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Minningup Pool Day Use Area – Master Plan Part B Executive Summary For Shire of Collie



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Information presented in this report has been compiled with care, subject to constraints of time and resources. This is a Master Plan, and no responsibility is accepted by the authors for any use or misuse of information contained in or omitted from this report. Corrections, additions and comments are welcome and should be addressed to the consultant, or the Shire of Collie.

Acknowledgements:

We acknowledge that we discuss the traditional land of the Noongar people, the custodians of the Region, and that we respect their spiritual relationship with the country and particularly with Minningup Pool.

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Minningup Pool Day Use Area – Master Plan

Executive Summary

1 Introduction

1.1 Background to this project

The Shire of Collie (SoC) received funding in 2018 to undertake the planning and environmental assessments for a nature-based tourism facility, including low key accommodation at Minningup Pool on Reserve 34343, Collie, Western Australia.

As a first stage the local Noongar community was engaged and consulted resulting in an endorsed visioning report and heritage assessment¹ (Dr Myles Mitchell). Concurrent to this a targeted fauna assessment and flora survey² (EcoEdge) was undertaken as well as a basic site analysis and context plan (Planned Focus)³.

These reports were used to inform the next stage being demand analysis and prefeasibility for accommodation including community consultation and concept plans for the development. This was a comprehensive study of the site and development options including further site analysis, community and stakeholder consultation, investigation into management options and concept plans including staging of the recommended development. The demand analysis and prefeasibility report⁴ (Brighthouse) was endorsed by Council in December 2019.

Having gained both Aboriginal and general community support for this project as well as demand and financial viability, Vicki Winfield & Associates Pty Ltd, in association with Coates Civil Consulting Pty Ltd were engaged to prepare a master plan to upgrade the Minningup Pool Day Use Area and this Executive Summary outlines the proposals for the foreshore area, together with an indicative cost estimate.

Version 2 of this Executive Summary was presented to Council in December 2020 where it supported the master plans that were endorsed at that meeting. The entire master plan report has recently been completed and so this Executive Summary has been updated to reflect some of the developments that occurred since December 2020 in the process of finalising the master report and commencing the preparation of the construction drawings.

This document is now referred to as Part B the second of four parts which document the planning process, the proposals and the implementation details of the Master Plan for the Redevelopment of the Minningup Pool Day Use Area. The series of documents is summarised below.

- Minningup Pool Day Use Area – Master Plan: Part A - Background
This contains the communication plan, investigation and feedback, analysis and development of design options.
- Minningup Pool Day Use Area – Master Plan: Part B - Executive Summary

¹ Mitchell, Myles and Rosie Halsmith, The Minningup Pool Precinct Project: Aboriginal Engagement and Heritage Assessment - Visioning Report, 2019.

² Ecoedge, Reconnaissance and Targeted Flora and Vegetation Survey at pt. Reserve 34343, Collie, 2018

³ Planned Focus, Minningup Pool Reserve Site Analysis, Prepared for Shire of Collie, March 2019

⁴ Brighthouse, The Minningup Pool Demand and Pre-feasibility Study prepared for the Shire of Collie and the South West Development Commission, December 2019

- Version 2 was based on early drafts of Part A and C and consisted of the Executive Summary report and associated plans that summarise the Master Plan for the Redevelopment of Minninup Pool Day Use Area as was endorsed by Council in December 2020. These are the documents that have been made available to the public. Essentially this is a description of the whole project as due to the extent of the project any more detail will give a document that is too long for most people to read. It included a description of the precincts, a summary of the proposed elements and a section on targeted outcomes to help understand how the objectives of the project are being met. It also contained an indicative cost estimate. Version 3 of this document has been updated in May 2021 to reflect the details in the completed Part A and Part C.
- Minningup Pool Day Use Area – Master Plan: Part C – Master Plan Proposals and Implementation Guidelines
This document details the Master Plan and provides the information required to progress the project. It contains the Master Plan proposals as documented in the Executive Summary together with more detailed information on the individual elements proposed. The elements that are not further detailed in the contract documentation (Part D) are described so that the information can be used to brief subsequent consultants and designers. The Benefits Analysis is an Appendix of this plan.
- Minningup Pool Day Use Area – Master Plan: Part D – Contract documentation of the Civil and Landscape Works.

It should be noted that the original spelling of Minningup was only confirmed for use by Shire of Collie early in 2021 and so documents finalised before then will use Minninup as has been the practise for many years. Minninup Road will remain as it is until it is officially changed.

The spelling of Wagul is also variable and although Wagul is generally used for this master plan, other spellings may be found and all are 'correct'.

1.2 Planning Process

The master plan was initially informed by the wealth of planning that was undertaken prior to the commencement of this project and subsequently further investigations were undertaken particularly site assessments and further community consultation, specifically focussed on the foreshore.

A communication plan was prepared by VWA⁵ for this project which focussed on communicating with stakeholders that had previously registered their interest in the project and some additional stakeholders that were identified as the project progressed. The plan also included further consultation with the Noongar Community as recommended by the previous Aboriginal engagement regarding Minningup Pool.

The community survey undertaken in June 2020 provided information on activity and facility preferences, visitor user patterns, and interpretation topics and this was complimented by one on one consultation with key stakeholders such as land managers and Shire of Collie staff. Preliminary on site consultation with Noongar Elders confirmed the directions in the Noongar Visioning report and consequently development options were prepared and used as the basis for further consultation.

A community meeting about the design for the day-use area and interpretation of Noongar culture at Minningup Pool was held in July 2020. This gave direction to the proposed site designs and interpretation concepts and has been followed up with further site visits and consultation with the Elders. There is a need for this consultation to continue as proposals continue to evolve and develop.

⁵ Vicki Winfield & Associates, 'Communication Plan For the Shire of Collie, Minninup Pool Tourism Precinct Detailed Design and Costings for Day Use Area Project', unpublished, May 2020.

The revised concepts were then presented to the project management group and Shire of Collie Council in August 2020 who gave additional direction to the project. The proposals were revised and made available for community input in August and September 2020.

There was general support for the concepts with the need to retain naturalness emphasised and requests for specific facilities such as those for the less able. There were those that wanted no change but others were keen to arrest the degradation occurring at the site and generally improve facilities such as provide flushing toilets and irrigated lawn areas.

Further investigations were undertaken to enable indicative cost estimates to be prepared and to confirm the feasibility of the proposals. These included

- The Shire of Collie commissioning a report into the feasibility of providing services (power, water and sewer) to the day use area.
- An assessment of the trees and necessary management by a qualified arborist as retention of trees has been identified as an important component of the process.
- Flagging in the proposed road alignments, inspecting these in the field and adjusting alignments to preserve trees where feasible.
- A preliminary assessment of the proposed river access structures by a marine engineer.

The above assessments, together with Council’s decision in November 2020 to seek funding to provide services to the day use area have further informed the proposals which are detailed in this Executive Summary.



L: Existing Infrastructure at Minninup Pool



R: Display as part of the community consultation

1.3 SWOT Analysis

The various issues and opportunities identified for the area through the consultation and investigation are summarised in the SWOT analysis below. These are considered to be the most influential factors, though there are other considerations that are not included below.

Table 1 SWOT Analysis

Strengths	Weakness
<p>The area is valued by the whole community An attractive natural environment with high visual quality including the ephemeral qualities of the river. Natural values such as habitat trees and significant flora and fauna. Significant Noongar Cultural Values. Provides opportunities for natural recreation close to the town. Water based recreation especially swimming is popular, particularly with young people. Passive recreation such as relaxing, enjoying the view and picnicking is popular. Connection with a variety of trails, cycling, MTB, walking, driving and paddling. Dual use path linking to nearby areas and town centre. Important dog walking area. Existing commercial tourism. Adventure races and other events sometimes held in the area. Will compliment/support proposed camping areas.</p>	<p>No acknowledgement of Noongar Cultural values. Much of the existing infrastructure is old and worn, there are no BBQs and disabled access is limited High levels of use are impacting the area (such as erosion of sections of the foreshore). Unmanaged activities (such as 4WD driving on Sandy Beach and use of rope swings) is causing environmental damage and creating visitor risks. Vehicles drive through the site at speed. Submerged hazards are known to be in the river. Many trails are unsanctioned. Heavy use is impacting vegetation such as along the foreshore, worn grass areas and sealed areas stressing the jarrah trees at the entry. Weeds are established in some areas. Dieback occurs throughout the site. Litter and waste from humans, ducks, horses and dogs. Feral ducks can be a nuisance looking for food. Services such as power, water and sewage are not provided at the site.</p>
Opportunities	Threats
<p>The local Noongar Community are keen to share their cultural values and have ongoing involvement. Provision of infrastructure can direct and manage visitor pressure (e.g. providing river access structures can prevent bank erosion). Allowing for likely changes, such as changing water levels can reduce the impact of change in the future. Realigning roads and organising vehicles can reduce traffic risks and provide more space for picnicking etc. Managing form, line, colour and texture can assist with retaining naturalness and visual quality. Signage and interpretation can help visitors appreciate the values of an area and manage visitor behaviour and risk. Encouraging new visitors can bring economic benefits to the local community. Recreation results in health and wellbeing benefits. Improving the presentation of an area and installing CCTV can discourage vandalism and anti-social behaviour. Capital investment can reduce ongoing maintenance needs and therefore costs. Areas of weed removal may be more suitable for infrastructure than undisturbed natural areas. Volunteers can contribute resources to a project and health and wellbeing benefits to a community.</p>	<p>The area is part of the river’s flood plain. Water levels fluctuate during the year, rainfall is reducing and supplementing flow with mine dewatering may not continue indefinitely. People generally don’t like change. Anti-social behaviour occurs at the site. Visitor numbers are likely to increase with nearby developments and increased visitor pressure may cause crowding and lack of visitor satisfaction. Increasing visitation to the site without increasing capacity may cause displacement of current visitors (locals). Changing the experience at the site may also cause displacement of existing visitors. Development causes impacts such as tree and vegetation removal (replanting can compensate in part but takes time to establish). Resources are required for development and ongoing maintenance and management. Development can change the character of an area unless the essential values of the area are retained.</p>

2 Proposals

2.1 Vision

The vision for Minningup Pool is that it is a welcoming, natural place where the Noongar cultural values are acknowledged and shared and recreation is provided sustainably for the whole of the Collie community.

