

MULLUMBIMBY MEMORIAL CENTRE-PETRIA THOMAS POOL FEASIBILITY

November 2021



About this document

This document is the final Feasibility report for the upgrade of the Mullumbimby Memorial Centre-Petria Thomas Pool (Mullumbimby pool).

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- Council staff. In particular, Pattie Ruck, Project Manager and officers who provided planning and site specific information
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- School interviewed for this process
- Other businesses and key informants interviewed.

We acknowledge the traditional owners of the land, the Arakwal people, the Minjungbal people and the Widjabul people of the Bundjalung Nation, and pay our respects to elders past and present.



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1. INTRODUCTION

1.1. The project

This project addresses Byron Shire Council's resolution (Res 20-061) to conduct a feasibility study into converting the Mullumbimby Memorial Centre-Petria Thomas Pool (The Mullumbimby pool) into a year round, solar heated facility with an access ramp, children's splash and a rehabilitation / hydrotherapy pool, and to consider various water treatment options.

In assessing the feasibility of this proposal, the brief required consideration of the public health and social benefits of such a facility.

The pool

The Mullumbimby pool is located at is located at Stuart Park, 5 Jubilee Avenue, Mullumbimby, on Crown Reserve R42924 . The site is bordered on two sides by waterways, the Mullumbimby Creek to the west and the Saltwater Creek on the north. The pool is a short walk from the CBD, the Mullumbimby High School and sports facilities. The existing pool has a toddlers pool, a wading pool and a lit 8 lane 50m pool and small kiosk. The pool is used by water polo and swimming clubs, is only open seasonally as it is not heated. Images of the site are provided below



Pool history

The pool is located on the traditional lands of the Bundjalung of Byron Bay, Arakwal People, who continue to have rights and interests in the land.

Various newspaper articles refer to a river swimming pool at this site since the turn of the century and various improvements including lighting. ¹

The current Mullumbimby Memorial Centre-Petria Thomas Pool was constructed in the 1950s, in honour of those who served in the First and Second World Wars. The pool was renamed after Australian swimmer Petria Thomas OAM who grew up in Mullumbimby. Thomas became an Olympic gold medallist and won 15 national titles.

On 16 February 1950 Max Mercer, secretary of the Baths Planning Committee, called a public meeting at the Mullumbimby Council Chambers to discuss commencing work on the proposed memorial pool and community centre, including potential fundraising schemes. At the meeting the mayor of Mullumbimby, Alderman W.E. Smith, stated "a swimming pool is one of the best memorials the town could have and I feel sure the whole town and district will be right behind the movement ..." (*Northern Star*, 17 February 1950).

A fund raising committee was formed and the Mullumbimby Municipal Council was asked to be trustees. It was agreed the project was to be called the Mullumbimby Memorial Centre. By 1953 the site had been selected.

Mr Board and Mr Newton prepared the drawings for the pool at no cost.

1.NSW War Memorial Register, and Lismore North Star

Project background

The Mullumbimby Residents Association provided a submission to Council along with a petition of 1500 signatures, and letters of support from health professionals, schools and community groups in support for:

“heating of the swimming pool by solar panels to allow year-round use, improve access for seniors and disabled, a hydrotherapy pool and an innovative kids splash pad”.

On 27 February 2020, Council resolved (Res 20-061) that Council:

1. Conduct a feasibility study into converting the Petria Thomas Swimming Pool in Mullumbimby into a year round, solar heated facility that could service the needs of the local and visitor population, by adding a disability access ramp to the existing 50 metre pool, a splash children's pool and a rehabilitation / hydrotherapy pool, and that the feasibility also consider various water treatment options.

2. In assessing feasibility, consider the public health and social benefits of such a facility

3. Research other Council areas that have installed similar facilities such as Ballina Shire to see how these types of projects have worked in other similar communities.

4. Allocate the appropriate budget to conduct this study in the draft 2020/21 budget.

5. Identify potential funding sources including money from Council's own funds and appropriate grant opportunities and relevant timelines.”

Following the allocation by Council of a budget to fund the feasibility study this work was commissioned.

Methods

The key stages of work undertaken for this project were:

- Step 1: Situational analysis
- Step 2: Demand analysis and potential participation
- Step 3. Site and supply analysis
- Step 4: Options, concept, business case and cost benefits and economic and social impact assessment, and
- Step 5: Reporting

Key tasks undertaken for these key stages include those following:

Situational Analysis

- Investigating policy and planning context and relevant background information

Demand assessment/Stakeholder identification and analysis

- Interviewed key staff re population projections, flooding, planning access and cultural heritage, sustainability-(energy and water)
- Interviewed local schools who may use the facility
- Interviewed key staff including planning, access etc.
- Interviewed organisations serving people with a disability, and allied health providers about use of the pool for therapy
- Conducted some basic market research via a survey monkey survey, to test the likely use of the features proposed and the practicality of the open-air warm water with a sample of ratepayers
- Interviewed other pools, and management staff (Byron, Mullumbimby, Ballina, Alstonville)
- Benchmarked energy costs with other pools and industry suppliers
- Determined the likely catchment for the facilities and prepared population and participation projections.

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Site and supply assessment

- Downloaded the property and planning details for the site
- Identified key site context and constraints and opportunities: planning flooding, cultural heritage, vegetation etc.,
- Investigated the existing aquatic facilities used by Mullumbimby and other residents in the Shire (competitor analysis)
- Investigated heating options given Council's zero emissions target
- Identified the key features of the existing facilities that users like and those they wish to improve.

Options, concept, business case and cost benefits and economic and social impact assessment

- Determining the scope of preferred features of the facility, layout and concept design
- Identified features of the existing facility requiring improvement , and those to be retained
- Scope the size and layout of preferred facilities to reflect site constraints and demand
- Discuss option related to capital and recurrent cost in line with the site capability and demand and condition of existing facilities to brief the architect.



1.2. Byron Shire's Wellbeing Framework

Council has a Shire Wellbeing Framework which provides indicators of wellbeing. These indicators are shown in the following table. Those shown in bold type are pertinent to the development of an aquatic centre and are addressed in this report.

Byron Shire Wellbeing Framework	
SOCIAL AND CULTURAL	ENVIRONMENTAL
<ul style="list-style-type: none"> • Housing affordability • Relative socioeconomic equality • Community services/facilities • Self reported health • Life satisfaction • Safety • Community connectedness • Social support • Cultural diversity • Cultural participation • Recreation • Public art 	<ul style="list-style-type: none"> • Responsibility for environmental sustainability • Greenhouse gas emissionsEnergy use • Waste minimisation • Healthy waterways • Biodiversity • Open space • Road safety • Active and public transport
ECONOMIC	CIVIC LEADERSHIP
<ul style="list-style-type: none"> • Economic diversity and resilience • Early childhood education and care access • Innovation • Work-life balance • Growth and development 	<ul style="list-style-type: none"> • Trust • Political participation • Council performance

2. KEY TRENDS IN AQUATIC AND LEISURE PROVISION

A number of key trends in swimming pools and leisure centres are evident internationally. These have particular relevance to Mullumbimby. A summary of key points follow, building on IAKS² summary of trends.

Swimming is regaining importance

Swimming is one of the most participated recreation activities across all age and abilities groups. The importance of swimming pools is increasing for health and fitness and water safety. Even in communities where there is a high pool ownership, participation in life saving and beach swimming, public pool provision has been shown to be essential and complementary, for water safety education, social and sports activity and community fitness.

Immersing in a lifelong healthy lifestyle

Aquatic activities fit in perfectly with the trend of people seeking more healthy lifestyles including more active seniors. As many children are no longer taught to swim by their parents, swimming lessons are becoming more important.

Pools are turning into 'wellness hubs'

The increasing importance of 'preventive health care' (mental health and stress reduction) is requiring more allied health components that provide holistic life-style activities. In Mullumbimby there is a strong demand for a warm water pool with a high degree of accessibility to facilitate health and rehabilitation programs and instruction. However there isn't a strong demand for allied health rooms in association with the pool and it may not be practical to provide these on site due to lack of space.

Fun for children and families

In addition to the "wellness" trend, children and families are a core target group for pools. Facilities-especially outdoor water - need to be more attractive and provide amenities focused on fun and that encourage life long participation.

Zero depth splash parks provide opportunities for all ages and abilities to cool-off and play without the risks and costs of other aquatic facilities. The site doesn't allow for other leisure attractions such as slides etc., and these are provided in Ballina.

Designing for inclusivity

Social sustainability and inclusion have become important goals for public leisure facilities. As the community becomes more diverse and infrastructure ages, design and management can promote physical, social and sensory inclusion. Specific features such as "changing places" change rooms with a height adjustable adult change bench and hoist direct from this type of facility to into a warm water pool, are now common.

Different types of water bodies who have different type of programs and users also require different forms of access ranging from stairs, ramps, hoists and suitable edges for transfers direct form a mobility device.

Pools as place for socialising

The social function of sports and leisure facilities is growing in importance. Centres can play an important role for lone persons, disengaged young people and older adults. A balance needs to be struck in spaces that can be heavily programmed as well as those where fun and socialising are encouraged.

² Adapted from IAKS Future Trends For Pools 2020. International Association for Sports And Leisure Facilities

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Sustainable and healthy pool facilities

Climate change places a new focus on ecological sustainability. This necessitates a holistic approach from planning and construction through to the operation of pools with a minimal ecological footprint. Six green star aquatic facilities are now achievable with renewable energy sources and storage, and a heavy emphasis on insulated pools and building components with low embodied carbon. COVID-19 also necessitates new considerations related to minimising customer contact for payments and booking, air handling and the management of capacity.

Safe and secure pools

The potential for antisocial behaviour and risks to non competent swimmers, as well as increasing attendances require more emphasis on surveillance in design and management and an emphasis on compliance.

Competing demands on public finances

The competing demands on public finances call for a prioritisation of investments. New projects need to outline social returns investment and consider partnership delivery models as well as cross subsidisation of services.

Improving economics

Long-term business plans (including life-cycle costing and financing) and professional management are crucial steps towards achieving long-term financial sustainability in public aquatic facilities.

Digital transformation

Digital technology has changed the way people access opportunities, managers generate market information, promote customised opportunities and measure performance. Technology therefore is an important consideration in design and management.

International harmonisation of demand

Globalisation, the internet and people's increasing mobility are influencing user expectations. Therefore these trends and expectations need to be monitored closely, with the growing harmonisation of international quality standards.

Diverse development of market segments

Commercial life-style clubs often service specific more profitable areas of the marketing leaving Council to serve the less profitable areas. Therefore it is more important than ever to articulate the social return on investment and public value of what centres deliver.

Scarcity of space

There is a migration to more indoor opportunities for physical activity and socialisation and therefore a greater need for flexibility in how spaces are used and who they can include. At the same time provision of multipurpose space in conjunction with water space facilitates a greater value and range of uses of public swimming pools for community, education and recreation purposes.

Fight for talent

Demographic and economic change is leading to significant challenges for leisure facilities in recruiting, and how components are managed. In some areas, new technologies may reduce staff requirements or result in the revision of job responsibilities. On the flip side more schools and community groups are interested in social enterprises that can support local and especially youth employment.

Increased demand for group exercise

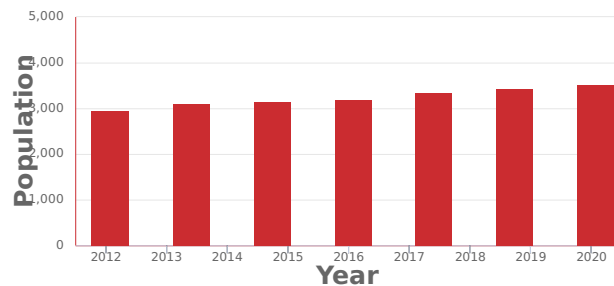
Trends suggest a significant increase in demand for group fitness activities - from an increasing range of people, age groups and abilities and the number of females. This demand may require additional programming of different water spaces to accommodate different ages, needs and abilities.

3. DEMAND FOR ALL YEAR ROUND SWIMMING, A WARM WATER POOL AND AN ACCESSIBLE FACILITY

3.1. Demographic influences

Population size

The ABS Estimated Resident Population of Mullumbimby in 2020 was 4,036 . Based on the usual resident population of Mullumbimby at the 2016 census, 3,588 people were living in 1,720 dwellings with an average household size of 2.27. The growth in the Mullumbimby population since 2012 is shown in the following graph.



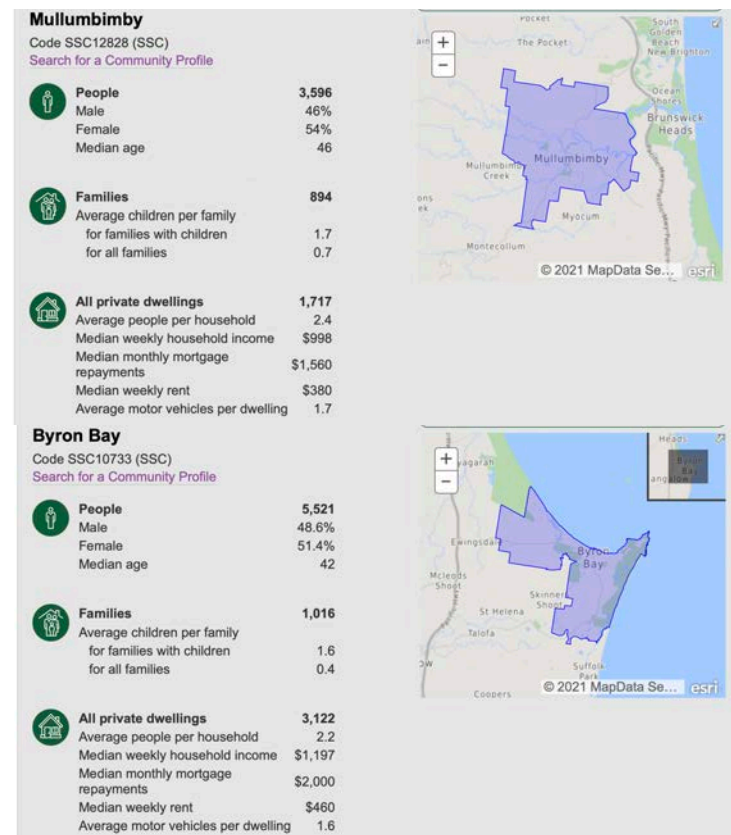
Source: Australian Bureau of Statistics, Regional Population Growth, Australia (3218.0). Compiled and presented by .id (informed decisions)

Figure 1. Mullumbimby population since 2012

While the population of Mullumbimby is relatively small to support a major aquatic facility, the nature of the current facilities is not a good match with an ageing population, and no similar facility is available close by to encourage participation. Note: As official population forecasts for Mullumbimby are not currently available the data presented here is from the 2016 census.

An overview of population statistics for Mullumbimby and Byron Bay are provided in the figures following. There are some differences including median age, age structure and household type between Mullumbimby and Byron Bay.

Figure 2. ABS Quick Stats:Mullumbimby and Byron bay 2016



Demographic influences on participation and the nature of the facility required

Age, gender, income, education, the need for assistance and cultural background are the principal determinants of participation in sport and physical activity. Other factors such as bodyweight and the presence of health conditions such as arthritis are also an indicator of potential use of a warm water pool.

Age structure

Mullumbimby has a slightly higher percent of school aged children than for the whole Shire, slightly higher proportion of 45-54 year old's and a higher proportion of people older 70 years.

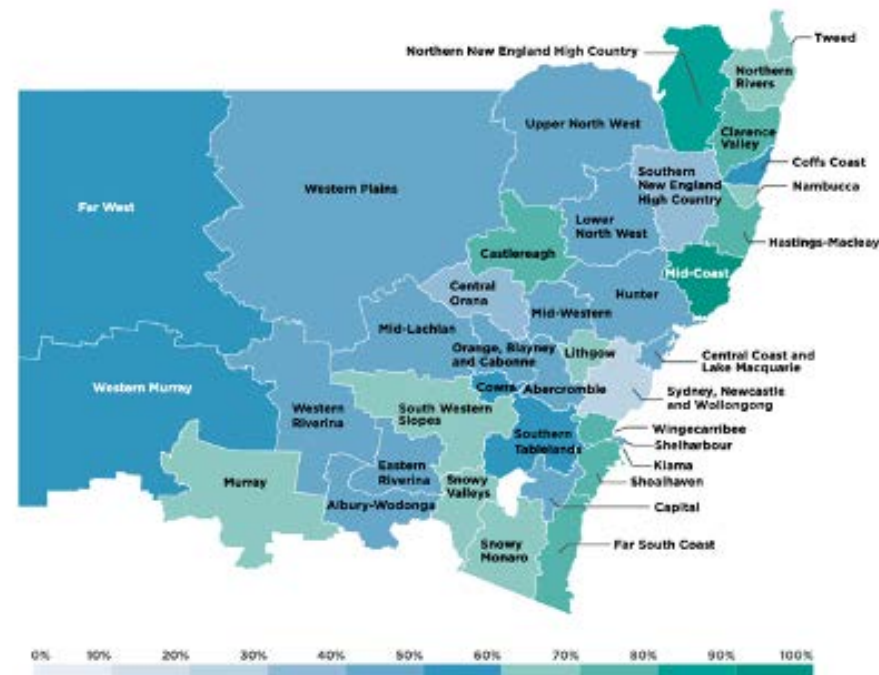
There were 571 people living in Mullumbimby who are 70 years and older and may seek gentle exercise or rehabilitation activities.

The median age of residents in Mullumbimby is 46, compared to Byron Bay (42) and NSW as a whole 38 years. This age profile suggests that accessible and warm water facilities will be important to serve Mullumbimby residents.

The key demographic measure that helps us to understand the impact of the ageing population is the aged dependency ratio which shows the ratio of those aged 65 and over to working age people. As the population ages, the aged dependency ratio increases (becomes larger). By 2061 there will be 2.4 people of traditional working age to support each person aged 65 and over. This is a significant decline from today's ratio of 3.9 people.

By 2041, many coastal areas in the north and south of the State will have age dependency ratios of 70 per cent or over (see Chart 1.2). This trend is driven by the movement of retirees relocating to desirable coastal locations.³

CHART 1.2: AGED DEPENDENCY RATIOS FOR REGIONS OF NSW IN 2041



Source: NSW Department of Planning, Industry and Environment; NSW Treasury.

The following table shows the number and percentage of residents for Mullumbimby by age group 2016.

³ Source 2021 NSW Intergenerational Report: 1. The population of New South Wales in 2061

Table 1. Mullumbimby 2016 population by age group

Five year age groups (yrs)	No.	%	Byron Shire %
0 to 4	174	4.9	4.9
5 to 9	221	6.2	5.9
10 to 14	252	7.1	6.0
15 to 19	201	5.7	5.1
20 to 24	131	3.7	3.8
25 to 29	98	2.8	5.2
30 to 34	141	4.0	5.5
35 to 39	209	5.9	6.3
40 to 44	259	7.3	7.6
45 to 49	319	9.0	7.6
50 to 54	304	8.5	7.9
55 to 59	284	8.0	8.7
60 to 64	263	7.4	8.7
65 to 69	208	5.8	6.7
70 to 74	173	4.9	4.0
75 to 79	100	2.8	2.4
80 to 84	92	2.6	1.6
85 and over	132	3.7	2.2
Total population	3,572	100.0	100.0

Source: Australian Bureau of Statistics, [Census of Population and Housing](#) 2016. Compiled and presented by [.id](#) (informed decisions).

Indicative forecast population growth between 2021 to 2041 by each age group is shown by locality in Appendix 1.

Household structure

Mullumbimby has a slightly smaller proportion of couples with children, and group households than for regional NSW but it has a high proportion of visitor only households.

People requiring assistance

There is an increase in older adults projected in Byron, as well as a more diverse population for a wide range of backgrounds, more interventions will be required to ensure residents have access to appropriate physical activity and sporting choices. There is also an increasing number of people who have a disability and need assistance in daily living tasks, and to participate in physical and social activities that can enhance well-being. This is particularly true for the 60 plus age cohort.

In 2016, 1,384 people (or 4.4% of the population) in Byron Shire reported needing help in their day-to-day lives due to disability. In 2041 the number of people needing assistance is likely to be 1,865 persons.

At present there are limitations in what aquatic fitness and swimming opportunities people with a disability can participate in due to the lack of services and accessible infrastructure. This population group is a growing market that Council's pool's have not been servicing and one that is generally poorly serviced in private competing facilities. (See details of competing facilities and their access features in Chapter 4).

The Mullumbimby Master Plan notes that Mullumbimby will have to consciously embrace lower and middle-income residents to maintain a diverse and inclusive population by providing physical and social infrastructure for them.

In addition, an ageing population will mean that Mullumbimby will have to look for more ways for community facilities to become truly accessible, for people of all abilities.

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The Mullumbimby pool would have a significant competitive advantage if it could accommodate people with a wider range of abilities through pools with ramp access, a warm water pool and an accessible room with adult change table and an overhead hoist directly into the pool. These facilities will include a greater proportion of the population who have previously not had access to the facility or other beneficial health and fitness opportunities.

The following table shows the estimated number of residents within the Byron Shire with a disability.

Table 2. Forecast number of persons needing assistance with daily activities, by agegroup Byron Shire

Age group (years)	2021	2031	2041
0 - 4	15	16	18
5 - 9	39	43	48
10 - 14	37	40	45
15 - 19	31	34	38
20 - 24	33	37	42
25 - 29	46	51	57
30 - 34	50	55	62
35 - 39	56	62	69
40 - 44	67	74	82
45 - 49	68	74	83
50 - 54	70	77	85
55 - 59	77	85	94
60 - 64	142	156	173
65 - 69	107	117	129
70 - 74	100	111	125
75 - 79	96	107	120
80 - 84	119	133	151
85 and over	342	389	446
Total	1,496	1,664	1,865

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

The following table shows the estimated number of residents of Mullumbimby with a disability.

Table 3. Forecast number of persons in Mullumbimby needing assistance with daily activities, by age group

Age group (years)	2021	2031	2041
0 - 4	2	2	3
5 - 9	5	7	9
10 - 14	5	7	9
15 - 19	4	6	7
20 - 24	4	5	7
25 - 29	3	4	5
30 - 34	4	6	7
35 - 39	6	8	11
40 - 44	8	10	13
45 - 49	10	13	16
50 - 54	9	12	16
55 - 59	9	11	15
60 - 64	15	19	25
65 - 69	12	15	20
70 - 74	15	19	25
75 - 79	14	18	23
80 - 84	25	32	42
85 and over	74	96	125
Total	225	292	378



3.2. The catchment

To guide possible attendance numbers (in the absence of Council population forecasts), high level population forecast assumptions have been made using i.d Community Profile and NSW Dept. of Planning forecasts for 2037.⁴

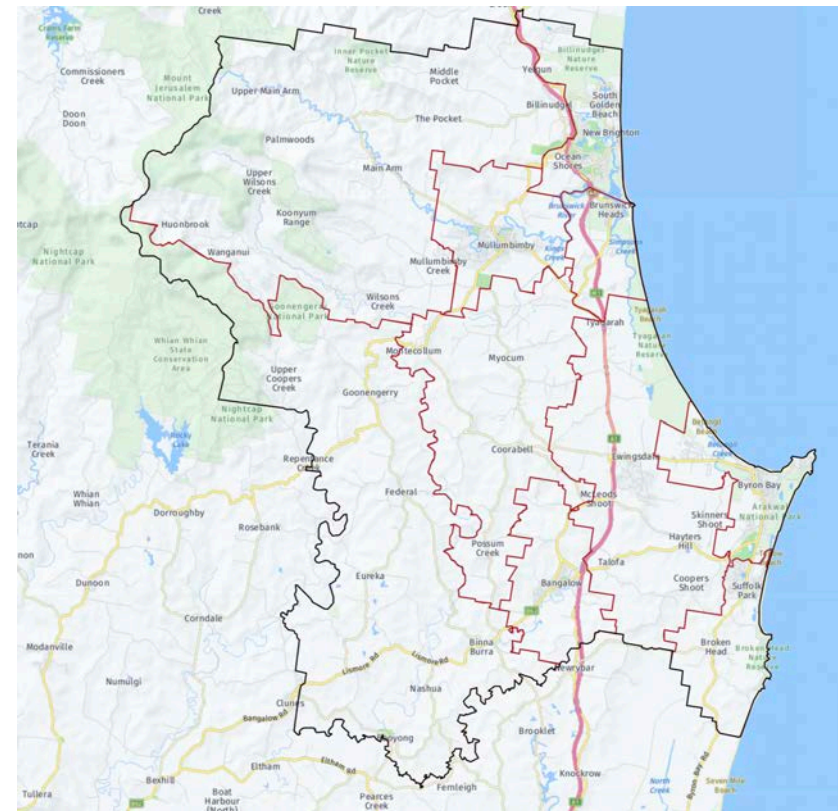
The following table provides these high level forecast assumptions used in this report, by suburb (SA1).

Table 4. High level population forecast assumptions by suburb

Locality	2021	2041	Growth rate p.a applied %
Bangalow	2,106	2,502	0.9%
Brunswick Heads	1,836	2,344	1.2%
Byron Bay	6,092	8,554	1.7%
Mullumbimby	4,086	6,853	2.6%
Myocum - Coorabell and District	1,727	1,797	0.2%
Ocean Shores - New Brighton - South Golden Beach	6,496	7,299	0.6%
Rural North West	2,996	3,117	0.2%
Rural South West	2,107	2,192	0.2%
Suffolk Park - Broken Head	3,924	4,043	0.1%
Tyagarah - Ewingsdale and District	1,631	1,697	0.2%
Total forecast population	33,001	40,398	

SA1 areas based on the 2016 Census are shown in the following image.

Figure.3 SA1 localities in Byron Shire used in the 2016 census



⁴ These figures should be used with caution .

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

The survey of residents suggest that some 40% of the users of the current pool are from post code 2482: Mullumbimby, Goonengerry, Mullumbimby Creek, Main Arm, Wilsons Creek, Wanganui neighbouring suburbs.

