

SPLASH PARK FEASIBILITY STUDY







ABOUT THIS DOCUMENT

This document is The Central Goldfields Splash Park Feasibility, prepared by @leisure Planners and Jeavons Landscape Architects.

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The Dja Dja Wurrung People lived in the area now known as Central Goldfields Shire Council. Council pays respect to leaders and Elders past, present and emerging for they hold the memories, the traditions, the culture and the hopes of all Dja Dja Wurrung People.

We express our gratitude in the sharing of this land, our sorrow for the personal, spiritual and cultural costs of that sharing and our hope that we may walk forward together in harmony and in the spirit of healing.





CONTENTS

1.	INTRODUCTION	3
1.1	Background	3
1.2	Objectives and alignment with existing plans	5
2.	ABOUT SPLASH PARKS	7
2.1	Key types of splash parks	8
3.	IDENTIFYING THE MOST APPROPRIATE SITE	9
3.1	Issues affecting site selection	9
3.2	Site selection criteria	10
3.3	Methods of determining the preferred site	12
3.4	The site options	13
3.5	The preferred site	15
3.6	Other options	15
4.	COMMUNITY ENGAGEMENT	16
4.1	Methods	16
4.2	Results of the community survey	16
5.	ISSUES AND OPPORTUNITIES	18
6.	DESIGN CONCEPT	23
6.1	The brief	23
6.2	Preliminary location diagram for splash park	23
7.	COST ESTIMATES	25
7.1	How much will it cost to construct and operate a splash park?	25
8.	CONCLUSION AND RECOMMENDATION	29

9. APPENDICES	. 3
Appendix 1. The Community Survey; What Respondents Said	31
Appendix 2. Benchmarking Of Splash Parks	43
Appendix 3. Types Of Splash Parks	45
Appendix 4. Summary Of Key Compliance Requirements: Vic Health And Wellbeing Act Regulations 2019	53





1. INTRODUCTION

This project investigated the feasibility of providing a Splash Park/Water Play area in the Shire, with the goal of providing a water-based attraction for families.

1.1 BACKGROUND

The need to undertake this project was initiated by local advocacy to Shire Administrators during 2018- 2020.

Interest in a splash park goes back to 2015, when parent of young children started a Facebook page *Maryborough Water Playground* – and collected information about splash parks/water play spaces across the state.

A proposal by community members was presented to the then Administrators, and Council subsequently agreed to provide funds to investigate the feasibility of a splash park.

The feasibility sought strategic advice about siting, construction, operation and maintenance costs, together with management options and an indicative concept plan to inform Council's decision making regarding future development of a splash park.

Currently there is no splash park/water play area in Central Goldfields Shire.

Council has an indoor heated pool complex at the Maryborough Sports and Leisure Centre in Gillies Street, Maryborough. There is a heritage-listed outdoor pools complex in Princes Park, and there are small outdoor pools in the towns of Dunolly and Talbot.

The community consultation during the Council's Recreation and Open Space Strategy 2020-2029, identified two sites as the preferred locations. These were both in Princes Park:

- Adjacent to the skate and scooter park and play space at Lake Road; and
- Within the heritage-listed Maryborough Outdoor Pool Complex.

Two further sites; Jack Pascoe Reserve adjacent to the Maryborough Sports and Leisure Centre and a site in Carisbrook were subsequently been identified as warranting investigation.

Feasibility

The outcomes sought from this feasibility study include:

- · Identification of the most appropriate site
- Community engagement and consultations (to be led by consultant with Council support)
- Preparation of site analysis and identification of proposed components
- Provision of cost estimates for construction, operation, maintenance plus whole of life costs
- · Bench marking, and
- Site visits.





Design considerations

The brief identified design considerations for a future project should include the following:

- Respond to the location and reflect any heritage significance of the site, if relevant.
- Provide challenge and creativity, the opportunity to develop new skills.
- Consider a range of features that provide opportunity for interactive play.
- Incorporate universal design principles with a particular focus on meeting the needs of people with mobility devices.
- Incorporate crime prevention through environmental design (CPTED).
- Incorporate environmentally sustainable design (ESD) principles and water sensitive urban design (WSUD) considerations.
- Create a welcoming and family friendly site.
- Provide opportunity to enhance social connectedness, particularly for young people.
- Consider potential future users as well as current ones.
- Consider partnership opportunities.





1.2 OBJECTIVES AND ALIGNMENT WITH EXISTING PLANS

Central Goldfields Shire Council has existing Plans with stated objectives which support the development or investigation of a splash park. This project aligns with these as follows.

Figure 1 The Council plans with objectives and commentary relating to splash parks

Plan	Relevant Objectives / Strategic Directions
Council Plan 2021- 25 Parks and playgrounds are part of daily life and contribute greatly to the health and well-being of residents. Strategic Objective 1. Our community's well-being Community's vision is: Socially connected, creative, inclusive, healthy and safe for "all ages" friendly community.	 What we will do Strengthen and build inclusion in community and intergenerational connections Supporting positive life journey development for all residents How we will do It Provide a diverse range of experiences that are welcoming accessible for people of all abilities, inclusive and affordable. Encourage and facilitate connections across all age groups through shared activities and social interaction Support children aged 0-8 and their families, so children can have the best start in life.
 Strategic Objective 3. Our spaces and places Strategic priorities Community's vision is: Sustainable living with green spaces A commitment to climate action and less waste production Preservation of heritage and Engaging places in spaces for people to leave work play and connect. 	 What we will do Provide engaging public spaces Provide infrastructure to meet community need How we will do It Actively plan and seek funding opportunities to develop infrastructure, including recreation facilitiesto meet community needs.





Plan

Relevant Objectives / Strategic Directions

Recreation and Open Space Plan 2020-29

 "Provide a free access splash park/water play area in Maryborough."

Maryborough Community Plan

- "Have a splash park in Maryborough so everyone can cool down in our dry hot summer."
- "A splash/ water park in Maryborough that is fenced and is free to use".

The Major Reserves Master Plan 2022

- Recommendations in the master plans for Princes Park,
 - J H Hedges Memorial Park and Jack Pascoe Reserve did not include a splash park.
- However a new play space at Jack Pascoe Reserve was recommended.

Objectives related to water play, from aligned strategic plans:

- Reduce heat stress
- Provide free access and fenced
- Improve shade in parks, playgrounds, pools
- Consider all ability access and female/family friendliness when planning recreation and community infrastructure
- Create more placed-based opportunities for young people to be physically active and socially connected
- Activate formal and informal green spaces across the Shire







2. ABOUT SPLASH PARKS

Water play can be provided in different forms. Typically water play facilities may include:

- a) Small water play elements in a play space for example a small hand pump or press-button tap, fillable trough, with gates that are interactive or include a stream bed in a natural setting, or
- b) A splash park which have a paved apron with sprays and cannons and the like, or other equipment, either as a stand-alone park or associated with aquatic centres.

A strong preference in the community survey was for a splash park, not water play elements in a natural setting.

This project investigates the feasibility of providing a splash park.

Splash parks- other names

Splash parks are also often known as splash pads, water parks, aquatic playgrounds, and legally as "interactive water features".

2.1 KEY TYPES OF SPLASH PARKS

There are two main types of splash parks distinguished primarily because risk and of regulations related to supervision. These are:

- a) Zero-depth splash parks, which may include a wide range of sprays cannons, buckets or equipment with water running over them, or
- splash parks with pools of water. These may include the same types of sprays as xero depth splash parks, play-equipment style water features etc., but include a pool, so they carry additional a risks and compliance issues. This type of splash park needs to be supervised and therefore they are commonly provided in conjunction with an aquatic centre, fenced lagoon pool or major destination park.

Zero depth / splash park elements

Zero depth splash parks do not require lifeguards. They typically include either:

- Sprays and various elements such as sprays, and cannons and buckets (for cooling off and fun) set into a spray apron.
- And/ or interactive play elements such as pumps and channels, often provided in conjunction with sand and other natural elements, or a dry playground equipment area.



Figure 2 Example of a) Zero depth splash park at Wallan Vic. This is a destination play space.

Splash parks with pools

Splash parks which include pools of water require lifeguards. They may include features such as sprays, cannons and equipment typically provided within an aquatic centre or destination or tourist park, either indoors or outdoors.



Figure 3 Example of b) Water play area with a pool of water and sculptures with sprays. The Entrance.

Images of a range of examples are shown in Appendix 3.





2.2 WHY PROVIDE SPLASH PARKS?

Splash parks are commonly provided for many reasons:

- As a tourist destination
 E.g. Townsville and Cairns Foreshore; South
 Bank; Darling Harbour; Brisbane River; Bright.
- As a major destination play space
 E.g. Wallan Community Park, Broad Water
 Parklands, The Heart Bannockburn
- To extend opportunities at a swimming pool E.g. AquaMoves Shepparton; Kingston Waves; Eureka Aquatic Centre Ballarat, or indoors at Splash-Hume; GESAC Glen Eira; East Keilor Leisure Centre etc..
- To replace an outdoor swimming pool deemed no longer viable E.g. Long Gully Bendigo, Seville.
- To extend typical dry play opportunities with a natural interactive element, and water to cool off that is attractive and educational lan Potter Children's Garden, Royal Park Nature Play space.

Splash parks are not a replacement for swimming pools

- Splash parks will not contribute to drowning prevention, swimming ability, or significant physical activity gains.
- Splash parks can however overcome fears of water in young children because they are non-threatening, safe and fun.
- Splash parks may be a welcome addition to the small traditional pools to expand the range of aquatic options for all ages and abilities.

Splash parks can add diversity to the range of play opportunities

Splash parks can:

- Provide open-ended play opportunities for the development of fine motor skills, coordination and problem-solving, and cause and effect.
- Provide opportunities to explore the senses, encouraging imagination and creativity.
- Expand on the attributes of an existing play space with traditional play equipment and create a focal point for activities not currently available.
- Embellish or "activate" a currently underutilised space.

Splash parks-the other benefits

Splash parks also:

- Provide relief from heat stress, to cool off, and reduce heat stress.
- Provide opportunities to socialise and play with friends and family and engage in cooperative play.
- Offer different experiences with water. They
 may be exciting, and stimulating because of
 the sound, movement and sparkle, but water
 may also be calming, restorative and
 encourage contemplation.
- Typically require hard-stand surfaces (the spray apron) which can easily be designed to be very accessible to a wide range of people with mobility disabilities and devices.
- The spray apron surfaces can be multi-use, and in winter months used for other activities such as gentle exercise classes, and other community purposes. However these surfaces may increase the heat island affect within a park and be used by unintended uses such as for skating, and personal training.
- Zero depth splash parks can be open for longer hours than pools as staff supervision requirements and temperature policies are not applicable.







3. IDENTIFYING THE MOST APPROPRIATE SITE

The summary of site selection criteria is provided following the discussion the selection criteria. (See page 10.)

3.1 ISSUES AFFECTING SITE SELECTION

There are three major issues that affect site selection for a splash park, because they can significantly reduce the costs of the development. These are:

1. The availability of facilities that need to be provided to support users' visits.

As support facilities may cost as much as the splash park sites where these are already provided are highly rated.

The feasibility and cost of monitoring and maintenance.

Legislation requires regular inspections and monitoring of water quality. Where sites can be cost effectively serviced by staff close by – these are highly rated.