2.2 Aims

The primary aims of the redevelopment of the Minningup Pool Foreshore are to

- provide for the whole of the local Collie community;
- acknowledge and share Noongar cultural values and
- maintain naturalness while sustainably providing for recreation (including improving access and facilities and protecting the foreshore from visitor impacts).

The secondary aims of the development are to

- support the development of the proposed adjacent nature based accommodation facilities;
- contribute to the development of Collie trails;
- provide an attractive area that will in time become well known and encourage visitors to the area and to
- provide a venue for events and commercial tourist operations such as canoe hire, coffee vans etc.

The overall character is to be of natural open parkland with the river as its focus.

2.3 Overall Site Layout

The site context and layout for Minningup Pool Foreshore is shown on Map 1 Minninup Pool Foreshore Area Upgrade – Site Context Map in Appendix 1C. Key components of this plan are

- Roads - The main access for Minninup Pool Foreshore will continue to be via Minninup Road off Mungalup Road. Minninup Pool Road will now merge into the road to Sandy Beach at the foreshore entry area, which returns to Mungalup Road at Griffin Bridge. The section of road from the pool to the bridge currently has no name and it is recommended it is called Sandy Beach Road. The extension of Minninup Road to the east, beyond the Rowing Club, is a dead end road which currently accesses a number of informal riverside recreation sites and in the future may provide access to a wellness centre and eco accommodation.
- Collie Golf Course – is located north of Minningup Pool.
- Camping and accommodation areas – a campground and some eco cabins are to be developed nearby as separate projects by others, to provide nature based accommodation experiences.
- Dual Use Paths (DUP) – a DUP links Minningup Pool to Collie town centre and a link to Mungalup Bridge is proposed with the section to Sandy Beach included in the day use area proposals.
- Trails – a number of informal tracks and mountain bike trails can be found in the area and some of these are noted on the plan.
- Minningup Pool Foreshore Day Use Area – has three distinct precincts with their own character – the Sandy Beach Precinct, the Main Pool Precinct and the Rowing Club Precinct.

2.4 Trails

The Minninup Pool Foreshore is an important component of the Collie Trails initiative as it is proposed to

- compliment the development of the adjacent nature based accommodation which is providing accommodation for trail users;
- provide an attraction / stopping point on trails such as drive, cycle, mountain bike and walk trails;

- be the trailhead for aquatic trails on the Collie River;
- connect to trails that extend beyond the foreshore in the Minningup Pool area and
- provide some specific trails along the foreshore itself.

The foreshore area needs to connect to and be integrated with the following trails that are being developed by others:

- The existing dual use path connecting to the Collie town site.
- The proposed Minningup Link Trail that will connect the Minningup Pool area to Westralia Conservation Park and the trails on the west side of Mungalup Road.
- Drive trails that visit Minningup Pool, particularly wildflower trails that benefit from stopping points with short wildflower walks.
- Aquatic (paddling) trails on the Collie River, launching facilities are required along the Minningup Pool foreshore.
- Road cycling trails.
- Mountain bike trails – well used informal trails currently exist on the reserve with loop trails east and west of the foreshore area, these are proposed to be formalised in due course by others. The connecting trail passing through the site needs retaining if feasible.
- Trails connecting the proposed accommodation areas with facilities and recreation opportunities along the foreshore.

In the context of the above trail framework the following trail infrastructure is proposed for Minningup Pool Foreshore:

- A trailhead on the foundations of the old rowing club building on the foreshore in front of the current Rowing Club Building.
- Continuation of the existing dual use path, along the current Minningup Pool Road alignment to the old Rowing Club trailhead where the dual use path will terminate. This will be black asphalt and not red asphalt.
- Planning and construction of a dual use path linking the existing dual use path to Sandy Beach. The northern section of this DUP is likely to form part of the Minningup Link (by others), but Sandy Beach itself will be a spur trail as speeding ‘through’ cyclists would be a hazard for beach goers.
- The Rowing Club trailhead will have potential to link to trails in the east of the reserve if/when they are planned and developed.
- The arrival points in the main parkland area at the bend in the river will have potential for some trail information for trail users arriving from the west.
- The existing mountain bike trail passing through the site will be accommodated within the site with potential links to the DUP, links to foreshore facilities (such as toilets), connections to the main trails (e.g. to Sandy Beach) and allowances to re-establish it where it is impacted by roadworks north of the Rowing Club building.
- Canoe launching will continue to be from the beach at the Rowing Club with increased lawn areas, a canoe set down bay and increased long vehicle parking. Canoe launching will also continue at Sandy Beach with a clear, wide path to the beach. However set down and rigging areas will not specifically be provided for. Informal boat launching will continue to be available at nearby Mungalup Bridge and this may be formalised in the future.

Trails beyond the foreshore are only included indicatively in the master plan as the mountain bike trails need formalising which is a planning process in its own right, any walk trails (such as new trails to enable

interpretation of bush tucker) will need to be integrated with these mountain bike trails and trails linking to the accommodation areas will need to be integrated with the site planning for those locations.

The DUPs will have some trailside interpretation within the site, but trailheads and trail marking is being developed as part of the overall Collie Trails initiative and so was not a part of this master plan. However the release of the Wambenger Trails Sign Style Guide Version 1.1 in February 2021 (WTSSG) has enabled components of the WTSSG to be incorporated into the sign proposals for Minningup Pool.

2.5 Sandy Beach Precinct

Sandy Beach Precinct will continue to provide for informal water based activities and beach activities and there will be a focus on rehabilitating degraded areas, reducing visitor risk and increasing amenity with additional facilities, but these will be lower key than the main pool area, though services (power, water, sewerage and electricity), are to be provided. See drawing Minningup Pool Day Use Area Upgrade – Master Plan – Sandy Beach Precinct in Appendix 2C, for the overall layout and the artistic impression Minningup Pool: Sandy Beach in Appendix 3C. Specific components of the proposal are discussed below.

- Weed removal and control is proposed for before works commence but will likely be ongoing.
- Vehicles will be excluded from the beach to reduce the risk of pedestrian vehicle conflict and to enable sections of the foreshore to regenerate while other areas are left as beach to give visitor access to the water.
- The Sandy Beach Road will be set to the west, mostly in the old sand pit, to separate through traffic from beach goers.
- The car park will be a drive through design and set mostly on the existing roads and tracks with approximately 35 bays and a disabled bay. Long vehicles will be able to park on the widened shoulder of Sandy Beach Road which will have a connecting path to the beach. Vehicles will be contained in the carpark with bollards, some cut banks and a combination of existing trees and new structures such as shelters and tables.
- The Cultural Area, which is to be developed to the west, will also be supported by the parking area and will be linked by a path with service access provided from Sandy Beach Road. The existing mountain bike trail will also be realigned. The infrastructure for the Cultural Area will be developed as directed by the Noongar community at the detail design stage, but may consist of a yarning circle, small bush garden and exhibit area.
- The dual use path from Minningup Pool will have a sitting area with views to the beach and will cross the road on a speed hump improving safety.
- The wide path will connect to the interpretation / arrival point from which visitors can step on to the beach. Nearby there will be bike racks.
- Interpretation was to have focussed on the riverine environment but now an orientation map with a short welcome will likely be provided.
- Service access (3m wide) with a removable bollard or similar for service and emergency access will connect from the car park (with bins on this section of path) to the beach and will have a ramp / hardened access on to the beach which will also be suitable for launching paddle craft.
- Elsewhere a network of smaller paths will connect parking areas to shelters, toilets and tables etc. with some facilities suitable for use by those in wheelchairs.
- Toilets will be flushing with basins for hand washing, an outside shower and a stand tap for washing of sandy feet.
- Two skillion shelters are proposed approx. one medium with a 2 plate BBQ and table (BBQ to be electric), the second slightly smaller shelter will only have a table.
- Tables will have separate benches and a table, with some suitable for wheelchair access. They will be set on concrete bases and will generally connect to paths. Some tables will be set near the river's edge near new trees (paperbarks *Melaleuca preissiana*) for shade.

