

A photograph of a paved path curving along a coastal area. The path is bordered by low-lying green shrubs and leads towards a bright blue ocean under a clear sky.

**SHIRE OF DANDARAGAN**

**PATH  
NETWORK PLAN**

**2022- 2032**

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## 1.0 INTRODUCTION

The Shire of Dandaragan is an attractive locale for walking and cycling, with its quiet residential streets, coastal exposure and proximity to the future Principal Shared Pathway (the Turquoise Way Path), along the Avon-Central Coast Regional 2050 Cycling Strategy network.

The Shire first commissioned preparation of a Bike Network Plan in 2015, that provided a list of recommended works to be carried out throughout the towns of Jurien Bay and Cervantes from 2015-2020, to enhance their cycling facilities. Since this time, there has been growth in cycling participation within WA and the Shire of Dandaragan are looking to progress upgrades to the network by expanding areas of path for recreational activities to include the nearby Badgingarra and Dandaragan town sites.

The purpose of this Path Network Plan is to identify and describe directions for improvements to existing and future path routes and new path infrastructure within the Shire of Dandaragan over the next 10 year period (2022 to 2032), for the following communities:

- Jurien Bay
- Cervantes
- Badgingarra; and
- Dandaragan

The approach by the Shire to link key destinations throughout each of the Shire's townsites to improve existing pathways is also highlighted within the Jurien Bay Growth Plan developed in 2012 through the State Government's Wheatbelt Development Commission and the Shire of Dandaragan.

Providing connections between key destinations will facilitate pedestrian and cyclist movements through each townsite. This Path Network plan identifies potential locations for future paths to be prioritised and help to develop a functional path network that provides safe and non-motorised transport modes for incidental exercise resulting in community health benefits that link to these strategic locations.

By linking these proposed pathways, as outlined in this Plan, the Shire envisages encouraging walking or cycling over the use of vehicles, with an interconnected network of paths, putting the majority of residents within a 10 minute walk of beaches, public open space areas or community facilities.

This Plan is intended to provide path objectives and guidance on the activities required to meet those objectives.

The Shire of Dandaragan currently has 158,995m<sup>2</sup> of footpath of which 109,412m<sup>2</sup> is concrete. Based on calculations of \$60/m<sup>2</sup>, over a life span of 55 years before reaching end of life, Council would need to commit a total of \$173k per annum to renew the existing path network.

This Path Network Plan proposes projects totalling up to \$1.25million over 10 years resulting in an annual commitment of approximately \$125,000.

Furthermore, the need for network pathways is dependent upon the following factors - traffic volume, the condition of particular roads/streets, pedestrian demand, and funding, therefore it is important to note that these conditions or demand may change over time. As a result of these changes, flexibility around project delivery needs to be taken into consideration by the Shire when seeking funding.

## 1.1 Project Area

The Shire of Dandaragan is a local government authority located in the Wheatbelt region of Western Australia, approximately 200 kilometres north of the state capital, Perth. This Path Network Plan will focus on the four most populous centres of the Shire which are the townsites of Badgingarra, Cervantes, Dandaragan and Jurien Bay.

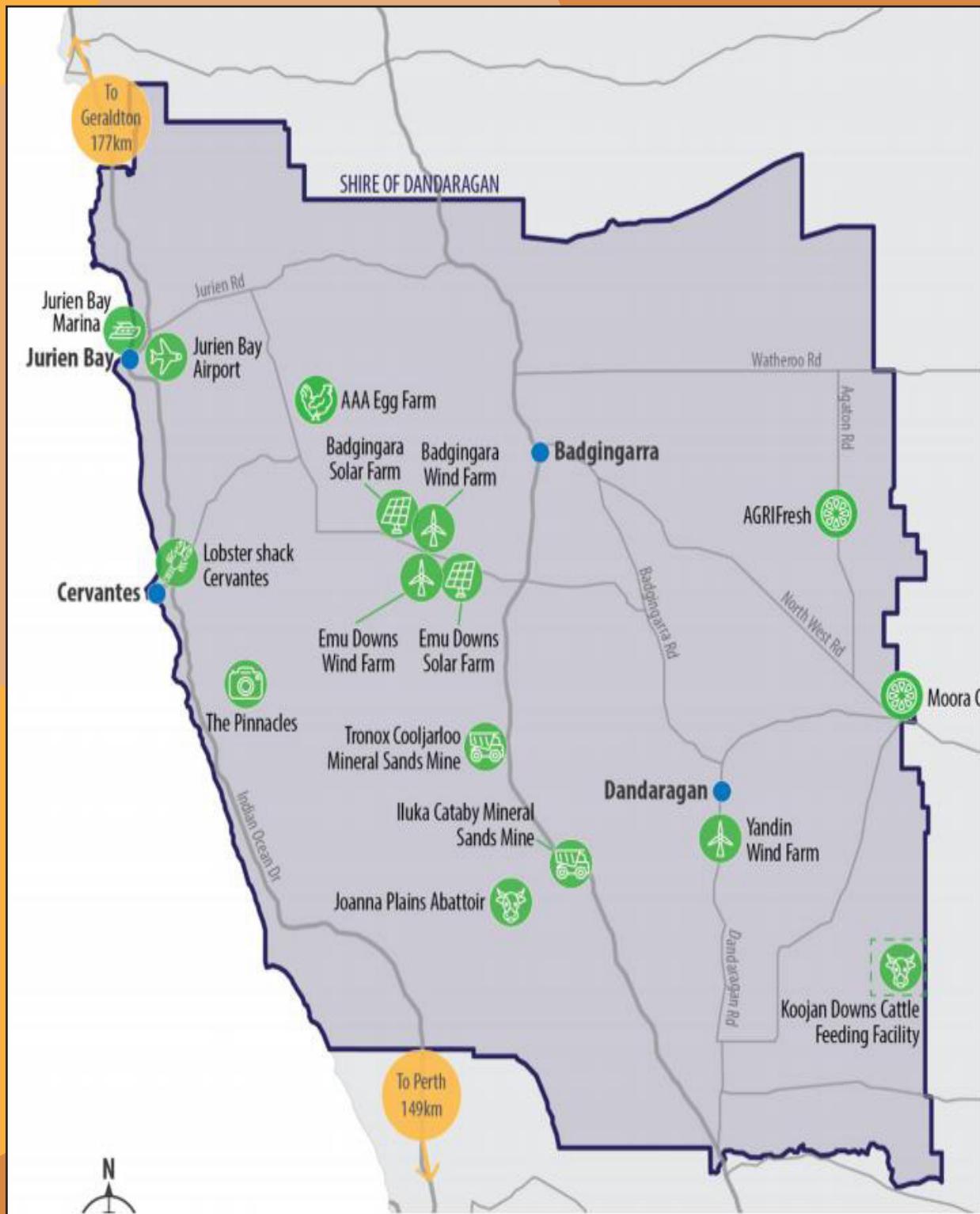


Figure 1 – Shire of Dandaragan Map  
Source: Shire of Dandaragan Economic & Tourism Development Strategy 2020

## 1.2 Purpose

The Shire of Dandaragan has all the ingredients required for great recreational bike riding and walking – warm weather, rolling landscape, and outstanding natural beauty. Transport WA are reviewing existing infrastructure and creating Long-Term Regional Cycling Strategy Plans that will integrate networks throughout Regional WA. The Avon-Central Coast Regional 2050 Cycling Strategy is currently in development and will review the wider shared path network of the Shire and its integration to Regional WA. Figure 2 below outlines the many and varied reasons why investment in shared path networks will benefit the wider community.

HEALTH	ENVIRONMENTAL	ECONOMIC	SOCIAL
<ul style="list-style-type: none"> <li>Inactivity is estimated to cost Australia's economy \$13.8 billion per year</li> <li>Cycling burns around \$1,200 kilojoules/hour the recommended daily "energy burn" through exercise</li> <li>Riding ½ hour each reduces the risk of obesity high blood pressure, high cholesterol and diabetes</li> <li>Bike riders take one less sick day/year</li> <li>Riding reduces stress, anxiety and depression</li> <li>Riding to work or the shops is one of the most time efficient ways to combine exercise with daily routine activities</li> </ul>	<ul style="list-style-type: none"> <li>Bikes produce \$5 times less air pollution, consume 53 times less water and produce 13 times less carbon dioxide equivalent emissions than cars over their life cycle</li> <li>Bike riders are two to three times less exposed to air pollution than car drivers</li> <li>Riding 7.5 kilometres to work and not driving saves 1 ton of carbon dioxide emissions/year</li> <li>8 people riding to work each day offset the same emissions as 1 hectare of forest/year</li> <li>Trips by bike are free; car trips cost 5.9 cents a kilometre in carbon dioxide emissions and water, air pollution &amp; noise pollution</li> </ul>	<ul style="list-style-type: none"> <li>Traffic congestion will cost Australia \$20.4 billion per year by 2020</li> <li>Bike riders spend 20 times less in maintenance and operational costs than drivers</li> <li>Bike lanes can increase local retail sales by 25%</li> <li>Bike parking saves space: 6-8 bikes can fit into one carpark space</li> <li>A bike rider takes up a third less space than a moving car</li> <li>The Australian government spends close to \$30 million per day in maintaining and improving the transport network – bikes require less infrastructure and do much less damage to roads than cars</li> </ul>	<ul style="list-style-type: none"> <li>Bike riders contribute to quieter more attractive neighbourhoods with less traffic and improved safety</li> <li>Bikes boost independence for people who do not drive</li> <li>Bikes promote social, economic, age and ability equity</li> <li>Bikes enable young people to be independent and develop healthy habits</li> <li>More people riding make streets safer for everyone</li> </ul>

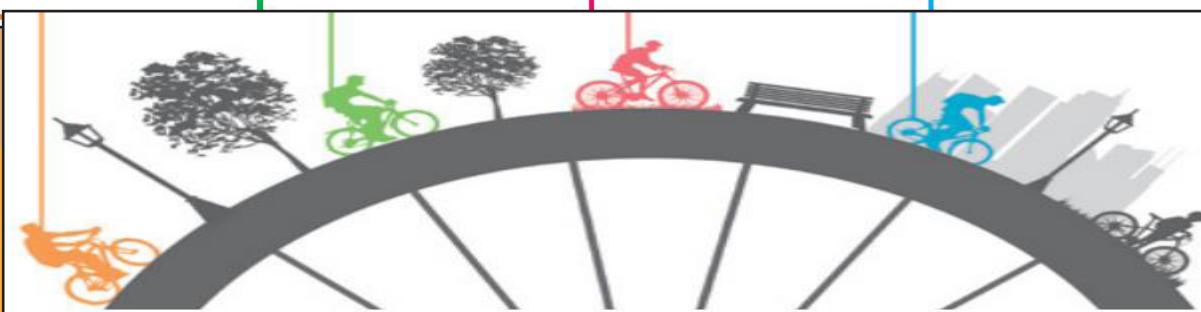


Figure 2 - How Do Shared Paths Benefit the Community?

Source: City of Melbourne Bicycle Plan

### 1.3 Local Bike Network Context

This Network Plan will be part of the overall Western Australian Bicycle Network (WABN) Plan. The Avon-Central Coast Regional 2050 Cycling Strategy is anticipated to be released by the end of 2022.

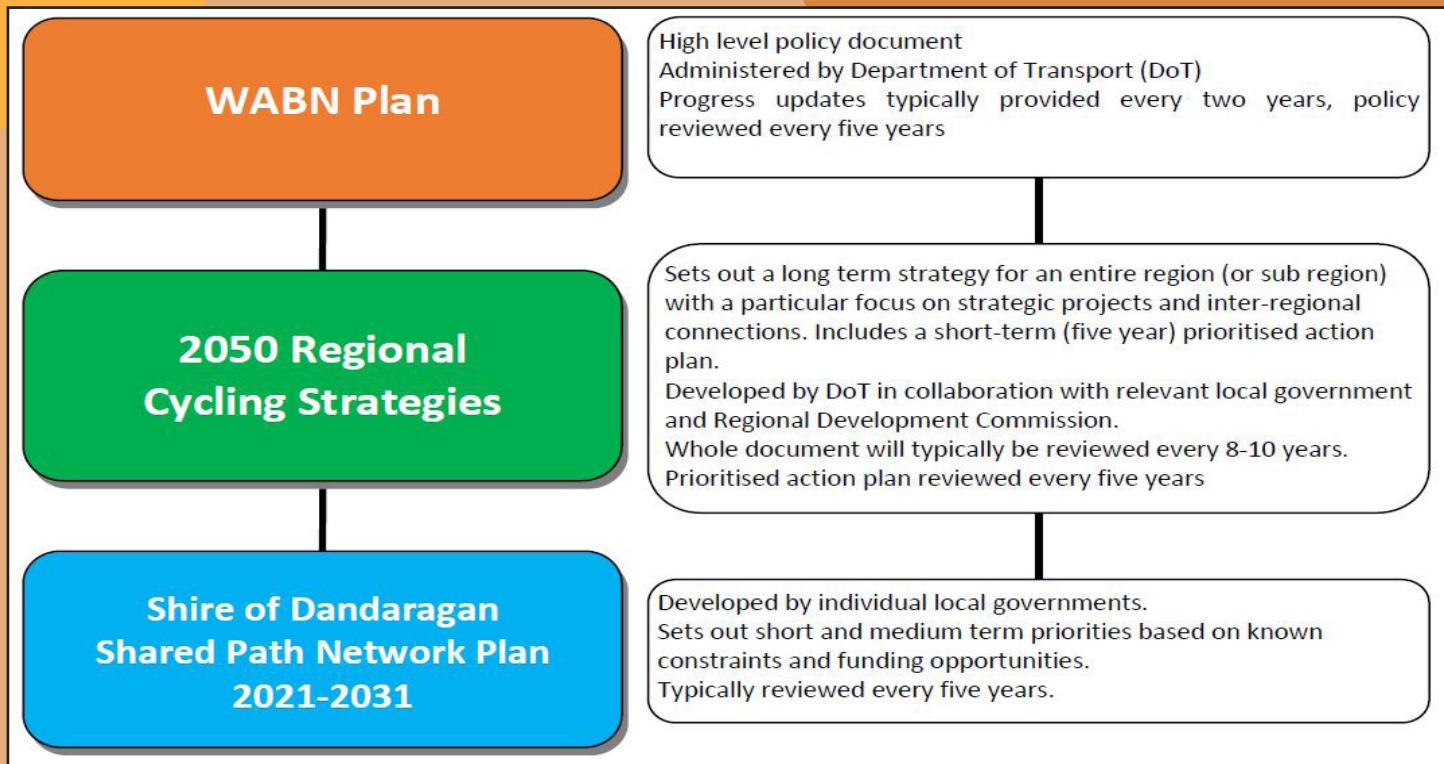


Figure 3 - Bike Plan Integration  
Source: Department of Transport



## 1.4 Policy Input

The Path Network Plan will assist the Shire of Dandaragan in achieving objectives in their wider community plans such as:

- Shire of Dandaragan Strategic Community Plan 2019-2029 – Envision 2029;
- Shire of Dandaragan Draft Urban Design Plan 2021 (3.5 Opportunities 04)
- Shire of Dandaragan Local Planning Strategy 2020 (4.9 Transport Infrastructure)
- Jurien Bay Growth Plan 2012

“Our built environment responds to the accessibility and connectivity needs of all residents providing equitable access and opportunity for participation.”