 Compatibility and ability to add benefits to an existing public space. A splash park is like to draw users from other towns including those outside the Shire. Therefore the space should have a compatible catchment hierarchy and be suitable for regional users. The opportunity for this facility to fill a gap in local provision should also be considered.

1. Availability of support facilities

As users tend to travel some distance to use splash parks, they need a range of support facilities. These include toilets, change facilities, picnic shelters, furniture, and car parking etc.

The recent survey for this project indicated over 50% of respondents said they would regularly travel more than 10 km for a splash park and many currently travel an hour to use existing ones.

Sites that already have these support facilities are favoured for a new splash park development.

2. Monitoring and maintenance

State government regulations (Public Health and Wellbeing Regulations 2019) require daily inspections, and frequent water quality monitoring and by their nature, there is a high level of maintenance required. Therefore if provided close to existing aquatic facilities, staff with necessary qualifications may be available to carry out monitoring.

3 Compatibility and ability to add benefits to an existing public space

Parks should have a regional or at least district catchment to be compatible with the potential use. The Play Spaces Strategy has proposed a park catchment hierarchy that sets out these characteristics for different levels of Parks across the Shire.

The Play Spaces Strategy and other Council Strategies have identified gaps in play and children's services. It would be beneficial to fill this gap with a splash park, which may also be colocated with a year round play space or other related service.

The specific site criteria are listed overleaf.



Figure 4 Long Gully Splash Park, City of Greater Bendigo





3.2 SITE SELECTION CRITERIA

For practical, social and economic reasons, splash parks need to be sited in district or regional parks in Central Goldfields Shire with the following attributes.

These selection criteria were weighted in terms of priority before evaluating each site against them. (See matrix with weightings on the following page and the steps in the process in 3.3).

- a. Space allows 500 sqm sized pad, plus shade, landscaping, picnic toilets/ change, lawn and associated dry play facilities, buffers and car parking)
- b. There is either existing support facilities such as car park, toilets, picnic and play facilities that can be added to, or the potential to provide them in conjunction with a play-space.
- The water play elements are consistent with and complements the park function and setting type and associated design/ existing opportunities
- There are no existing water play opportunities nearby, such as natural waterways that enable swimming or water play.

- e. Splash park can be cost effectively serviced, kept clean and managed i.e. close to an aquatic centre where qualified staff could inspect and monitor water quality and issues, and be able to organise /undertake repairs, unblock sprays/ drains etc.,
- f. Not heavily treed that may affect water quality, impact services, make surfaces slippery, increase cleaning etc., block drains and or obscure sight lines There needs to be an adequate buffer from existing trees.
- g. There is an adequate buffer from trees and residences for privacy, no conflict from light spill, noise etc., and there is space for vehicle/emergency maintenance
- h. Topography creates no substantial change in landform, a suitable balance in cut and fill, adequate grade for effective drainage
- The site is in Council ownership or longterm tenure/control.
- j. The water play elements, and especially new hard stand pavement, can be integrated into the park design without too much visual and environmental disturbance.
- Maximum population served, central to Shire and contributes to a better distribution of play / aquatic facilities

- Visually prominent open to two or more major road edges, not obscured by vegetation, large buildings or similar
- m. No major planning constraints that will require protracted approval processes
 e.g. flood, heritage, biodiversity, zoning, or services drainage, geotechnical, easement, trunk sewer
- Access to potable water supply close by as well as electricity, mobile phone internet service and other services connections
- o. Not a landfill site where subsidence, gas or poor soil conditions exist
- Accessible, safe pedestrian and cycle access to the site. Public transport access to the site or adjacent is desirable.





			POTENTIAL SITES / OPTIONS															
					OPTI	ON 1.			OPTIO	ON 2.		OPTION 3.		OPTION 4.		OPTI	ON 5.	
	SITE SELECTION CRITERIA		Park, Mar	fa. Princess ryborough oor Pool		ib. Princess lorough Play		: Coronation ryborough	Maryboro	TION 2. ugh Leisure entre	OPTION	. Phillip Gardens		4. Adjacent to Station nain Play Space		5a. Market Carisbrook		ib. Bucknall Carisbrook
			Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Α	Space allows 500sqm sized pad, plus shade, landscaping, picnic toilets/ change, lawn and associated dry play facilities buffers and car parking)	0.12	5	0.58	4	0.47	2	0.23	5	0.58	2	0.23	5	0.58	5	0.58	5	0.58
В	There is either existing support facilities such as tollet picnic and play facilities that can be added to, or where a new destination park is desirable	0.07	5	0.33	5	0.33	4	0.27	4	0.27	4	0.27	2	0.13	5	0.33	4	0.27
C	The water play elements are consistent with and complements the park function and setting type and associated design/ existing opportunities	0.02	5	0.08	5	0.08	4	0.07	4	0.07	3	0.05	3	0.05	5	0.08	4	0.07
D	Natural waterways that enable swimming or water play are not accessible close by	0.00	3	0.00	3	0.00	3	0.00	5	0.00	4	0.00	4	0.00	4	0.00	2	0.00
E	Splash pad is cost effective to service, keep clean and manage i.e close to a aquatic centre where qualified staff could inspect and monitor	0.11	5	0.54	4	0.43	4	0.43	5	0.54	3	0.33	3	0.33	2	0.22	2	0.22
F	Not heavily treed to affect services and cleaning etc.,	0.03	4	0.10	5	0.13	4	0.10	5	0.13	2	0.05	5	0.13	4	0.10	3	0.08
G	Adequate buffer from trees and residences for privacy, no conflict from light spill, noise etc., and space for vehicle/emergency maintenance	0.03	5	0.13	5	0.13	4	0.10	5	0.13	4	0.10	4	0.10	4	0.10	4	0.10
н	The site is in Council ownership or long-term tenure/control	0.13	5	0.63	5	0.63	5	0.63	5	0.63	5	0.63	5	0.63	5	0.63	5	0.63
1	Topography creates no substantial change in landform, a suitable balance in cut and fill, adequate grade for effective drainage	0.05	4	0.20	5	0.25	5	0.25	5	0.25	5	0.25	5	0.25	5	0.25	4	0.20
J	Maximum population served, central to Shire and contributes to a better distribution of play / aquatic facilities	0.10	5	0.50	5	0.50	5	0.50	5	0.50	5	0.50	5	0.50	2	0.20	2	0.20
K	Visually prominent open to two or more major road edges, not obscured by vegetation, large buildings or similar	0.08	3	0.23	3	0.23	3	0.23	5	0.38	4	0.30	3	0.23	4	0.30	2	0.15
L	No major planning constraints that will require protracted approval processes e.g flood, hedtage, blodiversity, zoning, or services drainage, geotechnical, easement, trunk sewer	0.09	4	0.37	4	0.37	4	0.37	4	0.37	4	0.37	4	0.37	4	0.37	4	0.37
M	Access to potable water supply close by as well as electricity and other services connections	0.07	5	0.33	4	0.27	3	0.20	4	0.27	5	0.33	3	0.20	4	0.27	4	0.27
N	Not a landfill site where subsidence, gas or poor soil conditions	0.08	5	0.38	5	0.38	5	0.38	5	0.38	4	0.30	4	0.30	4	0.30	4	0.30
0	Accessible, safe pedestrian and cycle access to the site	0.04	4	0.17	5	0.21	5	0.21	5	0.21	5	0.21	5	0.21	4	0.17	3	0.13
P	Public transport access to the site desirable	0.02	3	0.05	3	0.05	3	0.05	4	0.07	5	0.08	5	0.08	2	0.03	2	0.03
	TOTAL SCORE	TOTAL	70	4.61	70	4.43	63	4.00	75	4.74	64	3.99	65	4.08	63	3.93	54	3.58
	RANK	RANK		2		3		5		1		6		4		7		8





3.3 METHODS OF DETERMINING THE PREFERRED SITE

The steps to determine the preferred site are outlined below.

Step 1.

A list of evaluation criteria was identified to ensure the site met the criteria of locating a fitfor-purpose splash park facility (see above).

Step 2.

A short list of sites was established, in collaboration with Council officers, to evaluate against the site selection criteria.

Step 3

Using the paired comparison technique, each criterion is compared against each other, to determine the relative importance of each.

Step 4.

The paired comparison technique was used to compare each criterion with each other. The priority for each comparison adds to the score for each criterion. This summed score divided by the total provides a weighting for each criterion.

Step 5.

Each site option was evaluated against the site selection criteria to provide a score for how well the option met the criteria.

This score was multiplied against the weighting to arrive at a weighted score for each site for each criterion.

Step 6.

The weighted scores for each site option are summed.

This determines a total for each option, and these are sorted to provide a ranking of the sites.

The site with the highest score indicates which option best meets all criteria.

Step 7.

The last step was to identify other advantages and disadvantages of each site, and this considers other added value and costs for example.







3.4 THE SITE OPTIONS

Option 1. Princes Park Maryborough (1a. Outdoor Seasonal Pool)

A splash park could be positioned outside the pool fence, or as a replacement for a small swim pool inside, if in keeping with the heritage works.

If a splash park is included with the pool, it would add diversity to the swimming offer and be serviced from the pool cost effectively. However it was not the preferred site as:

- A separate fenced area with an openable gate would be needed to provide for free access, and if open beyond pool hours, access to toilets, shade and support facilities would be required.
- The site is small
- It has heritage significance
- This option may be very expensive and would prevent colocation with new play space.
- This site would not address a gap in the distribution of play spaces.

Other options considered in Princes Park were in conjunction with an existing play space:

- 1b. Lake Rd East, and
- 1c. Coronation Park.

These sites were not found to be suitable because:

- The lack of space
- Context, and
- Potential conflict with existing facilities
- The lake water table is likely to create additional complications.

Option 2. In the vicinity of the Maryborough Leisure Centre Outdoors (Jack Pascoe Reserve)

A splash park in conjunction with a new play space here would assist in filling a gap in play spaces in this area of Maryborough.

A development at this site would activate this park with aging assets, and could use existing support facilities, including the car park, changing places facility for people a disability located in the Leisure Centre.

An option to an upgrade the existing indoor water play space was considered.

However this option was deemed unsuitable as it did not meet the two objectives:

- To reduce heat stress, and
- Provide a free facility.

Nonetheless it may be beneficial to upgrade the existing equipment inside the Leisure Centre in the longer term.







Option 3. Phillip Gardens

This site is not considered suitable due to:

- The garden's highly manicured natural green setting (botanic garden)
- Potential impact on trees
- The limited space available for the splash park or a play space
- This site would not address an identified gap in the distribution of play spaces.

It would only be suited to small natural water play element.

Option 4. Adjacent to Station Domain Play Space and Council offices in Maryborough

This site is not the most suitable as:

- It is obscured by trees from the road.
- It is green and has large shady trees which would be impacted by paving, drainage and water supply.
- The leaf litter would be problematic in maintaining a non-slippery surface, and meeting water quality guidelines.
- There is no public toilet in this parkland.
- It would not address a gap in the distribution of play spaces, and the site adjacent to the existing play space is too small.

Option 5. Sites in Carisbrook

A site in Carisbrook is not considered a priority as:

- It would not address a gap in play provision
- Carisbrook has a smaller population
- A site in Carisbrook is not as a central to service cost effectively
- It would not be as accessible to as many visitors as a site in Maryborough

Options to add water play elements were considered at the following sites in Carisbrook:

- Market Reserve.
 Market Reserve could be enhanced by the addition of water and other design refinements.
- b) Bucknall Reserve. This is not considered suitable in the creek corridor due to limited informal surveillance, the flood prone nature of reserve, and other

factors.