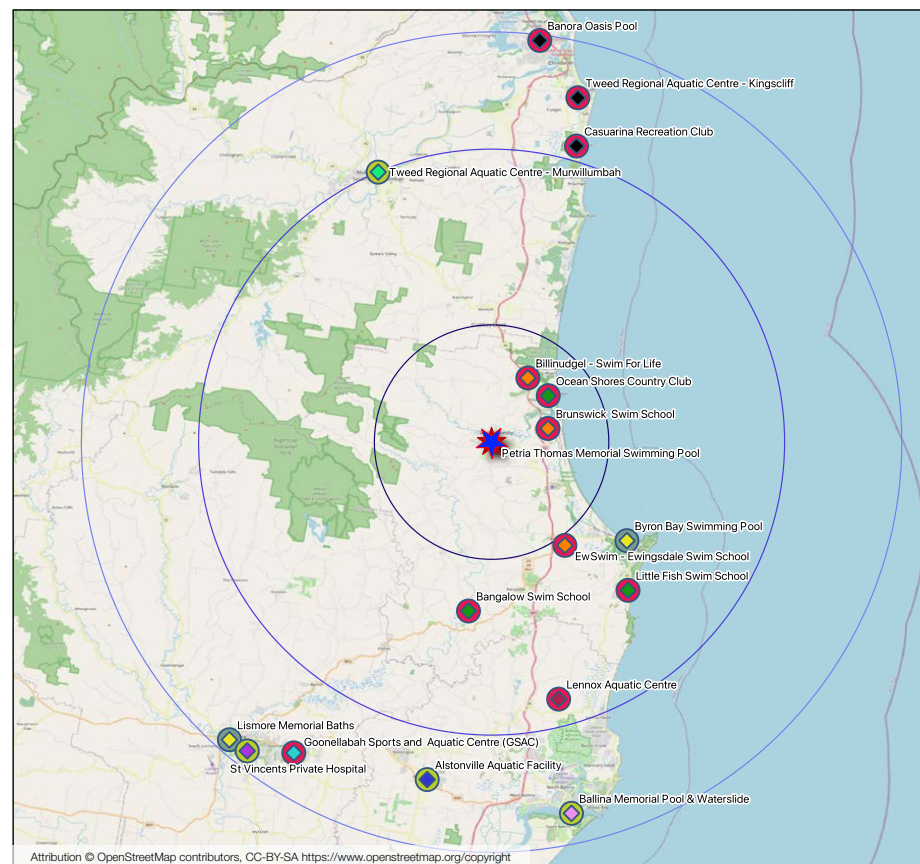
However, residents also visited several other pools in the region. Residents likely visit multiple pools due to the range of different facilities offered and their suitability for various activities, programs offered, and different degrees of accessibility.

Distances, ease of access by road, findings from interviews of providers, the survey of schools and residents (see Appendices 2 for results), and the availability of other pools and their facilities and services were all reviewed to determine the catchment for new facilities and programs at the Mullumbimby pool.

The following map shows the location of other pools. See Chapter 4. for the full scale map and table detailing the nature and accessibility of each other known pool in the region.

Where pools draw their users from is likely to be directly related to specific programs and facility features. For example, for fitness, the catchment for some activities like lap swimming or aqua classes are likely to be relatively localised and the frequency of use quite high. Other services such as hydrotherapy or competition swimming are likely to have a much larger catchment, and depend on where existing facilities are situated.

Figure 4. The location other aquatic facilities with public access around Byron Shire (See Chapter 4 for the full scale map with legend)



The following table shows an indication of the catchment for different types of facilities and programs proposed at the Mullumbimby pool.

Table 5. Key program areas including target audience, primary catchment radius and population

Program/activity	Target audience	Primary catchment	Principal SA1s
Swimming lessons	Children 6mths -9years	5km	Mullumbimby +Rural Nth West
Gentle exercise	Adults 60 yrs +	10km	Mullumbimby +Rural Nth West + Ocean Shores
Physiotherapy	People with a disability / rehabilitation clients	20km	Shire
Warm water exercise/ rehabilitation	People with a disability / rehabilitation	20km	Shire
Lap swimming	Adults-2020 yrs+	3km	Mullumbimby +Rural Nth West
School carnivals	Children - 5-16 years	10km	Shire-Bangalow Suffolk Park
Swimming Club	8-16 years	5km	Mullumbimby +Rural Nth West + Ocean Shores+ Rural North west
Aqua Play - U10	Children 0 - 9 years	3km	Mullumbimby +Rural Nth West
Unstructured outdoor aquatic activities	Families with children / Teenagers	5km	Mullumbimby +Rural Nth West
Group fitness	Primarily females 20 - 60 years	10km	Mullumbimby +Rural Nth West

3.3. Current and projected attendances

Current attendance

The Mullumbimby pool operates approximately 35 weeks a year from September 1 until the end of April.

Some 33,600 attendances (pool entry and season tickets) were recorded for the season 2019/20 providing revenue of some \$108,677 to Council.

In season 2020/21, Council received some \$106,857, and given the similar revenue figure it could be assumed attendances were consistent between the last two seasons.

Due to the current management lease arrangements, reporting requirements and COVID implications, program and hire attendances are likely to be much higher than the recorded attendance of 33,600 for 2019/20.

The following table provides a breakdown of general entry visitations for season 2019/20. Season pass holders are assumed to visit twice a week for the operating season and each 'family' visit equates to four visits.

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Table 6. Pool attendances by category 2019/20

Entry category	Annual attendance
Pool entry	
Spectator	908
Adult (18+)	6446
Child (2-17)	5180
Concession	1344
Season tickets	
Adult (18+)	1292
Child (2-17)	748
Concession	1700
Family	8160
Concession Family	4080
Ticket Books	
Adult (25 tickets)	1475
Adult (15 tickets)	750
Child (25 tickets)	300
Child (15 tickets)	225
Concession (25 tickets)	650
Concession (15 tickets)	345
Total visits	33603

In addition to general entry attendances above, programs and hirings at the pool provide up to an estimated 12,700 additional attendances per year. (Assumptions based on managers phone interview). The following table estimates likely program and current hire attendances at the pool.

Table 7. Estimated seasonal attendances for group and hire bookings- existing pool

Activity	Assumptions	Visits
Swimming lessons	8 sessions per week x 7 x 20 weeks	1120
Swimming squad	1 session p/wk x 10 x 30 weeks	300
Water Polo - training	1 team x 15 players x 30 weeks	450
Water Polo - games	2 teams x 15 players x 7 games	210
Swimming club - training	20 members x 4 nights p/wk x 30 weeks	2400
Swimming club - carnival	1 per season	300
School carnivals	8 carnivals x 150	1200
School swimming program	4 schools x 200 x 10 days	8000
Scuba training	1 session per week x 6 x 30 weeks	180
Total estimated visits-group and hire bookings		12740



Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

The market potential

Using participation projections based on state participation rates from AusPlay 2020 for NSW, the potential market for swimming (all things being equal) is estimated for Byron Shire and Mullumbimby. These figures were then divided into more specific activity groups and a frequency of use applied by activity to generate potential pool attendances.

The table following shows the potential participation in swimming based on indicative forecast population to 2041 and state participation rates for swimming from AusPlay2020 for NSW.

Note: these market projections are only indicative, due to a wide range of factors that determine if people use a public swimming pool and which pool they will use.



Table 8. Potential market for swimming activities in Byron Shire

	2021		2031		2041	
Age group	Population	Likely Swimmers	Projected Population	Likely Swimmers	Projected Population	Likely Swimmers
0-4 years	1598	527	1755	579.0	1941	640.5
5-9 years	1949	838	2138	919.2	2363	1015.9
10-14 years	1988	298	2189	328.3	2428	364.2
15-19 years	1689	169	1864	186.4	2073	207.3
20-24 years	1240	744	1384	830.2	1554	932.6
25-29 years	1723	1551	1905	1714.4	2119	1906.7
30-34 years	1873	1686	2064	1858.0	2291	2061.6
35-39 years	2096	231	2306	253.7	2556	281.2
40-44 years	2507	276	2750	302.5	3039	334.3
45-49 years	2514	2262	2773	2496.1	3084	2775.6
50-54 years	2609	2348	2870	2582.6	3180	2862.4
55-59 years	2874	2012	3157	2209.7	3492	2444.2
60-64 years	2859	2001	3137	2195.6	3465	2425.8
65-69 years	2163	1081.5	2372	1186.1	2620	1310.1
70-74 years	1328	664.1	1478	738.8	1657	828.3
75-79 years	793	237.9	883	265.0	991	297.2
80-84 years	503	100.5	564	112.8	638	127.6
85 years +	696	69.6	792	79.2	908	90.8
Total	33,001	17,097	36,379	18,838	40,398	20,906

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Table 9. Potential participation in swimming in Mullumbimby

	2021		2031		2041	
Age group	Population	Likely Swimmers	Projected Population	Likely Swimmers	Projected Population	Likely Swimmers
0-4 years	200	66	259	85.0	335	111.0
5-9 years	254	109	328	141.0	425	183.0
10-14 years	289	43	374	56.0	485	73.0
15-19 years	231	23	299	30.0	387	39.0
20-24 years	150	90	195	117.0	252	151.0
25-29 years	112	101	146	131.0	189	170.0
30-34 years	162	146	210	189.0	271	244.0
35-39 years	240	26	311	34.0	402	44.0
40-44 years	297	33	385	42.0	498	55.0
45-49 years	366	329	474	427.0	614	553.0
50-54 years	349	314	452	407.0	585	527.0
55-59 years	326	228	422	295.0	547	383.0
60-64 years	302	211	391	274.0	506	354.0
65-69 years	239	119.0	309	155.0	400	200.0
70-74 years	199	99.0	257	129.0	333	167.0
75-79 years	115	34.0	149	45.0	192	58.0
80-84 years	106	21.0	137	27.0	177	35.0
85 years+	151	15.0	196	20.0	254	25.0
Total	4,086	2,010	5,292	2,604	6,852	3,372

Estimated annual visits for a redeveloped pool

The potential annual visits to the redeveloped pool with a heated year round 50m, warm water and toddlers pool, are shown in the following table.

Table 10. Estimated annual visits for redeveloped facility

Use type	Base case estimated participation (annual visits)
Spectator	9,020
Adult (18 +)	45,060
Child (2-18)	10,464
Concession	11,560
Carnivals	1,522
School children at school sessions	4,710
Swim school	3,838
Warm water participants	20,720
Water polo	750
Swim club	3,660
Aqua aerobics	1,584
Warm water pool - allied health	800
Room hire	4,200
Total estimated participant visits	117,889

Potential participation from visitors and events

For 2019/20, there were 935,006 international visitors nights in Byron Shire, accounting for 20.1% of the total visitor nights. In addition there were 2,757,070 domestic visitor nights and 965,575 domestic day trips.⁵

A Destination Visitor Survey Program run by Tourism Research Australia found that the median number of stops in the Byron Shire was two - 90% of visitors stopped in Byron Bay, 32% in Bangalow, 31% in Brunswick Heads and 28% in Mullumbimby.⁶

Although the region is clearly a popular tourist destination, it is difficult to predict the number of additional attendances visitors may bring to a redeveloped pool at Mullumbimby.

Anecdotally, it appears that tourists make up a very small percentage of visitations at a typical Council aquatic centre. In addition, it is typically more extensive aquatic facilities with substantial leisure water features that may attract visitors, especially family and social groups. However, Mullumbimby has many accommodation premises. Therefore, there may be a market for those staying in Mullumbimby (other than short stays) to use the pool to keep exercise routines up whilst away.

If the Mullumbimby pool is actively promoted it maybe possible to attract some additional carnivals who seek pools in the off-season, and swimming teams using Byron Shire as a base for swimming camps.

Evening school carnivals have the potential to attract greater spectator numbers allowing parents and family members to attend and for schools to avoid higher day time temperatures that are more likely to impact events in the longer term.

The 2032 Summer Olympics offer an opportunity for regional 50 m pools to host swimming, water polo or synchronised swimming teams from competing countries for pre Olympic and Paralympic training camps. (Note this outside the 10 year timeframe of costings prepared for this study).

⁵ economy.id.com.au

⁶ Byron Shire Visitor Profile and Satisfaction Report

Mullumbimby pool has a desirable depth profile and generous lane widths attractive to competitive swimmers. However with the modest scale of facilities to be provided at Mullumbimby and some impact on regular users if international teams need extended exclusive use, such arrangements should weigh up the costs and benefits to the community .

While there is some demand for pools for carnivals in the off-season, the demand is largely for indoor 25 m pools with a minimum of 6 lanes, and the proposed warm water pool at 20m would not be suitable for carnivals.

School use

A sample of primary and secondary schools were interviewed for this project. In total 10 primary, one secondary and primary+secondary school were interviewed. They were asked about current and future usage of the Mullumbimby pool and services and future facility components.

All the schools interviewed have attended the Mullumbimby pool in the past 12 months and travel by bus or minibus to the swimming pool (except for Mullumbimby High School, they walk to the facility).

The Mullumbimby pool is the preferred pool option for the schools in the local area.

A high percentage of the schools completed their swimming lessons at the Mullumbimby pool (88%). The schools that attended Alstonville Aquatic Centre and Lenox Head Aquatic Centre preferred these pools because they were closer to the school and offer warm water swimming.

In addition to swimming lessons, schools also attend the Mullumbimby pool to participate in carnivals (73%), lifesaving activities (18%), recreation activities (55%), fitness activities (9%) and water polo (9%).

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Additional activities that schools may do at a redeveloped Mullumbimby pool include:

- Term two and three swimming lessons (6 schools)
- Lessons, recreation activities to give students more options
- Extending our positive learning program to include more aquatic activities
- Introduce water polo, or more water-based activities
- Extend current programs, and
- More opportunities for students with a disability

All the schools interviewed agreed that undercover stands, change rooms and bus parking were essential facilities that were required for them to attend the facility. Some additional statements made by the schools included:

- With additional lighting they would consider running their carnivals at night, which may encourage more parents to attend
- More drinking fountains
- Upgraded change rooms – we do not use them; children get changed back at school
- Change rooms are not up to disability code

All of the general comments made by the schools were positive. The schools feel like this would be a great project (18%) that will provide the pool with greater usability (9%) and provide job opportunities for the community (9%).

One school suggested that this project was well overdue, and it was time for the Byron Shire to redevelop their facilities.

Potential use of the pool by residents

Existing pools visited

A small sample of residents were surveyed to understand current pool usage patterns. Residents surveyed show they visit a range of pools including those up to 47 km away. Pools visited included the Mullumbimby pool, Tweed Regional Aquatic Centre-Murwillumbah, Byron Bay Swimming Pool, Ballina Swimming Pool and Waterslide, Brunswick Heads Swim School, Ewingsdale Swim School, Banora Oasis Pool, and Alstonville Aquatic Centre.

Only 17% respondents did not visit a swimming pool to do warm water exercise, with 60% visiting this type of pool. The pools that were most frequented included the Ballina Swimming Pool (21.5%), Tweed Regional Aquatic Centre-Murwillumbah (17%) and the Brunswick Heads Swim School (21%).

Visiting a warm water pool was most common for respondents aged 45-49 years (8.2%). No residents under 29 years visited a warm water pool to do exercise or hydrotherapy.

What residents would like to do at Mullumbimby pool

The activities that residents would like to do at Mullumbimby included:

- Lap swimming for fitness (73.6%)
- Relaxation/recreational swimming (52.4%)
- Group exercise/aquafit program (37.9%)
- Rehabilitation therapy (29.1%)
- Children's play (29.1%)
- Deep water activities/exercise (26.0%)
- Swimming lessons/parents and bubs activities (24.7%)
- Squad/club swimming (17.6%), and water polo (6.6%)
- Other: winter swimming (8), freediving (6), exercise programs for seniors and Dive training (1).

Likely use of the upgraded pool facilities

The results explain that a high proportion of the respondents would attend the Mullumbimby pool more than twice a week to do a number of these activities.

For residents in postcode 2482: Mullumbimby, Goonengerry, Mullumbimby Creek, Main Arm, Wilsons Creek, Wanganui, an increase in use of the pool by about 4.4% is expressed.

For 2481: Byron Bay, Myocum, Tyagarah, Suffolk Park, Ewingsdale, Talofa 3.2% increase could be expected.

For localities to the north and east, little additional potential use of the pool was identified.

Use of the 50 m pool year-round

The survey results indicate that 91.3% of the respondents would swim in the outdoor 50 m pool all year round.

Respondents indicated that if a warm water pool were provided, they would continue to do exercise in the winter months.

The activities 61% of the respondents would participate in included casual swimming for fitness, (25.2%) for aquatic fitness/gentle exercise program, exercise/rehabilitation (21.1%), swimming lessons (15.8%) and water familiarisation programs (9.7%).

Open air or enclosed?

Respondents support the development of a warm water swimming pool that is not fully enclosed given the climate. The survey forums an open, heated water pool will be:

- Asset to the community
- Protection from the wind
- Need change room upgrades
- If cost effective to leave outdoor
- Leave open less Chlorine smell
- Flexibility in all weathers
- Keep sides open for fresh air
- Sun protection needed over a pool
- Solar heating

Respondents stated that solar heating was an effective way to heat the pool and the showers.

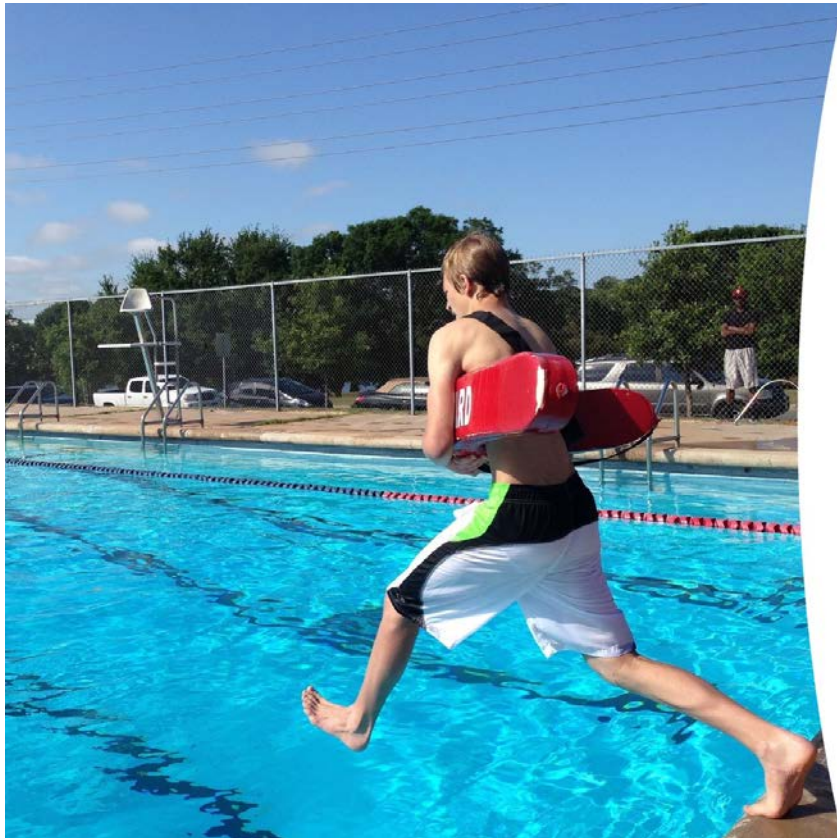
General support

There was overwhelming support from the respondents for the redevelopment of the Mullumbimby pool.

Respondents stated that they wanted the pool to be accessible all year round and believed the best way to do this was to heat the swimming pools.

Many stated that the redevelopment of the pool would mean that they do not have to travel to another pool to fulfil their aquatic needs.

4. OTHER POOLS IN THE REGION



The following map shows the known pools with public access, closest to the Mullumbimby pool, by type and access features.

Some sixteen pools are located in the region with approximately 50 minutes drive of Mullumbimby. Pools in Lismore in the south west, Ballina in the south and Banora Oasis Pool in the north, may compete with the upgraded facility for some type of activities, depending on a number of factors including facility features, temperature and accessibility, and convenience to get there.

A list of the known pools and a map of their location can be found over the page.

4.1. Competition with other pools

The provision of a warm water pool with glass bifold doors that opens in the summer, and the provision of contemporary and highly accessible facilities suitable for use by allied health and casual users, will provide a major competitive strength for the pool.

None of the pool's identified in the region had a warm water pool with a temperature over 32oC, with an adult change table and over head hoist direct from the change room into the water.

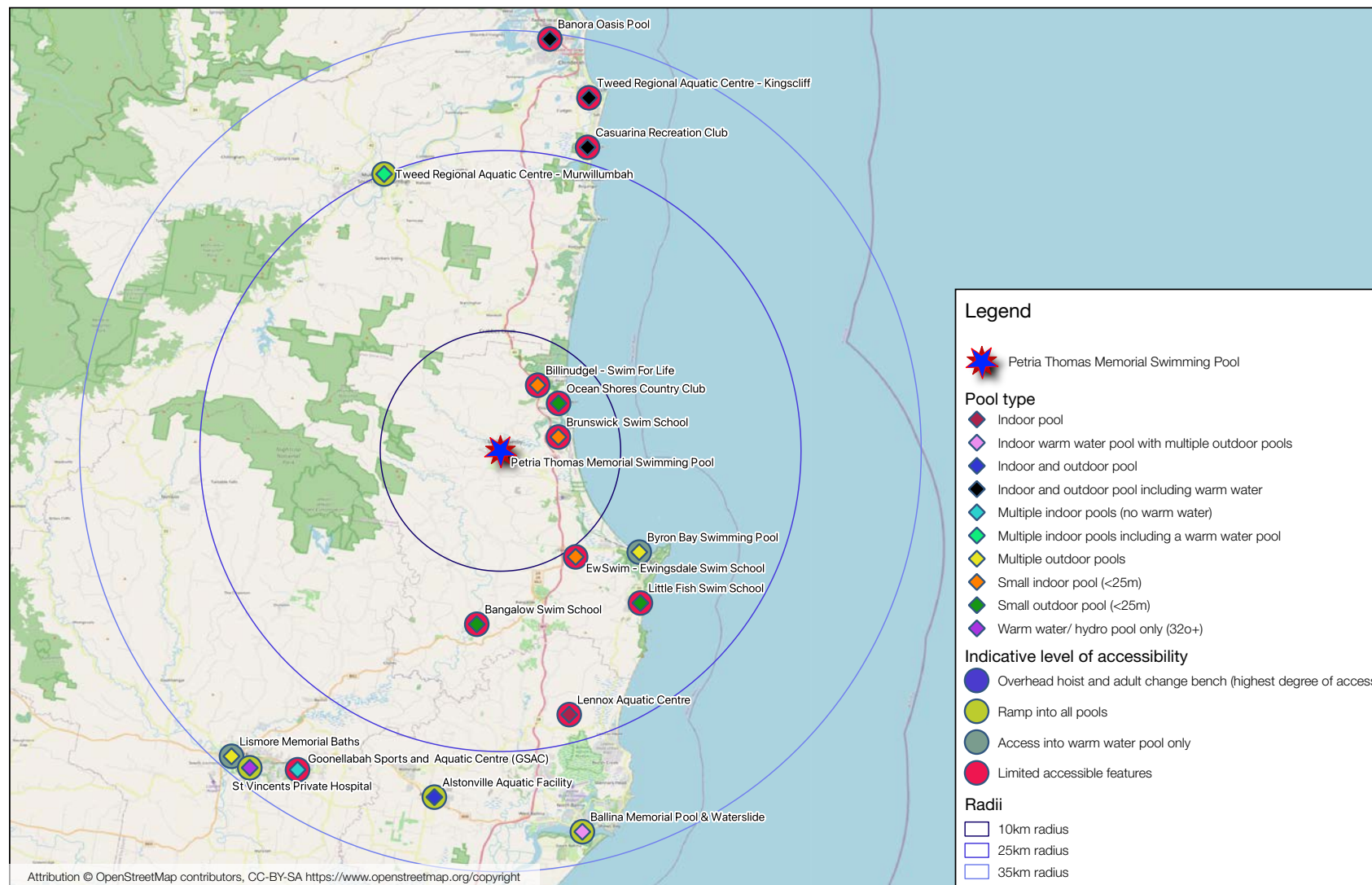
The size and profile of the current outdoor 50 m pool is attractive to existing swimming club members and water polo players, and these should not be changed, even if the pool shell needs to be replaced.

The site is sheltered-compared to other pools such as Byron and Ballina, and this assists with keeping the water warm and at an ambient temperature.

As the Mullumbimby pool site is very constrained in size, so it is not able to offer the slides and size of leisure water facilities to compete with other larger pool complexes such as Ballina.

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Figure 5. Map of other pools in the region open to the community, by type of pool and accessibility to people with a disability.



Aquatic facilities with public access in and adjacent to Byron Shire
Petria Thomas Memorial Swimming Pool Feasibility

0 10 20 km

DISCLAIMER: While care has been taken with the production of this map, the publishers do not accept responsibility for any error or omissions.