“Provide a well-designed and safe transport and shared path network that connects people to their destinations and encourages non motorised journeys within townsites.”

In addition, the population of the Shire is ageing at a faster rate than WA<sup>1</sup>, meaning it is even more essential to consider future proofing the network by incorporating strategies such as the 8 to 80 Cities<sup>2</sup> (Urban Transformation), and Safe Active Street initiative developed by the Department of Transport.

## 1.5 Analysis of Crash Data

The most recent crash statistics were obtained from the Main Roads WA IRIS Database Crash Analysis Reporting System (CARS), of the 167 crash incidents recorded between January 2016 and December 2020, none resulted in injury to pedestrians or cyclists. Whilst the records show excellent safety for cyclists, data has shown that where cyclists are exposed to speeds in excess of 30km/hr, the risk of a fatal accident increases significantly. Consideration to lowering speed limits where a major Shared Path (SP) runs parallel to a main road within the Shire will be explored further in the sections below.

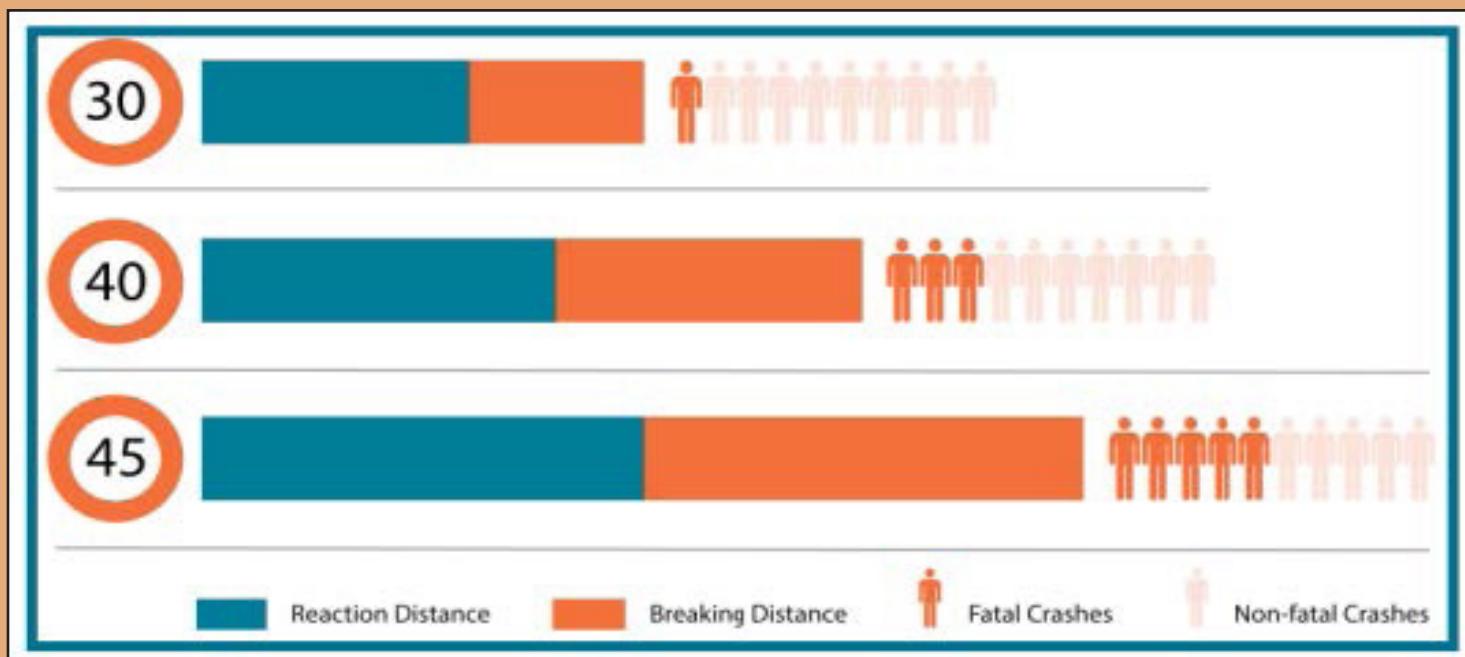


Figure 4 - Speed Safety  
Source:Auckland Transport

<sup>1</sup> Shire of Dandaragan Aged Care Strategy ZKC Consulting May 2011

<sup>2</sup> Global Initiative <https://www.880cities.org/>

## 1.6 Overview of Existing Services

A review carried out by the Shire of Dandaragan in early 2021 of the existing path network shows that 86% of paths are currently in good or excellent condition and of the pathways surveyed, 94% of these consisted of either concrete or red asphalt sealed construction.

The path network covers a total area of 158,995m<sup>2</sup>, an increase of 5% since the original 2015 Bike Network Plan was commissioned.

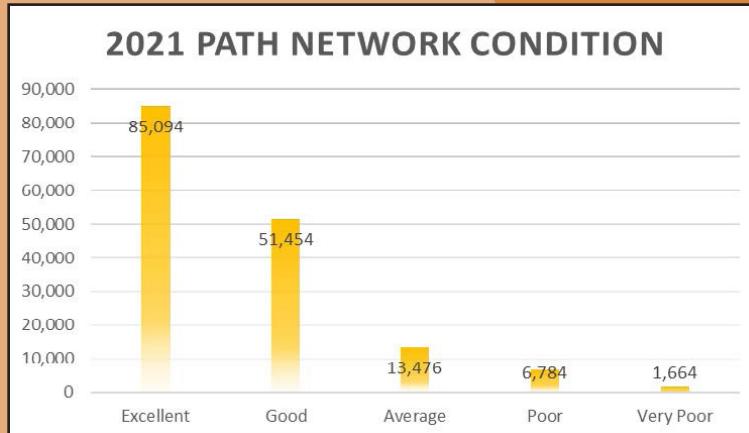


Figure 5 - SoD 2021 Path Network Condition Survey

## 1.7 Path Construction

The Path Network Plan has allowed for three types of paths to be installed; however, this will be defined further at detailed design stage depending on existing site-specific conditions. For the purpose of this report, the following three path types considered are:

- Shared Path
- Footpath
- Unsealed Path

The construction of each of these paths is as follows:

Path Type	Construction Details
Shared Path	concrete or bituminous seal, minimum 3 metres wide, can include linemarking
Footpath	concrete or bituminous seal, minimum 1.8 metres wide
Unsealed Path	gravel, limestone or road base; minimum 2.5 metres wide,

Table 1 - Path Construction

## 1.8 Recommended Path Network Processes

The proposed projects identified within this Plan have been identified as potential pathways to be constructed over the next 10 years to help provide direction for future planning of path routes.

Set guiding principles have been established by the Shire of Dandaragan in development of this Path Network Plan as follows:

- Equity – ensure equitable provision across place and communities to support people to walk and cycle more often
- All ages, all abilities – with the increased aged population anticipated in the Shire of Dandaragan, ensuring that the network is suitable for a wide range of ages is essential.
- Evaluation – monitoring of the network to ensure identification of asset renewal on end of life approach



## 1.9 Bike Network Gap Analysis

Areas that have not been explored as part of this path network review that may have an impact on proposed works are listed below:

- Community consultation
- Lighting
- Surveys (topographical and services)
- Future residential development areas
- Land tenure
- Environmental sensitivity
- Title and heritage
- Arborist Reports

## 2.0 CURRENT PROJECT PIPELINE

Summary of proposed path infrastructure projects that are funding approved or in the planning stages:

Town	Location	Description	Status
Badgingarra	Badgingarra Public Toilets Car Park along Meagher Drive	New shared path	Potential revised reserve project with the Department of Transport (DoT)
Cervantes	Ronsard Park to Seville Street	Upgrade existing unsealed path to shared path	Funding approved for 2022-2023 (partnership with the DoT)
	Thirsty Point to Thirsty Point Walk/ Hansen Bay Lookout to Hansen Rd	New shared path	In planning for inclusion in DoT's Avon-Central Coast Regional 2050 Cycling Strategy
	Hansen Bay Rd to Cervantes Rd	New shared path	In planning for inclusion in DoT's Avon-Central Coast Regional 2050 Cycling Strategy
	Cervantes Rd to Aragon/Seville Sts	New shared path	In planning for inclusion in DoT's Avon-Central Coast Regional 2050 Cycling Strategy
Jurien Bay	Lindsay St	Shared Path	Project approved for completion in 2022-2023
	Bashford St (Indian Ocean Drive) to Coalseam Drive	New shared path	Current reserve project with the DoT and in planning for inclusion in DoT's Avon-Central Coast Regional 2050 Cycling Strategy

Table 2- Current and Future proposed projects



### 3.0 JURIEN BAY NETWORK

Jurien Bay is the largest town in the Shire of Dandaragan situated 220km north of Perth. The town has the capacity for fast future expansion with services and land development works well underway. The existing network in Jurien Bay is well established on the main travel routes and completion of the Turquoise Way Path has increased coastal access for all. Improvement of connectivity in the local area and introducing path amenities will enhance the town's path network even further.

- Population in 2019: 1,790
- Largest town in the Shire of Dandaragan
- Services and land available for significant growth (around 20,000+)
- Turquoise Way Path was identified as a strength in the recent community consultation carried out.

#### 3.1 Overall Current Network

Existing network plans are located in Appendix A

Jurien Bay is relatively flat topography located on the coast of central Western Australia (refer to topography map provided below Figure 6). The southern half of the town is well connected with most new builds now including footpaths as part of land development works.

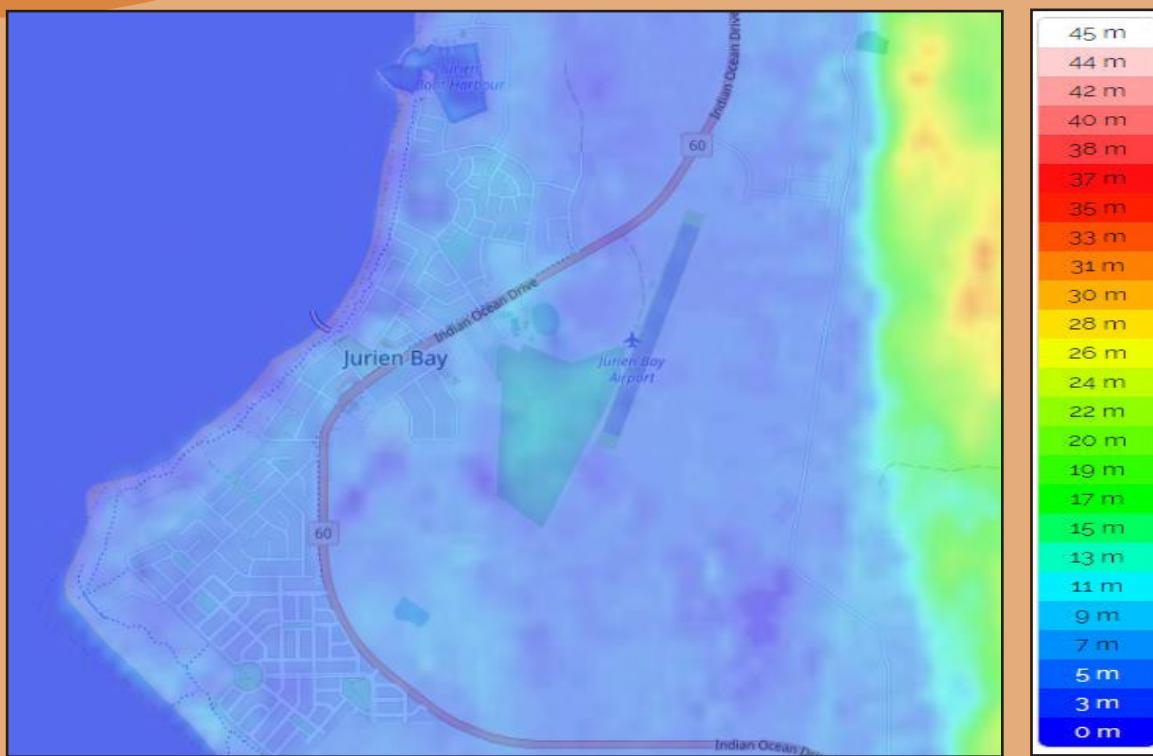


Figure 6 - Jurien Bay Isothermal Map  
Source: <https://en-au.topographic-map.com/>

#### 3.2 End of Trip Facilities

There are a number of formal parking options available to cyclists in Jurien Bay within the Town Centre. To continue to improve the parking network, the possibility of adding parking facilities in key locations with natural shade should be explored. For example, locations with existing tree cover and nearby to the main tourist attraction areas would be an economical option.

Offering water stations for pedestrians and cyclists along the main path network would enhance the existing network for potential walkers and cyclists. Whilst there are no plans currently to add water stations, this could be an area to focus on in the near future. Below in Figure 7 is a diagram of the existing potable water network in Jurien Bay which shows there are a number of locations along the coast, and in the town, that could provide excellent locations for water facilities.

A long term upgrade, to be considered, could be the installation of repair stations around the town or in the remote sections of pathway. Refer Figure 8 below. These stations require no services for installation.