3.5 THE PREFERRED SITE

The priority and most feasible site for a splash park in Central Goldfields Shire was found to be adjacent to the Maryborough Leisure Centre in Jack Pascoe Reserve.

The ranking of the site options is as follows:

No.	Site	Weighted Score
1.	Option 2. Adjacent to Maryborough Leisure Centre in Jack Pascoe Reserve	4.74
2.	Option 1a Princes Park - Outdoor Pool	4.61
3.	Option 1b Princes Park – Lake Rd East	4.43
4.	Option 2 Adjacent to Station Domain Play Space	4.08
5.	Option 1c Princes Park – Coronation Park	4.00
6.	Option 3 Phillip Gardens	3.99
7.	Option 4. Market Reserve, Carisbrook	3.93
8.	Option 5. Bucknell Reserve, Carisbrook	3.58

The ratings are shown detailed site selection matrix with weighted site selection criteria is shown in 3.2.



Figure 5 Site adjacent to the Maryborough Leisure Centre

3.6 OTHER OPTIONS

These options and the priority to provide a significant splash park for the Shire do not preclude small-scale water play elements being provided in conjunction with the existing outdoor swimming pools to enhance their offering.

The Council may best progress these in the longer term once a freestanding splash park is provided.





4. COMMUNITY ENGAGEMENT

4.1 METHODS

Community and stakeholder engagement included the following:

- A Your Say page for residents to contribute their ideas and information about play in Central Goldfields
- A poster was used to draw people to those online opportunities.
- A project reference group who was used to advise and provide feedback into the process telephone interviews of key stakeholders.
- A community survey was conducted, which received over 300 responses.
- A review of other social media outlets and commentary being made about play and splash parks in Central Goldfields.

4.2 RESULTS OF THE COMMUNITY SURVEY

Highlights

Almost all survey respondents (97%) said they would use a water play facility. Those respondents who supported Council delivering a splash park, provided a number of reasons why one is needed:

- Its accessible / something that the whole family/ people of all ages and abilities can enjoy.
- 2. It is an activity needed by kids/ so many people would use it
- 3. It would bring people to the town, an attraction (18%)
- 4. Free activities are important, so you do not have to travel and the pool costs money. It would add variety to what is available (64%).
- 5. The outdoor pool is closed, and the kids need somewhere to cool off (22%).

Over 50% of respondents would travel more than 10 km to use a splash park.

A high proportion of residents (86%) prefer the paved apron with sprays as the style of park rather than a natural water play area with pumps and channels etc.

Some 92% of respondents (250) think a splash park is a higher priority than other park types, and other play space upgrades.

Other feedback

Eight survey respondents are not likely to use a splash park. The reasons given were as follows:

- It is for toddlers mostly. But if it was connected to a great play space, such as the Princes Park.... well maybe.
- I don't have children of a young age
- We would probably use it, but I disagree with it being free, I don't think as a ratepayer that our Shire can afford the construction and ongoing costs of this project
- It will end up being a dirty space as people will bring dogs and rubbish
- It will be a waste of money. We need a swimming pool that all members of the community can use. A pool that is open on hot days. Would rather the money be put into the outdoor pool. We need an outdoor pool!!!!
- A splash park will not be able to be used all year
- Because people think their dogs have the same rights as children
- Prefer places to sit, have a BBQ, sheltered.
 Allergic to chlorine...no no!







Views of supporters

It should be noted that community members supporting a splash park in Central Goldfields have actively promoted the survey, so survey results may not be representative of the whole population.

"Mainly doing this survey to assist those who have been really persistent and vocal for the build, though I must say there needs to be more swings at the Princes Park playground that aren't catered to toddlers".

"A minority of the community is very vocal in regard to a splash park, but many wouldn't understand the ongoing costs involved with the running of this, as well as the overall use each year. I wouldn't be taking my little kids there unless it's a hot day, which is only going to be over approximately 3 months of the year"

Respondents family members with a disability

There were 65 respondents who have a family member with a disability and want a water play park.

Two of the 8 respondents that don't want a water play space, have a family member with a disability.

Reasons for not prioritising a water play space Reasons given for not prioritising a water play space above other options are that money should be spent elsewhere (e.g. outdoor pool, updating current play spaces), particularly because a water play space would only be used for a portion of the year.

"Having a full size fully functional outdoor pool would be more beneficial than a splash park or anymore play spaces. Currently our kids are learning to swim in an indoor pool where they can touch the bottom which is not ideal or overly realistic if they fell in fully clothed etc. if a splash park was to be considered this area should all tie in together. Utilise the derelict tennis courts as well. It's a great central space".

"We have many play spaces in the area that would get a lot more use if they were upgraded there is no point adding more and letting the older places go to waste".

"The ongoing cost and water usage concerns me. For the cost it is only one season so 3-4 months at most. I think the money could be used to better. Adding public use basketball rings and more nature play in numerous areas around the region would be my choice".

"The other play spaces are in desperate need of upgrading. It would be amazing to have both a splash park and upgraded park but a park that can be used all year around would be amazing".

Respondents place of residence and sites

The respondents who said they would travel less than 5 km for a water play space are either in Maryborough or close to, and so would expect it to be within that distance.

Those willing to travel further are in the outer regions of the Shire, so expect that to be the case (it is likely to be "normal" for them).

Place of residence doesn't have an impact on type of water play space.

73% of Carisbrook residents want the water play space in Carisbrook, with the remainder in Maryborough. 34% want it in conjunction with the Maryborough Outdoor Pool, though it is worth noting that some comments suggest they don't want it in the pool complex because that requires an entry fee.

The most common "Other" suggestion for a site is near the skate park (Princes Park East). More gave this response than for Carisbrook.

Age of children

There was no notable difference in whether a water play space is a priority, by age of respondent's children.

145 people provided an additional comment at the end of the survey. 26% of those mentioned the water play.

Appendix 1. provides more details from the survey results, in particular the reasons why it would be good to have one in the Shire.







5. ISSUES AND OPPORTUNITIES

The following table outlines typical questions and issues that can arise in splash parks and suggested solutions to overcome them.

Figure 6: Typical questions and issues that can arise in splash parks and possible solutions

Issue: Year-Round or Seasonal?



- Splash parks are typically used when temperatures are 25 degrees and above. As a place to cool off and to be available for free, an outdoor splash park (with sprays etc.), will be by nature seasonal.
- Potential contamination requires higher turnover rates and higher chlorination levels than a typical swimming pool. Regulations require daily inspections and regular monitoring of water quality.
- Splash parks provide more flexibility in responding to unseasonal hot weather than a pool because they are not staffed.
- Benchmarking suggests low use increases the likelihood of equipment failures.

Solution

- Splash parks are feasible only to operate in warm weather.
- Minimal non-immersive water play elements such as hand pumps, or small channels can be provided with other dry play elements, allows a park to provide access to water play all year. An apron with sprays, buckets and wetting equipment can be available only when temperatures achieve 25 degrees, or for a designated time such as November – April.
- On hot nights out of season or when pools may be closed, splash parks located outside a pool enclosure may provide access to water and cool off. Fencing alignments and access arrangements can however be challenging.

Issue: Water too cold?



- As temperatures can be cool in Victoria, some Victorian splash parks have water that is solar heated, introducing added comfort in the shoulder seasons, but also cost. (Long Gully, Bendigo, and some of the Big 4 Splash Parks, such as Mildura).
- Splash parks typically require a large volume of water to be heated quickly, and solar heating systems may not be able to provide the necessary heat output in a timely manner.

- If this issue is likely to be a concern by users, consider being able to heat the water when days between November -April don't reach 25 degrees.
- Adjacent permanent shelters can reduce wind chill and include solar panels to minimise energy cost.
- Ensure facilities can be activated by users (push button)
- Turn off at a sensible time at night, so they don't run when no one is present.





Issue: Weather and usage



- Water play features may subject to high usage, wear and tear due to hot weather or low usage due to cool weather and shutdowns due to wind, weather and leaf litter etc.,
- Wind can blow water off the apron reducing flow back to filtration and dosing. Wind can also introduce debris that blocks filtration, and make the water feel cold.
- The windiest months are Jan and November.
- The average mean temperature is above 25 in the months of December, January, February, and March. The most common wind direction is S-SW.
- High usage and low water volume in an outdoor setting can lead to contamination, especially from toddlers in nappies, fully clothed adults, dog, sunscreen, birds, and loose materials blowing in.

Solution

- Ensure balance tanks are filled automatically (when water blown off the apron is not returned) and drain when they over fill due to rain. Ensure all valves and parts needing regular access are easy to access for maintenance, without permits for confined spaces etc.,
- Ensure there are not loose materials abutting the apron, or trees especially in the SSW direction that may cause debris to block sprays etc., and that the location of sprays minimise the amount of water ending up off the apron.
- Turn off the splash park in the wind. Warn the public that on windy days it will be closed. Maintain effective communication with users.

Issue: Burns from users moving from a cool wet surface onto hot dry equipment



 Positioning a splash pad adjacent to a dry unshaded surface such as synthetic softfall in an adjacent playground, or metal play equipment may put babies and young children in danger of they inadvertently crawl from the cool wet, to a hot surface and burning bare skin.

- Dry play spaces can be places adjacent to a splash park.
- Construct adjoining surfaces with material that does not retain heat, warn users and provide adequate permanent shade.





Issue: Fun for everyone



- Splash parks should have features that are attractive and useable to people of all ages, gender identities and abilities.
- A splash park should offer graded challenges and opportunities for all people to be included in the same way as a play space should.
- Some people may want to be involved, but not get wet.
- A spray apron should be accessible to a person using a mobility device, but they may not be able to get this wet.

Solution

- Ensure there is an accessible path of travel from the car park to the splash park and around and through the equipment for people whose wheelchairs or mobile frames can get access.
- When adjacent to a swimming pool, consider the option to hire water chairs. Consider interchangeable sprays to build in variety.
- Ensure there are items where the water is gentle for toddlers and interactive as well as areas that have more significant volumes of water, intense spraying and dumping features that are only accessible to older children.
- Provide adequate curtilage around the sprays and options where adults or people using mobility devices can be close to water and can get their feet wet for example, without being soaked.
- Ensure adequate space for the extended family in the picnic and seating areas. Provide accessible all-gender toilets where people can also change if required.

Issue: Desire for services, not just a splash park



- As users may travel some distance to use a splash park and wish to stay and socialise, a range of facilities are required.
- Some splash parks note a high demand for places to buy coffee, nappies, band-aids etc., nearby and a place to change.
- Some splash parks offer water wheelchairs for people with a disability to enjoy the water in.

- Covered seating areas, BBQ, picnic facilities and open lawn areas, and toilets including a "Changing Places" style of toilet are desirable to provide in associated with Splash Parks.
- Dry play opportunities can extend the use of a splash park, and small water features that don't involve getting wet, such as hand pumps, channels and features can add to a splash.
- If the splash park is adjacent to a service like an aquatic facility, some support services and equipment hire may be possible.







Issue: Recycled or potable water?