Date 25 10 21
 Prepared by NR



Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Table 11. Details of Swimming Pools That May Compete With An Upgraded Facility in Mullumbimby

Pool name	Suburb	LGA	All year/ Summer	Km from PTMSP	Indoor Pools	Outdoor Pools	Access	Aquatic Programs
Byron Bay Swimming Pool	Byron Bay	Byron Shire	SO	19.5 km	No	Yes-multiple	Limited.	Aqua Fit, Water Polo, Carnivals, Swimming Squads
Bangalow Swim School	Binna Burra	Byron Shire	AY	27km	No	Yes	No	Teaching.Learn to swim
Brunswick Swim School	Brunswick Heads	Byron Shire	AY	9.1 km	Yes	No	No	Aqua Aerobics,Learn to Swim, Lap swimming
EwSwim - Ewingsdale Swim School	Ewingsdale	Byron Shire	AY	15.9 km	Yes	No	Accessible toilet only	Learn to Swim
Billinudgel - Swim for Life	Billinudgel	Byron Shire	AY	9.8 km	Not known	Not known	Not known	Learn to Swim for people with a disability.
Ocean Shores Country Club	Ocean Shores	Byron Shire	AY	9.4 km	No	Yes	Limited	Aqua Aerobics – Low impact
Little Fish Swim School	Suffolk Park	Byron Shire	SO	30km	No	Yes	Not known	Learn to Swim
Tweed RAC-Murwillumbah	Murwillumbah	Tweed Shire	AY	36.6 km	Yes	Yes + Splash	Good. No overhead hoist	Aqua Aerobics, Deep water running. LTS
Tweed RAC - Kingscliff	Kingscliff	Tweed Shire	AY	45.7 km	Yes	Yes	Limited	Aqua Aerobics, Learn to Swim, incl. all ability. Squads
Ballina Swimming Pool & Waterslide	Ballina	Ballina Shire	AY	42.7 km	Yes	Yes + Splash	Good. No overhead hoist	Aqua Aerobics, Learn to Swim, Water Polo, Squad Swimming LTS for pwd.
Alstonville Aquatic Centre	Alstonville	Ballina Shire	AY	48.8 km	Yes	Yes + Splash	Good. No overhead hoist etc.	Learn to Swim Incl. people with a disability,Water Polo Swim Club, Squad
Lennox Aquatic Centre	Lennox Head	Ballina Shire	AY	38.8 km	Yes		No	Aquarobics. Learn to Swim 4 months to squad.
Banora Oasis Pool	Banora Point	Tweed Shire	AY	53.7 km	Yes	Yes	Ramp to outdoor	Aqua Aerobics,Learn to Swim 4 months to squad
Casuarina Recreation Club	Casuarina	Tweed Shire	AY	48.2 km	Yes	Yes	No	Aqua fit, Squad , Learn to Swim, Lap Swimming
Lismore Memorial Baths	Lismore	Lismore	SO	58.8 km	No	Yes-multiple	Good. No overhead hoist	Learn to Swim squad
Goonellabah Sports and Aquatic Centre (GSAC)	Goonellabah	Lismore	AY	19.5 km	Yes	No	Limited	Aqua Aerobics. Learn to Swim incl. all ability
St Vincent's Private Hospital	Lismore	Lismore	AY	27.0 km	Yes	No	Ramp only.	Only for hospital patients and day rehab program.

5. THE EXISTING POOL SITE

5.1. The Reserve

The Mullumbimby Pool is located at Stuart Park, 5 Jubilee Avenue, Mullumbimby on Crown Reserve R42924 which is Lot 187 in DP 755692.

Crown Reserve R42924 was gazetted for the purposes of Public Recreation in 1908 and is classified as Community Land and categorised as General Community Use.

A new Plan of Management for the Reserve would need to be prepared in consultation with the community and Crown Lands before any new or significantly upgraded facilities could be introduced to the Reserve, including the areas of the Reserve outside of the swimming pool fence.

At the rear of the current pool enclosure is Swimming Pool Park, that abuts the creek. In the north, the land used as the pool car park is a separate reserve; Stewart Reserve. See image over the page.

First Nations interests in the land

Native Title Rights and Interest

The pool is located on the traditional lands of the Bundjalung of Byron Bay, Arakwal People, who continue to have rights and interests in the land. Ongoing management and use of the pool needs to continue to co-exist with the exercise of Native Title Rights and Interests in the land.

Any redevelopment of the pool can only occur if it is a 'valid future act' complying with Native Title Act 1993 (Cth).

Before proceeding with any proposed redevelopment plans, Native Title Manager Advice will be required on the specific plans.

The Native Title Manager Advice will indicate if the proposed works could be validated, whether they would create an obligation to pay compensation for impacts on Native Title Rights and Interests and what statutory processes must be followed before Council has the ability to make any decisions about potential redevelopment.

Aboriginal Cultural Heritage

As noted above, the area is traditional lands of the Arakwal People who have continuing cultural rights. A search of the Aboriginal Heritage Information Management System indicates that there are aboriginal sites recorded in this area – refer to Appendix 8. Council will be required to complete due diligence investigations into Aboriginal Cultural Heritage before proceeding with works on the Reserve.

At the rear of the current pool enclosure is Swimming Pool Park, that abuts the creek. In the north, the land used as the pool car park is a separate reserve; Stewart Reserve. See image in Figure 6.

The site is crown land. It is bordered on two sides by waterways, the Mullumbimby Creek to the west and the Saltwater Creek. Immediately to the south the land along the creek is in private ownership.

A preliminary search indicates that "aboriginal sites are recorded in or near the swimming pool". Appendix 8. provides the preliminary notification from the search, about this site. However here are few additional areas of the site that are to be disturbed in this proposal, except along the northern boundary.

Planning controls

Planning controls held within the Planning Database are summarised below.

- Local Environmental Plans Byron Local Environmental Plan 2014 (pub. 26-2-2021)
- Land Zoning DM Deferred Matter: (pub. 12-2-2021), RE1 - Public Recreation: (pub. 30-5-2014)
- Height of Building 9 m
- Floor Space Ratio NA
- Minimum Lot Size NA
- Heritage Mullumbimby Significance: Local
- Land Reservation Acquisition NA
- Foreshore Building Line NA
- Acid Sulfate Soils Class 4

Site constraints and opportunities

The plan following (SITE ANALYSIS NOTES) shows an aerial photo and some key points about the Mullumbimby pool. In addition, there appears to be significant constraints associated with the site and its physical conditions that may influence the proposed design and development at this site, or simply require further investigations to be prepared prior to planning approval.



Figure 6. Land zoning Source NSW Planning Portal

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Size

The site is 12645 m² in area. The land parcel is triangular in shape and extends a long way west along the creek boundaries. The pool enclosure however does not currently extend all the way back to the creek.

The possibility of extending the pool enclosure into the park at the rear (Swimming Pool Park) has been suggested. Council's Recreation and Open Space Strategy identifies that a playground in this location should be upgraded, however it is a very secluded area and according to the Mullumbimby Residents Association and local schools this area attracts a degree of anti-social activity.

There is a steep drop off into Mullumbimby Creek and the site is likely to have cultural heritage values. The extension of the fence to include some of this area, as suggested would need to be considered in the Plan of Management process and consider safety and sight lines from the pool deck. The image below shows the area of land.



Flooding and soil conditions

Information provided by Council concerning flooding shows that the buildings on site would flood by 29 mm in a 1:100 year flood. The site was flooded in 2017 and the pool was closed for some while it was cleaned at a considerable cost. Previous to that the last major flood was in 1974.

The design and levels of building will need to be in accordance with Byron Shire Development Control Plan 2014, Chapter C2 Areas Affected by Flood.

Further detailed advice about this site was not available during the time frame of the study concerning specific implications of flooding, or the placement of the building. A further detailed flood assessment will need to be submitted with a development approval application.

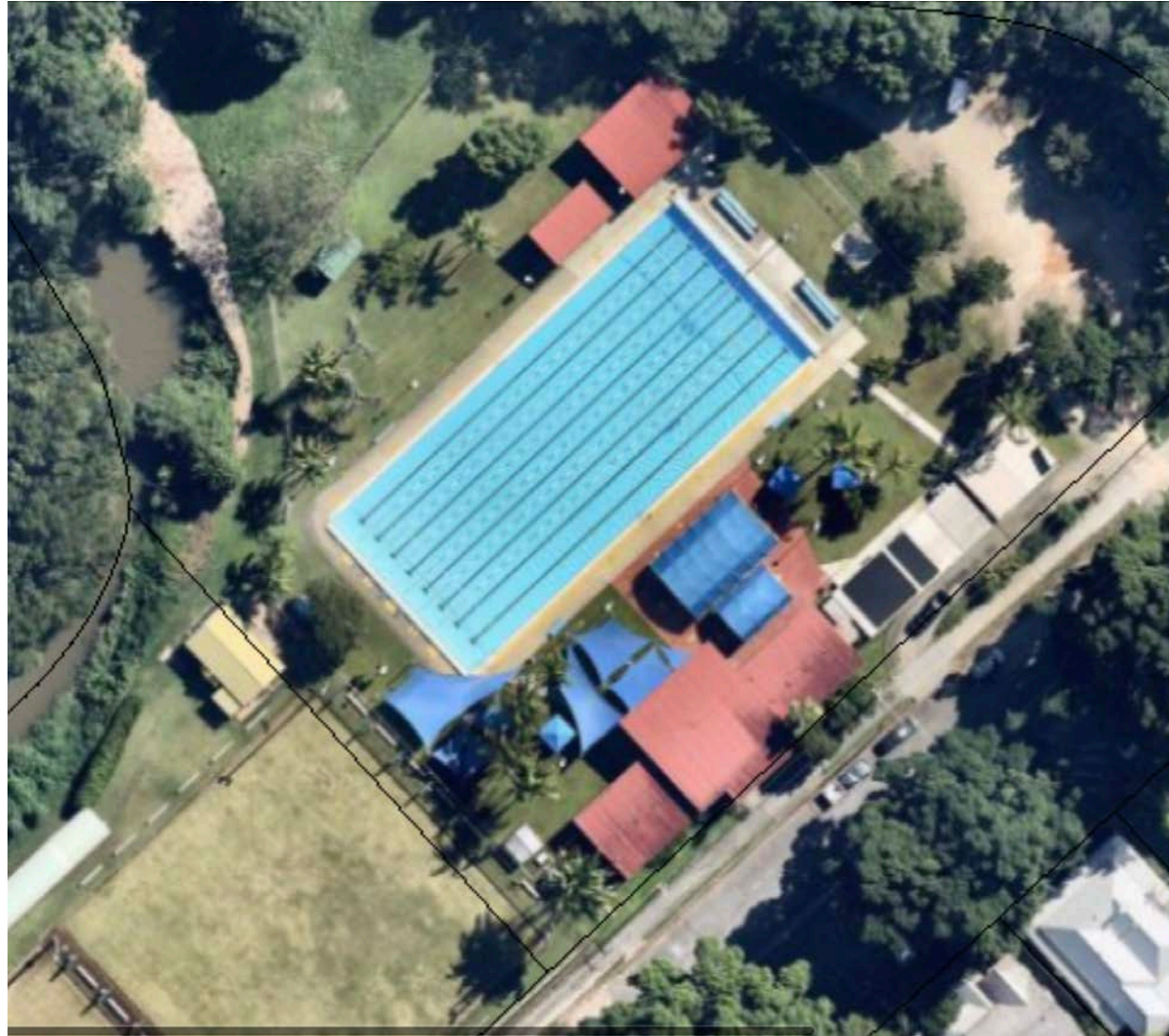
The architect engaged for this project, advises that the amenities building floor level could be raised without having to fill the site. If the 50 m pool structure is replaces the levels of the site could also be adjusted.

A geotechnical investigation was carried out in December 2007 by Border Tech. Subsurface conditions are summarised as a field layer of stiff sandy clay extending 2.6 mm overlying and alluvial sequence of stepped silty and sandy clays which continued to a depth of three metres. The ground water table was not intercepted in the course of the investigation. There is existence of some filling material.



Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

SITE ANALYSIS NOTES



Constraints. The site is small and flood prone. Buildings are under 100 return period. Trees have high pollen and debris get into filters. Development approval may require flood, vegetation and cultural heritage assessments.

The Swimming Pool Reserve at the rear may be incorporated into the pool enclosure, pending POM, Native Title and safety assessments. The site slopes down to the waterway.

Better storage for clubs is required e.g for water polo to fit goals and ensure caps can dry.

Additional shade and under cover space is needed especially for schools, and clubs.

The club to the south is considering their options to develop one green. This site may provide an opportunity for bigger

Buildings are not fit for purpose or code compliant, and can't be used by schools. There is only one hot shower, and limited shelter adjacent to the kiosk. A warm water pool needs pool side accessible facilities. The location along the front reduces visibility into the pool.

Access: At peak times after school, it is very busy and children run across to the pool across the busy road. The on-street accessible car parks are on steep slope and not safe. Parking is unsealed, undefined and constrained by trees. The site is not likely to be able to provide adequate car spaces to meet code requirements. Schools need bus parking.

The Pools. The 50 m Olympic pool is 8 lanes, 1-2m depth. Blocks needs to be replaced. Users say it is important to retain the lane and pool width and the depth profile-good for water polo, as well as a swim ledge for swimming lessons. The pool is unheated and seasonal. It is predicted from wind so temperatures can be maintained. The pool only has ladder access and a pool deck hoist. There is a wading pool (not operational) and a junior pool

The pool has lights, but their positioned at the pool ends is not satisfactory for water polo. With good lights schools would hold carnivals at night so families can attend.

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

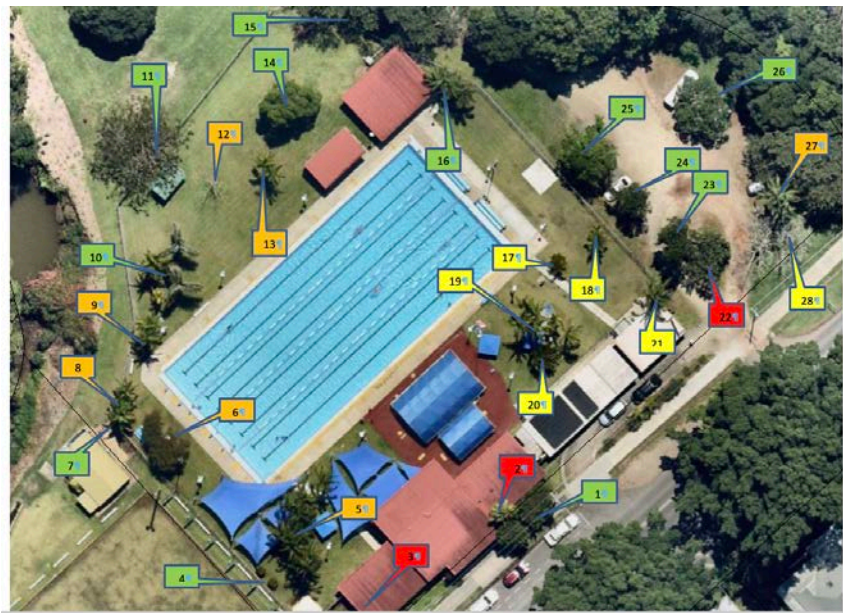
Vegetation

The site is surrounded by vegetation which provides a level of protection from wind and a beautiful scenic background.

There are some trees in the pool enclosure, some of which may not be suitable for this setting due to the amount of leaf and floral matter and other loose materials that interfere with pool filters and may make surfaces slippery.

Pool users also identified problems associated with the amount of pollen generated by some trees at the site. Tree's habit that may impact on the concourse integrity and the amenity value is also an important consideration. Users also suggested additional trees be provided along the southwest side of the pool to protect users from the sun.

Council prepared a report on the 28 trees within the pool enclosure and associated car park. This report is attached as Appendix 7.



This report suggests that most trees are desirable to retain and several may be replaced if required. The image above shows the recommendations of the horticulturalist; (replace those shown in red, potential trees to be replaced in orange and those to be retained in green).

The design concept has sought to work around existing trees, especially in the car park. However, in relocating the building to the northern boundary at least one tree (18) will need to be replaced.

Access and parking

The pool has accessible parking on the street (2 spaces), which appear small. Users say these are steep and therefore not functional.

There is a drop-off point and unsealed informal parking on the road verge. Concern was raised about people running across the road in busy times. The potential movement of the amenity building to the north, to address the car park would overcome this risk.

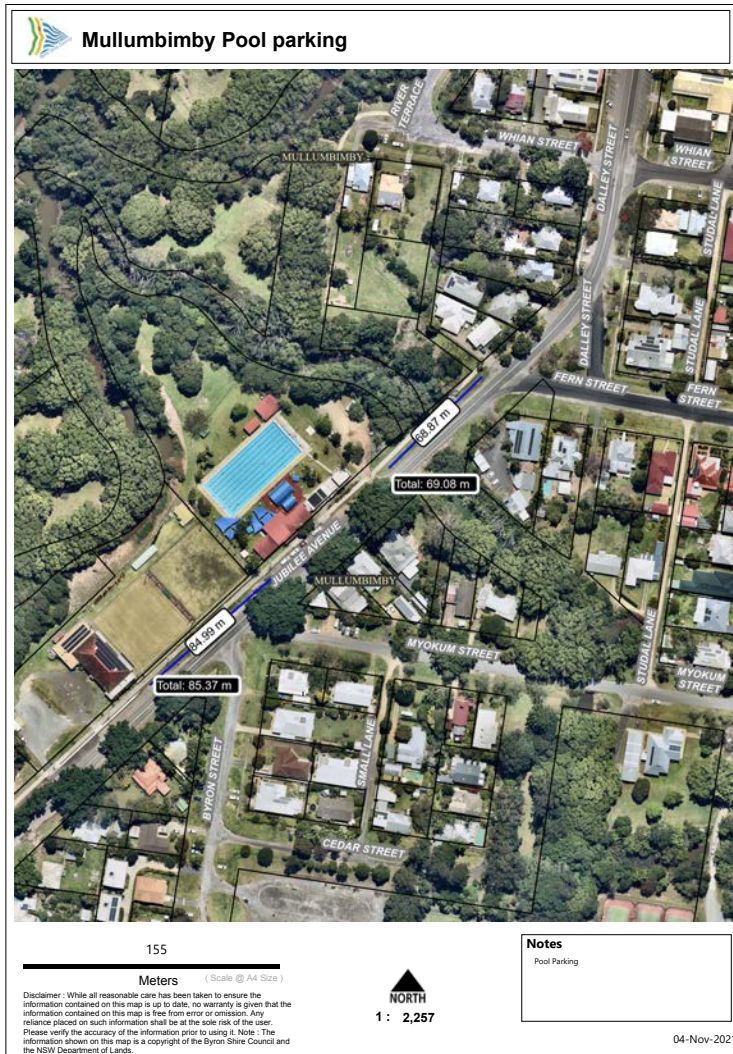
The existing car park to the north of the pool is unsealed and does not have designated car spaces. If this was formalised 26 car spaces could be provided. This number of car spaces is not likely to be sufficient to serve new facilities, including the demand for buses during carnivals.

The opportunity to use the existing car parking at the ex-serviceman's club to the south and or an arrangement for acquiring or leasing car parking in the land that may be surplus to their needs should be investigated.

No significant changes to the existing car park are proposed other than designation of spaces including accessible spaces.

Any redevelopment of the car parking area would need to be supported by a new Plan of Management and the works would comply with Native Title Act requirements, including potentially the requirement to pay compensation if the works impact Native Title rights and interests.

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility



Car parking for the upgraded facility would need to be in accordance with Byron Shire Development Control Plan 201 Chapter B4 Traffic Planning, Vehicle Parking, Circulation and Access. It is not clear if this upgrade would be considered “a major expansion of an existing development “ that would require a traffic impact assessment.

Council advises that on-street car parking could be provided on the west side of the Jubilee Avenue, in the locations shown on the following map. Approximately 25 parallel car spaces could be provided in these locations.

Council staff advice there are no specific car park requirements for outdoor pools and any assessment will be on merit.

The Council could investigate opportunities to use the existing car parking at the ex-serviceman’s club to the south of the pool site, especially for any major events. If part of that land ever becomes surplus to their needs, the value of the site for parking or other pool uses should be investigated.

The Mullumbimby Master Plan however notes “that the town is generally flat and walkable, with wide streets that allow for multi-modal access. There is an opportunity to create an “active” town that is physically and economically accessible for all people from all walks of life”. There is a pedestrian off-road link south from River Terrace.

Connections from the town centre to the pool should be made accessible to encourage people to walk, wheel or cycle to the pool without having to park. Undercover parking for mobility scooters should also be provided close to the pool entry.

The design concept site plan, shows parallel parking along Jubilee Avenue and a bus drop off zone along side the pool.

The DA approval process may require some formal traffic and parking report.

6. PROPOSED FACILITY FEATURES AND THE DESIGN CONCEPT

6.1. A heated 50 m pool

The key elements associated with the outdoor 50 m pool would include:

- Continue to accommodate water polo and competitive swimming (with lights to the side) with the same depth profile of 1-2m
- Additional covered stands and drinking water for carnival users
- Continue to provide for laps swimming and lessons
- New starting blocks for the swim club and school sports
- Protection from the western sun
- Provide multiple access options:
 - Add an ramp access
 - Provide a pediment to allow some one transfer from a wheelchair, and
 - Retain a pool side hoist/or vertical lift
- Use the existing plant room where possible to minimise pipe work
- Heat the pools with solar power
- Relocate the lighting towers and replace the fittings with energy efficient ones
- Locate safe storage for blankets
- Provide additional storage-including that purpose built to accommodate water polo and other equipment.
- Extend the pool enclosure where safe to do so, to encompass more of the Swimming Pool Reserve (as appropriate considering POM outcomes and further first nations rights and interests assessments)

- Consider the species and placement of trees to minimise interference with the concourse or pool structure, limit fruit, nuts and flowers contaminating the pool or splash park getting into filters and to reduce pollen discomfort.

6.2. A splash park

Why a splash park?

A splash park is zero depth water, so there is no risk of drowning and therefore these facilities don't need lifeguards. Other benefits of splash parks are:

- They encourage interaction and parents to play with the children.
- They allow a parent who may not swim or uses a mobility device to play in water with a child.
- They can easily be designed to be accessible to people using mobility device suitable for water.
- These facilities get around all the special clothing, for cultural groups and body image issues that people may face when using a swimming pool.

Some regional Councils suggest you may get 5% increase in attendances and may be a longer duration of stay for families.

A splash park should have the following features:

- Be zero depth, have light colour, non-slip water surface (for environmental reasons and so they can be used by children in bare feet when its hot).
- Be designed to be accessible to people using mobility device suitable for water
- Have a range of interactive elements suited to children of different ages and abilities
- Have a barrier between any pool they adjoin.

What are the implications of including a splash park?

These facilities need different management to pools. Unless a splash park uses non circulating drinking water, it must be treated like any other aquatic centre-in fact, it needs higher turnover levels (every 1/2 hr) and disinfection and 4 hrs water quality testing.

Water can become contaminated by food scraps from adjacent picnic areas etc, and make the surface slippery.

If people are clothed and not showered or if babies are in nappies, a source of infection can be introduced to the water.

Dirt and other debris may also blow in and cause blockages. Maintenance on jets and pumps etc can be quite high.

Some specific risks around spray plume height and velocity need to be planned for. High spray plumes may expose more people to the drift of water particles if contaminated, including people who may not be directly using the facility; while low spray plumes may be more appealing to young children, resulting in accidental or intentional water consumption.

Big buckets may knock children off their feet and cause injury.

If a splash park is not protected from wind large quantities of water may be lost outside the apron and wet other areas patrons.

A child may crawl from the cool wet surface onto a very hot dry surface if such a surface surrounds the splash park.



6.3. A warm water/hydrotherapy pool

What is the difference between a hydrotherapy/warm water and other pools?

Typically, a hydrotherapy pool is a warm water pool designed for aquatic rehabilitation and heated to a minimum of 34°C.

The term warm water pool is typically used when a public pool is required for programming, lessons, and exercise classes and for therapeutics activities, and doesn't need to purely meet hydrotherapy needs. Also pools classified as hydrotherapy pool have higher staffing requirements than may be feasible in a public setting.

Warm water pools are generally heated pools to 32°C +. Air temperature around a hydrotherapy/warm water pool is warmer than a typical swimming pool; maintained at approximately 25-28°C.

It is not typical to provide a warm water pool outdoors, as the energy cost of maintaining the water at 32°C would be excessive.

Why a hydrotherapy or warm water pool?

The value of hydrotherapy and warm water pools is the combination of heat and buoyancy that provide a relaxing, pain-relieving medium. For example, older adults, or clients with acute pain, arthritic or some neurological conditions will benefit from hydrotherapy that can often not be offered on land.

Hydrotherapy pools are widely used in the healthcare profession for rehabilitation programs, for pain relief, enhancing strength and flexibility, and improving balance. They are also commonly used by people with a disability for lessons, exercise and to enhance well-being generally.

The buoyancy of the water makes it easier for users to move about and allows them to perform activities, rehabilitative exercises and learn movements, without placing additional stress on joints.

Users get the benefit of a gentle form of exercise that can significantly improve their overall quality of life. It is not necessary for the patient to know how to swim to enjoy the benefits of therapy pools.

Warm water facilitates muscle relaxation and improves circulation, while also helping to decrease a user's sensitivity to pain. Additionally, warm water enhances balance, trunk stability and body awareness.

Hydrotherapy is an exercise conducted in water to maintain and upgrade body strength, flexibility, conditioning and general fitness and to promote a sense of well-being.

Features of the warm water pool

- The pool should be 900m-1.5m deep to allow for learn to swim and water familiarisation activities, aqua programs such as gentle exercise, water walking and deep running, casual swimming for people with a disability or older adults and rehabilitation and hydrotherapy activities.
- A ramp should be provided into the pool with a hand rail and associated walling and a water chair should be provided.
- Two accessible change rooms on the pool deck should include at least one with an adult change table and ceiling hoist direct into the water.

6.4. Multi-purpose room

A multipurpose room should be provided in the amenity block and adjacent to the outdoor pool. This could be used for small group activities such as yoga, birthday parties, club meetings and activities, staff and water safety training and will support social activities at the pool.

A small amount of income from the hire of the multipurpose room is likely, however its availability will benefit and extend other existing users.

6.5. Storage

User groups identified the need for fit for purpose storage spaces of an adequate size and nature to store water polo goals and enable caps to dry, for example.

In previous Royal Life assessments storage was raised as a concern around the plant room impeding access and because sports club equipment was being kept in a number operational areas restricting access.

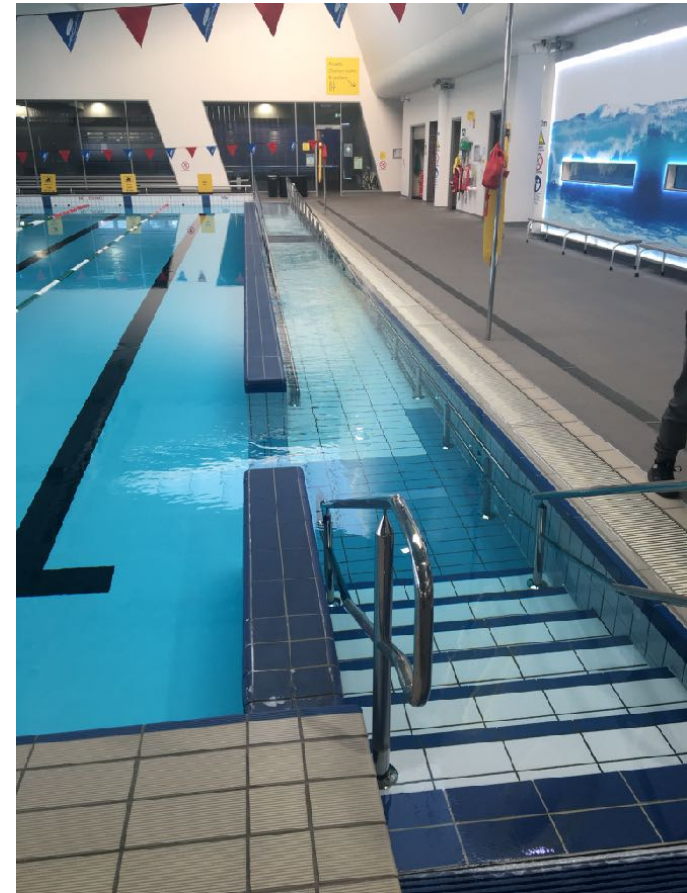
Internal storage and storage close to the pool for sports is required.