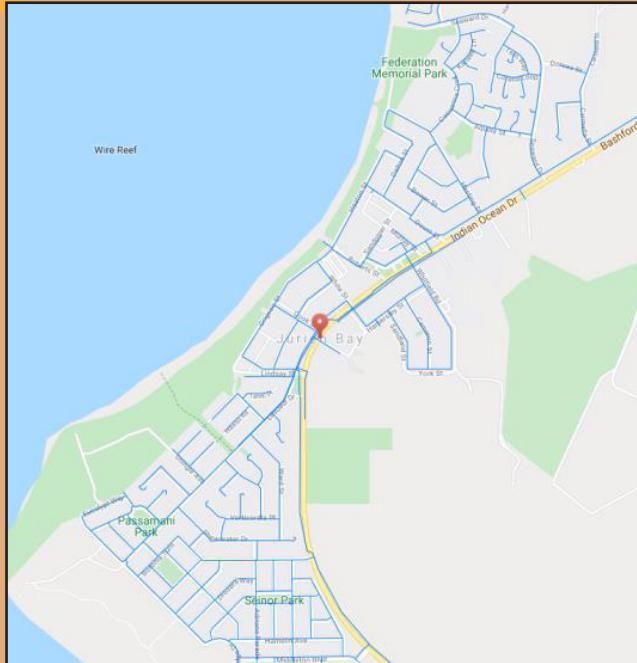


Figure 7 - Jurien Bay Potable Water Supply  
Source: <https://www.mngaccess.com.au>



Figure 8 – Public Bike Repair Station  
Source: [www.all4cycling.com.au](http://www.all4cycling.com.au)

### 3.3 Traffic Analysis

Whilst current traffic data indicates safety on the roads in and around the Jurien Bay area is good, Shire's planning documents outline that future planning for significant growth is to be considered in the long term.

To ensure Jurien Bay is an 8 to 80 city of the future, consideration should be given to the following opportunities to improve safety when population increases occur.

Implementation of these now will provide priority to path users across intersections between paths and minor access roads of Bashford Street and Hamersley Street.

### 3.4 Proposed Opportunities

MAP ID	PRIORITY LISTING	ROAD	NETWORK TYPE	CONSTRUCTION TYPE	SCOPE	INDICATIVE COST	FUNDING POSSIBILITIES
1	High	Bashford St	expansion	Shared path	LIA connectivity project. Proposed bituminous shared path between junction with Carmella St and junction with Coalseam Dr – 1.02km in conjunction with the Airstrip connectivity project.	\$ 108,000.00	fully reliant on State Govt funding
2	Medium	Bower St to Doust St	upgrade	Footpath	Proposed concrete footpath between eastern point on Bower St heading south east, connecting to Doust St – 123m	\$ 25,000.00	
3	Medium	Shingle Ave	upgrade	Shared path	Proposed concrete footpath from Lesueur to Turquoise Way - 350 metres	\$ 65,000.00	fully reliant on State Govt funding
4	Medium	Lindsay St	upgrade	Footpath	Proposed concrete footpath from Bashford St to Turquoise Way - 450 metres	\$ 90,000.00	fully reliant on State Govt funding
5	Low	Corella Loop to Batavia Way	upgrade	Footpath	Proposed bituminous footpath between midpoint of Corella Loop and bend on Batavia Wy – 92m	\$ 18,000.00	
6	Low	Airstrip Rd	expansion	Shared path	Proposed bituminous footpath connecting from shared path on Bashford St (north) to end of sealed pavement - 595m in conjunction with the LIA connectivity project	\$ 100,000.00	fully reliant on State Govt funding
TOTAL						\$ 406,000.00	

Table 3 - Jurien Bay proposed opportunities



Additional services for improvement are noted below for consideration in future:

- Introduce E-Bikes for Hire in the Town Centre
- Improve Cycle Signage network including providing details of ride times
- Ensure priority is provided for bicycles on Principal Pathways at road junctions
- Improve existing networks with amenities such as water stations, bike repair stations and shade sails
- Integrate recommended action outcomes from Avon Central Coast Regional 2050 Cycling Strategy

### 3.5 Future Opportunities

Jurien Bay has been identified as a strategic area for inclusion within the Avon-Central Coast Regional 2050 Cycling Strategy. The Department of Transport will be releasing the report in the coming months. Once approved, the recommended action items should be reviewed for inclusion in the 2022-2032 tranche of works.

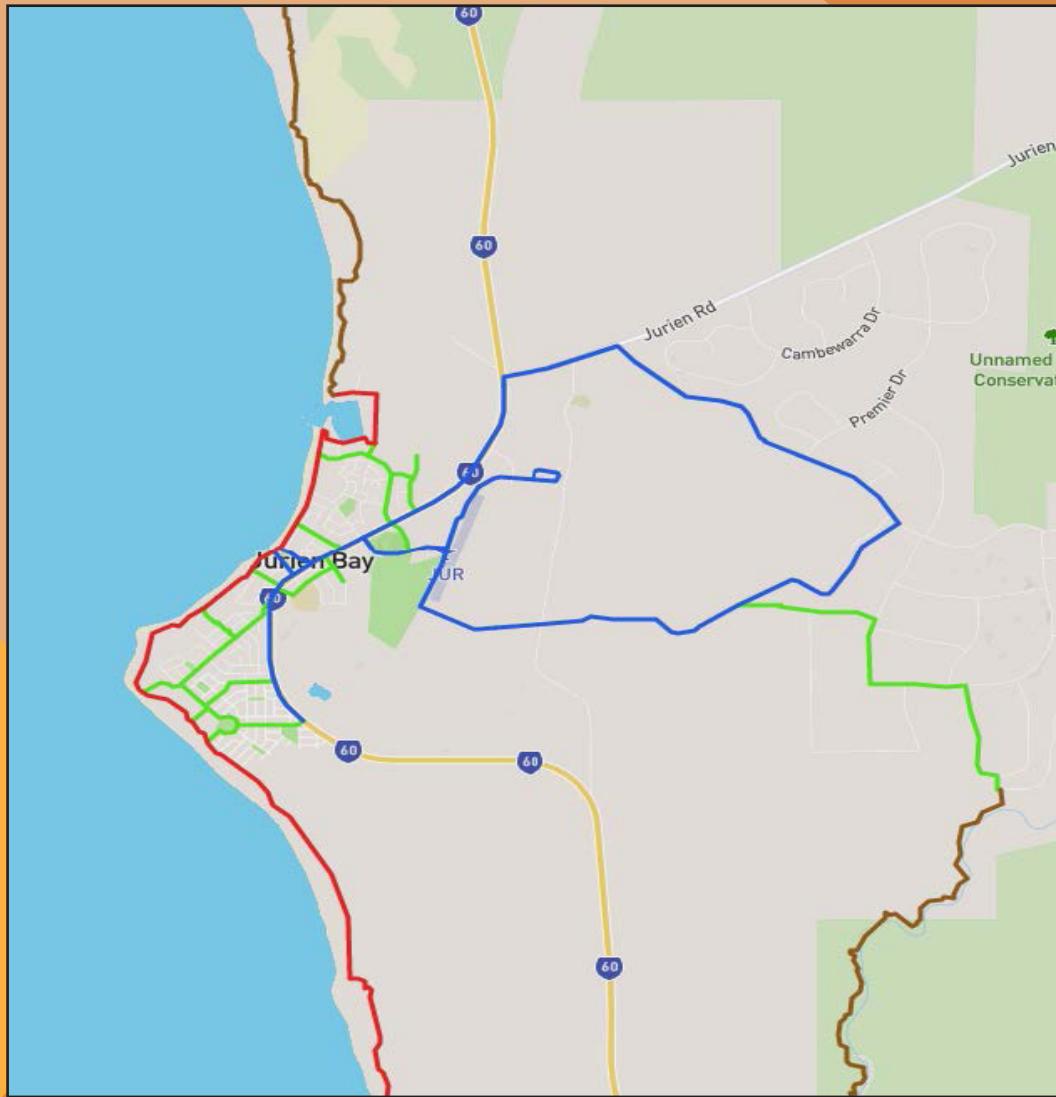


Figure 9 - Avon Central Coast Regional Route 2050 Concept Jurien Bay

Source: <https://www.mysaytransport.wa.gov.au/avon-centralcoast-cycling-strategy/maps/avon-central-coast-2050-regional-cycling-strategy-interactive-feedback-map>

Below, in Figure 10, shows the Jurien Bay Pathway used by people in the Jurien Bay community who are registered Strava athletes. The map shows the recorded walking and cycling paths used by members throughout the town. The mapping tool could be used to identify areas frequently used and therefore that may be best suited to the upgrade of amenities such as water facilities or shade sails.

Strava can also be used to identify current regional path routes used by the community. This information, combined with crash data from Main Roads WA could identify safe routes to connect the eastern town sites to the coastal trails.

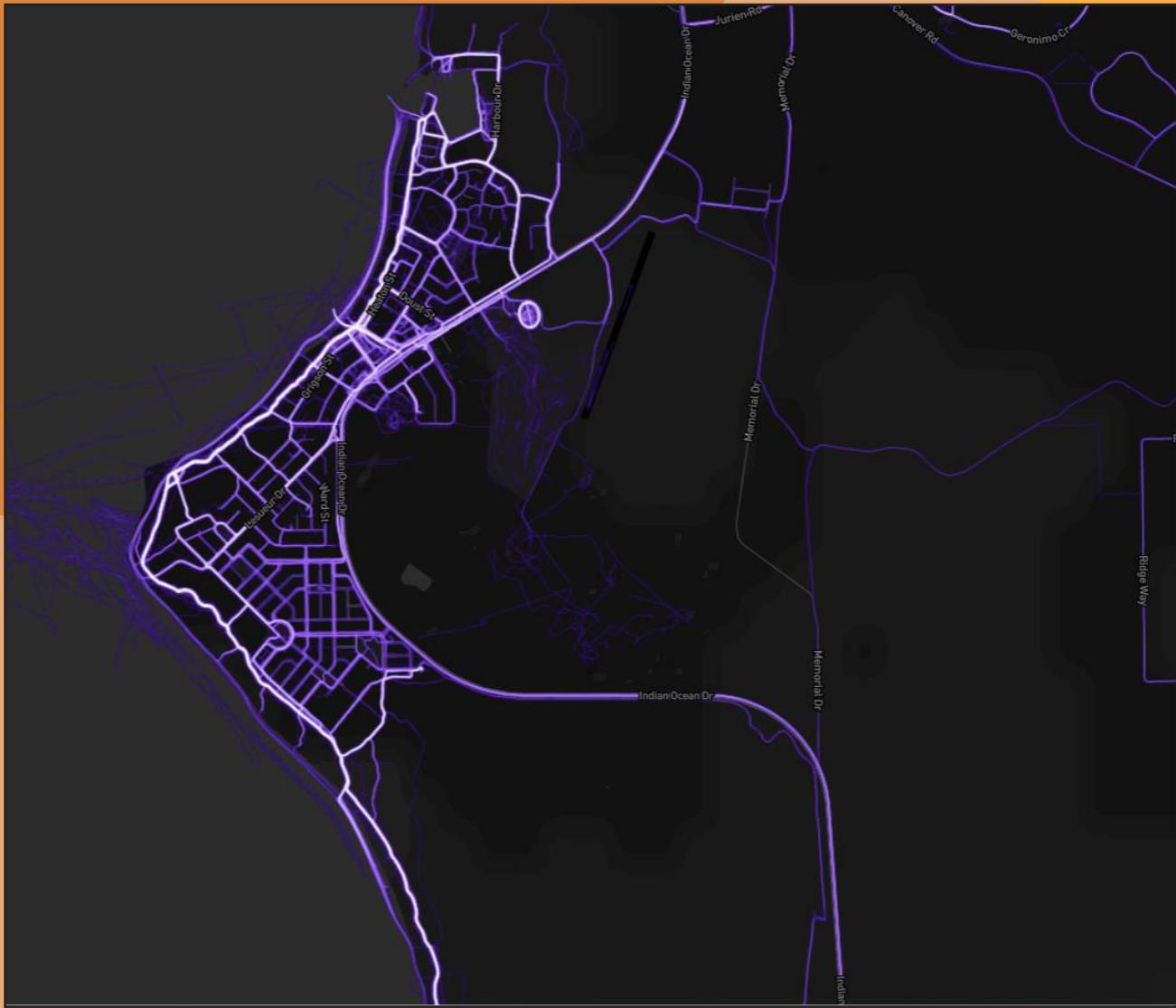


Figure 10 - Strava Global Heatmap of Jurien Bay Walk & Cycle Routes  
Source: <https://www.strava.com/heatmap>

## 4.0 CERVANTES NETWORK

The coastal town of Cervantes is located toward the central western boundary of the Shire of Dandaragan and is 198km northwest of Perth and 24km south of Jurien Bay. Being the closest community to Nambung National Park, it accounts for 400,000 tourist visitors per year, with 150,000 of those being international visitors prior to the COVID-19 global pandemic. These numbers should stabilise again now that international travel has resumed.

The Town Centre already benefits from an upgraded bicycle and footpath network resulting from works carried out by the Shire over the past 5 years.

This report will focus on further path upgrades that will continue to integrate the community further, along with exploring ideas for facility enhancements.

#### 4.1 Overall Current Network

Cervantes is a coastal town with generally level topography. Figure 11 below shows the range of ground level heights found within the town of Cervantes. Due to its proximity to the ocean, a number of paths are subject to regular erosion along the coastal front.

The existing network is shown in Appendix A.



Figure 11 - Cervantes Isothermal Map  
Source: <https://en-au.topographic-map.com/>



## 4.2 End of Trip Facilities

The existing formal parking facilities are located around the Town Centre. A number of proposed parking facilities along the coast at key tourist destinations are shown in the overall network layouts contained in Appendix A. A bike repair station at Catalonia Park, along the popular Cervantes foreshore, has also been installed to provide service to this area of the town's path network.

The existing potable water network is shown below in Figure 12. Drinking water fountains could be added where the network is located near an existing key location within the town. Works towards this could be carried out as part of long term improvements in Cervantes.