- Rehabilitation areas, including some foreshore areas, will be fenced off and planted with small stock and may be mulched and / or have topsoil and debris from clearing works. Coir logs may be required to facilitate regeneration along the shoreline.



L: Looking south along Sandy Beach

R: Drainage issues west of Sandy Beach

- There will be no visitor access provided to the Bedrooms area with service, emergency and cultural access provided along one existing track and all other tracks to be rehabilitated.
- Wheelchair access onto the beach can be provided via a beach wheelchair that is currently available from the Collie Pool and a concrete path, with rails where it enters the water, is also proposed to provide access for all to the water from the paddle access ramp.
- Minimal lighting for night time use and security cameras will be provided.

2.6 Minningup Pool Precinct – Parkland Area

The western portion of Minningup Pool Precinct is a quieter contemplative area with a focus on passive recreation and Noongar Culture. It is suggested the elevated open area, together with the terraces is actually given its own name, such as Minningup Pool Park or an appropriate Noongar name. Swimming will continue at the beach at the base of the terracing and there will be picnic tables but no BBQs with varied opportunities for sitting and contemplating the river. The site for the proposed cultural centre is north of the entry area and south of the Golf Course, but developing this centre is not a component of the master plan. The eastern portion is more focused on picnicking and water based activities and is described in the next section see drawing Minningup Pool Day Use Area Upgrade –Master Plan – Pool Precinct in Appendix 2C, for the overall layout and the artistic impressions Minningup Pool: Entry and Minningup Pool: Foreshore in Appendix 3C. Specific components of the proposal are discussed below.

The key proposals for the precinct are noted below.

- The intersection of Minningup Road with Sandy Beach Road will be realigned to make Sandy Beach Road the through road so vehicles have to slow to turn into the relocated Minningup Pool Road.
- Parking will be set off the new realigned Minningup Road with approximately 19 standard bays, 1 disabled accessible bay, a long vehicle bay and about 4 motor cycle bays. The car bays face the park and river. A couple of car bays will be set off Sandy Beach Road near the existing concrete steps giving additional river viewing opportunities.
- The existing Minningup Road will be a dual use path 3m wide also used by service vehicles. Low head walls will be installed at culverts to suggest a bridge and reduce the scale of the path.

- The existing dual use path will cross the road west of the intersection (with a speed hump) and will be located west of Sandy Beach Road. It will cross Sandy Beach Road (with another speed hump) in the vicinity of the above car bays and arrive at a small lookout (Minningup Lookout) over the pool which links to the area at the top of the concrete steps. The steps will likely be removed as developing a platform at the bottom of the steps will intrude on the pool.
- The lookout will have seating and interpretation and some site orientation information. From the lookout there will be a path descending at disabled gradients to the base of the terracing by the river. The path will be almost flush with the beach enabling people to step off the path easily onto the beach. This path will continue east up the slope to join the main Minningup path and one or two interpretation plaques will be set along the path.
- A wide path/boulevard, which follows the top of the bank, will connect the dual use path (near the lookout) to the main Minningup path. The existing dual use path will not connect to the main path in a direct line as that would take it in front of parked vehicles with the potential for alighting passengers to step out in front of cyclists. It would also make it close to the yarning circle.
- Where the northern end of the boulevard meets the main path (near two large jarrah trees) will be a welcome node with a sculptural sign and welcome to Minningup Pool information and artwork. This will be the arrival point for those arriving in vehicles. The boulevard will have seats (with arms for the elderly) set along it for viewing the pool. These seats could be Waugal seats.
- The realigned and setback Minninup and Sandy Beach Roads enable a park to be created in the angle between the two roads with the existing majestic jarrah *Eucalyptus marginata* trees in the centre. The bitumen in the area will be carefully removed and a large grassed yarning circle with logs around the circumference, established in the centre of the park. Low local shrubs will be planted to partially screen out the adjacent roads (while still allowing glimpses of the river from the road) and lawn areas established above the pool. Some plants along the edges of the lawn areas and paths may be interpreted or named.
- Picnic tables will be provided in the park overlooking the pool and more trees are established to provide shade (shelters on individual tables tend to provide poor shade and unless carefully sited they will block out views for others, so they are not proposed).
- There will be a Noongar sculpture of a Wagul at the western side of the park, prominent for all arriving at the Pool Precinct.
- The terraces will be refurbished with blocks of a laterite concrete mix, used to build low retaining walls to replace the disintegrating timber retaining walls. An additional wall is proposed for the lower level to give a 2m wide terrace associated with the beach. The upper terrace will be wider (approximately 8m) and suitable for activities. The upper wall will be set back a little but setting back too far will restrict seating opportunities between the wall and the path. The existing steps and path down the terracing will be replaced and widened to 3m and the steps will have a central hand rail.
- All lawn will be irrigated to withstand the high use levels and to be comfortable to sit on.
- A toilet will be located near the car park with cycle racks, bins and service / emergency access all close by.
- Lighting and CCTV will be strategically provided throughout the site.
- Picnic tables will be set among trees east of the terraces and this area merges with the picnic area, which is discussed in the next section.
- A pontoon is proposed for the river with the exact location to be decided after underwater investigations have been made as there is understood to be a lot of debris in the river such as a truck and the old diving platform. For cultural reasons the pontoon should be set in the deepest part of the river, see indicative location on the plan.



L: Looking North to the existing parking area

R: Looking northeast over the terracing

2.7 Minningup Pool Precinct - Picnic and Water Based Activities Area

Between the parkland area and the Rowing Club are picnic areas with proposed facilities enabling access to the river for water based activities. See drawing Minningup Pool Day Use Area Upgrade – Master Plan – Pool Precinct in Appendix 2C, for the overall layout and specific components of the proposal which are discussed below.

- The relocating of Minningup Road away from the river and the conversion of the current road to a path gives more area for picnicking and removes the potential for speeding vehicles to conflict with pedestrians.
- Parking is provided for with a central parking area of approximately 15 standard vehicles and a long vehicle bay, off the new road. The bays are facing the pool, so the pool can still be enjoyed by those sitting in vehicles and this organised parking will assist with reducing compaction under trees from parked vehicles.
- Trees will have mulch on their root zones to sustain them and where there are groups of trees the combined mulch areas will create more natural looking areas which will separate and enclose the open areas of irrigated lawn that will be between the groups of trees.
- River access will be managed with stepped access structures built to enable visitors to access the water without eroding the river banks. The banks will be rehabilitated as necessary with coir logs, revegetation etc.
- The proposed pontoon will be accessible from these swimming access stairs.
- Between the river access structures the foreshore will be temporarily fenced for rehabilitation. No path will be provided close to the foreshore in this precinct but stepping stones and / or a small bridge will provide access across one of the drainage lines to enable people to wander along the foreshore grassed areas. Some new shade trees will also be planted for the future.
- New picnic tables will be installed to provide for more visitors.
- A seat with arms will be set along the trail.
- Picnic tables and a central 2 plate BBQ will be located near the car park.
- Trailside plaques (1 or 2) will be provided in the area and there will be a small interpretation node near the car park.
- The existing toilet will be removed and a new large toilet provided near the Rowing Club.



L: Looking east along existing road and picnic area

R: Looking east along the worn foreshore

2.8 Rowing Club Precinct

The Rowing Club Precinct consists of around the Rowing Club shed (to be the Collie Kayak and Rowing Club shed) and associated foreshore areas. The shed is currently leased by Rotary but it is proposed to blend the club and public activities and share facilities such as toilets and BBQ facilities. The area is proposed to be the focal point for trails both aquatic and terrestrial but will also acknowledge the Noongar and European (settler) cultural significance of the area. Additional parking is proposed and this will be where long vehicles visiting the pool can turnaround using the loop layout of the car park. See drawing Minninup Pool Day Use Area Upgrade – Master Plan –Rowing Club Precinct See Map 6 Minninup Pool Day Use Area Upgrade – Master Plan –Rowing Club Precinct in Appendix 2C for the overall layout and specific components of the proposal are discussed below.

- Relocation of Minninup Road to the rear (north) of the building. This will require a new creek crossing, removal of the existing septic tanks behind the Rowing Club and removal of the pine trees *Pinus sp.* east of the Rowing Club to enable the new road to re-join the existing road that continues on to Kings Park.
- The pine trees will be removed as they are introduced and contrast with the form and colour of the existing vegetation, reducing naturalness. They also have potential to spread.
- The open areas created by the removal of the pines will facilitate the development of a parking / turnaround area that will also have set down facilities for paddlers and long vehicle parking. Access to the Collie Kayak and Rowing Club shed will be integrated into the layout. Care will be taken to protect and retain the many Christmas trees *Nuytsia floribunda* in the area.
- A water point for use by fire trucks will be developed east of the old Rowing Club Shed foundations.
- The existing parking area will be removed (except for sections that are retained as paths), and converted to lawn for setting down paddle craft. New trees will be planted for shade and to ‘soften’ the area.
- The foundations of the old Rowing Club will be partially paved and developed as a trail head and interpretation node. A disabled accessible picnic table, cycle racks and bins will all be located in the vicinity.
- The steep banks will be revegetated and the existing gently sloping area just to the west will be retained as a beach for paddle craft launching and swimming, the sand will be replenished.
- The area around the fallen tree will be developed as a bush garden with local plants, possibly a sitting log and a plaque telling the story of the tree.
- A large skillion roofed shelter (approximately 4m x 12m) will be located west of the Rowing Club building for use by club members and the public. It will have 2 picnic tables and a central BBQ (disabled accessible) and possibly some panel walls for a community notice board.