6.6. Design issues and opportunities

Some key issues are in considering the upgrade requirements. These were:

- Car parking
- The location and relationship of the amenity block to parking
- Toddlers pool location
- Enclosure of the warm water pool
- Implication of flooding
- Implications of breaking into an old pool shell to provide an access ramp.

These issues are set out in the following table.



Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Table 12. Key design issues and options

Issues	Details	Option
Car parking	The current car park is not sealed and doesn't not have designated spaces. The size is constrained by the surrounding vegetation. More car spaces that the 26 possible on this site would be needed to serve the proposed facility. Any redevelopment of the existing carpark would need to be supported by a new Plan of Management and the works would comply with Native Title Act requirements.	Investigate the options to expand the car parking in the present location or arrangements with adjacent property owners to use existing or develop further car spaces.
Relationship of the amenity-block to parking	The condition and position of the amenities block. The block is large and screens views of the pools. It is close to the road and people park on the unsealed shoulder of Jubilee Avenue and for children to run across the road. The on-street accessible car parks on the street are not fit for purpose.	Replace the amenity block with a code compliant fit for purpose facility, addressing the carpark on the north side. This location may not have any additional benefit in relation to flood levels. There is sufficient room on the north side of the pool for an amenity block, including the existing balance tank.
Toddlers pool location	Adding a warm water pool at the minimum recommended size of 20m* 11 m on a small site, and where it can be serviced by amenities close by, means that the toddlers pool needs to be moved.	Colocated a toddler's pool with the splash park in a central area allows it to be easily supervised. This area can be designed so it can be divided for lessons and programs.
Enclosure of the warm water pool	The warm water pool was proposed to be an outdoor facility. While this may mean the pool will be comfortable in the warm weather, outdoors it will be less functional and flexible in use and very expensive to heat. Council has a zero emissions policy. This type of pool is considered an outdoor pool and when it comes to storms people with a disability using the pool may need to get out in a hurry.	The alternative is to provide an enclosed building which is light and has glass bifold doors that can be opened in warm weather and closed when raining, cold or stormy (or for some rehabilitation or single gender activities). By being able to manage the air temperature the cost of heat will be considerably less. This pool could be closed at certain times if there we no bookings, to minimise the cost of lifeguards.
Access ramp into the 50 m pool	The existing pool has a really good depth profile and width however the infrastructure is quite old and there is some risk of breaking into the pool wall to add an access ramp as it may cause structural failure	There are two options to address this issue. One is to reduce the dimensions of the pool and move the lanes over to put the ramp inside the pool shell. This option this would be much cheaper but will affect the pools usability and would not likely be acceptable to sport users. Alternatively, if the risk of breaking into the wall is considered high, then there is a cost of approximately \$5 million to replace the existing pool shell with a new pool that may be beneficial anyway, to provide a longer asset life.

6.7. The preferred concept and site plan

The Mullumbimby pool site and the proposed layout of the upgraded facility is shown in the following site plans, with a larger design concept over the page.

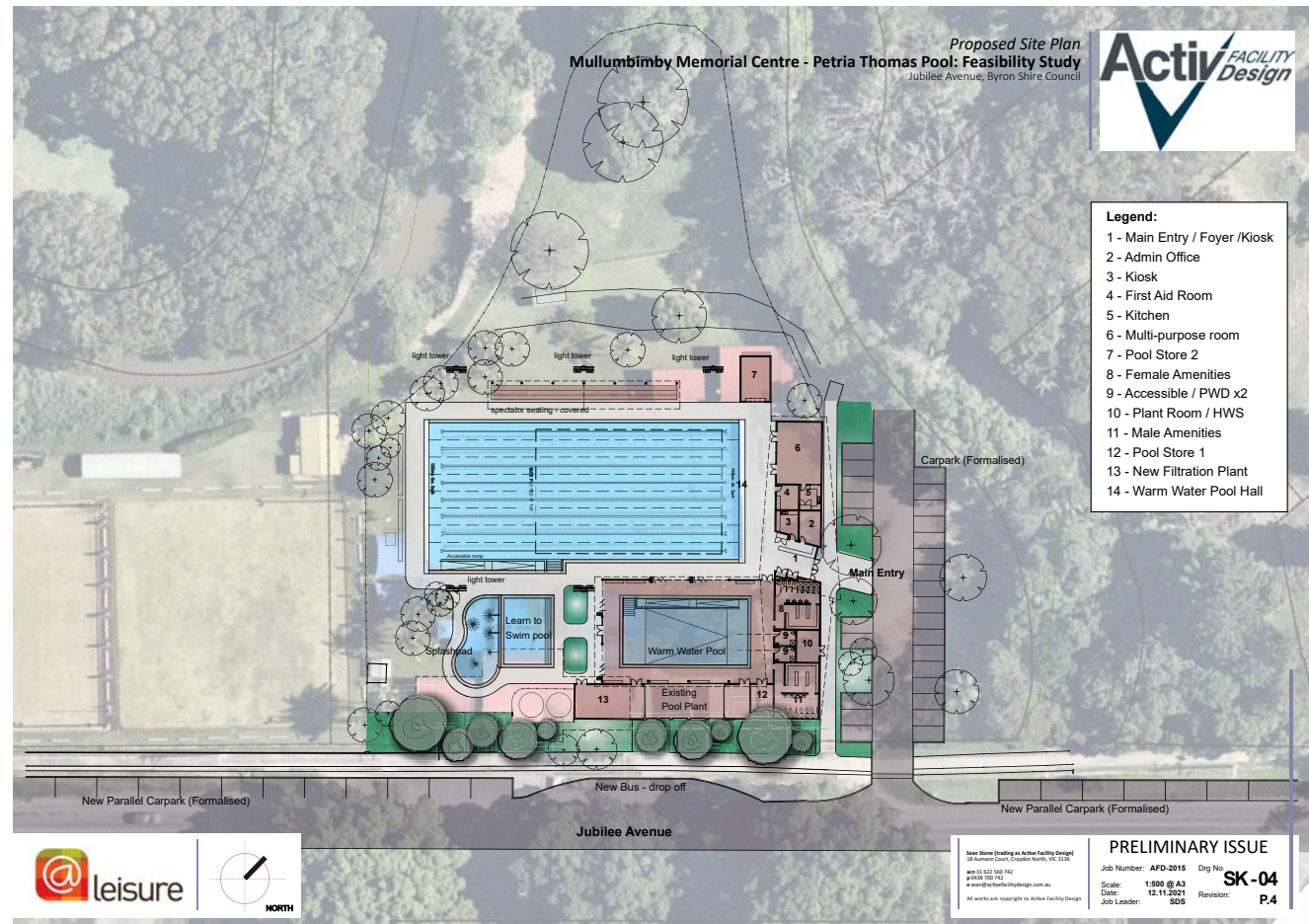
The site plan shows that the site is constrained for size.

This site plan shows a possible extension to the pool enclosure at the rear of the existing pool. This extension may not be supported from a Native Title perspective. Fences can only be installed on Native Title lands during construction works or to address serious public safety. Pool fences are required for safety but an extension of the pool fence to enclose otherwise public open space may not be possible or supported in the PoM process.

To increase the safety of access, the proposed pool amenity building is relocated to the north.

With the constraints of the vegetation surrounding the current car park, it could include some 26 designated car spaces. However if a full redevelopment of the car park is proposed it would need to be supported by a new Plan of Management and the works would comply with Native Title Act, including the potential requirement to pay compensation, if the works impact Native Title rights and interests.

Other car parking and access arrangements may need to be refined at detailed design stage.

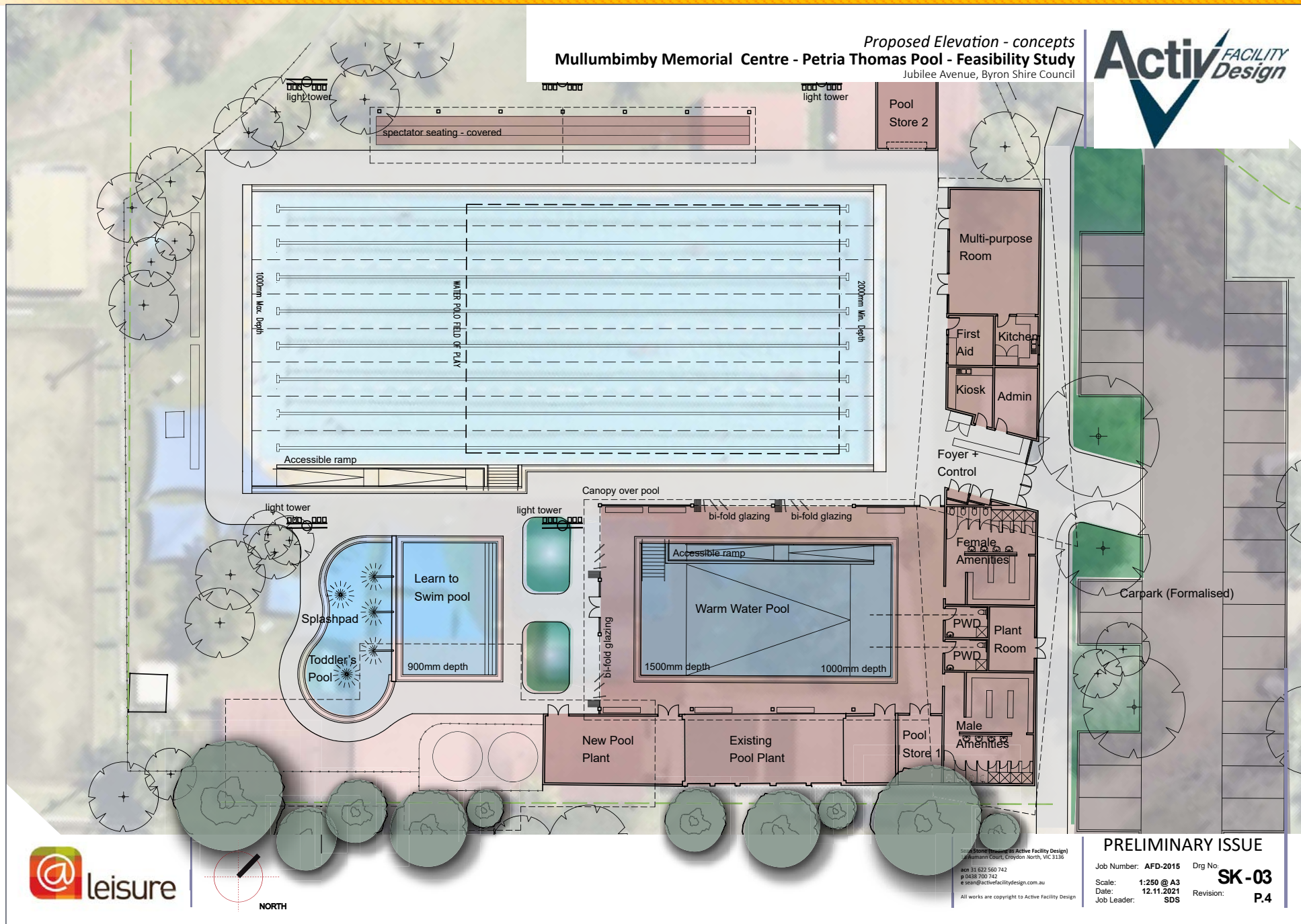


Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Proposed Elevation - concepts

Mullumbimby Memorial Centre - Petria Thomas Pool - Feasibility Study

Jubilee Avenue, Byron Shire Council



PRELIMINARY ISSUE

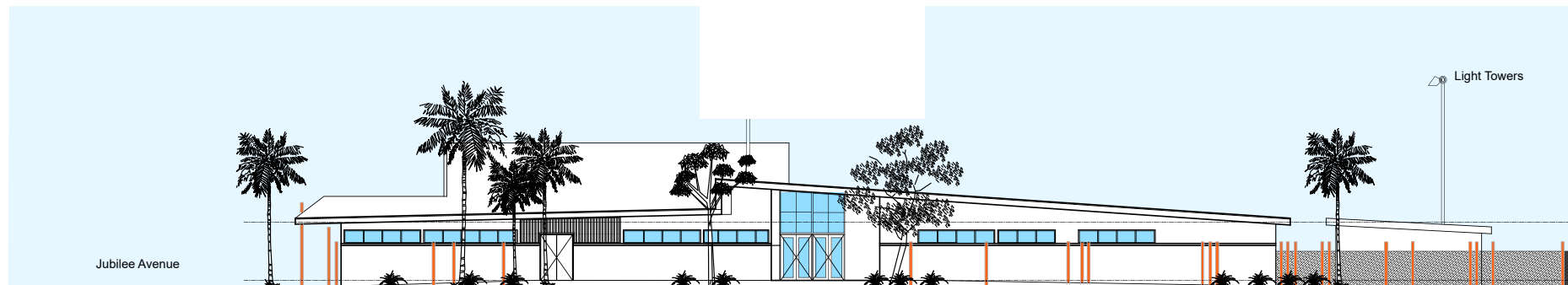
Job Number: AFD-2015 Drg No: **SK-03**
 Scale: 1:250 @ A3
 Date: 12.11.2021
 Job Leader: SDS
 Revision: **P.4**

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Proposed Elevation - concepts
Mullumbimby Memorial Centre - Petria Thomas Pool: Feasibility Study
 Jubilee Avenue, Byron Shire Council



Main Street Frontage - Elevation (Southern)



Main Entry - Elevation (Northern)

Main Entry

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

External Impressions - View 2 (Car park Frontage)
Mullumbimby Memorial Centre - Petria Thomas Pool: Feasibility Study
 Jubilee Avenue, Byron Shire Council



Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

External Impressions - View 4 (Pool side)
Mullumbimby Memorial Centre - Petria Thomas Pool: Feasibility Study
 Jubilee Avenue, Byron Shire Council



Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

External Impressions - View 1 (Street Frontage)
Mullumbimby Memorial Centre - Petria Thomas Pool: Feasibility Study
 Jubilee Avenue, Byron Shire Council



Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

External Impressions - View 3 (Main Entry)
Mullumbimby Memorial Centre - Petria Thomas Pool: Feasibility Study
 Jubilee Avenue, Byron Shire Council



7. POOL HEATING AND WATER TREATMENT OPTIONS

7.1. Water and energy in pool operations

In recognition of the importance local government plays in addressing climate change, Byron Shire Council has been actively implementing emissions reduction actions and reporting on emissions since 2004. Council has committed to:

- Achieving 100% net zero emissions for Council operations by 2025 in collaboration with Zero Emissions Byron.
- Sourcing 100% of Council's energy needs through renewable energy within 10 years (2027).
- Becoming certified under the Climate Active Carbon Neutral Standard by 2025/26.

The community benefits of swimming pools are significant, as outlined in the cost benefit analysis in Chapter 10. However, typically swimming pools are the greatest consumers of water and energy of any other type of building.

Water and space heating can account for up to 80% of an aquatic centre's total energy costs and is the single most expensive operating cost after labour.⁷

New facilities can reduce water use and energy losses through insulation, choice of materials and energy and water saving fittings. However If Byron Shire wishes to build and operate a warm water pool and heat an outdoor 50 m in Mullumbimby, a reliable and affordable renewable heating source is required with the least impact on emissions.

Currently Council's two swimming pools are not targets for reducing emissions or water as they are only seasonal and are not heated.

Energy source options

Natural gas, which typically provides the energy for many public indoor pools is an energy source that Councils are moving away from as a means of reducing carbon emissions.

Geothermal energy takes heat from below the earth's surface to heat pool water via a ground loop system requiring two bore wells. The heat energy from the water is taken off via a heat exchanger and the cooled water is re-injected back down into the aquifer at about 40 degrees. Typically it is a closed loop operation whereby no net water is extracted from the aquifer. It is suggested that savings of 730 tonnes per year of Co2 emissions can be made by using this heating source. The new Gippsland Aquatic Centre in Victoria have installed a 650 metre bore to reach an aquifer below the surface to access water at 65C. The Scarborough Beach Pool, Perth, is the 13th Perth swimming pool to use geothermal heating. It is estimated that the design will result in a greenhouse gas abatement of approximately 1800 tonnes of carbon dioxide per year compared to a conventional gas boiler system⁸.

Council has advised that Geothermal heating and wind power is not a practical consideration in Mullumbimby, and the principal source of energy for the pool would be solar power.

⁷ Energy efficient water heating technology guide for aquatic centres. NSW Office of Environment and Heritage. 2019

⁸ ausleisure.com July 2017

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

There are several 6 Star Green Star Rated pools in planning/construction in Australia, and one seeking to use green hydrogen as the principal energy source. These examples are however in different climate zones, where for example timber construction can significantly reduce embodied carbon. Due to the humidity in Mullumbimby, a timber building is not likely to be practical.

Figure 6 Temperature and Rainfall: Mullumbimby over 12 months



Mullumbimby's climate

The average temperature in Mullumbimby is 19.1 °C and the rainfall is 1306 mm per year. The figure below illustrates the key climate statistics.

The region is likely to experience more hot days as well as milder winters, perhaps reducing the pool heating requirements.

The average rainfall, sun hours, rainy days and maximum and minimum temperatures through out the year are shown in the following figures from Climate data.org

Figure 7. Average temperature , sun hours, rainy days and maximum and minimum temperature

	January	February	March	April	May	June	July	August	September	October	November	December
Average Temp °C	23.4	23	22	19.5	16.9	14.8	14.1	15	17.5	19.3	21	22.6
Average Sun (hrs.)	7.8	7.3	6.9	7.1	7.4	7.0	7.7	8.2	8.7	8.3	8.6	8.6
Rainy Days (d)	12	12	14	12	9	9	6	6	6	8	9	10
Precipitation (mm)	162	166	147	101	112	109	54	58	49	94	121	133
Max. Temp °C	27.1	26.5	25.3	22.9	20.6	18.4	18.3	19.6	22.3	23.8	25.2	26.6
Min. Temp °C	20.7	20.5	19.5	16.9	13.9	11.9	10.7	11.2	13.7	16	17.9	19.6

Source: Climate.org from BOM records.

Council considers timber structures (due to the humidity) and the use of wind generated power and geothermal energy, are not practical energy sources for Mullumbimby.

Pool heating options to further consider for a indoor warm water pool and 50 m outdoor pool in a redeveloped Mullumbimby swimming pool could include:

- Hydrogen
- Tri-generation
- A combination of sources-rotary heat exchange, electric system with solar. etc.,
- Solar/Battery with the use of electric heat pumps

Electricity that can be generated from a renewable source appears to be the most practical energy source.

Electric heat pumps

Heat pumps extract heat from the air (similar to a reverse cycle air conditioner) and use that heat to produce hot water.

Electric heat pumps are extremely energy efficient. They consume very little electrical energy to operate and produce much more in the form of heat. For example, if a heat pump consumes 2 kW of electricity it will produce 6 to 10 kW of heat energy.

Electronic heat pumps are becoming a common option for aquatic centres.

Heat pumps may lose their high energy efficiency slightly once the weather cools down, as the pump has to work harder to heat the water against the outside temperature. This is unlikely to be an issue in Mullumbimby where icing is unlikely to occur.

Ballina Aquatic Centre uses heat pumps, however the solar power (without storage) generated on the site is not sufficient to meet all energy requirements.

Heat pumps, solar panels and battery storage

Heat pumps can also be used in conjunction with solar roof panels as an energy source with a battery used to store excess energy. Alternatively, energy can be returned to the electricity grid to earn credits from the electricity provider to help subsidise the overall energy costs.

Solar strip-heating

The solar strip system is commonly used to take the 'edge' off cold water pools and is currently in use numerous seasonal pools around Australia. A portion of pool water is redirected to tubing located on a nearby roof structure, heated by the sun and returned to the pool. Heating is reliant on the sun shining and is restricted by the amount of roof space to install the tubing on.

Typically, a pool blanket is used for both indoor and outdoor pools overnight, to help retain the heat generated during the day in the pool water.

Co-generation/Tri-generation

Combination – rotary heat exchange, electric system with solar.

The power plant produces multiple forms of energy from a single input. The most common is natural gas-powered combined heat and power, which produces power and heat, while tri-generation produces chilled water as the third output. Extra energy that would otherwise be wasted is recovered and used. However, there are many complex technical, regulatory and financial elements to this technology.

Cogeneration and tri-generation offer energy efficiency of 90% or more compared to fossil fuel-powered plants, which have a 30-40% maximum efficiency.

The new City of Sydney, Gunyama Park Aquatic and Recreation Centre (Green Square) is to be heated by a cogeneration system, while a cogeneration system is currently being installed at Cardinia Life Aquatic and Recreation Centre in Melbourne.

Hydrogen

Hydrogen fuel cells produce electricity by combining hydrogen and oxygen atoms. The hydrogen reacts with oxygen across an electrochemical cell similar to that of a battery to produce electricity, water, and small amounts of heat.

Hydrogen can be stored in either gas or liquid forms.

Hydrogen is now used to power vehicles including buses and cars.

Hydrogen energy is being considered for the proposed an Aquatics and Wellbeing Centre in George Town Council, Tasmania.

Heating recommendations

Based on our experience, using solar power and electric heat pumps is likely to be the most effective and efficient option for Mullumbimby.

Further technical advice is needed at the detailed design concept stage to confirm the details of the best heating option on this specific site, and the quantity of solar power that can be generated. The detailed design process should also introduce water and energy saving elements such as insulation, and more energy and water saving fixtures and fittings as well as harvesting (where possible) and recycling of water.

An allowance is provided in the preliminary order of costs for ESD (environmentally sustainable design). Only at detailed design stage can the details and cost of materials, fixtures and plant be accurately costed.

7.2. Water treatment options

The disinfection of public swimming pools and spas in NSW is guided by NSW Health and public health legislations including Schedule 1 of the Public Health Regulation 2012.

The Public Swimming Pool and Spa Advisory Document, 2013 also provides information and guidance to pool operators, authorised officers, pool consultants and other swimming pool industry stakeholders.

NSW Health (as in other States) only recommends the use of chlorine or bromine based disinfection systems for public swimming pools, interactive water features and spa pools. These systems rely on proper concentrations of pH and reserve alkalinity.

There are two primary disinfection paradigms acceptable and they are based on the halogens of chlorine and bromine. Other chemicals or systems, such as ozone or UV light, may be used in conjunction with chlorine or bromine.⁹

Salt water chlorination or in line salt-water generation works by having pool water run through an electrolytic cell containing a cathode and anode, before being returned to the pool inlets. Chlorine gas is generated at the anode while hydrogen gas is generated at the cathode. This system is more suited to smaller pools as it is limited in the amount of free chlorine that can be produced.¹⁰ Therefore salt water chlorination systems are typically more suited to home pools.

⁹ Health Protection NSW. Public swimming pool and spa pool advisory document, Sydney: 2013. Sydney, 2013.

¹⁰ Ibid

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Other sources that provide guidance for water treatment in public swimming pools include:

- Royal Life Saving Society Australia 2018, Guidelines for safe pool operations.

Australian Standards:

- HB 241-2002 Water management for public swimming pools and spas
- AS 1926.3-2010 (R2016) Swimming pool safety — water recirculation systems
- AS 3780-2008 The storage and handling of corrosive substances
- AS 3979-2006 Hydrotherapy pools.



8. PROBABLE CAPITAL AND RECURRENT COSTS

8.1. Preliminary order of cost

The probable capital cost of upgrading of the Mullumbimby pool is estimated as in order of \$10.2 million has been estimated as at 30/10/21 by Activ Facility Design architects (see notes about exclusions). However these do not include any allowance for compensation for impacts on Native Title rights and interests, or pre work investigations.

Several further technical investigations will be required for planning approval and at detailed design, that will refine costs.

Should an investigation find that the pool shell should be replaced (as breaking into it to provide an access ramp is not viable) the cost will increase by some \$5 million dollars.

Staging the project could add a further \$1.6m over 3 stages, or about 20% per stage to the costs. Also it is typically more difficult to seek grants for the second or third stage of a development. It is generally better to seek multiple sources of funds for the overall development.

The table on the following page sets out the summary of the preliminary order of costs, for the total development, and by stage if required. The more detailed cost plan is provided as an Appendix.

Staging

If staging is required there are three logical stages:

- 1) A new amenities building, ESD, preparatory work for the warm water pool hall and car parking
- 2) The new warm pool hall, outdoor learn to swim pool and splash park.
- 3) Outdoor 50 m pool works; access ramp (or replacement of the shell and access ramp), lighting and new spectators stands etc.,



Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Table 13. Preliminary Order of Costs (2021)Mullumbimby pool, including the options to stage the development

Component	Area	Rate	Complete project as a single stage	Staged Options		
	m2	\$/m2	\$	Stage 1. New amenities building and car parking	Stage 2. New warm water pool, learn to swim pool + splash park	Stage 3. Ramp to existing 50 m and outdoor lighting and stands
Building Works - Ground Floor						
Total building works			2,660,900	1,277,900	1,383,000	
Aquatic components						
Total aquatic components			2,938,000		2,588,000	350,000
External Works and Services						
Total External Works and Services			1,434,000	632,500	115,000	766,500
Locality Allowance						
Construction in Mullumbimby	3%		210,987	57,312	122,580	33,495
Construction Total Costs			7,243,887	1,967,712	4,208,580	1,149,995
Fees ESD escalation and other allowances						
Total Stage Cost				3,187,399	6,749,760	1,825,478
Total Project Cost			10,183,059			11,762,637
Additional Option: replacement of the 50 m pool tank structure as required						
Replace the pool shell and balance tank should the risk of breaking into the wall to include a ramp, be too high	Allow		4,500,000			4,500,000
Piping and filtration to suit new 50 m pool shell	Allow		500,000			500,000
Additional Pre-work Costs						
Preparation of Plan of Management			50,000			
Potential Native Title Compensation			Unknown*	*Depends on the type of works and design details		

8.2. Operational costs

Base case profit and loss

Based on the catchment projections and attendances (provided below) and the proposed program for the venue, a Base Case Profit and Loss forecast were estimated.