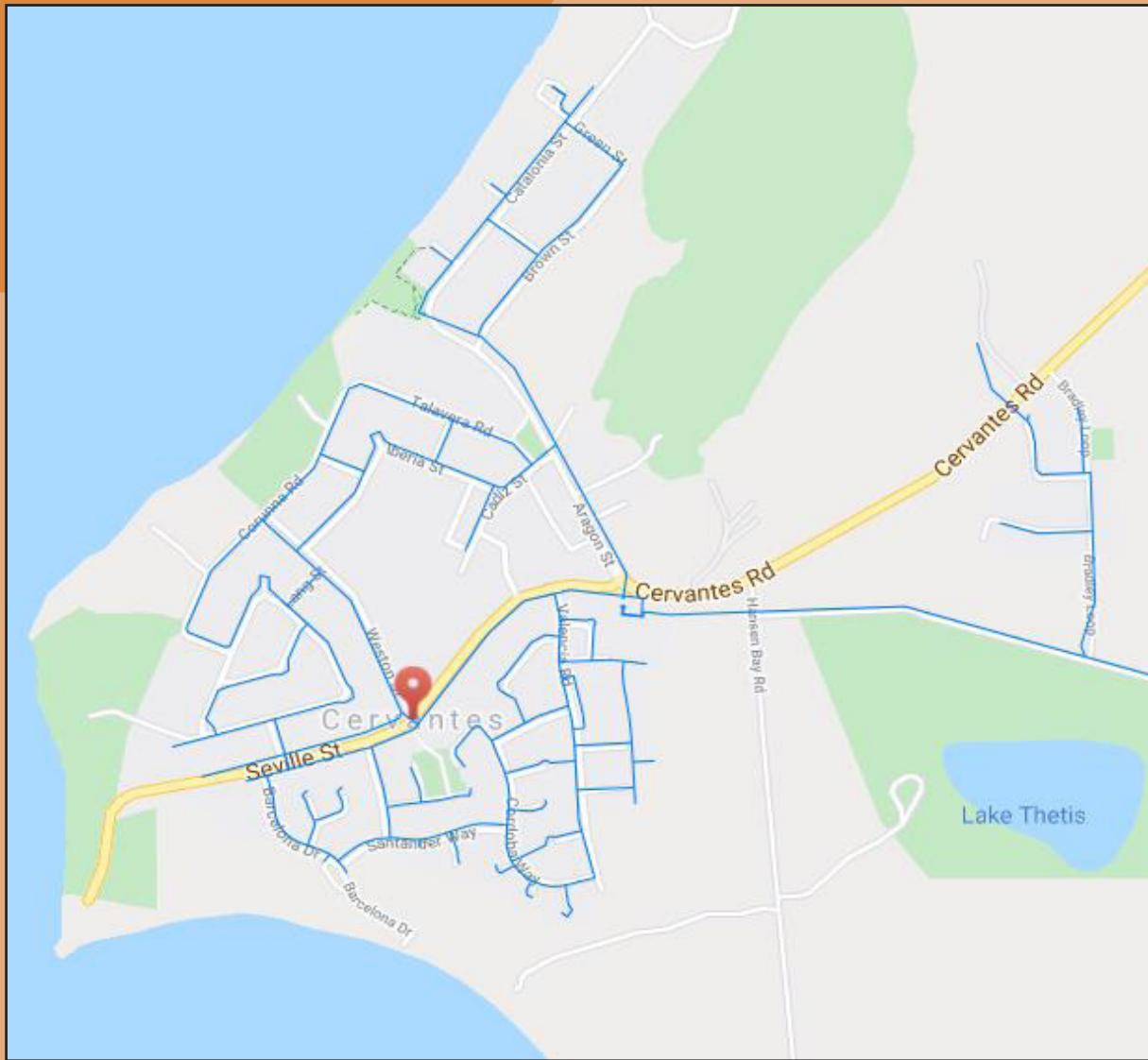


Figure 12 – Cervantes Potable Water Supply Map

Source: <https://en-au.topographic-map.com/>

#### 4.3 Traffic Analysis

- One section of the path network is on a Regional Distributor Road with transition of the speed limit from 50km/h to 60 km/hr. Sight lines at the proposed crossing point should be reviewed to ensure adequate stopping times are provided.
- Analysis of the most recently available crash data obtained from MRWA recorded no bicycle crash reports between 2016 and 2020.



#### 4.4 Proposed Opportunities

MAP ID	PRIORITY LISTING	ROAD	NETWORK TYPE	CONSTRUCTION TYPE	SCOPE	INDICATIVE COSTS	FUNDING POSSIBILITIES
1	High	Turquoise Way Path from Hill River to Catalonia Street	expansion	Shared path	Extend existing Turquoise Way Path from Hill River to Cervantes	300000	fully reliant on State Govt funding
2	Medium	Corunna Rd – Public Carpark	expansion		Proposed Bicycle Parking at public toilets (Ronald Park)	10000	
3	Medium	Iberia St (from Lang St intersection to Majorca St intersection)	upgrade & expansion	Shared path	Upgrade existing footpath to 3m wide concrete shared path – 630m	120000	fully reliant on State Govt funding
4	Low	Thirsty Point Walk Track from Thirsty Point Parking Area (Seville St) to Hanson Bay Rd via Hanson Bay Lookout	upgrade	Shared path	Upgrade existing unsealed path to bituminous shared path – 1.91km. There are land tenure issues to be resolved to complete this project.	200000	fully reliant on State Govt funding
5	Low	Hansen Bay Rd from northern junction with Aragon St to Hansen Bay Lookout.	expansion	Shared path	Proposed bituminous shared path west side of existing carriageway from lookout to Aragon Street – 1.25km. There are land tenure issues to be resolved to complete this project.	150000	fully reliant on State Govt funding
6	Low	Aragon St, from intersection with Seville St, heading east, to intersection with Hansen Bay Road.	expansion	Shared path	Proposed bituminous shared path south side of carriageway – 300m. Dependent upon projects 4 and 5 above.	50000	fully reliant on State Govt funding
TOTAL						3530000	

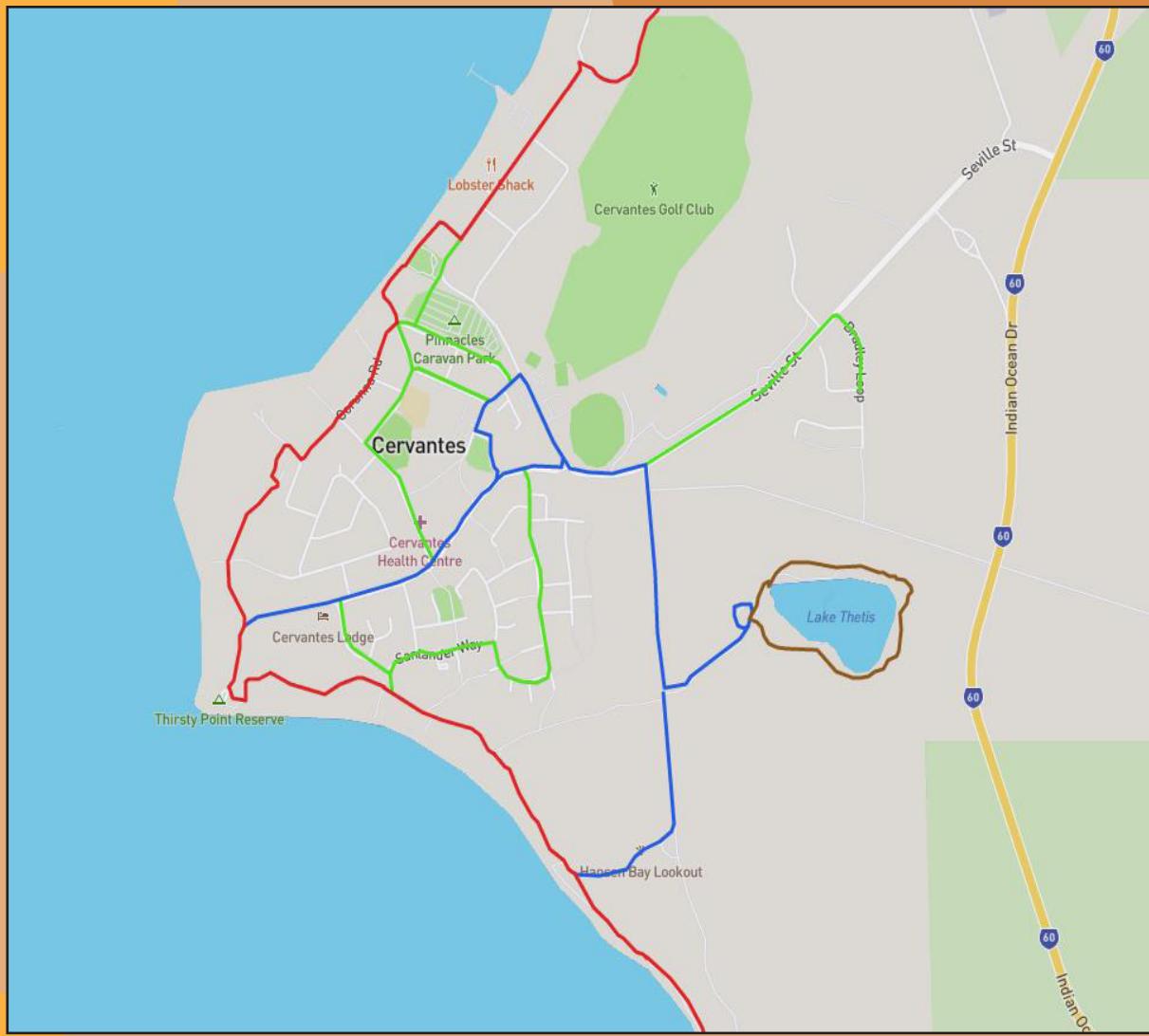
Table 4 - Cervantes proposed opportunities

Improvement opportunities for further investigation:

- Erosion protection measures along coastal routes
- Improve the Cycle Signage network including providing details of ride times
- Ensure priority is provided for bicycles on Principal Pathways at road junctions
- Improve existing networks with amenities such as water stations, bike repair stations and shade sails
- Integrate recommended action outcomes from Avon-Central Coast Regional 2050 Cycling Strategy

#### 4.5 Future Opportunities

The Avon-Central Coast Regional 2050 Cycling Strategy is expected to include a route connection from Nambung National Park, travelling along the coast through Cervantes and eventually connecting up to Jurien Bay. Once the report is published, the Shire can review their local path network to ensure the future path is connected to key tourist and local locations in the community. Figure 13 below shows the concept route mapped on the Avon-Central BikeNetwork.



Source: <https://www.mysaytransport.wa.gov.au/avon-centralcoast-cycling-strategy?tool=map>

Strava Labs provides a number of mapping tools to assist the development of local bike and walking paths. Figure 14 below shows the recorded cycle and walking paths in the Town of Cervantes. This can be used in the future to develop strategic routes and allow the Shire to focus on maintenance of the more heavily trafficked areas on the Bike Network Route.



Source: <https://www.strava.com/heatmap>



## 5.0 BADGINGARRA NETWORK

The town of Badgingarra is located approximately 60km east of Cervantes and is situated beside the Brand Highway. The town has limited existing cycle paths with most pedestrians and cyclists likely using the road carriageway to travel.

Addition of the recent Badgingarra Art Trail that starts from the public toilets carpark on Meagher Drive and connects to the Vern Westbrook Walk, located 3.5km from the Brand Highway along North West Road, is also a popular walking/trail bike location.

There is opportunity to improve cycling and walking paths in this community to encourage a more active lifestyle.

### 5.1 Overall Current Network

The town is relatively level however has a rise of around 15m on the southeast corner of the town boundary along the firebreak track.

The existing footpath network is shown in Appendix A.

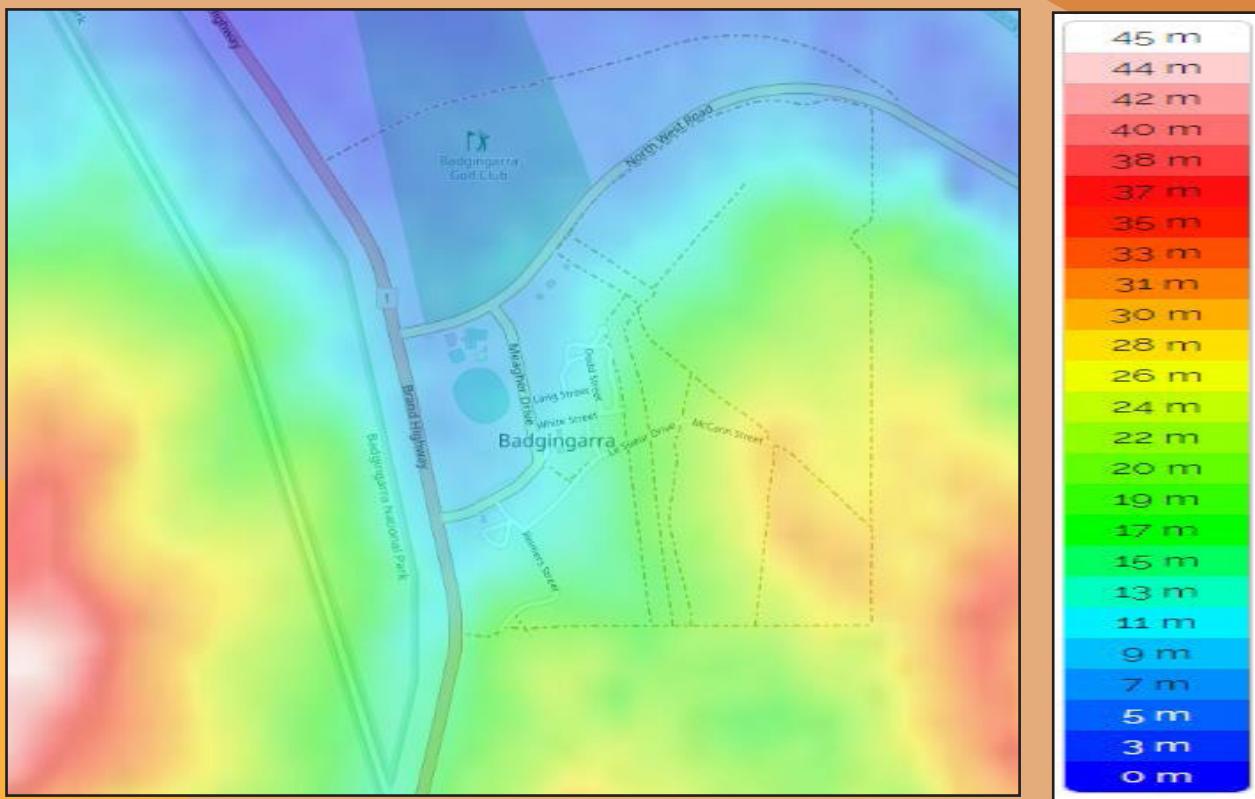


Figure 15 - Badgingarra Isothermal Map  
Source: <https://en-au.topographic-map.com/>

### 5.2 End of Trip Facilities

There are no recorded bicycle parking facilities in the town of Badgingarra. As part of the overall upgrade, some parking structures could be introduced at the community centre and post office.