- Potable (drinking) water that is not recycled does not need to be treated as it is only used once. Recycling and treating water has a cost, but potable water may also be expensive and not available during restrictions.
- Saving water is considered an environmental priority and the cost of water is increasing. Western Sydney Parklands Water Play uses potable water, which is then used for irrigation.
- The cost to operate a non-recycling spray park may be \$5,000 to \$30,000 per year in water costs, depending on use, flow rate, size of the park, and cost of water.
- A <u>recirculating spray park</u> has a much lower yearly cost to operate as it reuses the water. Water costs may be in order of \$5000 to \$10.000.

Solution

- The capital cost of splash parks using recirculated water will be higher than those using potable water, due to the cost of installing a balance tank, chemical storage, and dosing pumps and equipment, however the recurrent cost of water and water usage will be substantially reduced.
- During water shortages facilities that do not use recycled water are less likely to operate.
- Objectives in Council Plan 2021-2025 regarding sustainable living, climate action and less waste are best met with a recirculated water system.

Issue: Management and design



- Splash parks can be high maintenance, and they need to be managed in accordance with current regulations.
 Sometimes high maintenance is due to poor design or inexperience, and poor choice of switches, pumps, valves and other fittings.
- As a minimum, splash parks must be inspected in the morning before opening to ensure they are safe and operational: Water testing is 4 hourly, filtration.
- Regular cleaning may be required depending on proximity to trees, shade, and loose materials etc.,
- Call outs of specialists may be required for issues with water quality, plumbing and electrical issues backwashing, vandalism repairs and equipment servicing.

- Ensure design includes systems to monitor use and water quality remotely and minimise maintenance. Where contractors are required, ensure they have significant splash design and construction experience.
- Minimise inspection and monitoring costs by co-locating a splash park with a swimming pool and extending the management arrangement /job description of existing aquatic personnel.
- Choose surfaces and products that are robust and easy to maintain. Porous impact absorbing surfaces are difficult to disinfect and should not be used in splash parks. Brushed concrete is the most practical surface for splash parks as it is easy to maintain.





Issue: Meeting health regulations



Regulations to be met include:

- Public Health and Wellbeing Act 2008 and the Public Health and Wellbeing Regulations 2019 (the regulations).
 (see excerpts in Appendix 4).
- Victorian Government, Health (Infectious Diseases)
 Regulations, Dangerous Goods (Storage & Handling)
- Occupational Health and Safety (Manual Handling),
 Dangerous Goods Act.

For risk management, signs should include conditions of use, warnings and information.

- Install and off-site monitoring system that enables water quality and use monitoring remotely. This is particularly effective for sites without direct supervision, as an operator can be advised when chemical levels are outside recommended parameters.
- Operating parameters can be monitored remotely via Wi-Fi. Water chemistry can be remotely adjusted, or the facility shut down/turned on for example.
- Treat the static water before it returns to the apron, when the system is first turned on each day.
- The recirculation system should allow water to be returned to a balance tank, treated and returned to the park features.
- Ensure design maintains water levels in balance tanks to avoid manual filling etc., Ensure valves are accessible from outside confined spaces.
- Signage is required to show people how to use the park, and how to keep it safe for everyone.
- Site the splash park close to a staffed aquatic centre to enable more cost effective monitoring and access to trained staff.





6. DESIGN CONCEPT

6.1 THE PROJECT BRIEF

The project brief required the following components be considered.

- Shade structures and wind protection
- Access to toilets and shower facilities
- Bicycle parking
- Access to drinking water
- Access to BBO facilities
- Signage re safety and usage
- Graffiti and vandalism resistance surfaces
- Good lines of sight for active and passive surveillance
- Access to complementary play/recreation equipment/areas
- Potential extension or development of complementary facilities
- Zones suitable for younger and older users
- Accessible pathways and ramps
- Landscaping and pathways that integrate with surrounding areas
- Seating for spectators with easy access and good viewing
- · The durability of all materials used
- Easy access for maintenance and cleaning
- Risk mitigation
- Access to car parking
- Access to public transport.

6.2 PRELIMINARY LOCATION DIAGRAM

The following preliminary sketch assumes that the Jack Pascoe Reserve is the most feasible and preferred location for a splash park in Central Goldfields Shire.

This site would address a gap in the provision of play space in this area of Maryborough. Note: the master plan for this site shows a proposed play space in the vicinity of the tennis courts.

This is a high-level plan showing how the new facility could be positioned on the site of the soon to be decommissioned skate park, adjacent to the Leisure Centre.

This space is well serviced by access roads car parking and proximity to existing aquatic infrastructure. The driveway would be retained beside the Centre for maintenance access and chlorine deliveries.

Additional car parking may be required to address peaks in use of the Leisure Centre.

There is an existing shelter that could be retained, though it is not oriented ideally, and is not especially attractive.

New accessible toilets/change facilities would be positioned centrally so that they can serve a new district level play space, in the future. Access to a Changing Places toilet for people with a disability is available in the Leisure Centre.

Other shade and shelter structures would be provided, especially in the play space.

There would be a fully accessible path system linking both car park and bus stop to all the play opportunities and amenities, and there would be a strong connection between the play and splash parks.

A low fence could be provided along Majorca Rd.





Figure 7. Sketch showing an indicative layout of a splash park and play space in association with the Maryborough Leisure Centre



Water play elements

The proposed splash park would meet the design brief by providing fully accessible, interactive opportunities for children and adults of all ages and abilities.

The design can provide zoned activities that enable boisterous, more challenging activities to be separated from those that are more restful.

The design will include:

- Spray arches for through- movement
- Interactive elements such as spray guns, ground level bubble jets, water augers.
- Bubble jets in a variety of configurations that enable both group and individual play.
- Quieter zones with trickle stream (zero depth) and similar.
- Umbrella and mushroom shaped sprays.
- Possible bucket-style equipment, if appropriate.
- Smaller items with low velocity sprays for toddlers.

The play space could be constructed at a separate time from the splash park for funding purposes. However they should be designed together as an integrated space.





7. COST ESTIMATES

7.1 COST TO CONSTRUCT AND OPERATE AND MAINTAIN A SPLASH PARK

The following estimated probable costs are provided from actual projects benchmarked.

The costs assume an area of about 500 m² is available for the splash pad without accompanying support facilities, such as toilets, shelter, and an associated play space.

Figure 8 Estimated splash park construction costs

. NO.	COMPONENT	ESTIMATED CAPITAL COST
	FOOTPATHS AND PAVED AREAS	
1	Splash pad /apron	\$300,000
2	Footpath from the street	\$65,000
	TOILET, SHELTER	
3	Two all gender/accessible toilets	Excluded
4	Shade over water play elements	Excluded
5	Picnic shelter	Excluded
	EQUIPMENT/ FITTINGS/ FURNITURE	
6	Signage	\$7,000
7	BBQ	\$6,000
8	Bench seating, bins, drink fountains	\$15,000
9	Spray elements /cannons/buckets/ interactive equipment	\$120,000
10	Builders works (piling, excavations)	\$60,000
11	Plant room	\$250,000
12	Balance tank	\$300,000
13	Preliminaries on aquatic works	\$55,000
	DRAINAGE /WATER/ PIPE WORK	
14	Water pipe work and drainage, storm water collection	\$55,000
	SECURITY LIGHTING / PAD	
15	Security lighting	\$75,000
16	Power to the site	\$25,000
	LANDSCAPING	
	Miscellaneous	\$30,000
	TOTAL ESTIMATED COST	\$1,363,000.0





Indicative costs to operate a splash park

The following annual operational costs are based on the estimated capital costs and projects benchmarked. The costs assume the park is about 500 m² without accompanying support facilities, such as toilets, shelter, and associated play space.

Figure 9: Estimated operating costs and assumptions for a seasonal splash park

Component	Est. Cost per annum
Water	\$5,000
Electricity (Circulation pumps and features pumps)	\$22,000
Staffing (Backwashing, water testing, cleaning)	\$13,500
Staff training	\$1,500
Cleaning (Pressure washing surface, surrounds)	\$6,120
Rubbish removal	\$2,400
Grounds maintenance	\$1,080
Chemicals (Chlorine, Acid/CO2)	\$4,000
Repair and maintenance	\$7,000
Parts replacement - solenoids etc	\$5,000
Insurance	\$5,000
Technology monitoring	\$1,000
Security	\$6,000
Contingencies	\$5,000
Total	\$84,600

Assumptions

- The park is adjacent to an aquatic centre
- Design ensures minimal irregular maintenance.
- Equipment that needs servicing is easily accessible.
- The season is November to March.
- The park operates 10 hours per day.
- System uses recirculated water.
- Cleaning of nearby toilet, changeroom, BBQ facilities not included.
- Leisure Centre staff complete daily maintenance checks and 4 hourly water testing.
- Contractors do quarterly servicing and break downs.
- Pumps and sprays run daily not only on days over 23^{oC}-25^{oC}.
- No solar panels that would reduce electricity costs.

Asset life cycle costs

Indicative life cycle costs over the first 10 years are shown in the following table. These are related to the capital costs of wear and tear, typical repairs etc.





Figure 10 Indicative splash park life cycle costs over the first 10 years

NO.	COMPONENT	PROBABLE CAPITAL COST	YEAR										
			1	2	3	4	5	6	7	8	9	10	Yrs. 1-10
	FOOTPATHS AND PAVED AREAS												
1	Splash Pad	\$300,000				\$8,038				\$9,224			\$17,261
2	Footpath from the street	\$65,000		\$1,634		\$1,742		\$1,866		\$1,998		\$2,141	\$9,380
	TOILET, SHELTER												
3	2 all gender/accessible toilet	Excluded											Excluded
4	Shade over water play elements	Excluded											Excluded
5	Picnic shelter	Excluded											Excluded
	EQUIPMENT/ FITTINGS/ FURNITURE												
6	Signage	\$7,000		\$440		\$469		\$502		\$538		\$576	\$2,525
7	BBQ	\$6,000			\$777			\$861			\$955		\$2,592
8	Bench seating, bins, drink fountains	\$15,000			\$2,912			\$3,229			\$3,580		\$9,721
9	Spray elements /cannons/buckets/ interactive equipment	\$120,000					\$83,191					\$98,805	\$181,997
10	Builders works (piling, excavations)	\$60,000								\$9,224			\$9,224
11	Plant room	\$250,000	\$3,050	\$3,142	\$3,236	\$3,349	\$3,466	\$3,588	\$3,713	\$3,843	\$3,978	\$4,117	\$35,481
12	Balance tank	\$300,000											Outside 10 year life





NO.	COMPONENT	PROBABLE CAPITAL COST	YEAR										
			1	2	3	4	5	6	7	8	9	10	Yrs. 1-10
13	Preliminaries on aquatic works	\$55,000											Outside 10 year life
	DRAINAGE /WATER/ PIPE WORK												
14	Water pipe work and drainage, storm water collection	\$55,000	\$1,342	\$1,382	\$1,424	\$1,474	\$1,525	\$1,579	\$1,634	\$1,691	\$1,750	\$1,811	\$15,612
	SECURITY LIGHTING / PAD												
15	Security lighting	\$75,000		\$1,885		\$2,009		\$2,153		\$2,306		\$2,470	\$10,823
16	Power to the site	\$25,000											\$0
	LANDSCAPING												
	Miscellaneous	\$30,000	\$732	\$754	\$777	\$804	\$832	\$861	\$891	\$922	\$955	\$988	\$8,516
	TOTAL ESTIMATED	\$1,363,000.0	\$5,124	\$9,236	\$9,125	\$17,884	\$89,015	\$14,638	\$6,238	\$29,746	\$11,217	\$110,909	\$303,132
										Average	cost pa ove	er 10 years	\$30,313

@ leisure





8. CONCLUSION AND RECOMMENDATION

Support

A splash park can provide additional fun, affordable, attractive, and safe aquatic play opportunities for young families in the Shire, and would be supported by residents, based on the survey results.