The Base Case estimates a net loss of approximately \$400,000, based on approximate revenue of \$500,000 and expenditure of \$900,000.

Assumptions for the forecasts are provided in 8.3 following the presentation of the base case.



Estimated annual visitations

Estimated annual participant visits is 113,688 including 9,020 spectator visits, over 20,000 visits to the warm water pool. The following table breaks these estimated visits down in to use types.

Table 14. Estimated annual participation for redeveloped facility including heated year round 50m pool, warm water pool and learn to swim pool

Use type	Est. Annual Visits
Spectator	9,020
Adult (18 +)	45,060
Child (0-18)	10,464
Child 0 - 4	3,168
Child 5 - 17	7,296
Concession	11,560
School carnivals	1,522
School children at school sessions	4,710
Swim school	3,838
Warm water participants	20,720
Warm water pool - allied health/disability	800
Water polo	750
Swim club	3,660
Aqua aerobics	1,584
Total estimated visits	113,688

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Table 15. Profit and loss base case including Council and lessee revenue and expenses based on current management model

Mullumbimby Pool	Base Case Scenario \$	Council \$	Lessee \$
ESTIMATED REVENUE			
Spectator	27,962	27,962	0
Adult (18 +)	171,228	171,228	0
Child (0-18)	26,160	26,160	0
Concession	28,900	28,900	0
Carnivals	12,280	3,000	9,280
School children at school sessions	24,069	15,543	8,526
Swim school	29,127	15,352	13,775
Warm water participants	87,024	87,024	0
Water polo	10,311	3,525	6,786
Swim club	23,415	14,640	8,775
Aqua aerobics	10,829	6,653	4,176
Warm water pool - allied health	26,680	23,200	3,480
Café	29,472		28,422
Multi purpose room hire	5,250		5,250
Total estimated revenue	512,707	423,187	88,470
ESTIMATED EXPENSES			
Cafe costs of goods sold	20,631		19,896
<i>Staff</i>			
Salaries, wages, contractor fees	511,815		511,815
<i>Office and admin</i>			
Banking and finance expenses	2,500		2,500
License fees-front of house IT	3,000		3,000

Mullumbimby Pool	Base Case Scenario \$	Council \$	Lessee \$
Communications	5,000		5,000
<i>Utilities</i>			
Electricity	145,000	145,000	
Water	36,000	36,000	
<i>Equipment maintenance</i>			
Repairs and maintenance	60,000	60,000	
Minor maintenance, repairs and security			
Security, pest control	17,000	17,000	
Fire and safety maintenance	1,000	1,000	
<i>Purchases</i>			
Equipment purchases	2,000		2,000
Rates and charges	23,000	23,000	
Insurance	22,500	7,500	15,000
Marketing	5,000		5,000
Chemicals	30,000		30,000
Program expenses & first aid	1,500		1,500
Misc costs	2,000		2,000
Total estimated expenses	887,945	289,500	597,711
Net operating result	-430,036	133,687	-509,241
Management contract fee		-540,000	540,000
Net result Council/lessee		-406,313	30,759

8.3. Financial assumptions

General

- Centre is open 80 hours per week, 48 weeks per year.
- Indoor and outdoor pools are solar heated with electric heat pump assistance.

Income

Learn to Swim

- 100 enrolments, over a 40 week program.

Aquatic entries

- Income is based on an Adult visit of \$3.80 and Child /concession of \$2.50 to allow for the number of seasonal and multiple pass discounts.

Group fitness

- Lane Hire; Aqua-3 classes per week of 8 participants over 48 weeks per annum.

Learn to swim schools

- Lane hire, based on a 5 day program, 8 per lane.

School carnivals

- Lane hire based on a 10 carnivals, of 4 hours each.

Cafe

- Cafe income based on \$0.25 per visit.

Expenditure

Staffing

- 2 full time staff.

Lifeguards

- 1 outdoor pool and 1 indoor pool for all operating hours.

Swim instructor

- 13 hours per week, 40 weeks a year.

Cafe

- Assistant 8 hours per week.

Energy

- Based on 20/21 Alstonville Aquatic Centre Outdoor 50 m heated to 26C and semi enclosed, 25 m heated to 32C. Solar heating with electric heat pumps.

Note:

Other costs based on current rates/usage and industry averages.

Building depreciation and cost of capital not included.

9. BENEFITS OF UPGRADING THE MULLUMBIMBY POOL

9.1. Benefits of upgrading facilities at Mullumbimby pool

The wide range of benefits of providing community aquatic and sporting infrastructure “brings with it a unique opportunity for further collaboration across governments and government departments to deliver improved value to their communities”¹¹.

Economic benefit includes the economic activity associated with the construction, maintenance and operation of community sporting and aquatic infrastructure and the increased productivity of those who are physically active as a result of such infrastructure¹².

Health benefits include personal benefits to those who are less likely to contract a range of health conditions which are known to be associated with physical inactivity and the benefits to the health system from a healthier population¹³.

The availability and use of community sport infrastructure enables physical activity, and by extension, it supports health and wellness in communities.

Sporting infrastructure provides a space for people of different walks of life to connect around common objectives, it promotes employment and the economy, and it is a critical requirement for liveable cities and neighbourhoods¹⁴.

Social benefits include the increased human capital resulting from the social interactions that are facilitated by community sport infrastructure and the broader community benefits of providing facilities that inclusive of all the community’s needs — not just those who are young, fit, and able bodied, but people of all gender, ability, and age groups. Importantly community members do not need to be active sport participants to derive value and benefit from community aquatic and sporting infrastructure. These facilities draw communities together by providing a gathering place for a broad range of events, celebrations, and meetings¹⁵. And in this instance we have recommended the provision of a modest multi-purpose room to facilitate community activities pool side as well as water safety training.

Community sporting and aquatic infrastructure also supports greater amenity within local communities, enhances connectedness and community pride¹⁶.

¹¹ The Value of Community Sports Infrastructure. Investigating the value of community sports facilities to Australia. KPMG. Aust. Sports Commission 2018

¹² Ibid

¹³ Ibid

¹⁴ Ibid

¹⁵ Ibid

¹⁶ Ibid

9.2. Economic benefits¹⁷

Economic benefits of developing community aquatic and sporting infrastructure include the following¹⁸.

- Increased economic activity: the value that expenditure on community sport infrastructure adds to the Australian economy
- Increased productivity: the value of the additional productivity of physically active people (i.e., in this context those who can swim for fitness all year round or be rehabilitated quicker after surgery or injury or stay active and mobile longer because of warm water, accessible facilities, and local allied health services offering rehabilitation close to home instead of travelling to Tweed head or Gold Coast. For sport a longer season can enable squad to keep training and people participating in aquatic sports for a longer season), all these may add at least a modest amount to the Australian economy
- Employment: the number of people employed through community aquatic sport infrastructure, especially local young people, and all year
- The contribution of volunteers: the value of the contribution of volunteers to community sport, through clubs that use the pool
- Induced visitation: there may also be very small economic benefit of travel generated by events held at this type of community facility.

See Appendix 3.

9.3. Health benefits

Health benefits of providing community aquatic and sporting infrastructure include increased in physical activity, personal health benefits, and a reduced risk of accidents and drowning due to fitness and water safety training and the ability to increase “children’s year-round connection” to swimming.

Increase in physical activity

The old adage of “build it and they will come,” has some element of truth. Statistically significant positive relationships exist between the level of provision of new aquatic and leisure facilities and the level of participation¹⁹ that will increase levels of physical activity.

By heating the pool and adding another accessible body of water for gentle exercise and rehabilitation the facility offers opportunities for older adults and people with temporary and permanent disabilities. Locally this amounts to some 1400 people across the Shire that the existing facilities do not service.

The addition and improvement of facilities at the Mullumbimby pool will increase use, due to the ability to participate all year round, and the additional capacity (through more and better facilities and lights), a broader range of people being able to participate, and the higher appeal of the facility with contemporary and compliant design.

¹⁷ Ibid

¹⁸ Ibid

¹⁹ Rochelle M. Eime, 1,2 Jack Harvey,1,2 Melanie J. Charity,1,2 Meghan Casey,1 Hans Westerbeek, 2 Warren R. Payne2 the relationship of sport participation to provision of sports facilities and socioeconomic status: a geographical analysis Australian and New Zealand Journal of Public Health 2017 vol. 41 no. 3

Programs and organised sport

While all physical activity provides significant benefits for health and well-being, group activity and team-based sports, can provide stronger outcomes including improved resilience; improved mental health across the life course; positive role models; social connectedness; higher likelihood of meeting physical activity guidelines and ongoing activity long term²⁰.

Play opportunities, relevant physical education curriculum and organised sports participation, also help young children to become 'physically literate'²¹. Local schools said they would expand their aquatic offering to other terms, offer more for students with a disability, hold carnivals at night to encourage the engagement of a broader community, and enable students to “connect with swimming” all year round.

A key issue in swimming competency is to allow lessons to continue to occur all year round and enable young people to practice their swimming skills in between lessons and programs.

Personal health benefits

The benefits derived by individual participants through active and social participation decreases their risk of developing chronic diseases and severe mental illness. There is evidence that physical activity can reduce the risk of developing anxiety and depression and act as an effective treatment²².

Perhaps the most significant long-term preventive health benefit of being physically literate is the propensity for physically literate children to maintain a 'normal' body weight range and body mass index (BMI). The evidence is clear, overweight and obesity are factors that increase the risk of acquiring several non-communicable diseases, both in childhood and later in life²³.

The National Health Tracker 2020²⁴ indicates that the estimated proportion of the population, aged 2 to 17 years who were obese in Byron (7.5%) is marginally higher than the target (7.6%) for the area. For those aged 18 years and over who were obese in Byron (67.9%) is much higher than the target (61.1%) for the area by 2025.

The data illustrates however, that the estimated proportion of people aged 18 years and over in Byron Shire who undertook no or low exercise in the previous week (56%) was lower than the target of (59.7%).

The number of potential additional people using the facility is approximately 1000, achieving 113,000+ visits a year.

While all physical activity provides significant benefits, sport and group exercise, particularly team-based sport—can provide stronger outcomes including improved resilience and mental health outcomes; positive role models; social connectedness; higher likelihood of meeting physical activity guidelines and continuing physical activity in the long term²⁵.

²⁰ Clearing House

²¹ See note 11 above

²² See note 11

²³ See note 11

²⁴ Australian Health Policy Collaboration, AUSTRALIA'S HEALTH TRACKER ATLAS, Data by Local Government Area. Nov. 2017.

²⁵ See note 11 above

Increasing indigenous participation

Many Indigenous Australians experience poorer health than other Australians, often dying at much younger ages. Indigenous Australians are more likely than non-Indigenous Australians to have respiratory diseases, mental health problems, cardiovascular disease, diabetes and chronic kidney disease²⁶.

There is also a continued high occurrence of specific diseases - and resulting conditions - that are now virtually unknown in the non-Indigenous population. Notable among these are trachoma (a bacterial infection of the eye) and rheumatic heart disease.

The AusPlay data indicates that Indigenous people are less likely than non-Indigenous people to participate in sports or physical activities (79% compared with 87%).

Exercise and water safety related programs can assist in engaging Indigenous communities, developing wellbeing, and play an important role in progress towards Closing the Gap targets²⁷.

The Aboriginal and Torres Strait Islander population at the 2016 census of Byron Shire was 575.

Reduced risk of accidents and drownings

Evidence suggests that participation in sports and physical activity such as strength training and gentle exercise can significantly reduce the risk of fall-related injury in older adults, while activities such as learn to swim classes hosted at community pools can reduce the risk of drowning²⁸.

Some 89 people drowned in NSW in 2020 according to the Royal Life National Drowning Report and the largest proportion of those (25%) while swimming or recreating.

The provision of a warm pool and a heated pool all year round, for lessons and exercise will encourage more people, especially those in their later years, to remain active and provide for more social sports opportunities.

The Australian Water Safety Strategy 2030 (AWSS 2030) promotes the need for equity in the renewal of swimming, water safety and lifesaving skills across the community.

In addition to reducing drowning, there is a need to promote skill development and a lifelong love of the water.

The AWSS 2030 encourages investments in aquatic centres, the promotion of aquatic facilities as safe venues for physical activity and rehabilitation in a controlled environment and the design of aquatic facilities and redevelopments that cater for an ageing population.

The Strategy identifies that “Preventing drowning in swimming pools is a priority because public access to safe aquatic recreation is vital to reducing drowning in Australia, and Aquatic facilities allow skill development and practice in a more controlled environment”²⁹.

²⁶ [Australian Institute of Health and Welfare](#) (The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples: 2015), [Department of Health and Ageing](#) (Indigenous Australians' Health Program), [Australian Indigenous HealthInfoNet](#) (Closing the Gap)

²⁷ Clearing House AusSport 2019

²⁸ See note 11 above

²⁹ Australian Water Safety Strategy 2030: Towards A Nation Free From Drowning Australia Water Safety Council 2020

Research and evidence suggest that Australian children's physical literacy and motor skill competence is declining, with potential life-long impacts for health and wellbeing. Many studies have indicated that there has been a decline in movement skill competency and physical fitness among Australian children. The 2018 Australian Active Healthy Kids report card gave Australian kids a 'D+' grade for movement skills and a 'D-' for overall physical fitness³⁰.

Additional opportunities to swim all year, including through local schools who said they would include additional aquatic sports, lessons and recreation activities throughout the year, would provide benefits to children's and their physical literacy and motor skill competence.

9.4. Social benefits

Social benefits are derived by users of facilities through physical and sport activity as well as the broader social connection and networks created at community sports and aquatic facilities.

Some pools have indicated that the groups first to return after COVID-19 lockdown were the regular older adults who rely on their pool for regular gentle exercise and social connection³¹.

A wealth of literature suggests a relationship between social connection and improved mental health. By fostering this connection, in addition to facilitating physical activity, community aquatic and sport infrastructure has a unique role to play in the wider sport and recreation³². This connection is not only important for older adults, but for young people also.

The NSW Regional Youth Framework identifies regions are losing young people, unemployment is higher, there are fewer mental health services, and there is not

always place for young people to connect with friends or feel like they belong. Four common themes emerge as things they want. These themes related to jobs and pathways to employment, physical and mental health, digital and physical connection and, things to do and places to go. The provision of an all-year aquatic sports facility in Mullumbimby can provide additional staffing opportunities for young people, as well as things to do and a place to go.

A significant issue often exists with youth disengagement in regional communities. The evidence is clear; during this period of their lives, a significant number of young people stop participating in sport³³. Initial research undertaken by the ASC found that the school environment provides an ideal opportunity to improve participation outcomes for the youth demographic. Local schools see the Mullumbimby pool as enabling them to do provide more active options for the students.

Children who become physically literate are more likely to achieve sporting prowess, athleticism, cardiovascular fitness or more time spent being active, which are amongst a long list of positive outcomes³⁴.

There are some considerable benefits of the proximity of the pool with Mullumbimby High School. They are users of the pool for multiple activities, and this is likely to expand with the proposed improvements.

Social connections can also be facilitated by involvement not just by direct participants in physical activity but by volunteers, officials, and spectators in sports competitions such as water polo and swimming.

³⁰ See note 11 above

³¹ Personal communication with Glen Eira City Council about GESAC

³² See note 11 above

³³ Australian Sports Commission Addressing the decline in sport participation in secondary schools Findings from the Youth Participation Research Project November 2017

³⁴ Keegan R, Keegan S, Daley S, Ordway C and Edwards A, Centre of Excellence in Physical Literacy and Active Youth (CEPLAY), University of Canberra (2013)

The social benefits of upgrading community aquatic facilities also stem from:

- Developing pathways for swimmers from a school to local to regional and higher levels of sports competition
- Enhancing club development and participation through year-round access to facilities for clubs and schools
- Providing for carnivals and events
- The schools interviewed felt that the redevelopment of the PTMSP would be very beneficial to the community. The greatest benefits identified were health (56%) of the local community, with people getting more active all year round. The discussion of benefits also focused on connection (27%) and providing the opportunities for the squad to be operational all year round (27%).

Human capital uplift

The pool upgrade may encourage the club and school sports of swimming and water polo to grow due to access to a longer season and better facilities to attract members. Sport is particularly useful in generating social capital in that it creates both connection between individuals within a group or community and connections between different groups of communities. Sports ability to build bridges between different groups that sets it apart from many other community activities³⁵.

Participants in sports benefit from increased cognition as well as the development of many skills that improve their education and employability outcomes. More broadly, sport is connected with the development of life skills such as goal setting, problem-solving and positive thinking as well as higher levels of engagement with formal education. Participation also encourages young people to stay in school for longer. If the clubs using the Mullumbimby pool grow, then a small increase in volunteers may arise.

Volunteers at sport and recreation facilities produce outputs that contribute to the size and growth of the overall economy, at no financial cost (except to the volunteer through donating their time). They are a crucial element in the delivery of the benefits of community sports infrastructure to participants, acting as administrators, managers, coaches, and organisers amongst other functions

Making Mullumbimby a more attractive place to live

The availability of community infrastructure such as swimming pools is one of the key facility types that attract people to live in a particular area.

Council's Residential Strategy 2020 seeks to maintain community diversity and social cohesion by providing a good supply of housing for a range of lifestyle choices, household types and life stages, including:

- Young people
- Older residents
- Diverse families
- Workers
- Those on a low to middle income

Upgraded aquatic infrastructure that supports all people regardless of age and ability to be physically and socially active and play and watch sport, reinforces the goals of the residential strategy.

In addition to users, the wider community will be advantaged by improvements to their urban environment in attracting families to the area, connecting investment in events and infrastructure, and encouraging partners such as clubs, schools and Councils work together for shared outcomes³⁶.

Communities can take pride in facilities and the successes of their local sports teams, as well as events hosted. New programs or services also engenders feelings of pride amongst individuals

³⁵ Matthew Tont Competitive Sport and Social Capital in Rural Australia 2005.

³⁶ See note 11 above

The Social Impact of the National Aquatic Industry

A recent report: The Social Impact of the National Aquatic Industry Nov. 2021, a report prepared as a Collaboration between Swinburne University of Technology, and Royal Life Saving Society - Australia identified the social value of the industry as 3.8 billion dollars.

Further, the RLSSA report calculated health savings of \$26.00 per pool visit. If this is applied to the redeveloped Mullumbimby pool, then the health saving of development would be \$3,065,114, similar to the "avoided general health benefits projected" (\$3,650,776) but a long way above the "total health benefits" calculated by @leisure of \$1,767,046.

The four main drivers of social impact

The report above suggests, that "the social impact of the aquatic industry is driven by four primary factors, with each factor creating multiple outcomes:

- An aquatic facility's ability to enhance an individual's leisure time or create increased life satisfaction when a person attends for leisure or physical activity.
- An aquatic facility's role as a community space providing increased amenity and bringing people together.
- An aquatic facility's role in providing jobs for young people and regional communities, and the
- The aquatic industry's role in society, that supports early learning".

Similar findings have been identified in research undertaken on social impact in the sport sector, where it has been identified that sport is an effective tool to engage disengaged communities, to create social, mental and physical health outcomes, for safety and social cohesion and for employment and education outcomes (Schulenkorf, Sherry and Rowe, 2016).

9.5. The specific benefits of hydrotherapy/ warm water pools

Warm water pools provide opportunities for rehabilitation programs, strength and conditioning, fitness, weight loss, relaxation or tone reduction and pain management because of the warm water temperature, and resistance and buoyancy provided by water, and enable patients to exercise without having to load bear. The key benefits are:

- Restoration maintenance of muscle power, improved/maintained range of joint movement
- Makes movement easier and maximises function and movement for people with spasticity, stiff joints, etc.
- Ability to exercise without weight bearing
- Warm water provides a comfort factor especially for older adults and people with a disability who may not be able to control their body temperature
- Healing and strength training (resistance of water) after surgery, e.g., joint replacement—hence reduces recovery time and cost.
- Enables a broader range of users to swim or exercise (younger and older) than cold water
- Access to hydrotherapy may mean:
 - Faster rehabilitation: out of hospital, back to work and normal activities
 - Improved physical health and wellbeing, independence, and mobility
 - Prevention of surgery, hospitalisations, and additional care needs
 - Decreased isolation, care needs, medication, GP appointments
 - Fitness/aerobic exercise that may not otherwise be possible—that has a beneficial effect on heart and lungs, endurance, mental alertness, general sense of well-being and increases general body fitness.

9.6. Summary of financial value of benefits

For every dollar invested, the facility may generate \$1.98 for the community.

Table 16. Estimated value of the benefits of upgrading Mullumbimby pool

ECONOMIC BENEFITS	
Current value of avoided absenteeism	\$603
Number of new participants	996
No. of additional visits by people who would not otherwise participate	44,798
No. of additional hours of physical activity	56,893
Present value of avoided absenteeism	\$10,618,792
Present value of avoided general health costs	\$3,650,776
HEALTH BENEFITS	
Value of time benefits for participants	\$1,254,339
Total health benefits	\$1,767,046
Present value of health (user) benefits	\$28,933,954
SOCIAL BENEFITS	
Value of volunteering	\$30,720
Present value of volunteer labour	\$503,015
TOTAL BENEFITS:COST	
Benefit:Cost ratio	1.98
Net Present Value	\$28,933,954

The assumptions on which these calculations have been made are provided in the following table:

Table 17. Inputs and assumptions in the cost benefit analysis

Item / assumption	Value
Project life in years	35
Interest rate	5%
Capital cost-assumes all construction in one stage	\$10,183,059
Operating cost-annual	\$887,945
Escalation of operating costs (percentage)	3%
Number of visits to facility in first year	117,889
Visitors growth factor	2%
Percentage of new participants	38%
Average number of visits per participant per year	45
Inflation rate	1.34%
Current year	2021
Value of avoided absenteeism per year	\$595.4
Base year for value of absenteeism	2020
Percentage of population aged 0 to 14 yrs	16.80%
Value of each additional hour of physical activity	\$3.02
Average no. of hours per visit	1.27
Average travel time (hrs)	0.25
Total annual revenue for facility	\$512,707
Cost of leisure time per hour	\$7.00
Number of new volunteers	6
No. of hours given per volunteer per week	4
No. of weeks per volunteer per year	40
Value of each volunteering hour	\$32

9.7. Risks

There are a number of risks associated with delivering the project. These largely relate to the site, capital funding, ability to meet emission, cost control and marketing. The main risks are listed in the following table.

Table 18. Risks associated with delivering the project

Risk	Likelihood	Consequence	Level of risk	Preventative action required
1) The project doesn't get through planning scrutiny, based on parking, flooding, vegetation, or cultural heritage grounds due to the site	Likely	Major	Moderate	Seek clear planning directions. Consider options to expand the site, raise floor levels and redesign once clear requirements are known.
2) The project does not attract federal or state government funding	Unlikely	Major	Moderate	Lever multiple great opportunities from different sources i.e. regional development, renewable energy, NDIS, including Council.
3) Council determines it can't find the recurrent costs required to operate the facility given low priority of aquatic asset.	Unknown	Major	High Risk	Not known
4) The cost of storing renewal energy required to operate the pools all year is considered too high	Unlikely	Possible	Moderate	Further technical investigation is required into heating sources and renewable energy storage.
5) Recurrent cost over-runs occur as the marketing or financial control is inadequate to achieve attendances and financial outcomes	Unlikely	Major	Moderate	Ensure detailed consideration is given to the nature of management and financial and from of house control.
6) Programming and scheduling don't allow for the maximum use of the facilities without clashing priorities.	Unlikely	Major	Moderate	Ensure detailed consideration is given to the nature of marketing, stakeholder management and creation of partners.

10. CONCLUSIONS AND RECOMMENDATIONS

10.1. Conclusions

There are significant benefits of providing highly accessible and fit-for-purpose aquatic facilities that provide for a diversity of activities such as sport, physical and social activity, rehabilitation and therapy, to a broad range of the community not currently served.

The heating of the outdoor pool will extend the capacity of the facilities and allow the facilities to open all year as well as attract additional use. Providing warm water for therapy and gentle exercise as well lessons and programs with accessible features for older adults and people with a disability we will also the whole community to swim and exercise. Providing a zero depth a splash park for social / family recreation will provide safe and fun options for water play and mean the whole community can be included.

The community and personal health benefits of providing such a facility outweighs the likely financial costs; \$10 million in construction costs (preliminary) and some \$400,000 per year to operate.

The next steps

The recommended next steps to upgrade the Mullumbimby pool are to confirm the ability and cost of addressing any planning issues with respect to specific site constraints, including limited car parking, flooding issues, the risk of breaking into the wall of the 50 m pool to provide an access ramp and potential issues concerning vegetation and cultural heritage.

Further work at detailed design stage may also be required to determine the exact costs of storing renewable energy at the site and reducing potable water use to meet Council emissions reduction strategy.

10.2. Recommendations

@leisure planners recommends the following:

- 1) Exhibit this report for community feedback
- 2) Commence looking for grant opportunities to fund the detailed design and construction of the recommended improvements at Mullumbimby pool
- 3) Conduct further site investigations to refine costs and obtain development approval
- 4) Work with club and potential user groups and the Disability and Inclusion Working Group, through the detailed design process.