### 5.3 Traffic Analysis

Traffic volumes in the town are low, creating a safe environment for pedestrians and cyclists, however the town is located alongside Brand Highway which has a high volume of traffic, including road trains, travelling at high speeds of 110km/hr. The proposed path is running parallel to the existing roads reducing interaction between path users and cars. Over the short term, feedback should be sought from the community in regards to safety to ensure concerns are addressed at the appropriate time.

## 5.4 Proposed Opportunities

MAP ID	PRIORITY LISTING	ROAD	NETWORK TYPE	CONSTRUCTION TYPE	SCOPE	INDICATIVE COSTS	FUNDING POSSIBILITIES
1	High	Meagher Dr	New	Shared Path	From entrance of public toilets carpark on Meagher Drive to meet up with existing path opposite Lang Street to be constructed once existing playground pathway alongside oval becomes unserviceable.	\$ 85,000.00	fully reliant on State Govt funding
2	Low	Badgingarra Town Trail	Expansion	Unsealed Path	Proposed gravel path from public carpark at community centre to edge of fire break heading south along Northwest Road - 1698m (part 1).  Proposed gravel path from the junction of Northwest Rd heading south and west to meet with the junction of Reimers St - 3120 metres (part 2).  Proposed gravel path from Firebreak Track to Meagher Dr – 522m (part 3).	\$ 150,000.00	fully reliant on State Govt funding
<b>TOTAL</b>						<b>\$ 235,000.00</b>	

Table 5 - Badgingarra proposed opportunities

Additional improvement points are listed below for further discussion with key stakeholders.

- Introduce Bicycle Parking Facilities at key locations in the community
- Ensure priority is provided for bicycles on Principal Pathways at road junctions
- Improve existing networks with amenities such as water stations, bike repair stations and shade sails
- Integrate recommended action outcomes from Avon-Central Coast Regional 2050 Cycling Strategy



## 5.5 Future Opportunities

Additional connection opportunities will be published in the Avon-Central Coast Regional 2050 Cycling Strategy. This strategy should be reviewed when available.

Strava Global Heatmaps show an existing walking track east of the town off the North West Road that could be included in local expansion plans in the near future.

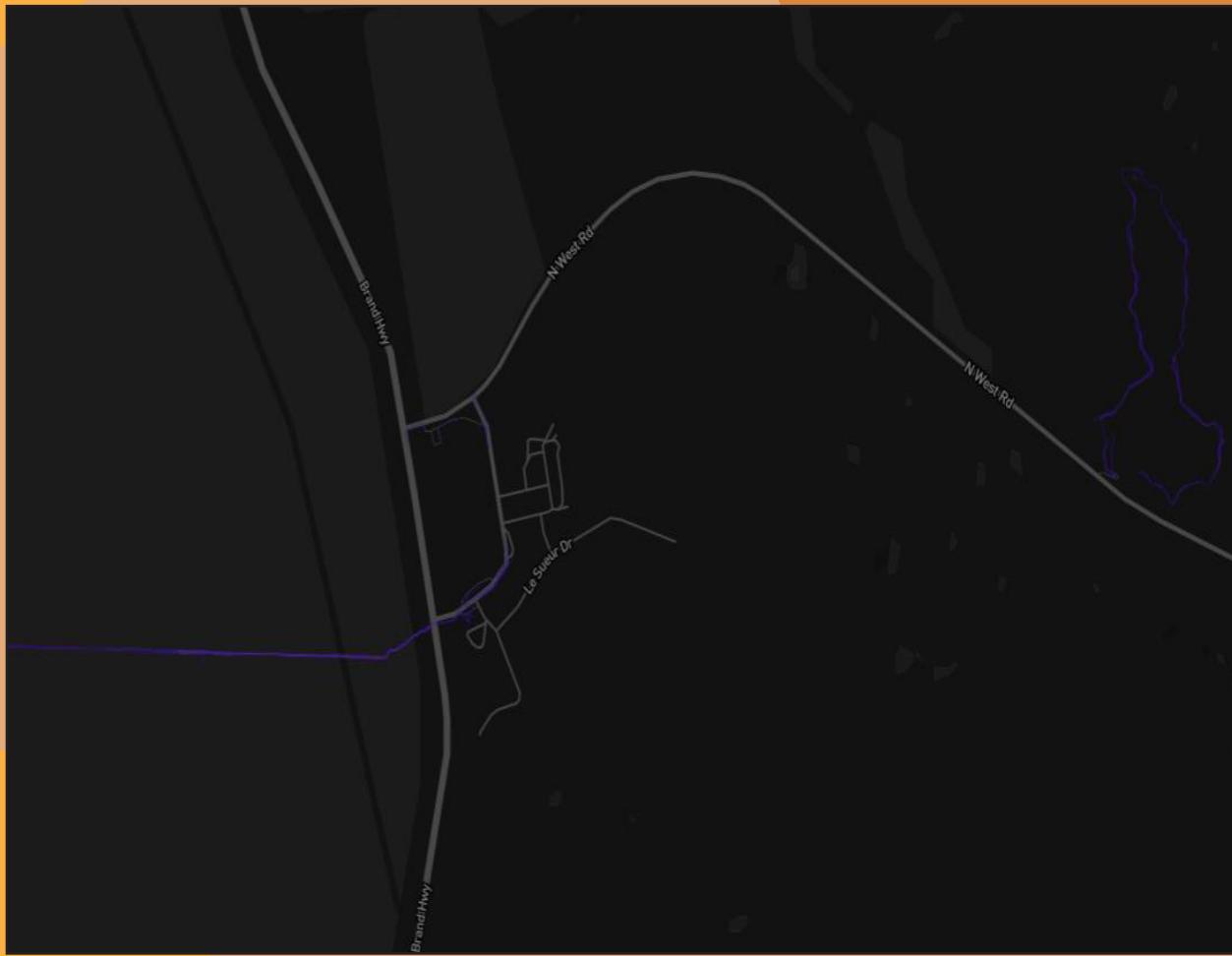


Figure 16 – Strava Global Heatmap - Badgingarra

Source: <https://www.strava.com/heatmap>



## 6.0 DANDARAGAN NETWORK

The town of Dandaragan is the southernmost location included in this study, located approximately 100km south east of Cervantes and 40km south of Badgingarra. Dandaragan is located near to the neighbouring town of Moora, just 35km west.

### 6.1 Overall Network

Dandaragan is relatively level with a rise of around 10m towards the existing golf course situated to the north east area of the town.

The existing pathway infrastructure is shown within Appendix A.

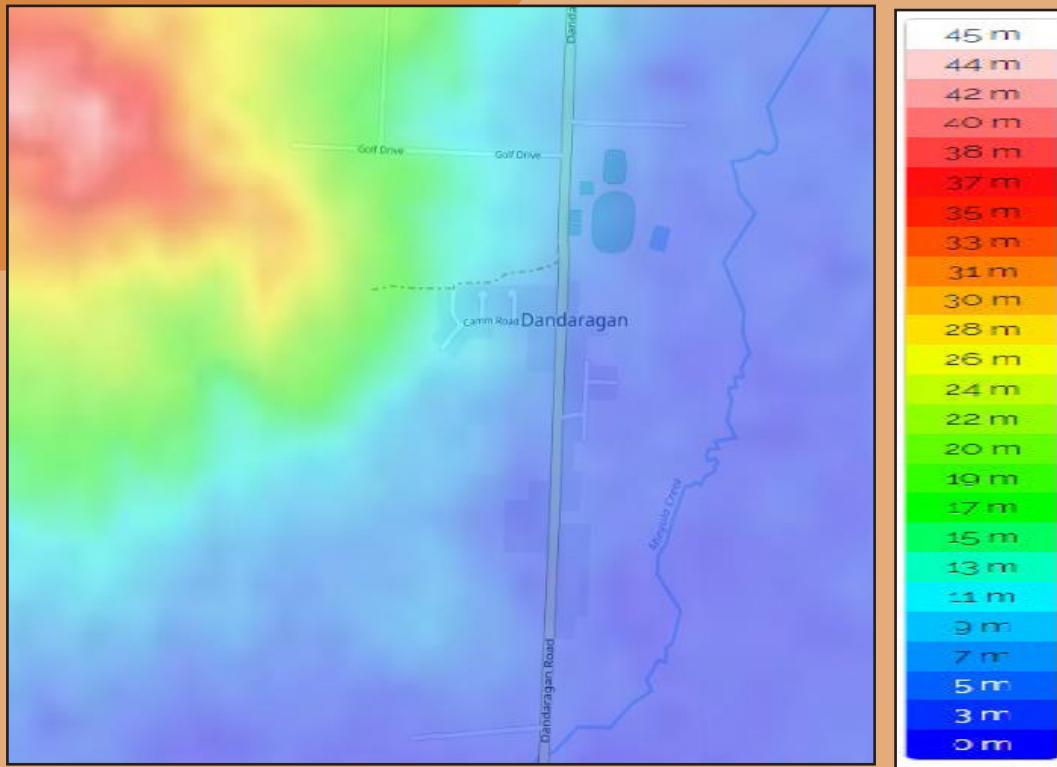


Figure 17 - Dandaragan Isothermal Map  
Source: <https://en-au.topographic-map.com/>

## 6.2 End of Trip Facilities

There is opportunity to construct end of trip facilities in the long term around the town. However, in the short term, parking facilities could be installed at the local school and sportsground, as well as the installation of a drinking fountain water station alongside the nearby potable water supply as shown below in Figure 18.

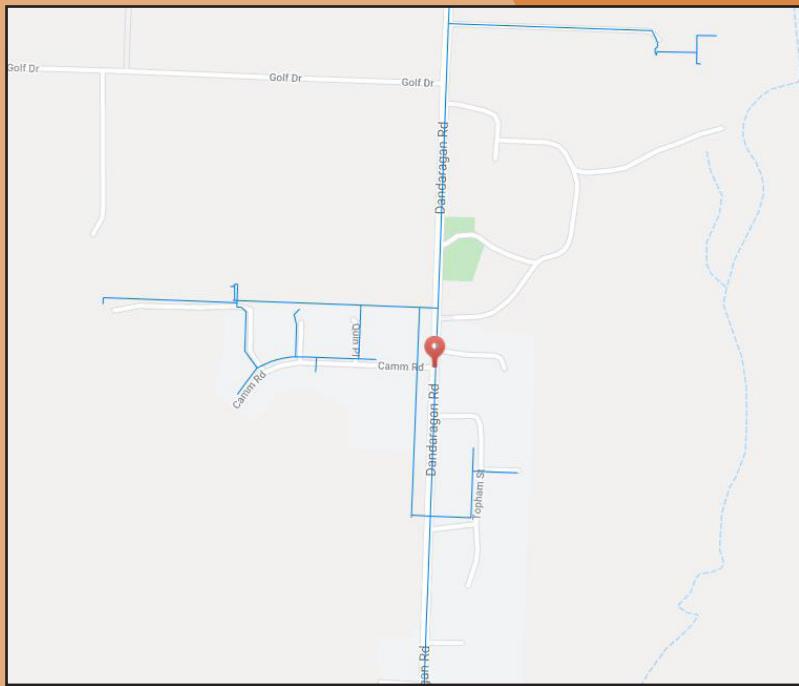


Figure 18 - Dandaragan Potable Water Supply Map

Source: <https://www.mngaccess.com.au>

## 6.3 Improvements Opportunities

MAP ID	PRIORITY LISTING	ROAD	NETWORK TYPE	CONSTRUCTION TYPE	SCOPE	INDICATIVE COSTS	FUNDING POSSIBILITIES
1	Medium	Dandaragan Road	Expansion	Footpath	Extend existing concrete footpath South to last dwelling within the town – 510m	95000	fully reliant on State Govt funding
2	Low	Golf Drive	Expansion	Unsealed	Proposed gravel path around Firebreak Track surrounding the Golf Course – 2.39km	75000	fully reliant on State Govt funding
<b>TOTAL</b>						<b>170000</b>	

Table 6 - Dandaragan proposed improvements

Improvement opportunities for further investigation:

- Introduce Bicycle Parking Facilities at key locations in the community
- Ensure priority is provided for bicycles on Principal Pathways at road junctions
- Improve existing networks with amenities such as water stations, bike repair stations and shade sails
- Integrate recommended action outcomes from Avon Central Coast Regional 2050 Cycling Strategy

#### 6.4 Future Opportunities

The Dandaragan Streetscape Beautification and BMX Track project will provide opportunity for increased interest in walking and cycling activities within the community.

Based on information from Strava Global Heatmaps, the town of Moora appears to have a healthy existing cycling community therefore cycle routes available between the towns could be investigated further.

