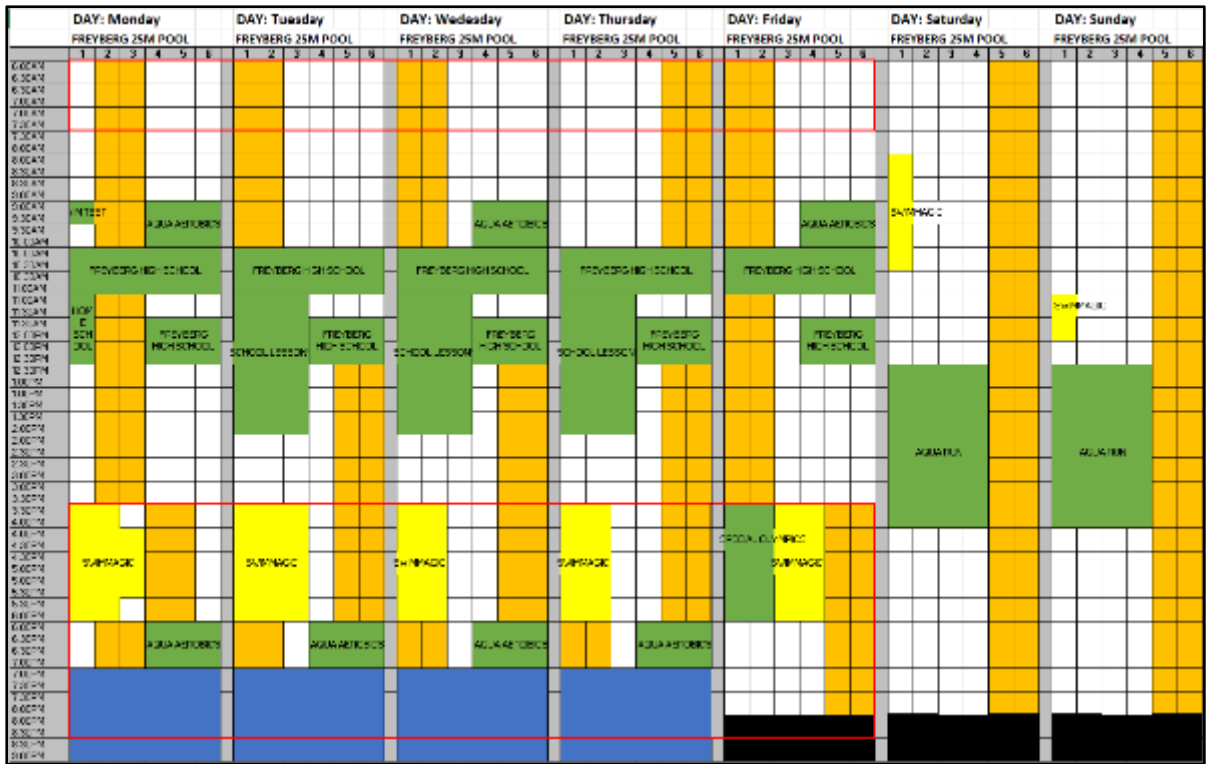


Figure 20 - Freyberg Community Pool 25m pool

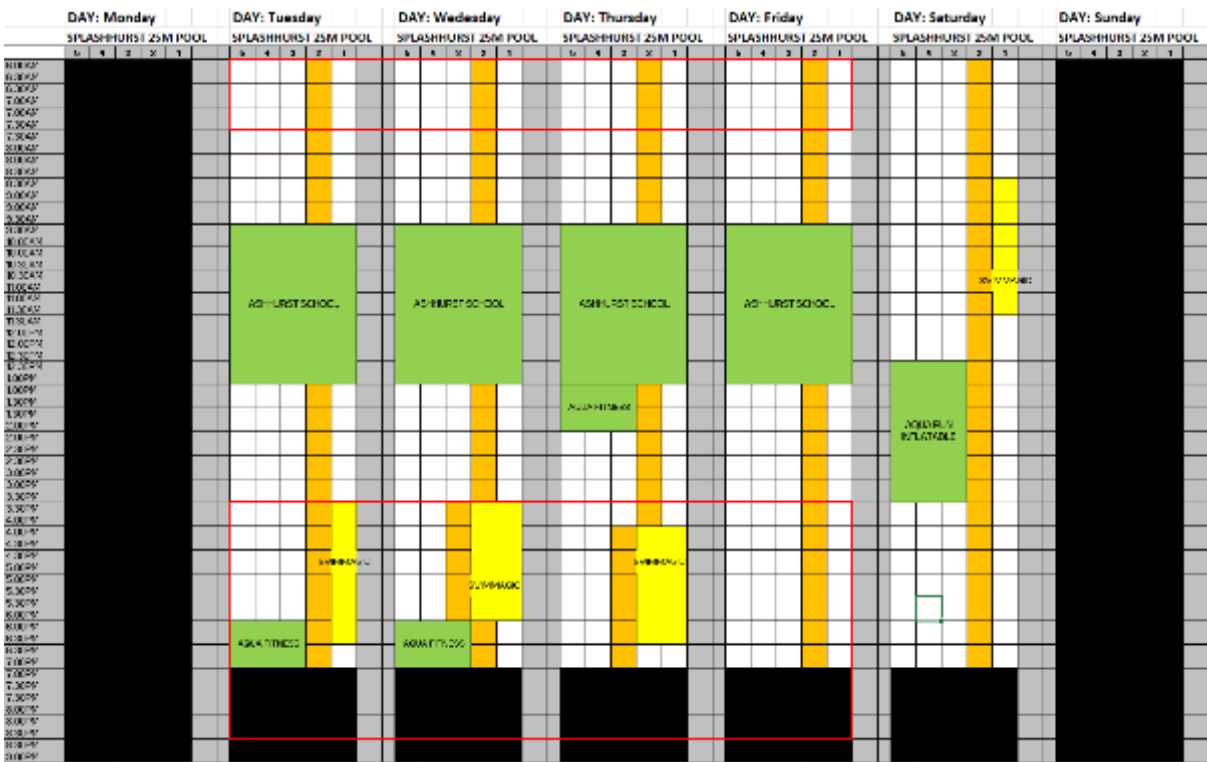


Figure 21 - Splashhurst Community Pool 25m pool

Time	DAY: Monday					DAY: Tuesday					DAY: Wednesday					DAY: Thursday					DAY: Friday					DAY: Saturday					DAY: Sunday				
	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL									
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Figure 22 - West End School 25m pool