11. APPENDICES

Appendix 1. Indicative population growth between 2021 to 2041

Appendix 2. Swimming pools that may compete with an upgraded facility in Mullumbimby

Appendix 3. Economic feasibility data required by the brief

Appendix 4. Potential pool users survey findings

Appendix 5. The school's survey findings

Appendix 6. Preliminary order of cost

Appendix 7 Horticulturalist's report on the trees in Mullumbimby pool

Appendix 8. Cultural heritage search



APPENDIX 1. INDICATIVE POPULATION GROWTH BETWEEN 2021 TO 2041

This table shows the assumed forecast population growth between 2021 to 2041 in each age cohort by suburb (SA1)

Locality (SA1)	0-4 years	5-9 years	10-14 years	15-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45-49 years	50-54 years	55-59 years	60-64 years	65-69 years	70-74 years	75-79 years	80-84 years	85 years+	Total
Bangalow	27	32	30	21	11	15	17	29	35	35	28	27	29	21	11	9	7	13	396
Brunswick Heads	15	22	30	30	16	16	26	28	36	39	37	51	49	32	31	24	12	14	508
Byron Bay	100	110	105	105	144	232	198	163	160	151	170	207	213	156	103	57	26	62	2,462
Mullumbimby	135	172	196	156	102	76	110	162	201	248	236	221	204	162	134	78	71	103	2,766
Myocum - Coorabell and District	3	4	4	3	2	3	3	4	5	6	6	7	8	6	2	2	1	1	70
Ocean Shores - New Brighton - South Golden Beach	44	49	51	51	26	34	43	51	64	62	59	68	68	53	32	22	12	16	803
Rural North West	6	9	8	5	3	5	6	8	9	9	10	11	13	11	5	2	1	1	121
Rural South West	4	6	6	5	3	2	4	5	6	7	8	9	8	6	3	1	1	1	85
Suffolk Park - Broken Head	7	7	7	5	4	8	9	10	10	9	10	10	8	6	4	2	2	2	119
Tyagarah - Ewingsdale and District	2	4	4	3	2	4	3	3	5	6	7	6	6	4	3	2	1	1	66

APPENDIX 2. SWIMMING POOLS THAT MAY COMPETE WITH A FACILITY IN MULLUMBIMBY

Table 1. Details of Swimming Pools That May Compete With An Upgraded Facility in Mullumbimby

Pool name	Suburb	LGA	Season (AY/SO)	Km from PTMSP	Indoor Pools	Outdoor Pools	Access	Programs	Est. Attendances
Byron Bay Swimming Pool	Byron Bay	Byron Shire	SO	19.5 km	No	Wading baby pool 2/3s covered, six inches depth and a temp. of 22°C Toddler/kids pool 2/3 covered, depth of 600 mm and a temp. of 22°C. 6 lane outdoor 50 m pool, a depth of 1 m. Pool temp. 22°C. Not heated.	50 m outdoor swimming pool has a hoist and a large step access. Change rooms are accessible with hand railing, shower, seat. Accessible parking available.	Aqua Fit Water Polo Swimming Carnivals Masters Swimming Squads	Est. 80-90,000 p.a swimming Est. 2-3 aqua classes per week with 8-9 people. 20-30 people max for learn to swim.
Bangalow Swim School	Binna Burra	Byron Shire	AY	27km	N/A	Outdoor toddler heated pool	No	Learn to Swim	Est. 340 swimmers with 68 classes
Brunswick Swim School	Brunswick Heads	Byron Shire	AY	9.1 km	12 m teaching pool, 1.2-1.8m depth temp. 32°	No	Access with a ladder only no hoist. No disability fit out but big enough to fit in the accessible change rooms. Accessible parking available.	Aqua Aerobics – high and low impact Learn to Swim Lap swimming	Three hydro aqua classes of 24 people.
EwSwim - Ewingsdale Swim School	Ewingsdale	Byron Shire	AY	15.9 km	12 m 2 lane teaching pool. Temp to 34° in winter	No	Accessible toilet only	Learn to Swim	Est. there are 80 swimmers – assume 4 people per class for one teacher.
Billinudgel - Swim for Life	Billinudgel	Byron Shire	AY	9.8 km	No	Not known	Not known	Learn to Swim for people with a disability.	Est. 160 swimmers-4 classes per session for 4 kids.
Ocean Shores Country Club	Ocean Shores	Byron Shire	AY	9.4 km	No	Kidney shaped toddler/kids pool 15 m, 1.2 – 2.8 m depth	Ladders have hoist but not installed. There are two accessible change rooms. There are ramps from the car park to the building.	Aqua Aerobics – Low impact	

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Pool name	Suburb	LGA	Season (AY/SO)	Km from PTMSP	Indoor Pools	Outdoor Pools	Access	Programs	Est. Attendances
Little Fish Swim School	Suffolk Park	Byron Shire	SO	30km	No	Yes	Not known		Class of 25 swimmers — for a 12 wk program April to October.
Tweed Regional Aquatic Centre - Murwillumbah	Murwillumbah	Tweed Shire	AY	36.6 km	25 m indoor pool, 4 lanes, 1-3.8 m depth, temp. 29°C s. 12 m warm water pool, 0.9-1.5m depth, temp. with ramp and adult change room. Teaching pool 12 m, 1m depth, a temp. of 33°C	Splash Park not heated. 50 m pool 8 lane and a depth of 0.9-1.2 m, not heated. Have two non-operational diving boards	Ladders only, two portable hoists for the outdoor swimming pool, the warm water pool has an adult change bench with a ramp into the pool. There is one accessible change room. There is accessible car parking.	Aqua aerobics Deep water running Learn to swim Aerobics classes	Est. 1300 per week for swimming. Est. 120 per week for hydro Est. 528 Learn to Swim members per week.
Tweed Regional Aquatic Centre - Kingscliff	Kingscliff	Tweed Shire	AY	45.7 km	Teaching pool, 15 x 15 ms, 1.25 m depth and heated with a temp. of 33°C.	Outdoor 25 m pool with six lanes with a depth of 1.0-1.5 m and a temp. of 28°C.	There is a shallow step in a teaching pool, stairs and ladder are only moveable in the hoist. There is one accessible change room. There is accessible car parking.	Aquarobics-low impact Learn to Swim for aged 6 months – squads Learn to Swim for people with a disability.	
Ballina Mullumbimby Petrie Thomas Swimming Pool & Waterslide	Ballina	Ballina Shire	AY	42.7 km	25 m enclosed pool with six lanes and depth of 1 m. Pool temp. 32°C.	A splash park with zero depth but a water temp. of 30°C. An outdoor 50 m pool with 8 lanes and a depth of 2-3.2 m and a pool temp. of 26°C.	There is ramp access to all pools with a ladder. There is one change room with access for people with a disability. There is accessible car parking.	Aqua Aerobics classes Learn to Swim for those aged 6 months – Adults Water Polo Squad Swimming Learn to Swim for people with a disability.	Eight aquatic classes per week. Est. 400 people in Learn to Swim

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Pool name	Suburb	LGA	Season (AY/SO)	Km from PTMSP	Indoor Pools	Outdoor Pools	Access	Programs	Est. Attendances
Alstonville Aquatic Centre	Alstonville	Ballina Shire	AY	48.8 km	25 m enclosed pool with depth of 1 m and with a temp. of 27°C	A splash park with no depth and not heated. An outdoor 50 m pool with 8 lanes, a depth of 1.32 – 2.0 m and a pool temp. of 27°C.	There is ramp access to both 25 and 50 m pools with ladders and hoists. There is one accessible change room. There is accessible car parking.	Learn to Swim for those aged 6 months – Adult Water Polo Swim Club Squad Learn to Swim for people with a disability.	Three aquatic classes per week.
Lennox Aquatic Centre	Lennox Head	Ballina Shire	AY	38.8 km	Indoor pool with six lanes and depth of 1.2 ms. Temp. is 28 degrees.		There are ladders only for access. There is one change room for people with a disability. Car Park has access for people with a disability.	Aqua Aerobics classes high and low impact. Learn to Swim for those aged 4 months to Squad.	Est. 400 swimmers per week. Est. 465 LTS and aquatic members.
Banora Oasis Pool	Banora Point	Tweed Shire	AY	53.7 km	13 lanes 6 m pool, depth of 1 m and a pool temp. of 32°C. Also contains a sauna.	An outdoor 50 m pool with 8 lanes, a depth of 1.2 – 1.5 m and a temp. of 26°C.	The 50-m pool ramp only has a hoist and steps with rails. There is one accessible change room. Accessible car parking.	Aqua Aerobics classes - low impact. Learn to Swim for those aged 4 months squad and adults.	Est. 250 aquatic and LTS members.
Casuarina Recreation Club	Casuarina	Tweed Shire	AY	48.2 km	25 m indoor pool with 5 lanes and 33°C temperature A kid's lesson pool is also on site.	A six-lane outdoor wading pool	Ladders only for the 25-m pool and stairs for the lesson pool.	Aqua fit classes Squad Learn to Swim Lap Swimming	Est. 280 participants – 26 classes with five kids each.

Mullumbimby Memorial Centre-Petrie Thomas Pool Feasibility

Pool name	Suburb	LGA	Season (AY/SO)	Km from PTMSP	Indoor Pools	Outdoor Pools	Access	Programs	Est. Attendances
Lismore Mullumbimby Petrie Thomas Swimming PoolBaths	Lismore	Lismore	SO	58.8 km	N/A	<p>An 8x10 m wading pool, 30-cm depth, a solar heating to 30°C. A toddler's splash pool.</p> <p>An 8 lane 50 m pool, 1.2 – 2 m depth and a solar heating temp. of 27°C.</p> <p>An outdoor 25 m pool, depth of 1.3 m and a solar heated temp. of 28°C</p>	<p>There is a ramp, ladders and a hoist in the 25 m pool.</p> <p>There are two accessible change rooms.</p> <p>Accessible parking at the front of the centre with the ramp to get into the facility.</p>	Learn to Swim squad	<p>Est. 500 swimmers per week.</p> <p>Est. 140 swimmers for Learn to Swim.</p> <p>Est. aquatic squad members 90.</p>
Goonellabah Sports and Aquatic Centre (GSAC)	Goonellabah	Lismore	AY	19.5 km	<p>5 lane 25 m pool, and a temp. of 29.5°C.</p> <p>20 m teaching pool with three lanes and a depth of 1 m. Pool temp. is 29.5°C.</p>		<p>There is a portable bar hoist around the teaching pool.</p> <p>Car parking is available for people with a disability.</p>	<p>Aqua Aerobics classes high and low impact.</p> <p>Learn to Swim</p> <p>Learn to swim for all abilities.</p>	<p>Est. 500 swimmers visit per week.</p> <p>Est. 300 Learn to Swim Aquatic Members.</p>
St Vincent's Private Hospital	Lismore	Lismore	AY	27.0 km	A 25 m indoor pool for physio use only + a teaching pool with a temp. of 32–35°C.		They have a ramp. The hoist they do not use anymore.	Only for hospital patients and day rehab program.	

APPENDIX 3. ECONOMIC FEASIBILITY DATA IN RESPONSE TO THE BRIEF

The following table provided in the brief has been completed from information provided with the report.

	Item from Council's brief	\$	Notes
1	Productivity Effects <ul style="list-style-type: none"> • Present value of avoided absenteeism • Present value of avoided general health costs 	\$10,618,792 \$3,650,776	Refer economic benefit table.
a)	Predicted usage	\$512,707	Approximately 1,000 new participants and an annual visitation of 117,889 Refer Table in Chapter 9.
	Average daily patronage	311	Based on operating for 48 weeks per year.
	•Adult (18+)	45,060	
	•Child 5-17	7,297	
	•Pre-School 0 - 4	3,168	
	•Spectator	9,020	
	•Concession (inc. pensioners)	11,560	
	•Person with a disability	800	Anticipated significant increase in participation level.
	•Pensioner	Ref concession	Anticipated significant increase in participation level.
	•Schools/Pupils	4,710	
	•School Carnivals	1,522	
	•Swim school	3,838	
	•Warm water participants	20,720	
	•Water polo	750	
	•Swim Club	3,660	

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

	Item from Council's brief	\$	Notes
	• Aquarobics	1,584	
	• Room hire	4,200	
	• Total	117,889	Refer table in chapter 9.
b)	Kiosk - expenditure	\$20,631	
c)	New and existing businesses		Refer employment section
	Direct and indirect		Refer employment section and cost benefit table
	Economic value-add opportunities		Refer cost benefit table
2	Employment effects		
a)	FTE's	3 New FTE's (Full time jobs directly created. 4.5 indirect jobs supported.	ABS indicate that one job in construction requires \$363,000 in construction turnover.
b)	Employment growth (during construction)	26 FTE's Full time jobs directly created during construction. 55 FTE's Full time jobs indirectly supported during construction	The number of indirect jobs supported by the investment would be 2.13 jobs for every direct job.
c)	Employment growth (ongoing)		Refer section 2a above.
d)	Industry mix		Not known
3	Tourism effects (if applicable)	N/A	As a local facilities no significant tourism benefits are likely - other than some additional carnival and future elite training opportunities
a)	Visitor numbers (potential increase in visitor no's)	N/A	See above
b)	Induced expenditure	N/A	
4	Effects on land values in the surrounding streets / village (if applicable)	N/A	N/A
5	Costs		
a)	Capital costs and any support infrastructure, including potential native title costs.	\$10,200,000 or 3 stage construction \$11,800,000	Additional \$5m should outdoor pool shell require replacement. See exclusions listed in the cost plan. A percentage allowance is provided for native title costs.

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

	Item from Council's brief	\$	Notes
b	Recurrent and additional operating costs (including salaries/wages and on-costs)	\$887,945	As per base case profit and loss included within the report
c	Renewal /major periodic maintenance	\$60,000	Per annum. Included within recurrent costs above.
d	Risk mitigation costs (if applicable)	\$22,500	Insurance (included within recurrent costs above). See section on risks in report.
6	Public health benefits	\$1,767,046(total) Present value of health (user) benefits \$28,933,954	Refer cost benefit analysis in report.
7	Other benefits		Refer cost benefit analysis attached
	Levels of Service (benefits and dis-benefits, as applicable to a year-round facility)		Increased level of service to a wider % of the Byron Shire population. Increased level of participation, increased health benefits.Addressing resident with high needs. Potential to review management contract arrangements tin line with services and new costs. Disbenefits: Initial capital costs and increase in annual recurrent costs.
8	Technology		
	<ul style="list-style-type: none"> Update POS system, introduce iCloud technology and software for performance reporting. 	\$3,000 pa (allowance)	Highly recommended to assist in management understand the market, and operational oversight. Paired with door counter for further oversight and management planning and accountability.
9	Catchment areas		Refer table within the report.
	Outline demographic and catchment area present and predicted.		Refer data tables and corresponding explanations within the report.

APPENDIX 4. SURVEY FINDINGS OF MULLUMBIMBY RATE PAYERS AND SCHOOLS

Introduction

This report summarises the key findings from an online survey that was conducted through the Mullumbimby Rate Payers Association database. The survey was conducted by @leisure planners.

A sample of 226 people were surveyed by using survey monkey. They were asked information about current and future usage of the Mullumbimby aquatic facilities and services and future facility components. A copy of the survey can be found in Appendix 1.

The survey questionnaire was set up and administered using three main sections.

Survey respondent profiles such as age and location (this will allow cross tabulation of the results).

Current swimming pool usage (in general and specifically related to the Mullumbimby pool).

Future use of the Mullumbimby Petria Thomas Swimming Pool specifically related to heating the outdoor 50 m pool and the inclusion of a warm water partly or fully enclosed pool.

Current use of swimming pool

Survey respondents were questioned on their use of swimming pools. Public swimming pools included swimming pools that were council and privately owned, but not home use.

The results from the survey found that 92.6% of the respondents used a swimming pool near where they lived.

A total of 7.4% did not visit a pool near to where they lived.

The high percentage of respondents that visit swimming pool provides this analysis with a reasonable sample to understand the current and future needs of the community in relation to the Mullumbimby Petria Thomas Swimming Pool.

Location of swimming pools used

The survey respondents were asked which swimming pools they currently attend. A comparison of the results identifying the pool the respondent swims at compared with where they reside is provided in the following table.

Table 1. Respondents by post code

Post code and suburbs	Total No.	%
2482: Goonengerry, Main Arm, Mullumbimby, Mullumbimby Creek, Wanganui, Wilsons Creek	114	50.2%
2483: Billinudgel, Brunswick Heads, New Brighton, Ocean Shores, Ocean Shores Nth, South Golden Beach, The Pocket	72	31.7%
2481: Byron Bay, Ewingsdale, Myocum, Suffolk Park, Talofa Park, Tyagarah	24	10.6%
2479: Bangalow, Coorabell	7	3.1%
2480: Clunes Eureka, Federal, Goonellabah, Upper Coopers Creek	5	2.2%
2478: Ballina, Cumbalum	2	0.9%
2477: Alstonville	1	0.4%
2488: Bogangar	1	0.4%
2484: Murwillumbah	1	0.4%

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Table 2. Swimming pool attendances in relation to postcode/suburb

Swimming pool	Postcode and suburb (no. of swimmers)	Postcode and suburb total	%
Mullumbimby Pool	2482: Mullumbimby (87), Goonengerry (6), Mullumbimby Creek (5), Main Arm (3), Wilsons Creek (2), Wanganui (1)	104	40.6%
	2483: Ocean Shores (33), South Golden Beach (22), Brunswick Heads (8), Billinudgel (2), New Brighton (1), North Ocean Shores (1), The Pocket (1)	68	26.6%
	2481: Myocum (7), Byron Bay (4), Tyagarah (3), Suffolk Park (2), Ewingsdale (2), Talofa (1)	17	6.6%
	2479: Bangalow (5), Coorabell (2),	7	3.4%
	2480: Federal (2), Goonellabah (1), Upper Coopers Creek (1)	4	1.6%
	2478: Ballina (1), Cumbalum (1)	2	0.8%
	2477: Alstonville (1)	1	0.4%
	2488: Bogangar (1)	1	0.4%
	2484: Murwillumbah (1)	1	0.4%
Tweed Regional Aquatic Centre - Murwillumbah	2482: Mullumbimby (14), Goonengerry (1), Wilsons Creek (1)	16	6.3%
	2483: Ocean Shores (8), South Golden Beach (3), Brunswick Heads (1)	12	4.7%
	2481: Tyagarah (2), Myocum (1), Ewingsdale (1)	4	1.6%
Byron Bay Swimming Pool	2482: Mullumbimby (6), Mullumbimby Creek (1)	7	2.7%
	2483: Ocean Shores (5), South Golden Beach (3), Billinudgel (1)	9	3.5%
	2481: Byron Bay (4), Suffolk Park (2)	6	2.3%
	2479: Bangalow (2)	2	0.8%
	2480: Federal (1)	1	0.4%

Swimming pool	Postcode and suburb (no. of swimmers)	Postcode and suburb total	%
Ballina Swimming Pool and Water slide	4282: Mullumbimby (16), Goonengerry (4), Mullumbimby Creek (2), Main Arm (1), Wanganui (1)	24	9.4%
	2483: Ocean Shores (11), South Golden Beach (4), Brunswick Heads (2), North Ocean Shores (1)	18	7.0%
	2481: Tyagarah (3), Byron Bay (1), Myocum (1), Suffolk Park (1), Ewingsdale (1)	7	2.7%
	2479: Bangalow (2), Coorabell (1)	3	1.2%
	2480: Federal (1), Goonellabah (1)	2	0.8%
	2478: Ballina (1), Cumbalum (1)	2	0.8%
	2477: Alstonville (1)	1	0.4%
	2484: Murwillumbah (1)	1	0.4%
Brunswick Heads Swim School	4282: Mullumbimby (11), Main Arm (1), Wanganui (1)	13	5.1%
	2483: Ocean Shores (7), Brunswick Heads (3)	10	3.9%
	2481: Tyagarah (2), Ewingsdale (1)	3	1.2%
Lennox Aquatic Centre	4282: Mullumbimby (1), 2481: Suffolk Park (1), Ewingsdale (1), 2479 Bangalow (1)	3	1.2%
EwSwim – Ewingsdale Swim School	4282: Mullumbimby (2), Main Arm (1)	3	1.2%
Banora Oasis Pool	2483: Ocean Shores (2), North Ocean Shores (1)	3	1.2%

The results from the survey identified that the respondents visited a range of swimming pools that included the Mullumbimby Petria Thomas Swimming Pool, Tweed Regional Aquatic Centre - Murwillumbah, Byron Bay Swimming Pool, Ballina Mullumbimby Petrie Thomas Swimming Pool and Waterslide, Brunswick Heads Swim School, EwSwim (Ewingsdale Swim School) and Banora Oasis Pool.

A high percentage of respondents that live in the postcode area of 2482 (40.6%) attend the Mullumbimby Petria Thomas Swimming Pool, however, they also visit a range of other pools i.e., Tweed Regional Aquatic Centre (Murwillumbah), Byron Bay Swimming Pool, Ballina Mullumbimby Petrie Thomas Swimming Pool and Waterslide, Brunswick Heads Swim School, Lennox Aquatic Centre and EwSwim (Ewingsdale Swim School).

Two reasons that the respondents from postcode 2482 could be visiting other pools is to continue swimming, lessons, or water-based exercise over the winter month (as the Mullumbimby Petria Thomas Swimming Pool is closed) and/or seeking specialist services such as a warm water pool that are currently not offered at the Mullumbimby Petria Thomas Swimming Pool.

The surveys indicated that the respondents are willing to travel to achieve their aquatic needs. The Mullumbimby Petria Thomas Swimming Pool has a wide catchment area that receives visitors from 30 other suburbs including Alstonville, which is 47 km away. These results indicate that the Mullumbimby Petria Thomas Swimming Pool has a strong following and would indicate that any improvements to the centre would only strengthen their current market.

Improvements to the Mullumbimby pool

To assist in understanding the future level of demand of the Mullumbimby Petria Thomas Swimming Pool the respondents were asked to nominate activities that would encourage more use. A total of 97.4% respondents stated that they would be likely to use the Mullumbimby Petria Thomas Swimming Pool if improvements were made to make it a year-round facility.

The proposed inclusions include a heated outdoor 50 m pool, a warm water program/therapy and to create access to the 50 m pool, change rooms and car parking to include all people.

The respondents identified a number of activities that they would like to do at the Mullumbimby Petria Thomas Swimming Pool that they do not do now, these included:

- Lap swimming for fitness (73.6%)
- Relaxation/recreational swimming (52.4%)
- Group exercise/aquafit program (37.9%)
- Rehabilitation therapy (29.1%)
- Children's play (29.1%)
- Deep water activities/exercise (26.0%)
- Swimming lessons/parents and bubs activities (24.7%)
- Squad/club swimming (17.6%)
- Water Polo (6.6%)

The respondents also identified a range of 'other' (8.37%) activities that they would do at the Mullumbimby Petria Thomas Swimming Pool that they would not do now. These have been outlined in Table 3.

These results see a significant potential increase in the use of the Mullumbimby pool from current usage levels.

Table 3. Additional swimming or related fitness activities

Theme – Activities/ services	Comment(s)	No. of comments
Diving	Free diving Dive training Free diving training in winter	6
All year-round swimming	Winter swimming (4) Winter swimming (instead of River swimming) Lap swimming for fitness during winter All year-round (2) Weekly swimming lessons year-round after school	8
Programs and activities	AquaFit for seniors Dads and kids activities-not all single parents are “mums” A water slide like Ballina would be amazing for the children in the area	3
Disability	Mullum residents do not represent potential usage of creating the only Shire pool with heating and disability access	1
Health	Mental health	1

To understand how these activities compare to usage levels, the respondents were asked how often they would complete these activities if they could. The results from this question are provided in the following tables.

Table 4. Future use frequency of participation

Activity	More than twice a week	Once a week	Once a fortnight	Once a month	Less than once a month
Squad/Club swimming	67.5%	22.5%	2.5%	0.0%	7.5%
Children's play	54.6%	27.3%	7.6%	7.6%	3.0%
Swimming lessons/ mums and bubs activities	25.9%	70.4%	0.0%	0.0%	3.7%
Rehabilitation/therapy	48.4%	38.7%	3.2%	6.5%	3.2%
Group exercise/aqua fit program	40.0%	47.1%	8.2%	3.5%	1.2%
Relaxation/recreational swimming	45.5%	37.5%	7.1%	8.9%	0.9%
Deep water activities/ exercise	35.7%	55.4%	7.1%	0.0%	1.8%
Water polo	53.9%	46.2%	0.0%	0.0%	0.0%
Lap swimming for fitness	71.5%	23.6%	1.8%	1.8%	1.2%

The survey results indicated that a high percentage of respondents are likely to attend the Mullumbimby pool on a regular basis if the renovations are undertaken. The results explain that a high proportion of the respondents would attend the Mullumbimby pool more than twice a week to complete in activities that included:

- Lap swimming (71.5%)
- Squad/club swimming (67.5%)
- Children's play (54.6%)
- Rehabilitation therapy (48.4%)
- Recreational swimming (45.5%)
- Water Polo (53.9%)

Additional comments by respondents suggested that there was a range of people that would attend the centre 4-5 times a week or every day.

The activities completed by respondents attending the centre once a week include:

- Swimming lessons (70.4%)
- Deep water activities/exercise (55.4%)
- Group exercise/aqua fit programs (47.1%)

These results indicate a strong validation of peoples intended future use of the Mullumbimby Petria Thomas Swimming Pool if the renovations are completed.

The following table provides a comparison of the current pool users postcode they reside compared to potential future user's postcode that they reside.

Table 5. Comparison between current and future pool users by postcode/suburb they reside

Postcode and suburb	Currently use the pool (%)	Likely to use the pool (%)	Variation current and future use
2482: Mullumbimby, Goonengerry, Mullumbimby Creek, Main Arm, Wilsons Creek, Wanganui	40.62%	45.06%	4.44%
2483: Ocean Shores, South Golden Beach, Brunswick Heads, Billinudgel, New Brighton, North Ocean Shores, The Pocket	26.56%	24.46%	-2.10%
2481: Byron Bay, Myocum, Tyagarah, Suffolk Park, Ewingsdale, Talofa	6.64%	9.87%	3.23%
2479: Bangalow, Coorabell	3.41%	3.00%	-0.41%
2480: Federal, Goonellabah, Upper Coopers Creek	1.56%	1.71%	0.15%
2478: Ballina, Cumbalum	0.78%	0.85%	0.07%
2477: Alstonville	0.39%	0.42%	0.07%
2488: Bogangar	0.39%	0.42%	0.07%
2484: Murwillumbah	0.39%	0.42%	0.07%

The future use of the Mullumbimby Petria Thomas Swimming Pool indicates that there is an opportunity to attract more people from most postcodes except for postcodes 2483 (-2.10% future use) and 2479 (-0.41% future use), however these improvements are marginal. The most significant increase was for the postcode of 2482 (+4.44%).