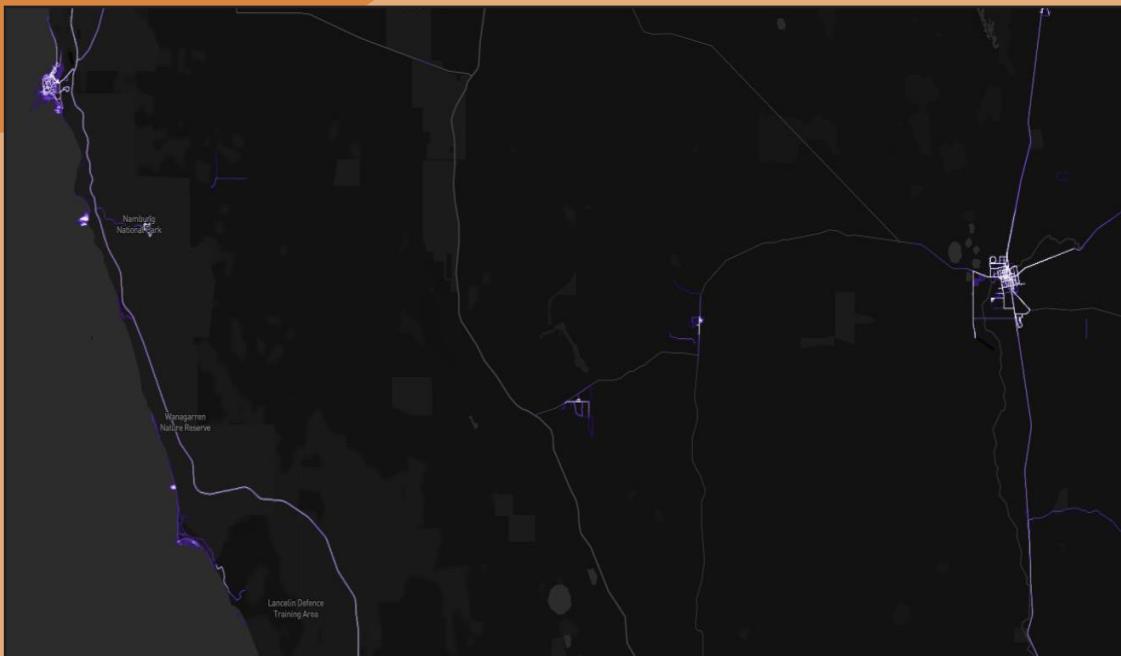


Figure 19 - Strava Global Heatmap – Dandaragan/Moora  
Source: <https://www.strava.com/heatmap>

## 7.0 FUTURE PROJECT PLANNING

### 7.1 Project Programming

In planning for future path networks, the following design considerations have been taken into account as a planning tool to select priority pathways for construction:

- Identify links to key destinations
- Provide links with other paths to create a network
- Following existing tracks/trails where possible to minimise disturbance or removal of vegetation
- Avoidance of poorly drained locations
- Consideration and avoidance of safety hazards

The identification of priority locations has been based on the above priorities in order to provide fair and equitable rankings of high, medium and low for proposed future projects.

It is important to note that the ranking provided for a potential project does not necessarily mean a pathway will be constructed and will be determined through the provision of potential external funding and/or Council's adoption of future capital works budgets.

Priority Assessment Criteria		
Ranking	Criteria	Description
Low	Connect links on all path networks	Provision for majority of residences to have access to a pathway nearby.
Medium	Community facilities missing links to be connected and community member request for consideration of pathway construction.	Missing links around community facilities, schools, medical centres and specific community requests for path construction or upgrade.
High	Construction of shared path arterial links to community amenities, schools, and facilities.	Any missing link within 10 minutes walk from beaches, public open space, and community facilities.

Table 7

### 7.2 Project Cost Planning

Since the development of the Shire's first Bike Network Plan 2015-2020, for the Jurien Bay and Cervantes townsites, over the past several years, the Shire of Dandaragan has worked extensively to expand its path network to provide increased connectivity to key destinations within both townsites. The majority of these projects have been in joint partnership with external funding partners and the Shire will continue to work with regional partners in order to maximise external funding opportunities.

Future projects identified throughout this plan amount to considerable construction length planned and at costs considerably higher than funding made available by Council. This means that the Shire will be required to continue to pursue external funding to complete those projects listed as high priority in the short term. Medium to low priority projects will continue to be planned for in the future, either through external funding or funded solely by Council, as determined through the annual budget process.

## 8.0 INTER-REGIONAL OPPORTUNITIES

Mapping software generated by Strava Global Heatmap shows existing routes travelled by bike or foot in the Shire of Dandaragan as shown below. This information could be used to develop a wider network for cyclists and walkers. For example, Badgingarra could be connected through to Cervantes trails. Dandaragan could partner with the Shire of Moora to provide a connection between the towns.

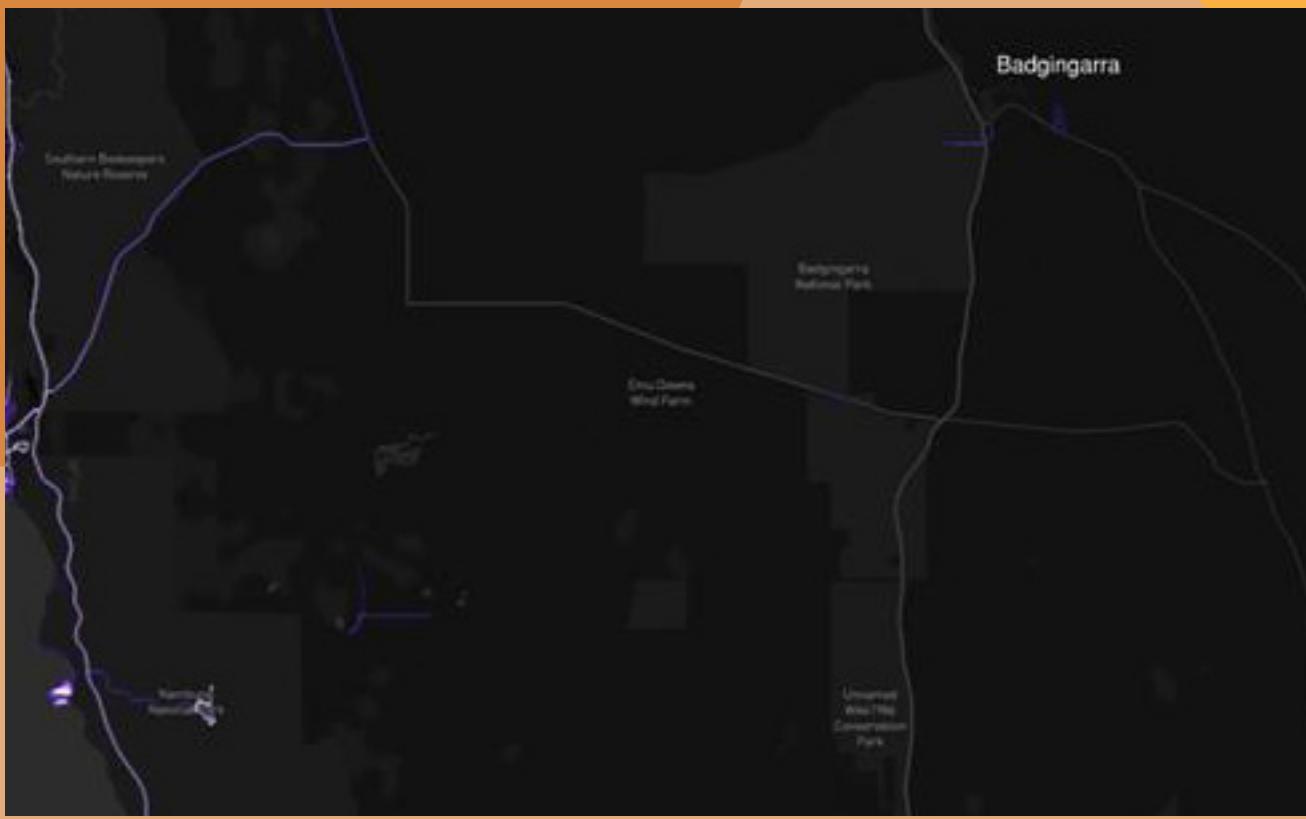


Figure 20 - Strava Global Heatmap – Shire of Dandaragan  
Source: <https://www.strava.com/heatmap>

## 9.0 RESOURCES AND BACKGROUND MATERIAL

Australian Cycling Participation 2019

Shire of Dandaragan Age Friendly Community Plan

Shire of Dandaragan 2029 Community Plan

Disability Access and Inclusion Policy

<https://roads-waterways.transport.nsw.gov.au/business-industry/partnerssuppliers/lgr/downloads/programs/documents/bikeplanv2.pdf>

National Cycling Participation Survey (download via <https://austroads.com.au/publications/activetravel/ap-c91-19>)

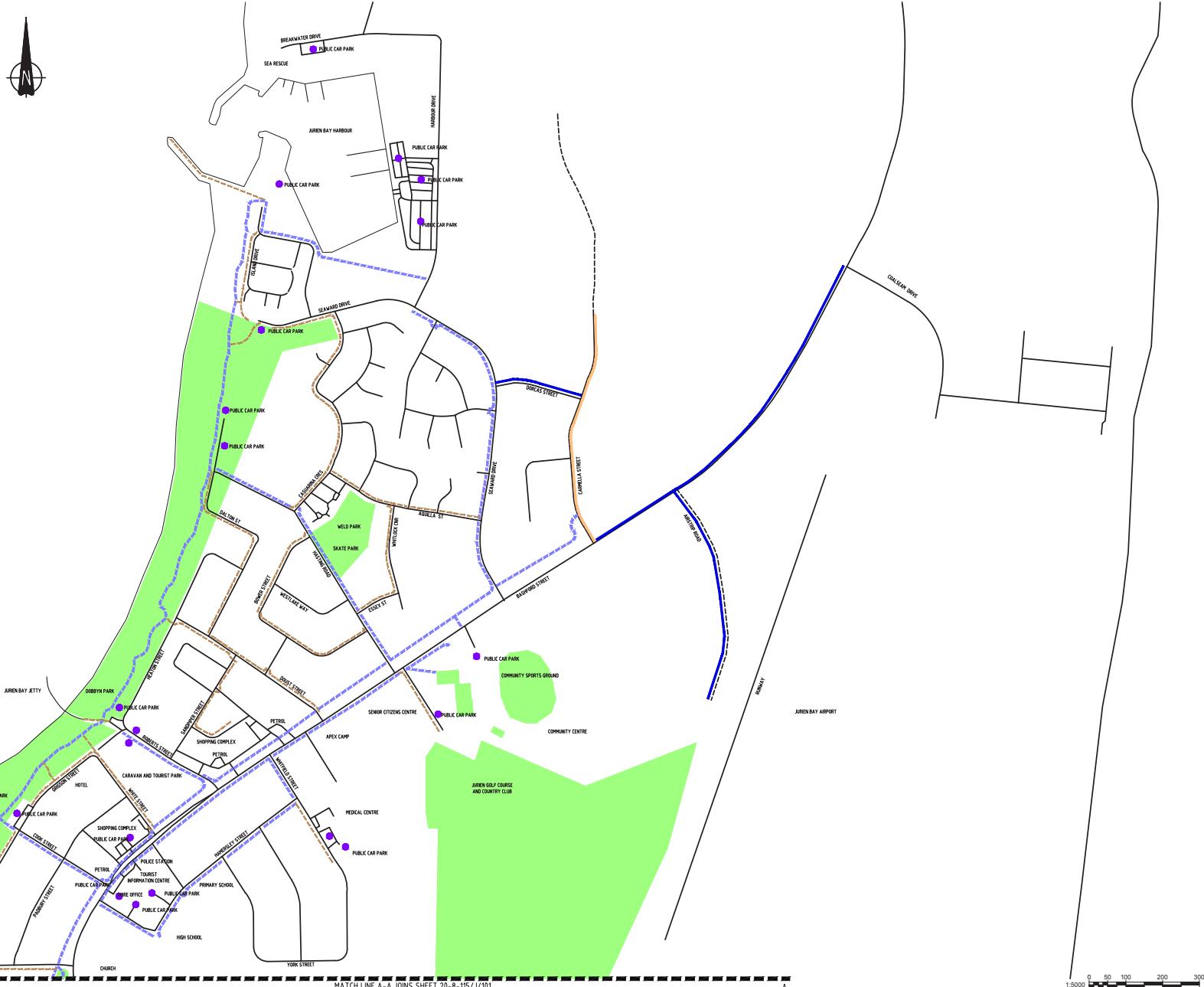
[https://www.dandaragan.wa.gov.au/Profiles/dandaragan/Assets/ClientData/Documents/Strategies\\_and\\_Plans/Economic\\_and\\_Tourism\\_Development\\_Strategy\\_Interactive\\_.pdf](https://www.dandaragan.wa.gov.au/Profiles/dandaragan/Assets/ClientData/Documents/Strategies_and_Plans/Economic_and_Tourism_Development_Strategy_Interactive_.pdf)

## APPENDIX A - Existing Path Network Maps

## LEGEND

- ROAD
- EXISTING PATH
- EXISTING PATH - UPGRADE
- EXISTING UNSEAL PATH
- EXISTING DUAL USE PATH
- EXISTING DUAL USE PATH- UPGRADE
- PROPOSED DUAL USE PATH
- EXISTING CYCLE PATH
- PROPOSED CYCLE PATH
- PROPOSED FOOTPATH
- EXISTING CAR PARKING
- PUBLIC OPEN SPACE
- PROPOSED CYCLE PARKING
- EXISTING CYCLE PARKING

DASHED LINES ARE EXISTING PATHS  
SOLID LINES ARE PROPOSED PATHS



1:5000 0 50 100 200 300  
Metres 1:10000 Scale (m)

PROJECT:	JURIEN BAY TOWN SITE CYCLE PATH NETWORK		
A.			
7-10-2020	ISSUED FOR APPROVAL	REVISION	B7

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Mt Pleasant 6153 WA  
Telephone (08) 9452 0500 Facsimile (08) 9452 0501  
Email: porter@porter.com.au  
www.portergroup.com.au



CLIENT:

SHIRE OF  
DANDARAGAN

DRAWING:  
OVERALL CYCLE NETWORK  
NORTH  
20-8-115/J/100  
STATUS: FOR APPROVAL

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DATE	OCT 2020			
DESIGN	EW			
DRUM	MEG			
DATA	000			APPS