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Figure 23 - Palmerston North Boys High School 25m pool

Normal Winter week learn-to-swim pools (term time)



Figure 24 - Lido learn-to-swim pool

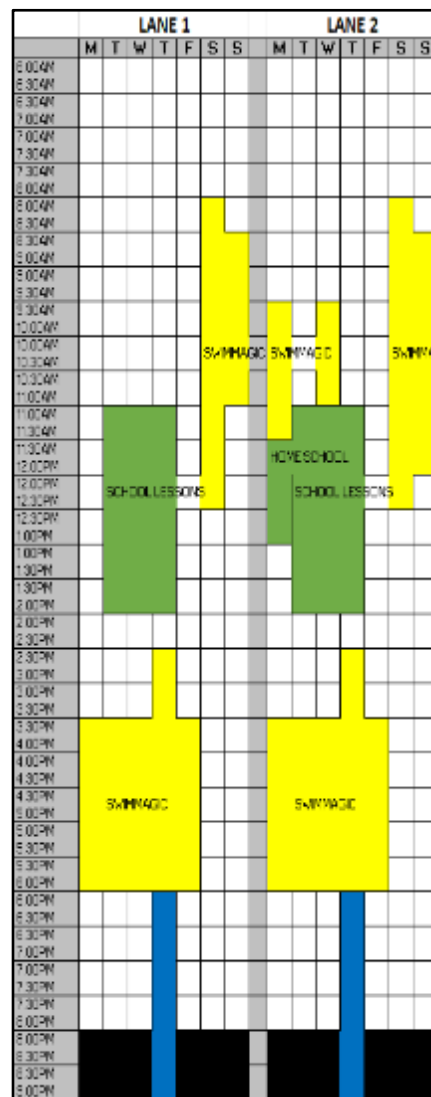


Figure 25 - Freyberg learn-to-swim pool

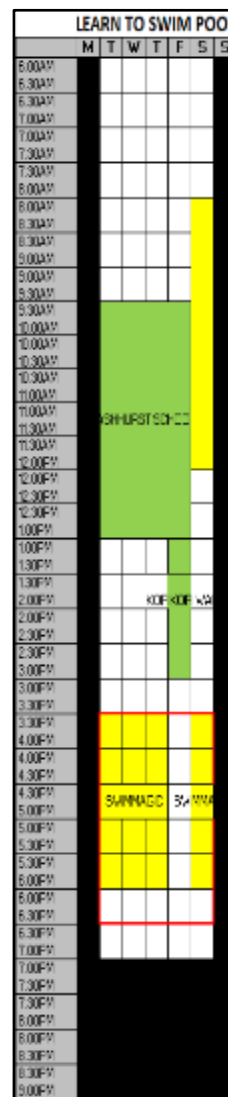


Figure 26 - Splashhurst learn-to-swim pool

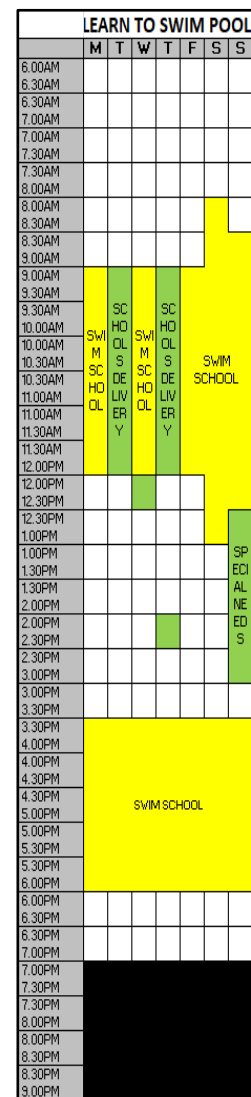


Figure 27 - West End learn-to-swim pool

Normal Summer week lane pools (term time)