- The area at the front of the shed will be hard stand or similar for use by pop up commercial operators such as coffee vans. There will be new picnic tables in this vicinity to complement the pop up business and the BBQ shelter.
- New toilets will be provided for use by club members and the public.
- East of the trailhead picnic tables will be provided in open areas along the river's edge adjacent to the parking bays keeping clear of the existing large blackbutt *E. patens* which could drop branches (if it is retained). This will be a low key 'bush' area once the bush has returned after the pine tree removal.



L: Existing Rowing Club Building



R: Existing Rowing Club Foreshore looking east

2.9 Infrastructure Details

The proposed infrastructure has been selected primarily on the basis of being fit for purpose but other reasons have also contributed to the selection of individual items including the following criteria.

- Feasibility of being built locally.
- Connection to other infrastructure used elsewhere in the SoC to give a cohesive aesthetic e.g. the bins will be the same as used in the town centre, toilet and shelter styles are used elsewhere in the region by DBCA.
- Naturalness in terms of colour and materials and the ability to be unobtrusive.

Due to the preference for building locally two options (one locally built the other 'off the shelf') are provided for some elements with the final selection to be made once the overall method of project implementation and management has been determined.

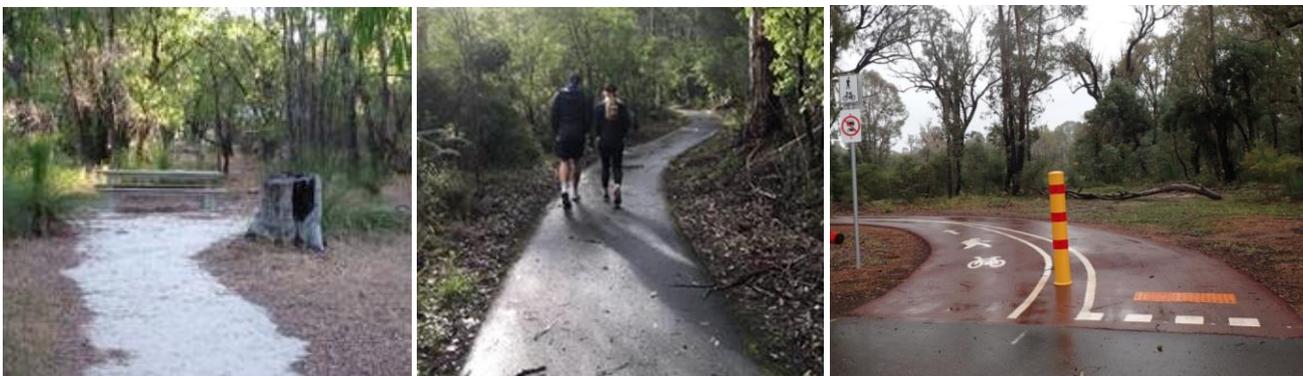
2.9.1 Roads and Paths

All roads will be black asphalt and there will be a hierarchy of paths from red asphalt collector paths to concrete paths of varying sizes to compacted shale or limestone and bush trails.

Road furniture will include concrete wheel stops, pine bollards, removable bollards and large yellow bollards as required in various standards. The removable bollards (or possibly service access gates) will be able to accommodate at least two padlocks so service vehicles can use one padlock and emergency vehicles another padlock. Signage will be a mix of standard road signs, custom signs and totems see sign section.



L: Typical parking with black asphalt, wheel stops and concrete collector path C: Low key road construction with speed hump R: Pine bollards



L: Compacted limestone path C: Black asphalt path R: Existing Dual Use Path

2.9.2 Toilets and Shelters

Due to the preference for structures to be built locally the toilet and skillion roof shelter designs currently being constructed by Department of Conservation and Biodiversity (DBCAs) at Lake Kepwari are proposed to be modified and used at Minningup Pool. Materials and colours will be adjusted to suit Minningup Pool. Alternative suitable designs would be Landmark 'off the shelf' Peninsular shelter range and Caretaker restrooms.



L: Lake Kepwari toilet



R: Lake Kepwari shelter, a smaller shelter is proposed for Minningup Pool

2.9.3 Site Furniture

As there is a preference for naturalness, tables and seats will have metal frames and timber slats, preferably jarrah. Metal work will be the Minningup Pool Grey see section 2.13.1 where feasible.

- Picnic settings - DBCA tables and benches can be built locally though Exteria Daintree settings which come in standard and wheelchair accessible versions will also be acceptable. Most will have concrete bases but some near trees may just have mulch.
- Seats – as seats with backs and arms are requested Exteria Courtyard seats are recommended.
- Plinth or table seats – of a DBCA design are proposed for informal areas such as at swimming decks.
- Bins – Exteria Frankland bins will be used in groups of three bins.
- BBQs – double plate electric BBQs will be used, at least one of which will be disabled accessible.
- Bike racks – Wombenger style bike racks which have been developed for the Collie Trails.



L: Exteria DA Picnic Table C: Exteria seat with back and arms R: Path for water's edge and DBCA seat



L: DBCA style plinth seat C: Disabled accessible BBQ R: Exteria Frankland bin



L: DBCA table without concrete C: Collie Bike Rack R: Wombenger bike rack

2.9.4 Refurbishing Infrastructure

Where infrastructure has disintegrated such as the retaining walls in the terraced area this is to be refurbished and as necessary redesigned. Natural earth blocks are proposed for retaining walls and steps together with stainless steel handrails or balustrades as required.



L: Natural earth retaining blocks

C: Stainless steel handrail

R: Concrete steps to be removed

2.10 Planting

A variety of planting is proposed for the foreshore as detailed below. Local provenance species will be used and seed will need sourcing in good time to enable plants to be grown to a suitable size.

- Shade trees – individual advanced trees will be planted in open areas for shade and amenity, mostly jarrah trees (*Eucalyptus marginata*) on the higher areas and paperbarks (*Melaleuca preissiana*) closer to the river.
- Low shrub planting of local species will be planted to give interest and enclosure to areas.
- Foreshore areas will be temporarily fenced and revegetated with rushes and other fringing vegetation. Coir logs will assist with stabilisation where needed.
- Irrigated lawn areas of kikuyu cultivars will be established.



L – C: Local Shrub Species

RC – R: Rush species and protective fencing for the foreshore areas

2.11 Services

The community requested flushing toilets and as the area is a flood plain all sewage needs removing from site either by sewer or carted out or processing on site. Power in some form is required for lighting, CCTV (both required for security), pumps and irrigation and for BBQs, so as services are to be supplied to the nearby accommodation the feasibility of extending the services to the foreshore was investigated. Council

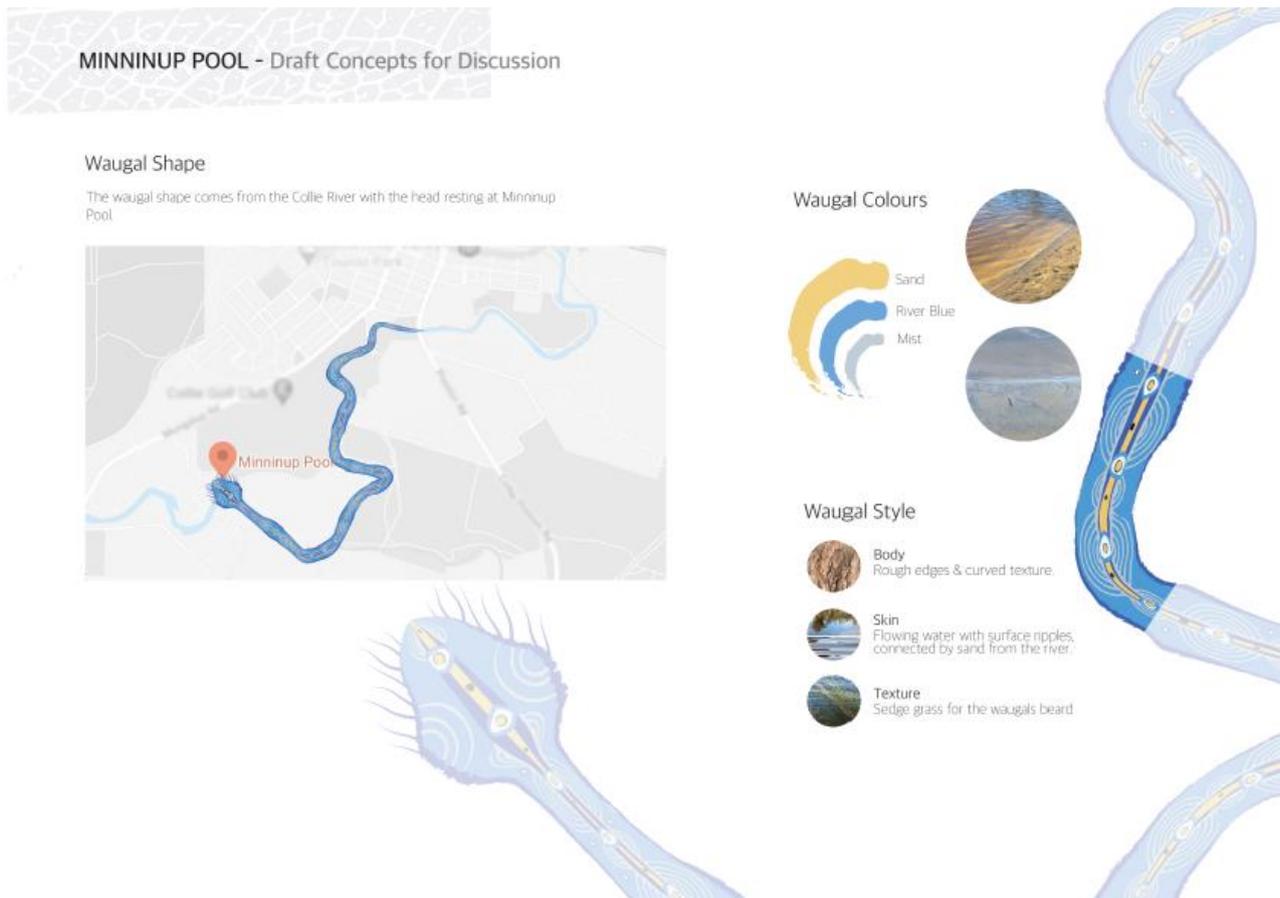
approved the extension of services to the Pool in November 2020, subject to funding and so proposals and indicative costs have been prepared on the basis that these services are available.

2.12 Interpretation

Visitor interpretation is proposed for each of the three precincts and along the walk trails. There will be a welcome feature at the main entry / arrival area and inclined panels at the interpretation nodes and along the trails. There is also the option of developing QR codes to add to the interpretation presented on site. The proposed structures and themes are identified below and require further discussion and approvals.

2.12.1 The Wagul and Proposed Interpretation Structures

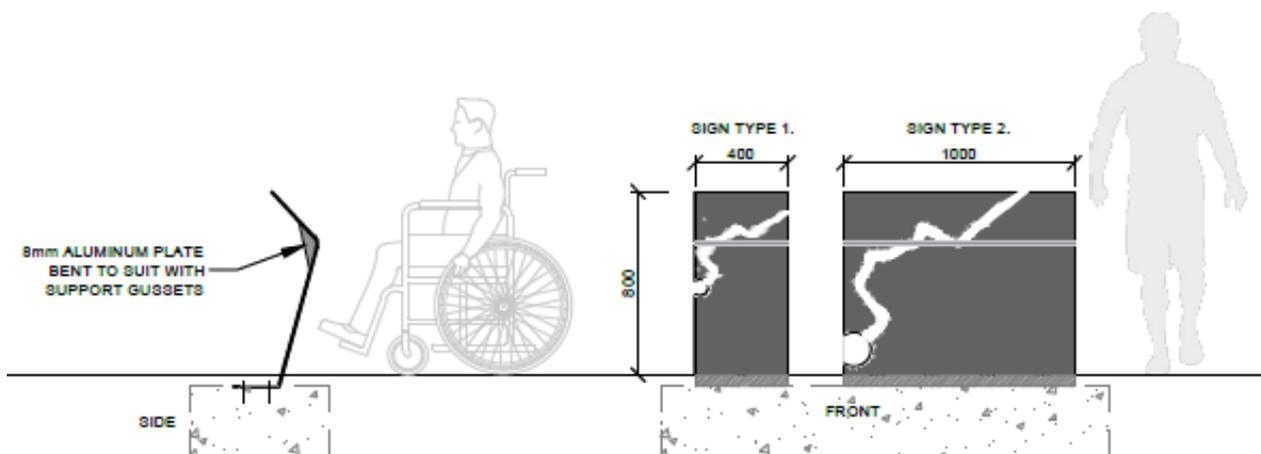
A graphic theme depicting the Wagul has been developed by a graphic designer⁶ and discussed with the Noongar Community, see below.



Colour and graphic concepts for Minningup Pool

It is proposed this theme will be used in the graphic design for each panel and possibly etched, cut out or applied to the vertical component of the panel structures.

⁶ Bunting Shaun, Tiger graphics 2020.



Sketch of side and front of proposed panel structures (indicative only)

The inclined panels at the nodes will be approximately 1000mm x 500mm and along the walk trails they will be smaller with 400mm x 300mm panels. See above for the general form of the panels and it is proposed there will be bespoke ‘Walgu’ artwork on the vertical component, either cut out, etched or applied.

Alternative panels including ‘off the shelf’ inclined panels are also shown below which illustrate the proposed sign sizes with the bright colour graphic (e.g. Colorlok) format that is also proposed. The structures below would be cheaper as they are a standard design and do not incorporate bespoke art work.

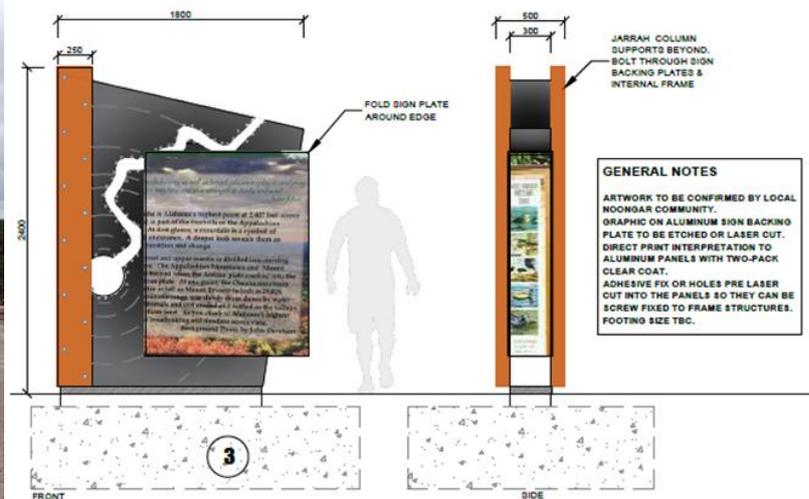


Figure 1 L: Similar Inclined Panel C: Typical Trailside Panel Format R: Large panel format with an alternative structure and similar proposed bright colours.

A large welcome feature is proposed for the main arrival area, see below for indicative concepts for and a conceptual Minningup structure, but alternatives will be considered at the graphic design production stage.

2.12.2 Main Arrival / Welcome area

At the main entrance point from the new car park, near two distinctive jarrah trees and where there is currently a picnic table, a large arrival welcome feature is proposed, similar to the ones shown below approx. 2500h x 1800w x 500d.



L: Indicative Welcome Feature though brushed aluminium would be used

R: Minningup concepts

The three proposed themes for the Welcome Area are:

- **Welcome to Minningup Pool** – a special place for Kaniyang Wilman people and a sacred place for the huge mythological serpent – the hairy Walgu which still inhabits Minningup Pool
- **Site map and district orientation map.**
- **Welcome to Kaniyang and Wilman peoples country**, and dialect map (linear panel on the end).

2.12.3 Central Picnic Area

Between the Arrival Area and the Rowing Club a small interpretation node will be set adjacent to the main path, near the central parking area. There will be an inclined panel 1000mm x 500mm with the themes:

- **Birds from the bush around Minningup.** You are likely to see several bird species – here are a few.
- **Wildfowl or feral?** There are many species of wild waterfowl at Minningup Unfortunately you also see many feral ducks that have invaded from the town site.

2.12.4 Bush Garden

A small bush garden is to be developed around the large tree lying on the foreshore and there will be an inclined panel 800mm x 400mm possibly with the theme

- **Trees** and their significance to Noongar people.

2.12.5 Rowing Club

In the interpretation node / trailhead on the foundations of the old Rowing Club there will be two inclined panels each approximately 1000mm x 500mm with the following themes.

- **'Settler's History'** Community history of sporting, picnics, and relaxation at Minningup. The story behind the Roberts Rocks Weir and dedication of the reserve etc.
- **Inset – Commander Collie** Surgeon on board H.M.S. Sulphur - part of convoy to found new colony of Western Australia. Lived in Albany 1829-1835 made particular friends with Noongar man, Mokare.

At the arrival area north of the Rowing Club building, not far from the toilets will be an orientation panel.

- An abbreviated version of the **Welcome** Area text and site orientation map.

There may possibly be a fishing sign for this trailhead area and liaison with the Department of Primary Industries and Regional Development (DPIRD) will be required regarding format of any signs and who is responsible for them.

2.12.6 Lookout at the top of the Concrete Steps near the Main Pool

At this circular lookout space will be an approximately 1000mm x 500mm inclined panel with the following theme:

- **The sacred river:** members of the Noongar community visit Minninup Pool after the death of a loved one to ask the serpent Walgu to accept the spirit of the deceased person and allow them to rest at this place in the afterlife.

A central circular panel approximately 1000mm diameter is proposed for the centre of the space with the following theme:

- **Noongar six seasons:** Noongar people divide the year into six seasons, and they passed through this area following the seasonal supply of food from the river.

2.12.7 Sandy Beach

At the interpretation node adjacent to the path overlooking Sandy Beach there will be an inclined panel approximately 1000mm x 500mm with

- An abbreviated version of the **Welcome** Area text and site orientation map.
- Alternatively modified **sacred river** story.

2.12.8 Trailside Panels

Eleven trailside panels will be provided along the Dual Use Path from Sandy Beach to Minninup Pool and the Rowing Club along the main Minninup Pool path where there are suitable plants. A smaller panel 400mm x 300mm will be used. Possible themes are:

- **Kaarl boodja koorliny** – burning country. Burning by the Noongar peoples occurred mainly during occasional mild periods of the dry summer months of Birak and Bunuru (December to March). They had a deep understanding of fire behaviour and ecosystem responses to fire.
- **Moodjar tree** (*Nuytsia floribunda*) commonly known as the Western Australian Christmas tree. The moodjar or kaanya tree” - kaanya, meaning recently departed soul - is regarded as “highly spiritual” because it was associated with the spirits of the dead.
- **Marri** - bush first aid kit
- **Banksia and other nectary plants.** Nectar was obtained from the flowers and a sweet drink was made from them.
- **Moonah - paperbark trees** (*Melaleuca sp.*) bedding, wrapping for transporting food, roofing mia mia etc.
- **Djiridji - zamia palm** (*Macrozamia reidlii*) produce baio seeds: a food which required considerable preparation before it could be eaten.
- **Balga - grass tree** (*Xanthorrhoea sp.*) The resin from balga plants was used in spear making and as an invaluable adhesive for Aboriginal people, the dried flower stalk scape was also used to generate fire, the leaves were used as roof material in mia mias.
- **Wonnil – WA peppermint** (*Agonis sp.*) and other medicinal plants and smoking ceremony plants.
- **Madja – edible root plants.** Bloodroot, orchid roots, bulbs and tubers, yangit reeds, were the main sources of vegetable food - gathering these was a task for the women and children.
- **Wuanga - wattles** (*Acacia sp.*) and other seeds –used for flour and damper.

- **The importance of trees to Noongars** - the spirits are still present in the landscape, and trees are a visual expression of this, so all trees hold some connection to the spirits.

Optional:

- **Protein supermarket: *bardi grubs, yonga* - kangaroo and other meats.**
- **Snottygobble**
- **Riverside reeds and the story of the hairs on the Walgu**

2.12.9 QR Codes and off-site Interpretation

The Noongar culture community meeting proposed the use of QR codes to link phones to website content enabling information of greater content depth and up to date accuracy to be made available to visitors. Signage and panels can be a portal to an online experience that is easily updated and expandable. The link could for example be hosted by the SoC and have more stories, audio clips and artwork.

Costs for QR codes all depend on how much you want to invest in quality content. To set up a supporting static web page connected by QR code to give a quality extra content for say the ten trailside panels on Noongar food may cost around \$50,000 This gets two pages - one for desktop / tablet user and another for the phone user. Populating it with more meaningful content – for example audio clips - makes it more interesting but the unknown cost here is in preparing the content.

This work is beyond the scope of the current project but could be considered for development in the future.

2.13 Signage

2.13.1 Sign Style

The signage for Minningup Pool is to be based on the DBCA sign style but will use colours that are specific to Minningup Pool. Initially the colour palette that was developed in association with the Wagul graphics was proposed but the development of branding and sign styles for the Collie Trails project identified a different range of colours to be considered. Consequently the Minningup Pool colour palette evolved using the greys from DBCA’s colours for the region, that are relevant for the Minningup Pool landscape and featuring the teal of the Collie Trails Wombenger logo.



Proposed Minningup Pool Colour Palette

The Wombenger Trails Sign Style Guide⁷ is also to be used for trail signage at Minningup Pool. The proposed trailhead in the Rowing Club precinct will be developed by the Collie Trails project in due course but the Guide will assist with signage along the dual use paths.

The range of signs proposed for Minningup Pool include

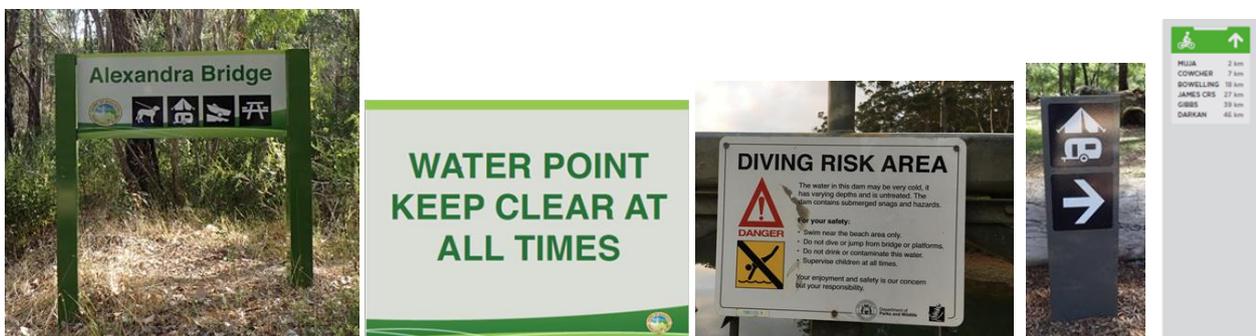
- Road signage – such as directional signage off Mungalup Road and regulatory signage for roads and trails, see below

⁷ Wayfound, The Wambenger Trails Signage Style Guide Version 1.1, February 2021.



Signage L: Brown Tourism signs C: Standard road signs C: Road crossing hoop rails R: DUP Signs

- Customised signs – generally using the Minningup Pool colour palette and requiring a graphic designer. These include site identification signs, directional signs and management signs in a range of sizes and colours.



L: Customised signs at Alexandra Bridge based on DBCA style guide C: Risk signage R: Totems

- Totems – will be used as much as possible to reduce the overall impact of signs. Reassurance signs along the trail will be totems in the WTSSG format.
- Shire of Collie Management Signs and Stickers – standard shire signage will be used as needed.

2.14 Management

The proposed works will require some specific management actions and other increases in management and maintenance are also likely including the following:

- Review of the Golf Course and Rotary Club leases as development is proposed to encroach on these lease areas.
- Fire management – a fire management plan is recommended to be prepared (by others) for the reserve (note an allowance is included in the indicative cost estimates) and this may require additional infrastructure. A new water point for filling fire trucks has already been requested and is proposed for east of the Rowing Club. Fire managers will require a separate key for accessing locked bollards etc.
- Provision and maintenance of emergency access is required and St. John’s Ambulance will require a separate key for accessing locked bollards etc. Provision of a defibrillator may also need considering.
- Soft landscape management will increase including mowing and lawn maintenance and maintenance of planting areas and new trees.
- Overhead risk management – regular inspections and management of trees will be ongoing.

- Management of river access structures will be ongoing – engineering checks of the structures and underwater checks for submerged hazards (as water levels are controlled this is likely to be less of an issue than at some other wilder rivers).
- Continuing management of water quality by monitoring at appropriate times will be needed to reduce risk to swimmers.
- Replenishing beach sand as required.
- Regular servicing of facilities including toilet cleaning, rubbish removal, BBQ cleaning, etc.
- Resources for paying for services such as power, sewer, water etc. will be required.
- The increased levels of infrastructure will require ongoing maintenance (painting, oiling timber, repairing etc.) and allowances for capital depreciation.
- Enforcement of the no camping policy and monitoring for unruly behaviour will be required including maintenance of the CCTV.
- Monitoring and recording of visitor use levels (vehicle counts, trail counters etc.) is recommended to assist with reviewing management actions and seeking future funds.
- If QR codes are provided resources will be needed to keep the associated information up to date and current.

It is recommended the ongoing need for increased management and maintenance resources is acknowledged and necessary resources are identified as part of the overall upgrades to the day use area.

3 Targeted Outcomes

The proposals aim to achieve some key outcomes from the overall development. These outcomes are identified below together with the elements or initiatives that are to contribute to these outcomes.

3.1 Incorporation of Noongar Values and Aspirations

Noongar values and aspirations are supported with the provision of the following in the proposals:

- Artwork – a Wagul entry sculpture is proposed and there are opportunities to develop Wagul inspired seats, paving and interpretation structures, a preliminary meeting with an artist to scope this project is recommended and preliminary funding allocated
- Welcome / arrival area – to welcome visitors to this important Noongar place.
- Yarning and storytelling opportunities – varied spaces proposed including a major yarning circle, terraces near the pool, a small lookout near the concrete steps and lawn areas near the bush garden.
- Sandy Beach Cultural Area – indicatively shown with yarning and display areas but development to meet the needs of the local Noongar community. A preliminary funding allocation is included but more may be required once the proposals are developed in detail.
- Proposed cultural centre – beyond the scope of this project but a site has been identified.
- Interpreted trails.
- Incorporation of Noongar values into site design – selecting and locating infrastructure in association with the Noongar community.
- Minningup Pool / Collie River Cultural Advisory Group – as input from the Noongar Community will continue to be integral to the development of proposals and management initiatives for Minningup Pool the formation of a formal advisory group is recommended (and costed) that can guide future development and management of the area.
- Monitoring during construction – will be required and is allowed for in the indicative costings.



L: Yarning Circle, but Minninup will have lawn



R: Yarning circle with covered fire pit

3.2 Provision of Sustainable Access to the River

The river's edge is currently degraded in a number of locations primarily due to the impacts of visitors but also due to erosion caused by runoff from adjacent compacted and paved areas. The overall strategy is to identify and where necessary 'harden' river access points for visitors and management and elsewhere revegetate the foreshore and manage erosion. The specific provisions include the following:

- Installing a pontoon – to provide a more challenging but low risk swimming opportunity. It will require a bathymetry survey, hazard survey and removal and ongoing management of water hazards.
- Reviewing access and stabilisation of the foreshore and banks in the vicinity of the existing concrete stairs. Proposals still being developed.
- Replenishing the beach below the terraces.
- Providing two sets of wide steps to access the river and be used for sitting and chatting.
- Replenishing and increasing the gently sloping sections of beach near the Rowing Club, and revegetating the steep sections. Stormwater will also be managed to prevent further erosion.
- Providing a hardened water point with access stairs for filling fire trucks.
- Restricting vehicle access to Sandy Beach so sections of the foreshore can regenerate while others remain sandy providing access to the river.
- Increasing the water retention capacity of surrounding parkland by managing compaction.
- Managing stormwater and runoff from parking areas so it passes through vegetated drainage lines, sumps or swales.



L: Foreshore erosion evident at low water levels R: Swimming access decks similar to those proposed

3.3 Increase the Capacity of the Foreshore Areas

Due to continued use of the area by the local community, likely increases in use due to the connections to trails, use of the area by visitors to the proposed nearby camping and accommodation areas and possible increases in day visitation the development proposals aim to increase the overall capacity of the foreshore areas. The proposals to achieve this include the following:

- Relocating roads back from the foreshore areas and providing parking on the foreshore side of these roads, so visitors have direct access to the foreshore but there are more areas free of vehicles for recreational use.
- Organising parking to maximise the number of vehicles that can be parked in a given area.
- Providing quality trails and associated facilities such as bike racks so visitors are encouraged to access the area on foot or cycle to reduce vehicle parking pressures.

3.4 Maintaining Naturalness

This key community aspiration will be achieved by the following proposals:

- Maintaining and enhancing existing vegetation where feasible and planting new trees, shrubs and foreshore vegetation.
- Particularly managing trees to sustain them into the future.
- Removing incongruous elements such as the pine trees.
- Setting structures into the landscape amongst other landscape elements and keeping them as small scale and simple as is feasible.
- Using natural forms, lines, colours and textures where feasible, particularly curvilinear lines and breaking up large expanses of grass or bitumen with areas of mulch or plantings.
- Minimising road design standards so the roads blend into the environment, particularly minimising the use of kerbs.
- Using low levels of night lighting.

3.5 Maintaining a Variety of Recreation Activities

The proposals contain a variety of provisions for recreation activities as follows:

- Swimming, the most popular activity will have sustainable access to the river at Sandy Beach and the pool and the new pontoon should provide new swimming opportunities.
- Relaxing, enjoying the view and the peace and quiet is supported by setting vehicles back from the river while still maintaining views from vehicles over the pool and providing seats along trails and paths.
- Picnicking, relaxing or celebrating with family and friends, and informal nature play is supported with irrigated grass, tree management and with the additional picnic tables, BBQs and shelters.
- Kayaking/canoeing/paddle boarding is provided for with increased lawn areas outside the Rowing Club, set down bays, increased long vehicle parking and a wide access path at Sandy Beach.
- Photography, bird watching and interest in wildflowers are sustained with the emphasis on retaining naturalness, interpretation, increased foreshore vegetation, provision of new planting areas and more trails in the bush.
- Bike riding and walking may increase with the new trails and there will be provision for dogs (clean up bags and bins).
- School excursions, events etc. will have larger areas free of vehicles and open grassed areas near shelters may provide areas for specific activities and gatherings or just facilitate informal kicks of the footy or hit and run cricket.

3.6 Increasing Access for the Less Able

Better disabled access was requested and with an aging population there is a focus on making all infrastructure more accessible. Specific provisions include the following proposals:

- Provision of disabled accessible parking bays and toilets.
- Aligning parking so there are views to the foreshore from cars where feasible.
- Providing a new path at disabled grades to access the beach below the terraces.
- Providing handrails where required (steps, swimming structures etc.).
- Investigating a wheelchair ramp to access the river at Sandy Beach.
- Providing wheelchair accessible shelters, picnic tables and BBQs.
- Providing some seats with arms and paved areas beside for wheelchairs to park.

3.7 Providing Amenity

The amenity of the foreshore will be sustained or improved with the following proposals:

- Replacement or upgrading of existing aging infrastructure such as the terraces, new bins and flushing toilets.
- Provision of new facilities such as barbecues and irrigated lawn areas.
- Provision of new shade shelters and new tree plantings to provide more shade long term.
- Provision of lighting and CCTV to enhance a feeling of safety and security.

3.8 Managing Visitor Risk

Proposals aim to mitigate identified visitor risks with the particularly significant risks noted below:

- Pedestrian / speeding vehicles conflict – vehicles speed along the existing roads and this will be managed by separating vehicle and pedestrian areas, road geometry, speed humps, etc.
- Recreationist / manoeuvring vehicle conflict – vehicles will generally be excluded from areas where children are likely to be playing.
- Overhead hazard risk – the risk of falling branches will be mitigated by an ongoing tree management program.
- River risks – will be mitigated by providing low risk swimming opportunities and ensuring there is ongoing management for these structures including maintenance and checking for underwater hazards. Also signage and information will advise of the risks and how to avoid them and water quality monitoring will continue.
- Dog risks – signage will advise dog owners of their responsibilities.
- Heat risks – shade shelter and trees are proposed and water will be available from the toilet blocks.

3.9 Minimising the Pressures on Management Resources

The increased provision of facilities will require additional servicing and maintaining by the shire and this will require additional resources as noted in section 2.12. Some strategies for managing ongoing costs have been included in the proposals as follows:

- High quality materials (which are often more expensive) such as stainless steel railings and vandal resistant finishes to interpretation panels, will be used to reduce ongoing maintenance costs.
- Incorporating advice from SoC managers on how to simplify maintenance such as enabling mowers to access spaces, providing necessary service vehicle access, locating bins where they can be easily emptied, using electric rather than gas BBQs, etc.
- Providing an automatic irrigation system and pumping water from the river to reduce ongoing water costs.
- Providing a new mower as part of the capital costs of the project.

However it needs acknowledging there will be significant ongoing increases in maintenance resources required with the increased level of infrastructure and servicing proposed.

4 Indicative Costs

4.1 Introduction

The cost estimates (prepared in December 2020) should at best be considered indicative as they are based on very preliminary quantities and general rates. The project has evolved with a higher level of infrastructure being provided than was initially envisaged and although in general, suppliers have provided prices for this infrastructure provision, these were only ever requested to be indicative. The costs are still considered to be indicative (at May 2021) as although some items have been added others have been deleted but it is recommended that the SoC engage a quantity surveyor to confirm cost estimates once documentation of Part D is complete for detailed funding applications and before quotes or tenders are called for construction. It is also understood contractors and consultants are becoming very busy with the current increase in construction projects and this may further influence prices.

4.2 Indicative Costs

Table 2 Indicative Costs Ex. GST

Item	Comment	Cost Ex GST
WHOLE OF PROJECT/PREPARATORY COSTS		
Project Management	10% of Project cost, see cost summary	
Project manager		
Construction supervisor		
Obtaining approvals		
Ongoing Noongar Input and Management		
Monitors during construction		\$25,000
Collie River Aboriginal Reference Group or similar	For 2 years	\$12,000
Noongar Art Project – scoping meeting with art consultant to identify projects to be worked on.		\$5,000
River Investigations		
Bathymetry Survey		\$8,000
Detailed underwater assessment by divers		\$5,000
Removal of debris as required.		\$20,000
Design drawings and fabrication drawings of structures		\$20,000
Services		
Water and sewer delivered to precincts between \$1.525m - \$1.514m NB Connection costs to outlets to be included in cost of structure e.g. toilet	Of total cost water reticulation costs to - Sandy Beach - Minninup Pool and Rowing Club Consultancy fees	\$50,000 \$60,000 \$20,000
	Of total cost sewer reticulation costs to - Sandy Beach - Minninup Pool and Rowing Club	\$60,000 \$90,000

	Consultancy fees	\$20,000
Power delivery to precincts Between \$493k - \$659k - \$628k	Of total cost power costs extension to the precincts is between \$233k - \$293k - \$336k excluding environmental costs	Say \$250, 000
Electrical distribution and lighting	Design Fees Sandy Beach - Power and Lighting Minninup Pool – Power and Lighting Rowing Club – Power and Lighting	\$15,000 \$62,000 \$158,000 \$134,000
CCTV	If power not available add another \$45k for solar power	\$140,000
Irrigation – supply, construct and commission	Design to be included as design and construct.	\$130,000
Detail Design		
Road design and hard and soft landscape design	Generally covered by existing contract	
Preparation of new construction drawings for toilet and shelter based on DBCA designs		\$5,000
Graphic design - signs		\$3,000
QR Codes for 10 trailside plaques, no audio		\$50,000
Other		
Seed Collection for propagation of local provenance plants		\$5,000
New mower for grass areas		\$30,000
Fire management plan		\$10,000
	SUBTOTAL	\$1,387,000
SANDY BEACH (INCLUDING SANDY BEACH ROAD UPGRADE)		
Weed removal (by Shire)		\$8,000
Basic Engineering costs - Protective barriers for trees, clearing, earthworks, pavement construction, kerbing, humps, paths, drainage, line marking		\$377,000
Paths (included in above engineering costs) – Dual Use (2.5m), collector (1.5m), compacted limestone and service access		
Canoe launch ramp	Compacted limestone say	\$1,000
Wheelchair swimming access	2m wide concrete path approx. 25m Handrail stainless steel	\$5,000 \$10,000
Specialist tree works		\$25,000
Bollards, barriers and gates – supply and install		\$20,000
Signs – design, supply and install		\$13,000
Interpretation – design, supply and install		\$17,000
Toilets – Cubicles - 2 Unisex DA and 2 unisex ambulant, supply and install, Lake Kepwari style	Alternative is Landmark Caretaker approx. \$90,000	\$110,000
Shelters – 2 x skillion, medium size 6m x 4m supply and install	Lake Kepwari style TBA Landmark Peninsular \$16,000	\$32,000

Furniture – supply and install, bins, BBQ, picnic settings (DA and standard), dog waste bag dispenser and cycle racks		\$105,000
Planting – advanced trees (paperbarks), foreshore rehabilitation, tidy up mulching and dry grass		\$44,000
Cultural Area	To be developed by Noongar community, allow \$50,000 to start	\$50,000
	SUBTOTAL	\$817,000
MINNINUP POOL PRECINCT		
Weed removal (by Shire)		\$2,000
Basic Engineering - Protective barriers for trees, clearing, earthworks, pavement construction, kerbing, humps, paths, drainage, line marking		\$403,000
Paths (most included in above engineering costs) – Dual Use (2.5m), Black asphalt (3m) collector (1.5m), Wheelchair accessible beachside path, service access, links to informal MTB trails	Extras - low walls either side at culverts/creeks \$3,000 Stainless steel handrail along wheelchair ramp \$20,000 Links to informal MTB trails \$1,000	\$24,000
Yarning Circle	Sitting logs and fire pit	\$10,000
Terraces –walls, steps and handrails		\$40,500
Lookouts and other masonry structures, including stepping stones		\$22,000
River Access Structures – refurbishment of concrete steps area, beach replenishment, 2 x swimming access stairs, pontoon		\$245,000
Toilets – 2 Unisex DA and 2 unisex ambulant, supply and install, Lake Kepwari style	Alternative is Landmark Caretaker approx. \$90,000	\$110,000
Shelters – skillion 1 small and 1 large, Lake Kepwari style	Lake Kepwari style TBA Landmark Peninsular \$13,000 and \$23,000	\$36,000
Specialist tree works		\$48,000
Bollards, barriers and gates – supply and install		\$26,000
Signs – design, supply and install		\$11,500
Interpretation – design, supply and install	DPIRD signs not included Includes welcome feature \$22,000	\$57,500
Entry Sculpture	Costs depend on scale \$80 - \$200,000	\$120,000
Furniture – supply and install, bins, BBQ, picnic settings (DA and standard), seats with backs and arms, custom seat for lookout, dog waste bag dispenser and cycle racks		\$105,500
Planting – advanced trees (jarrah and paperbarks), low shrub planting, foreshore rehabilitation, tidy up mulching and turf areas.	Note Establishing turf 2,500m2 @ \$22/m2 = \$55,000	\$95,000
	SUBTOTAL	\$1,356,000
ROWING CLUB PRECINCT		
Weed removal (by Shire) including removing pines		\$10,000
Basic Engineering - Protective barriers for trees, Clearing, earthworks, pavement construction, kerbing, humps, paths, drainage, line marking		\$335,000

Paths (included in above engineering costs) –Black asphalt (3m) collector (1.5m), service access, trailhead node.		
Landscape construction – old boatshed foundation, reshaping beach and logs for bush garden		\$5,000
River Access – beach replenishment and water point construction		\$25,000
Toilets – 2 Unisex DA and 2 unisex ambulant, supply and install, Lake Kepwari style	Alternative is Landmark Caretaker approx. \$90,000	\$110,000
Shelters – 1 large, Lake Kepwari style	Lake Kepwari style TBA Landmark Peninsular and \$23,000	\$23,000
Specialist tree works		\$45,000
Bollards, barriers and gates – supply and install		\$12,000
Signs – design, supply and install		\$9,500
Interpretation – design, supply and install		\$22,000
Furniture – supply and install, bins, Disabled Accessible BBQ, picnic settings (DA and standard), seat with back and arm, dog waste bag dispenser and cycle racks		\$84,500
Planting – advanced trees (paperbarks), low shrub planting (Bush Garden), foreshore rehabilitation, tidy up mulching and turf areas.	Note Establishing turf 1,500m2 @ \$22/m2 = \$33,000	\$43,500
	SUBTOTAL	\$724,500

Table 3 Summary of Total Project Costs Ex GST

	Preparatory	Sandy Beach Precinct	Minninup Pool Precinct	Rowing Club Precinct
Subtotals	\$1,387,000	\$817,000	\$1,356,000	\$724,500
10% Project Management	\$138,700	\$81,700	\$135,600	\$72,450
10% Contractor Overheads	\$138,700	\$81,700	\$135,600	\$72,450
20% Contingency	\$277,400	\$163,400	\$271,200	\$144,900
	\$1,941,800	\$1,143,800	\$1,898,400	\$1,014,300
			GRAND TOTAL	\$5,998,300 Ex GST

4.3 Works Staging

The costs have been broken down into the separate precincts with a ‘whole of project’ section which mostly consists of necessary preparatory works. Provision of power, water and electricity are a major part of the preparatory works as they need to be installed preferably before road and path construction to avoid digging up newly laid surfaces. They are also required for toilets, BBQs etc.

If items such as road construction are staged according to separate precincts it will be more expensive overall due to extra mobilisation costs for each stage.

Components of the project that could be implemented relatively independently of other works include the following.

- Installing the pontoon.
- Installing the swimming access steps and associated foreshore stabilisation (though local provenance plants may take time to source).

- Possibly undertaking restoration works in the vicinity of the existing concrete steps.
- Arboricultural work – particularly managing many of the existing trees and spreading mulch on their root zones.
- New picnic shelter near the Rowing Club (once adjustments have been made to the Rowing Club lease).

References

Brighthouse, The Minninup Pool Demand and Pre-feasibility Study prepared for the Shire of Collie and the South West Development Commission, December 2019

Ecoedge, Reconnaissance and Targeted Flora and Vegetation Survey at pt. Reserve 34343, Collie, 2018

Mitchell, Myles and Rosie Halsmith, The Minninup Pool Precinct Project: Aboriginal Engagement and Heritage Assessment - Visioning Report, 2019.

Planned Focus, Minninup Pool Reserve Site Analysis, Prepared for Shire of Collie, March 2019

Vicki Winfield & Associates, 'Communication Plan For the Shire of Collie, Minninup Pool Tourism Precinct Detailed Design and Costings for Day Use Area Project', unpublished, May 2020.

Wayfound, The Wambenger Trails Signage Style Guide Version 1.0, December 2020.

List of Tables

Table 1 SWOT Analysis

Refer page

Table 2 Indicative Costs Ex. GST

Table 3 Summary of Total Project Costs Ex. GST

Appendices – Refer Part C

NB The Appendices are in separate documents and to avoid duplication, reference should be made to the Part C appendices as these are the same documents as are referred to in this Part B.

Appendix 1C – Map 3 Master Plan Context

Appendix 2C – Precinct Master Plans (3)

- Minninup Pool Day Use Area Upgrade – Master Plan –Sandy Beach Precinct;
- Minninup Pool Day Use Area Upgrade – Master Plan – Pool Precinct and
- Minninup Pool Day Use Area Upgrade – Master Plan –Rowing Club Precinct.

Appendix 3C – (3) Artistic Impressions

- Minninup Pool: Entry;
- Minninup Pool: Foreshore and

- Minninup Pool: Sandy Beach.