Outdoor 50 m pool

To understand if the outdoor 50 m pool would be used if it was open all year round and was heated, the respondents were asked to respond to a series of statements. The response rate to these statements is provided below.

Yes, I would swim in the outdoor 50 m pool all year round - 91.3%

No, I would just swim in warmer months i.e., September to April - 4.8%

No, I wouldn't use the 50 m outdoor pool in either season - 2.2%

No, I would only use the 50 m outdoor pool in winter, when I don't go the beach - 1.3%

The results indicate that 91.3% of the respondents would swim in the outdoor 50 m pool all year round. This result correlated with the results from the future use frequency of activity participation (section 1.4.4) indicates that there is a strong desire from the respondents for the Mullumbimby Petria Thomas 50 m outdoor pool swimming pool to be heated and operational all year round.

Warm water/hydrotherapy pools

The respondents were questioned specifically about their use of a swimming pool to do warm water exercise or hydrotherapy.

The results identified that 58.9% of respondents visit a swimming pool to do warm water exercise, 17.35% did not. The pools that were most frequented included the Ballina Mullumbimby Petrie Thomas Swimming Pool (21.5%), Tweed Regional Aquatic Centre (Murwillumbah) (16.9%) and the Brunswick Heads Swim School (20.6%). Additional warm water pools that the respondents attended were Alstonville Aquatic Centre (0.9%), Ewingsdale Swim School (0.9%), Banora Oasis Pool (0.45%) pools and a private hotel pool (0.5%).

Visiting a warm water pool was most common for respondents aged between 45-49 (8.2%), however, there was minimal difference for the 60-64 (7.3%), 30-34 (6.8%), the 40-44 (6.4%) and the 50-54 (6.4%) age groups. Respondents under the age of 29 do not visit a warm water pool to do exercise or hydrotherapy.

Respondents indicated that if a warm water pool were provided, they would continue to do exercise in the winter months.

Respondents asked to identify activities they would do at the pool. The findings indicated that 61.5% of the respondents would participate in casual swimming for fitness, this was the most popular activity for people that were aged between 30-34 (5.6%), 35-39 (6.1%), 40-44 (8.7%), 45-49 (8.2%) and 60-64 (9.1%).

A total of 25.2% of respondents said that they would participate in an aquatic fitness/gentle exercise program, this was the most popular activity for people that were aged between 55-59 (5.6%), 65-69 (4.3%) and 70+ (4.3%).

In addition to these programs the respondents suggested that they would use a warm water pool for exercise/rehabilitation (21.1%), swimming lessons (15.8%) and water familiarisation programs (9.7%).

The survey results indicated that 92.9% of respondents would use a heated pool that was not fully enclosed. To understand the respondents' thoughts about the development of a warm water pool that was not fully covered they were asked to respond to a series of statements. The response rate to these statements is provided below.

- I like the idea, but I think it would be too cold to use in winter-5.8%
- I don't think it would be practical given the cost to keep the pool so warm when it's not enclosed - 4.4%
- I think this is a reasonable idea given our warm climate-61.1%
- I think it would be better to enclose this pool so it can be used in all weather and the water can be kept warm cost effectively - 20.8%
- Other (please specify) - 8.0%

Additional comments made by the respondents are provided in the following table and Table 8.

Table 6. Respondents comments on a heated pool that was not enclosed

Theme	Comment(s)	No.
Asset to the community	This would be a real asset to all Shire residents, including all of the Shires disabled residents and visitors	1
Wind break	I think it's reasonable, but with wind breaks	1
Change room upgrades	I think it will be great if this is also hot water showers available. If it is open, like Ballina, I'd suggest a shower/change room upgrade as people will need to have more than one hot shower to keep warm while they are changing	2
Cost effective	I'm not sure of costs but if a heated outdoor pool is plausible than this is my preference To be more cost effective a heated 25 metre pool could be enough for people to do laps in winter (and hydro classes) Would the money be better spent just focussing on keeping the 50 m pool warm in winter?	3
Chlorine smell	Leave it open, less smell of chlorine Enclosed areas are so chloriney, ventilation sounds great! I stopped taking my kids to Bruns heated pool for lesson because they stunk too much of chlorine afterwards. I don't like the air quality of a fully enclosed pool	3
Flexibility	Fantastic idea, covered during winter, lovely to swim warmer months in open air and sun. Example is the Ballina therapy pool with its roll up and down thick plastic curtains	3
Keep sides open	I think it is important to keep open for mental health and exercise open sides so we can breathe fresh air	2
Sun protection	We need full sun protection so a roof covering a 50 m pool as the sunburn / skin cancer is severe.	1
Solar heating	Solar all the way free from the sun Solar heat the pool	1
Keep 50 m pool as is	I like cold-water open-air swimming	1

The results identified that the respondents support the development of a warm water swimming pool that it not fully enclosed given their climate.

Respondents commented that they liked the idea but suggested that some sort of covering over the winter months would add a lot of flexibility to the pool.



General comments

The final question on the survey asked the respondents to comment about the feasibility of or need to upgrade the Mullumbimby Petria Thomas Swimming Pool. A total of 112 of the 256 respondents answered this question. The respondents comments have been arranged into themes and are presented further in the findings.

The themes that obtained five or more responses included:

Theme	Percentage of respondents
Open all year round	27.0%
Travel to other pools	12.5%
Swimming in winter	8.9%
Heated pools	8.9%
Do it!	8.9%
Hydrotherapy pools	7.1%
Solar heating	6.3%
Upgrade change rooms	5.4%

There was overwhelming support from the respondents for the redevelopment of the Mullumbimby Petria Thomas Swimming Pool.

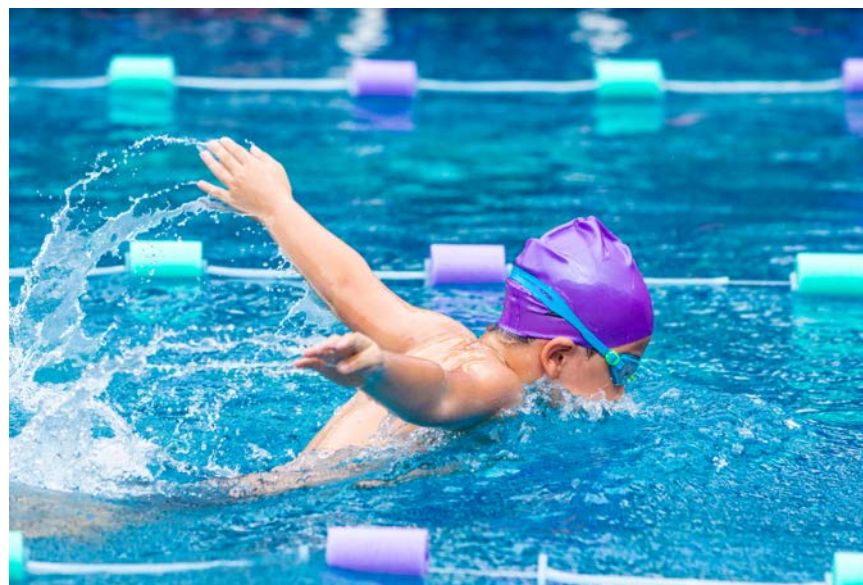
Respondents stated that they wanted the pool to be open all year round and believed the best way to do this was to heat the swimming pools.

Many respondents stated that the redevelopment of the pool would mean that they do not have to travel to another pool to fulfil their aquatic needs.

The respondents were excited by the thought of swimming at the Mullumbimby Petria Thomas Swimming Pool in winter with some respondents stating that the redevelopment was well overdue.

The respondents felt that the addition of a hydrotherapy pool was worthwhile but there was differing opinions on the best infrastructure model for this pool, i.e., to be fully enclosed or have an opened aired enclosure with a roof.

Respondents stated that solar heating was an effective way to heat the pool and the showers.



Respondent profile

The table below summarises the respondents from the Mullumbimby Rate Payers Association online survey respondent sample by age and location.

Table 7. Respondents age group

Age group (years)	Total No.	%
0-14	0	0.0%
15-19	0	0.0%
20-24	1	0.5%
25-29	1	0.5%
30-34	26	11.8%
35-39	26	11.8%
40-44	26	11.8%
45-49	30	13.6%
50-54	29	13.2%
55-59	22	10.0%
60-64	28	12.7%
65-69	17	7.7%
70	14	6.4%

Age profiles

The majority of the surveys sample size were aged between 30 and 60 years of age. The most responsive age was between 40-49, this is reflective of the average age of the demographics of the northeast region of NSW (is this correct)?. The survey was not completed by any respondents under the age of 20. Approximately 26.8% of the respondents were aged 60 years or older. These age category percentages reflect a reasonable sample in relation to the region's demographics.

Area of residence

The majority of survey respondents come from the suburbs of Mullumbimby (42.3%), Ocean Shores (15.4) and South Golden Beach (5.3). When postcodes suburbs are linked with their postcode area this indicates that 2482 (50.2%), this included the suburbs of Goonengerry, Main Arm, Mullumbimby, Mullumbimby Creek, Wanganui, and Wilsons Creek had the most respondents, followed by postcodes 2483 and 2481.

Mullumbimby Rate Payers Survey: Questionnaire

- 1) Do you visit any swimming pool near where you live?
 - Yes
 - No
- 2) Which swimming pool do you visit now? Please tick as many that apply from the options provided below.
 - Mullumbimby Swimming Pool
 - Murwillumbah Swimming Pool
 - Byron Swimming Pool
 - Ballina Swimming Pool
 - Brunswick Heads Swim School/Fitness Health Club Pool
 - Other (please specify)
- 3) How often do you use the main pool you visit, (listed above)? Please select one answer from each line.
 - Murwillumbah Swimming Pool
 - Ballina Swimming Pool
 - Brunswick Heads Swim School/Fitness Health Club Pool
 - Other (please specify)
- 4) Do you visit a swimming pool to do warm water exercises/hydrotherapy? If yes, which pool do you use?
 - Yes
 - No
- 5) If improvements are made to Mullumbimby Pool, (to make the pools year-round, heat the outdoor pool in winter, provide a warm water program/therapy pool, and create access into the 50 m pool, change rooms and car parking to include all people) would you be likely to use Mullumbimby Pool?
 - Yes
 - No
- 6) If yes, what swimming or related fitness activities would you do there regularly that you can't do now? Please tick as many that apply from the options provided below.
 - Squad / Club swimming
 - Children's play
 - Swimming lessons/mums and bubs activities
 - Rehabilitation / therapy
 - Group exercise / aqua fit program
 - Relaxation / recreational swimming
 - Deep water activities / exercise
 - Water polo
 - Lap swimming for fitness
 - Other (please specify)
- 7) How often would you do these activities if you could? Please select one answer from each line. (More than twice a week, Once a week, Once a fortnight, Once a month, Less than once a month)
- 8) If the outdoor 50m was heated and open in winter, would you swim all year round? Please select one option only.
 - Yes, I would swim in the outdoor 50 m pool all year round
 - No, I would just swim in warmer months i.e., September to April
 - No, I would only use the 50 m outdoor pool in winter, when I don't go the beach
 - No, I wouldn't use the 50 m outdoor pool in either season
 - Other (please specify)
- 9) If a warm water pool was provided for hydrotherapy/gentle exercise, what activities would you like to do in the warm water pool in the winter months? Please tick as many that apply from the options provided below.

- Swimming lessons
 - Casual swimming for fitness
 - Aquatic fitness/gentle exercise program
 - Therapeutic exercise/rehab
 - Mums and bubs/water familiarisation programs
 - Other (please specify)
- 10) If a warm water pool proposed for gentle exercise, therapy and some lessons was a pool covered by a roof, but not in an indoor facility, would you be likely to use this warm water pool if it wasn't fully indoor?
- Yes/No
- 11) Please select one of the following answers that best describes your thoughts about this type of pool:
- I like the idea, but I think it would be too cold to use in winter
 - I don't think it would be practical given the cost to keep the pool so warm when it's not enclosed
 - I think this is a reasonable idea given our warm climate
 - I think it would be better to enclose this pool so it can be used in all weather and the water can be kept warm cost effectively
 - Other (please specify)
- 12) Do you have any other comments you would like to make about the feasibility of, or need to upgrade the Mullumbimby Pool? Please write them here.

Table 8. Mullumbimby Rate Payers Association survey comments

Theme	Comment	No.
Being open all year round	<p>I have used the Mullum Pool for over 20yrs, mainly for squad training. My children learnt to swim there. The pool is only utilised fully for 5 months as it is not heated. A core group use it for the season. If heated everyone would benefit, include school swim carnivals with increased participation.</p> <p>Would love to be able to use a heated pool and see the swimming centre open throughout winter, I would be there every week, perhaps twice.</p> <p>I love the Mullum pool so much but if there was a warm pool, it would be perfect!! We could use it whole year!!!!!!</p> <p>Our local community needs a pool they can use year-round. For our children it is ridiculous there is no local pool open all year round, so swim squads only train for half a year!</p> <p>It would be fabulous to have Petria open all year round.</p> <p>Only 30 per cent of the Australian population have sufficient physical activity for health benefits. People living in rural and remote parts of Australia have even lower physical activity levels than those in major cities. There's a number of social, economic, and cultural reasons why this is the case, and access to swimming pools and heated swimming pools in regional areas is one of them. And as I get older, swimming year-round is now the best form of cardio for me. I know I'm not alone in that.</p> <p>I feel our climate is perfect to have pool open all year.</p> <p>I'm not a resident of Mullum although I am a rare paying resident of the Byron shire and I work in Mullumbimby and would use the pool for lap swimming year-round if it was heated.</p> <p>An indoor heated pool, open every day of the year, would be a fantastic asset to our town and I for one would love it.</p> <p>We definitely need a facility that can be used all year round.</p> <p>I would LOVE to be able to swim year-round.</p> <p>I love the pool and so do my friends. We would all go there all year round!</p>	31

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Theme	Comment	No.
Being open all year round (cont'd)	<p>For people who swim to keep fit having the Mullumbimby pool open all year around would be beneficial...It is important that this facility is available all year around.</p> <p>The existing 50 metre pool should remain otherwise unchanged (& not ever permanently covered), except for this suggested heating of that 50 m pool during wintertime, which will encourage a lot more people to use this great public asset, all year round.</p> <p>Mullumbimby needs this, we need a pool opened all year round.</p> <p>I am totally for a year-round swimming pool.</p> <p>We would LOVE to have this pool open all year round.</p> <p>All year-round opening would be great, and I used to swim all year round in a heated outdoor Council Pool in Hawthorn, Melbourne which was terrific, no awful chlorine fumes!</p> <p>The pool is an underutilised resource due to the off season. It is disappointing that Byron Shire residents have to visit neighbouring LGAs to access a year-round pool.</p> <p>Thank you for considering keeping the pool open all year.</p>	

Theme	Comment	No.
The travel to other pools	<p>For younger people and their families, I can imagine how the early starts get even earlier as they travel out of area to train in a heated. Olympic pool in winter and it's ironic and a shame that our pool is named after an Olympic champion who wouldn't have been able to train in her local pool throughout the year.</p> <p>Currently we have to go to Ballina or Murwillumbah for water play.</p> <p>This is a great idea in Winter I drive 80kms return to swim my laps when Mullum is closed.</p> <p>I endorse the upgrade of the pool, so it is more accessible to me rather than having to use the pool at Brunswick Gym.</p> <p>But we love Mullum pool! 4 generation of our family still enjoy this pool and it would be great to see some upgrades to our local pool to save us having to do a trip out of our shire when we have larger groups of smaller children.</p> <p>I love swimming and water polo and it's hard to get to other pools through winter with Lennox and Banora over half an hour drive away.</p> <p>I know people that travelled to swim in winter months.</p> <p>I've been travelling between Ballina and Banora pools now for 14 yrs. when our Mullum pool closes as have many people trying to keep their fitness.</p> <p>We have to drive to Ballina to use the pool, which is only undercover, we don't mind...whatever we can get is an improvement, thank you!!!</p> <p>There are many that travel out of the shire to use hydrotherapy pools, this is a much-needed requirement in the shire.</p> <p>I swim every day in Mullum pool...and when it closes for winter I have to travel to Ballina, Alstonville, Bankar point to do my laps...it is just crazy that it closes in winter as so many people use this beautiful pool.</p> <p>It's ridiculous that people in the Byron shire need to travel to the tweed or Ballina for year-round use of pools regardless of what they are used for.</p> <p>It would be fantastic not to have to travel to Murwillumbah for</p>	14

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Theme	Comment	No.
Swimming in winter	<p>I used to train in the casuarina 25metre pool all year round and got Australian record times at FINA Masters Swimming. The most important thing for everyone is that there is still some access to lap swimming and exercising over WINTER.</p> <p>A pool that was heated throughout the winter months would also offer an extra facility for young people of Mullumbimby - something that is woefully lacking at the moment.</p> <p>We get some very warm days in winter, and I'd use the pools if they were heated on those days but not on cold, overcast, or windy days.</p> <p>Wouldn't just heating the Mullumbimby pool and keeping it open through the winter months be the best start!?! Focus on what we already have and make that more accessible through the winter months.</p> <p>Please, please allow this pool to be open and heated in winter. So many more people here now. I am quite sure it would be well frequented in winter too. 👍😊🌸</p> <p>Having lived in Mullumbimby for over 42 years. I was there when the community raised the \$'s to get the pool extended. For years we heard about opening the pool during the winter months.....NOTHING happened ...all Council jabber. I have since moved to Ballina Shire. Mullumbimby pool needs to be upgraded for winter use; pools are opened during winter & occupied...</p> <p>I would use it all winter.</p> <p>It's such a shame to have the pool out of action for half a year. I would use it all winter.</p>	10

Theme	Comment	No.
Heated pools	<p>Heating and upgrading the Mullum pool were discussed 10yrs ago and is still being discussed. Do it now.</p> <p>Such a beautiful pool, central for so many residents. Realistically it is far too cold for young children until November at the moment.</p> <p>Will more likely come to a heated pool in winter with this facility.</p> <p>Having lived in Melbourne where there are numerous outdoor 50 m pools that remain open all year round (Fitzroy, Brunswick, Northcote, Harold Holt, MSAC) & are heated comfortably I think it could be easily done up here.</p> <p>During the winter months 22-24° that would be perfect.</p> <p>Would be very happy if the pool was heated and outdoor.</p> <p>I can't drive now due to eyesight complications as result of Mitochondrial Disease so having an easy access pool heated in Mullum would be so good.</p> <p>We need a heated pool in our shire.</p> <p>Yes, outdoor heated option. Let's keep it a country town. Not a ritzy city oasis...</p> <p>"I've swum and exercised at Cleveland Aquatic Centre. I like both the 25 m and 50 m outdoor heated pools. I'm not aware though of the technology not, costs or environmental impacts of them. https://www.clevelandac.com.au/swim/aquatic-facilities"</p>	10

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Theme	Comment	No.
Do it!	<p>Please do this, sounds great.</p> <p>This would be so good for the community!! Please do it.</p> <p>Please do this upgrade! The outdoor facilities at Miami on the Gold Coast are perfect all year round!</p> <p>Get on with it and just do it. Lots of people are waiting for this to happen.</p> <p>Let's do it! I've been hoping for this to happen for years.</p> <p>I love our pool please bring it on the sooner the better it's unbelievable that we haven't our own heated pool in the entire shire.</p> <p>Hopefully, this will happen sooner rather than later.</p> <p>Please, please, please do this!</p> <p>Yes, please upgrade the pool. It is sorely needed.</p> <p>Please do it.</p> <p>Yes, please upgrade the pool. It is sorely needed.</p>	10
Hydrotherapy pool	<p>A wonderful way to exercise and for hydrotherapy, ageing population and fitness for all ages.</p> <p>Don't worry about the hydro pool people can go to Brunswick Heads for that and the Shire can't afford it.</p> <p>The proposed facility is greatly needed in Mullumbimby particularly a heated therapeutic pool for the elderly, disabled and for rehabilitation.</p> <p>We need a therapy pool for everyone and exercise which is gentle for everyone.</p> <p>The hydrotherapy pool needs to be at least 25 meters to be of any benefit.</p> <p>What about using an open sided cover for the rehab pool.</p> <p>There are many that travel out of the shire to use hydrotherapy pools, this is a much-needed requirement in the shire.</p> <p>The hydrotherapy pool would need to be fully enclosed to enable the people who need it most to be able to use it all the year round.</p>	8

Theme	Comment	No.
Solar heating	<p>Some pools heat their pools using renewable energy sources.</p> <p>Solar should do the trick.</p> <p>Solar hot water.</p> <p>If the outdoor 50 m could be solar heated all year round.</p> <p>Solar heating main pool so it can be used all year.</p> <p>Using solar for heating would lower the cost.</p> <p>Solar heat pool with the assistance of heat pumps.</p>	7
Upgrade change rooms	<p>More hot showers are needed.</p> <p>Love the family change spaces with hot water showers.</p> <p>I believe the pool desperately needs family change rooms.</p> <p>They are much safer. As a Mum, I don't like sending my son (10yo) into the current male change rooms alone, but he is not comfortable in the ladies. I imagine Dad's with daughters would find difficulties too.</p> <p>Free hot water showers.</p> <p>Would be great to have hot showers.</p> <p>Better showers and change rooms.</p>	6
Health and well-being	<p>Many of us have injuries which swimming is the best exercise and also helps relieve pain.</p> <p>We need this facility for our wellbeing & fitness. I need to swim to maintain my knee health.</p> <p>My physical and mental health in winter would be so much easier to manage. I have back issues and swimming is the one thing that helps. Thank you!</p> <p>I'm a fit 48-year-old but heading into winter 12 months ago I seriously injured my ankle and swimming was the only way I could exercise without pain.</p> <p>Lap Swimming has really helped my mental health.</p> <p>It would also benefit people's mental health; some people use lap swimming as an output for the mental health.</p>	6

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Theme	Comment	No.
Comments on other pools	<p>The enclosed and opened style of heated pool, like Ballina pool, seems the best idea.</p> <p>Look at Scarborough pool in WA, constant 25C pool in winter, solar powered and access ramp.</p> <p>Prefer an open-air heated pool like Ballina.</p> <p>Anything like the disaster at Ballina is not forward thinking. (I.e., pool not deep enough and not long enough in Ballina.)</p> <p>We don't go to the Brunswick pool as it is stuffy to breath and small, so the kids upset the other users. Especially when they are diving training in shallow end. And it's expensive on a casual basis.</p>	5
Disability Access	<p>There is no other heated or disability access pool in the Shire and it would be a very welcome addition for all Shire residents and many of our 2,000,000 tourists, especially tourists with a disability.</p> <p>We desperately need a ramp into the 50 m and baby pool to assist those requiring hydrotherapy and mobility issues. Disabled community members will benefit.</p> <p>The disabled champions in our community, I can only imagine the added travel and transport hassles they negotiate.</p> <p>I know of younger and older residents who would benefit from having access to a warm water pool with suitable access for those with mobility problems. Travelling to other centres is often limiting for those with disabilities as they depend on transport assistance</p> <p>Wheelchair access or a hoist would be beneficial for those with disabilities.</p>	5
Community	<p>Make it a meeting hub for the community.</p> <p>It would make such a difference to our community.</p> <p>A heated pool would make such a difference to our community.</p> <p>Because of the lack of recreation for young people in Mullum the upkeeping and possible upgrade of the pool is very important.</p>	4

Theme	Comment	No.
Infrastructure and services	<p>Add WIFI.</p> <p>When planning the Mullum Pool please consider a large shallow end that is good for getting kids confident swimming bigger seated area.</p> <p>Please make sure that there is plenty of room to sit.</p> <p>For ongoing safety reasons consideration should be given to the entry point to the pool being changed to the northern car park instead of being directly on a busy road.</p>	4
Aqua fitness classes	<p>I want to start Aqua fitness classes - especially deep water.</p> <p>Get therapy or aquafit classes going anyway?</p>	2
Hours of operation	<p>Why not just extend the opening hours of the pool in summer to keep teenagers out of trouble? Maybe extend the months of operation a bit into cooler months to see what happens?</p> <p>Please consider opening hours extended to allow swimmers to use the pool Before work for all activities. Thank you.</p>	2
Pool closure	<p>I am happy there is a pool in Mullumbimby. An upgrade would mean the pool would be closed for a long period of time.</p> <p>Considering the real estate and rental prices in Mullumbimby I would not have thought money would be an issue.</p> <p>I like the sound of these proposed upgrades to our Mullum public pool, provided that the actual construction process, does not annoyingly drag on for years, thereby preventing the public access to the pool for a long period of time.</p>	2
Ventilation	<p>If indoor would be good to ensure enough ventilation as the chlorine smell will be off putting; concerned for my children , etc.</p> <p>Please do not consider enclosing pool as the chlorine fumes and noise echo is horrible.</p>	2
Water	<p>Make it salt water not chlorine.</p> <p>Please make it a mineral or magnesium pool.</p>	2

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Theme	Comment	No.
Additional income streams	I would also suggest that additional revenue streams e.g., kids birthday party bookings through winter months could be considered to offset the costs associated with this project. Little Winter Merrows could become a thing for local kidlets.	1
Another pool in a different location	I would like to see another pool somewhere else like Clunes perhaps. Mullumbimby is so full on and crowded already. As is Brunswick heads. I am local. Our towns are taken over by selfish full-on people. I would love to go to another pool.	1
Cafe	An indoor-outdoor cafe with great healthy food and juices, where people could meet even if they are not swimming.	1
Car parking	Please ensure residents are considered who live in the immediate area when designing parking.	1
Catchment area	It services a large area	1
Community support	I believe that we already have the user numbers both in community members & wider community groups/schools to support this & make it a viable endeavour.	1
Do not change	I like the pool and when it's not open, I swim in the Brunswick River.	1
Extending the swimming season	Heating the pools would definitely extend the swimming season for me as I really dislike cold water.	1
Environment	Make sure whatever is decided on, is as environmentally effective as possible	1
Flexibility of heated pool	The smaller Therapy pool should have a roof and the ability to pull down walls but be open as well. Otherwise, they're stuffy.	1
Green spaces	Please make sure that there is lots of green space.	1

Theme	Comment	No.
Remain current beauty	Any alterations to the facility should not impact on its open aired natural beauty.	1
Sauna	A sauna on site.	1
Senior citizen	An enclosed therapy pool is a necessity considering the large number of seniors in the area.	1
Sun protection	50 m with full sun protection and open sides is the ultimate swimming experience	1
Swimming lessons	Many children learn to swim there.	1
Water play	A water- play park would be loved by kids. More areas from smaller children to play as the kids pool can often get crowded in the warmer months or when swim lessons are on.	1
General comment	Please design your surveys better!!! I'm sorry to say but this feels completely amateur, and I wonder if you'll actually get the information you're seeking.	1

APPENDIX 5. SCHOOL SURVEY FINDINGS

Sample

A telephone survey specifically related to school based aquatic programs run at the Mullumbimby pool (PTMSP). The survey was conducted by @leisure planners.