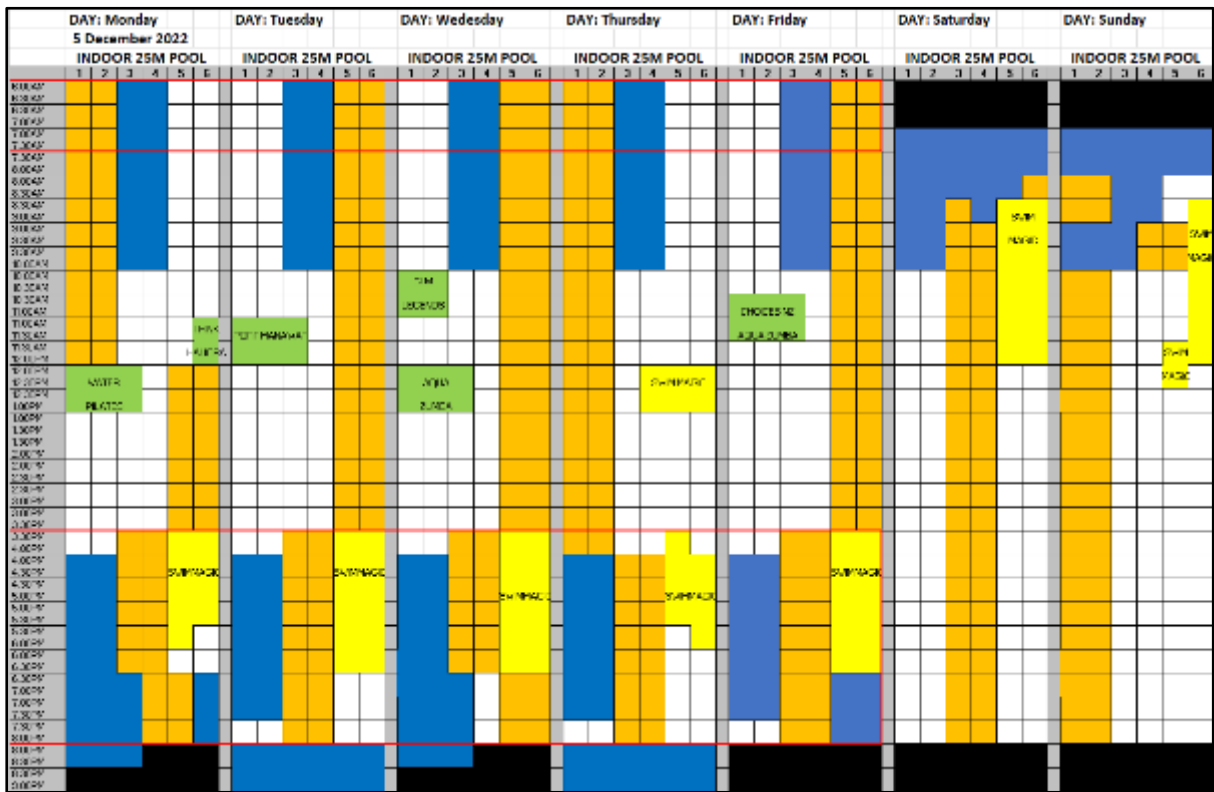


Figure 28 - Lido Aquatic Centre 25m pool

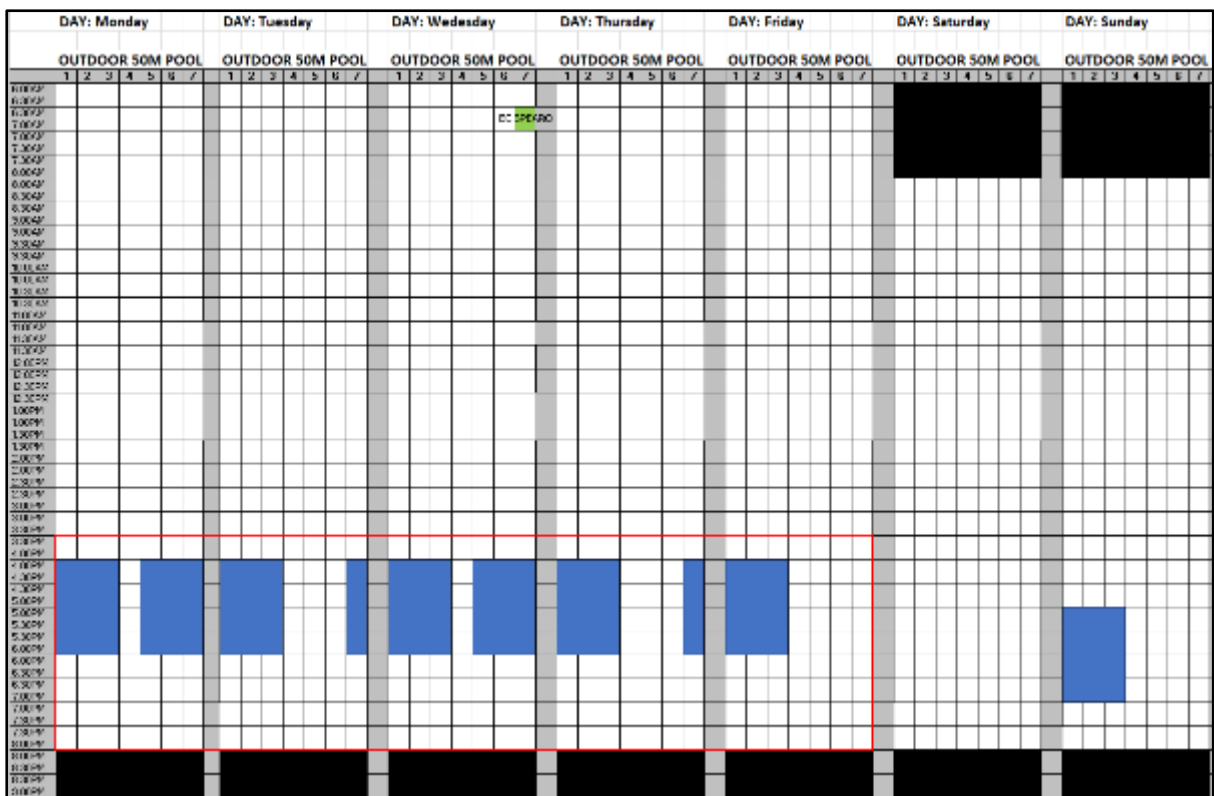


Figure 29 - Lido Aquatic Centre 50m pool

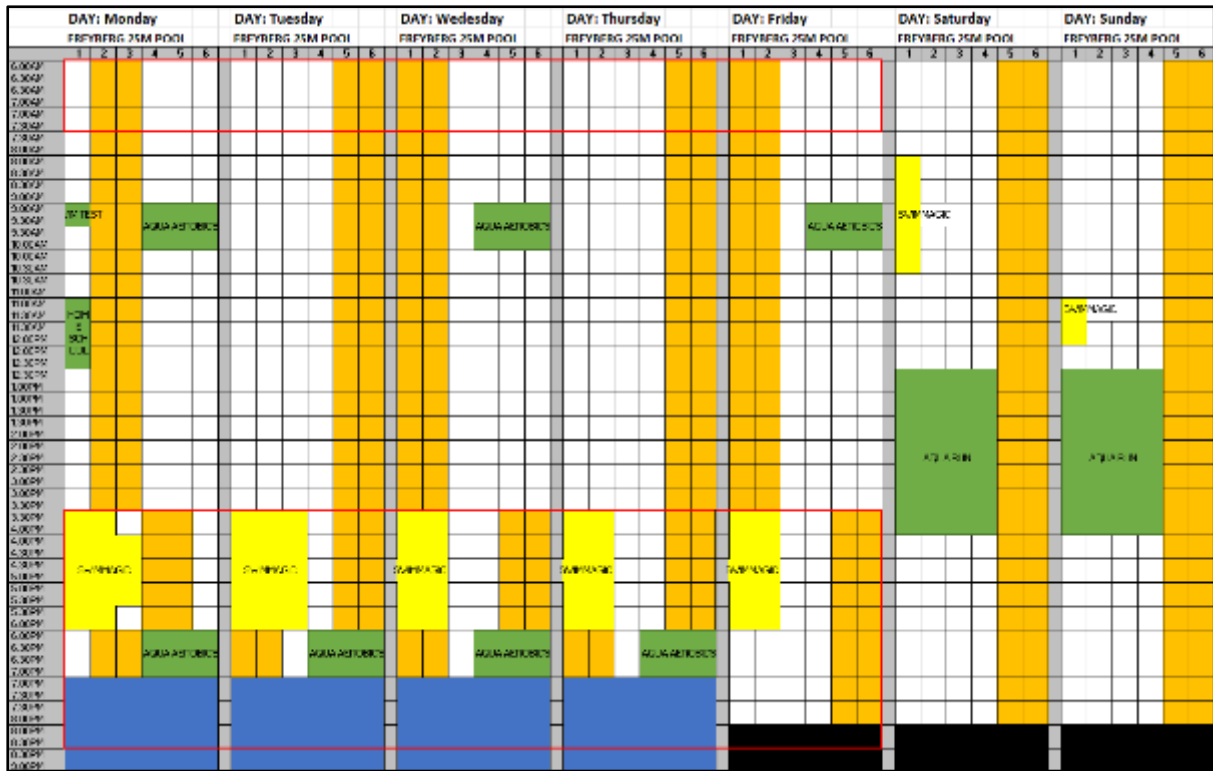


Figure 30 - Freyberg Community Pool 25m pool

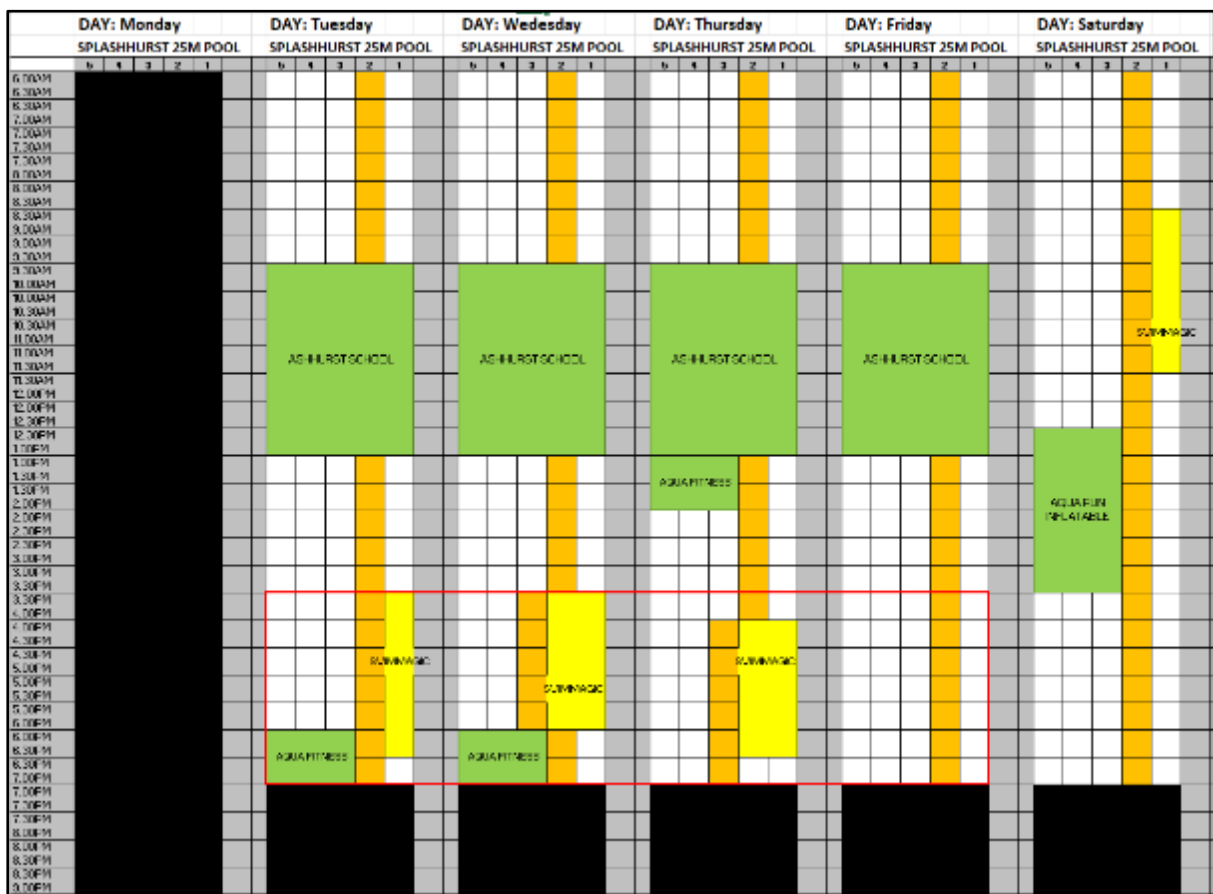


Figure 31 - Splashhurst Community Pool 25m pool

	DAY: Monday					DAY: Tuesday					DAY: Wednesday					DAY: Thursday					DAY: Friday					DAY: Saturday					DAY: Sunday				
	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL	WEST END POOL	25M POOL							
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Figure 32 - West End School 25m pool

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Figure 33 - Palmerston North Boys High School 25m pool

Appendix 11: Age of the city pool network

Table 21 – Network pools ages.

Pool Facility	Year built
Lido Aquatic Centre 25m Pool ⁶⁰	1985
Lido Aquatic Centre 50m Pool	1966
Lido Aquatic Centre Dive Pool	1966
Lido Aquatic Centre Teaching Pool	2002
Lido Aquatic Centre Indoor Leisure Pool	2002
Lido Aquatic Centre Spa Pool	2002
Memorial Park splash pad	To be determined
Memorial Park shallow pool	To be determined
Victoria Esplanade paddling pool ⁶¹	To be determined
Freyberg Community Pool	1998
Splashhurst Community Pool	To be determined
Aokautere School	1984
Awapuni School (P North)	1970
Bunnythorpe School	1964
Central Normal School	1928
Cloverlea School	1976
College Street Normal School	1969
Hokowhitu School	1923
Longburn School	1957
Our Lady of Lourdes School	1980
Palmerston North Boys' High School	1972
Palmerston North Girls' High School	1954
Palmerston North Intermediate	1972
Queen Elizabeth College	1963
Riverdale School	1930
Russell Street School	1955
St James School (P North)	1966
St Mary's School (P North)	1957
Te Kura o Wairau	1960
Terrace End School	1972
Turitea School	1976
West End School	1972
Whakarongo School	1974
Winchester School (P North)	2003

⁶⁰ The exterior wall on Park Rd side of the building has been assessed as 20% earthquake prone.

⁶¹ Has been assessed as 20% earthquake prone.

Appendix 12: The Draft 2023 Strategy hierarchy descriptions

The Draft 2023 Strategy provides guidance on the categorisation levels of water-based recreation facilities.

<p>Local / Sub-district</p>	<p>A Local pool which often facilitates people’s introduction to water play and recreation, aquatic skills, play, recreation, and family swimming, it primarily serves a small town or suburb only, it is normally a single pool or double pool (lane pool & shallow pool) facility. For example, secondary school pool run by community out of school hours, some school pools, or a private learn-to-swim focused pool.</p> <p>A Sub-district facility which facilitates people’s development of aquatic skills play, recreation, and family swimming, it primarily serves a larger town or a ward/ zone/ cluster of suburbs in a city, it could be a single pool facility, or it may have multiple pools. For example, a community pool, a high school pool, a smaller Council pool.</p>
<p>District/City/Sub Regional</p>	<p>The main district/ city facility with the ability to draw significant numbers of users/whanau/ participants/teams/competitors from a whole district or across adjacent territorial authority boundaries for a variety of purposes including play, family outings, therapy, exercise, competition or training purposes, it will have two or more pools varying depths and temperatures. For example, the main council facility in a provincial city</p>
<p>Regional</p>	<p>A facility with the ability to draw significant numbers of users/whanau, participants/teams/competitors from a whole region or across adjacent regional boundaries for variety of purposes including play, family outings, therapy, exercise, competition or training purposes, it will have two or more pools of varying depths and temperatures. Has a pool with the ability to host inter-regional and intra-regional competitions and /or serves as a regional high-performance training hub for one or more sports codes, it will have more than one pool with varying depths and temperatures. For example, a large council facility with a large leisure component.</p>
<p>National (International)</p>	<p>A facility with the ability to host national and inter-regional representative competitions and / or to serve as a national high-performance training hub for one or more sports codes, it could have the ability to host international competitions / events. It will meet the national standard specifications of the aquatic sport, please note it will usually have more than one pool to enable warm-up and warm-down for competitors.</p> <p>In most cases it will also serve some of the needs of the local community such as fitness swimming and sports training.</p>

Appendix 13: The Draft 2023 Strategy event facility demand

The Draft 2023 Strategy provides clear guidance from the water-based sport user groups regarding the provision needs for the level of water-based recreation facility. Swimming and diving sports do not require additional international or national level event facilities as there are enough to serve the event needs now and into the future⁶². The recent addition of the Hawke's Bay Regional Aquatic Centre and the future addition of the Parakiore facility in Christchurch means the event facility network has reserve capacity.

This was confirmed with direct responses from Swimming NZ⁶³ and Diving NZ when questioned for this Report. Diving NZ would appreciate an indoor facility for training and capable of hosting city and regional level events.

Water polo and underwater hockey do have gaps in international and national level event facility provision. The deep-water requirements and the level of building specification eg seating capacity, causes difficulties to justify the scale of facility required. An additional requirement for underwater hockey is to have a tiled surface on the floor of the pool. This is due to the coefficient of friction of tiles enables the puck to travel across the floor. Other surfaces impede the puck's speed of travel.

The strong guidance from the Draft 2023 Strategy is that the facility focus should be on local level facilities.

⁶² In May 2023 the New Zealand Olympic Committee announced its interest in hosting the 2034 Commonwealth Games. For an aquatic facility to meet the standards there would need to be two indoor 50m pools adjacent to each other. Recent and near future World or Commonwealth games events have taken a temporary pool facility approach rather than building permanent pool facilities.

⁶³ "We wouldn't be looking to host national events or above in Palmerston North. We have other facilities at the national level around the country and Palmerston North doesn't require that level of facility." Feedback received from Dale Johnson, Head of Participation & Events, Swimming New Zealand.

Appendix 14: The Draft 2023 Strategy data sources

Data Sets	What it Includes	What it's used for
Sport Membership	350,000 individual records Between 2018 and 2023 20 Codes Address, Gender, Age, Club/Team	Understanding Membership Demand calculations Where people come from Where do they play Age and gender breakdowns
Leisure, Aquatics and Leisure Data	80,000 individual records Between 2018 and 2023 350,000+ participation records from 40+ facilities From 4 different operator types	Understand participation and activities across Leisure and Aquatics Facilities (Including private gym operators)
Census Data	Population, Ethnicity, Gender, Age Deprivation Health questions	Understanding community around facility or club
Facilities Data: Facility Planning Tool Sport Facilities (individually validated) Aquatics and Leisure Facilities Private Exercise Facilities (Gyms, Yoga etc)	6000+ Sites 12,000+ facilities Setting Type Territorial Authority activities/ use Accessibility Amenities	Understand provision / gaps in provision Overlaying facilities against key populations
Experian Mosaic	NZ's most complete household data set Segments into 9 groups and 34 detailed types Uses over 500 variables to create groups and types Adds a further 2,400 variables around demographic, location, lifestyle, behaviour & attitudes	Completing the gaps in Census data for the demand modelling User personas to understand who members are and what part of the community is under represented
Mapbox Drive Time	Drive time calculations from locations	Calculate demand based on convenience (absorption of demand) in relation to distance from locations
Movement Data	84,000,000 lines of activity per month across NZ GPS activity from over 45,000 different apps Not subject to mobile phone coverage Not subject to credit on phone 90% of all adults have smartphones	Understanding Indexed GPS activity at locations Compare use patterns and times across locations Compare activity across regions

Appendix 15: Options assessment criteria

The following criteria has been developed to guide the options assessments to determine the most beneficial solutions to deliver an appropriate water-based recreation network for Palmerston North City.

<p>DEMAND REQUIREMENTS - Achieves demand focus</p>	<ul style="list-style-type: none"> • Contributes to increasing the capacity for leisure / play / relaxation / hydrotherapy water space
<p>STRATEGIC REQUIREMENTS - Achieves future focus</p>	<ul style="list-style-type: none"> • Provides length of life to the network • Fosters partnerships • Can serve multiple needs e.g. one pool accommodates Hydrotherapy and Learn / education, or a facility serves sport training and local level sport events.
<p>COMMUNITY REQUIREMENTS - Serves the community need</p>	<ul style="list-style-type: none"> • Serves a catchment within the expected travel time. • Space is maximised e.g. has community access or operates to capacity with programmed activities. • User affordability matches the location catchment
<p>SUSTAINABILITY REQUIREMENTS – Environmental and Financial</p>	<ul style="list-style-type: none"> • Minimises the carbon impact through construction. • Maximises renewable energy sources and operational efficiencies. • Minimises the capital cost of provision. • Minimises the cost of operation. • Whole of life cost benefits are achieved.
<p>WATER-BASED RECREATION FACILITY REQUIREMENTS – Physical attributes</p>	<ul style="list-style-type: none"> • Dimensions • Temperature • Depth • Associated features (changing room facilities, accessibility design/equipment, parking etc.) • Maintenance and operation

Appendix 16: Options assessment detail

The options presented have been assessed against the assessment criteria requirements. These have been scored using the following rating:

- 0 = does not have any contribution to the requirements
- 1 = contributes to some of the requirements
- 2 = contributes to most the requirements
- 3 = contributes to all the requirements

A total score of 8 or higher was included in options for recommendation and deployment or detailed feasibility. A total score of 7 or less was an automatic exclusion.

Options scoring

Table 22 - Option assessment scores.

Option	DEMAND REQUIREMENTS - Achieves demand focus	STRATEGIC REQUIREMENTS Achieves future focus	COMMUNITY REQUIREMENTS Serves the community need	SUSTAINABILITY REQUIREMENTS Environmental and Financial	WATER-BASED RECREATION FACILITY REQUIREMENTS physical attributes	Total	Commentary
Policy setting options for public pools scheduling	0	1	2	3	2	8	An immediate improvement opportunity for the sport facility users with little to no negative impacts.
Morning pool space optimised for sports groups	0	1	2	3	2	8	An immediate improvement opportunity for the sport facility users with little to no negative impacts.
Summer school pool access	2	2	2	2	1	9	A medium-term opportunity that can target sectors of the community pool access for leisure / play over the summer months.
Network resilience - current indoor school pools	0	1	2	2	2	7	A medium-term opportunity that will secure current pool space.
Leveraging Council's pool management contract	2	1	2	2	2	9	A medium-term opportunity that will encourage school pool space to be available to the community for leisure / play.
Leveraging resources across the pools network	2	2	1	2	1	8	A longer-term that draws on a partnership approach that will secure school pool space to be available to the community for leisure / play.
Hokowhitu Lagoon water quality	2	3	2	3	2	12	A medium-term opportunity in partnership to ensure the recreation resource remains suitable for community use.

Option	DEMAND REQUIREMENTS - Achieves demand focus	STRATEGIC REQUIREMENTS Achieves future focus	COMMUNITY REQUIREMENTS Serves the community need	SUSTAINABILITY REQUIREMENTS Environmental and Financial	WATER-BASED RECREATION FACILITY REQUIREMENTS physical attributes	Total	Commentary
Network resilience - strategic school pool investment	1	2	3	2	2	10	A longer-term that draws on a partnership approach that will secure school pool space to be available to the community for learn / education, and some leisure / play.
Lido 50m pool enclosure – fitness, leisure and sports training facility	1	2	2	3	2	9	A medium to long-term opportunity to create all year round space for primarily sport facility users but depth is suitable for leisure /play with limitations to the physical attributes for sports but minimising financial and environmental impacts.
Lake opportunities	2	2	1	3	2	10	A medium to long-term opportunity to secure the recreation resource suitable for community use with focus on sport users.
Lido 25m Indoor Pool replacement – fitness, leisure and sports training and events facility	1	1	2	1	3	8	A long-term opportunity to create all year round space for primarily sport facility users with the physical attributes for the key sports but having significant financial and environmental implications.
Lido new 50m Pool – fitness, leisure and sports training and events facility	1	1	2	0	3	7	A long-term opportunity to create all year round space for primarily sport facility users with the physical attributes for the key sports but having significant financial and environmental implications.

Option	DEMAND REQUIREMENTS - Achieves demand focus	STRATEGIC REQUIREMENTS Achieves future focus	COMMUNITY REQUIREMENTS Serves the community need	SUSTAINABILITY REQUIREMENTS Environmental and Financial	WATER-BASED RECREATION FACILITY REQUIREMENTS physical attributes	Total	Commentary
Canoe Polo courts facility	1	1	2	2	2	8	A medium to long-term opportunity to create the sport facility suitable for sport users, but displacing the current impact on other Hokowhitu Lagoon users.
New local level pool facility – multi-use facility	3	3	3	1	3	13	A long-term opportunity to create all year round space in a growth area of the City for community users with the physical attributes for relaxation, hydrotherapy, learn / education, leisure / play, and fitness / health / lane sports, but having significant financial and environmental implications.

Appendix 17: Lido 50m pool enclosure option additional information

A submersible and dividable, mechanical bulkhead/swimwall creates an opportunity to divide the pool in two. Figure 34 is an example of a submersible swimwall. They are also available as dividable walls allowing for multiple configurations as demonstrated by Figure 35.

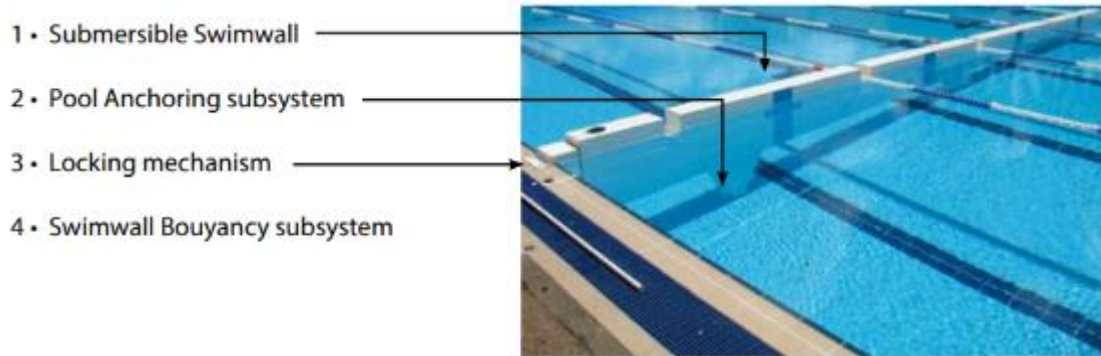


Figure 34 - Example submersible and dividable mechanical bulkhead⁶⁴

⁶⁴ The product brochure *1AntiWaveBulkheadsSwimWalls2019.pdf* sourced from the Anti Wave website <https://www.anti.to/allproducts/bulkheads-and-floors/>

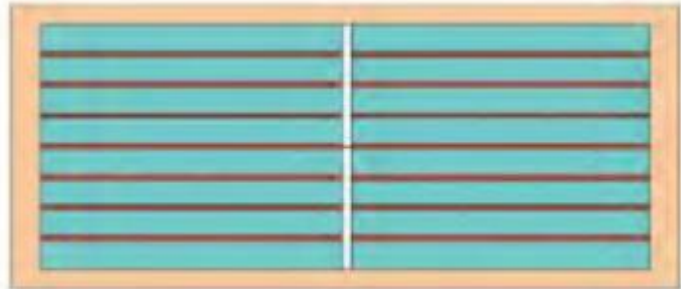
Program 1 (2 x 10m SwimWalls):

- One 8 Lane Pool 25m x 20m
- Suitable for lap swimming
- One 8 Lane Clear Pool 25m x 20m
- Suitable for a range of Aquatic Sports



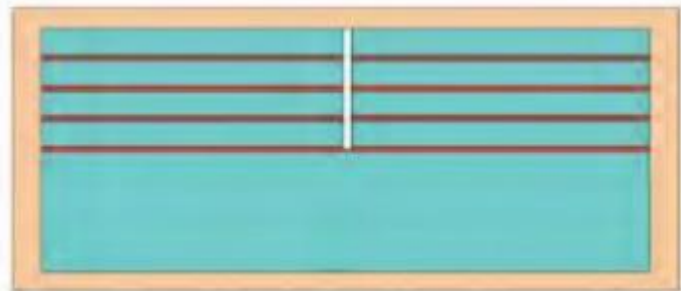
Program 2 (2 x 10m SwimWalls):

- One 8 Lane Pool 25m x 20m
- Suitable for lap swimming
- One 8 Lane Pool 25m x 20m
- Suitable for lap swimming



Program 3 (1 x 10m SwimWall):

- Two 4 Lane Pools 25m x 10m
- Suitable for lap swimming
- One Clear Pool 50m x 10m
- Suitable for a range of Aquatic Sports



Program 4 (1 x 10m SwimWall):

- One 4 Lane Pool 25m
- Suitable for lap swimming
- One 4 Lane Pool 50m
Suitable for lap swimming
- One 25m Clear Pool
- Suitable for Aquatic Sports

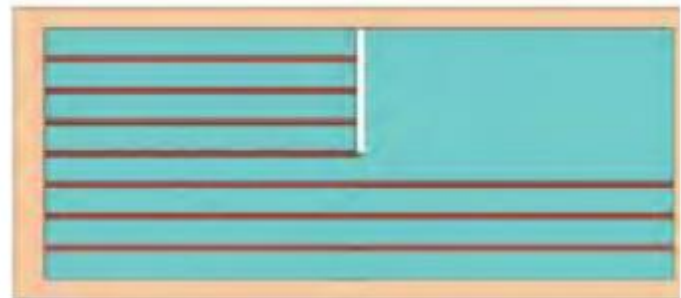


Figure 35 - Example pool configurations of a submersible and dividable mechanical bulkhead

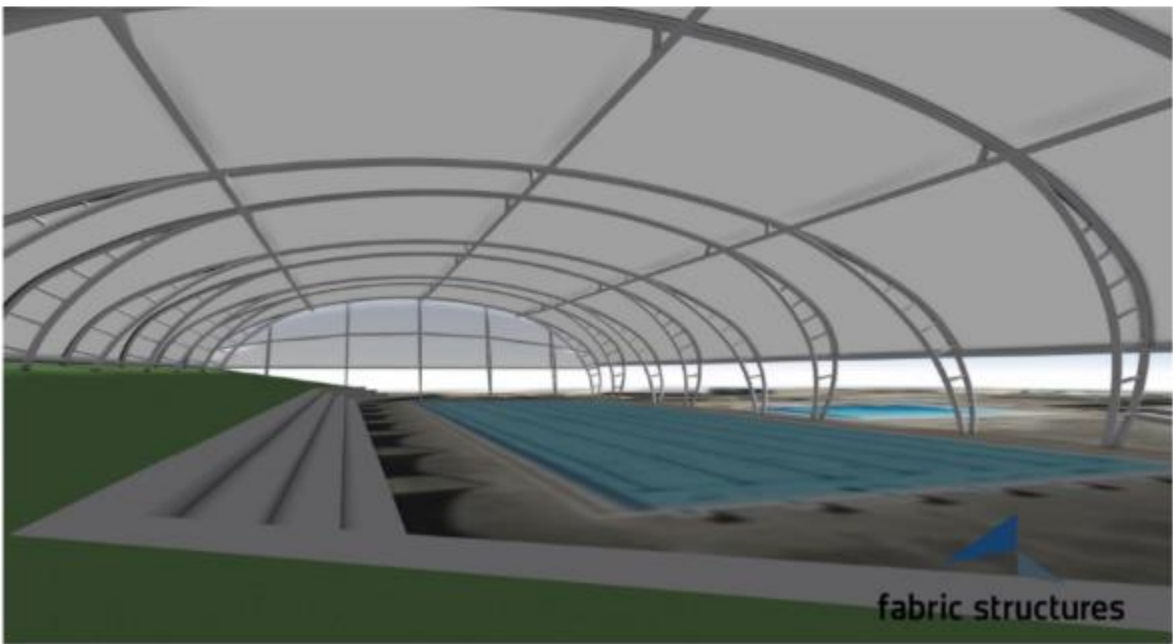
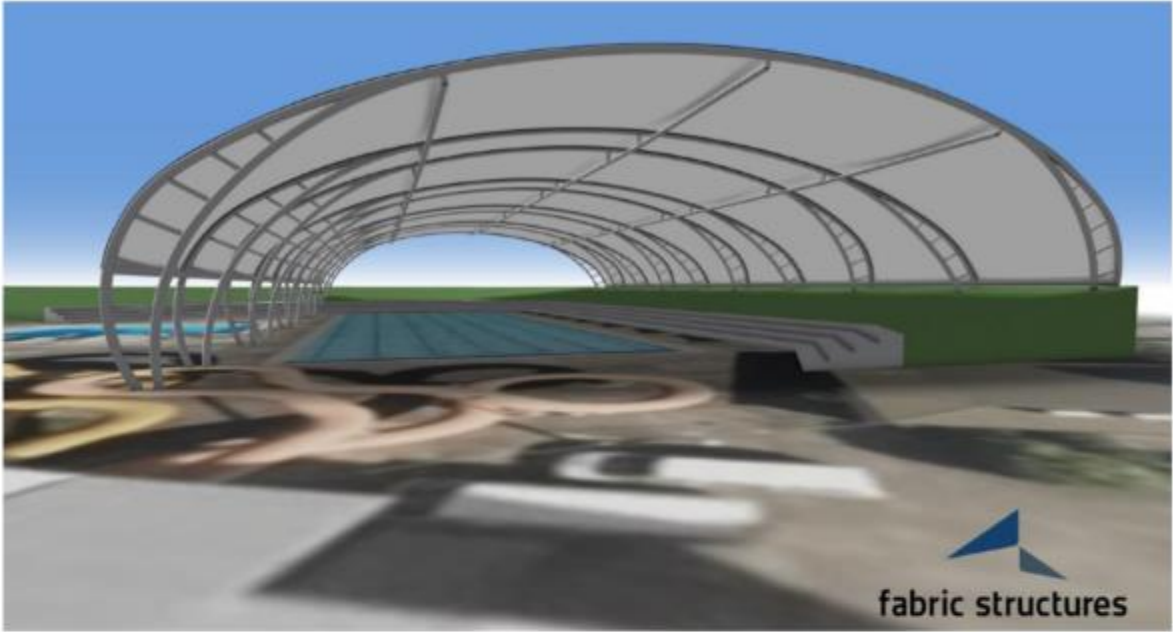


Figure 36 -Lido 50m enclosure CLM proposal renders.

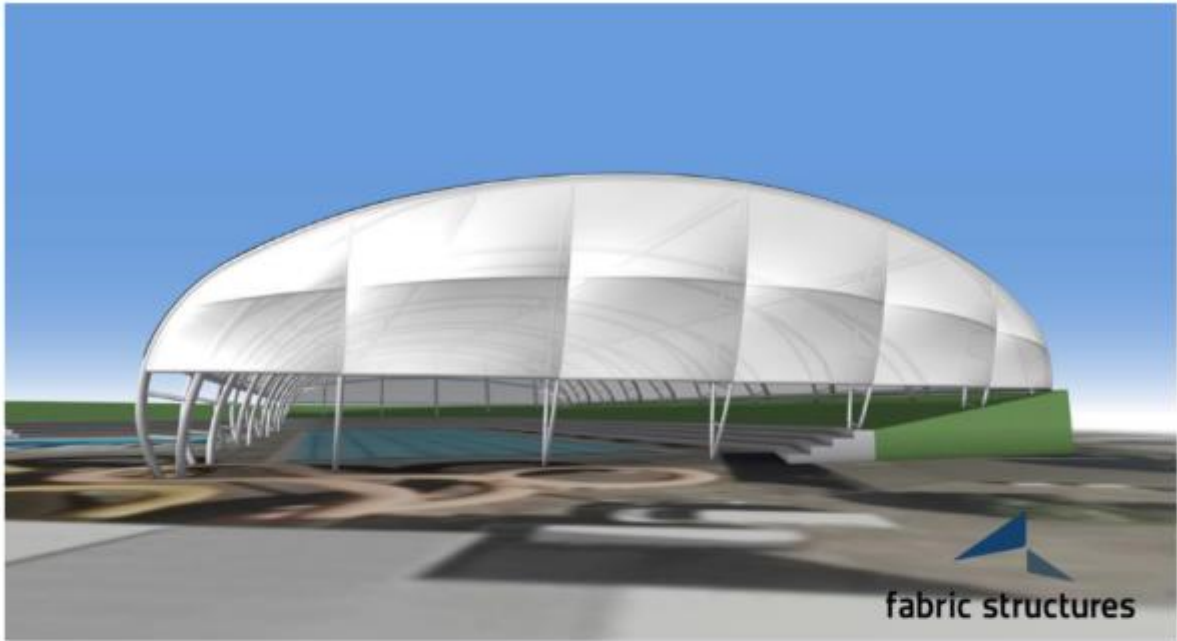


Figure 37 - Lido 50m enclosure CLM proposal renders.



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