It is important that it is well-used and it is recommended that therefore it should be located in Maryborough.

The Site

The preferred site for a splash park is at Jack Pascoe Reserve, adjacent to the Maryborough Leisure Centre.

- This is an area of Maryborough with an identified gap in access to play opportunities.
- The site provides an unimpeded space for a design that could provide a district level or destination space for residents and people from outside the Shire and well as within.
- This site would provide cost efficiencies in inspecting and managing the water play.
- It already has the required infrastructure, such as car parking and nearby services, which provide savings.
- It would activate a space that is underutilised, and currently has a large expanse of concrete.
- It does not have excessive tree cover.
- It is a prominent location on Majorca Road and has an existing bus stop.

Advantages of this site

The advantages of co-locating a splash park with an existing Council facility include:

- Lower build cost due to co-location, e.g. Council owns the land and accessible change rooms/toilets, utility services and chemical storage, kiosk, etc., are already provided on site.
- Lower operating costs where there is access to trained staff for management, maintenance and water quality monitoring, and security is provided with the existing pool.
- Opportunity to extend the offer at the Leisure Centre and enhance its use.
- Residents are familiar with the site.
- Income generated by additional visits to the Leisure Centre could offset additional staff costs.

No disadvantages of this site were identified.

Management

 The facility could be included in Council's contract for the management of the Leisure Centre and swimming pools.

Other options

A splash park in conjunction with a play space is the preferred priority and meets all the objectives set. However, in the longer term, the Council could add small interactive water play elements to one or more of the swimming pools across the Shire and the existing one at the Leisure Centre. These would meet a slightly different objective of increasing the appeal of the swimming pools.





- Some interactive water play elements could replace the small pool in the Maryborough Outdoor Pool. This pool doesn't not have a heritage listing.
- These water play elements would add to the attraction of the pools and aquatic offerings and provide more experiences for additional people.

Capital and Operating Costs

The estimated cost to construct just the splash park is at least \$1.4 million. This figure excludes supporting infrastructure and the recommended district play space to be provided in association with the splash park.

Any further detailed costs will need a detailed design to inform them. Based on benchmarking facilities proximate to Central Gold Fields, operational costs are likely to be in order of \$85,000 per year.

Additional capital costs over 10 years could be an order of about \$30,000 per year to address preventative works and repairs to assets.

Resourcing this proposal

It is recommended that Council:

- Consider providing a splash park, only if Council can provide adequate funds to manage and maintain the facility to a high standard.
- If Council can resource this type of facility; plan to provide a zero depth splash park that caters to a district catchment, in conjunction with a new play space, and associated picnic and support facilities. The splash park and play space could be constructed separately but should be designed as one integrated facility.
- Consider this resourcing decision in term of play space upgrades and annual maintenance, and the findings of the Play Space Strategy
- Manage and operate the splash park as part of the Leisure Centre operations.
- Refer an amount of up \$2 million to Council's budget and Strategic Financial Plan for the construction of a splash park in Maryborough.



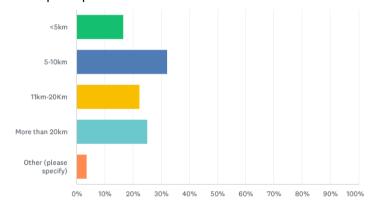


9. APPENDICES

APPENDIX 1. THE COMMUNITY SURVEY: WHAT RESPONDENTS SAID

Question 15: How far would you travel to use a small water play area?

The majority of respondents would travel 5 to 10 kilometres however a number were also prepared to travel more than 20 kilometres to use a splash park.



The following table shows the distance likely to travel to a splash park, and the town where the respondents is from.

Location	<5km	5-10km	11-20km	>20km	Other	Total
Maryborough	42	73	32	37	7	191
Carisbrook		14	10	4	2	30
North			1	7		8
Central	4	3	5	4		16
South		4	12	8		24
Outside CG		1	1	12	2	16
Grand Total	46	95	61	72	11	285

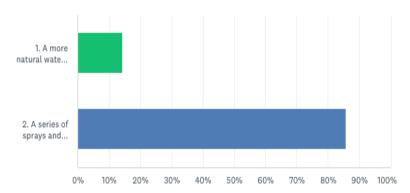




Question 16: What type of water play area would be best provided by Council?

Respondents were asked about the nature of water play that they would prefer a) A more natural water play area with hand pump, zero depth channels, sand play with vegetation etc., or b) A series of sprays and water play equipment on a paved apron.

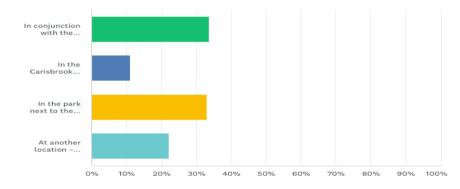
Over 85% of respondents preferred the spray apron style of water park over a more natural water play elements.



Ouestion 17:

Which location for a water play facility do you think would suit the most people in the Shire?

A very similar number of respondents thought the best location for a water park was in association with the Maryborough outdoor pool it's those who chose next to the Maryborough Leisure Centre (64) respondents suggested another location other than those options provided.



*The most common "Other" suggestion is near the Skatepark (Princes Park East). More gave this response (40) than for Carisbrook (32). See following table.





Figure 11. Which location for a water play facility do you think would suit the most people in the Shire?

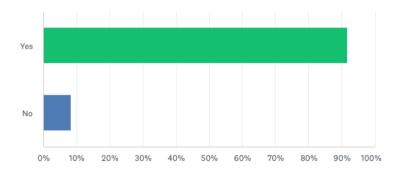
Location	North	Central	Maryborough	Carisbrook	South	Other	Total
Maryborough Outdoor Pool	5	3	71	3	11	3	96
Beside Maryborough Leisure Centre	2	7	64	5	7	8	93
At another location*	1	5	48		5	5	64
Carisbrook Park/Market Reserve		1	8	22	1		32
Grand Total	8	16	191	30	24	16	285





Question 18: Splash parks may cost more to build and maintain than a typical play space. Do you think a water play area is a higher priority to build than other play space upgrades?

More than 90% of respondents thought that a water play area was higher priority than other play space upgrades.



Question 19: Reasons why a water play area is a higher priority to build than other play space upgrades

The main reasons given as to why a water play area is a higher priority are summarized in the following table.

The main reasons were a splash park would add variety to the opportunities available, there is no outdoor pool, providing an additional attraction to the town, there is a need for more free activities, children need these types of activities, it and it would be an accessible to people of all ages and abilities.

Figure 12. Reasons why a splash park is a high priority

Summarised Reason	Qty	%
Adds variety to opportunities available	160	64%
No outdoor pool	54	22%
Attraction	45	18%
Free	28	11%
Activity	23	9%
Accessible	21	8%
Prefer to pool	9	4%
Safer than a pool	9	4%
Other	6	2%
Cost	2	1%
Water familiarisation	1	0%





Question 20: If no, please provide your reasons why a water play area is not high priority

Figure 13 Reasons why a water play area is not high priority

Reasons why a water play area is not high priority	Count
Costs	3
Short season/ only suitable for the summer Playgrounds can be used all year around	5
Need an outdoor pool more	2
All other playgrounds would get more use	1
Outdoor pools don't have much variety for toddlers	1
No one community deserves it over another	1
All parks are basic / not up to date, need more going on e.g. basketball rings, more nature play and fences, e.g. Whirrakee Rise	2
Not everyone will use them	1
Can do water play at home	1
Incorporate water into other playground spaces; don't need a dedicated space	1
We need more indoor play space i.e., for birthday parties	1

Full comments Reasons why a water play area is not higher priority to build than other play space upgrades?

- A minority of the community is very vocal in regard to a splash park, but many would not understand the ongoing costs involved with the running of this, as well as the overall use each year-l wouldn't be taking my little kids there unless it's a hot day, which is only going to be over approx. 3 months of the year.
- Other okay areas need updating first.
- Having a full size fully functional outdoor pool would be more beneficial than a splash park or anymore play spaces. Currently our kids are learning to swim in an indoor pool where they can touch the bottom which is not ideal or overly realistic if they fell in fully clothed etc. if a splash park was to be considered this area should all tie in together. Utilise the derelict tennis courts as well. It's a great central space.
- We have many play spaces in the area that would get a lot more use if they were upgraded there is no point adding more and letting the older places go to waste.
- I think all growth to our community is beneficial in the long run.
 Our local outdoor pools offer baby/toddler pools but not much variety when it is keeping the kids interested in long enough periods times especially when a parent pays an entry fee.
- At the same time no area of community deserves more than the other. But it's not just our local community that benefits from growth to the wider community





- It's a hard question, I don't think any of the parks are up to date or have enough going for them especially having twin boys who like to run off. I think all parks should have fences. So I can't answer that one
- We don't have a swimming pool in the town!
- There would be more things to do at a splash park and more water and fun for kids to play with
- The ongoing cost and water usage concerns me. For the cost it is
 only one season so 3-4 months at most. I think the money could
 be used to better. Adding public use basketball rings and more
 nature play in numerous areas around the region would be my
 choice.
- Not everyone will use a splash park. More families would use playgrounds any time of the year
- The other playgrounds are in desperate need of upgrading. It
 would be amazing to have both a splash park and upgraded park
 but a park that can be used all year around would be amazing.
- There are other options for water play at home
- Our play spaces are very basic. I think spending the money and improving the beautiful area near the lake would be more useful. The splash park would only be used for a couple of months a year
- You have an indoor pool with a play area and an outdoor pool where children can play in water, they will play on other maintained playgrounds.... Splash parks are really only suitable for the summer....
- Have a pool and safer play in backyard compared to this, splash park so limited to time of year. Playgrounds all year around.

- Water play can be more economically incorporated into other playground spaces; we don't need a dedicated splash park per se, as it's use would be limited to the handful of very hot days. Water play in a playground setting can be used year round.
- It would be great. Not a necessity over improving other spaces.
- I think Whirrakee rise has a very large proportion of young children and families, making a series of upgrades to make the area user friendly would be my preference first.
- I suppose you can only use a splash park for a few months of the year and playgrounds can be used all year!
- Water parks are only for summer and warmer months. Parks we can use all year round. We take a towel and dry the slide and swing, so we get more use out of them
- We need more indoor players, especially when kids want to have birthday parties and don't want to have it at home. There's not much places to have a kids party.

Summary: Why is splash play appealing to residents

Those respondents who supported Council providing a splash park provided a number of reasons:

- 1. Its accessible / something that the whole family/ people of all ages and abilities can enjoy
- 2. It is an activity needed by kids/ so many people would use it
- 3. It would bring people to the town, an attraction
- 4. Free activities are important, so you do not have to travel and the pool costs money
- 5. The outdoor pool is closed, and the kids need somewhere to cool off.







Details of what respondent said under each heading are provided below.

1. Its accessible / something that the whole family/people of all ages and abilities can enjoy

- · It is family friendly, and the younger children love water
- There is plenty of fun play spaces all ages can enjoy the splash pad easier for grandma to walk in water than go down a slide
- There are a lot of new families in the area, meaning little toddlers, and a majority of them love to play in water, and we as parents like them to be able to interact with others while they do so, therefore I feel that a splash park would be a great asset to the town for this reason.
- Better access for some families.
- It's somewhere all young children can play
- They are more inclusive of all ages, where the artificial creeks are mostly for small children.
- The splash park will be built to cater for all children and abilities.
- The nearing towns all have parks. A water space is a safe space for all children to be able to play and enjoy the heat. Whilst engaging with other families in the near communities.
- Unique, accessible option for summer. There are lots of playgrounds in the area. Might attract families to the town
- I think a splash park would be inclusive for different ages, disabilities/abilities and social backgrounds
- Provides safe and inclusive summer activity for children of all ages and abilities- great for familiarising children with water, also calming/sensory for neurodivergent children. Plenty of other playgrounds and natural spaces for kids already.

- I have been waiting years for a splash park to be in town. Several times a year I'll drive to Bendigo to take the kids to one. My little boy is autistic and a sensory seeker, so he loves splash parks. He hates being in water like a pool, but the spray water is extremely appealing to him. I have taken him to the indoor pool that has the spray but because it's indoors it echoes really bad, and he gets that excited with screaming of joy that the sound echoes really badly being indoors. An outdoor one would be amazing
- Play n catch up with family.
- it would bring young family together
- The water parks the kids have been to have been awesome adults having a BBQ and the kids play for hours
- A splash park would appeal to all age groups.

There are smaller generations in this town that would love something that fits their needs and growing criteria. This town is full of families, this will bring the community together.

2. It is an activity needed by kids/ so many people would use it

- Need something like this for the kids
- It is hot in Maryborough. The kids get bored, there's nothing to do in summer.
- There is nothing for kids to do in Maryborough when it's summer and they want to cool off
- Kids of all ages love them. And other Smaller towns have them.
 It's about time we had One
- Because a lot more children would use this space





- Give kids a fun time, and people from out of town here to spend money at our shops
- This is a facility that so many people would use. In the warmer months children love to use splash parks
- Already travel to Creswick to use for smaller children. Better for families to just pop in
- · To get outdoors more often
- It is a space that will be well utilised by the community and promote and strengthen relationships between community members.
- There is hardly anything for younger kids to do
- Yes, keeps kids outside and off of their electronics
- It will also provide those out of town something to do in town instead of going to other towns.
- Children love water play so it will get kids out socialising & off screens.
- There is nothing to do with young kids.
- So many people would take their kids
- Kids of all ages love them.
- Because it would be well utilised.

3. It would bring people to the town, an attraction

- It will be great for the growth of Maryborough
- Having a splash park will bring in more tourists and other homeowners to travel to Maryborough to use the splash park,
- Splash park at the market reserve Carisbrook would significantly improve this play space.
- Splash parks bring so much summer joy. And many families including mine travel to Ballarat or Creswick to use their splash parks. This would attract people to our town
- The existing parks are well established, and some are new such as the skate park. The water park would be great in the summer for local children, would attract more visitors to town and if placed near the outdoor pool, attract more people to use the pool facility, it's a great resource with views of the park and lake.
- Get people travelling to Maryborough. Which results in business making money. Or having free entry to all swimming pools again
- It will bring people into the town. We and a lot of other people travel to Creswick to use theirs.
- People would love to have a splash park close by with having to travel 45 mins, would also mean a lot more use for families
- Carisbrook could benefit from a splash park and be great for the local people to have something to look forward too and it takes some pressure of Maryborough parks in peak times.
- We need something for our town
- As families travel out of town to water/splash park if there is 1 in town people will tend to spend money in town





- Would attract tourists to the town, could be accessed by caravan park visitors Summer in Maryborough is hot and would be a great summer activity outdoors. The slides and things get too hot
- Most play areas are appropriate. But I think water park will also get people travelling to Maryborough. Which in turn \$\$\$
- A splash park in Carisbrook would bring people to the town and kids of all ages would love it
- Because I think it would get so much more use! Plus will bring more people to town!
- Everything cost money but this would keep community in town there for brings money
- This town needs more revenue and having a splash park will be a great way to add to our already growing tourism attractions.
- if Ballarat and other areas can have them why can't
 Maryborough. Mildura has one right on the Murray and it's
 always busy it's a great one. Visitors can use it, and it's safer
 than a big pool for drownings and more fun.

4. Free activities are important, so you don't have to travel and the pool costs money

Access must be free though.

- We travel a lot, and a free splash park will often dictate where we stop for lunch or dinner and occasionally even our o Enright stop.
 Therefore being tourist \$ into the town.
- Anything free Everything is so expensive for families
- Don't put it in the pools and charge us to go. Every other splash park is free and accessible
- the pool is hardly open

- A lot of family's can't afford to travail to other towns in our shire to go to the pool and also may not have the money to get into the indoor pool in summer.
- So that everyone can enjoy and not have to travel in the heat
- Some people cannot afford the pool- a free splash park would be amazing
- A lot of families that can afford it go out of town. And the ones
 that can't miss out and a lot of these families don't even have air
 conditioning or cars This space also needs to be inclusive for
 those with a disability so anyone can use it including the clients I
 work with of all ages
- I believe a lot of the community if asked would donate or contribute to fundraising for this to happen
- Not a lot to do with your family that's free
- Because it will help those who can't afford to attend the pool in summer keep cool while children can still play.
- We need a free space for kids & families to use during summer.
 Parents don't want to go to playgrounds on 40 degree days & have kids going down hot slides & getting too hot so often stay home locked indoors under an air con.
- It is a free activity for families in the shire that differs from a regular playground. It can be enjoyed by people of all ages.
- There also needs to be a free outdoor water option for families, especially during times of hardship, no child should miss out.
- Some families can't afford to go to pool so at least this would be somewhere for them to enjoy.
- Offering a free service, would allow families to enjoy it on a regular basis.







5. The outdoor pool is closed, and the kids need somewhere to cool off

Because we have no outdoor pool, give the local kids and the kids that come down for energy breakthrough somewhere to cool down

- There is very little for young children to do during the hotter times of the year, especially with the pool not being open.
- Kids need options when it comes to play, and this is an excellent option for summer especially when there is no outdoor pool operating in town
- We don't have a proper water area as the outdoor pool is not opened and is not of a good standard.
- Because of pool closure plus they are SO MUCH FUN
- We don't have enough for children to do in our town and without an outdoor pool being operational atm
- Children have no outdoor water space with our outdoor pool out of action.
- At least there is somewhere for kids to go while the pool is closed.
- And a free water space play area to go when it's hot would be fantastic. Everything costs so much these days. There are no pools open into the day to use in this town
- Families in this town will benefit from this as we no longer have a big outdoor pool.
- The benefit will out way the cost and coverage of building and maintaining
- The pool is now closed. Imagine all the fun a splash park would bring to the town for children over holidays, after school and weekends.

- We live in an area that is generally hot for a lengthy period of time. The outdoor pool is not open, and I feel that a beautiful natural water park would not only be a great learning and fun place for our local children but also for the tourist families that stay here. Perhaps even encourage more visiting families. Lake Victoria area is a wonderful spot for this as the caravan parks are also nearby
- With the Maryborough outdoor pool being closed indefinitely, the splash park would still allow families to gather and socialise.
- We have lots of other play spaces and no outdoor pool
- With Maryborough having no outdoor pool and being rather hot up here during the summer months I believe that this will bring more families outside and more families relocating to the area
- No outdoor pool
- I think with the outdoor pool closed kids need another source of water fun in the summer, I'd vote that be built first and then upgrade the play equipment. Personally the outdoor gym equipment was a waste of money! Should have been put into these other ideas
- As the outdoor pool is closed
- There are already enough play space options in town, we need to add a splash park for families who can't afford a pool. Especially with the outdoor pool closing
- With so many families struggling with the cost of living and not having the outdoor pool currently operating, a free slash park would be amazing
- Due to the closure of Maryborough outdoor pool.







- We don't even have a public pool and our water ways are polluted with blue green algae
- Given that our outdoor pool is now closed until further notice, an outdoor water plays place is important for children. It provides a place to meet, play and have lots of fun.
- Need a splash park as there is no outdoor pool in Maryborough
- Summer fun is limited to pools only when it's super-hot and the outdoor pool isn't even useable
- With the pool being shut there is nothing to do in summer. I feel like the splash park would well utilised.
- More user friendly than pool, also the fact the outdoor is not in use. All ages and people living with disabilities would have ease of access. It would be a draw card to the town with local businesses profiting from the extra tourism. We wouldn't have to travel to Creswick like we usually do to attend a splash park. It would be financially cheaper to run than the outdoor pools and have longer seasonal usage.
- Because there is no outdoor pool at the moment and since nothing has been started on its renovations. I'm guessing there won't be an outdoor pool for some time
- No outdoor pool currently and indoor pool to hot in summer
- Because you have shut the outdoor pool, and we also travel to Ballarat a bit for the water parks
- Not all pools are open and have to be a certain temperature when a splash park will be up to parents' choice.
- There is currently no outdoor pool, so an outdoor splash park is essential!

- Currently, there doesn't seem to be any indication that the
 outdoor pool will be opening any time in the next few years.
 There's no other option for water play in summer other than the
 indoor pool which is humid and not the best location to be on a
 warm day. Also, there isn't a huge variety of things to do in town
 and as we are a low socio-economic area, it's nice to have a
 variety of no cost options for families.
- They are fantastic to use, and it is something the shore is really missing. Especially since the outdoor pool is gone
- Without an outdoor pool in Maryborough, and the increasing hot weather and lack of free experiences for families and children in the shire I feel it is vital to provide more experiences for families to engage in to maintain healthy lifestyles. Also many families cannot financially afford to drive to the outlying suburbs that have water parks.
- The parks we have in town her great a water park will add something new and exciting for the family especially because we don't have an outdoor pool
- We haven't got an outdoor pool; we have warm enough weather.
 It would be such an asset to the town.
- At this time there is only the Maryborough Leisure Centre for the indoor pool due to outdoor pool requiring a major repair or replacement. They are usually closed after midday on Saturdays meaning citizens/residents have to travel out of town to use other pool facilities.
- No outdoor pool within 20 km of us. Bring young children out to enjoy the outdoors and encourage physical activity for both children and parents.
- Our swimming pool is closed so a good alternative.





- Something for the kids to do in the summer as no outdoor pool
- We currently have no outdoor pool for an unknown amount of time. It would also be an asset to energy breakthrough
- Because there is currently no outdoor pool or appropriate space for children to spend summer safely in Maryborough
- Splash parks can be made fun for a large age range and not having an outdoor pool for the next 4+ years in such a hot, dry area means we need somewhere for kids to find relief.
- No outdoor pool in use currently. Improve kids confidence around water.
- We have no pool God knows when we will..... This will be used a lot
- You've closed the outdoor pool! Spend the money in the meantime!!
- With no pool for school age children it is necessary to drive for more than 20 minutes to find anything more than a puddle in the summer. If the municipal pool doesn't get fixed for 2,3 or 4 years, what are we to do!?
- Due to no outdoor pool in town a splash park would be perfect for the kids
- When the heat hits the kids need more options of outdoor play to keep cool. Plus god only knows how long the outdoor pool will be closed for.
- Outdoor pool is now shut and who knows when or if it'll reopen. A splash park is great for children all ages to enjoy.
- There is over a dozen other play spaces. While a splash park would cost more to build and maintain, it would be filling a gap. Not all families have the funds to access the pool.