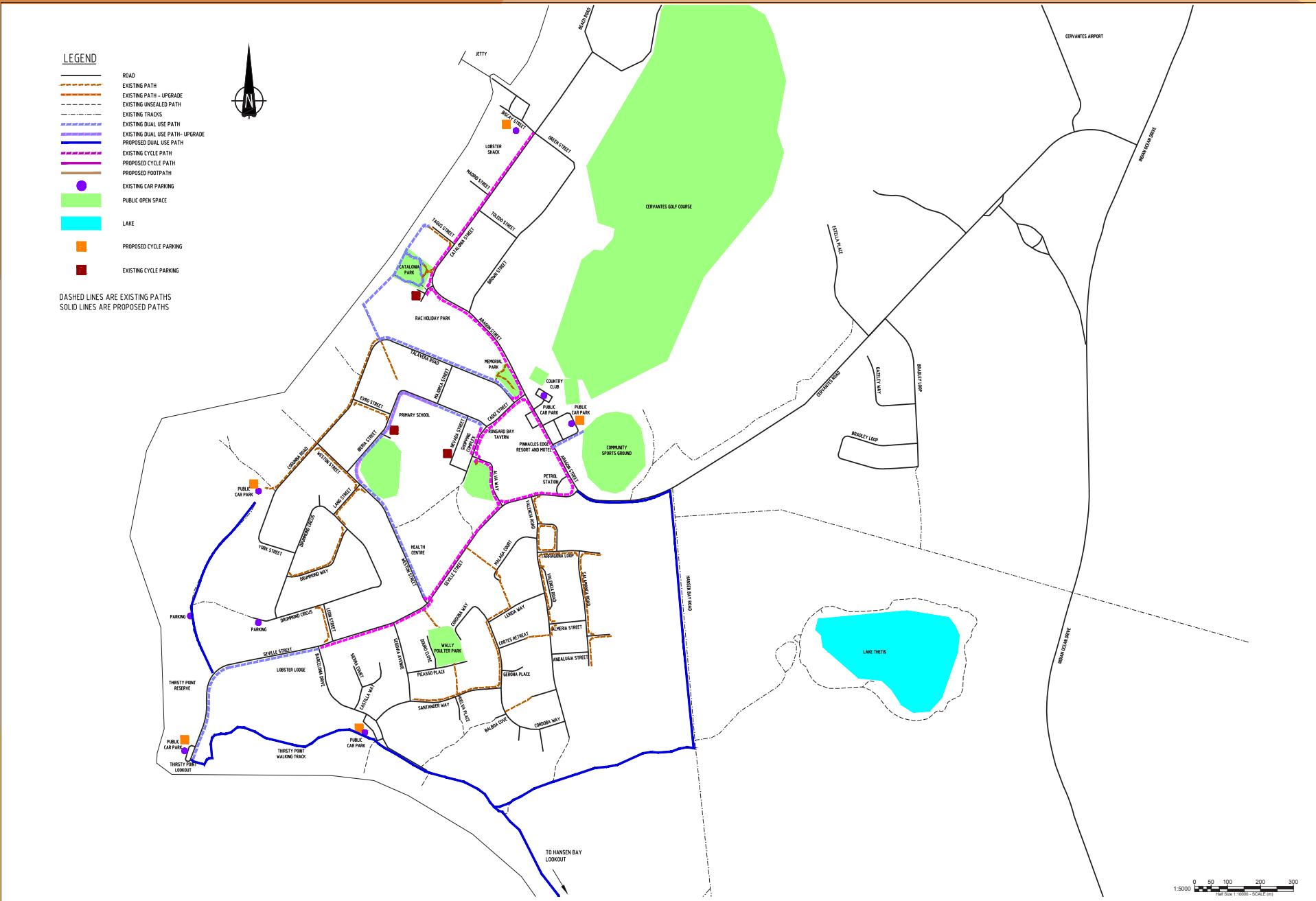


## LEGEND

- ROAD  
EXISTING PATH  
EXISTING PATH - UPGRADE  
EXISTING UNSEALED PATH  
EXISTING TRACKS  
EXISTING DUAL USE PATH  
EXISTING DUAL USE PATH- UPGRADE  
PROPOSED DUAL USE PATH  
EXISTING CYCLE PATH  
PROPOSED CYCLE PATH  
PROPOSED FOOTPATH  
  
EXISTING CAR PARKING  
  
PUBLIC OPEN SPACE  
  
PROPOSED CYCLE PARKING  
  
EXISTING CYCLE PARKING

DASHED LINES ARE EXISTING PATHS  
SOLID LINES ARE PROPOSED PATHS





000 IEC

## CERVANTES TOWN SITE CYCLE PATH NETWORK



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PO Box 1836  
Canning Bridge 6153 WA  
  
Tel (08) 9315 9955  
Email [office@parsons.com.au](mailto:office@parsons.com.au)

**SHIRE OF  
DANDARAGAN**

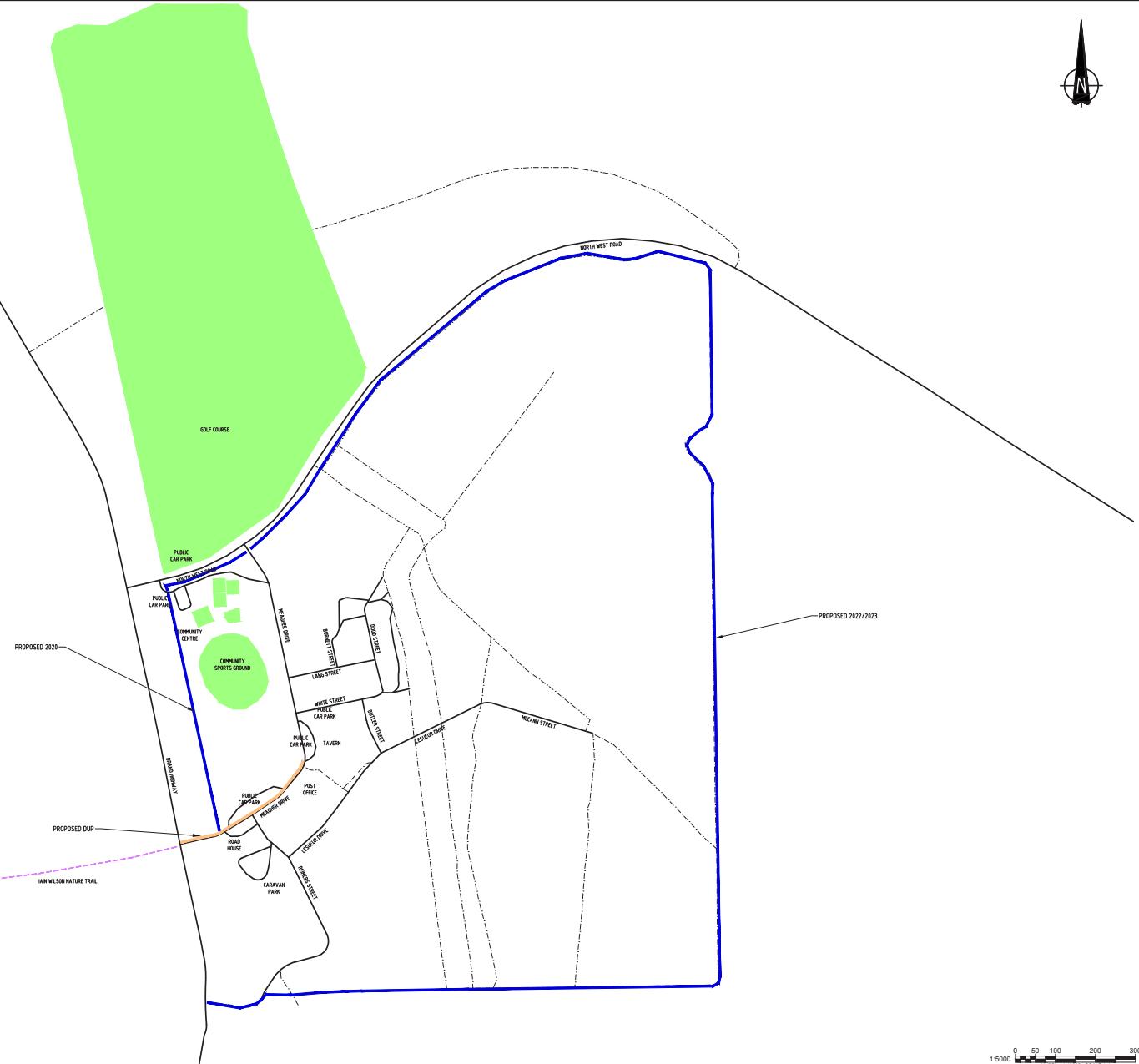
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DATE	OCT 2020	20-8-115/C/100	A	A1
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## LEGEND

- ROAD
- EXISTING PATH
- EXISTING WALKING TRAIL
- STRATEGIC CYCLE PATH
- LOCAL CYCLE PATH
- PROPOSED DUAL USE PATH
- EXISTING CAR PARKING
- PUBLIC OPEN SPACE
- PROPOSED CYCLE PARKING
- EXISTING CYCLE PARKING

DASHED LINES ARE EXISTING PATHS  
SOLID LINES ARE PROPOSED PATHS



1:5000  
0 50 100 200 300  
Metres 100000 Scale (m)

PROJECT:	BADGINGARRA TOWN SITE CYCLE PATH NETWORK					COPYRIGHT	CLIENT:	DRAWING:	SCALE:	DRAWING NO.	REV NO.	
	A	1-10-2020	ISSUED FOR APPROVAL	MEG	BY	Porter Consulting Engineers	SHIRE OF DANDARAGAN	OVERALL CYCLE NETWORK	15000	20-8-115/B/100	A A1	
	No.	Date	Revision			Level 1, Electron Court 58 Victoria Road Mt Pleasant NSW 2530 Australia Tel: (02) 895 9955 Fax: (02) 895 9956 Email: <a href="mailto:porter@porter.com.au">porter@porter.com.au</a> <a href="http://www.portereng.com.au">www.portereng.com.au</a>						

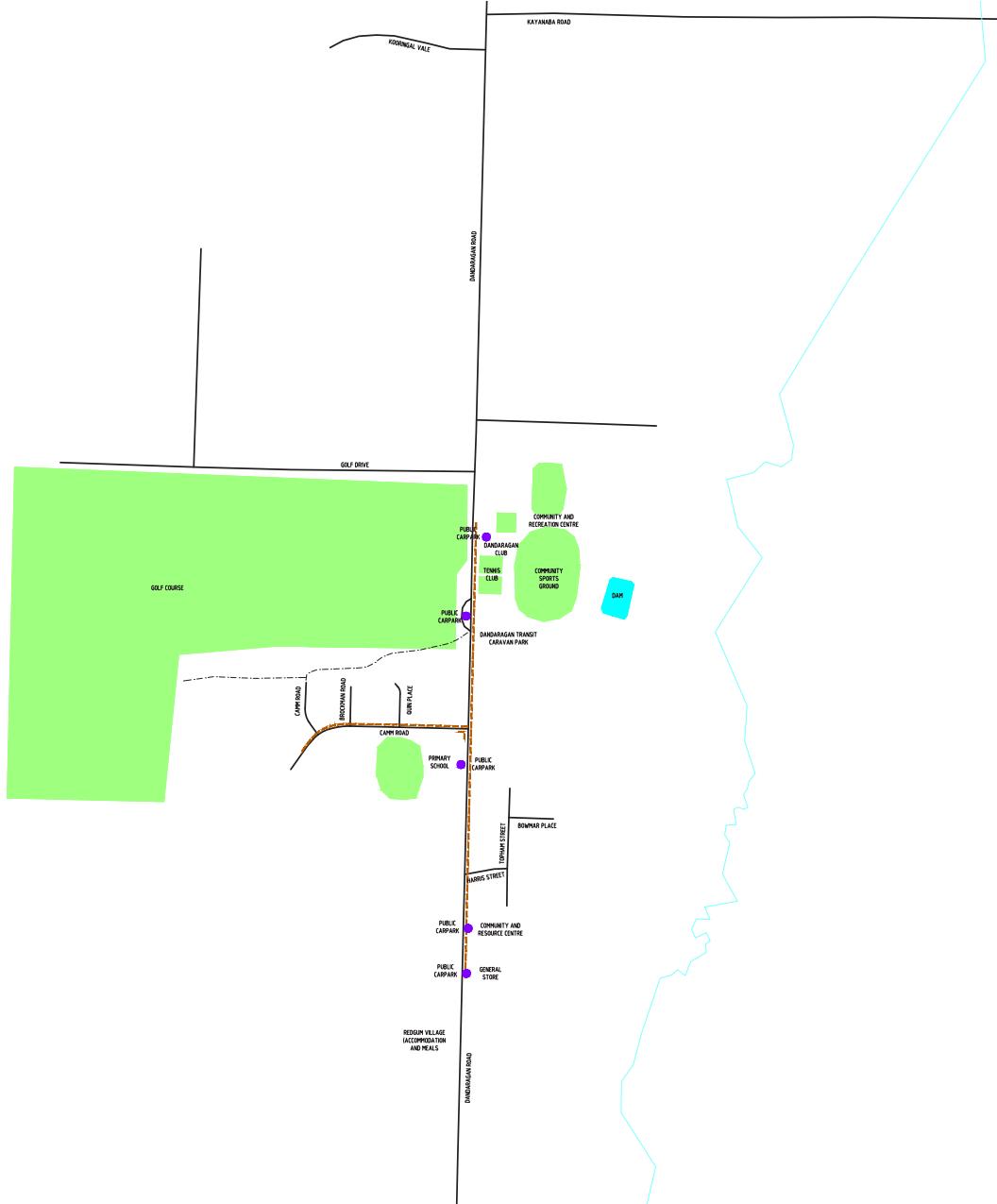


LEGEND

- A legend consisting of colored squares and text labels:

  - ROAD
  - EXISTING PATH
  - EXISTING TRACKS
  - EXISTING CREEK
  - STRATEGIC CYCLE PATH
  - LOCAL CYCLE PATH
  - FOOTPATH
  - EXISTING CAR PARKING
  - PUBLIC OPEN SPACE
  - DAM
  - PROPOSED CYCLE PARKING
  - EXISTING CYCLE PARKING

DASHED LINES ARE EXISTING PATHS  
SOLID LINES ARE PROPOSED PATHS

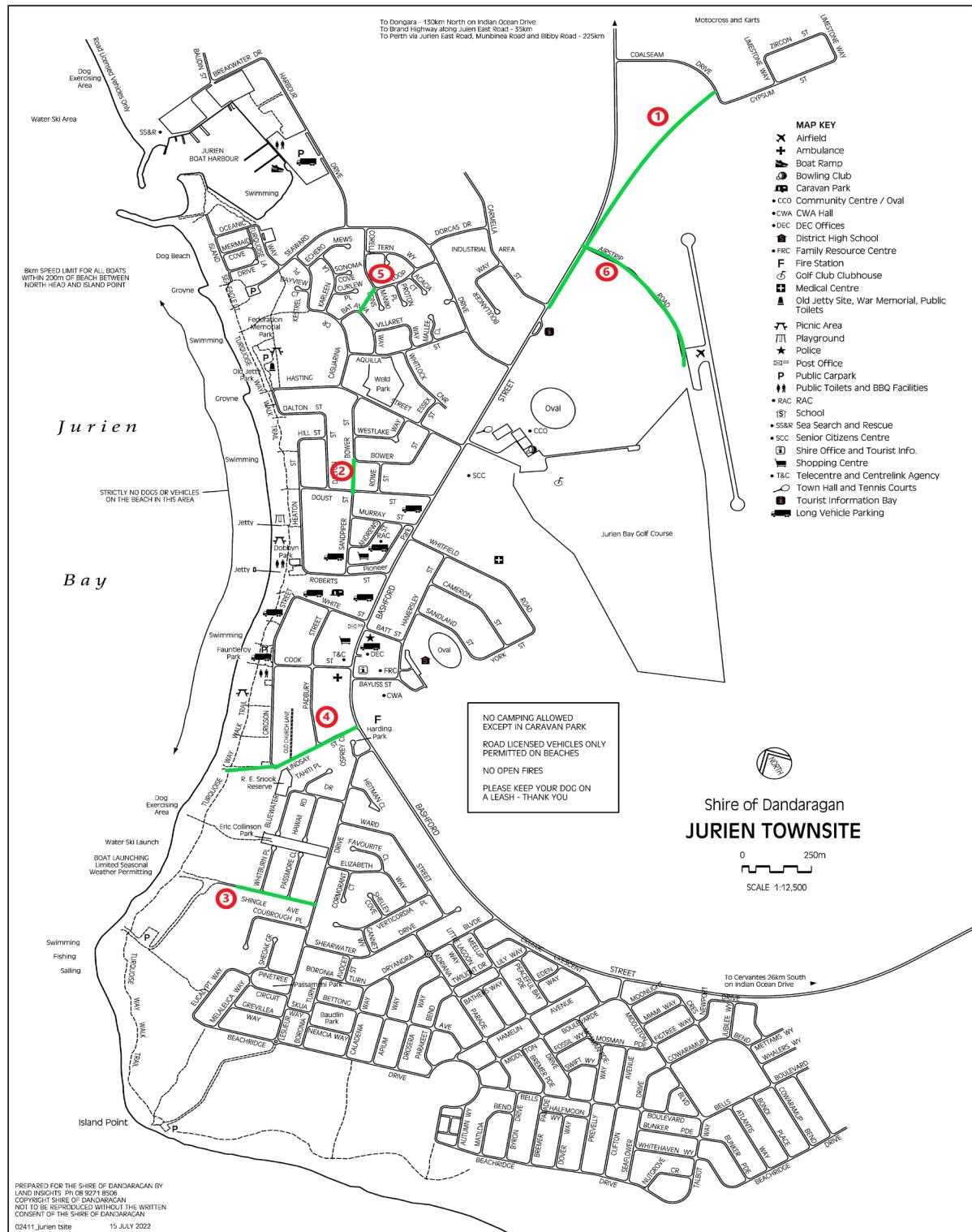


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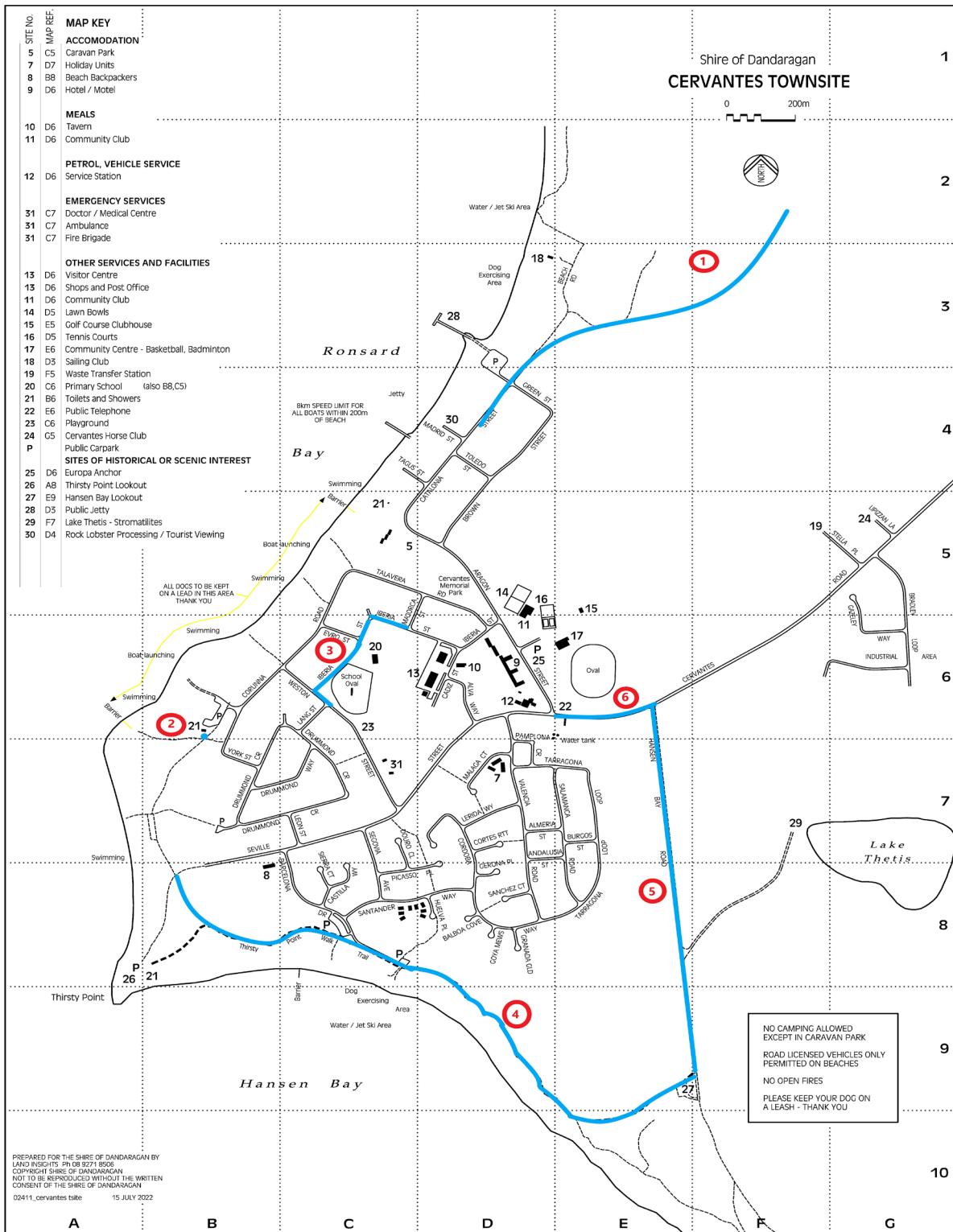
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## APPENDIX B - Proposed New Path Network Maps

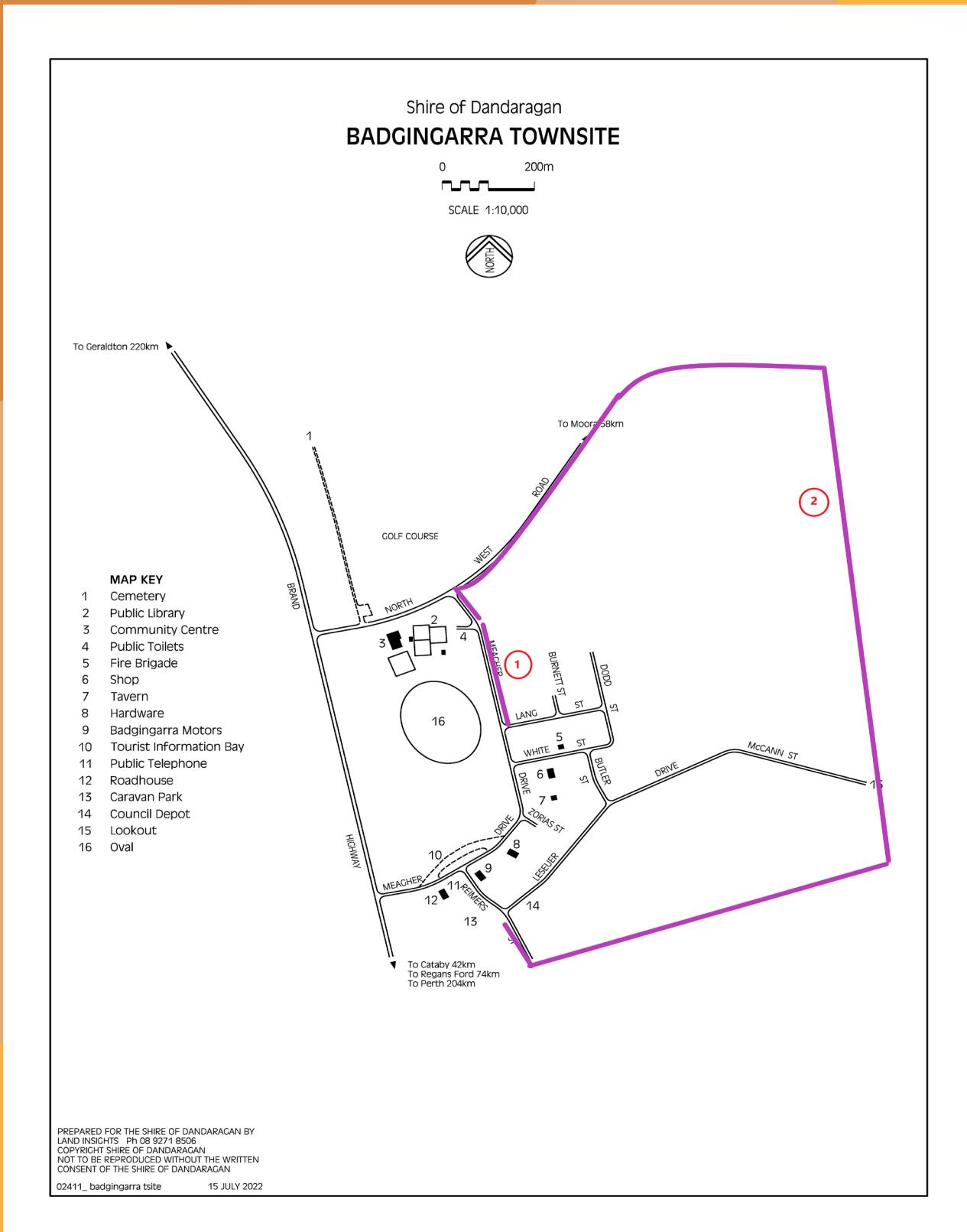
# Jurien Bay



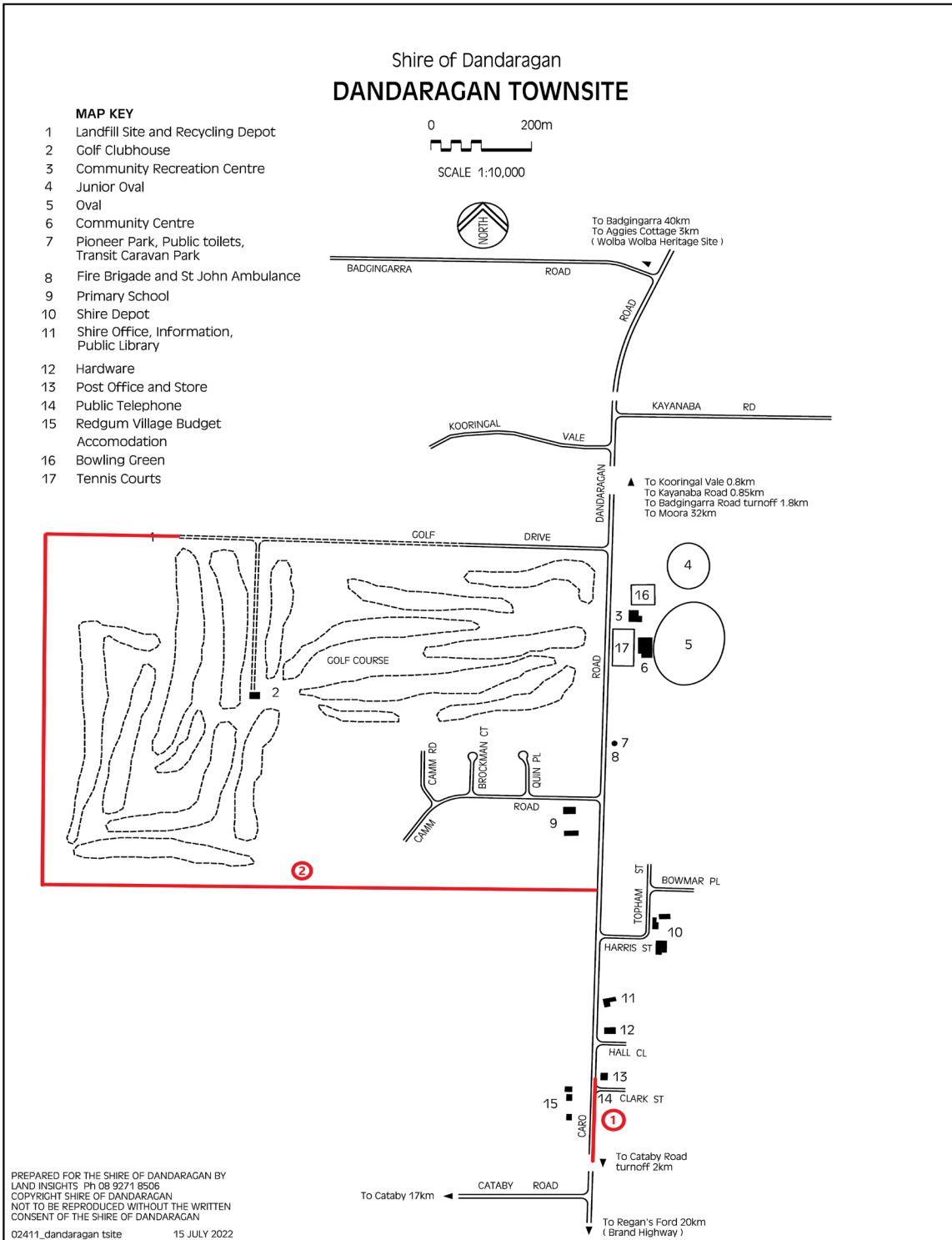
# Cervantes



# Badgingarra



# Dandaragan





69 Bashford Street, JURIEN BAY WA 6516  
Telephone: (08) 9652 0800  
email: [council@dandaragan.wa.gov.au](mailto:council@dandaragan.wa.gov.au)