



Barooga Foreshore Adventure Play Trail

Stronger Country Communities Fund Application
May 2018

Berrigan Shire Council
&
Liesl Malan Landscape Architects



FINAL DRAFT



LM·LA

Project Support

A project to build a Stronger Country Community

Evidence of Support from Local Community

Reference (Berrigan Shire Council Stronger Country Communities Survey 2018)



Statement of Support from Mayor Matthew Hannan

The development of a far-reaching vision incorporating the staged redevelopment of the Barooga Foreshore adjacent to the Murray Valley National Park is a significant achievement acknowledging the hard work and perseverance of Barooga residents, the Barooga Advancement group, Councillors and Council Officers.

It has been seven years since Barooga residents told us as part of the developing point of our first Community Strategic Plan Berrigan Shire 2022 that what they wanted to

- Enhance the livability of Barooga to attract more long-term residents, especially younger families.
- Encourage visitors to stop and use facilities available for children
- Improve resident access to and use of the River and forests (Barooga Town Plan 2011)

These objectives were similar to those expressed by residents and businesses in our other towns yet unique to Barooga with its connection to the Red Gum Forests and the lagoons of the Murray River.

This plan is the culmination of three years work by Barooga residents, Council, the Barooga Advancement Group and the Landscape Consultants engaged by the Council as part of its rolling program of Town Entrance and Town Landscape Master Plans. A Council program designed to guide investment by the Council and community groups in projects that add to the livability of Barooga and its sense of place.

A sub-plan of the Barooga Township Landscape Master Plan (2018). Concept planning for the Barooga Foreshore Adventure Play Trail runs from Lawson Drive – Swing Bridge Park to Lions Park on Golf Course Road with the centrepiece of the Plan the development of an Adventure Park at Collie Park. Providing in this natural setting adjacent to the National Park and the Barooga town centre a place where families with children aged 0 years to 13 years can come together – appealing to a broad range of age groups. Ensuring, as each stage is developed that we cater to the needs of children and visitors of all ages, abilities and backgrounds.

Co-located with the Council's library as each stage is completed it will be one more step toward the Barooga's 2011 vision that more families with children will live in and visit Barooga.

Cr Matthew Hannan
Mayor



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Executive summary

A project to build a Stronger Country Community

Improving quality of life for the community of Barooga

Project summary

The Barooga Adventure Play Trail incorporates and links three separate projects along the Foreshore. This project is based on current research which demonstrates the health and wellbeing contribution of green space. This is supported by community feedback Berrigan Shire Council (BSC) has recently received which demonstrates the high importance local community members place on keeping their public spaces green, particularly during times of drought.

The Barooga Adventure Play Trail project is a direct outcome of the Barooga Town Concept Plan which was completed in 2018. During extensive community engagement, the Foreshore was identified as a high priority for improvement by local community members. A concept was developed for an overall trail linking all three parks. Individual concepts for the three parks outlined clear and distinct identities for each - Lions Park, Collie Park and Swing Bridge Park. Overall, they cater for a wide range of uses and each park provides different facilities.

Diversifying the existing product on offer will improve existing assets to cater for a wider range of interests and age groups. Barooga already has an established reputation for its active recreation facilities and a strong outdoor culture. This project will build on the existing natural assets and tap into a growing market in Australia for nature based recreation.

The Foreshore currently lacks adequate infrastructure and doesn't provide acceptable *access for all abilities*. The gravel paths are subject to erosion during flood and rain events and there are a number for areas which do not meet Crime Prevention Through Environmental Design (CPTED) requirements.

The plans included in the Barooga Town Concept Plan (2018) outline a strategy to address these concerns. The plans incorporated in this Report address each of these concerns more specifically and provide practical, well considered design solutions for each site.

Delivers infrastructure

The Barooga Adventure Play Trail includes the following infrastructure:

- 1,440 metres of shared path
- one large shelter for gatherings and events and three small picnic shelters,
- an adventure play space catering for 0-13 year olds
- a public facilities block with unisex DDA compliant toilets and a parents room
- a story time garden linked to the existing library
- a gateway to the Murray Valley National Park refurbish swing bridge and wayfinding



Both physiological and psychological benefits arise from the use of parks and there is a link between the two.

Townsend M and Weerasuriya R. (2010). Beyond Blue to Green: The benefits of contact with nature for mental health and well-being. Beyond Blue Limited: Melbourne, Australia p.20

'The experience of the Millennium Drought taught our communities the health and wellbeing benefits of green space in our rural towns. The planting and maintenance of drought-tolerant trees and green space support social wellbeing enhancing the liveability of our towns. Leveraging the benefits to the Council and local communities of its early investment in infrastructure (2008) that treats effluent used to maintain the green spaces and amenities that are important to our community: its golf courses and the Berrigan Race Track. The Council's Permanent Water Saving Policy continues to optimise the external residential use of water – supplementing community infrastructure and on-farm water efficiencies.'

Berrigan Shire Draft Integrated Water Management Strategy 2018, p 11

'New with this Strategy [Berrigan Shire Draft Integrated Water Management Strategy] is an emphasis on incorporating the health and wellbeing benefits of 'green' space and the steps we are taking to ensure that Integrated Water Cycle Management principles are included in the planning of all services provided by the Council, e.g., open space, reserves, streetscapes etc.'

Berrigan Shire Draft Integrated Water Management Strategy 2018, p 15

Executive summary

A project to build a Stronger Country Community

Boosts livability

The Barooga Adventure Play Trail will significantly enhance the town for local residents. It will also improve the visitor experience and boost local tourism. It will make Barooga an even more attractive place to live by:

- Increasing shade and shelter - particularly over paths, play and gathering areas
- Enhancing the aesthetics of the Foreshore with tree planting, landscaping, paving and play elements
- Improving links by providing a shared path along the entire Foreshore
- Highlighting the Foreshore as a key gateway into the Murray Valley National Park at Lawson Drive Reserve
- Improving social cohesion by providing community gathering spaces of different sizes and a range of play opportunities
- Increasing the available park uses and activities, which will in turn increase safety through passive surveillance
- Offering better public spaces will benefit the Barooga community and attract potential new residents

Meets a community need

The Barooga Adventure Play Trail directly responds to community needs identified during the development of the Barooga Town Concept Plan. The project as a whole will elevate the Barooga Foreshore to a destination for the region. This will benefit existing businesses, foster potential new ventures and create new opportunities for the local community.

Can be maintained and operated within available resources

Maintenance and available resources have been considered at all stages during the design process. BSC maintenance team input has been incorporated in the Concept Plans. The play elements have been developed in collaboration with the BSC Risk Manager. They have been designed in accordance with Australian Standards and current best practice for natural playspaces.

Has been carefully planned and costed

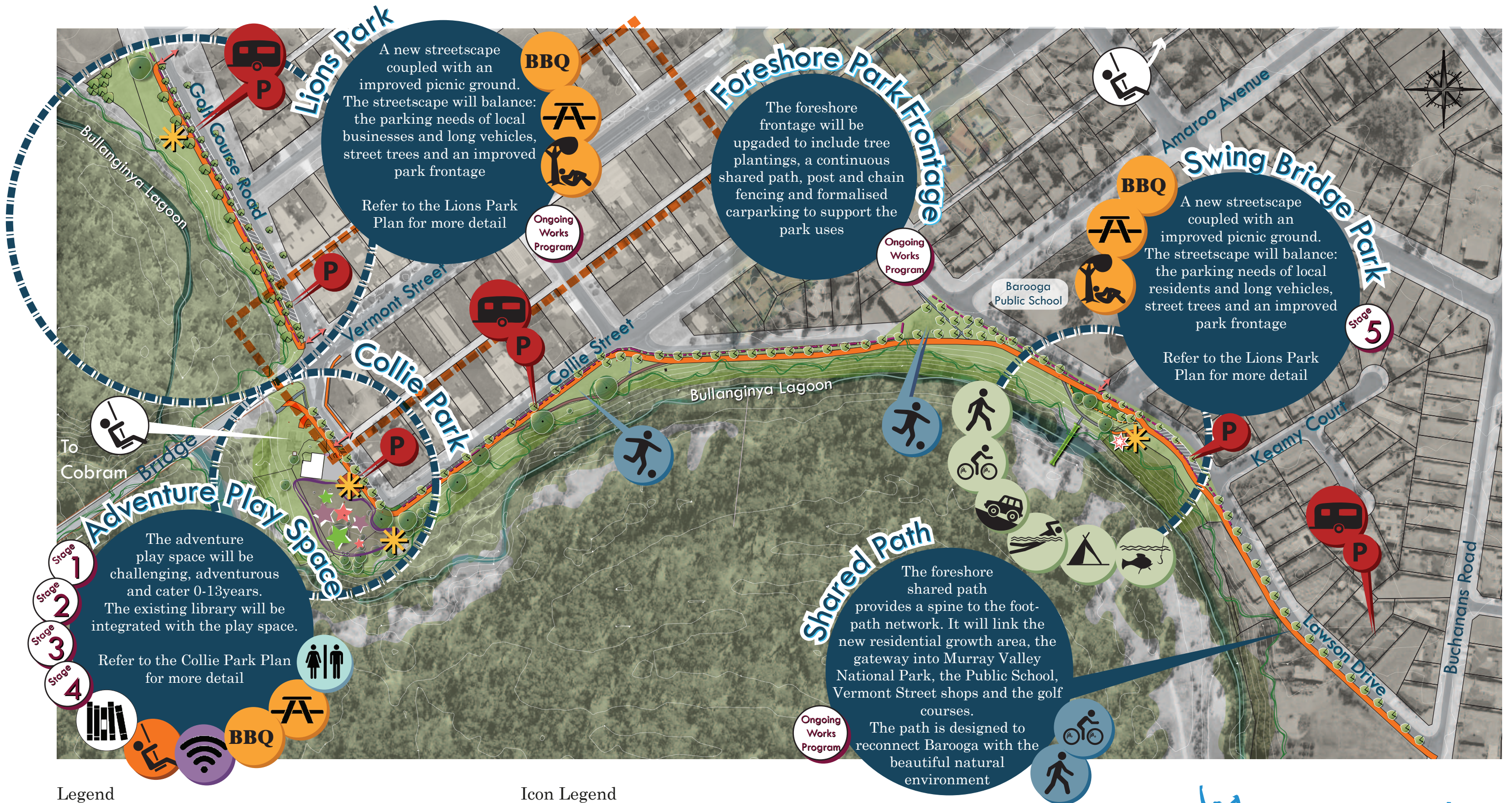
The Barooga Adventure Playground and Play Trail has been designed by a team of professional Landscape Architects who specialise in regional projects. Detailed cost estimates have been developed in collaboration with BSC and included in the Appendix to this Report.

Key Tourism Metrics for Berrigan Shire				
	International	Domestic Overnight	"Domestic Day"	Total
Visitors ('000)	np	98	np	np
Nights ('000)	np	279	-	np
Average stay (nights)	np	3	-	np
Spend (\$m)	np	29	np	np
Average spend per trip (\$)	np	295	np	np
Average spend per night (\$)	np	103	-	np
Average spend (commercial accommodation) per night (\$)	np	140	-	np
Tourism Statistics for Berrigan Shire				
	International	Domestic Overnight	"Domestic Day"	Total
Reason (visitors '000)				
Holiday	np	43	np	np
Visiting friends or relatives	np	44	np	np
Business	np	np	np	np
Other	np	np	np	np
Travel party type (visitors '000)				
Unaccompanied	np	np	-	np
Couple	np	38	-	np
Family group	np	np	-	np
Friends/relatives travelling together	np	18	-	np
Accommodation (nights '000)				
Hotel or similar	np	68	-	np
Home of friend or relative	np	114	-	np
Commercial camping/caravan park	np	np	-	np
Backpacker	np	np	-	np
Other	np	np	-	np

Data from Local Government Area Profiles, 2016 produced by Tourism Research Australia and Australian Government Austrade

Tourism

A destination playground will improve the experience of Barooga in both the Holiday and Visiting Friends or Relatives markets



Legend

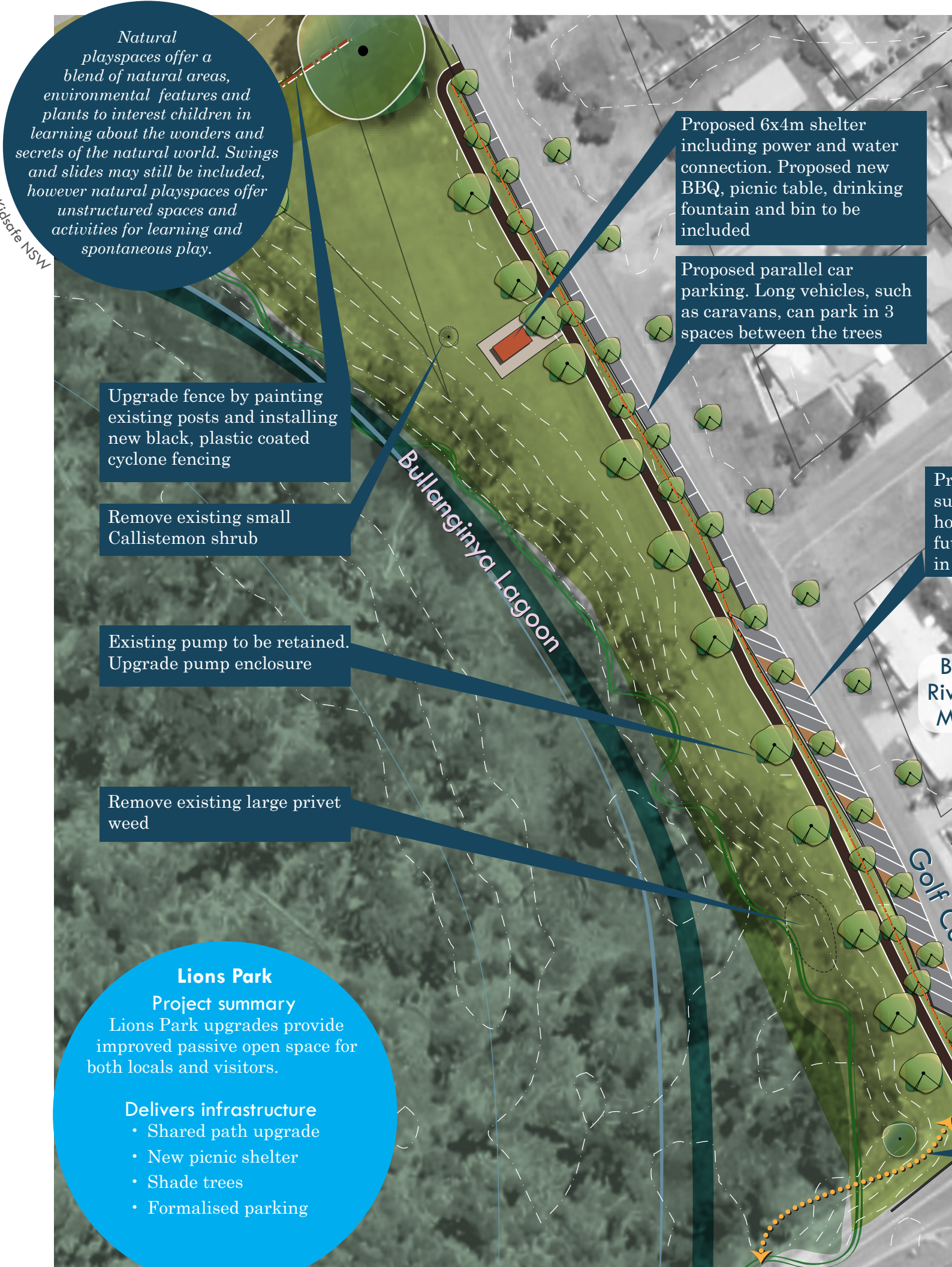
- | | | | |
|--|---|--|---|
| | Vermont Street shop area | | Proposed formalised gravel path |
| | Existing vegetation edge | | Proposed post and chain fence |
| | Existing tree | | Proposed shelter location |
| | Proposed tree | | Proposed 45° car parking |
| | Proposed grass area | | Proposed parallel parking / long vehicle parking |
| | Existing bridge to be painted & refurbished | | Proposed adventure playground |
| | Existing concrete path | | Proposed wayfinding point for Murray Valley National Park |
| | Proposed shared path | | |

Icon Legend

- | | | | | | |
|--|-------------------------------|--|--------------------------|--|--------------------------------------|
| | Proposed long vehicle parking | | Existing library | | Connection to existing cyclist route |
| | Proposed car parking | | Proposed WIFI | | Connection to existing walking route |
| | Proposed BBQ | | Proposed kickabout space | | Connection to existing 4WD route |
| | Proposed picnic table | | Proposed shared path | | Connection to existing swimming spot |
| | Proposed shady quiet spot | | Proposed public toilets | | Connection to existing fishing spots |
| | Existing playground | | | | Connection to existing camp sites |
| | Proposed playground | | | | |



Kidsafe NSW



Natural playspaces offer a blend of natural areas, environmental features and plants to interest children in learning about the wonders and secrets of the natural world. Swings and slides may still be included, however natural playspaces offer unstructured spaces and activities for learning and spontaneous play.

Upgrade fence by painting existing posts and installing new black, plastic coated cyclone fencing

Remove existing small Callistemon shrub

Existing pump to be retained. Upgrade pump enclosure

Remove existing large privet weed

Proposed 6x4m shelter including power and water connection. Proposed new BBQ, picnic table, drinking fountain and bin to be included

Proposed parallel car parking. Long vehicles, such as caravans, can park in 3 spaces between the trees

Proposed 45° car parking to support overflow parking for hotel, Vermont Street and future Adventure Play Space in Collie Park

Existing connection to library and Collie Park. Install fixture to keep gate open at all times, unless required

Legend

- Grass area
- Adjacent bushland & tree canopy line
- Existing tree
- Proposed tree
- Proposed footpath
- Proposed parallel / long vehicle parking
- Proposed 45° car parking
- Proposed upgrade to existing fence
- Proposed post and chain fence to park/road edge

Lions Park - boosts livability

Comfort and presentation

- Improves the foreshore frontage aesthetics
- Provides a clear park identity
- Increases connections to the Bullanginya Lagoon
- Improves comfort with additional shade trees, a shelter and facilities

Access and linkages

- This section of shared path plays a key role in connecting the golf courses and main shop areas. This connection will support both the commercial area and the sports and recreation zones
- Formalised parking improves the connectivity to the main shops and this park

Uses and activities

- Provides a passive outdoor recreation space tailored to the needs of families, grey nomads, visitors and the local community
- The shared path is part of a large network along the entire foreshore and provides a range of outdoor recreation opportunities - both passive and active

Social

- Green passive recreation spaces are important to the community as a place to gather and spend time together

Meets a community need

During consultation the community identified Loins Park as a space they wanted to use more, but felt it lacked shade and identity.

Can be maintained and operated within available resources

This park has been designed to meet current available skills, resources and budgets. The design is low maintenance, while providing great outcomes for Barooga

Has been carefully planned and costed

Refer to the Detailed Estimate of Project Costs

Foreshore & Adventure Play Trail Barooga

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BERRIGAN SHIRE

Sheet: **Lions Park - Landscape Concept Plan**
Scale: 1:1000 at A3 Drawn: GC and CR April 2018



Collie Park - Boosts livability

Comfort and presentation

- The adventure playground will provide a destination for the whole region with a specific Barooga identity
- It will improve the foreshore frontage and increase connections to Bullanginya Lagoon
- Improves comfort with additional shade trees, a shelter and facilities

Access and linkages

- The path network has been designed to connect the play space and library to the main shops
- Path connects to Lions Park (under the bridge)

Uses and activities

- Provides play opportunities for ages 0-13. Play elements are challenging and adventurous
- The shared path is part of a large network along the entire foreshore and provides a range of outdoor recreation opportunities

Social

- The large shelter provides a community gathering space and smaller gathering areas also been included

Meets a community need

During consultation, the community identified the need for a play space for all ages. The community is concerned that there are not enough activities for late primary / early high school-aged children. The community specifically asked for an adventure playground near the foreshore.

Maintained and operated within available resources

This park has been designed to consider current available skills, resources and budgets. Playspaces are not low maintenance, however, Berrigan Shire Council is comfortable that they can grow their maintenance team/skills to meet the requirements of this space. A existing playground past its useful lifespan will be decommissioned after this playspace is built to help balance resources.

Has been carefully planned and costed

Refer to the Detailed Estimate of Project Costs



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Sheet:

Collie Park - Landscape Concept Plan

Scale:

1:600 at A3

Drawn:

GC and CR April 2018



adventure+ | spectrum+ pinnacle+ symmetry+ motion+

Please Note:
This is an impression only. Play equipment colours, surface materials and landscaping are from 3D rendering software. For further detail refer to Collie Park Concept plans & zoom ins and Project Elements - Play Equipment Colour Palette, Adventure Playspace Plant Palette and Adventure Playspace Materials Palette

Collie Park - Berrigan Shire
Proposed Play Equipment
Equipment Illustration - View 1



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Sheet:

3D impressions of playspace

Scale:

N/A

Drawn:

AdventurePlus





adventure+ | spectrum+ pinnacle+ symmetry+ motion+

Collie Park - Berrigan Shire
Proposed Play Equipment
Equipment Illustration - View 2

@ sales@adventureplus.net.au
1300 237 587
w adventureplus.net.au

Please Note:
This is an impression only. Play equipment colours, surface materials and landscaping are from 3D rendering software. For further detail refer to Collie Park Concept plans & zoom ins and Project Elements - Play Equipment Colour Palette, Adventure Playspace Plant Palette and Adventure Playspace Materials Palette

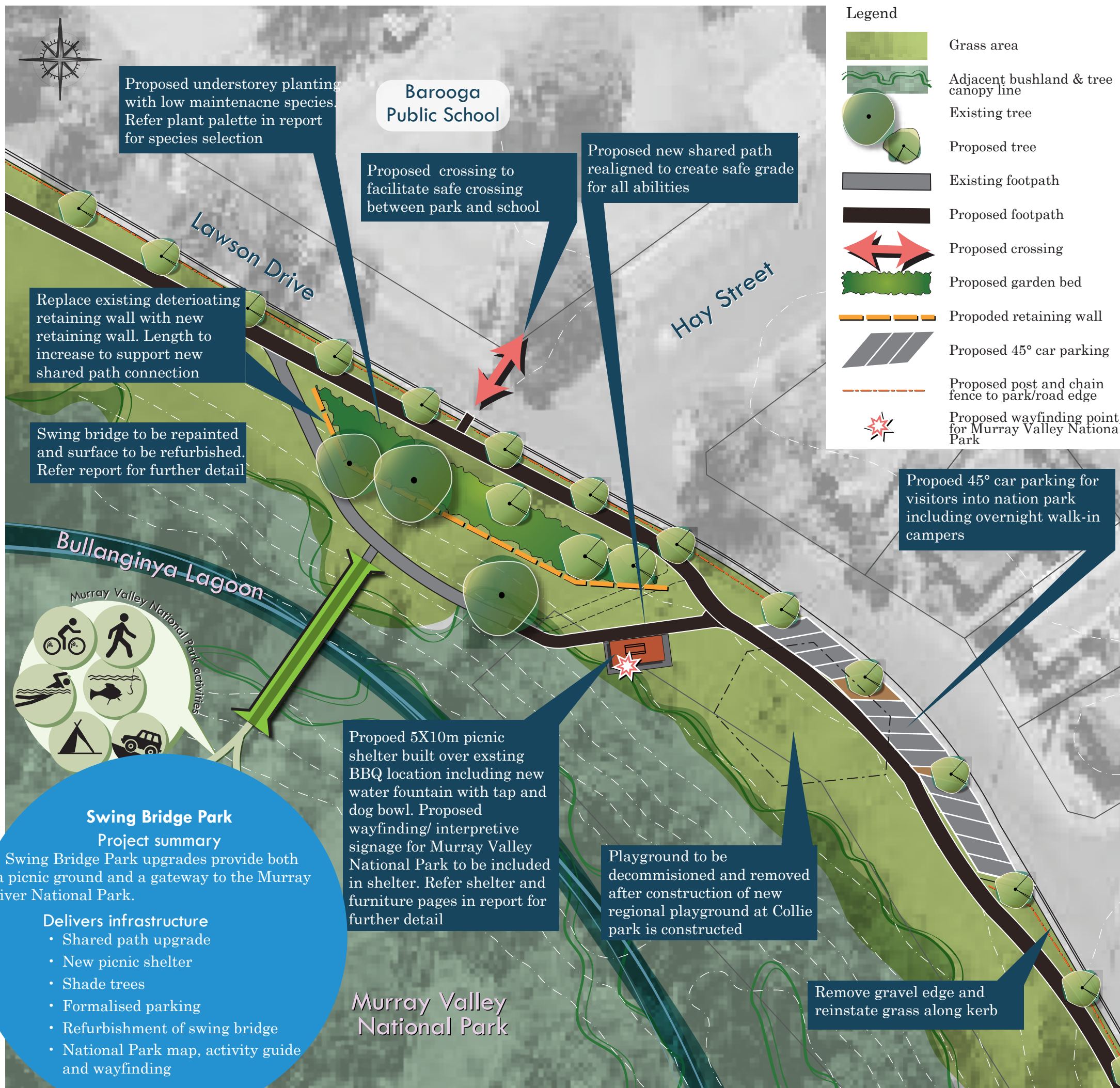
Foreshore & Adventure Play Trail
Barooga



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Sheet: 3D impressions of playspace
Scale: N/A Drawn: AdventurePlus



Swing Bridge Park - Boosts livability

Comfort and image

- Improves the foreshore frontage aesthetics
- Provides a clear park identity
- Increases connections to tullanginya Lagoon and The Murray Valley National Park
- Improves comfort with additional shade trees, a shelter and facilities

Access and linkages

- This section of shared path plays a key role by connecting to the Barooga Public School.
- The formalised parking provides improved access to the Murray Valley National Park from this site

Uses and activities

- Provides a passive outdoor recreation space tailored to the needs of families, visitors and the local community
- Town gateway to Murray Valley National Park
- Shared path is part of a large network along the entire foreshore and provides a range of outdoor recreation opportunities

Social

- Green passive recreation spaces are important to the community as a place to gather and spend time together

Meets a community need

Barooga identifies itself as a sporting community. The work at this site supports the outdoor active/adventure recreation sector and taps into a growing market in Australia.

Can be maintained and operated within available resources

There is a treated pine playground that is past its useful life span at this site. A previous report has noted that is should be removed and supports development of an Adventure Play Space at Collie Park.

This park has been designed to meet current available skill, resources and budgets. The design is low maintenance while providing great outcomes for Barooga

Has been carefully planned and costed

Refer to the Detailed Estimate of Project Costs



Sheet: **Swing Bridge Park - Landscape Concept Plan**

Scale: 1:600 at A3 Drawn: GC and CR April 2018

Stronger Country Communities Fund Application

Providing children with an outdoor learning environment that incorporates areas for quiet, natural, creative, active and stimulating play will allow children to learn whilst using their imagination.

Project elements

Shelter Concept	13
Foreshore Public Facilities Plan.....	14
Adventure Playground Plan	15
Junior Play / Nature Play Area Plan.....	16
Forecourt & Library Storytime Garden Plan.....	17
Play Equipment Colour Palette	18
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Adventure Playspace Materials Palette	20
Foreshore Materials and Furniture Suite.....	21
Swing Bridge Refurbishment.....	22



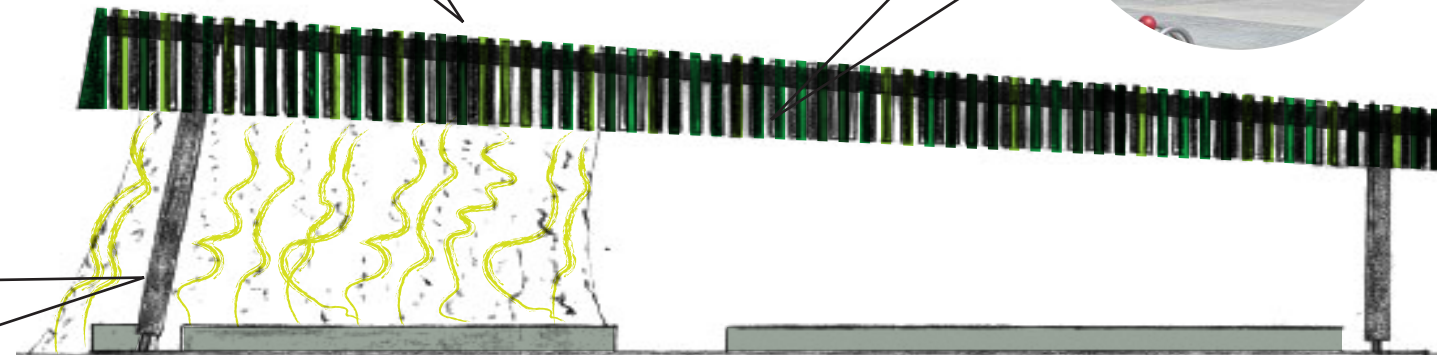
When children really enjoy a well designed play space, they want to return there again and again. The playspace has unique meaning for them and offers special memories to share.



Custom shelters

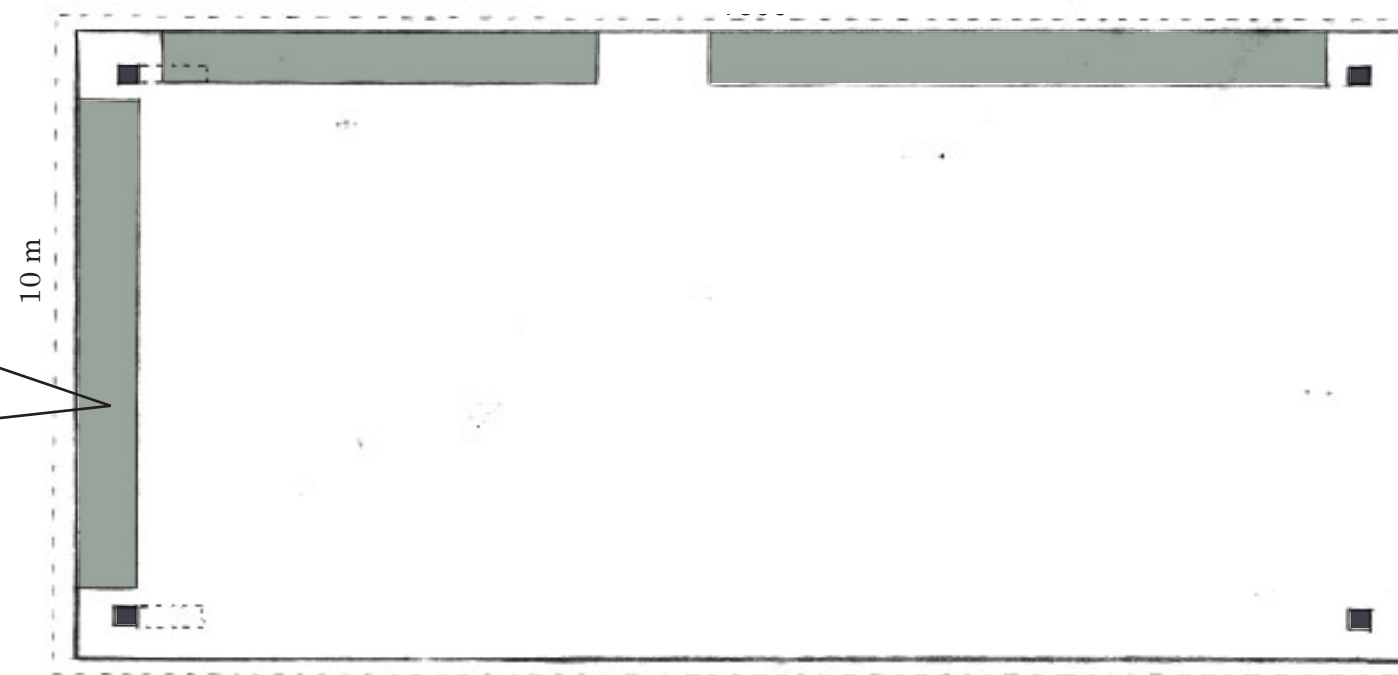
Project summary

A standard shelter has been designed for the foreshore. It is proposed at 4 locations. The design responds to the hot climate while providing a welcoming and comfortable space for the community to gather.



Large shelter elevation
1:100

18 m



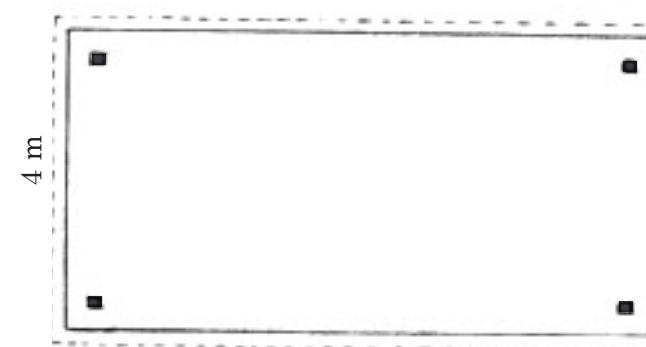
10 m

Large shelter plan
1:100

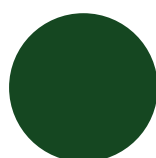


Small shelter elevation
1:100

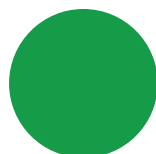
8 m



Small shelter plan
1:100



Green steel batten colours
Hawthorn Green



Kelly Green



Apple Green

Foreshore Shelters

Comfort and image

- The custom designed shelters respond to the human scale and need for comfort in the hot and dry climate.
- They will make a positive contribution towards the aesthetic image of the Barooga Foreshore

Access and linkages

- The shade will provide respite along the shared path from both rain and heat

Uses and activities

- The shelters have been coupled with picnic facilities to support family and friends to gather
- The larger shelter has been designed to cater for family events such as birthday parties and community events

Social

- Providing meaningful social opportunities in public spaces increase the social capital available in the community. These shelters will provide community destinations and focal points.

Meets a community need

During the Barooga Town Concept Plan the need for shelters was identified with the community. These shelters are a direct outcome of community engagement.

Can be maintained and operated within available resources

The materials and form have been designed to be long lasting and require limited maintenance which is within the capacity of Berrigan Shire Council.

Has been carefully planned and costed

Refer to the Detailed Estimate of Project Costs



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Sheet:

Foreshore Shelter Concept Design

Scale:

as shown at A3 Drawn: GC and CR April 2018

Retain the two standard toilets available in the library

Note these will not meet the needs of a regional place space, the library and the town. These toilets currently serve the town centre and the library. Extension to the existing toilets was considered, but was not ideal, due to the floor plan of the library and the roof line of the existing building. An extension would also cut into the play space and create a potential CPTED issue

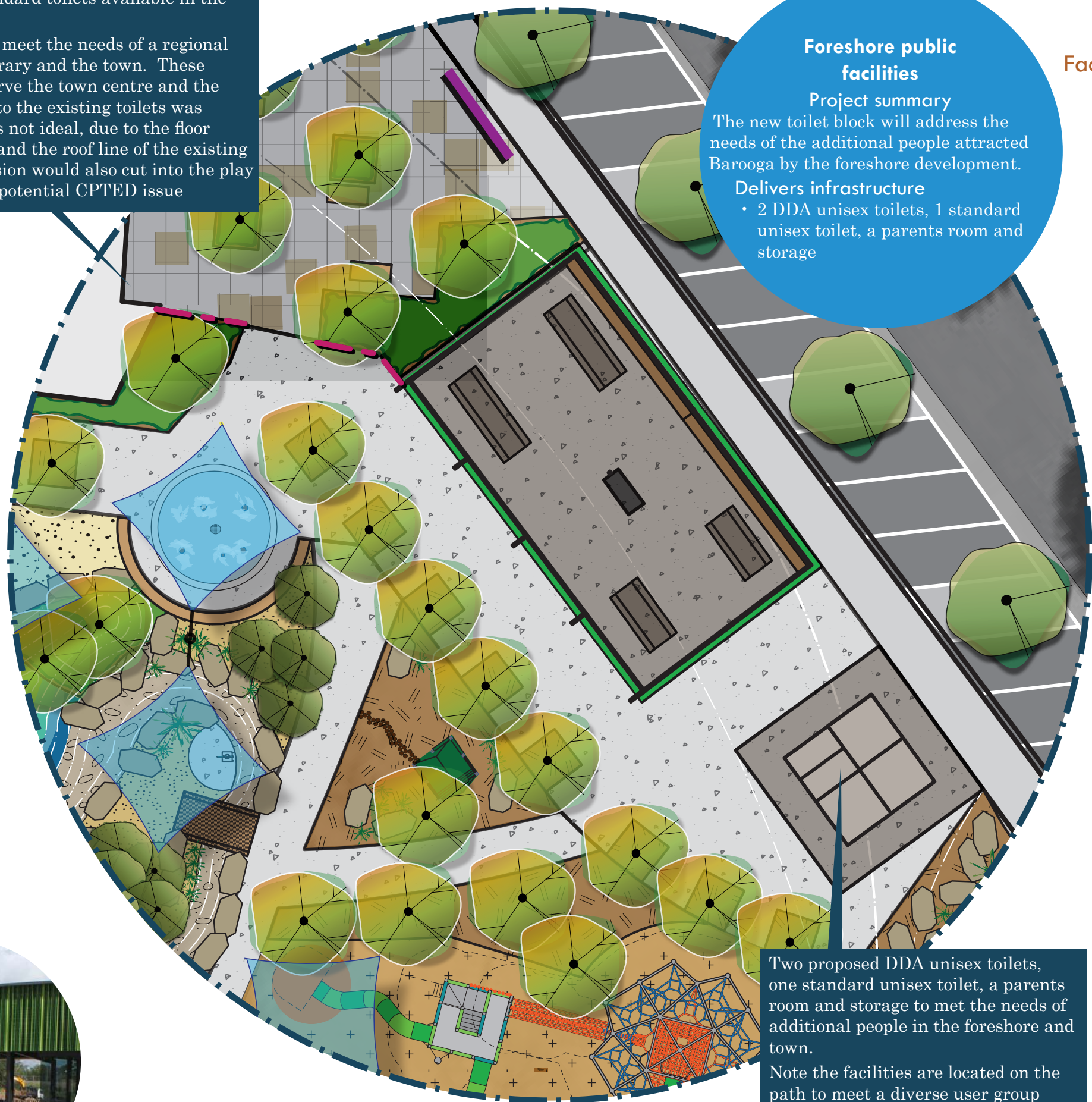
Foreshore public facilities

Project summary

The new toilet block will address the needs of the additional people attracted Barooga by the foreshore development.

Delivers infrastructure

- 2 DDA unisex toilets, 1 standard unisex toilet, a parents room and storage



Two proposed DDA unisex toilets, one standard unisex toilet, a parents room and storage to meet the needs of additional people in the foreshore and town.

Note the facilities are located on the path to meet a diverse user group and are intended not just for the playspace, but for also for people on the foreshore and in town.

Foreshore Public Facilities

Facilities for Barooga town centre and the Foreshore

Boost livability

- Comfort and presentation**
- Increased comfort is achieved with clean and welcoming toilets that meet the needs of *access for all abilities*
- Access and linkages**
- Links to the town of Barooga, the Adventure Playspace and the foreshore
- Uses and activities**
- Adequate public facilities support the use of the Adventure Playspace, as well as local businesses
 - Proposed facilities encourage active and passive recreation in the foreshore area
- Social**
- DDA accessible unisex public facilities are welcoming to all and addresses issues around personal dignity
 - A parents room addresses the needs of the diverse Australian community providing a space both for baby change facilities and a feeding space for mothers and their babies.
- Can be maintained and operated within available resources**
- Robust design and easy maintenance will be a key design requirement
- Has been carefully planned and costed**
- Refer to the Detailed Estimate of Project Costs



Sheet: **Foreshore Toilet**

Scale: 1:200 at A3 Drawn: GC and CR April 2018

Adventure and Challenge

play to explore

AdventurePlus Mt
Ambition climbing
net, slide & rope
bridge

Adventure Play

Traditional playgrounds generally cater for younger age groups and few of them provide excitement and interest for teenagers. These play elements have been carefully selected to provide an adventurous, challenging play experience for all ages, especially young teens.

This playground fills a void which is particularly apparent in many regional Australian areas. It will improve the play experience for local kids and provide a destination visitors to the region.



Proposed Mt Ambition rope climbing net (S1351S) with tunnel slide from top

Existing large red gum tree to be protected and retained. Proposed rock edging / informal seating space around tree



AdventurePlus
Winchester Tower



AdventurePlus
Trampoline



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Sheet:

Adventure Playground

Scale:

1:200 at A3

Drawn:

GC and CR April 2018

Proposed small round trampolines (T200S) in a linear layout with coloured rubber surfacing surrounds

Proposed shade sails to shade end of slides and rubber surfacing

Proposed Winchester Tower play unit (S5599U) with 2 tunnel slides

Proposed rope bridge (part of Mt Ambition structure) between climbing net and tower unit

Proposed community quad swing set (S0408U) looking toward lagoon with coloured rubber surfacing to high wear area

Proposed Double Flyway (F2040N) flying fox. Launch from 1.3m high mound with rubber surfacing

Proposed Gyro (S0345G) basket swing with coloured rubber surfacing underneath to high wear area

Proposed small shelter

Proposed grassed earthen levee to protect play space from flood events



AdventurePlus
Double Flyway



AdventurePlus Gyro

Adventure and Challenge

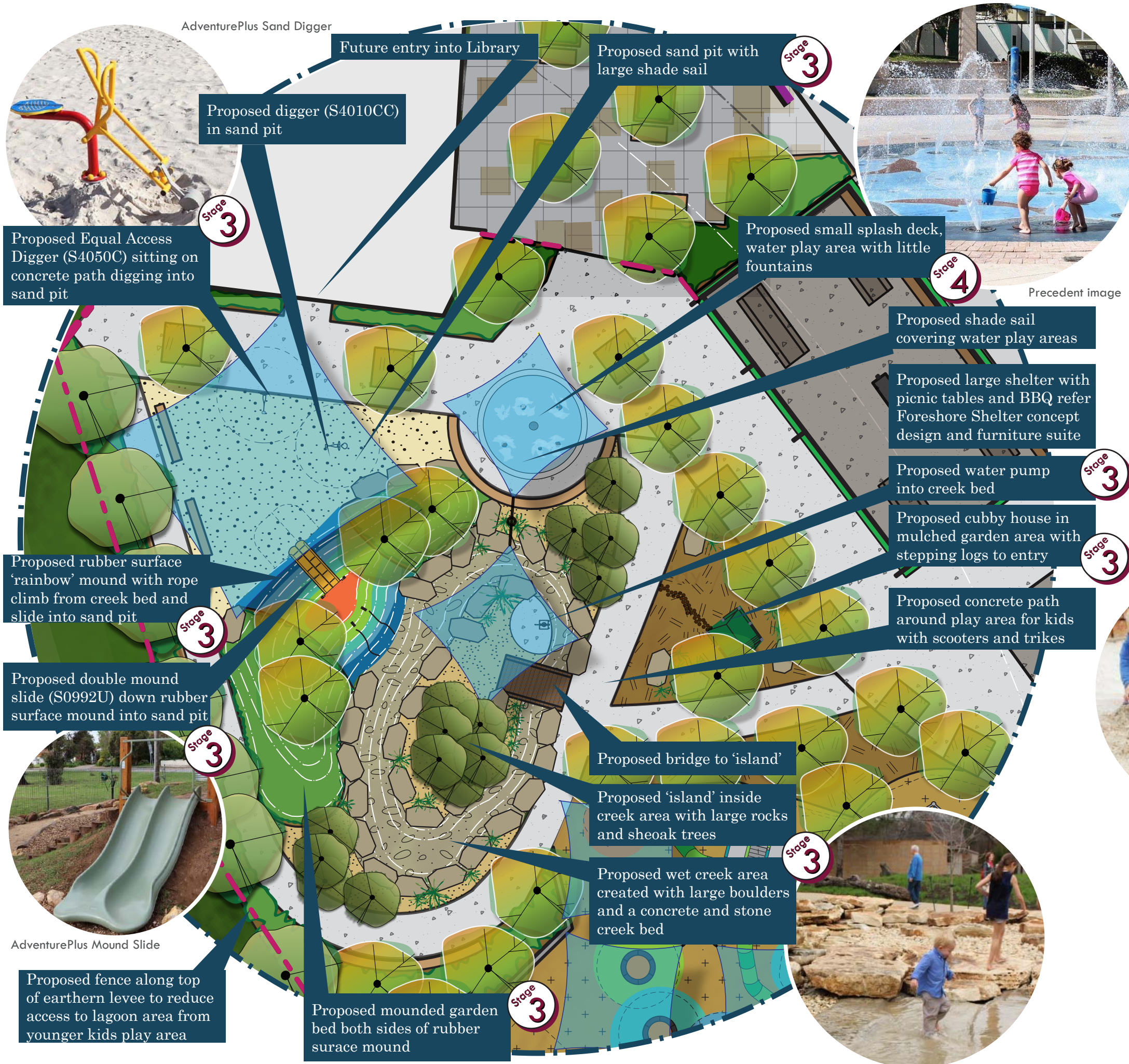
play to explore

Water & Sand Play

These play elements encourage imaginative play by incorporating water, sand, rubber surface mounds and boulders. They encourage creativity and the development of motor skills, particularly in younger children.

The Riverina Plains are particularly hot in summer and the water play elements will provide an attractive, shaded facility for local children and a destination playground for the region.

Deciduous trees will ensure solar access in winter with a range of play opportunities.



Precedent images



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Sheet:

Junior Play / Nature Play Area

Scale:

1:200 at A3

Drawn:

GC and CR April 2018

Adventure and Challenge

play to explore

Story Time Garden

An outdoor area for story telling, reading and quiet time. The design provides a path linking the library to a shaded seating circle. Deciduous trees provide solar access in winter and shade in summer. There are opportunities to develop landscape elements which reference themes such as Australian children's classics, Indigenous dreamtime stories and classical literature from around the world.

Proposed crossing and path connection to Vermont street shops

Golf Course Road

Proposed Story Time garden path with seating and reading chair to provide an outdoor 'nook' for the library

Precedent images



Precedent image



Booran Reserve - Caulfield

Proposed large sign with name of park eg. Barooga Adventure Play Park

Proposed entrance forecourt to Library and playground. Trees in raised planters with seating for community members and visitors

Proposed gateway entry fence to playground. Consider decorative fence, wayfinding and a welcoming entry to park

Precedent images



LM·LA



A colourful playground

in a beautiful natural setting

Playground colour palette




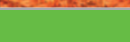
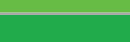

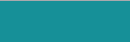
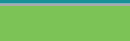

























The playspace has been designed with a coordinated colour palette. The colours have been chosen to

- match with the natural environment
- provide highlight and interest
- promote the feeling of a cooler environment

Meets a community need
During community engagement undertaken by BSC with the local Barooga Public school bright feature colours were identified as a core design consideration. This direction has been a key principle in the design of the playspace. Refer to the Collie Park Plan and Project Elements for more information.

Can be maintained and operated within available resources
A reputable play brand has been chosen for the supply. The colour is achieved through quality products including powdercoat, colorbond, wire rope and fiberglass. The limited maintenance associated with the colour in the playspace will be within Berrigan Shire Councils existing skills and resources.

Has been carefully planned and costed
Refer to the Detailed Estimate of Project Costs

No.	Play Item	Part	Colour Name	Colour
S1351S	Mount Ambition plus Steel Frame Structure	Frame	Metropolis Silver Glow	
		Rope colour 1 (centre)	Blue	
		Rope colour 2 (bridge & top)	Burnt Orange	
		Slide colour 1	Apple Green	
		Slide colour 2	Kelly Green	
S5599U	Winchester Tower Play Unit	Vertical Frame Colour	Metropolis Silver Glow	
		Vertical Rail colour 1	Deep Pool	
		Vertical Rail colour 2	Intensity Leaf	
		Slide colour 1	Apple Green	
		Slide colour 2	Kelly Green	
S0345G	Gyro 4.5	Post	Metropolis Silver Glow	
		Arm	Intensity Summer	
F2040N	Flyway 40 Double	Fly 1 - x2 posts	Intensity Summer	
		Fly 2 - x2 posts	Dark Violet	
T2000S	Trampoline Round	Protective surround	Black	
		Trampoline mat	Traffic orange	
S0992U	Double Mound Slide 1.5m high	Posts	Metropolis Silver Glow	
		Handgrips	Deep Pool	
		Double Slide	Golden Yellow	
S4010C	Sand Digger	Post	Metropolis Silver Glow	
		Handles	Intensity Sunshine	
		Seat	Dark Violet	
S4050C	Equal Access Digger	Post	Metropolis Silver Glow	
		Handles	Intensity Sunshine	
S1008V	Kinda House Play Unit	Timber Walls	Jarrah	
		Roof	Cottage Green	
S0404U	Community Swing Frame – 2.5m Double	A Frame	Metropolis Silver Glow	
		Top beam	Deep Pool	
	Rubber Surfacing	Colour 1	May Green	
		Colour 2	Patina Green	
		Colour 3	Teal	
		Colour 4	Rainbow Blue	
		Colour 5	Orange	



Sheet: **Play Equipment Colour Palette**
Scale: as shown at A3 Drawn: GC and CR April 2018

Natural Shade to the Playground

Planting for a shady future

Native evergreens



Deciduous Shade Trees



Undertorey Gardenbeds



LM·LA



Sheet:

Adventure Playspace Plant Palette

Scale:

as shown at A3 Drawn: GC and CR April 2018



Soft Fall Mulch

Organic impact attenuation mulch to comply with Australian Standards

Regarded as the safest impact attenuation material

Maintenance

Regular checking and top up of mulch to required level. Areas of high wear will require more frequent topping up.



Sand as a play element and soft fall

Sand provides hours of play with minimal risk or cost. The play is rich and diverse. Can be impact attenuation mulch if it complies with Australian Standards

Maintenance

Good drainage is essential

Must be separated from soft fall



Concrete edge

Provides an edge to soft fall

Maintenance

Limited if correctly installed



Mown Grass

Excellent informal play surface

Maintenance

As currently required



Rubber surface

Provides a impact attenuation surface in high wear areas to limit the need for ongoing top ups of loose softfall

Maintenance

May need patching over time

Liesl Malan Landscape Architects



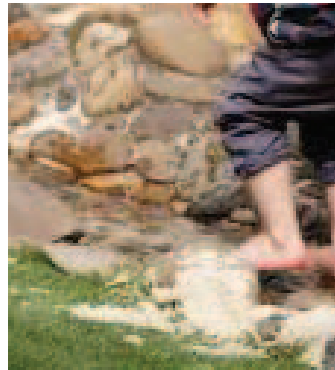
Rocks

A natural product which will enhance the setting

Ensure the rocks are free of sharp points

Maintenance

Weeding / weed control around plantings



Wet dry creek

Stones are set into a reinforced concrete channel.

This item should last as long as a paved surface

Maintenance

Limited if :

- correctly installed with expansion joints
- water drains adequately



Concrete seats

Simple

Designed with timber top surface to limit skateboard jumps

Maintenance

oil of timber

ensure there is an anti graffiti finish



Feature front fence

Steel feature fence to provide gateway entrance to the play space and separate the play space from the library entrance.

Maintenance

Check periodically that fence is sound, and for possible structural rust



Rear fence

To match existing playground fence

Maintenance

Check periodically that fence is sound, and for possible rust

Berrigan Shire Council

Playground materials palette

The materials have been chosen to enhance the natural setting of the Bullanginya Lagoon.

The hot climate has been a core consideration to limit creating a heat island effect in the playspace. Refer to Appendix 'Materials that make heat worse for our kids demand a rethink by designers.'

Can be maintained and operated within available resources

Limiting maintenance has been a core consideration of materials choices and the playground design. Refer to notes on each material for more information.

Has been carefully planned and costed

Refer to the Detailed Estimate of Project Costs



LM·LA

Sheet:

Adventure Playspace Materials Palette

Scale:

as shown at A3 Drawn: GC and CR April 2018





Mown Grass

Maintenance
As currently required
for existing assets



Concrete Shared Path

Maintenance
As currently required
for existing assets



Asphalt Shared Path

Maintenance
As currently required
for existing assets



Drinking fountain

Supplier:
Landmark
Unit
Drinking Fountain
KB502 with Side Tap &
Dog Bowl
Finish:
Powder Coat Black



Park bench

Supplier:
Landmark
Unit
San Marco Bench K052
Finish
Cast aluminium
Hard wood timber



Park seat (with arms)

Supplier:
Landmark
Unit
San Marco Seat KA002
Finish
Cast aluminium
Hard wood timber



Drinking fountain

Supplier:
Landmark
Unit:
San Remo K060
Finish
Cast aluminium
Hard wood timber



Bin surround

Supplier:
Landmark
Unit:
Daintree Bin Surround
(240lt) K076
Finish:
Hardwood timber
Woodland grey
powdercoat



BBQ

Supplier:
Unisite group
Unit
Grillex Double
Wheelchair accessible
BBQ
Finish
Charcoal



Timber bollard

Finish
Hard wood



Timber bollard and chain

Supplier
Local fabrication
Finish
Hard wood timber
Galv. chain



Bike hoop

Supplier:
Landmark
Unit:
Single Bicycle Stand
KF401
Finish
Stainless Steel

Foreshore Palette

The suite has been chosen as a Berrigan Shire-wide standard to limit maintenance issues.

Surface Materials

The surfaces materials have been chosen in collaboration with Berrigan Shire Council to provide long lasting easy to maintain finishes.

Furniture

The furniture has been sourced from a local supplier to

- support the local economy,
- ease of maintenance and replacement
- high-quality products that are built to withstand vandalism, local climate condition

The furniture finishes have been chosen to limit ongoing maintenance and consider the ease of replacement.

Can be maintained and operated within available resources

See above

Has been carefully planned and costed

Refer to the Detailed Estimate of Project Costs





Existing Barooga Swing Bridge - Before



Bridge from pathway



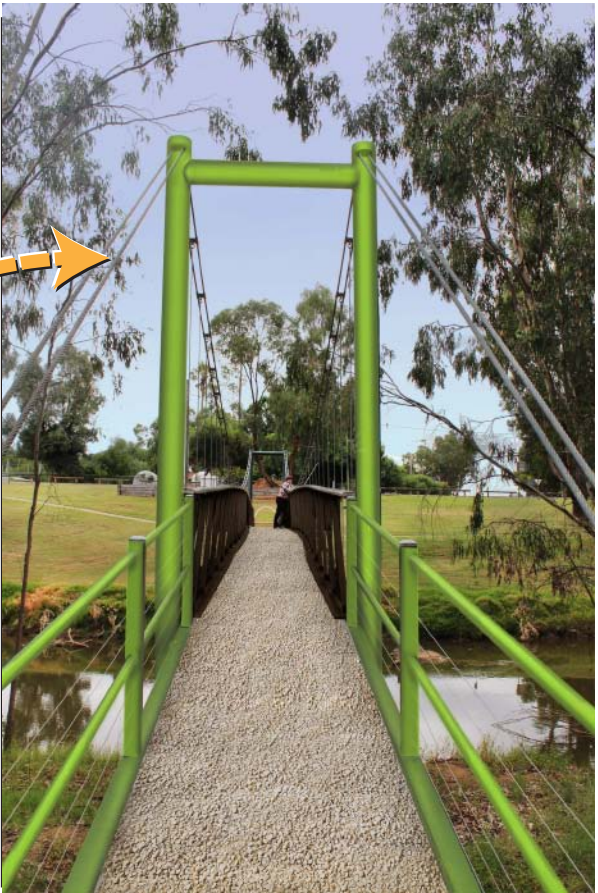
From bridge looking towards National Park



Start of bridge looking towards Parkland - Before



Proposed painted swing bridge - After



Proposed upgrade to bridge surface - After



Proposed timber stain colour to balustrade



Surface aggregate option A
Rounded seed pebbles in a cream and grey mix



Surface aggregate option B
Cream aggregate with angular particles

Swing Bridge Gateway to the Murray Valley National Park

Barooga’s natural environment is a significant asset to the town. The existing swing bridge is a well-loved locals access to the National park over the Bullanginya Lagoon. The Barooga Town Concept Plan identified this gateway as a tourism opportunity. Barooga has a rare town entry to the national park which would suit both short and overnight visits.

The swing bridge is in need of minor refurbishment to repair the paintwork and address the decking which is occasionally slippery

Wayfinding

The bridge be refurbished as a wayfinding gateway. The colour should both standout and compliment the surrounding environment, for this reason, a bright green has been selected. The colour should help visitor identify the bridge as their entry from Barooga to explore the National Park.

In addition to the bridge, a map and activity interpretation is proposed in the nearby new shelter.

Meets a community need

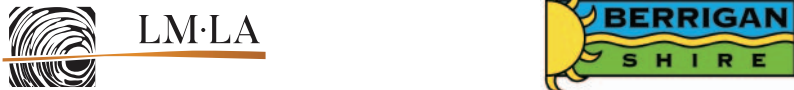
The Swing Bridge is an opportunity to diversify the recreation and tourism product on offer in Barooga. Active recreation tourism is a growth industry in Australia.

Can be maintained and operated within available resources

The finishes have been selected in collaboration with Council and consider Berrigan Shire Councils existing skills and resources

Has been carefully planned and costed

Refer to the Detailed Estimate of Project Costs



Appendix

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Article - Materials that make heat worse for our
kids demand a rethink by designers **60**

Detailed Estimate of Project Costs

Carefully planned and costed

Project Delivery

Good Planning + Strong Community Involvement

Berrigan Shire Council works closely with its community on the development of community infrastructure and placemaking projects. We ensure that the community are involved in staging and prioritisation as part of the concept planning and design phase. This process gives assurance that the project will:

- have community ownership and deliver the outcomes that residents want
- be cost effective and provide value for money
- be completed on time
- be integrated with related Council projects and add value to other projects in the Shire.

Experience and Expertise in Project Management

As funds are identified for key elements in this Plan the Council’s project management planning and processes will include:

- establishment of a project team charged with responsibility to manage funded projects
- engaging external contractors as required (noting that the Council’s preferred procurement method is to undertake a ‘Design and Construct’ tender process)
- a project-wide Risk Assessment (Safety, Project Specific and Commercial).
- in-house contract management to ensure timely project delivery

Berrigan Shire Council staff have the experience and expertise to manage and deliver projects of this nature.

DRAFT
to be updated with
BSC rates

Barooga Foreshore	
Opinion of Probable Cost	
Schedule 1 - Barooga Foreshore	
Prepared by Liesl Malan Landscape Architects, PO Box 78 Harcourt, VIC 3453	
Date :24.04.2014	
Description of works	
Landscape Works - Foreshore general	\$333,510.00
Landscape Works - Lions Park	\$271,140.00
Landscape Works - Collie Park Stage 1 and 2	\$721,030.00
Landscape Works - Collie Park Stage 3 and 4	\$760,885.00
Landscape Works - Collie Park other areas	\$182,115.00
Landscape Works - Lawson Drive / swing bridge	\$332,365.00
Total	\$2,601,045.00
Contingency at 25%	\$650,261.25
Total including contingency	\$3,251,306.25
Subtotal	\$3,251,306.25
GST	\$325,130.63
Total amount (including contingency and GST)	\$3,576,436.88
• Whilst every effort has been taken to ensure accuracy Liesl Malan Landscape Architects cannot accept liability arising from the use thereof.	
• This OPC includes construction costs only, it does not include consultancy fees associated with additional design for revised scope, documentation and project management.	
• This OPC is based on a Concept Plan only and is subject to variation during documentation	
• All rates are to be confirmed by Berrigan Shire Council.	

Detailed Estimate of Project Costs - Foreshore General

Carefully planned and costed

Barooga Foreshore							
Opinion of Probable Cost							
Schedule 3 - Foreshore General							
Prepared by Liesl Malan Landscape Architects, PO Box 78 Harcourt, VIC 3453							
Date :24.04.2014							
No.	Item	Unit	Quantity	Plant size	Unit cost	Approximate total cost (excluding GST)	Subtotal
Preliminaries and earthworks							\$14,000.00
1	Preliminaries - setout, Public Liability Insurance, Safe Work Methods, Site Management Plan, Traffic Management Dial Before You Dig and OH&S	item	1	n/a	\$2,000.00	\$2,000.00	
2	Demolition including of existing path (areas only), treated pine post and rail fence	item	1	n/a	\$5,000.00	\$5,000.00	
3	Earthworks and Drainage - preparation, grading & site set-out, ensuring all areas are free draining stock pile top soil, weed control	item	1	n/a	\$7,000.00	\$7,000.00	
Kerb works							\$141,310.00
4	Supply an install new kerb edge	lm	865	n/a	\$110.00	\$95,150.00	
5	Demolition of road surface and creation of healthy growing environment for trees	item	1	n/a		\$40,000.00	
6	Supply and install road surface to carparking areas	m2	516	n/a	\$170.00	\$87,160.00	
7	Line marking for parking provision	item	1	n/a	\$1,000.00	\$1,000.00	
Fencing							\$50,250.00
8	Supply and install post and chain fence	lm	666	n/a	\$75.00	\$49,950.00	

9	Supply and install removable bollards	item	3	n/a	\$100.00	\$300.00	
Path							\$92,400.00
10	Supply and install asphalt shared path	m2	2310	n/a	\$40.00	\$92,400.00	
Planting							\$35,550.00
11	Supply and plant semi-advanced trees in accordance with tree planting detail	item	60	250lt	\$400.00	24000	
12	Supply and establish grass to disturbed areas	m2	2310	n/a	\$5.00	\$11,550.00	
						Subtotal	\$333,510.00
						Refer Schedule 1 for contingency	

Detailed Estimate of Project Costs - Lions Park

Carefully planned and costed

Barooga Foreshore							
Opinion of Probable Cost							
Schedule 3 - Lions Park							
Prepared by Liesl Malan Landscape Architects, PO Box 78 Harcourt, VIC 3453							
Date :24.04.2014							
No.	Item	Unit	Quantity	Plant size	Unit cost	Approximate total cost (excluding GST)	Subtotal
Preliminaries and earthworks							\$8,000.00
1	Preliminaries - Setout, Public Liability Insurance, Safe Work Methods, Site Management Plan, Traffic Management Dial Before You Dig and OH&S	item	1	n/a	\$2,000.00	\$2,000.00	
2	Demolition including existing BBQ and golf fence	item	1	n/a	\$2,000.00	\$2,000.00	
3	Earthworks and Drainage - preparation, grading & site set-out, ensuring all areas are free draining stock pile top soil, weed control	item	1	n/a	\$4,000.00	\$4,000.00	
Kerb works							\$84,520.00
4	Supply an install new kerb edge	lm	311	n/a	110	\$95,150.00	
5	Demolition of road surface and creation of healthy growing environment for trees	item	1	n/a		\$40,000.00	
6	Supply and install road surface to carparking areas	m2	931	n/a	10	\$5,150.00	
7	Line marking for parking provision	item	1	n/a	1000	\$1,000.00	
Fencing							\$20,175.00
8	Supply and install post and chain fence	lm	253	n/a	\$75.00	\$18,975.00	
9	Supply and install removable bollards	item	2	n/a	\$100.00	\$200.00	
10	Refurbish pump station cage	item	1	n/a	\$1,000.00	\$1,000.00	

Path							\$65,800.00
11	Supply and install concrete shared path	m2	658	n/a	\$100.00	\$65,800.00	
Planting							\$35,550.00
11	Supply and plant semi-advanced trees in accordance with tree planting detail	item	60	250lt	\$400.00	24000	
12	Supply and establish grass to disturbed areas	m2	2310	n/a	\$5.00	\$11,550.00	
						Subtotal	\$333,510.00
						Refer Schedule 1 for contingency	

Detailed Estimate of Project Costs - Collie Park Stage 1 and 2

Carefully planned and costed

Barooga Foreshore							
Opinion of Probable Cost							
Schedule 3 - Collie Park Stage 1 and 2							
Prepared by Liesl Malan Landscape Architects, PO Box 78 Harcourt, VIC 3453							
Date :24.04.2014							
No.	Item	Unit	Quantity	Plant size	Unit cost	Approximate total cost (excluding GST)	Subtotal
Preliminaries and earthworks							\$118,000.00
1	Preliminaries - setout, Public Liability Insurance, Safe Work Methods, Site Management Plan, Traffic Management, Dial Before You Dig and OH&S	item	1	n/a	\$8,000.00	\$8,000.00	
2	Demolition including tree removal, pump house, overhead power	item	1	n/a	\$10,000.00	\$10,000.00	
3	Earthworks - Levee construction	m3	3000	n/a	\$30.00	\$90,000.00	
4	Earthworks and Drainage - preparation, grading & site set-out, ensuring all areas are free draining stock pile top soil, weed control	item	1	n/a	\$10,000.00	\$10,000.00	
Path and surfaces							\$33,540.00
5	Preparation, supply and installation of exposed aggregate concrete surface	m2	258	n/a	\$130.00	\$33,540.00	
Planting							\$49,745.00
6	"Playground trees Supply and plant advanced trees in accordance with tree planting detail"	item	23	300lt	\$1,000.00	\$23,000.00	
7	"Playground trees Supply and plant semi-advanced trees in accordance with tree planting detail"	item	17	100 lt	\$400.00	\$6,800.00	
8	Supply and install garden beds	m2	107	n/a	\$30.00	\$3,210.00	
9	Supply and establish grass to new levee bank	m2	1405	n/a	\$5.00	\$7,025.00	

10	Supply and establish grass any disturbed areas in stage 3 and 4 (area allowance only)	m2	1300	n/a	\$5.00	\$6,500.00	
11	Supply and install soft fall mulch to the base of large tree 75mm deep	m2	428	n/a	\$7.50	\$3,210.00	
Shade, shelters and structures							\$80,000.00
12	Supply and install of shelter (6x4m) including footings, feature panels and structural engineers computations	item	1	n/a	\$50,000.00	\$50,000.00	
13	Supply and install of shade sails	item	1	n/a	\$30,000.00	\$30,000.00	
Furniture							\$10,245.00
14	Supply picnic tables (long) (including delivery)	item	1	n/a	\$5,980.00	\$5,980.00	
15	Supply Roadside Litter & Recycling Receptacle (metal front/rear and timber sides) (including delivery)	item	1	n/a	\$1,645.00	\$1,645.00	
16	Supply bike hoops (including delivery)	item	4	n/a	\$405.00	\$1,620.00	
17	Install furniture	item	1	n/a	\$1,000.00	\$1,000.00	
Landscape features							\$13,525.00
18	Supply and install large rocks to seating area	item	43	n/a	\$175.00	\$7,525.00	
19	Supply and install mound to Flying fox area (70m2 to maximum height of 0.8m)	item	1	n/a	\$2,000.00	\$2,000.00	
20	Supply and install mound to future play junior play space (106m2 to a max height of 1.5m)	item	1	n/a	\$4,000.00	\$4,000.00	

DRAFT
to be updated with
BSC rates

Detailed Estimate of Project Costs - Collie Park Stage 1 and 2

Carefully planned and costed

No.	Item	Unit	Quantity	Plant size	Unit cost	Approximate total cost (excluding GST)	Subtotal
Play surfaces							\$97,705.00
21	Supply and install soft fall mulch to Australian Standards	m2	682	n/a	\$30.00	\$20,460.00	
22	Supply and install garden bed for trees in play space with soft fall mulch to Australian Standards	m2	147	n/a	\$15.00	\$2,205.00	
23	Supply and install inground concrete edge to softfall area	lm	96	n/a	\$70.00	\$6,720.00	
24	"Stage 1 & 2 Play Space Supply and install rubber surface to Australian Standards"	m2	176	n/a	\$200.00	\$35,200.00	
25	"Stage 1 & 2 Play Space Supply and install gravel sub base for rubber surface"	m2	176	n/a	\$70.00	\$12,320.00	
26	"Mound in future play space Supply and install rubber surface to Australian Standards"	m2	40	n/a	\$200.00	\$8,000.00	
27	"Mound in future play space Supply and install gravel sub base for rubber surface on mound in future play space"	m2	40	n/a	\$70.00	\$2,800.00	
26	Rubber surface installer costs, freight, travel and accommodation	item	1	n/a	\$6,000.00	\$6,000.00	
27	Supply and install drainage to playground surfaces	item	1	n/a	\$4,000.00	\$4,000.00	

Play elements (on rubber or organic softfall)							\$273,270.00
28	Supply and installation Mt Aspiration climbing structure with slide (S1351S Mt Ambition)	item	1	n/a	\$80,960.00	\$80,960.00	
29	Supply and installation Winchester Tower (S5599U Winchester Tower Play Unit)	item	1	n/a	\$96,470.00	\$96,470.00	
30	Supply and installation Flying fox (F2040N Flyway40 Double)	item	1	n/a	\$33,450.00	\$33,450.00	
31	Supply and installation swing set (S0408U Community Swing Frame – 2.5m Quad)	item	1	n/a	\$3,470.00	\$3,470.00	
32	Supply and installation single point swing set (motion-S0345G-Gyro 4.5m)	item	1	n/a	\$13,510.00	\$13,510.00	
33	Supply and installation of trampoline (motion-T2000S-Trampoline-Round)	item	4	n/a	\$11,240.00	\$44,960.00	
34	Underground establishment of services for installation of play equipment	item	1	n/a	\$450.00	\$450.00	
Lighting, security and irrigation							\$45,000.00
35	Lighting	item	1	n/a	\$10,000.00	\$10,000.00	
36	CCTV	item	1	n/a	\$5,000.00	\$5,000.00	
36	Irrigation system including controller and connection to supply, permits and authority liaison. Controller will need to be suitably sized to provide irrigation to future garden beds.	item	1	n/a	\$30,000.00	\$30,000.00	
						Subtotal	\$721,030.00
						Refer Schedule 1 for contingency	

Detailed Estimate of Project Costs - Collie Park Stage 3 and 4

Carefully planned and costed

Barooga Foreshore							
Opinion of Probable Cost							
Schedule 3 - Collie Park Stage 3 and 4							
Prepared by Liesl Malan Landscape Architects, PO Box 78 Harcourt, VIC 3453							
Date :24.04.2014							
No.	Item	Unit	Quantity	Plant size	Unit cost	Approximate total cost (excluding GST)	Subtotal
Preliminaries and earthworks							\$9,000.00
1	Preliminaries - setout, Public Liability Insurance, Safe Work Methods, Site Management Plan, Traffic Management Dial Before You Dig and OH&S	item	1	n/a	\$4,000.00	\$4,000.00	
2	Earthworks and Drainage - preparation, grading & site set-out, ensuring all areas are free draining stock pile top soil, weed control	item	1	n/a	\$5,000.00	\$5,000.00	
Fencing							\$14,600.00
3	Supply and install feature front fence	lm	10	n/a	\$500.00	\$5,000.00	
4	Supply and install feature rear fence	lm	48	n/a	\$200.00	\$9,600.00	
Path and surfaces							\$85,800.00
5	Preparation, supply and installation of exposed aggregate concrete surface	m2	715	n/a	\$120.00	\$85,800.00	
Planting							\$33,125.00
6	"Playground trees Supply and plant advanced trees in accordance with tree planting detail"	item	10	300lt	\$1,000.00	\$10,000.00	
7	"Playground trees Supply and plant semi-advanced trees in accordance with tree planting detail"	item	38	100 lt	\$400.00	\$15,200.00	
8	Supply and install garden beds	m2	212	n/a	\$30.00	\$6,360.00	
9	Supply and establish grass to disturbed areas	m2	313	n/a	\$5.00	\$1,565.00	

Shade, shelters and structures							\$335,000.00
10	Supply and install of shelter (18x10m) including footings, feature panels and structural engineers computations	item	1	n/a	\$100,000.00	\$100,000.00	
11	Supply and install of toilet block including sewer connection	item	1	n/a	\$200,000.00	\$200,000.00	
12	Supply and install of shade sails	item	1	n/a	\$35,000.00	\$35,000.00	
Furniture							
13	Supply and install BBQ with 2 plates including electrical connection	item	1	n/a	\$10,000.00	\$10,000.00	
14	Supply and install picnic tables (medium)	item	2	n/a	\$4,880.00	\$9,760.00	
15	Supply and install picnic tables (long)	item	2	n/a	\$5,980.00	\$11,960.00	
16	Supply and install Roadside Litter & Recycling Receptacle (metal front/rear and timber sides)	item	2	n/a	\$1,645.00	\$3,290.00	
17	Install furniture	item	1	n/a	\$1,000.00	\$1,000.00	
18	Supply and install concrete seating walls	lm	47	n/a	\$400.00	\$18,800.00	
Landscape features							\$7,350.00
19	Supply and install rocks	lm	42	n/a	\$175.00	\$7,350.00	
Play elements - water							\$126,490.00
20	Supply and installation splash park (mains to drains style)	item	1	n/a	\$100,000.00	\$100,000.00	
21	Supply water pump	item	1	n/a	\$3,720.00	\$3,720.00	
22	Installation of water pump connect to mains and drainage system	item	1	n/a	\$3,000.00	\$3,000.00	
23	Supply and installation of wet dry creek concrete with in-situ rocks	lm	45	n/a	\$300.00	\$13,500.00	
24	Bridge to island	item	1	n/a	\$3,000.00	\$3,000.00	
25	Supply and install compacted granitic sand to island	lm	109	n/a	\$30.00	\$3,270.00	

Detailed Estimate of Project Costs - Collie Park Stage 3 and 4 - cont'

Carefully planned and costed

No.	Item	Unit	Quantity	Plant size	Unit cost	Approximate total cost (excluding GST)	Subtotal
Play elements - story time garden							\$25,440.00
26	Supply and install garden beds in story time garden	m2	124	n/a	\$30.00	\$3,720.00	
27	Supply and install inground concrete edge to story time garden bed	lm	119	n/a	\$70.00	\$8,330.00	
28	Supply and install compacted granitic sand to story time garden path	m2	113	n/a	\$30.00	\$3,390.00	
29	D&C story time sculptures	item	1	n/a	\$10,000.00	\$10,000.00	
Play elements - sand							\$7,480.00
30	Supply and installation sand digger	item	1	n/a	\$3,380.00	\$3,380.00	
31	Supply and installation sand digger (wheel chair access)	item	1	n/a	\$4,100.00	\$4,100.00	
Play surfaces							\$8,950.00
32	Supply and install sand soft fall mulch to Australian Standards	m2	103	n/a	\$30.00	\$3,090.00	
33	Supply and install garden bed for trees in play space with soft fall mulch to Australian Standards	m2	62	n/a	\$30.00	\$1,860.00	
34	Supply and install drainage to playground surfaces	item	1	n/a	\$4,000.00	\$4,000.00	
Play elements (on rubber of organic softfall)							\$12,840.00
35	Supply and installation cubby house	item	1	n/a	\$8,870.00	\$8,870.00	
36	Supply and installation 1.5 m high mound slide	item	1	n/a	\$3,470.00	\$3,470.00	
37	Supply and installation log steppes to cubby	item	1	n/a	\$500.00	\$500.00	

Lighting, security and irrigation							\$40,000.00
38	Lighting	item	1	n/a	\$5,000.00	\$5,000.00	
39	CCTV	item	1	n/a	\$5,000.00	\$5,000.00	
40	Irrigation system including controller and connection to supply, permits and authority liaison. Controller will need to be suitably sized to provide irrigation to future garden beds	item	1	n/a	\$10,000.00	\$10,000.00	
41	Irrigation system connecting reclaimed water from playspace to irrigate lawn, including tanks and grass irrigation system	item	1	n/a	\$20,000.00	\$20,000.00	
						Subtotal	\$760,885.00
						Refer Schedule 1 for contingency	

Detailed Estimate of Project Costs - Collie Park other areas

Carefully planned and costed

Barooga Foreshore							
Opinion of Probable Cost							
Schedule 3 - Collie Park other areas							
Prepared by Liesl Malan Landscape Architects, PO Box 78 Harcourt, VIC 3453							
Date :24.04.2014							
No.	Item	Unit	Quantity	Plant size	Unit cost	Approximate total cost (excluding GST)	Subtotal
Preliminaries and earthworks							\$ 10,000.00
1	Preliminaries - setout, Public Liability Insurance, Safe Work Methods, Site Management Plan, Traffic Management Dial Before You Dig and OH&S	item	1	n/a	\$8,000.00	\$8,000.00	
2	Earthworks and Drainage - preparation, grading & site set-out, ensuring all areas are free draining stock pile top soil, weed control	item	1	n/a	\$2,000.00	\$2,000.00	
Kerb works							\$49,470.00
3	Supply an install new kerb edge	lm	77	n/a	\$110.00	\$8,470.00	
4	Demolition of road surface and creation of healthy growing environment for trees	item	1	n/a	\$40,000.00	\$40,000.00	
5	Line marking for parking provision	item	1	n/a	\$9,000.00	\$9,000.00	
Path and surfaces							\$85,800.00
6	Supply and install concrete shared path	m2	446	n/a	\$100.00	\$44,600.00	
7	Library Forecourt - preparation, supply and installation of exposed aggregate concrete surface (coloured)	m2	272	n/a	\$150.00	\$40,800.00	

Planting							\$9,975.00
8	"Street trees Supply and plant semi-advanced trees in accordance with tree planting detail"	item	11	250lt	\$400.00	\$4,400.00	
9	"Forecourt trees Supply and plant advanced trees in accordance with tree planting detail"	item	7	250lt	\$400.00	\$2,800.00	
10	Supply and install garden beds	m2	55	n/a	\$30.00	\$1,650.00	
11	Supply and establish grass to disturbed areas	m2	225	n/a	\$5.00	\$1,125.00	
Furniture							
12	Supply and install Roadside Litter & Recycling Receptacle (metal front/rear and timber sides) with insert Picnic Point	item	1	n/a	\$1,645.00	\$1,645.00	
13	Supply and install benches (standard)	item	3	n/a	\$1,200.00	\$3,600.00	
14	Supply bike hoops (including delivery)	item	5	n/a	\$405.00	\$2,025.00	
Lighting, security and irrigation							\$40,000.00
38	Lighting	item	1	n/a	\$5,000.00	\$5,000.00	
						Subtotal	\$182,115.00
						Refer Schedule 1 for contingency	

Detailed Estimate of Project Costs - Swing Bridge

Carefully planned and costed

Barooga Foreshore							
Opinion of Probable Cost							
Schedule 3 - Swing Bridge							
Prepared by Liesl Malan Landscape Architects, PO Box 78 Harcourt, VIC 3453							
Date :24.04.2014							
No.	Item	Unit	Quantity	Plant size	Unit cost	Approximate total cost (excluding GST)	Subtotal
Preliminaries and earthworks							\$16,000.00
1	Preliminaries - Setout, Public Liability Insurance, Safe Work Methods, Site Management Plan, Traffic Management Dial Before You Dig and OH&S	item	1	n/a		\$2,000.00	
2	Demolition including existing shelter and playground	item	1	n/a	\$10,000.00	\$10,000.00	
3	Earthworks and Drainage - preparation, grading & site set-out, ensuring all areas are free draining stock pile top soil, weed control	item	1	n/a	\$4,000.00	\$4,000.00	
Kerb works							\$24,780.00
4	Supply an install new kerb edge	lm	184	n/a	\$110.00	\$20,240.00	
5	Supply and install road surface to carparking areas	m2	354	n/a	\$10.00	\$3,540.00	
6	Line marking for parking provision	item	1	n/a	\$1,000.00	\$1,000.00	
Fencing, retaining walls and refurbishment of bridge							\$172,700.00
7	Supply and install removable bollards	item	1	n/a	\$100.00	\$100.00	
8	Supply and install post and chain fence	lm	181	n/a	\$300.00	\$54,300.00	
9	Supply and install retaining wall	lm	61	n/a	\$300.00	\$18,300.00	
10	Refurbishment of exiting swing bridge including painting and new decking materials	item	1	n/a	\$100,000.00	\$100,000.00	

Path							\$21,180.00
11	Supply and install asphalt shared path	m2	426	n/a	\$30.00	\$12,780.00	
12	Supply and install concrete path	m2	70	n/a	\$120.00	\$8,400.00	
Planting							\$19,300.00
13	"Street trees Supply and plant semi-advanced trees in accordance with tree planting detail"	item	11	250lt	\$400.00	\$4,400.00	
14	Supply and plant semi-advanced trees in accordance with tree planting detail	item	6	250lt	\$400.00	\$2,400.00	
15	Supply and establish grass to disturbed areas	m2	2500	n/a	\$5.00	\$12,500.00	
Furniture and features							\$68,405.00
16	Supply and install of shelter including footings, feature panels and structural engineers computations	item	1	n/a	\$50,000.00	\$50,000.00	
17	Supply and install BBQ with 2 plates including electrical connection	item	1	n/a	\$10,000.00	\$10,000.00	
18	Supply and install picnic tables (standard)	item	2	n/a	\$3,380.00	\$6,760.00	
19	Supply and install Roadside Litter & Recycling Receptacle (metal front/ rear and timber sides)	item	1	n/a	\$1,645.00	\$1,645.00	
Wayfinding and interpretation							\$10,000.00
20	Design, print and installation of signage	item	1	n/a	\$10,000.00	\$10,000.00	
						Subtotal	\$332,365.00
						Refer Schedule 1 for contingency	



Foreshore & Adventure Play Trail Barooga

Sheet: Lions Club Reserve

Scale: 1:1000 @ A3 | Designed by: CR | March 2018

Revision: Draft | Drawn by: CR | March 2018

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Foreshore & Adventure Play Trail Barooga

Sheet: Collie Park
Scale: 1:600 @ A3 | Designed by: CR March 2018
Revision: Draft | Drawn by: CR March 2018

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Sheet: Lawson Drive Park Land / Swing bridge
Scale: 1:600 @ A3 | Designed by: CR March 2018
Revision: Draft | Drawn by: CR March 2018

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Play Precedents - Ian Potter Children's Gardens in Melbourne and Sydney

- Play at the entry
- Nature inspired
- Natural materials
- Small scale water play
- Climbing
- Children's literature connection



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Berrigan Shire Council



Foreshore & Adventure Play Trail Barooga

Sheet:			
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Revision:	Draft	Drawn by: CR	March 2018

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Site Photos - Lions Park



Liesl Malan Landscape Architects

Site Photos - Collie Park

Barooga Foreshore Adventure Play Trail



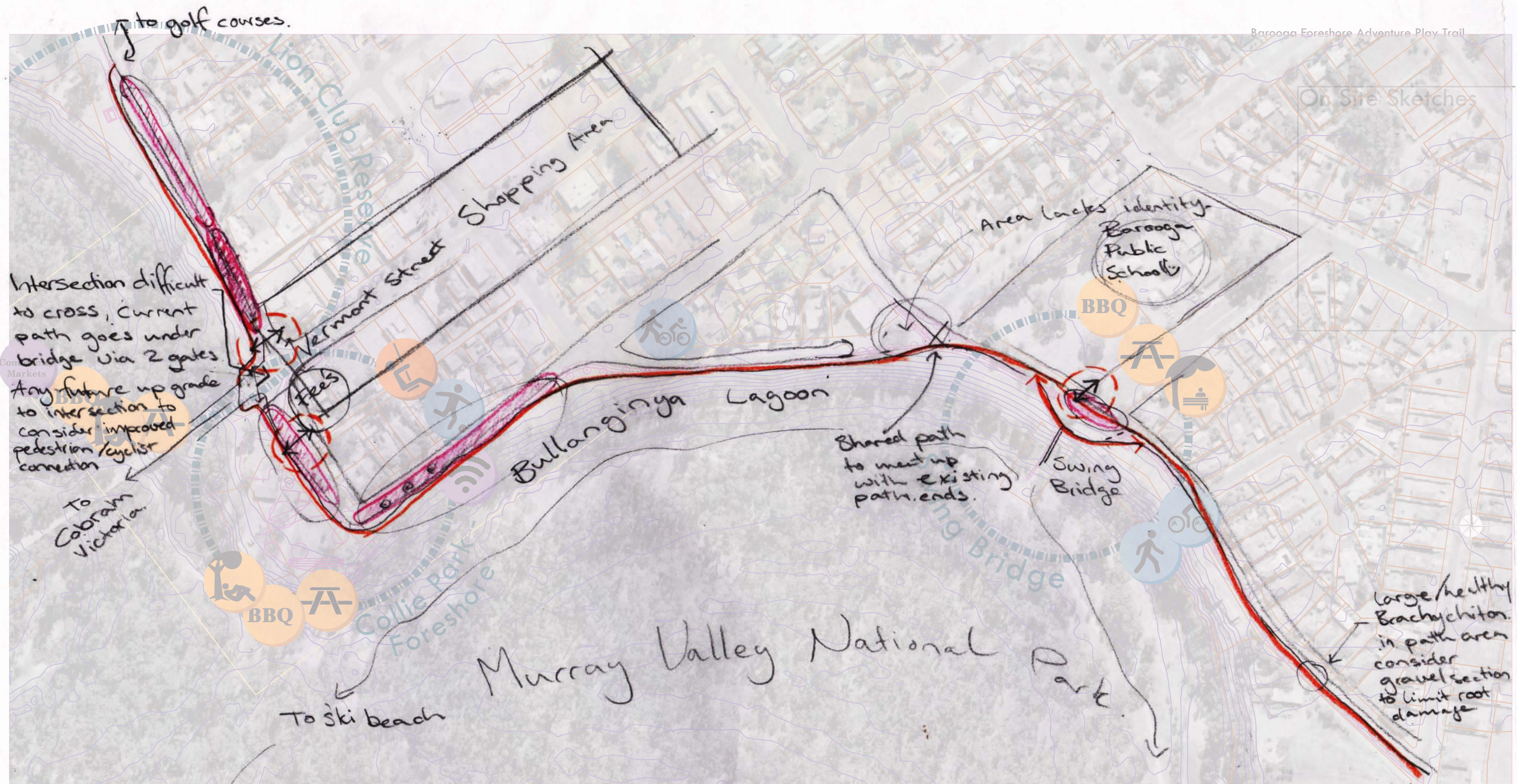
Berrigan Shire Council

Site Photos - Swing Bridge ParK



Site Photos - Foreshore

On Site Sketches

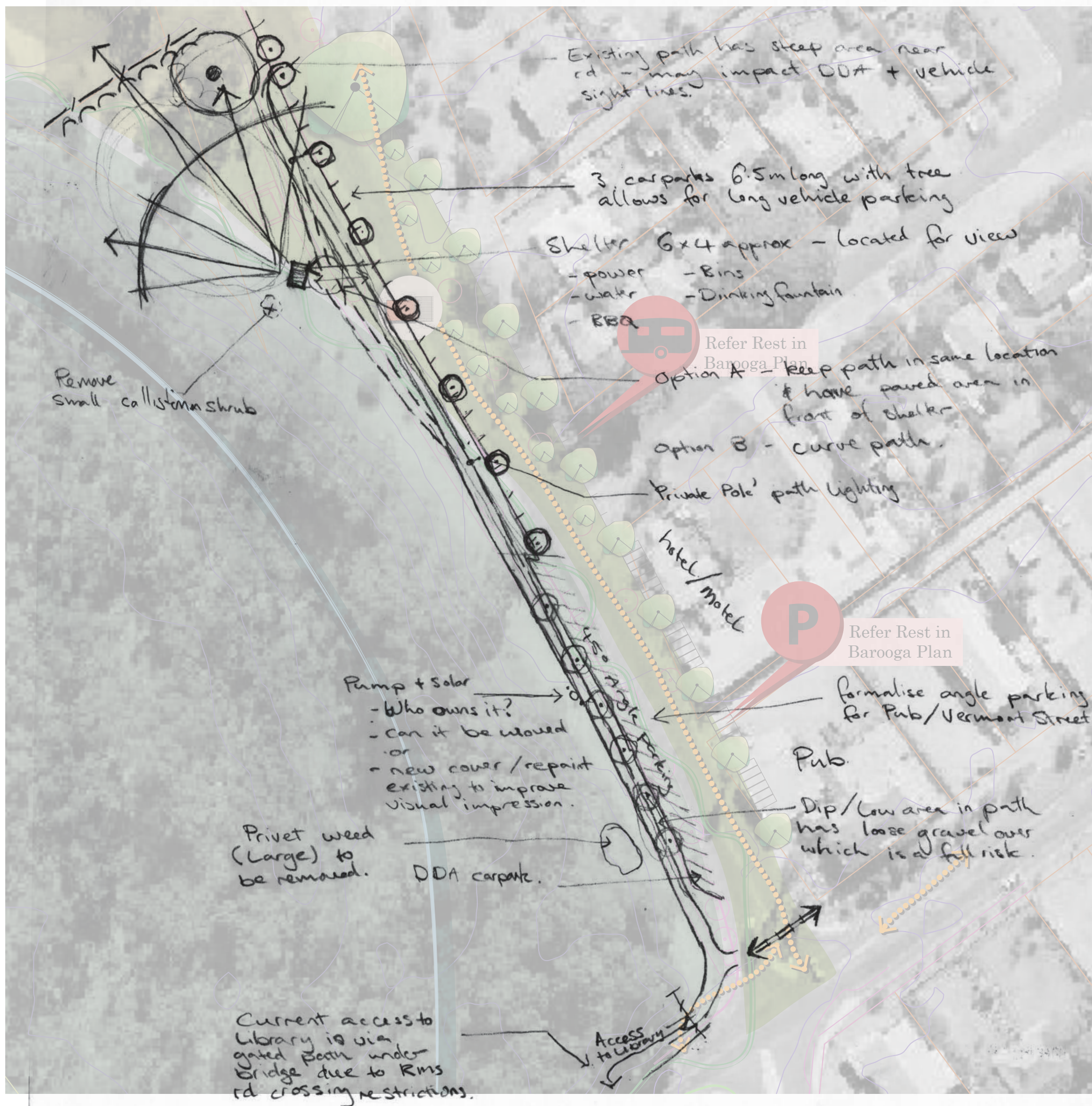


Sheet: Foreshore plan - onsite sketch design
 Scale: 1:3000 @ A3 | Designed by: CR March 2018
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Foreshore & Adventure Play Trail Barooga

Sheet: Lions Club Reserve - onsite sketch design

Scale: 1:1000 @ A3 | Designed by: CR | March 2018

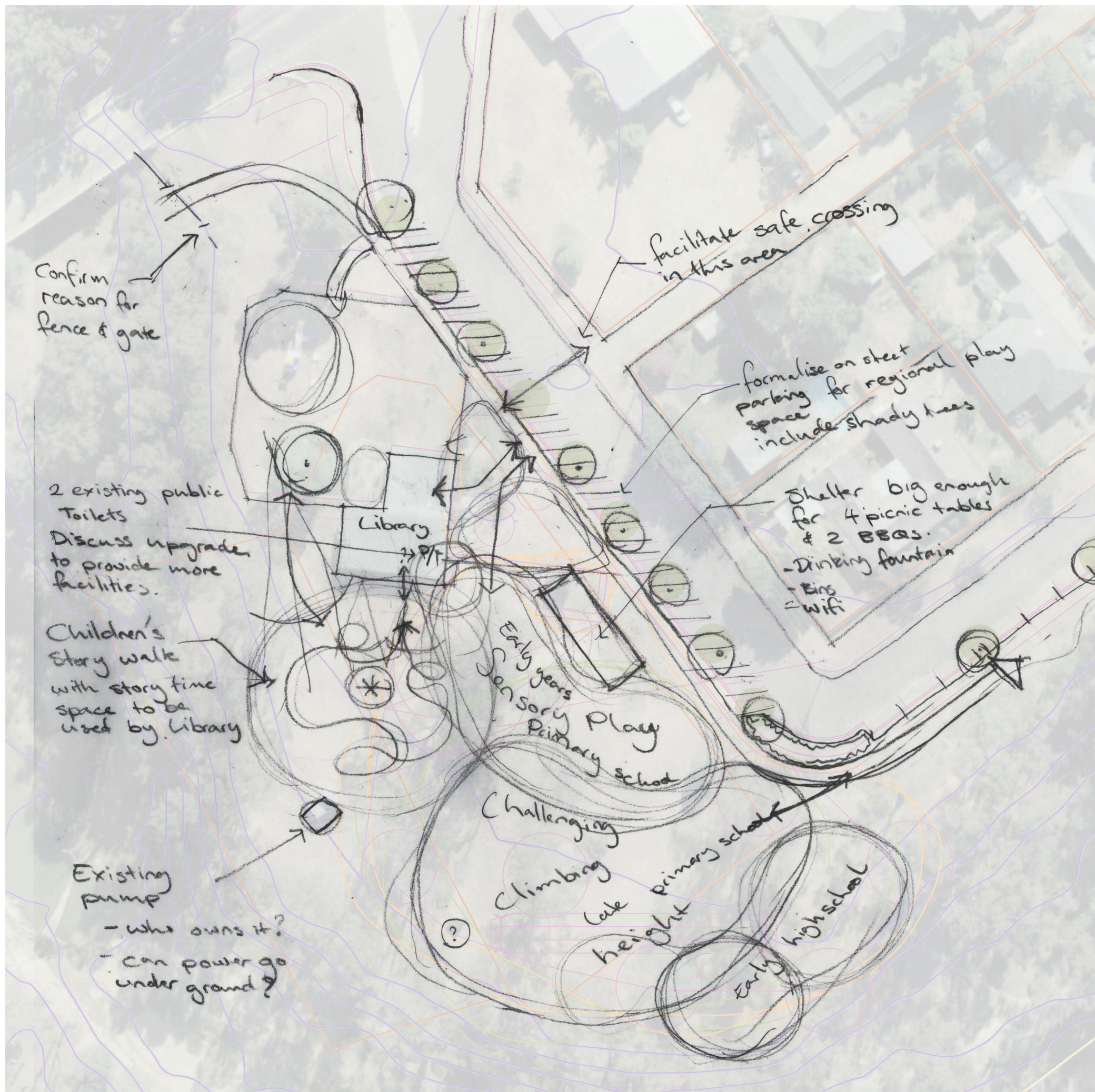
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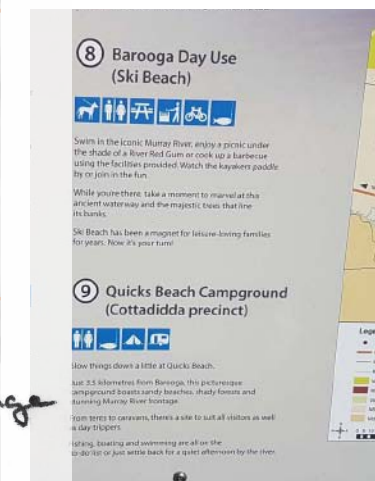
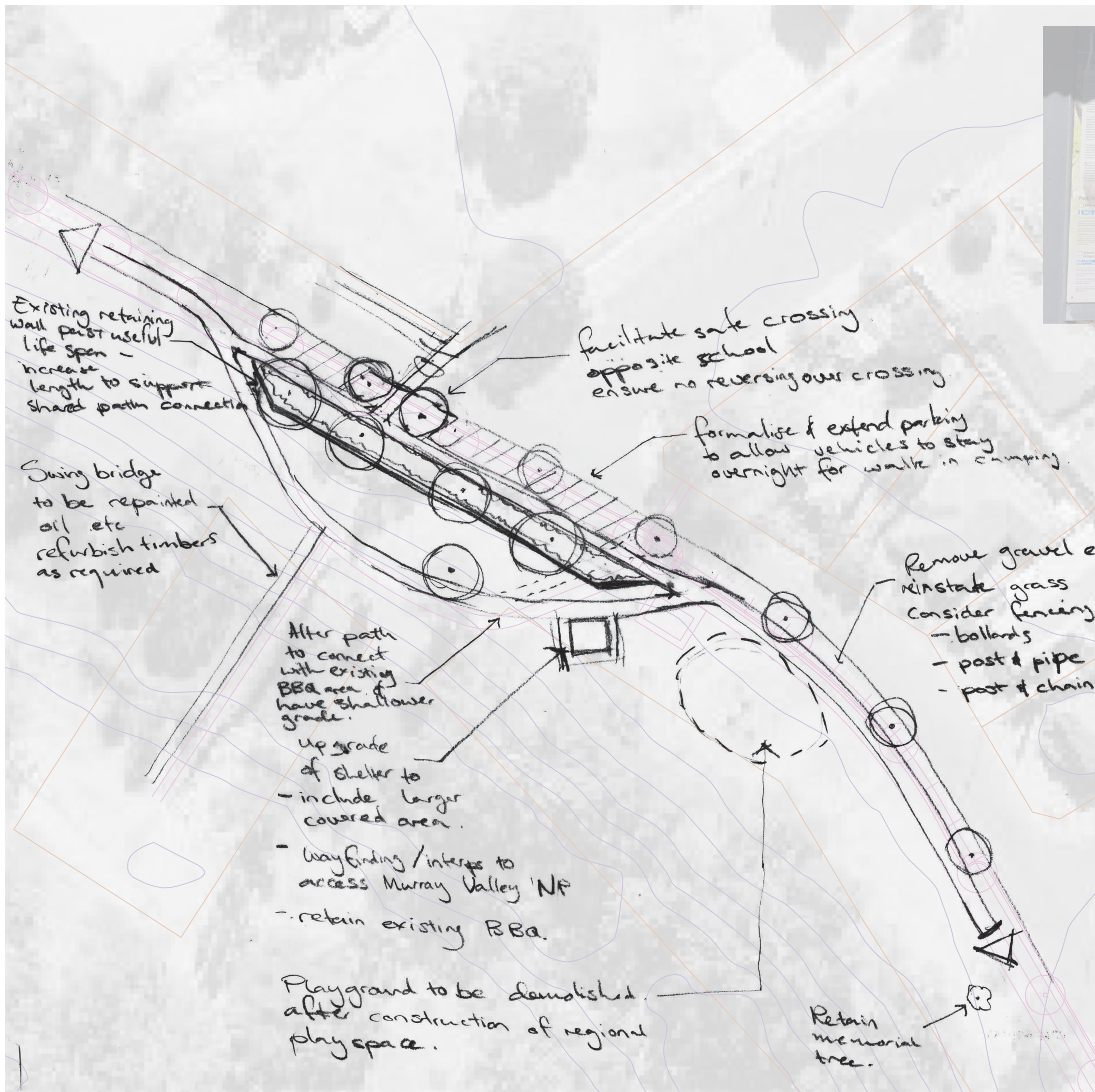


Foreshore & Adventure Play Trail Barooga

Sheet: Collie Park - onsite sketch design
 Scale: 1:600 @ A3 | Designed by: CR March 2018
 Revision: Draft | Drawn by: CR March 2018

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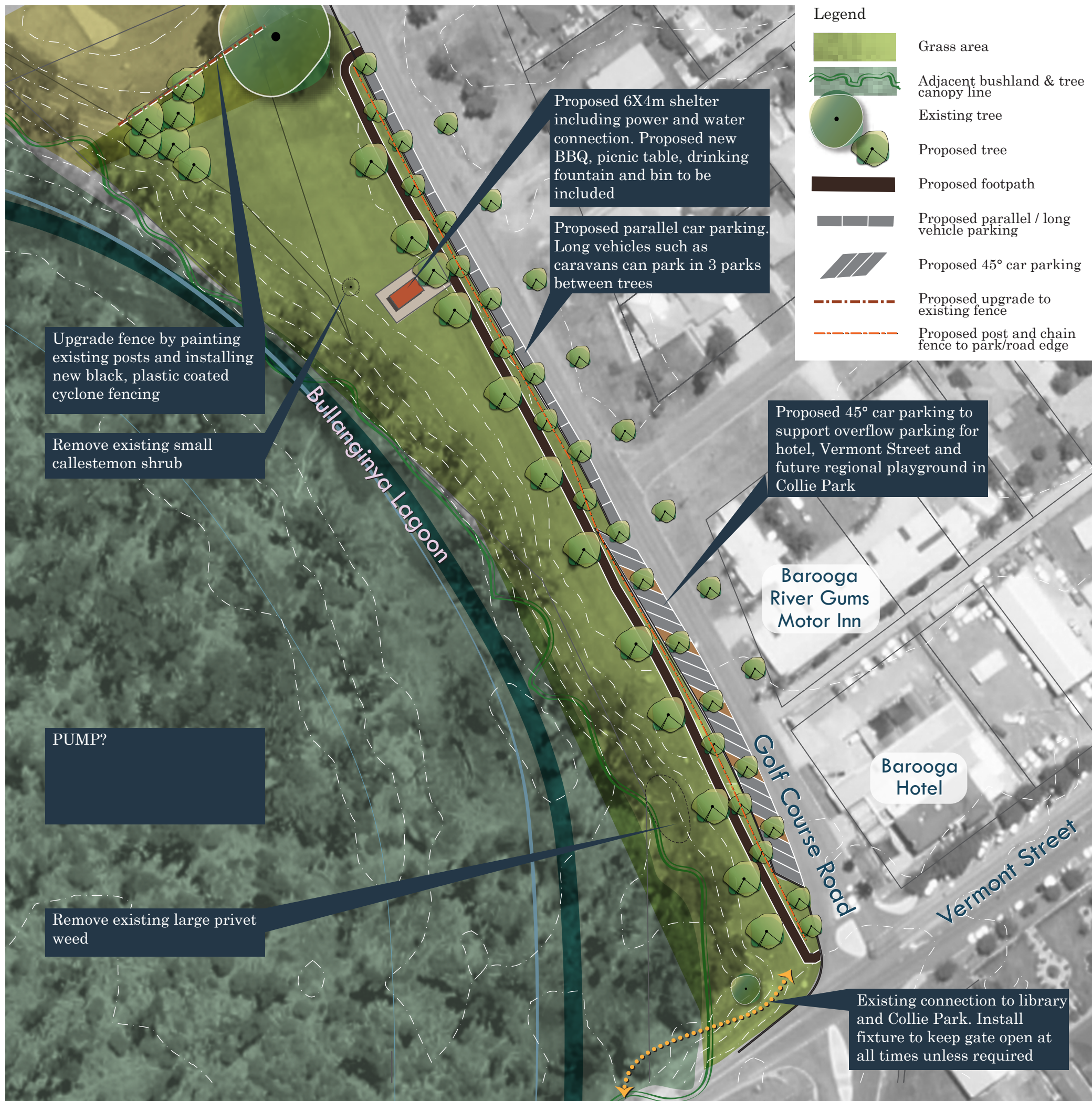




Sheet: Lawson Drive Park Land / Swing bridge
Onsite sketch design
Scale: 1:600 @ A3 | Designed by: CR March 2018
Revision: Draft | Drawn by: CR March 2018

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- Legend
- Grass area
 - Adjacent bushland & tree canopy line
 - Existing tree
 - Proposed tree
 - Proposed footpath
 - Proposed parallel / long vehicle parking
 - Proposed 45° car parking
 - Proposed upgrade to existing fence
 - Proposed post and chain fence to park/road edge

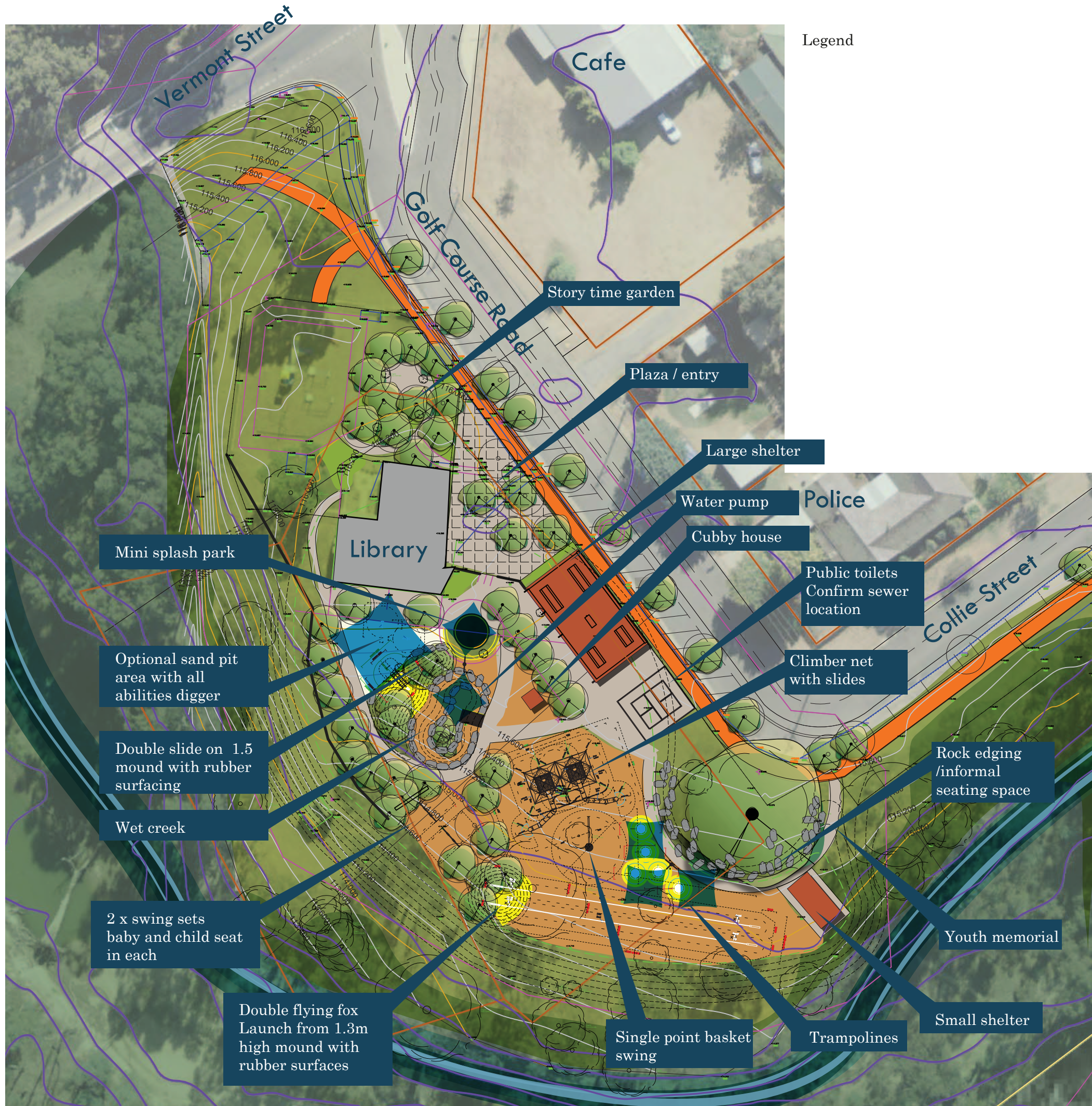
To be done
notes, colouring, legend

DRAFT



Sheet: Lions Club Reserve - concept plan

Scale: 1:1000 | Designed by: CR | March 2018
Revision: Draft | Drawn by: CR & GC | April 2018

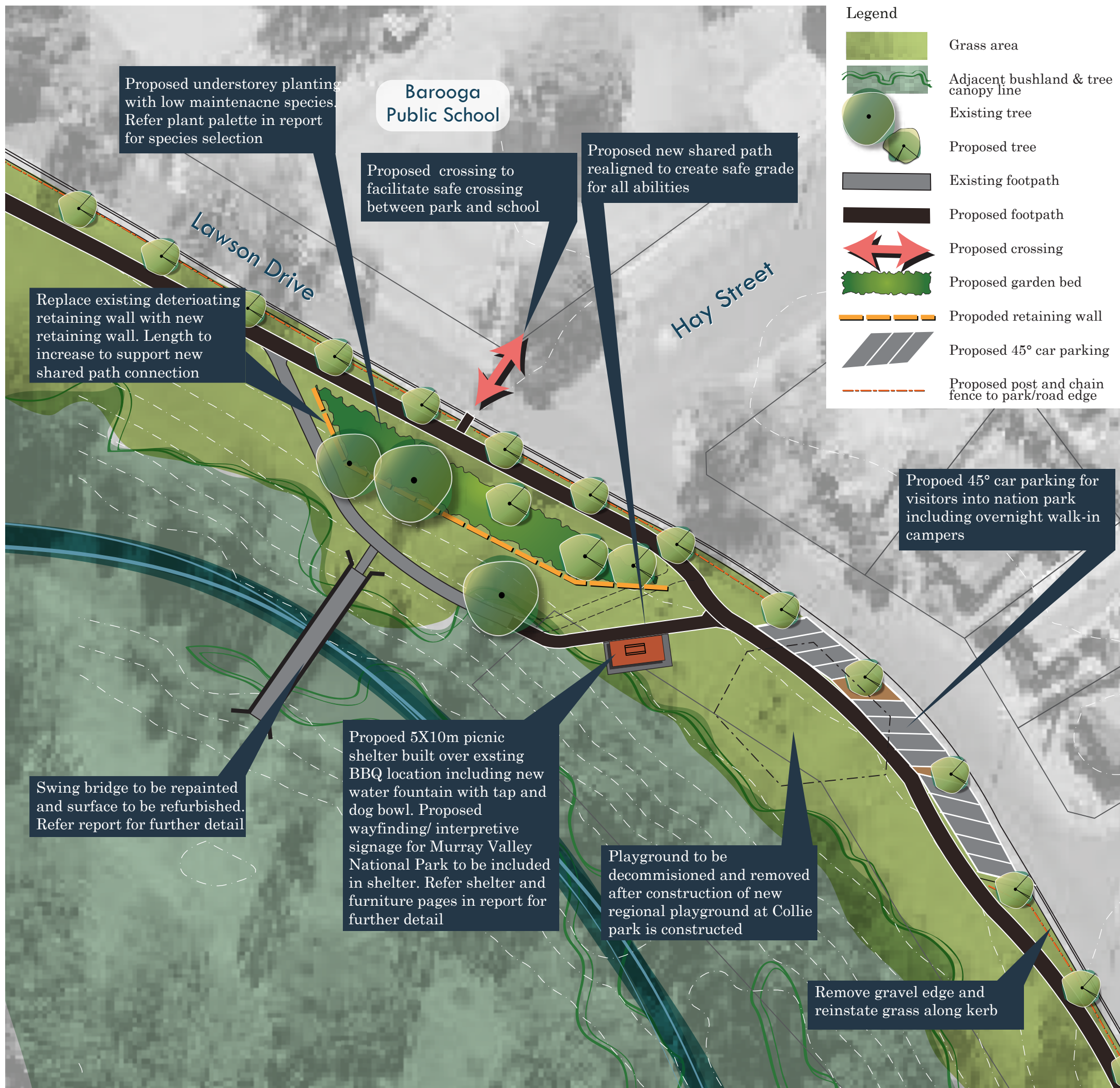


To be done
notes, colouring, legend

DRAFT



**Foreshore & Adventure Play Trail
Barooga**



Legend

- Grass area
- Adjacent bushland & tree canopy line
- Existing tree
- Proposed tree
- Existing footpath
- Proposed footpath
- Proposed crossing
- Proposed garden bed
- Proposed retaining wall
- Proposed 45° car parking
- Proposed post and chain fence to park/road edge

To be done notes, legend

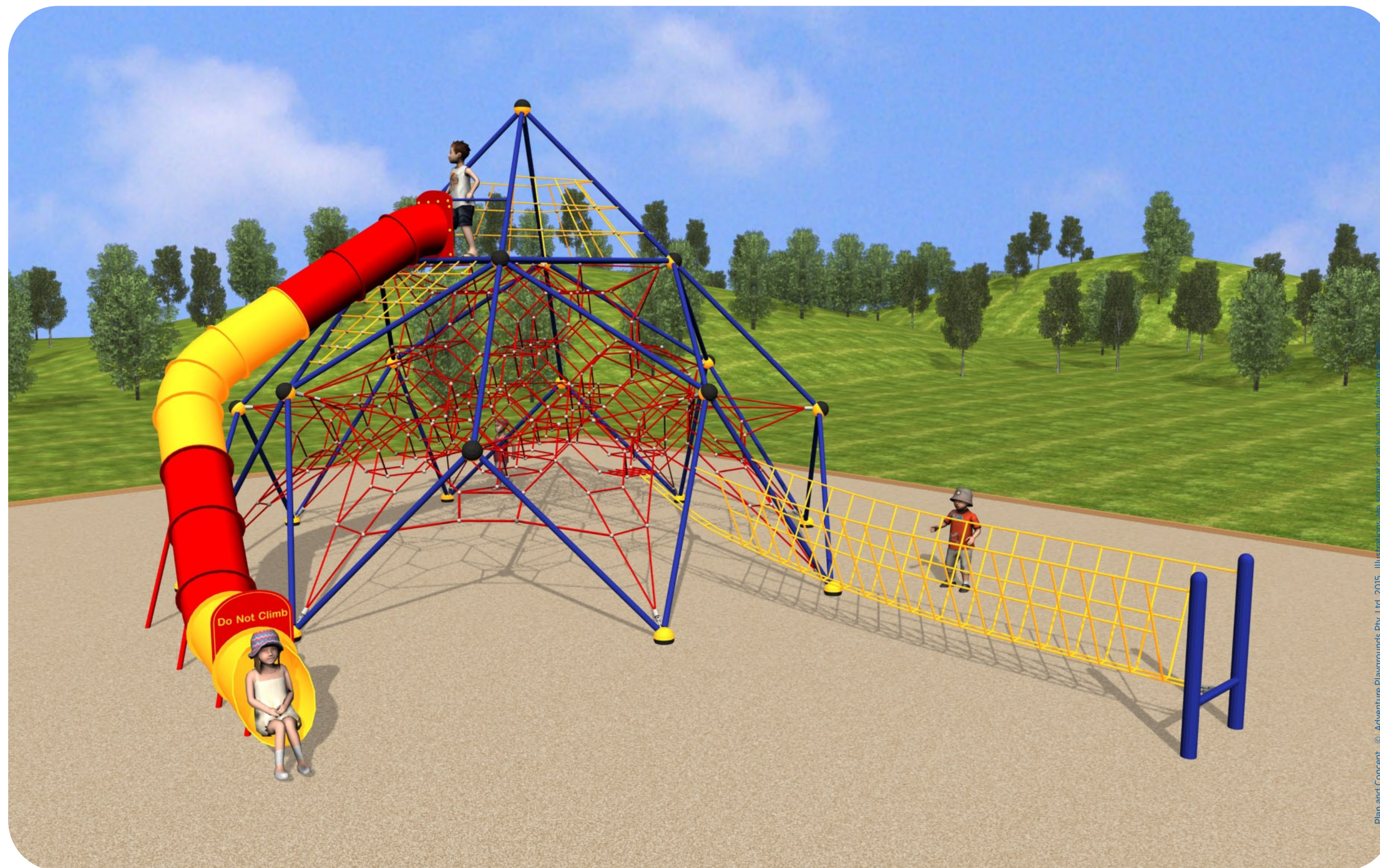


LM-LA



Sheet: Lions Club Reserve - concept plan

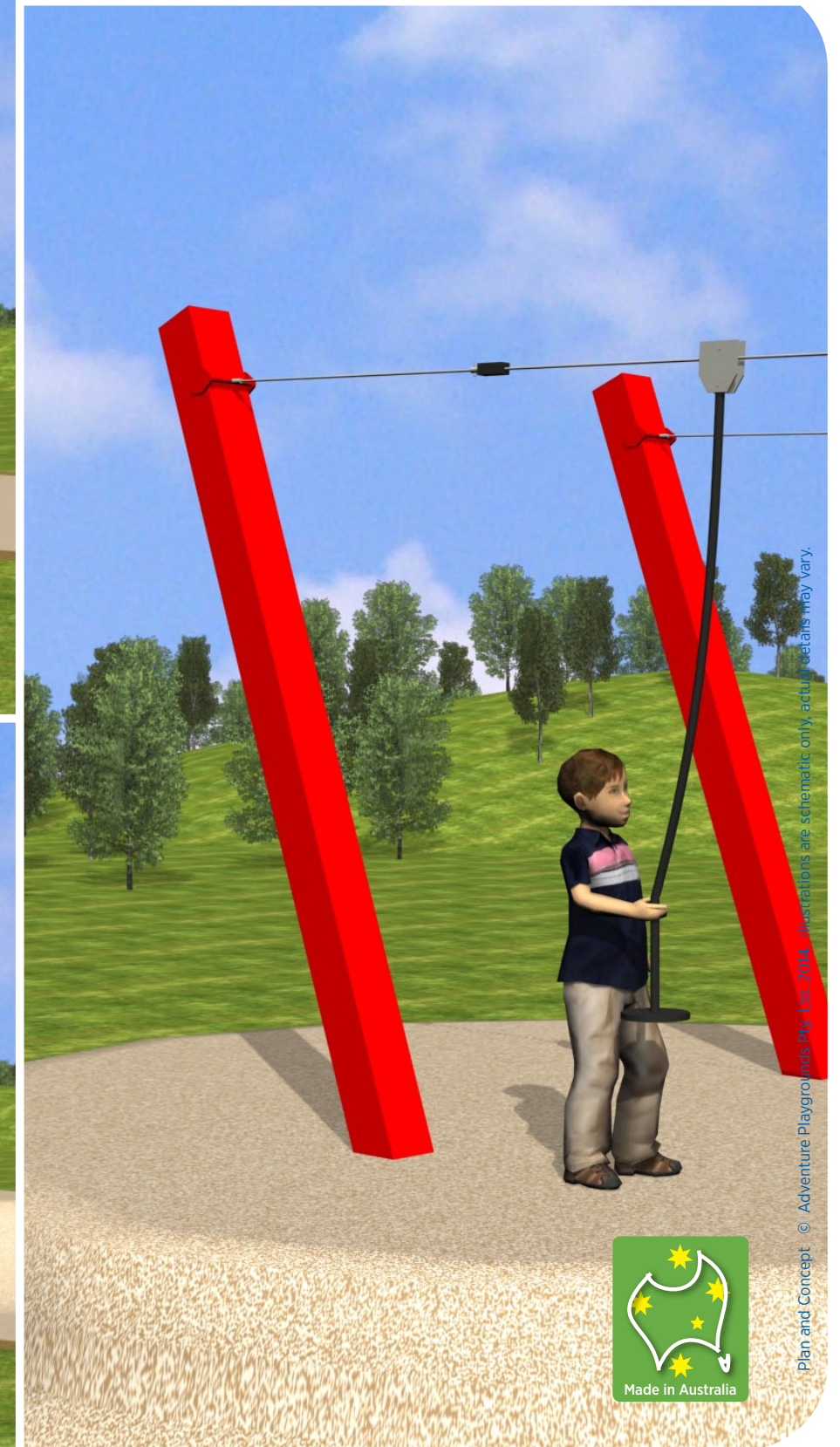
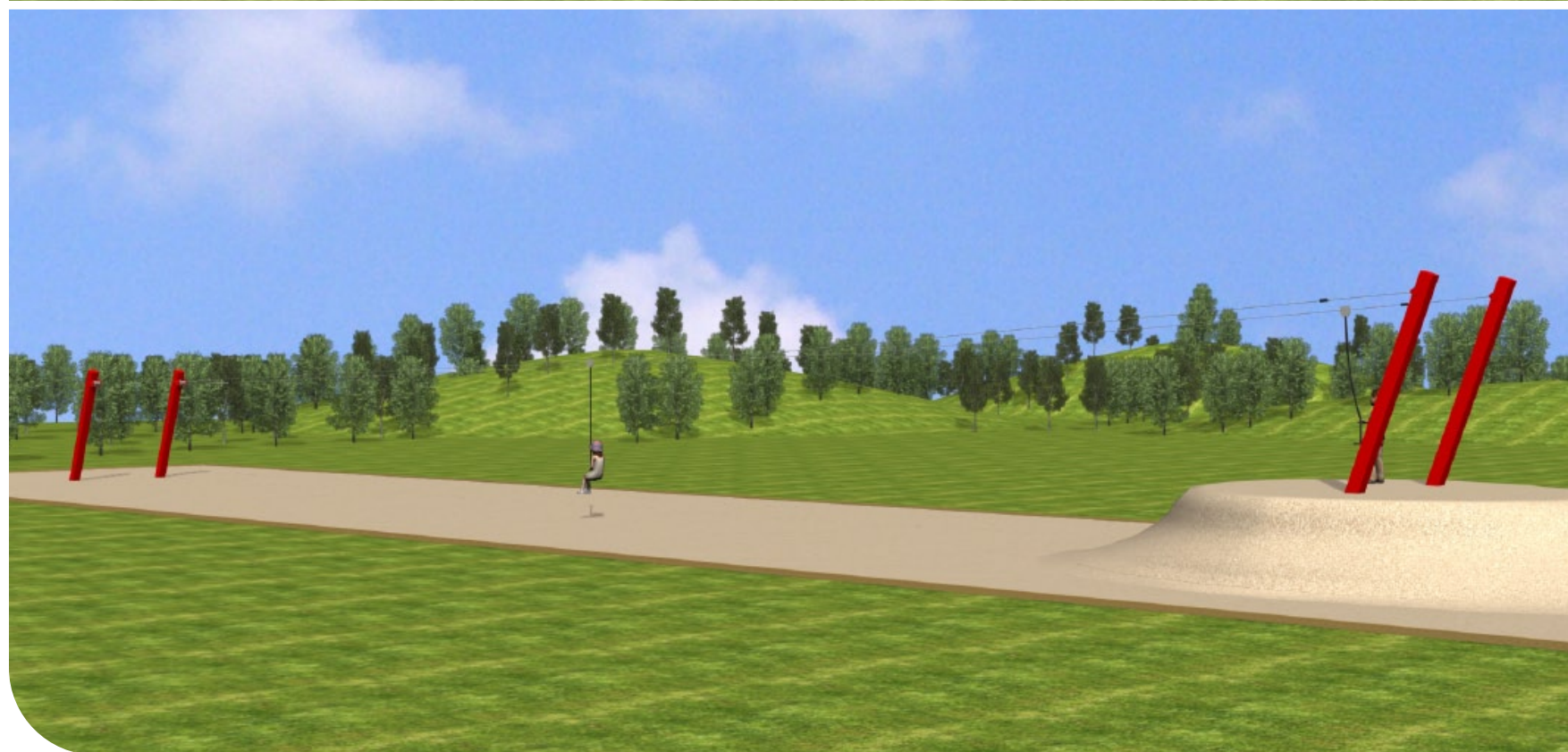
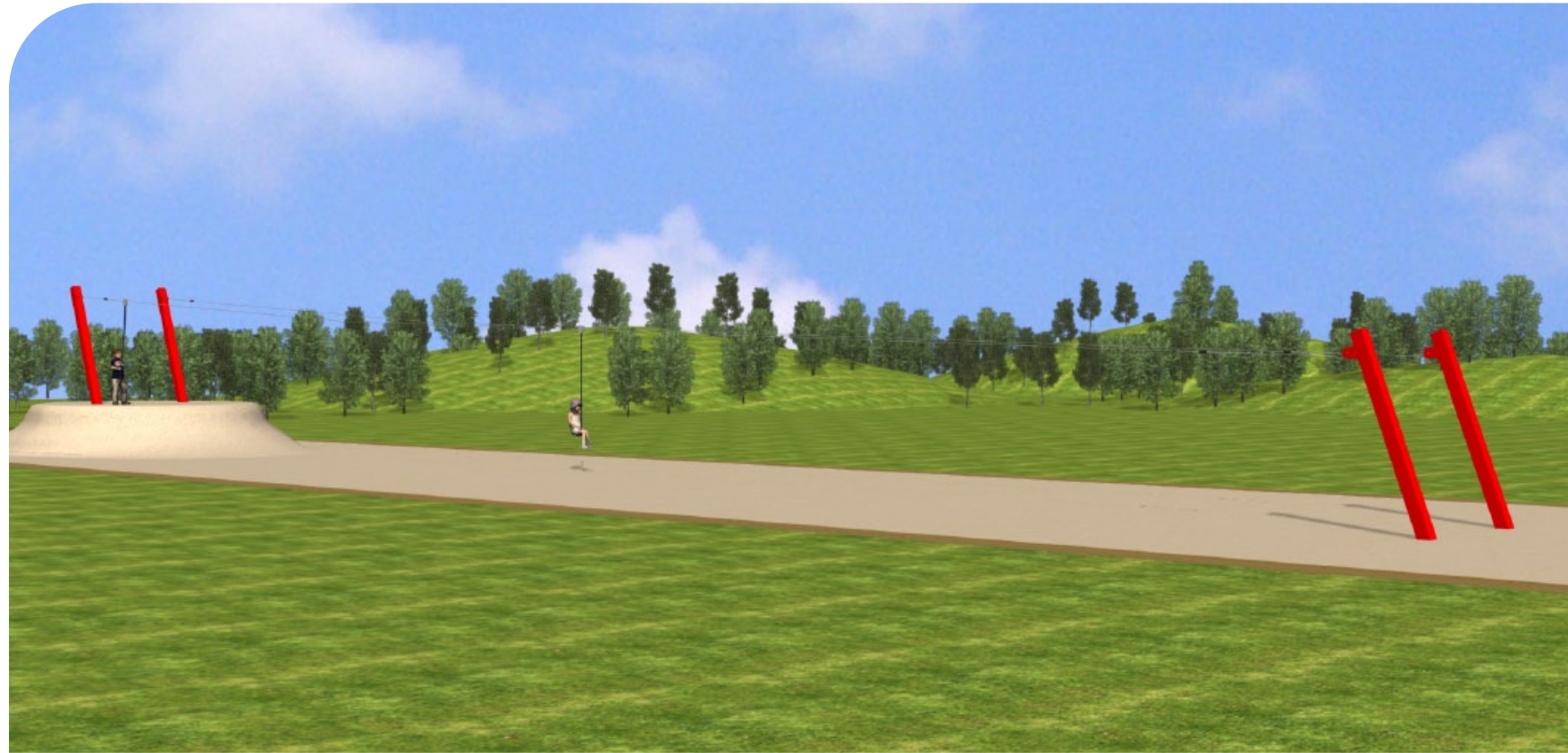
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Revision: Draft | Drawn by: CR & GC | April 2018

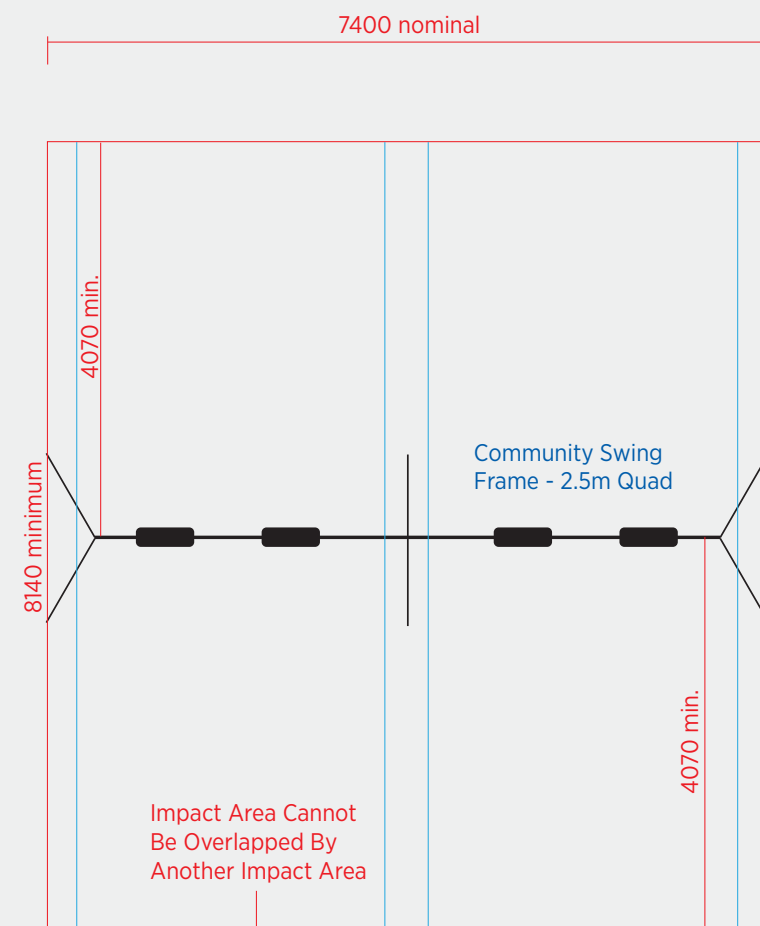


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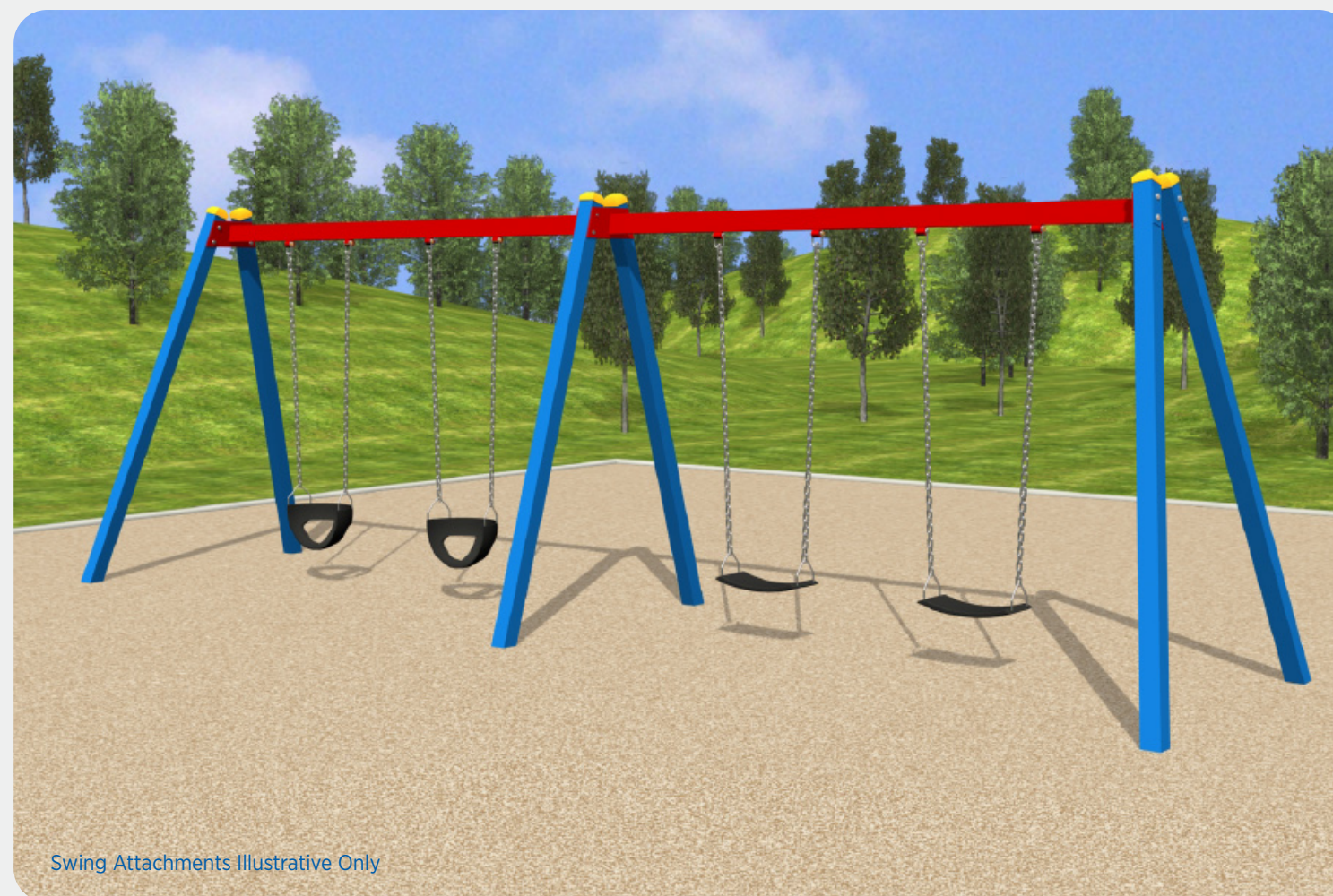
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- Provide undersurfacing in accordance with AS/NZS 4422:1996. Mulch undersurfacing should be 200mm minimum compacted depth.

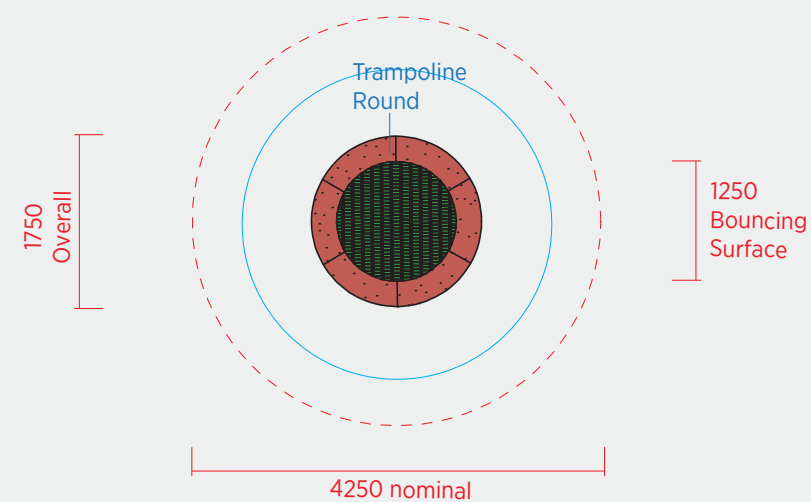
- Plans and illustrations are schematic only, actual details may vary. Do not scale for dimensions. Allow 5% minimum additional clearance for site variations.

- Falling Space:

Minimum impact area as per AS4685-2014	Required free space as per AS4685-2014
Victorian Dept. of Education minimum	Recommended clearance area



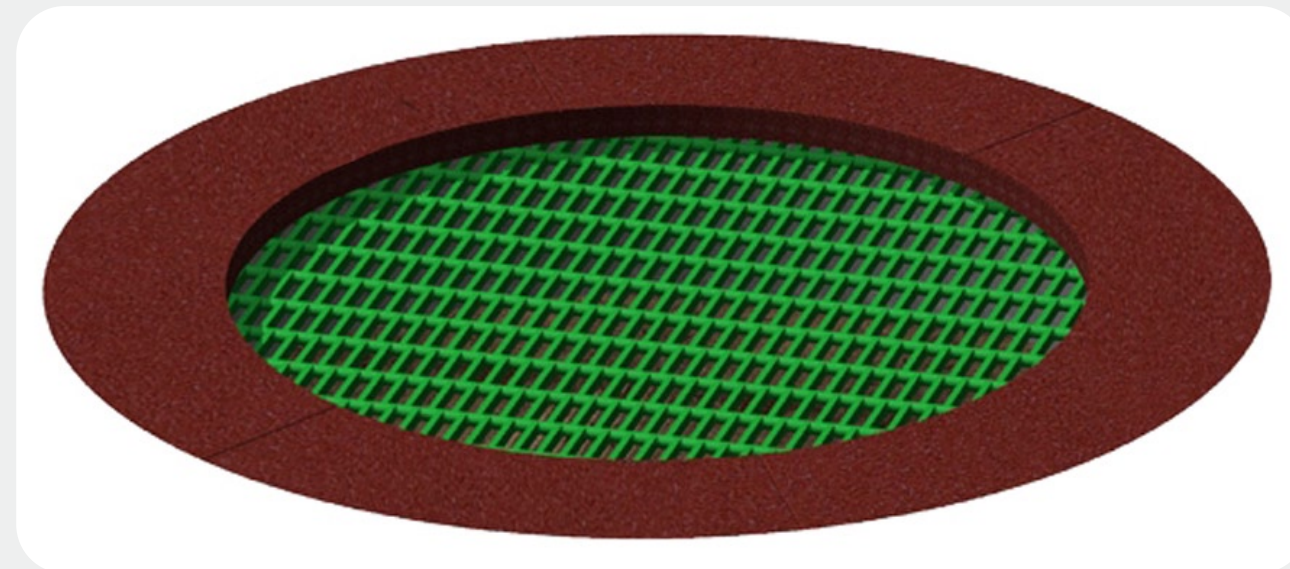
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SCALE
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Victorian Dept. of Education minimum	Recommended clearance area



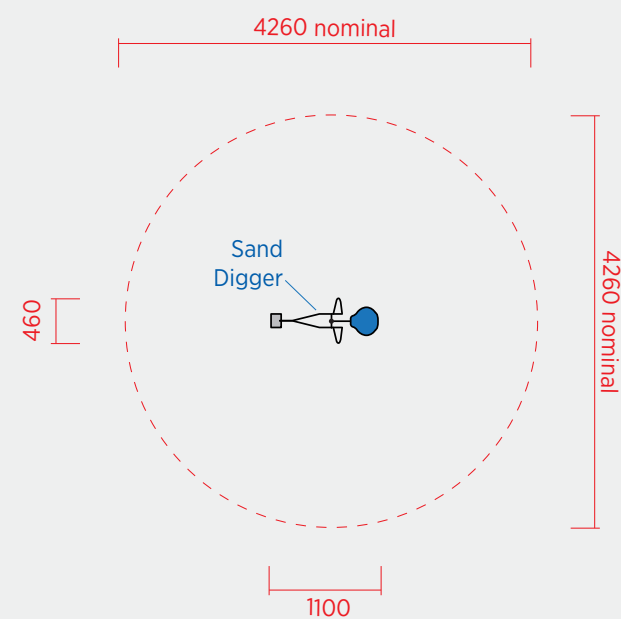
NOTES:

It is recommended that the trampoline has a 1500mm clearance zone from the edge of the bouncing surface as shown, and that some form of impact attenuation be provided within this zone.

The trampoline requires 1000mm of free space from the edge of the bouncing surface and the fall zones of other equipment must not overlap this space.

A layer of suitable drainage material must be provided underneath the trampoline and agricultural drainage may also be required, depending on the soil type at the proposed site.

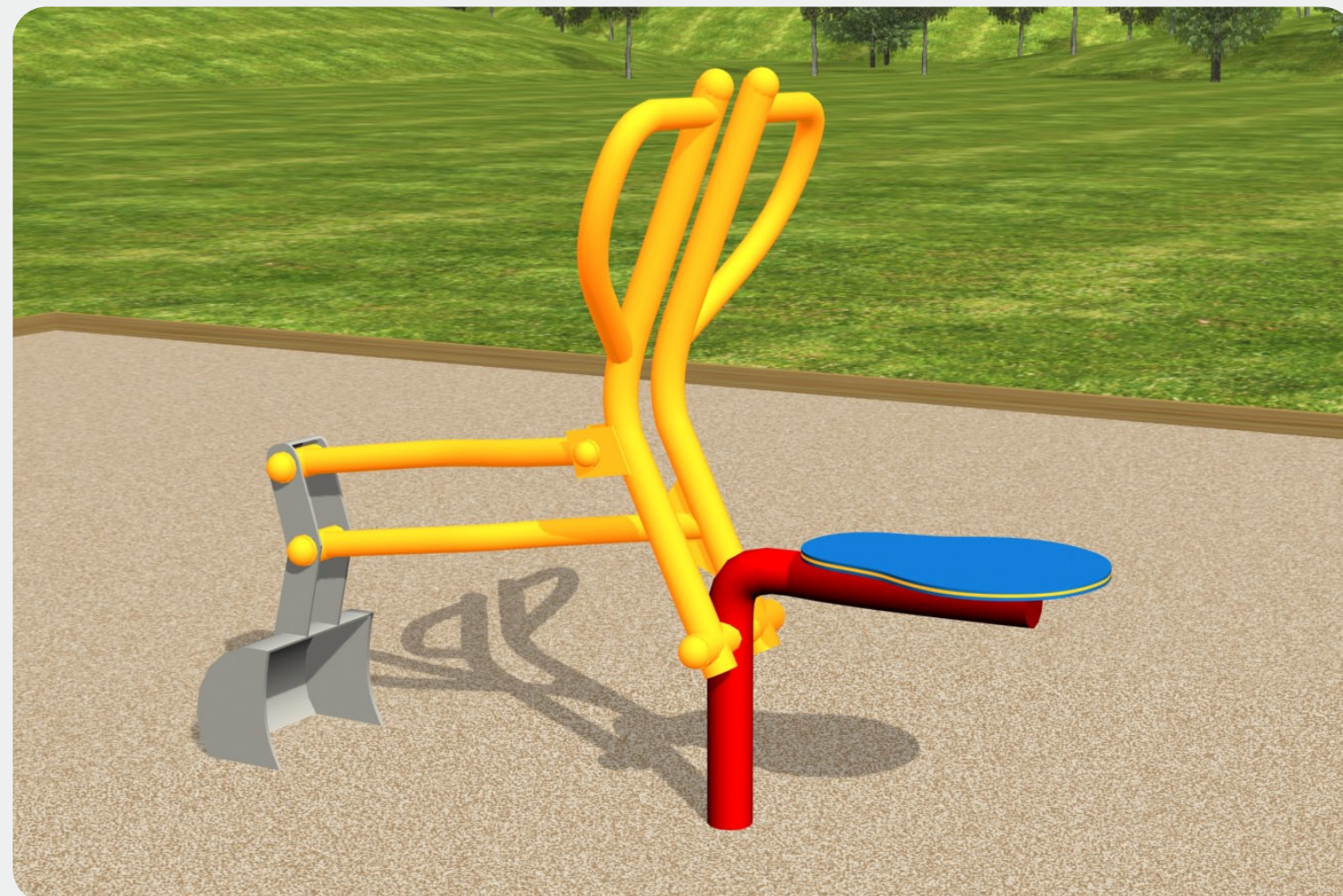
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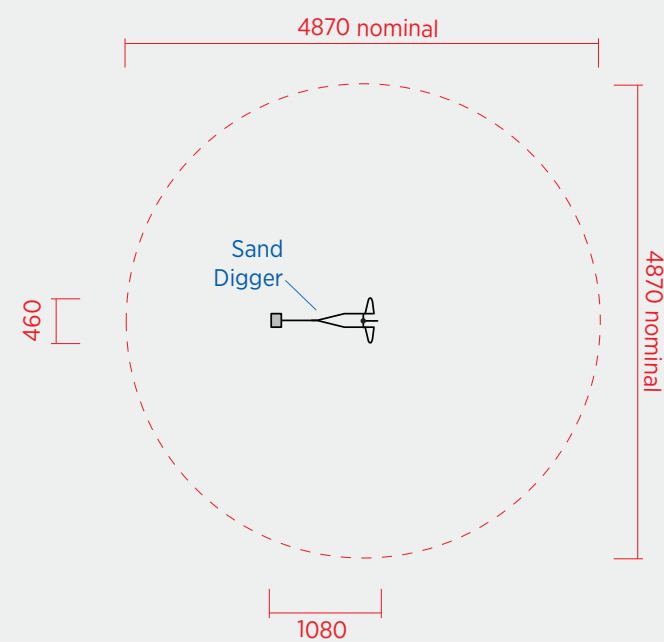
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Minimum impact area as per AS4685-2014	Required free space as per AS4685-2014
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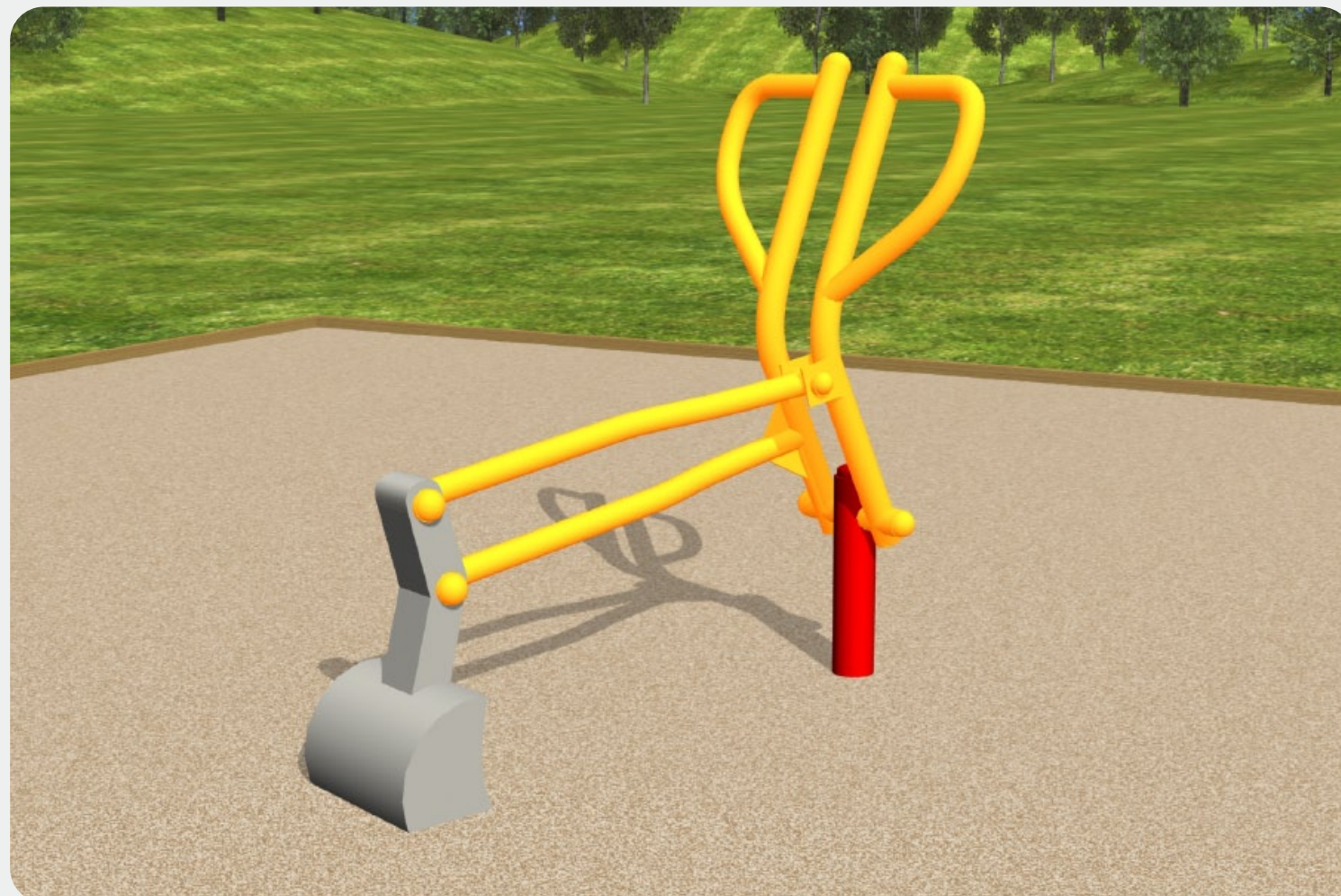
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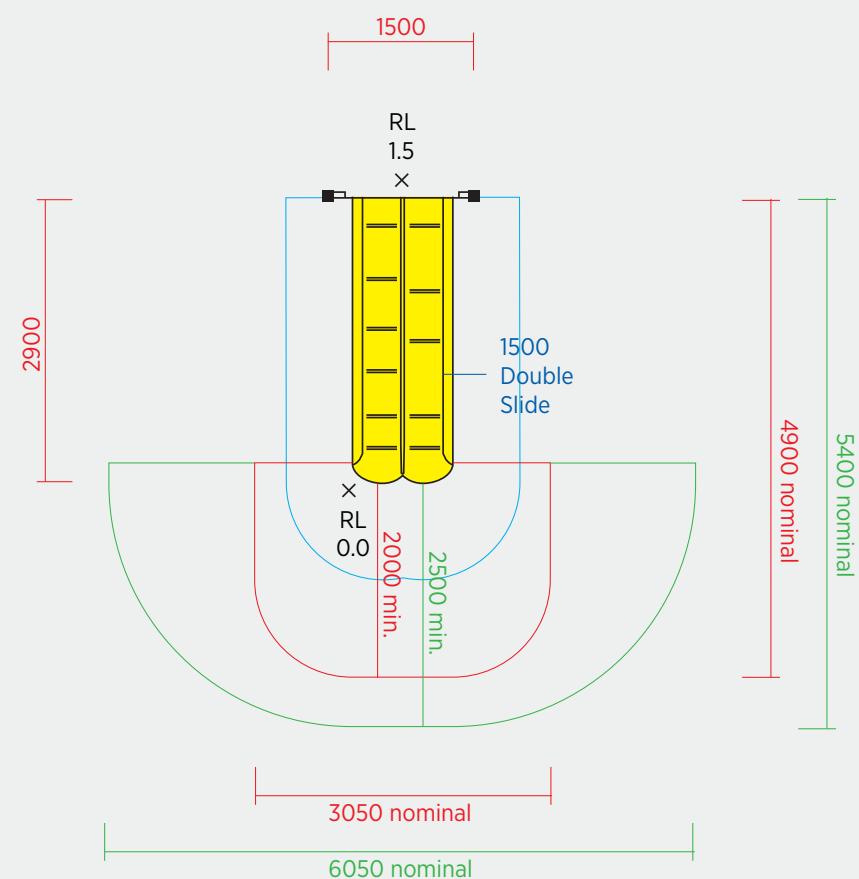
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• Falling Space:

Minimum impact area as per AS4685-2014	Required free space as per AS4685-2014
Victorian Dept. of Education minimum	Recommended clearance area



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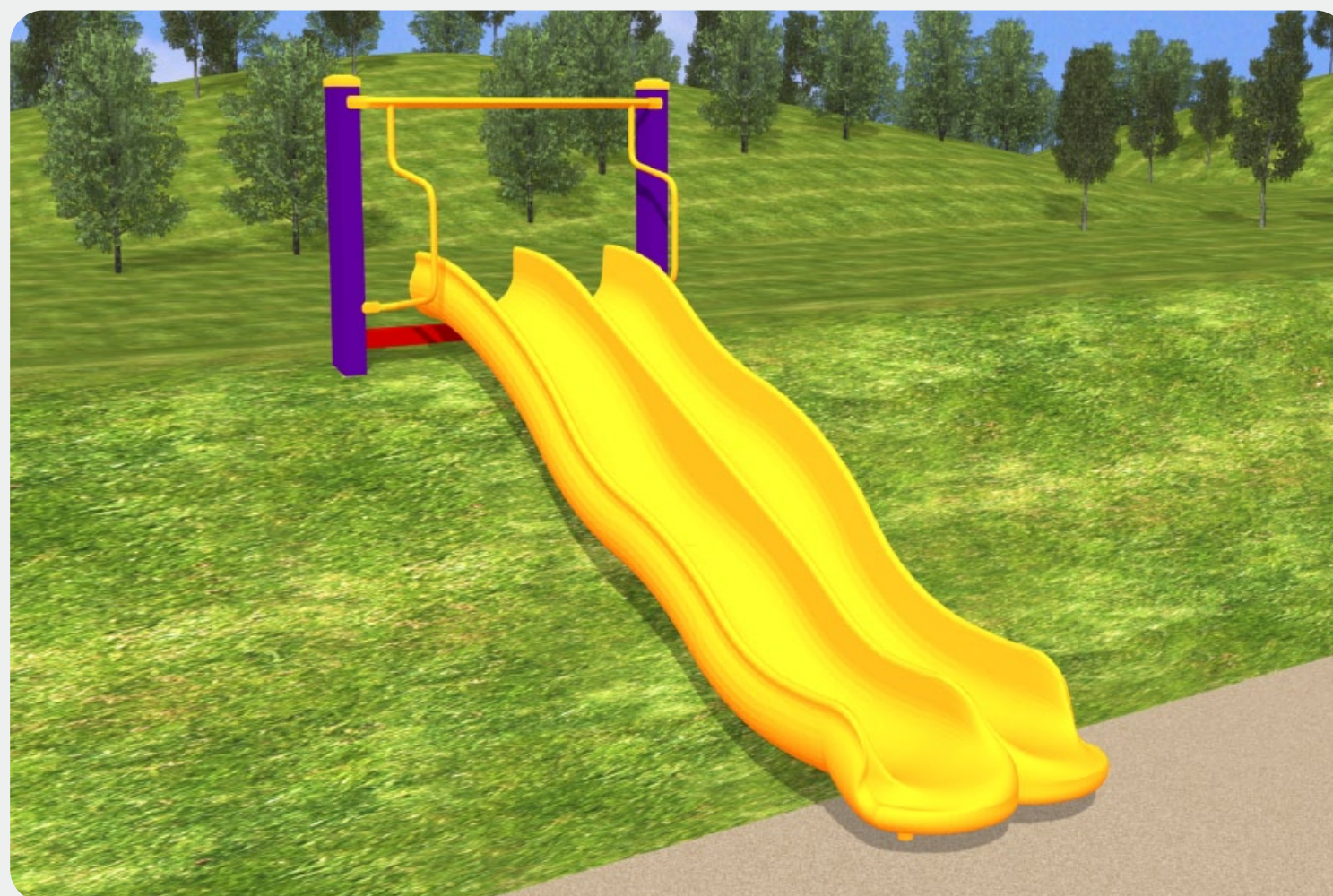


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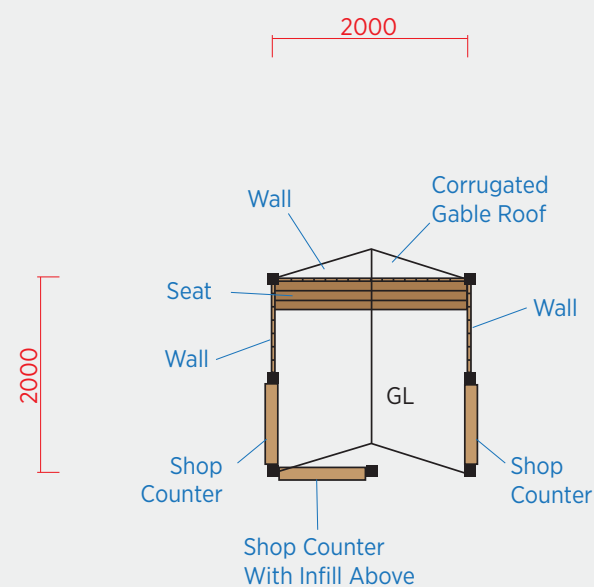
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- Falling Space:

Minimum impact area as per AS4685-2014	Required free space as per AS4685-2014
Victorian Dept. of Education minimum	Recommended clearance area



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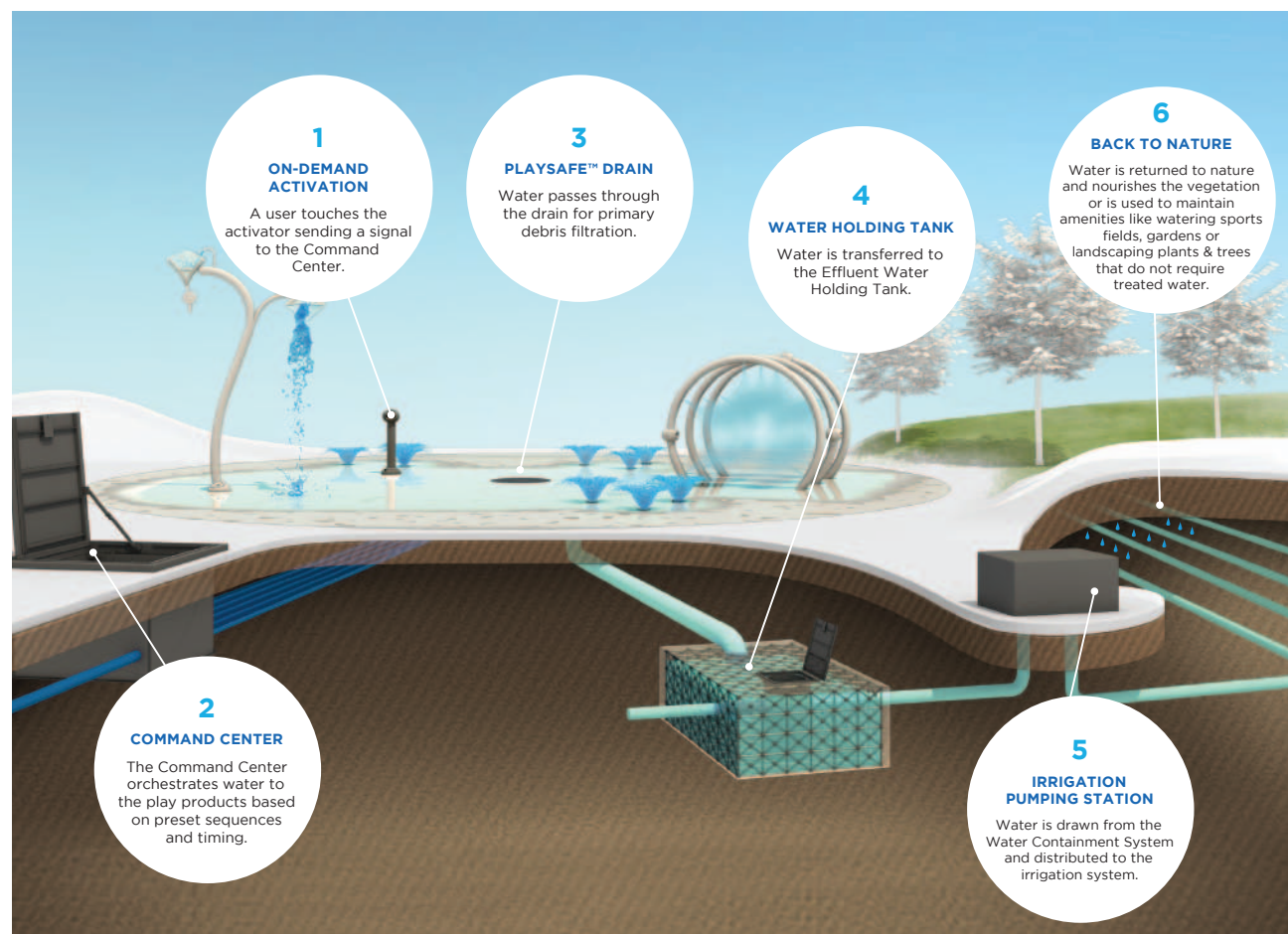
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- Falling Space:

Minimum impact area as per AS4685-2014	Required free space as per AS4685-2014
Victorian Dept. of Education minimum	Recommended clearance area



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REPURPOSE SUB-SURFACE IRRIGATION

DOUBLE UP ON THE FUN

Vortex water repurposing systems are sustainable solutions that are designed to integrate with the overall project scope and needs by reusing the Splashpad® or Spraypoint® effluent water for sub-surface irrigation. This system is simple to operate and require minimal maintenance.



World leader in aquatic play solutions with over 6,000 installations worldwide
vortex-intl.com • info@vortex-intl.com
1.877.586.7839 (free USA/CND) • +1.514.694.3868 (Intl.)

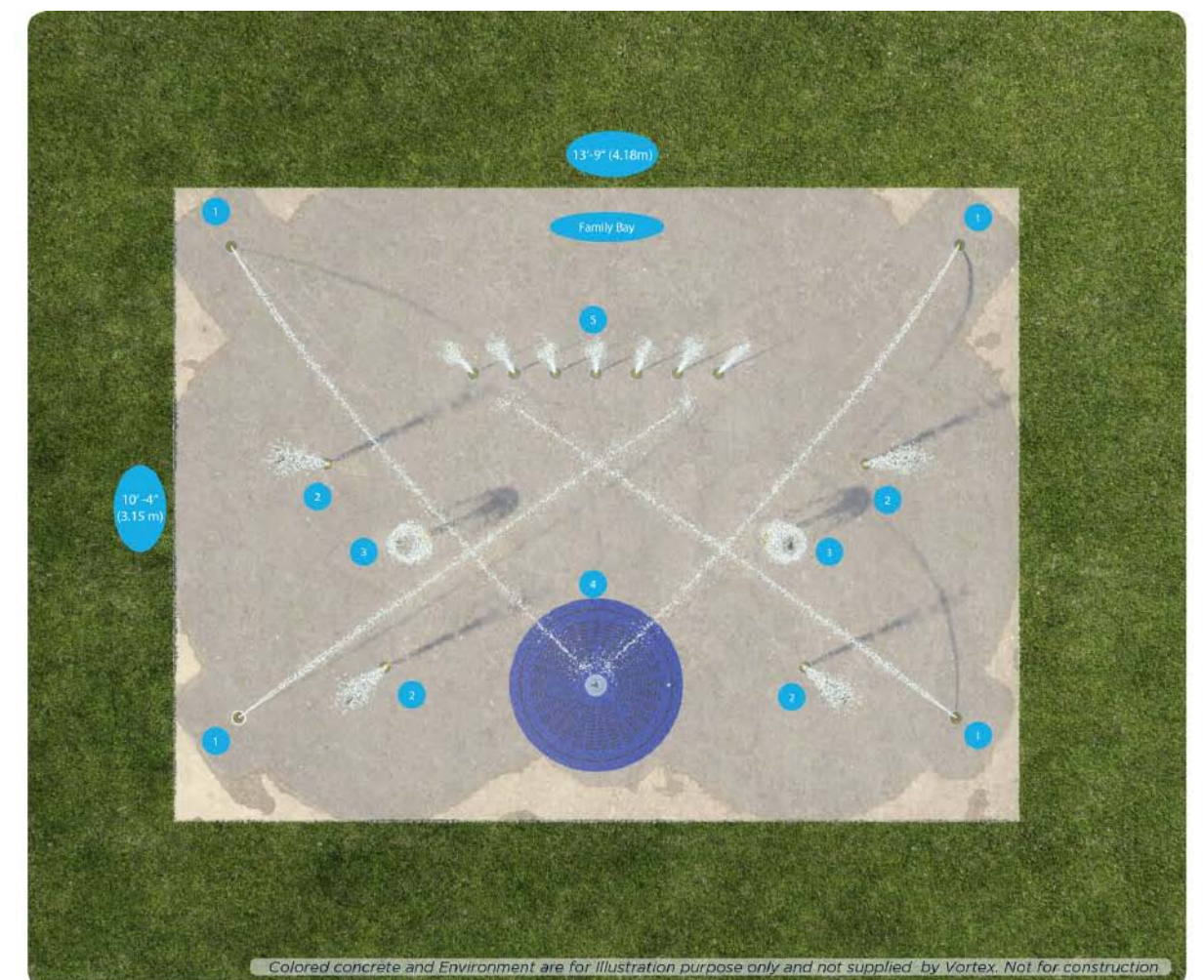
Authorities and water reuse

EPA

We have discussed the project with Riverina Far West Region. they have advised 'the EPA encourages the reuse of wastewater where it is safe and practicable to do so and where it provides the best environmental outcome'

NSW Health

The splash park and irrigation system should be constructed to meet NSW Health requirements.



THE CONVERSATION

Academic rigour, journalistic flair

Materials that make heat worse for our kids demand a rethink by designers

April 11, 2018 5.59am AEST

'Soft fall' surfaces are widely used in play areas where children might fall, but can also get very hot in the sun, which undermines this safety benefit. Brisbane City Council/Flickr, CC BY

Materials that make heat worse for our kids demand a rethink by designers

April 11, 2018 5.59am AEST

It is with some relief that Australians are leaving behind the excruciatingly hot days of summer. But did you ever stop to think about the role of design in making matters better – or worse? Spending all day in air-conditioned rooms before walking out to a car that has baked in the sun all day is an exercise in extremes that many of us have faced. It’s easy to forget these conditions are shaped and mediated by design.

Campaigns warn us about the dangers of leaving children in hot parked cars. However, there are many more designed microclimates in the city where “real feel” temperatures far exceed reported air temperatures. One example, where children spend many hours of the day, is the childcare centre, where we found some artificial surfaces can become dangerously hot.

Authors



Abby Mellick Lopes
Senior Lecturer in Design, Western Sydney University



Matthew Blick
Research Assistant, School of Social Sciences and Psychology, Western Sydney University



Sebastian Pfautsch
Research Theme Fellow - Environment and Sustainability, Western Sydney University

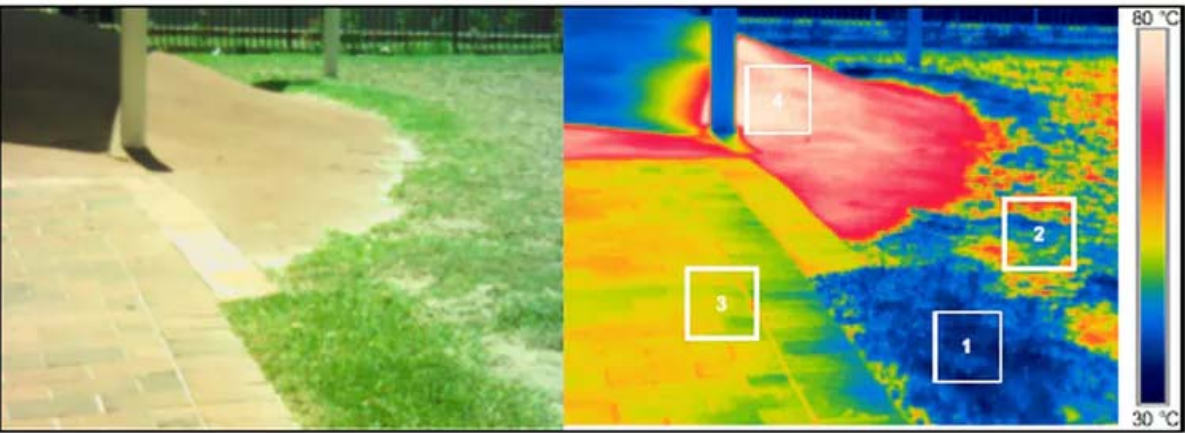
Read more: Building cool cities for a hot future

Our preliminary study over the record-breaking summer of 2017-8 assessed the thermal characteristics of outdoor play spaces in three childcare centres in Western Sydney. We discovered that summer temperatures can vary dramatically, depending on the materials and environments being measured.

We measured air and surface temperatures to generate detailed information about the effects of heat on shaded and non-shaded surfaces at each facility. These included artificial materials such as “soft fall” surfaces and Astroturf, “semi-natural” materials such as bricks and woodchips, and natural materials, including sand and grass.

In full sun, the artificial surface materials became dangerously hot. Soft fall surface temperatures reached 71-84°C on days when air temperatures were in the low 30s. Astroturf heated up to nearly 100°C. Plastic toys in direct sun reached temperatures up to 73.7°C – that is one hot rubber duck!

You can see the effect of different surfaces in the thermographic image below. It shows tens of degrees of difference between soft fall and thick grass in full sun.



Surface temperatures on a typical summer day (January 18 2018) in a Western Sydney early learning centre. Left: normal view; right: infrared view (surface temperatures are colour-coded). Average temperatures within boxes shown (approx. 0.3m sq): 1 = thick grass, 39°C; 2 = patchy grass 51°C; 3 = red bricks, 53°C; 4 = soft fall 74°C. Sebastian Pfautsch, Author provided (No reuse)

Hot materials undermine safety benefits

Soft fall, as the name suggests, is widely used to create “safer” environments for children should they fall. Rising heat undermines this safety benefit. Because it transforms the material into a source of potentially significant harm it also reduces the time that can be spent playing outdoors.

Contrary to their current widespread use, this study found that artificial materials like soft fall and Astroturf should be used sparingly and only in shaded settings. Shade does make a significant difference to the temperatures recorded, but shaded soft fall and Astroturf were still hotter than shaded natural surfaces. Perhaps unsurprisingly, a centre with an old camphor laurel tree supplying ample shade in the play space recorded the lowest daytime air temperatures.

Read more: If planners understand it's cool to green cities, what's stopping them?

A thermally healthy outdoor play space is crucial for supporting children’s social, physical and cognitive development. However, the extreme temperatures recorded in this study turn such spaces into hostile environments that leave little option but to move indoors to cope.

Indoor activities tend to be more sedentary, which is linked to reduced physical fitness and rising obesity. We already spend around 90% of our time indoors in environments (including cars) that depend on air conditioning for habitability.

Of course, you can only air-condition a space effectively if it is enclosed. The rise of the “indoor biome” has been associated with poor air quality and a raft of other complex hazards.

Yet childcare centres with cool, comfortable outdoor play spaces, designed to enable both mobility and a connection with nature, are far from the norm in our rapidly densifying cities. The newest centre in our study, for example, had the smallest outdoor activity space, with the least shade, very limited natural ground cover and the greatest proportion of soft fall. This raises questions about the impact of design trends on the quality of outdoor activity spaces.

It is worth noting too that, given the level of demand, there is often little choice about where a child might be offered a place.

Climate change makes design even more important

How accountable should designers be for the everyday living environments that they create? For example, could the designers of the past have known about the environmental, social and cultural impacts of one of the most transformative designs of the 20th century, the car?

Perhaps not, but things have changed. The need to adapt to a changing climate makes good design important for our survival. And that, in turn, demands designers take greater responsibility for the harms arising from their work.

In the United States, a recent report from the Conservation Law Foundation and Boston Green Ribbon Commission attaches a new urgency to the role of adaptation strategies in regulation, planning and design. The report finds that voluntary measures have not created a noticeable difference in planning, design or development practices. These continue to operate according to climate patterns of the past rather than the present or future.

Read more: When the heat is on, we need city-wide plans to keep cool

In Australia, the National Construction Code has been amended to require more stringent testing of external walls and cladding, following the 2017 Grenfell Tower fire in the UK and 2014 Lacrosse Apartments fire in Melbourne, Australia. But the code still does not account for “hail, storm tide, or have specific requirements related to heat stress”.

Resilience to current and anticipated environmental change requires updated design standards. Designers need to be better trained and supported to foresee harms and respond creatively to conditions we may not have experienced before, even if their clients do not request this.

After all, the lifespan of many designed products, structures and environments can far exceed a human lifespan. This means design decisions being made now leave a legacy for future generations. With 50°C summer days predicted to occur regularly before mid-century, we need to design our cities differently, now.

This hands a duty of care to all involved in the planning, designing and building professions. It has not traditionally been a compulsory part of their practices, but should be.

Read more: The reality of living with 50 °C temperatures in our major cities

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