- Also, a hybrid natural/artificial play space would be nice.
 Vegetation and also concrete.
- With our outdoor pool closed for however long, the kids need some other form of fun over the school breaks
- I have a 1 and two year old. A splash park would be great in summer, we don't have access to Maryborough pool because it's closed.





APPENDIX 2. BENCHMARKING OF SPLASH PARKS

The following table provides a list of largely regional splash parks and the facilities that are included at each.

Figure 14 Splash parks and their facilities

Splash Park Name	Toilets	BBQs	Picnic Area	Shaded Seating	Change rooms	Wi Fi	Bike Racks	Rubbish Bins	Kiosk	Solar heating
Long Gully, Bendigo	✓	√	✓	✓	√					√
Riverwalk Estate, Werribee	✓	✓	✓	✓			✓	✓		
Crocodile Park, Point Cook	✓	√	✓							X
Eureka Outdoor Pool, Ballarat	✓	√	✓	✓	✓		√	✓	√	
Victory Park, Sebastopol	✓	✓	✓	✓			✓	✓		
Midlands Park, North Ballarat	✓	✓	✓	✓			✓	✓		
Lara Outdoor Pool	√		✓	✓	√			✓	√	
Adventure Park, Wallington	√	✓	✓	✓	√	✓		✓	√	
Creswick Splash Park	✓			✓				✓		
Woodlea Estate Adventure Park, Rockbank	√	√	√	√				√		X
The Heart Bannockburn	√	√	√	√				√		





Splash park management, entry fees, season and operating hours

Figure 15. Example of splash parks, management entry fees, season length and opening hours.

Splash Park Name	Management	Entry Fees	Season Length	Operating Hours
Long Gully, Bendigo	Belgravia Leisure	Free	Oct - March	Sept - Nov 10 am – 6 pm; Dec- Mar 9 am - 8 pm
Riverwalk Estate, Werribee	Wyndham Council; Melbourne Water; Places Victoria	Free	Oct – March. Apr - Sept	9 am – 8 pm 10 am – 5 pm
Crocodile Park, Point Cook	Not known	Free	Year round	Open 24 hours
Eureka Outdoor Pool	City of Ballarat: In-house aquatic services co-ordinator	Adult \$5, Child/Concession \$4.20, Family \$15, Under 4 Free	Dec - April	6.30 am - 7.30 pm weekdays. closes 5.30 pm weekends
Victory Park, Sebastopol	City of Ballarat	Free	Nov - 30 April	9 am - 9 pm
Midlands Park, North Ballarat	City of Ballarat	Free	Nov - 30 April	9 am - 9 pm
Lara Outdoor Pool	City of Geelong	Adult \$8.00, Adult with child under 5 \$6, Adult with child 5-18 years \$12, Concession \$6	Nov - March	6 am – 6 pm
Adventure Park, Wallington	Private	Adult \$43, Child (based on height) \$33.50 Seniors \$26, Child under 90 cms Free	Oct - April	Oct - Dec 10 am - 5 pm; Dec - Apr 10 am - 6 pm
Creswick Splash Park	Shire of Hepburn	Free	2 Dec- 31 March	9 am - 9 pm
Woodlea Estate Adventure Park	Developer	Free	Year round	Open 24 hours
The Heart Bannockburn	Council; via contract to electrician and plumber	Free	December to April	9 am – 9 pm
Mill Park All Abilities Play	Not known	Free	Late October to April)	8am-8pm during summer while the water plays tables operate all year round.





APPENDIX 3. TYPES OF SPLASH PARKS

There are many styles and scales of splash parks and water play areas. These range from those which include just a small hand pump and troughs and perhaps a stream bed in a natural setting to large-scale facilities in social settings with sprays and hard surfaces, associated with aquatic centres, or major parks.

Images of a range of examples are shown below.

Figure 16. The following table describes different styles of splash park found in Australia and overseas.

Type of splash park	Description	Photo example
Zero depth, free- non supervised, interactive water play elements with play spaces	Local splash park/water play area in conjunction with small playground and oval, change facility etc., Long Gully City of Greater Bendigo	
Zero depth, free- non supervised, interactive water play elements with play spaces	Splash park added to a large destination play space, e.g., Wallan Community Playground	



Zero depth, freenon supervised, interactive water play elements with large destination play space. Urban plaza style

water play area

Booran Reserve City of Glen Eira



Zero depth, freenon supervised, interactive water play elements with play spaces Modest water play park with dry play equipment in an open space. City of Ballarat



Nonzero depth
Outdoor water
play requiring
supervision,
provided in
conjunction with
an aquatic centre paid access

Water play equipment at an outdoor pool: Noble Park





Nonzero depth
Free access,
outdoor water play
(theoretically
requiring
supervision)

The Entrance Water Play, Central Coast Council on a beach edge plaza adjacent to a shopping centre.



Nonzero depth water play requiring supervision; indoor, paid access These facilities require specialised management by trained personnel, (lifeguards) regular maintenance and routine water quality monitoring.

The Maryborough Leisure Centre has a small water feature.



Nonzero depth water play requiring supervision; indoor, paid access Keilor East Aquatic Leisure Centre.





Nature based zero depth unsupervised water play in wider play space Royal Park Nature Play Space City of Melbourne



Water element in overall park design – no equipment Seasonal creek bed water play – US



Water elements in overall park design – no equipment Princess Diana Foundation Play Space Hyde Park London





Free water play in natural water bodies (Lakes, Rivers and Creeks and the Bay) **Bright Victoria**



Zero depth, freenon supervised, interactive water play elements on the edge of the River. **Bright Victoria**



Zero depth, freenon supervised, interactive water play elements on the edge of the River. Nagambi Splash Park Buckley Park





Recently developed water play spaces

Bannockburn "The Heart" Golden Plains LGA. Constructed 2019

Nature of facilities

- Adjacent play equipment for toddlers and children
- A ninja-style play area for teens
- A flying fox designed for people of all abilities
- Seating, lighting, shade
- Public toilets
- Water play includes design features a splashpad with 40 interactive elements, including a tipping bucket and canopy trio
- 400m2 of concrete make up the waterplay slab
- Stage 2 to include: a village green, a performance stage that looks out to an open amphitheatre, change rooms to compliment the water play area
- · Additional shade and BBQ structures.

Capital costs

The \$3 million Stage One. Funded by \$1.2 million from the Australian Government through the National Stronger Regions Fund, \$1,233,500 from Council; \$566,500 in grants from the State Government with \$500,000 from Regional Development Victoria's Rural Infrastructure Fund and \$66,500 from Sport and Recreation Victoria's Community Sports Infrastructure Fund - Minor Facilities Program.

In addition, Barwon Water supplied the precinct with drinking water fountains, and the Bannockburn and District Lions Club helped fund the BBQ.

Recurrent costs

- \$60-80 per year, (water park only).
- 1500 litres per minute flow through the hydraulic systems

Figure 17 Images of Bannockburn "The Heart" splash park





Image: Puddles and Play - play spaces of Geelong

Image Melbourne Playgrounds.



Eco Park Romsey Macedon Ranges Shire LGA 2022

Nature of facilities

- · Climbing forest, ropes course, flying fox, water features, a sensory garden, a 'woodland ramble'
- An events space with picnic and BBQ facilities
- · Sculptural installations and 'Story Telling Chair'.
- 4000 native and exotic plants.
- Solar path lighting.

Capital costs

The cost of construction was \$2,737,000.

- Regional Development Victoria (\$1,333,000)
- Macedon Ranges Shire Council (\$996,000)
- The Australian Government (\$215,000)
- Romsey Ecotherapy Park Inc. (113,000 + Art in the Park), and
- Lancefield Romsey Community Bank (Bendigo Bank) (\$80,000).

Recurrent costs - Not known.

Figure 18 Images Eco Park Romsey





Photo Melbourne Playgrounds. Photo Macedon Ranges Shire



Mill Park All Abilities Play Space 2019

Nature of facilities

An extensive play with multiple zones of activities:

- Play Tower Zone
- Nature Zone
- Junior Play Zone,
- Water Zone
- · Swing and Sand Pit Zones, and
- Seniors Agility Zone.
- The water play area includes accessible water play tables, shooting water jets, misting rings and manual water pumps.

Capital costs

\$1 mill first stage from the Growing Suburbs Fund and \$2.03 millions of Council funds for the final stage.

Recurrent costs

- Running costs power and water; \$60 K to 70K per year.
- Other maintenance \$60-80 K a year for all year round items and water play.
- Upkeep / replacement parts.
- · Warranty for first 12 months on all parts.
- \$5K 10K per year after that for replacement parts.

Figure 19 Images Mill Park All Abilities Play Space







APPENDIX 4. SUMMARY OF KEY COMPLIANCE REQUIREMENTS: VIC HEALTH AND WELLBEING ACT REGULATIONS 2019

Key points

The regulations require the following for public interactive water features.

- Ensure adequate training and competency of aquatic facility operators. Recommendations for training are provided in Chapter 10 of the Water Quality Guidelines.
- 2. Have a water quality risk management plan that includes:
 - Staff roles and responsibilities, competencies and training requirements
 - A description of the facility, its source water, and its treatment systems
 - Water quality targets and treatment objectives
 - Hazard identification, risk assessment and control measures
 - Operational and verification monitoring
 - Incident management and response procedures, and
 - Data recording and reporting.

Resources to assist in the development of this document are available on the Department of Health and Human Services' website website website website website <a href="https://www.a

- 3. Undertake at a minimum:
- one daily check of key pool water quality parameters before the pool opens for the day; and
- operational monitoring every four hours while the pool is open.
- At least one of these checks should be done by hand and analysed manually each day. It is strongly recommended that this occurs immediately before the aquatic facility opens for the day.

For further information see Appendix 2 of the Water Quality Guidelines.

- 4. Keep pool water quality parameters within the range specified in the Water Quality Guidelines
- Undertake periodic verification monitoring of microbiological parameters (refer to Appendix 2 of the Water Quality Guidelines)
- 6. In the event of non-compliance with microbiological parameters, follow the prescribed procedure for responding https://www2.health.vic.gov.au/public-health/water/aquatic-facilities/incident-response>

 Keep written records for 12 months from the date the record was made, including details of all results of tests and monitoring, and all corrective activities undertaken in relation to the water in the aquatic facility.







WATER QUALITY GUIDELINES FOR PUBLIC AQUATIC FACILITIES

Version 2.0 December 2020

Appendix 1: Interactive Water Features; splash pads, spray parks and water play areas (IWF)

Interactive water features (IWF) such as splash pads, spray parks and water play areas have been associated with a number of disease outbreaks in Australia. The information provided below will help operators of IWFs to minimise the risk to public health.

Risk management

All IWFs should have site-specific risk management plans.

Location

IWFs are often located within public open spaces such as parks, so it is important to consider surrounding land uses and how other activities in the neighbouring area may affect the water quality of an IWF.

For example, sand pits, garden beds and trees will increase the volume of physical contaminants (such as sand, dirt and leaf litter) entering the IWF.

This will compromise the effectiveness of filtration and disinfection systems.

General site sanitation, including the availability of public infrastructure (such as toilet and shower facilities) will reduce physical and microbiological contamination of the IWF water system. Access to showers, toilets and baby change facilities encourage good hygiene practices among IWF users.

Ideally, fencing should be provided to keep out dogs and other animals during and outside operating hours. If this cannot be achieved, where IWFs are located in areas where animals may be present (for example, near dog parks), providing bag dispensers can prompt owners to collect and dispose of animal faeces.

System design

Full system design plans (as installed) and operating manuals should be maintained so they can be reviewed by an environmental health officer as required.

The following factors should be considered when designing an IWF:

- The quality and availability of the source water (only potable water should be used)
- Containment structures and drainage including upstream interceptor drains to prevent stormwater runoff entering the IWF
- Water circulation recirculating water (subject to treatment and re-use) versus non-recirculating water (passes through the IWF only once)

- Infrastructure appropriately sized to achieve effective water circulation, turnover, filtration and disinfection targets
- Materials and system components fit for purpose (slip resistant, anti-entrapment) and able to withstand ongoing exposure to the surrounding environment including varying disinfection concentration levels (such as during periodic shock dosing)
- Water flow engineered to prevent both water stagnation and water pooling
- Spray plume height and velocity high spray plumes may expose more people due to the drift of water particles (aerosols), including people who may not be directly using the facility; low spray plumes may be more appealing to young children, resulting in accidental or intentional water consumption
- backflow prevention this ensures water supply lines are protected from contamination. Any backflow device should be installed and commissioned to comply with the relevant plumbing and drainage legislation.







Recirculating systems

Water storage and circulation

Water should be stored and circulated to allow adequate water turnover and distribution of disinfectant throughout all parts of the system. Water tanks should be accessible for cleaning and inspection and be capable of complete draining. Storage capacity, including both the size and number of tanks required, must be sufficient to ensure an adequate residual of disinfectant is maintained within the system.

Water temperature is an important consideration when sizing water storage tanks. Small volumes of water will heat rapidly when exposed to external surfaces during IWF operation, increasing the risk of microbiological growth. A water turnover rate of not more than 30 minutes is recommended due to the relatively small volumes of water and high contaminant load associated with IWFs. A flow gauge should be fitted to the system to demonstrate an adequate flow rate within the IWF.

Treatment

Filtration

Filtration systems should be fitted to remove particulate matter (soils, leaves, etc.) and potential disease-causing microorganisms. The filtration system should run constantly while the IWF is open to users.

For new aquatic facilities, the filtration system should be designed and operated to remove *Cryptosporidium* oocysts 4 microns in diameter

or smaller and continuously achieve filtrate turbidity of not more than 0.2 NTU. Refer to <u>Table A2.2 in Appendix 2</u>.

Disinfection

Automatic dosing equipment and online monitoring equipment should be fitted to control the level of disinfectant in the water. Refer to Table A2.1 in Appendix 2 for water quality parameters and targets. Using cyanuric acid is unlikely to be beneficial where the majority of the water is contained in a balance tank. In addition, using cyanuric acid in such instances may reduce the effectiveness of chlorine disinfection.

Secondary disinfection

Secondary disinfection is recommended, usually in the form of UV disinfection, for all IWFs. UV disinfection can inactivate Cryptosporidium oocysts and medium pressure UV lamps can control combined chlorine while improving the water quality (including the odour from combined chlorine). A UV disinfection system should be installed in a location prior to the chlorine dosing point and run constantly while the IWF is open to effectively control the combined chlorine levels. Prioritise using validated equipment that is capable of delivering a UV dose required to achieve a minimum of 3log₁₀, or 99.9 per cent, inactivation of Cryptosporidium (Centres for Disease Control and Prevention 2018).

On-site monitoring

Daily on-site monitoring is essential for all IWFs and should include physically inspecting the site. This is important because IWFs are typically located in open public spaces and may be accessed after hours. On-site operational monitoring should be undertaken at all IWFs. This is important to gain an understanding of water quality and to verify the accuracy and reliability of any remote monitoring.

The frequency of monitoring should be determined as part of the site-specific water quality risk management plan. Routine operational monitoring should include free chlorine, total chlorine, pH, alkalinity, cyanuric acid (if used) and water temperature. Refer to Table A2.1 in Appendix 2 for water quality parameter targets.

Records of physical inspection and on-site operational monitoring should be maintained and made available for compliance inspection.

Remote monitoring

To enable real-time, remote monitoring of free chlorine levels, pH and water temperature, IWF operators should install probes for free chlorine, pH and temperature.

The probes should be configured to allow automatic shutoff of the IWF when the free chlorine levels, pH levels or water temperature are out of specification.







If remote monitoring is used, the results should be reliable and accessible during operating hours and made available during compliance inspections.

Signage

Safety signage should be provided in a conspicuous location(s) and include:

- Contact details for reporting issues/faults with the IWF
- Advice to not swallow the water
- Advice not to use the IWF if someone has diarrhoea, and for 14 days after symptoms have stopped
- Advice for babies and toddlers to wear tightfitting swim nappies

- The location of the nearest public toilets/change rooms
- Advice that animals are prohibited from accessing the IWF.

Assistance animals

Assistance animals (such as guide dogs) can be permitted to enter an area with an IWF but should not be permitted to enter the IWF or drink the water.

Seasonal operation

For any IWF that are operated seasonally, to minimise water quality risks the IWF should be drained to remove any stagnant water prior to closing for the season. Prior to reopening, the system should be cleaned and disinfected.

Operator skills and knowledge

The owner or operator of an IWF should take reasonable care to ensure the person(s) responsible for managing the IWF has the appropriate skills, knowledge, and experience. Further information on operator training is provided in Chapter 10.

Non-recirculating systems

The following systems present a lower public health risk and therefore may not require treatment:

Use mains drinking water supply - do not recirculate water.







Water quality guidelines Appendix 2: Water quality criteria and monitoring frequencies (excerpts)

Table A2.1: Chemical criteria for facilities using chlorine-based disinfectants

Parameter	Situation	Criteria (1)
Free chlorine (2)	Interactive water feature	Min. 1.0 mg/L
Combined chlorine (chloramines)	Any pool or interactive water feature	Max. 1.0 mg/L, ideally < 0.2 mg/L. Must be less than the free chlorine residual.
Total chlorine	Any pool or interactive water feature	Max. 10 mg/L
Turbidity (pool water) (3)	Any pool or interactive water feature	Max. 1 NTU ⁽⁴⁾ , ideally < 0.5 NTU
pH	Any pool or interactive water feature	7.2-7.8
Total alkalinity	Any pool or interactive water feature	60-200 mg/L
Ozone (5)	Any pool or interactive water feature	Not detectable

- (1) mg/L is equivalent to parts per million or ppm.
- (2) **Free chlorine** concentration should be increased when high bather numbers are anticipated to ensure concentrations are never less than the minimum.
- (3) If **turbidity** is measured immediately post filtration, it should not exceed 0.2 NTU (DIN 19643 (2012-11).
- NTU = Nephelometric Turbidity Unit. Ideally this would be measured with an appropriate device. If this option is not available, the following applies:

 An aquatic facility operator must ensure that the water in the aquatic facility is maintained in a clear condition so that the floor of the aquatic facility or any lane marking, or object placed on the floor of the aquatic facility is clearly visible when viewed from any side of the aquatic facility (r. 51, Public Health and Wellbeing Regulations 2019).
- (5) Residual excess **ozone** is to be quenched before circulated water is returned to the pool.





Table A2.3: Microbiological criteria for all facilities

Microbiological parameters

Parameter	Guideline value
Escherichia coli (or thermotolerant coliforms)	0 CFU ⁽¹⁾ /100 mL or 0 MPN ⁽²⁾ /100 mL
Pseudomonas aeruginosa	0 CFU ⁽¹⁾ /100 mL or 0 MPN ⁽²⁾ /100 mL
Heterotrophic colony count (HCC)	Less than 100 CFU/mL

- (1) **CFU** = Colony Forming Units
- (2) MPN = Most Probable Number

Table A2.4: Risk profiles to inform microbiological and chemical verification monitoring frequencies

Low-medium risk facilities	High-risk facilities
Residential apartment pools	Spas
Diving pools	Interactive water features
Lap pools (i.e. 25 m and 50 m pools)	Wading pools
Gym pools*	Learn-to-swim pools
Resort pools*	Program pools
Holiday park pools*	Hydrotherapy pools
Hotel/motel pools*	School pools
Theme park wave pools*	Water slides
	Shallow-depth interactive play pools
	Pools used by incontinent people
	Aged care facilities
	Retirement village pools
	Artificial lagoons with unrestricted access





Adapted from: NSW Department of Health 2013, Public swimming pool and spa pool advisory document (p. 34)

*Note: The following are medium-risk facilities that may require increased monitoring consistent with high-risk facilities during peak seasonal use: lap pools, gym pools, resort pools, holiday park pools, hotel/motel pools, theme park wave pools. In instances where a facility manager is operating a type of facility that is not included in Table A2.4, the manager should identify the type of facility that is most similar and monitor accordingly.

If a facility falls into multiple risk categories, the facility should be monitored as if it were the type of facility in the highest risk category. For example, if a gym pool is used for learn-to-swim classes, the facility should be categorised as high risk.

Table A2.5: Minimum operational monitoring frequency (1)

Parameter	Category 1 and category 2 aquatic facilities
Disinfectant: Free chlorine, combined chlorine and total chlorine; or bromine	 For facilities with automated monitoring: One check immediately before the pool opens for the day, and Four hourly monitoring while the pool is open. At least one of these daily checks should be done by hand and analysed manually. It is strongly recommended that this occurs immediately before the aquatic facility opens for the day.
Disinfectant: Free chlorine, combined chlorine and total chlorine; or bromine	 For facilities without automated monitoring: one daily check by hand and analysed manually immediately before the pool opens for the day, and four hourly monitoring by hand and analysed manually while the pool is open.
рН	Tested at the same time as for disinfectant parameters (all facilities)
Water balance (includes calcium hardness, total alkalinity TDS and temperature)	Weekly (all facilities)
Turbidity	Daily (all facilities)
Cyanuric acid (if used)	Minimum monthly, ideally weekly (all facilities)
Condition of aquatic facilities: Facility must be kept in a clean, sanitary and hygienic condition	 Aquatic facility operator to determine the inspection frequency necessary to ensure this regulatory requirement is met.





¹ The information provided in Table A2.5 is the minimum requirement under the Public Health and Wellbeing Regulations 2019. However, increased monitoring frequencies may be required based on the risk profile of the aquatic facility, as per Table A2.4. It is the responsibility of facility operators to determine if this applies. The frequency of monitoring should also be increased if the bather numbers increase significantly – for example, during school holidays.

Table A2.6: Recommended microbiological verification monitoring frequency

Parameter	Low-medium risk facilities	High-risk facilities
Escherichia coli (or thermotolerant coliforms)	Quarterly	Monthly
Pseudomonas aeruginosa	Quarterly	Monthly
Heterotrophic colony count (HCC)	Quarterly	Monthly

Table A2.7: Recommended chemical verification monitoring frequency

Parameter	Low-medium risk facilities	High-risk facilities
Chloramines (combined chlorine)	Quarterly	Monthly
Ozone (if used)	Quarterly	Monthly

Note: The frequency of monitoring should be increased if the bather numbers increase significantly. For example, during school holidays when bather numbers at public facilities increase significantly, medium-risk aquatic facilities should be monitored as if they were high-risk facilities.