A sample of 21 primary and secondary schools were contacted for the telephone survey. In total 10 primary (No = 8), secondary (No = 1) and primary-secondary (No = 1) schools were interviewed. They were asked information about current and future usage of the PTMSP and services and future facility components. A copy of the survey can be found in Appendix 1.

The telephone survey was set up and administered using two main sections.

Current school swimming pool usage (in general and specifically related to the Mullumbimby pool)

Future use of the PTMSP, specifically related to heating the outdoor 50 m pool and the inclusion of a warm water partly or fully enclosed pool

School profile

The table below summarises the schools that participated in the school's telephone interview survey respondent sample by:

- School
- Location
- Distance to travel to the PTMSP

Table 1. Schools telephone interview sample

School	Postcode	No. of students at school	Distance from PTMSP
Mullumbimby High School	2482	400	4 mins/350m
Mullumbimby Public School	2482	100	4mins/1.6km
Hinterland Christian College	2482	60	6mins/3.3km
Main Arm Upper Public School	2482	100	7mins/5.4km
Coorabell Public School	2479	110	11mins/10km
Wilsons Creek Primary School	2482	20	12mins/8.5km
Brunswick Heads Public School	2483	230	12mins/9.6km
Goonengerry Public School	2482	52	14mins/12km
Newrybar Public School	2479	42	15mins/16km
The Pocket Public School	2483	100	18mins/16km
Eureka Public School	2480	34	21mins/21km

School profiles

The schools that participated in the school's telephone survey varied in size from the Mullumbimby High School that has 400 students to a number of smaller schools that have between 20-52 students (Wilsons Creek Primary School, Newrybar Public School, Goonengerry Public School and Eureka Public School).

Distance from the Mullumbimby swimming pool

The schools interviewed in the telephone survey were located between 350 m and 21km's from the PTMSP. All schools travel by bus or minibus to the swimming pool except for Mullumbimby high school, they walk to the facility. All the schools interviewed have attended the PTMSP in the past 12 months.

Current use of the swimming pool

The schools interviewed were questioned on their current use of swimming pools. Public swimming pools included swimming pools that were council and privately owned, but not home use.

The schools interviewed were asked which swimming pools they currently attend and why they attended. The results are provided in Table 2.

Table 2. Swimming pool attendances in relation to activities

Swimming pool	Lessons	Carnivals	Life saving activities	Recreation activities	Fitness activities	Water polo
MPTSP	81.81%	72.73%	18.18%	54.55%	9.09%	9.09%
Lismore Swimming Pool		9.09%				
Murwillumbah Swimming Pool				9.09%		
Byron Swimming Pool	9.09%					
Alstonville Aquatic Centre	9.09%	9.09%				
Lenox Head Aquatic Centre	9.09%					

The results from the interviews identified that the schools visited a range of swimming pools that included the PTMSP, Lismore swimming pool, Murwillumbah swimming pool, Byron swimming pool, Alstonville aquatic centre and Lenox Head aquatic centre.

The PTMSP is the preferred option for the schools in the local area. A high percentage of the schools completed their swimming lessons at the PTMSP (87.81%). The schools that attended Alstonville aquatic centre and Lenox Head aquatic centre preferred these pools because they were closer to the school and offer warm water swimming. In addition to swimming lessons schools also attend the PTMSP to participate in carnivals (72.73%), lifesaving activities (18.18%), recreation activities (54.55%), fitness activities (9.09%) and water polo (9.09%).

Improvements to the Mullumbimby pool

To assist in understanding the future level of demand for schools at the PTMSP, the respondents were asked what activities they would do that they cannot not do now. A summary of the results are provided in Table 3.

Table 3. Additional activities that schools could do at PTMSP

Activity	Comment	No of comments
Consider term two and three for swimming lessons	<ul style="list-style-type: none"> Consider terms two and three for swimming lessons Consider terms two and three Would consider lessons in terms two and three as terms one and four are so busy Consider term three for lessons in a two-week block Maybe do lessons in term three closer to the carnival. Maybe once a week depending on the program in terms two and three Lessons, carnival, water polo and recreation activities, maybe in terms two or three, just gives us more options 	6
Additional opportunities	<ul style="list-style-type: none"> Lessons, recreation activities, give them more options Extending our positive learning program to include more aquatic activities Maybe introduce water polo, maybe introduce more water-based activities Extend current program, I am very excited about the prospect of doing this 	4
Keep lessons in term 4	<ul style="list-style-type: none"> Stay in term four Stay the same because of school programming 	2

Activity	Comment	No of comments
Opportunities for disability students	<ul style="list-style-type: none"> We have disability students that could use the hydrotherapy pool 	1
Would not go to PTMSP	<ul style="list-style-type: none"> None too far and bus costs too much 	1
Recreation activities	<ul style="list-style-type: none"> Maybe in term four 	1
Water safety assessments in term three	<ul style="list-style-type: none"> I have always wanted to do surfing with the children but cannot do assessments beforehand, this may give us the opportunity to do this in term three 	1
Cleaner	<ul style="list-style-type: none"> If it was cleaner, we might do more 	1

The schools were excited about the additional opportunities that could be available to them with the option to use the PTMSP all year round. Many of the schools (54.54%) stated that they would consider either moving their swimming lessons to term two or three, 36.63% of the school were considering additional opportunities that a year-round pool could provide for the school. This included the prospect of additional swimming lessons, introducing new programs and extending existing school programming.

All the schools interviewed agreed that undercover stands, change rooms and bus parking were essential facilities that were required for them to attend the facility. Some additional statements made by the schools included:

- Additional lighting they would consider running their carnivals at night, which may encourage more parents to attend
- More drinking fountains
- Upgraded change rooms – we do not use them; children get changed back at school
- Change rooms are not up to disability code

Outdoor 50 m pool

To understand if the outdoor 50 m pool would be used if it was opened all year round and was heated, the schools were asked to respond to a series of statements. The response rate to these statements is provided below.

- Yes, I would swim in the outdoor 50 m pool all year round - 36.36%
- No, I would just swim in warmer months i.e., September to April - 54.55%
- No, I would only use the 50 m outdoor pool in winter - 9.09%%
- No, I wouldn't use the 50 m outdoor pool in either season - 0%

The results indicate that 54.55% of the schools would just swim in the warmer months. These results indicated that while the schools are excited about the opportunities that an all year-round facility would bring to the school there is still a little hesitation about using the PTMSP in the winter months.

Warm water/hydrotherapy pools

The schools were questioned specifically about their use of a swimming pool to do warm water activities in the winter months. The results identified that 72.73% of the schools would like to use a warm water pool in the winter months, two schools (18.18%) of the schools said that they would not and one (90.9%) school stated that their decision would be weather dependent.

To understand the schools' thoughts about the development of a warm water pool that was not fully covered they were asked to respond to a series of statements. The response rate to these statements is provided below.

- I like the idea, but I think it would be too cold to use in winter - 0%
- I don't think it would be practical given the cost to keep the pool so warm when it's not enclosed - 9.09%
- I think this is a reasonable idea given our warm climate - 45.45%
- I think it would be better to enclose this pool so it can be used in all weather and the water can be kept warm cost effectively - 45.45%

There is not clear preference from the schools to if they prefer the warm water pool to be fully enclosed or partially enclosed. One additional comment made by one school was that would like to see the use of solar panels to heat the pools.

Social benefits

The schools were asked to comment on the social benefits for the local and Byron community of upgrading these facilities. Comments made by the schools are provided in Table 4.

Table 4. Social benefits comments

Theme	Comment	No of comments
Health	<ul style="list-style-type: none"> • Get people more active • Assists with mental and physical health • Health, mental well-being • More active more often • Allows all year-round low-impact exercise, health benefits • Physical exercise, 	6
Connection	<ul style="list-style-type: none"> • Keep the connection going all year round • Kids can continue to connect in the winter if it is raining, they can still go the indoor pool • Social interaction 	3
Squads	<ul style="list-style-type: none"> • Do not to have to travel to squad training • Squads can continue • Swim clubs can go all year round 	3
Great idea	<ul style="list-style-type: none"> • Yes, it would be fantastic • I really like this idea I could talk about the benefits for ages 	2
Greater usage	<ul style="list-style-type: none"> • Could potentially be used a lot more in winter 	2
Swim all year round	<ul style="list-style-type: none"> • Yes, it would get people active in winter • Option to swim all year round 	1

The schools felt that the redevelopment of the PTMSP would be very beneficial to the community. The people interviewed felt that the greatest benefits would be the health (54.55%) of the local community, with people getting more active all year round. The discussion of benefits also focused on connection (27.27%) and providing the opportunities for the squad to be operational all year round (27.27%).

General comments

The final interview question asked the schools to comment about the feasibility of or need to upgrade the MPTSP. The school's comments have been arranged into themes and are presented in Table 5.



Table 5. General comments

Theme	Comment	No of comments
No comment	No (thank you for asking me)	3
Great project	I think that it would be a brilliant project Good idea to upgrade, would be great	2
Increased usability	Increased usability	1
Job opportunities	Open opportunities for job prospects for children to gain employment in the area	1
Community	Redevelopment will be good for the community	1
We need it	About time, all the other municipalities have upgraded their facilities	1

All of the general comments made by the school were positive. The schools feel like this would be a great project (18.18%) that will provide the pool with greater usability (9.09%) and provide job opportunities for the community (9.09%). One school suggested that this project was well overdue, and it was time for the Byron Shire to redevelop their facilities.

APPENDIX 6. PRELIMINARY ORDER OF COSTS

Preliminary Order of Costs: Mullumbimby Memorial Centre - Petria Thomas Pool Redevelopment Date: 30/10/2021 Prepared by Activ Facility Design (Revision P2)

Component	Area	Rate	Complete project as a single stage	Staging Options - 3 stages		
	m2	\$/m2	\$	Stage 1: New amenities building and car parking	Stage 2. New warm water pool, learn to swim pool and splash park	Stage 3. Ramp to existing 50 m for access and outdoor lighting and stands
Building Works - Ground Floor						
Airlock	36	2,200	79,200	79,200		
Main entry, foyer and kiosk	18	2,500	45,000	45,000		
Administration office	14	2,500	35,000	35,000		
First aid room	15	3,000	45,000	45,000		
Kiosk - kitchen + preparation area			15,000	15,000		
Extra over for kitchen equipment	72	2,500	180,000	180,000		
Multi-purpose room	14	3,000	42,000	42,000		
Multi-purpose room - kitchenette	461	3,000	1,383,000		1,383,000.0	
Aquatic pool hall - warm water pool (inc balance tank)	64	4,500	288,000	288,000		
Aquatic - male amenities and change	55	4,500	247,500	247,500		
Aquatic - female amenities and change	9	4,500	40,500	40,500		
Aquatic - family change / pwd 1	9	4,500	40,500	40,500		
Aquatic - family change / pwd 2	23	2,000	46,000	46,000		
Aquatic pool store 1	20	2,000	40,000	40,000		
Aquatic pool store 2 (external)	61	2,200	134,200	134,200		
Total building area / average rate m2	871	2,860	177,393	91,279	\$1,383,000	
Total building works			2,660,900	1,277,900	1,383,000	
Aquatic components						
New accessible ramp outside of existing 50 m pool shell		allow	350,000			350,000
New outdoor learn to swim pool	80		350,000		350,000	
New outdoor splash pad + water features	75	allow	300,000		300,000	
New indoor 20 m x 11 m warm water pool		allow	1,500,000		1,500,000	
Pool equipment		allow	100,000		100,000	
Prelims on aquatic works		allow	338,000		338,000	
Total aquatic components			2,938,000		2,588,000	350,000

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

Component	Area	Rate	Complete project as a single stage	Staging Options - 3 stages		
	m2	\$/m2	\$	Stage 1: New amenities building and car parking	Stage 2. New warm water pool, learn to swim pool and splash park	Stage 3. Ramp to existing 50 m for access, outdoor lighting and stands
External Works and Services						
Site preparation	Allow		75,000	30,000	55,000	10,000
Demolition (inc buildings)	Allow		120,000	100,000	20,000	5,000
Car parking / driveway (excluding curbing and re-sealing for Jubilee Ave if required)	26	7,500	195,000	195,000		
Landscaping - soft	Allow		50,000	50,000	10,000	5,000
Landscaping - hard	Allow		200,000	200,000	30,000	10,000
Spectator seating area (including structure)	139	3,500	486,500			486,500
New fencing (approx. linear metre)	230	250	57,500	57,500		
Outdoor pool lighting	Allow		250,000			250,000
External services			excluded	excluded	excluded	excluded
Total External Works and Services			1,434,000	632,500	115,000	766,500
Locality Allowance						
Additional cost for construction in Mullumbimby	3%		210,987	57,312	122,580	33,495
Construction Costs			7,243,887	1,967,712	4,208,580	1,149,995
ESD allowance	10%		724,389	196,771	420,858	115,000
Contingency (design and construction)	20%		1,448,777	393,542	841,716	229,999
Native title compensation allowance	5%		362,194	98,386	210,429	57,500
Professional fee allowance	8%		562,632	152,832	326,880	89,320
Authority fees & charges	1%		70,329	19,104	40,860	11,165
FF & E (excluding new pool blankets)	5%		133,045	63,895	69,150	-
Cost of staging construction	20%		-	393,542	841,716	229,999
Cost escalation	EXCLUDED		562,632	152,832	326,880	89,320
Total Stage Cost				3,187,399	6,749,760	1,825,478
Total Project Cost			10,183,059			11,762,637
Additional Options as Required						
1. Replace the pool shell and balance tank should the risk of breaking into the wall to include a ramp be too high	Allow		4,500,000			4,500,000
Piping and filtration to suit new 50 m pool shell	Allow		500,000			500,000
2. Acquire/negotiate access to adjacent land for additional car and bus parking	EXCLUDED		EXCLUDED			EXCLUDED

Exclusions

Activ Facility Designs have expressly not taken into account the impact of the COVID-19 pandemic (or any other matter coming to our attention after the date of this report) and accordingly have excluded from this report any implications in relation to programme, costs, supply shortages, performance of parties due to shortages of labour and the inability to travel due to global and national travel restrictions, etc.

We accept no liability for any loss or damage which arises as a result of such matters or any reliance on this report which assumes such matters have been taken into account.

Other exclusion include:

- GST
- Excludes investigations required concerning planning, parking, vegetation and flooding that will be required as part of the DA process.
- Cost escalation excluded
- Cost escalations beyond Oct 2021
- Upgrade or provision of authority services infrastructure external to the site
- Land, legal and finance costs
- Adverse soil conditions incl. excavation in rock, contaminated soil, soft spot
- Asbestos and other hazardous materials removal
- Diversion / relocation of existing in-ground services
- Relocation / Decanting / Temporary Accommodation
- Upgrade of fire services including provision of fire sprinklers
- Stormwater on site retention / detention system
- Planning permit fees
- Native Title and Heritage* See following.
- Note: Exclusions within cost plan

Pre-work costs

Pre-work cost may also include the following:

- The additional cost of preparing a Plan of Management (estimated by Council at \$50,000)
- Aboriginal Cultural Heritage identification and management
- Compensation for impacts on Native Title Rights and Interests
- Note: Depending on the final type of works and design details, compensation for impacts on Native Title may be triggered. These cost are unknown.
- Other planning investigations may also be required.



APPENDIX 7. REPORT ON THE TREES AT THE MULLUMBIMBY POOL

Tree Identification Mullumbimby Pool November 2021 by Council's Qualified Horticulturalist

The existing landscape is dominated by Bangalow Palms (*Archontophoenix cunninghamiana*), they are quite old now and their growth is slowing down as can be seen from the ever-decreasing internodal scars on the upper trunk left after fronds are shed. This suggests that the palms are reaching the end of their natural lives. These palms don't contribute much to the provision of shade with a relatively small tuft of fronds atop a tall trunk. While these palms will regularly shed fronds they are unlikely to find their way into the pool, staff may tell you that their flowers are problematic in this respect and the small hard fruit are likely to be a hindrance to mowing.

The following table lists the species of trees shown on the plan and comments for each.

An aerial image with the each tree identified and corresponding numbers is provided at the end of the table. Those trees shown green are those to be retained, red need to be replaced and yellow have potential to replace.

Table. 1 List of trees at the Mullumbimby pool

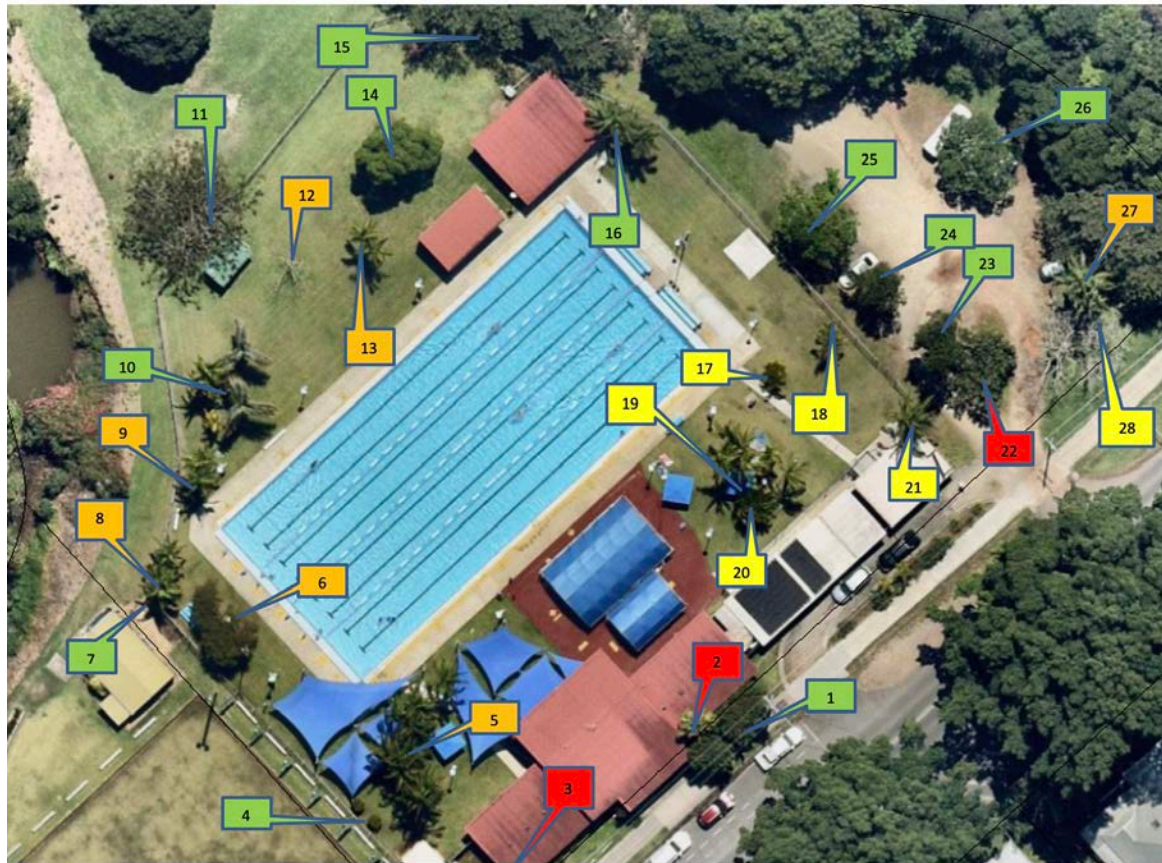
	Species	Horticulturalists comments	@leisure notes
1	<i>Syzygium australe</i> (Brush Cherry) x 2	Well suited to this location	
2	<i>Livistona</i> sp. (Cabbage Palm)	Interfering with powerlines, too close to building. Remove	Remove
3	<i>Anchontophoenix cunninghamiana</i> (Bangalow Palm) (multi planted)	Dropping heavy fronds in bin area, not contributing to landscape. Remove.	Remove
4	<i>Ixora</i> sp. An exotic shrub	Well behaved, doing ok, colourful flowers, best as a hedge.	Make into a hedge?
5	<i>Anchontophoenix cunninghamiana</i> (Bangalow Palm) (multi planted)	Growth is slowing with age, internodes shorter, fronds smaller. We should be planning for succession.	Check against design
6	<i>Callistemon viminalis</i> (Bottlebrush)	Healthy small trees, poorly pruned with a dead section. Staff not fond of them as they drop flowers and leaves into the pool.	Consider replacing with better shade species
7	<i>Wodyetia bifurcata</i> (Foxtail Palms) x 2	Low maintenance attractive palm species in good health.	Keep
8	<i>Anchontophoenix cunninghamiana</i> (Bangalow Palm) (multi planted)	Growth is slowing with age, internodes shorter, fronds smaller. We should be planning for succession.	Consider replacing
9	<i>Anchontophoenix cunninghamiana</i> (Bangalow Palm) (multi planted)	Growth is slowing with age, internodes shorter, fronds smaller. We should be planning for succession.	Consider replacing

Mullumbimby Memorial Centre-Petria Thomas Pool Feasibility

	Species	Horticulturalists comments	@leisure notes
10	Neodypsis decaryi (Triangle Palm) x 2	Healthy attractive palms, pity they are exotic.	No action required or replace when required
11	Glochidion sumatranum (Cheese Tree)	Local native species, healthy but will suffer annual defoliation from caterpillars.	No action required
12	Delonix regia (Poinciana)	Stunted, poor specimen, would benefit from grass control and mulch but mulch would end up in pool.	Consider replacing as required
13	Anchontophoenix cunninghamiana (Bangalow Palm) (multi planted)	Growth is slowing with age, internodes shorter, fronds smaller. We should be planning for succession.	Consider replacing as and when required
14	Syzygium leuhamanii (Riberry)	Healthy local species, doesn't appear to shed a lot of leaves.	No action required
15	Waterhousia floribunda (Weeping Lilly Pilli)	Healthy local species, doesn't appear to shed a lot of leaves.	No action required
16 16 (a)	Anchontophoenix cunninghamiana (Bangalow Palm) x 3 Plus Wodyetia bifurcata x 1	See previous comments.	Consider replacing as and when required
17	Chrysalidocarpus lutescens (Golden Cane)	Healthy, easy to look after. A staff favourite	May need to be replaced due to where proposed building will go
18	Anchontophoenix cunninghamiana (Bangalow Palm) Plus Wodyetia bifurcata x 1	See previous comments.	May need to be replaced due to where proposed building will go

	Species	Horticulturalists comments	@leisure notes
19	Anchontophoenix cunninghamiana (Bangalow Palm)	One with decay in trunk, does not require urgent attention.	May need to be replaced due to where proposed building will go
20	Chrysalidocarpus lutescens (Golden Cane)	Healthy, easy to look after. A staff favourite	May need to be replaced due to where proposed building will go
21	Anchontophoenix cunninghamiana (Bangalow Palm) x 2	See previous comments.	May need to be replaced due to where proposed building will go
22	Macaranga tanarius (Macaranga) with Phoenix roebellini growing beneath	Macaranga is a local pioneer species, the dwarf dates are exotic. This clump could be removed with little trouble to improve carpark access.	May need to be replaced due to car parking
23	Stenocarpus sinuatus (Firewheel)	A highly ornamental local tree, provides good shade	Keep and protect from damage from vehicles
24	Stenocarpus sinuatus (Firewheel)	A highly ornamental local tree, provides good shade	Keep and protect from damage from vehicles
25	Stenocarpus sinuatus (Firewheel)	A highly ornamental local tree, provides good shade	Keep and protect from damage from vehicles
26	Calodendrum capense (Cape Chestnut)	Not local but highly ornamental when in flower, non-invasive species.	Keep and protect from damage from vehicles
27	Anchontophoenix cunninghamiana (Bangalow Palm)	These Bangalow palms are not contributing much to the locale, they could be removed if needed for improved access.	Consider replacing if required by car park design
28	Albizia sp (Silk Tree)	An old tree, with large cavity in trunk but appears sound.	

Image 1. Trees in the Mullumbimby pool with numbers corresponding to the previous table



APPENDIX 8. CULTURAL HERITAGE SEARCH



AHIMS Web Services (AWS) Search Result

Your Ref/PO Number : weh
Client Service ID : 642029

Date: 25 November 2021

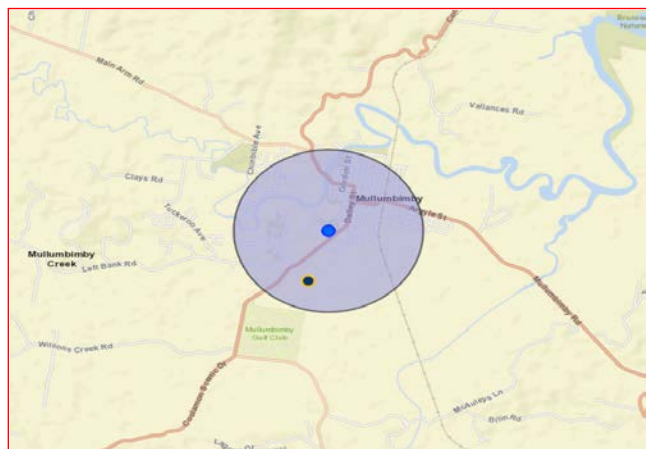
Robert Appo
70 Station Street
Mullumbimby New South Wales 2482
Attention: Robert Appo

Email: rappo@byron.nsw.gov.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Address : 5 JUBILEE AVENUE MULLUMBIMBY 2482 with a Buffer of 1000 meters, conducted by Robert Appo on 25 November 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

1	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *