Stantec

Ravensthorpe Bike Plan

Final Report

May 16, 2022

Prepared for:

Shire of Ravensthorpe

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Executive Summary

Based on the analysis of the local network and community consultation findings, the implementation of the initiatives outlined in this plan will support accessibility throughout the townsites of Ravensthorpe, Hopetoun and Munglinup for all members of the community. The vision for the Plan is:

“To create a connected and safe cycling network for all members of the community and visitors”

This vision balances the needs of the Shire, Stakeholders and the Community which have been understood and documented through the review and engagement process.

The Literature Review examined relevant planning documents regarding the interface with active transport in the Shire and the State. It identified that, whilst the Western Australian Bicycle Network Plan identifies a vision for cycling in Western Australia, the local policies in the Shire of Ravensthorpe provide a supporting framework for the development of a bike plan for each of the townsites.

The consultation phase included a community survey, a saddle survey (riding within each townsite) and a community workshop. These identified a basis of the existing network and improvements that can be implemented to satisfy the needs identified by the community. A summary of the key outcomes from the community survey are outlined in the table below:

A summary of the routes identified for the bike network plan are shown in the table below:

Townsite	Primary Route	Secondary Route	Local Route	Tourist Trail
Ravensthorpe	• Nil	• Morgans Street • Coleman Street • Queen Street	• Daw Street • Dunn Street • Spence Street • Dance Street • Moir Road • Carlisle Street • Hosking Street • Elston Street	• Ravensthorpe Hopetoun Road
Hopetoun	• Nil	• Ravensthorpe Hopetoun Road • Veal Street	• Banksia Road • Boronia Street • Cambewarra Drive • Beach Place • Seaview Way • Laughing Wave Avenue • Canning Boulevard • France Street • Mary Ann Drive • Keplar Street • Wilkinson Street • Esplanade West • Tamar Street • Hakea Street • Culham Street • Chambers Street • Dawn Street • Chapman Street	• Esplanade East • Southern Ocean Road • Dunns Swamp Road • Senna Road
Munglinup	• Nil	• Nil	• Tubada Street • Budjan Street • Hall Street • Yorrel Street • Morrel Street • Yandee Street • Memorial Drive	• Nil

The infrastructure and strategic actions identified from the development of the bike plan are outlined in the table below:

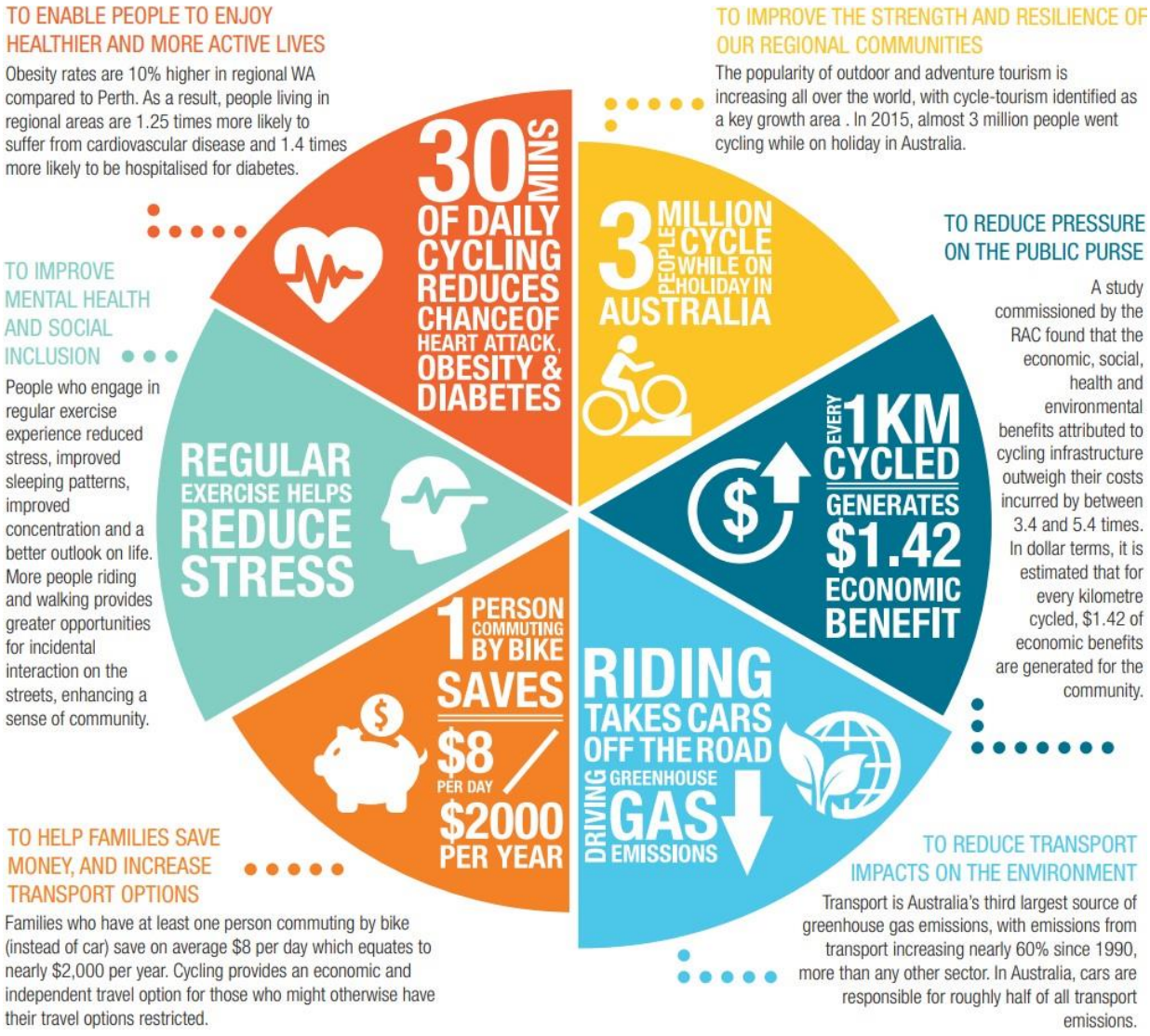
Item	Theme	Opportunity	Route Hierarchy (if applicable)	Priority
R1	Crossing	Crossing over Moir Road adjacent to Spence Street	Access Road	**Short**
R2		Crossing over Spence Street adjacent to Moir Road	Access Road	**Short**
R3		Crossing over Queen Street adjacent to Spence Street	Access Road	**Short**
R4		Crossing over Carlisle Street adjacent to Spence Street	Access Road	**Short**
R5		Crossing over Carlisle Street to Morgans Street	Access Road	Medium

R6		Crossing over Morgans Street adjacent to Carlisle Street	Access Road	Medium
R7		Midblock crossing over Morgans Street between Hosking Street and Elston Street	Access Road	Medium
R8		Crossing over Elston Street adjacent to Jamieson Street	Access Road	Medium
R9		Midblock crossing over Dunn Street between Queen Street and Carlisle Street	Access Road	Medium
R10		Crossing over Carlisle Street adjacent to Dunn Street	Access Road	**Short**
R11	Shared Path	A shared path on the south side of Spence Street from Hosking Street, south to Dance Street on the west to Hosking Street	Local Distributor	Medium
R12		Extend existing paths on both sides of Dunn Street to Queen Street	Access Road	Medium
R13		Connect paths on Coleman Street and Elston Street	Local Distributor	**Short**
R14		A shared path on the south of Jamieson Street	Access Road	**Short**
R15		Ravensthorpe to Hopetoun connection	Primary Distributor	Medium
R16	Shade	Plant trees along verge where possible to improve shade along shared path	Access Road	**Short**
R17	Shared Zone	Shared Zone on Coleman Street from Andre Street to Hosking Street	Local Distributor	Medium
R18	Wheelstops	Install wheelstops to prevent vehicles overhanging pathways	Local Distributor	**Short**
H1	Shared Path	Shared path on the west side of Veal Street from Mary Ann Drive to Birdwood Street	Regional Distributor	**Short**
H2		Shared path on the east side of Veal Street from Buckie Street to Alan Rose Drive	Regional Distributor	**Short**
H3		Shared path continuing the end of Dawn Street to Veal Street	Access Road	**Short**
H4		Shared path on the north side of Canning Boulevard from Esplanade West to Veal Street	Access Road	Medium
H5		Shared Path on the east side of Esplanade West from Canning Boulevard to West Street	Access Road	Medium
H6		Potential shared path connecting between either end of Canning Boulevard	Access Road	Medium
H7		Hopetoun to Ravensthorpe connection	Primary Distributor	Medium
H8		Shared path around outside edge of Tamar Street industrial area connecting back to Veal Street	Access Road	Long
H9	Crossing	Crossing over Veal Street adjacent to Moort Place	Regional Distributor	**Short**
H10		Crossing over Veal Street adjacent to Canning Boulevard	Regional Distributor	**Short**
H11		Crossings over Chambers Street either side of Buckie Street	Access Road	Medium

H12	Shared Zone	Shared zone on Veal Street from Dawn Street to Esplanade West	Regional Distributor	Medium
H13	Safe Active Street	Safe Active Street on Buckie Street from Veal Street to Chambers Street	Access Road	**Short**
H14	Long Distance Tourist Connections	Hopetoun to Bremer Bay	Primary Distributor	Long
M1	Shared Path Network	Circular shared path route from the start Tubada Street East on the south side, continuation on the west side of Morrel Street to the south side of Yandee Street and continuing on the west side of Hill Street, through laneway between Hall Street and Morrel Street to the north of Morrel Street and Yorrel Street back to Manjart Street	Access Road	**Short**
M2	Crossing	Crossing over Budjan Street adjacent to Yorrel Street	Access Road	**Short**
M3		Crossing over Morrel Street adjacent to Yandee Street	Access Road	**Short**
M4		Crossing over Morrel Street adjacent to laneway	Access Road	**Short**
M5		Crossing over Budjan Street adjacent to Manjart Street	Access Road	Medium
M6		Crossing over Manjart Street adjacent to Yorrel Street	Access Road	Medium
M7		Crossing over Manjart Street Tubada Street West and Tubada Street East	Access Road	Medium
M8	Wheelstops	Wheelstops on school parking to stop vehicles overhanging the pathway	Access Road	**Short**
S1	Behaviour Change	Engage with the DoT's Your Move officers to identify ways to collaborate with local schools and employers to help facilitate more walking and riding in the community	N/A	**Short**
S2	Behaviour Change	Engage directly with schools, workplaces and other advocacy groups to identify specific opportunities to promote walking	N/A	**Short**
S3	Behaviour Change	Undertake activation activities as soon as active travel infrastructure has been installed.	N/A	Medium
S4	Funding Programs	Investigate opportunities for obtaining funding for priority projects.	N/A	Medium

Why do we want more people cycling?

The graphic below has been adopted from the Department of Transport (DoT) 2050 Cycling Strategies.



1.0 INTRODUCTION

Stantec have been working with the Shire of Ravensthorpe (the Shire) to prepare a Bike Plan (the Plan) for the Shire, focusing specifically on the Townsites of Ravensthorpe, Munglinup, and Hopetoun.

1.1 VISION

Encompassing an area of 13,551 square kilometers, the Shire is characterised by rural landscapes, rugged coastline, and historic townsites. Due to its size and the distance between the townsites of Ravensthorpe itself and Hopetoun and Munglinup, there is an identified need to provide a safe and connected bike network within and between localities. Planned and recent development are key factors in assessing and planning a future bike network, while heavy vehicle traffic, so important for the major industries in the Shire, have also been considered carefully in designing and implementing a bike network. Stantec worked closely with the Shire to understand the needs regarding bike riding, both for transport as well as to support the growing tourist industry, and to ensure that all modes of transport can interact harmoniously on the transport network.

The vision of the Ravensthorpe bike plan is to align with the Western Australian Bicycle Network Plan and make the Shire of Ravensthorpe a place where cycling is safe, connected, convenient and a widely accepted form of transport.

1.2 OBJECTIVES

The objectives of the Ravensthorpe Bike Plan are to develop a Bike Network Plan for routes adhering to the guiding principles of a cycling network. The community consultation phase will aim to gain valuable feedback from the community and implement the comments into route choice and action plans. Ultimately, the bike plan will encourage more cycling within the Ravensthorpe, Hopetoun and Munglinup townsites.

1.3 GUIDING PRINCIPLES

The guiding principles for a cycling network are for the consideration of routes within the plan to be:

a) Safe (built to a standard that reflects the “all ages and abilities” design philosophy)
b) Connected (all routes must connect to a destination or another route)
c) Widespread (extensive enough to get to a destination without encountering hostile traffic conditions)
d) Legible (Intuitive and direct with coherent wayfinding)
e) Aspirational (long term network strategy and vision for bike riding)
f) Achievable (evidenced based planning principles)

1.4 METHODOLOGY

The steps for preparing this bike plan are as follows:

- Background and literature review of strategic documents
- Desktop review of the existing cycle network
- Online community consultation
- Preliminary bicycle network plans
- Site analysis and ride through of the Ravensthorpe, Hopetoun, and Munglinup townsites
- Community workshop
- Development of final bike network plans
- Shire Council Presentation
- Final Shire of Ravensthorpe Bike Plan.

This report presents the findings of these tasks, along with a final bike network plan for Ravensthorpe, Hopetoun, and Munglinup.

2.0 POLICY AND STRATEGIC CONTEXT

2.1 STRATEGIC CONTEXT

This Bike Plan provides a framework for the Shire of Ravensthorpe to implement a safe and connected network within (and where relevant, between) the townsites of Ravensthorpe, Munglinup, and Hopetoun, focusing specifically on enhancing community connectivity and safety.

A literature review has been undertaken as part of developing this Plan. In order to ensure that this Plan operates in coordination with other plans and strategies developed by the Shire of Ravensthorpe, this Literature Review examines relevant planning documents regarding the interface with active transport in the Shire and the State. The review encompasses the following documents / reports:

- State Planning Strategy (2014)
- Western Australian Bicycle Network (WABN) Plan (updated 2017)
- Shire of Ravensthorpe Local Planning Scheme No. 6 (2018)
- Shire of Ravensthorpe Local Planning Strategy (2015)
- Esperance 2050 Cycling Strategy (2018)
- Community Safety Plan (2009)
- Trail Master Plan for the Shire of Ravensthorpe (2013)
- Tourism Strategy for the Shire of Ravensthorpe (2010)
- Integrated Planning Suite 2020-2030 (2021)
  - Corporate Business Plan
  - Fleet, Equipment, & IT Asset Management Plan.

Overall, the Literature Review identified the following key points. For a detailed review of the relevant literature, refer to Appendix A.

- Cycling and the development of cycling networks will contribute to the overarching objectives in the State Planning Strategy.
- The Western Australian Bicycle Network Plan provides a framework to develop network recommendations for the Shire of Ravensthorpe Bicycle Plan.
- Local planning schemes are also broadly supportive of providing amenities for walking and riding from a recreation and tourism perspective.
- The Esperance 2050 Cycle Strategy envisions a regional cycling linkage between Albany and Esperance, which would traverse the Shire of Ravesthorpe. The Ravensthorpe Bicycle Plan should consider this long-term vision in this plan.
- The Community Safety Plan indicates that the principles of Crime Prevention Through Environmental Design should be followed in the design and implementation of bicycle facilities.
- The Trails Master Plan and Tourism Strategy for the Shire of Ravensthorpe identify five priority trails and discuss the potential for bicycle infrastructure to increase the tourism potential of the Shire.
- The Corporate Business Plan for the Shire of Ravensthorpe identifies the need to provide an effective network of footpaths and cycleways.

- The Fleet, Equipment, & IT Management Plan indicates that cycling/BMXing is a popular activity for residents.

These plans support the development of a safe and connected bicycle network for the Shire of Ravensthorpe.

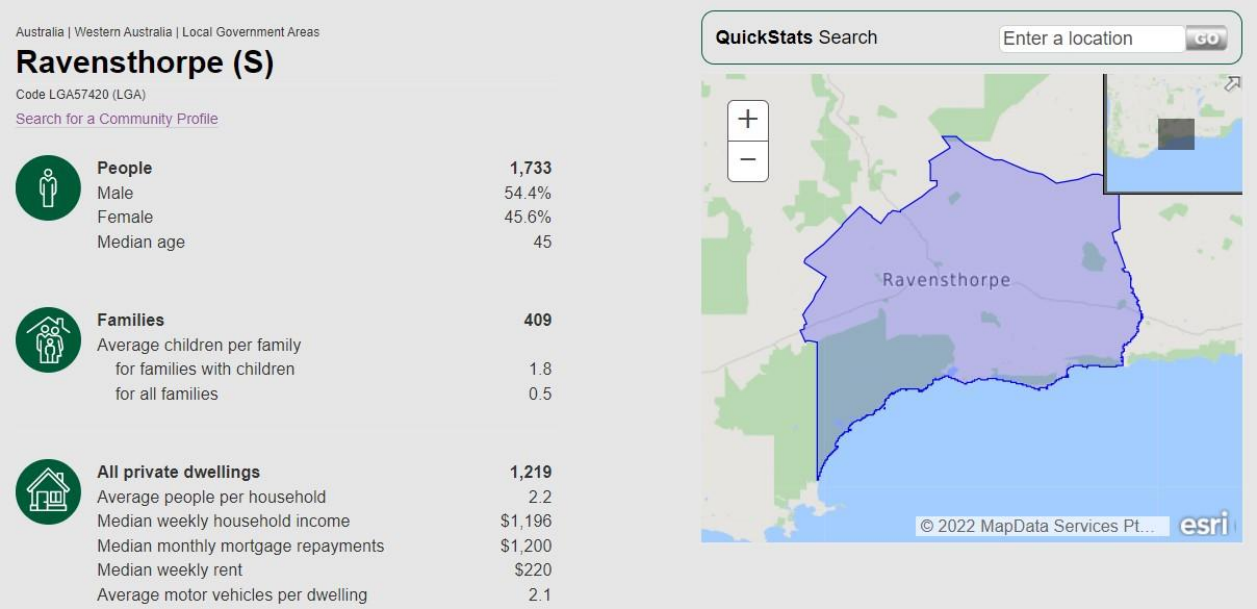
2.2 LOCAL CONTEXT

2.2.1 Demographics

The Shire of Ravensthorpe is located on the southern coast of Western Australia in the Goldfields-Esperance region, approximately 530 kilometres from the State Capital, Perth, and about halfway between the regional centres of Albany and Esperance. Within the Shire, there are five suburbs/localities, including Fitzgerald, Hopetoun, Jerdacuttup, Munglinup, and Ravensthorpe.

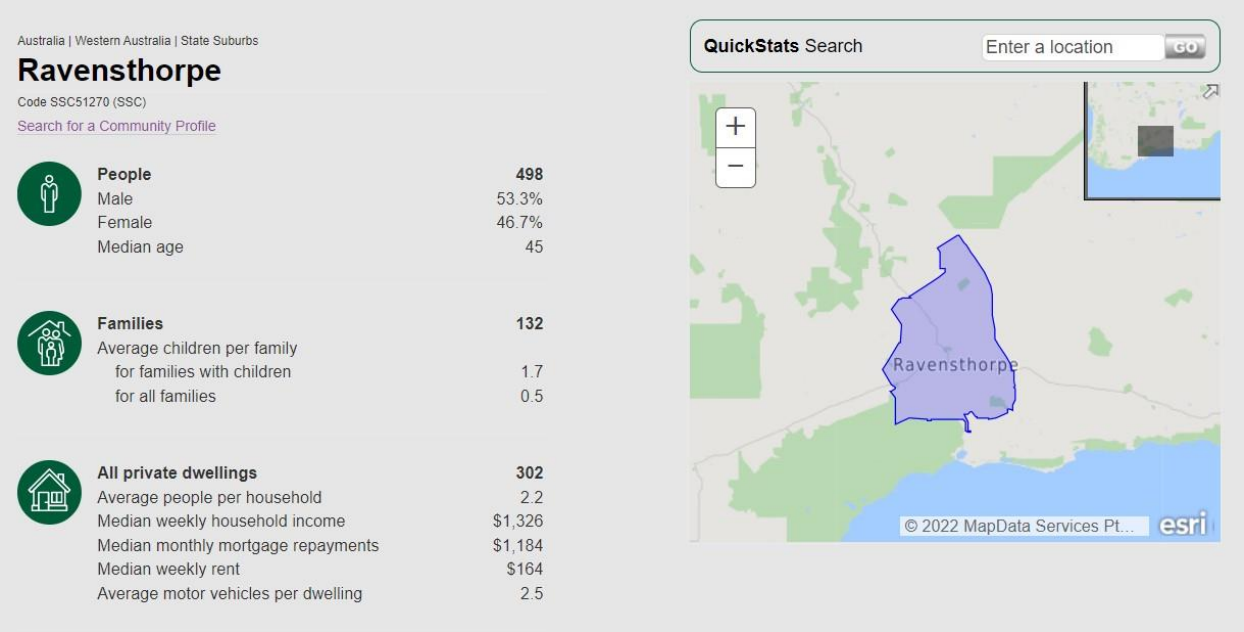
The Ravensthorpe, Munglinup, and Hopetoun townsites and the connections between them represent the areas of focus for this plan. The Australian Bureau of Statistics 2016 Census QuickStats have been referred to in order to understands the demographics of the Shire of Ravensthorpe in addition to the suburbs of Ravensthorpe, Hopetoun and Munglinup within. A screenshot of each place is shown in Figure 2-1 to Figure 2-4 respectively.

Figure 2-1: The Shire of Ravensthorpe Demographic Statistics



(Source: Australian Bureau of Statistics 2016 Census QuickStats)

Figure 2-2: Ravensthorpe Suburb Demographic Statistics



Australia | Western Australia | State Suburbs

Ravensthorpe

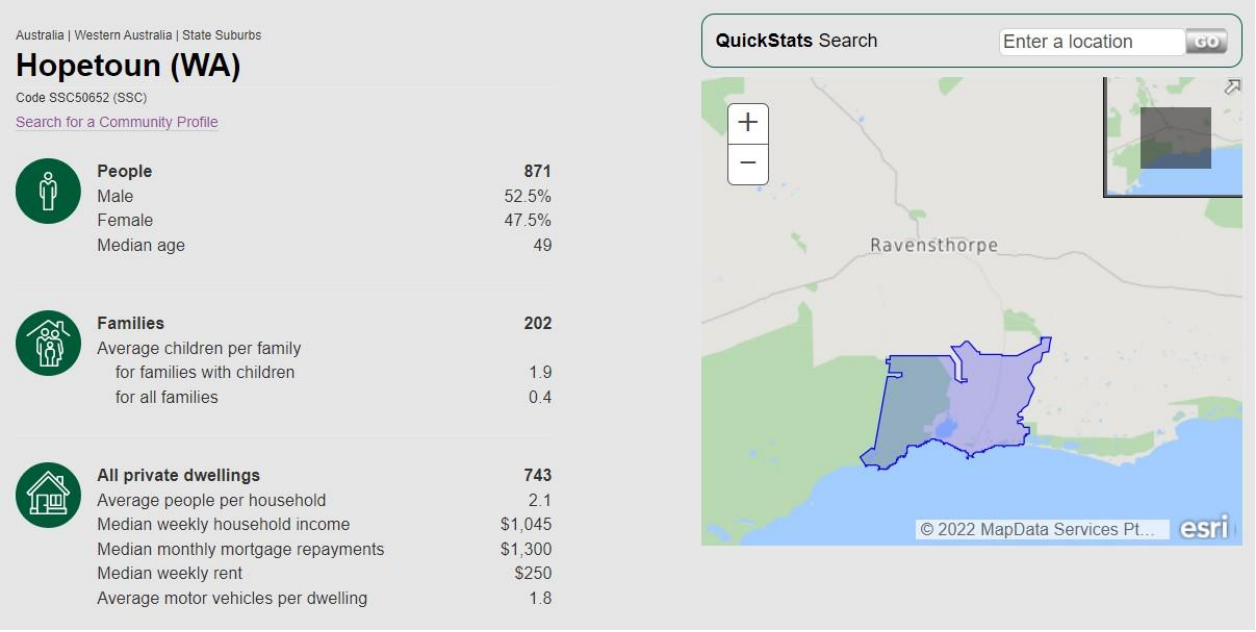
Code SSC51270 (SSC)

Search for a Community Profile

People	**498**
Male	53.3%
Female	46.7%
Median age	45
Families	**132**
Average children per family	
for families with children	1.7
for all families	0.5
All private dwellings	**302**
Average people per household	2.2
Median weekly household income	$1,326
Median monthly mortgage repayments	$1,184
Median weekly rent	$164
Average motor vehicles per dwelling	2.5

(Source: Australian Bureau of Statistics 2016 Census QuickStats)

Figure 2-3: Hopetoun Statistics Demographic Statistics



Australia | Western Australia | State Suburbs

Hopetoun (WA)

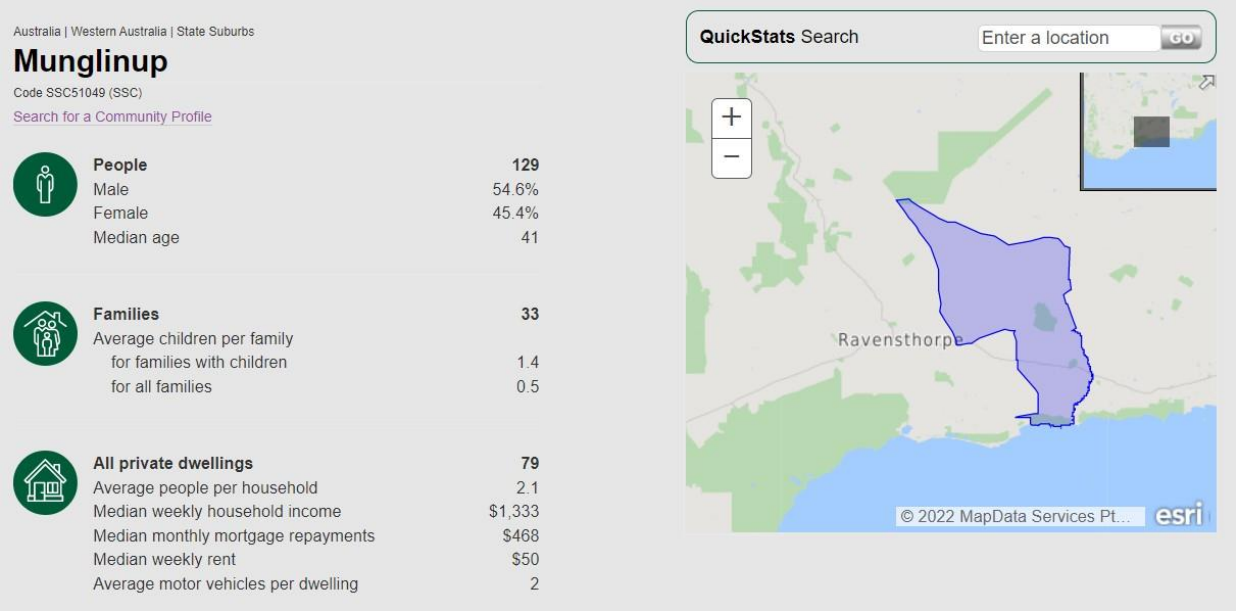
Code SSC50652 (SSC)

Search for a Community Profile

People	**871**
Male	52.5%
Female	47.5%
Median age	49
Families	**202**
Average children per family	
for families with children	1.9
for all families	0.4
All private dwellings	**743**
Average people per household	2.1
Median weekly household income	$1,045
Median monthly mortgage repayments	$1,300
Median weekly rent	$250
Average motor vehicles per dwelling	1.8

(Source: Australian Bureau of Statistics 2016 Census QuickStats)

Figure 2-4: Munglinup Suburb Demographic Statistics



Australia | Western Australia | State Suburbs

Munglinup

Code SSC51049 (SSC)

Search for a Community Profile

People	**129**
Male	54.6%
Female	45.4%
Median age	41
Families	**33**
Average children per family	
for families with children	1.4
for all families	0.5
All private dwellings	**79**
Average people per household	2.1
Median weekly household income	$1,333
Median monthly mortgage repayments	$468
Median weekly rent	$50
Average motor vehicles per dwelling	2

(Source: Australian Bureau of Statistics 2016 Census QuickStats)

2.2.2 Current Travel Behaviours

The most common methods of travel to work for employed people aged 15 and over are shown in Table 2-1.

Table 2-1: Study Area Commute Travel Behaviours

Location	Travel to work, top responses
Shire of Ravensthorpe (LGA)	• Car, as driver: 45.7% • Worked at home: 13.6% • Bus: 10.2% • Walked only: 9.6% • Car, as passenger: 3.1%
Ravensthorpe (Suburb)	• Car, as driver: 50.8% • Worked at home: 17.8% • Walked only: 14.0% • Other: 2.7% • Car, as passenger: 2.3%
Hopetoun (Suburb)	• Car, as driver: 52.8% • Bus: 12.7% • Walked only: 5.9% • Car, as passenger: 4.6% • Worked at home: 4.6%
Munglinup (Suburb)	• Car, as driver: 45.9% • Worked at home: 11.5% • Other: 9.8% • Bus: 4.9% • Walked only: 4.9%

(Source: Australian Bureau of Statistics 2016 Census QuickStats)

2.2.3 Key Industries

The most common industries of employees aged 15 and over and their occupations are shown in Table 2-2.

Table 2-2: Study Area Key Industries and Occupations

Location	Industry of Employment	Occupation
Shire of Ravensthorpe (LGA)	• Nickel Ore Mining: 15.6% • Other Grain Growing: 10.4% • Grain-Sheep or Grain-Beef Cattle Farming: 8.5% • Local Government Administration: 5.5% • Site Preparation Services: 3.8%	• Managers: 28.3% • Technicians and Trades Workers: 16.2% • Machinery Operators and Drivers: 15.3% • Labourers: 13.0% • Clerical and Administrative Workers: 8.7% • Professionals: 7.3% • Community and Personal Service Workers: 6.2% • Sales Workers: 4.3%
Ravensthorpe (Suburb)	• Other Grain Growing: 11.7% • Local Government Administration: 11.7% • Grain-Sheep or Grain-Beef Cattle Farming: 11.3% • Sheep Farming (Specialised): 5.4% • Hospitals (except Psychiatric Hospitals): 5.4%	• Managers: 34.1% • Machinery Operators and Drivers: 16.9% • Clerical and Administrative Workers: 12.0% • Labourers: 12.0% • Technicians and Trades Workers: 8.8% • Community and Personal Service Workers: 6.0% • Professionals: 5.6% • Sales Workers: 4.4%
Hopetoun (Suburb)	• Nickel Ore Mining: 30.9% • Supermarket and Grocery Stores: 3.9% • Real Estate Services: 3.9% • Local Government Administration: 3.9% • Pubs, Taverns and Bars: 3.5%	• Technicians and Trades Workers: 25.5% • Machinery Operators and Drivers: 14.1% • Managers: 12.7% • Labourers: 12.1% • Professionals: 9.2% • Community and Personal Service Workers: 8.5% • Sales Workers: 8.2% • Clerical and Administrative Workers: 7.8%
Munglinup (Suburb)	• Other Grain Growing: 38.0% • Grain-Sheep or Grain-Beef Cattle Farming: 18.0% • Primary Education: 16.0% • Beef Cattle Farming (Specialised): 10.0% • Shearing Services: 6.0%	• Managers: 63.6% • Labourers: 12.7% • Clerical and Administrative Workers: 7.3% • Professionals: 5.5% • Technicians and Trades Workers: 5.5% • Machinery Operators and Drivers: 5.5%

(Source: Australian Bureau of Statistics 2016 Census QuickStats)

2.2.4 Key Destinations

The path and trail network in the Shire comprises predominantly of off-road paths, trails and tracks, such as the Hopetoun-Ravensthorpe Railway Heritage Trail. Footpaths are present in the townsites and are typically paved, using concrete, asphalt or brick, though gravel or dirt paths are also present. Within the Hopetoun townsite, bike paths are planned, but few have been implemented to date.

Ravensthorpe contains a number of significant trip attractors, including the Silo Art Trail, the Overshot Hill Nature Reserve, the Ravensthorpe Range, the Visitor Centre and Museum and the Ravensthorpe Entertainment Centre, all of which may attract people riding, in addition to normal community destinations such as schools and medical facilities. While Ravensthorpe does have shared paths on both sides of the road along Morgans Street/South Coast Highway, the path network on adjacent streets is often limited to one side of the street only.

Figure 2-5: Ravensthorpe Townsite

On the southern coast, Hopetoun has significant tourist attractions and is likely to experience higher demand for riding from visitors to this location as a result. Demand is likely to be generated by the large number of visitor accommodations around the townsite, coastal attractions, and to the services within the townsite for residents. The proximity of Fitzgerald River National Park is a strong attractor for tourism.

Figure 2-7: Hopetoun Townsite

Munglinup is a much smaller community located along the South Coast Highway and therefore bike facilities are likely to be minimal. The focus for this townsite is likely to be safe local facilities and end-of-trip facilities and connections between community facilities. Munglinup is a key stop for travellers between Esperance and Ravensthorpe and beyond and as such, is important to provide safe facilities of both tourist and locals to travel around.

Figure 2-6: Munglinup Townsite

3.0 CONSULTATION THEMES

3.1 COMMUNITY SURVEY

A review of the responses given from the community survey showed the following trends:

- Riding is a popular option of travel within the Shire of Ravensthorpe with 60% of respondents riding over once per week
- Walking is also a main form of travel within the Shire of Ravensthorpe with those that do not ride as often, 79% selected walking as another form of frequent sustainable travel
- 57% of respondents highlighted the lack of dedicated bike riding infrastructure as a reason for not riding as often
- Riding on the road can be an uncomfortable experience for 73% of respondents
- Ravensthorpe encourages riding to and from leisure/recreation and commuting to and from work/school
- Hopetoun encourages riding to and from tourist attractions either in the form of fitness or leisure/recreation as indicated by the popularity in respondent's reasons for riding
- Munglinup had a lack of respondents in that area
- Hopetoun-Ravensthorpe Road a main route for riding in both Ravensthorpe and Hopetoun as a total of 15 respondents between both Towns selecting this as a road they use most when riding.

Due to the popularity of walking and riding in addition to the lack of dedicated riding infrastructure being highlighted as an issue, there appears to be a demand for bike infrastructure to be implemented in order to encourage riding more often within the Shire of Ravensthorpe.

Some of the feedback throughout the survey highlighted a demand for mountain biking and a lack of tracks and trails to facilitate this.

The limitations and constraints of the survey included the data being restricted to the number of participants proving responses. It was noted that a high percentage of participants skipped each question meaning that a limited data set was obtained. Additionally, the questions in relation to cycle routes and destinations within the geographical location were only able to be answered by those that have knowledge of the area and also cycle enough to answer on the routes and destinations provided within the options. It was noted that some participants answered the questions for both Ravensthorpe and Hopetoun however, only one participant answered on behalf of Munglinup. This meant that the opinions of the broader community may not have been captured.

The full analysis of the survey can be found in Appendix B.

3.2 COMMUNITY WORKSHOPS

Two community workshops were held in the Shire during the week commencing 25 April 2022. One of these was held in the townsite of Ravensthorpe (and included Munglinup area) and one in Hopetoun. Attendees had the opportunity to provide feedback into the bike network of each of the three townsites.

Unfortunately, there were no attendees for the Ravensthorpe and Munglinup workshop. A total of five people attended the workshop to discuss the Hopetoun bike network and in general were pleased with the proposed network and some of the priorities already identified such as a new path to the east of Veal Street, a safe, slower town centre area and improved infrastructure to the primary school.

In addition to the proposed cycle network, a number of local paths that are needed for construction were identified along:

- Gibson Way
- Chittick Street
- Forest Way
- The laneway connecting Gibson Way to Culham Street

Opportunity:

- Additional paths along Gibson Way, Chittick Street, Forest Way and the laneway connecting Gibson Way to Culham Street

3.3 SADDLE SURVEY

Stantec conducted a saddle survey of each townsite during the week commencing 25 April 2022 to plan a cycle network throughout the three townsite's in order to identify where there would be opportunities for improvement of the cycling infrastructure. A meeting with the Shire representative was held prior to the site assessment.

3.3.1 Ravensthorpe

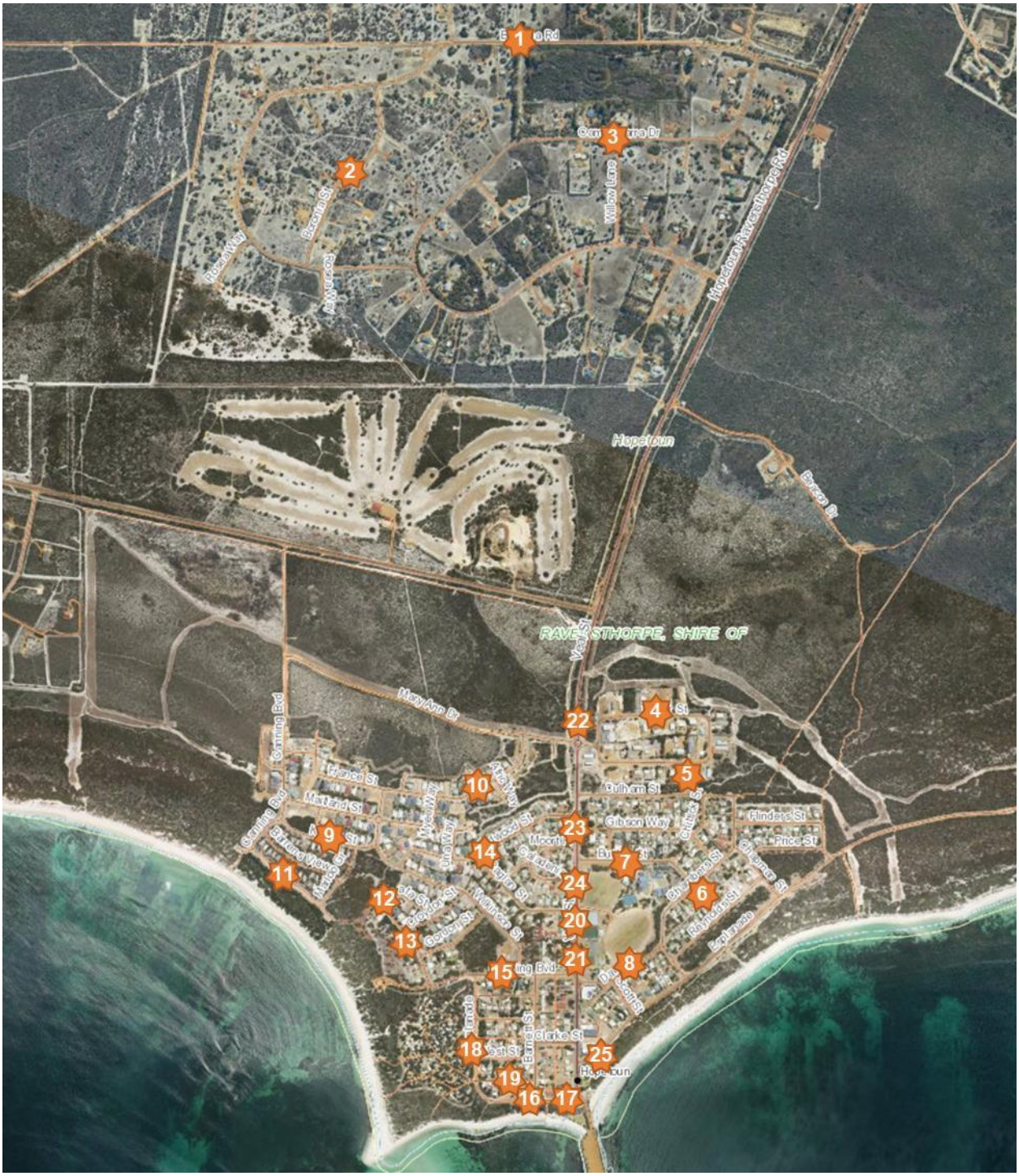
Figure 3-1: Ravensthorpe - Saddle Survey Findings

1. Morgans Street - opportunity for a shared zone or 30km/h speed zone
2. Coleman Street - existing shared path (approx. 2m wide) linking school to sporting complex. Stops prior to golf course and bowling ground
3. Morgans Street – no safe crossing between school and mini mart
4. Hosking Street – existing crossing south of Morgans Street would need improved if shared zone is not preferred
5. Dunn Street - existing path south of Hosking Street
6. Morgans Street - existing path on both sides from Coleman Street to Queen Street
7. Andre Street - existing path from Martin Street to Morgans Street, no connection to Dunn Street
8. Carlisle Street - existing footpath from Spence Street to Daw Street
9. Spence Street – existing footpath from Moir Road to Andre Street
10. Queen Street - existing footpath from south of Martin Street to Daw Street
11. Spence Street – path swaps sides at Moir Road with no connection between each side
12. Spence Street – existing path terminates halfway along Spence Street on south side
13. Neil Street - no paths on either side and no path connection from Martin Street
14. Dance Street - no paths on either side and no path connection from Morgans Street, Spence Street & Martin Street

15. Morgans Street – no path from Spence Street to the west
16. Laneway - existing gravel laneway from Queen Street and Hosking Street
17. Spence Street – opportunity for shared path on south side to connect Andre Street and Queen Street
18. Dunn Street - opportunity for shared path on both sides between Queen Street and Carlisle Street OR protected bike lanes along Dunn Street by widening from Carlisle Street to Elston Street OR widen existing footpath on north side and add shade
19. Daw Street - existing path needs widening to a shared path
20. Kingsmill Street – existing path along entire length
21. Dunn Street and Morgans Street – opportunity to upgrade crossings to access Carlisle Street
22. Elston Street - existing path to Jamieson Street
23. Jamieson Street - missing connection from Elston Street to path on Morgans Street with opportunity to widen path to a better shared path and improve all crossing across side roads
24. Morgans Street and Carlisle Street – existing 3 way crossing
25. Jamieson Street – no path to motel from the end of Morgans Street opposite caravan park
26. Queen Street – opportunity to narrow roadway for wider shared paths with shade OR widen roadway with protected bike lanes

3.3.2 Hopetoun

Figure 3-2: Hopetoun - Saddle Survey Findings



1. Banksia Road - no paths on either side (60km/h posted speed)

2. Boronia Street - no paths on either side
3. Canbewarra Drive - no paths on either side, on a school bus route
4. Tamar Road - industrial loop road is a kerbed road with no paths on either side
5. Hakea Street – existing path from Tamar Street to Culham Street, Culham Street has 1.5m wide path along south side with no shade
6. Chambers Street – existing path on south side connecting to Buckie Street which has paths on both sides leading to the school. Opportunity for improved crossing across Chambers Street to/from Buckie Street either side of Chambers Street
7. Buckie Street – cars overhanging path in school carpark, wheelstops required to prevent encroachment
8. Dawn Street – existing path on southern side into cul de sac with Veal Road but no path connection to town centre to the south without going around the memorial
9. Keplar Street - existing path needs widening to shared path
10. France Street – existing path connecting to Canning Boulevard via Eucla Way needs to be widened to a shared path
11. Canning Boulevard – existing shared path with embayed parking access to the beach and needs shade
12. Marloo Grove - cul de sac with trail path connecting back to Keplar Street
13. Templeton Drive - links to lookout path only and loops back to Croydon Street via existing path and crossing over Leata Street
14. Birdwood Street – quiet residential street with existing footpath swapping sides via a crossing
15. Canning Boulevard – no connection between northern and southern side paths of Canning Boulevard connecting to Wilkinson Street
16. Barnett Street – existing path connecting Canning Boulevard to Esplanade
17. Esplanade - missing section of path connects to Veal Street at Port Hotel and Bottlemart
18. Esplanade – existing footpath terminates at crossing to the Caravan Park
19. Laneway – unsealed track linking Barnett Street to Esplanade - potential for upgrade
20. Veal Street - path on both sides but with on-street parking and street furniture, narrow and poor condition with high traffic speeds – potential for a shared zone (30km/h) beginning at community centre near the park on west side
21. Veal Street – no crossing from Canning Boulevard to skatepark and basketball/tennis courts
22. Veal Street – existing path which becomes gravel over Birdwood Street crossing
23. Veal Street – midblock two stage crossing south of Buckie Street intersection, no crossing to the north. Cycle lane on west side
24. Veal Street – missing path link on east side connecting Buckie Street to district centre (school to shops)
25. Esplanade – existing path on south side that ends and becomes gravel path

3.3.3 Munglinup

Figure 3-3: Munglinup - Saddle Survey Findings

1. Tubada Street - no paths on either side or safe crossing points
2. Morrel Street - no paths on either side
3. Hall Street - more desirable route to sporting complex than Bennett Street
4. Laneway - off-road link between Hall Street and Morrel Street
5. Tallarack Street - no paths on either side
6. Yorrel Street and Manjart Street - existing pedestrian path with no shade
7. Yorrel Street - existing crossings to Budjan Street and Manjart Street (no path)
8. Budjan Street - existing 2m wide shared path next to School which needs shade plus widening to accommodate multiple modes (such as walking, riding bikes, scooter, skate boards etc) also cars overhanging the path at school parking, wheelstops required
9. Budjan Street - existing crossing linking to Tubada Street
10. Tubada Street – existing path to Manjart Street could be widened with added shade
11. Manjart Street – existing crossing to Tubada Street and park

4.0 BIKE NETWORK ANALYSIS AND PLANS

4.1 EXISTING NETWORK

Table 4-1: Town Features

Feature	Ravensthorpe	Hopetoun	Munglinup
Main Town Amenities	• Palace Motor Hotel • Ravensthorpe Motel • Green Haven Tourist Park • Blooz Café • Ravensthorpe Country Kitchen • BP Ravensthorpe Roadhouse • Shell Roadhouse • Four Barrel Café & Restaurant	• Port Hotel • Hopetoun Motel & Chalet Village • Hopetoun Beachside Caravan Park • Wavecrest Tourist Park • Ocean View Retreat • Blue Vista Cottage • Ocean Song Cottage • Hopetoun Chalet • Port Café • Wavecrest Bar & Bistro • Simon's Market Café • Christine's Kitchen	• Munglinup Beach Caravan Park
Main Streets	• Morgans Street • Spence Street • Queen Street • Dunn Street • Hoskings Street • Carlisle Street • Martin Street	• Veal Street • Esplanade • Canning Boulevard • Banksia Road • Dawn Street • Buckie Street • Wilkinson Street • Tamar Street	• Budjan Street • Manjart Street • Tallarack Street • Morrel Street • Tubada Street • Yandee Street • Hall Street
Schools	• Ravensthorpe District High School	• Hopetoun Primary School	• Munglinup Primary School
Health Facilities	• Ravensthorpe Community Swimming Pool • Ravensthorpe Gym • Ravensthorpe Tennis Club	• Hopetoun Gym	• CBH
Employment	• Farming and Agriculture • CBH • BP Roadhouse • Mining • Swans Verterinary Clinic • Real Estate • Retail • Trade Service and Supplies • Transport and Freight	• Farming and Agriculture • Mining • Retail • Trade Service and Supplies • Transport and Freight	• Munglinup Roadhouse • Transport and Freight
Recreation	• Ravensthorpe Entertainment Centre	• Hopetoun Gym	• Munglinup Playground

	• Ravensthorpe Gym • Ravensthorpe Tennis Club		
Tourist Facilities	• Ravensthorpe Visitor Centre and Museum	• Hopetoun Self-Service Visitor Information Hub • Southern Wilderness Art Trips	• Munglinup Camp Area
Retail Centres	• Ravensthorpe Shopping Strip (Morgans Street)	• Hopetoun Shopping Strip (Veal Street)	• N/A

Table 4-2: Transport Context

Feature	Ravensthorpe	Hopetoun	Munglinup
Crashes	Refer Figure 4-1 • 1 Hospital • 1 Medical • 3 Property Damage Only (PDO) Major • 4 PDO Minor	Refer Figure 4-2 • 4 PDO Major • 2 PDO Minor	Refer Figure 4-3 • Nil
Road Network	Refer Figure 4-4	Refer Figure 4-6	Refer Figure 4-8
Speed Limits	Refer Figure 4-5	Refer Figure 4-7	Refer Figure 4-9
Volumes (Heavy Vehicle Percentage) and 85th Percentile Speeds (Posted Speed Limit)	Hopetoun Ravensthorpe Rd (South of Old Ravensthorpe Rd) - 2019/20 • 390 AADT (14.9%) • 88km/h – 98km/h (110km/h) South Coast Hwy (East of Ravensthorpe) – 2021/22 • 816 AADT (30.6%) • 102km/h – 111km/h (110km/h)	• N/A	South Coast Hwy (West of Morrel St) – 2018/19 • 688 AADT (22.4%) • 103km/h – 114km/h (90km/h)
Footpath and Bike Network	Refer Figure 4-10	Refer Figure 4-33	Refer The existing path network for the Ravensthorpe townsite is shown in Figure 4-75 with a breakdown of the key findings below: • Lack of walking and riding infrastructure • Lack of shade • Overhanging parked vehicles Figure 4-75

Figure 4-1: Ravensthorpe - Crash Data (01/01/17 to 31/12/21)

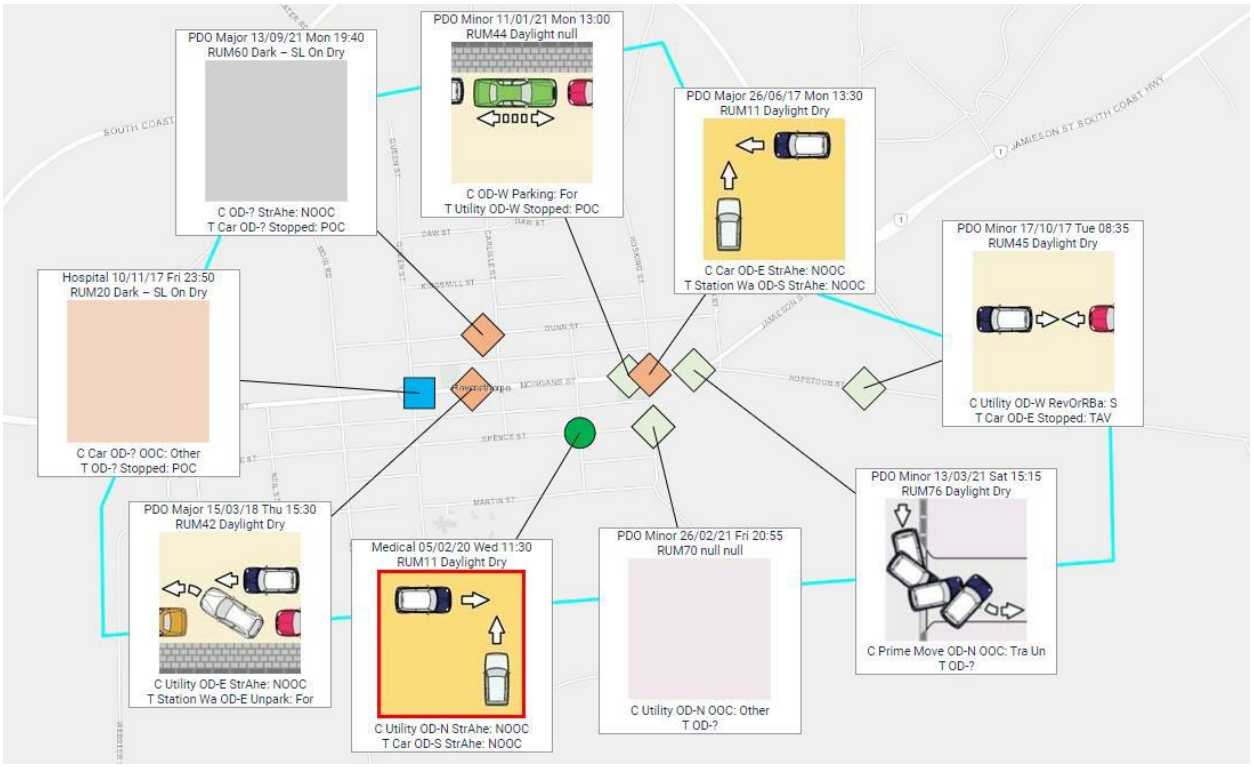


Figure 4-2: Hopetoun - Crash Data (01/01/17 to 31/12/21)

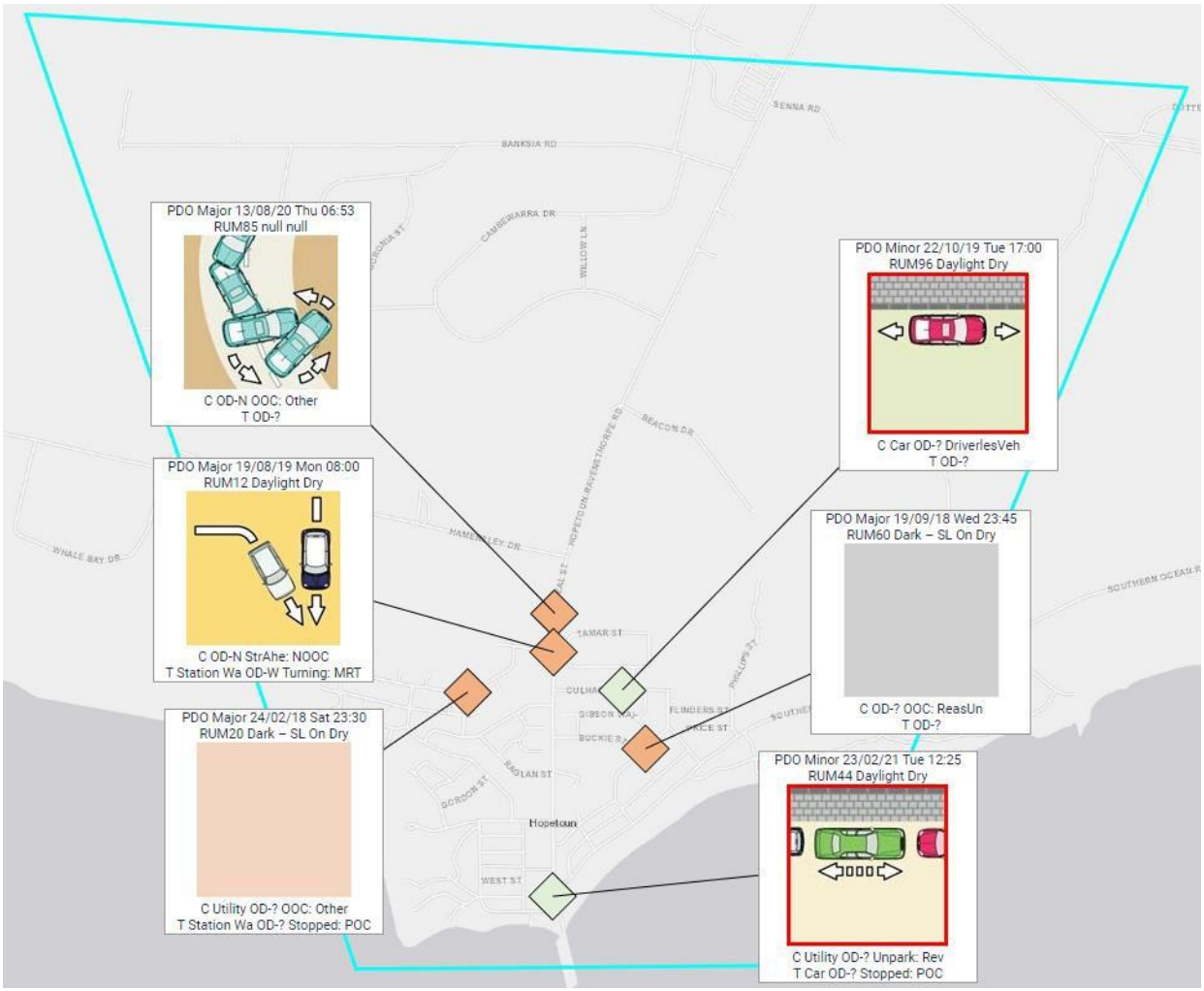


Figure 4-4: Ravensthorpe - MRWA Road Hierarchy

Figure 4-5: Ravensthorpe - MRWA Speed Limits

Figure 4-6: Hopetoun - MRWA Road Hierarchy

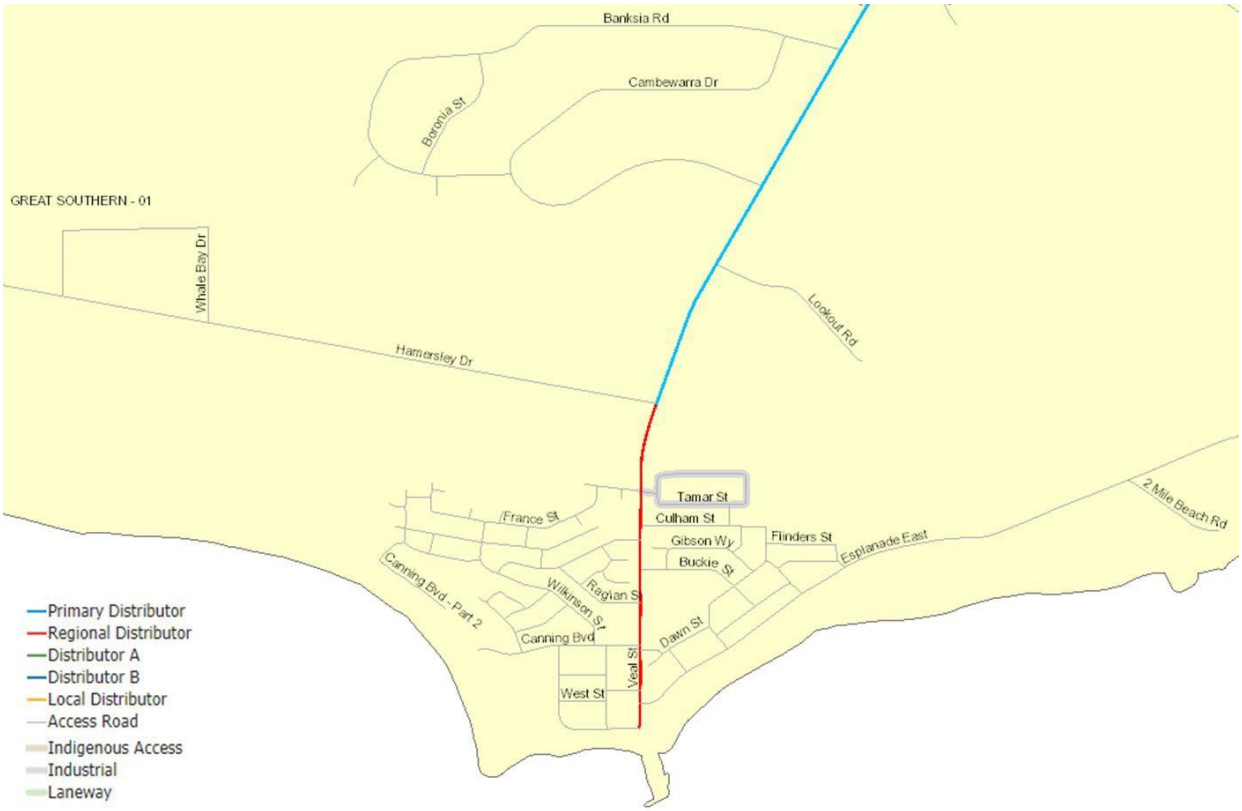


Figure 4-7: Hopetoun - MRWA Speed Limits

Figure 4-8: Munglinup - MRWA Road Hierarchy

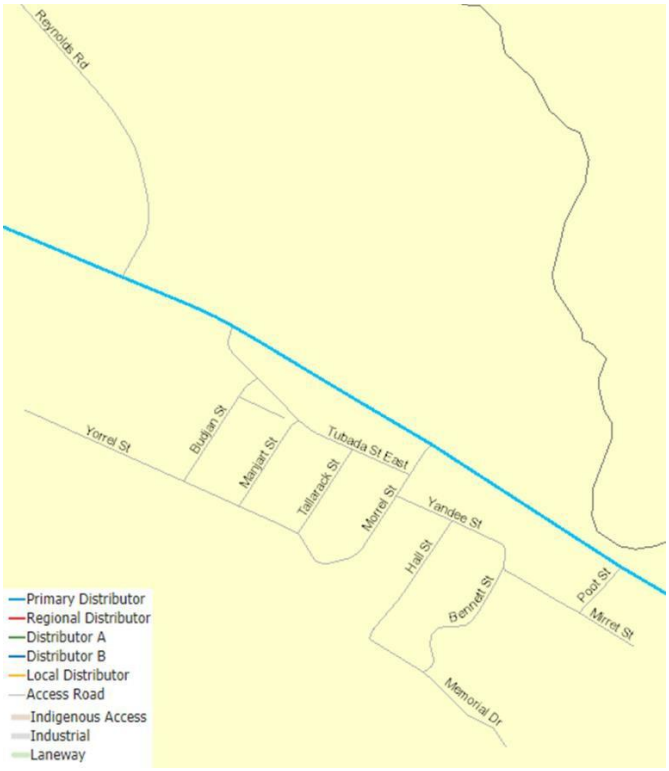
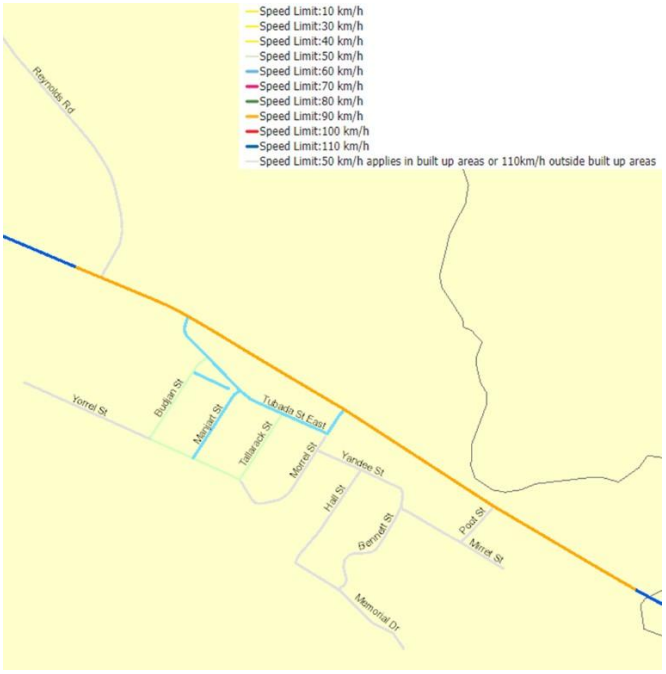


Figure 4-9: Munglinup - MRWA Speed Limits



4.2 HIGH LEVEL CONDITION ASSESSMENT

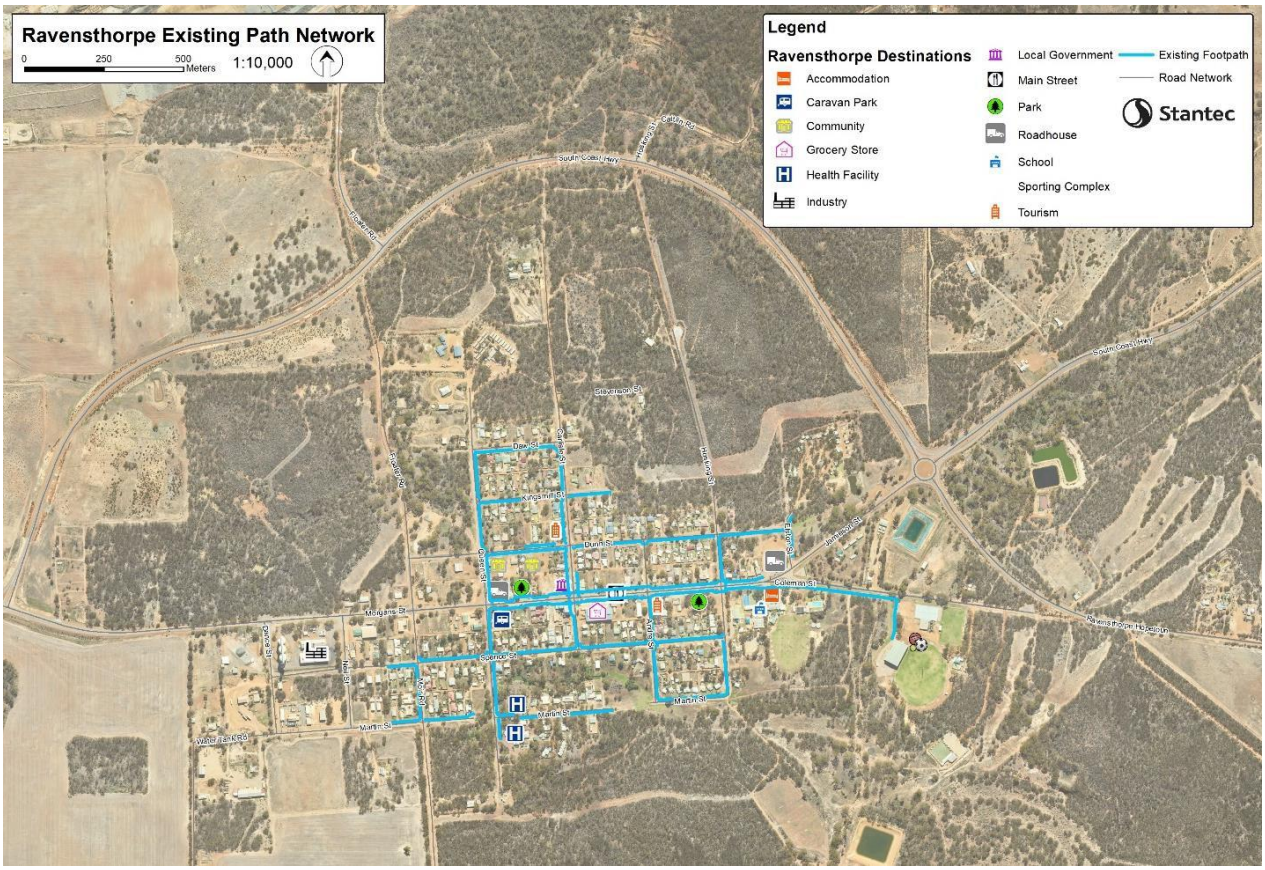
A saddle survey and aerial imagery review was used to identify the existing network within each townsite.

4.2.1 Ravensthorpe

The existing path network for the Ravensthorpe townsite is shown in Figure 4-10 with a breakdown of the key findings below:

- Existing paths require widening to reflect best practice to minimum standards for DoT funded infrastructure
- Missing path connections
- Lack of safe crossing points

Figure 4-10: Ravensthorpe - Existing Path Network



4.2.1.1 Coleman Street

Coleman Street connects on the eastern of Morgans Street and links the school to the entertainment and sporting complex. Which were considered as major destinations in the community survey by 44%, 56% and 44% of the respondents respectively. 8% of the total respondents in the community survey selected

Coleman Street as a major route when riding. It was noted that the existing path shown in Figure 4-11 terminates into a gravel path prior to the golf course and bowling club.

Figure 4-11: Coleman Street Path Network East of Elston Street

4.2.1.2 Morgans Street

Morgans Street is the main road leading through the town connecting the main shopping strip and tourist facilities to the school and industrial area on either end. 42% of the total respondents in the community survey selected Morgans Street as a major route when riding and the destinations along Morgans Street were generally highly selected. The westbound entry has on street parking on both sides with landscaped verges and shared paths as shown in Figure 4-12.

Figure 4-12: Morgans Street Path Network at Hosking Street

4.2.1.3 Hosking Street

Hosking Street connects South Coast Highway to Martin Street with the school and Jubilee Park being major destinations either side of Hosking Street, south of Morgans Street. 17% of the total respondents in the community survey selected Hosking Street as a major route when riding. Jubilee Park and the school were both selected by 44% of the total respondents as key destinations when riding. Hosking Street at the intersection with Morgans Street has an existing crossing with U-rails across both sides of Hosking Street and on the east side of Morgans Street as shown in Figure 4-13. The location of these crossings is adjacent to the school and are likely to be highly utilised in school start and end times.

Figure 4-13: Hosking Street Crossings with Morgans Street

Figure 4-14: Hosking Street Path Network South of Morgans Street

4.2.1.4 Spence Street

Spence Street connects the western entry of the school to the industrial zone via a residential area. 25% of the total respondents in the community survey selected Spence Street as a major route when riding. A pedestrian path runs from Hosking Street to Moir Road on the north side only before swapping to the southern side at Moir Road and terminating into a gravel path halfway along the street. The existing paths for this section are shown in Figure 4-15 through to Figure 4-19.

Figure 4-15: Spence Street Path Network between Andre Street and Martin Street

Figure 4-16: Spence Street Path Network between Queen Street and Carlisle Street

Figure 4-17: Spence Street Path Network from Moir Road

Figure 4-18: Spence Street Path Network from Neil Street

Figure 4-19: Spence Street to Dance Street

4.2.1.5 Andre Street

Andre Street connects Dunn Street to Martin Street, intersection with Morgans Street. 8 % of the total respondents in the community survey selected Andre Street as a major route when riding. Andre Street, south of Morgans Street has tourist facilities on either side. The visitor centre and museum were selected by 22% of respondents in the community survey.

Figure 4-20: Andre Street Path Network between Morgans Street and Spence Street

4.2.1.6 Queen Street

Queen Street connects the northern end of the town from Daw Street to the hospital on Martin Street. 25% of the total respondents in the community survey selected Queen Street as a major route when riding. The key destinations along Queen Street are the BP Truckstop, the RV park and the hospital/medical centre. The RV park and the medical precinct were both selected by 11% of the total respondents in the community survey as key destinations when riding.

Figure 4-21: Queen Street Path Network from Dunn Street

Figure 4-22: Queen Street Path Network from Daw Street

4.2.1.7 Moir Road

Moir Road starts south of Morgans Street and continues far south towards Fitzgerald River National Park. 33% of the total respondents in the community survey selected Moir Road as a major route when riding. Moir Road is largely residential with no major destinations along the road.

Figure 4-23: Moir Road Path Connections from Spence Street

4.2.1.8 Neil Street

Neil Street is the main industrial area between Morgans Street and Martin Street. 8% of the total respondents in the community survey selected Neil Street as a major route when riding.

Figure 4-24: Neil Street from Spence Street

4.2.1.9 Martin Street

Martin Street is split into three sections where there are currently three separate no through roads on the southern end of the town. The main portion has the medical centre on one side and the health service on the other, to the east of Queen Street. 25% of the total respondents in the community survey selected Martin Street as a major route when riding with the health service or medical centre selected by 11%.

Figure 4-25: Martin Street from Neil Street

4.2.1.10 Dunn Street

Dunn Street connects Floater Road to Elston Street with the main destinations along the route being the Ravensthorpe farmers centre, the community resource centre, the church and the herbarium. 42% of the total respondents in the community survey selected Dunn Street as a major route when riding. Each of the destinations were selected by 33%, 33%, 11% and 11% of the total respondents respectively. The existing paths are around 1.5m wide as shown in Figure 4-26 and Figure 4-27. Whereas, Figure 4-28 shows an existing shared path through a laneway off Dunn Street.

Figure 4-26: Dunn Street from Queen Street

Figure 4-27: Dunn Street from Carlisle Street

Figure 4-28: Dunn Street from midblock between Carlisle Street and Hosking Street

4.2.1.11 Daw Street

Daw Street is a residential street which connects the northern end of Queen Street to Carlisle Street. 25% of the total respondents in the community survey selected Daw Street as a major route when riding.

Figure 4-29: Daw Street from Carlisle Street

4.2.1.12 Carlisle Street

Carlisle Street runs from the northern end of the town to Spence Street with the herbarium, the shire offices and the IGA at intersecting roads. 25% of the total respondents in the community survey selected Carlisle Street as a major route when riding with 11%, 33% and 22% selected as key destinations respectively.

Figure 4-30: Carlisle Street Path Network from Daw Street

4.2.1.13 Elston Street

Elston Street connecting Dunn Street to Jamieson Street adjacent to the Shell Roadhouse and the Green Haven Tourist Park. 8% of the total respondents in the community survey selected Elston Street as a major route when riding.

Figure 4-31: Elston Street from Jamieson Street

4.2.1.14 Jamieson Street

Jamieson Street connects from Morgans Street to the South Coast Highway intersection. Jamieson Street was not included in the community survey and was unmentioned by respondents as an “other” option. However, the motel was selected 11% of the total respondents in the community survey.

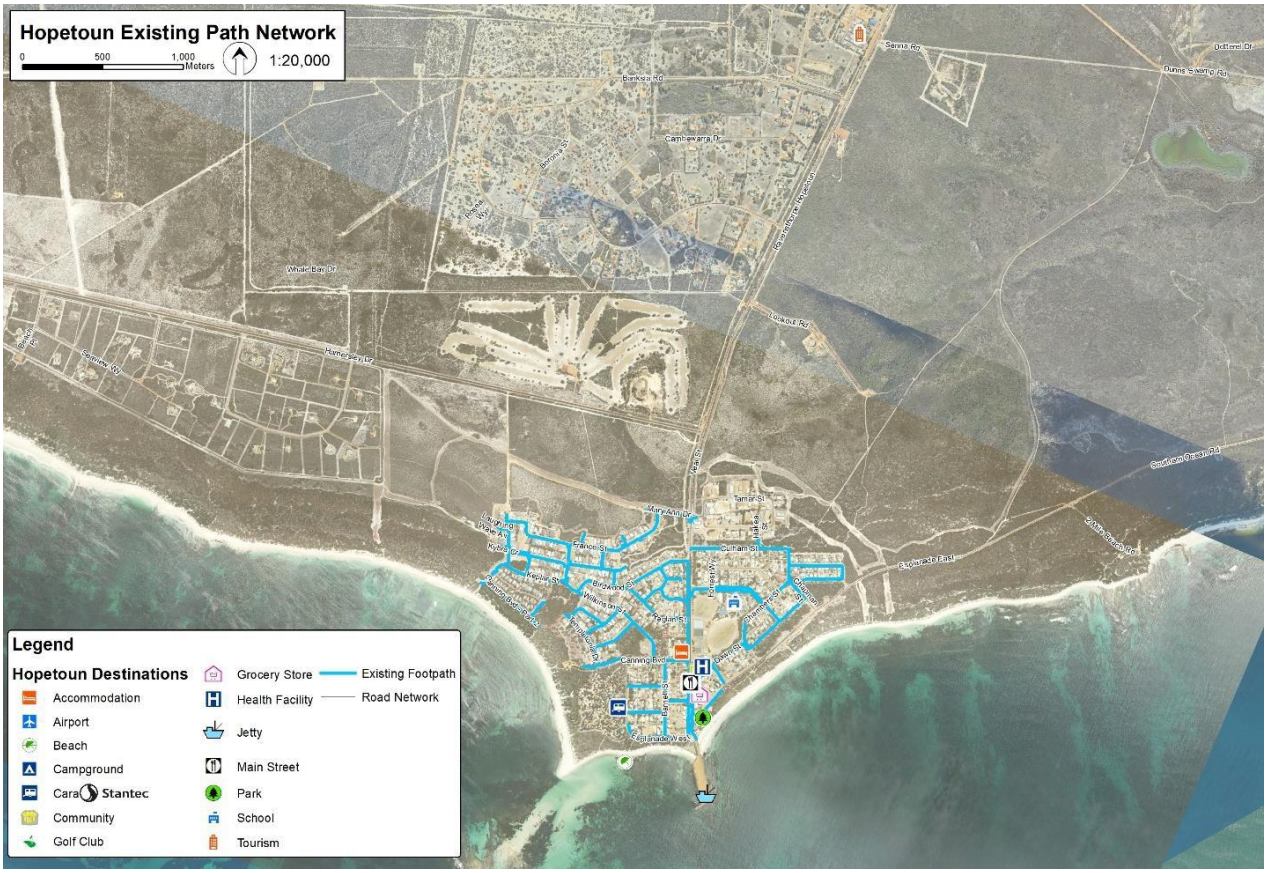
Figure 4-32: Jamieson Street from Elston Street

4.2.2 Hopetoun

The existing path network for the Ravensthorpe townsite is shown in Figure 4-33 with a breakdown of the key findings below:

- Existing paths generally under 2m wide and require widening to a shared path for the bike network
- Missing path connections
- Lack of safe crossing points

Figure 4-33: Hopetoun - Existing Path Network



4.2.2.1 Banksia Road

Banksia Road is a residential road looping from Ravensthorpe Hopetoun Road to Cambewarra Drive. 6% of the total respondents in the community survey selected this as a main route when cycling. There are no existing paths but there are wide road reserves as shown in the figures below:

Figure 4-34: Banksia Road from Ravensthorpe Hopetoun Road

Figure 4-35: Banskia Road from East of Boronia Street

Figure 4-36: Banksia Road from Boronia Street

4.2.2.2 Boronia Street

Boronia connects either side of the Banksia Road loop and is another residential road with wide road reserves and no existing paths as shown in Figure 4-37.

Figure 4-37: Boronia Street from Banksia Road

4.2.2.3 Cambewarra Drive

Cabewarra Drive connects residential lots from Banksia Road back to Ravensthorpe Hopetoun Road as shown in Figure 4-38. 24% of the total respondents in the community survey selected this as a main route when cycling and it is noted as having a school bus route servicing the corridor.

Figure 4-38: Cambewarra Drive from Banksia Road

4.2.2.4 Tamar Street

Tamar Street is a looping road connecting the residential area to Veal Street. There are no existing paths but wide verges suitable for a shared path as shown in Figure 4-39. 6% of the total respondents in the community survey selected this as a main route when cycling.

Figure 4-39: Tamar Street from Hakea Street

4.2.2.5 Hakea Street

Hakea Street is a short linking street connecting Tamar Street to Culham Street via an existing footpath on the west side as shown in Figure 4-40.

Figure 4-40: Hakea Street from Tamar Street

4.2.2.6 Culham Street

Culham Street connects Veal Street to Chambers Street. There is an existing shared path on the south side as shown in Figure 4-41. 12% of the total respondents in the community survey selected this as a main route when cycling.

Figure 4-41: Culham Street from Hakea Street

4.2.2.7 Chambers Street

Chambers Street connects Culham Street to Esplanade east with paths on the east side as shown in Figure 4-42. 12% of the total respondents in the community survey selected this as a main route when cycling.

Figure 4-42: Chambers Street from Chapman Street

4.2.2.8 Buckie Street

Buckie Street connects Veal Street to Reynolds Street and provides the main access to the primary school. There is a shared path on the southern side for the entire length and the northern side from Forrest Way eastbound. There is crossing points at Chambers Street as shown in Figure 4-43. The school provides bicycle parking allowing for kids to ride to school and park their bikes and scooters. However, the usable width of the shared path is restricted by overhanging parked vehicles as shown in Figure 4-44.

Figure 4-43: Buckie Street from Chambers Street

Figure 4-44: Buckie Street fronting School

4.2.2.9 Dawn Street

Dawn Street is a cul de sac connecting from Chambers Street with a path on both sides as shown in Figure 4-45. 12% of the total respondents in the community survey selected this as a main route when cycling. There is a path and a gravel path either side of the memorial park which connects to Veal Street as shown in Figure 4-46.

Figure 4-45: Dawn Street from Chambers Street

Figure 4-46: Dawn Street from Veal Street

4.2.2.10 Mary Ann Street

Mary Ann Street is a short link connecting Veal Street to France Street with a shared path on the side as shown in Figure 4-47. 6% of the total respondents in the community survey selected this as a main route when cycling.

Figure 4-47: Mary Ann Street from Veal Street

4.2.2.11 France Street

France Street is a residential street which connects from Mary Ann Street to Eucla Way and has a shared path on the south side for the entire length as shown in Figure 4-48. 18% of the total respondents in the community survey selected this as a main route when cycling.

Figure 4-48: France Street from Mary Ann Street

4.2.2.12 Keplar Street

Keplar Street connects Canning Boulevard to Wilkinson Street via a path on the south side. There is also a crossing from a path on Iris Way which connects to Maitland Street. The street is in a residential area with adequate shade. However, the paths are quite narrower and would need widened to a shared path as shown in Figure 4-49. 18% of the total respondents in the community survey selected this as a main route when cycling.

Figure 4-49: Keplar Street from Wilkinson Street

4.2.2.13 Canning Boulevard

Canning Boulevard connects Eucla Way to Veal Street but is split between a bush trail. However, there is a shared path from the northwest side which links back to Templetonia Drive and to Canning Boulevard. Additionally, there is a crossing which leads to a shared path connecting to Barrens View and continues up to Keplar Street as shown in Figure 4-51. The beach can be accessed via the western side with the eastern side linking back to the town. There is a shared path adjacent to the beach as shown in Figure 4-50. 53% of the total respondents in the community survey selected this as a main route when cycling.

Figure 4-50: Canning Boulevard from Keplar Street

Figure 4-51: Canning Boulevard Midblock Crossing

The east side of Canning Boulevard has a path on the north side which swaps to the southern side via a crossing adjacent to Esplanade West as shown in Figure 4-52.

Figure 4-52: Canning Boulevard from Wilkinson Street

There is a missing connection between Templetonia Drive and Wilkinson Street as shown in Figure 4-53. Additionally, there is a missing connection from Veal Street as shown in Figure 4-54.

Figure 4-53: Canning Boulevard from Templetonia Drive

Figure 4-54: Canning Boulevard from Veal Street

4.2.2.14 Marloo Grove

Marloo Grove connects from Canning Boulevard on the west to a zig-zag shared path up to Keplar Street as shown in Figure 4-55.

Figure 4-55: Marloo Grove from Barrens Way


4.2.2.15 Wilkinson Street

Wilkinson Street connects France Street to Canning Boulevard with a path which swaps sides at Keplar Street. There is a lack of shade along this route as shown in Figure 4-56. 18% of the total respondents in the community survey selected this as a main route when cycling.

Figure 4-56: Wilkinson Street from Canning Boulevard


4.2.2.16 Templetonia Drive

Templetonia Drive connects the Canning Boulevard shared path trail on the west to Canning Boulevard on the east. There is a path along the eastern side as shown in Figure 4-57. 24% of the total respondents in the community survey selected this as a main route when cycling.

Figure 4-57: Templetonia Drive from Canning Boulevard

4.2.2.17 Birdwood Street

Birdwood Street connects Wilkinson Street to Veal Street with a shared path which swaps side just west of Raglan Street. The path width can be restricted by residential bins as shown in Figure 4-58. There is also a trail between Birdwood Street and France Street as shown in Figure 4-59. 59% of the total respondents in the community survey selected this as a main route when cycling.

Figure 4-58: Birdwood Street from Wilkinson Street

Figure 4-59: Trail off Birdwood Street and France Street

4.2.2.18 Veal Street

Veal Street is the major road leading through the town from Ravensthorpe Hopetoun Road to the ocean. The northern portion is generally unpaved gravel tracks as shown in Figure 4-60 whereas, the southern portion is well landscaped with shared paths and street furniture as shown in Figure 4-61 to Figure 4-64. 53% of the total respondents in the community survey selected this as a main route when cycling.

Figure 4-60: Veal Street from Birdwood Street

Figure 4-61: Veal Street from Esplanade West

Figure 4-62: Veal Street from Dawn Street

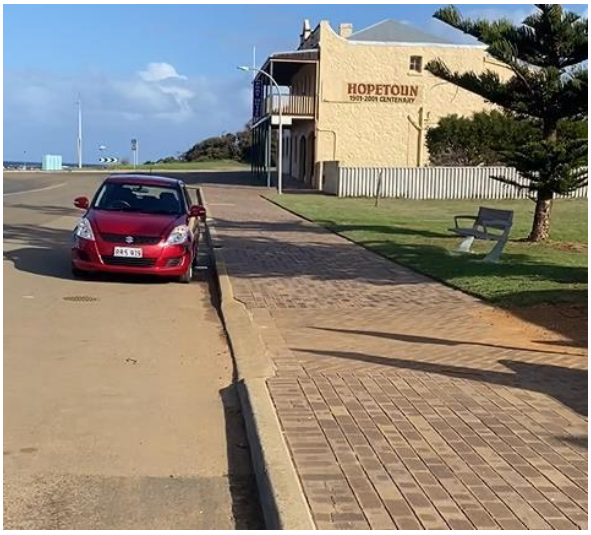


Figure 4-63: Veal Street from Esplanade East

Figure 4-64: Veal Street from Dawn Street

Where Dawn Street terminates, the is a paved path and a gravel path either side of the memorial which connects Veal Street to Dawn Street as shown in Figure 4-65.

Figure 4-65: Veal Street from Esplanade East

There is a lack of safe crossing points between the west side of Veal Street and the school and sporting complex, north of Canning Boulevard as shown in Figure 4-66. However, south of Buckie Street there is a two-staged crossing as shown in Figure 4-67.

Figure 4-66: Veal Street from Canning Boulevard

Figure 4-67: Veal Street from the South of Buckie Street

The west side of Veal Street adjacent to Birdwood Street has narrow asphalt paths as shown in Figure 4-68.

Figure 4-68: Veal Street from Birdwood Street

There is a lack of connections on Veal Street from the north of Buckie Street as shown in Figure 4-69.

Figure 4-69: Veal Street from Buckie Street

4.2.2.19 Barnett Street

Barnett Street connects Canning Boulevard to Esplanade West via a path on the east side as shown in Figure 4-70. 0% of the total respondents in the community survey selected this as a main route when cycling.

Figure 4-70: Barnett Street from Esplanade West

4.2.2.20 Esplanade East

Esplanade East connects Veal Street to Southern Ocean Road. 53% of the total respondents in the community survey selected this as a main route when cycling. There is a shared path on the south side which terminates just west of Scott Street. Further west there are no paths as shown in Figure 4-71.

Figure 4-71: Esplanade East from Chambers Street

4.2.2.21 Southern Ocean Road

Southern Ocean Road connects from Esplanade East to Springdale Road via Starvation Bay. 35% of the total respondents in the community survey selected this as a main route when cycling. The road reserve is restricted by the bushland as shown in Figure 4-72.

Figure 4-72: Southern Ocean Road from Esplanade East

4.2.2.22 Esplanade West

Esplanade West connects Canning Boulevard to Veal Street with the caravan park on the corner. 53% of the total respondents in the community survey selected this as a main route when cycling. There is a path on the northern side but a lack of connection to the caravan park as shown in Figure 4-73. However, there is a laneway which connects back to Barnett Street as shown in Figure 4-74.

Figure 4-73: Esplanade West from Caravan Park

Figure 4-74: Esplanade West from Laneway to Barnett Street

4.2.3 Munglinup

The existing path network for the Ravensthorpe townsite is shown in Figure 4-75 with a breakdown of the key findings below:

- Lack of walking and riding infrastructure
- Lack of shade
- Overhanging parked vehicles

Figure 4-75: Munglinup - Existing Path Network

4.2.3.1 Tubada Street

Tubada Street is split into east and west streets. The west side in a cul de sac street from the school. The east side has the camp area and playground on the northside and the roadhouse on the south side.

Figure 4-76: Tubada Street East from South Coast Highway

Figure 4-77: Tubada Street West from Budjan Street

Figure 4-78: Tubada Street West at Cul de Sac

4.2.3.2 Morrel Street

Morrel Street connects on the bend from Yorrel Street, east of Moir Street and runs to Yandee Street. The west side is bushland and the east side is residential.

Figure 4-79: Morrel Street from South Coast Highway

Figure 4-80: Morrel Street from laneway to Hill Street

4.2.3.3 Bennett Street

Bennett Street connects Yandee Street to Memorial Drive connecting the rear of the residential lots and the rear of the sporting complex.

Figure 4-81: Bennett Street from side of Sporting Complex

4.2.3.4 Yandee Street

Yandee Street connects Morrel Street to Bennett Street with Hall Street connecting from the south and a gravel track to the north connecting to South Coast Highway.

Figure 4-82: Yandee Street from Hall Street

4.2.3.5 Hall Street

Hall Street connects Yandee Street to Memorial Drive between residential lots. Hall Street is signposted for access to the sporting complex.

Figure 4-83: Hall Street from Yandee Street

4.2.3.6 Yorrel Street

Yorrel Street connects Morrel Street south of Moir Street to South Coast Highway.

Figure 4-84: Yorrel Street from Morrel Street

Figure 4-85: Yorrel Street from Budjan Street

4.2.3.7 Budjan Street

Budjan Street fronts the school, connecting Manjart Street to Yorrel Street. There is an existing path network on the school side with crossing facilities as shown in Figure 4-86 to Figure 4-89. However, the parking at the school has overhanging vehicles which restrict the usable width of the path as shown in ….

Figure 4-86: Budjan Street adjacent to Yorrel Street

Figure 4-87: Budjan Street at Yorrel Street

Figure 4-88: Budjan Street South of School Entry

Figure 4-89: Budjan Street North of School Entry

4.2.3.8 Manjart Street

Manjart Street connects South Coast Highway to Tubada Street East and Yorrel Street.

Figure 4-90: Manjart Street at Budjan Street

Figure 4-91: Manjart Street from Tubada Street West

4.3 OPPORTUNITIES

4.3.1 Ravensthorpe

The key opportunities were developed based on the following findings:

- The path on Coleman Street terminates at the sporting complex meaning a connection between Coleman Street and Hopetoun Ravensthorpe Road cannot be established in order to link the Ravensthorpe townsite to the golf course
- The paths between Elston Way and Morgans Street do not link meaning a connection between the tourist park and the townsite cannot be established
- A non-continuous path along Spence Street due to the path swapping sides of the road
- A non-continuous path between Queen Street and Carlisle Street on Dunn Street
- A missing link on the north side of Andre Street from Morgans Street
- A lack of safe crossing points between existing and proposed path networks
- Vulnerable road users crossing between the school over Morgans Street adjacent to Hosking Street
- Low speed environment west of Hosking Street on Morgans Street to facilitate land use
- The parking spaces at school car park and outside the shops had parked vehicles overhanging the path and restricting the usable width

Opportunity:

- Continue the shared path along Coleman Street to connect to the Golf Course
- Shared path on the entire south side of Spence Street connecting the existing footpath to either side and continuation to the west of Dance Street
- Shared path on both sides of Dunn Street from Queen Street to Carlisle Street to complete the missing links from Queen Street
- Shared path on the east side of Andre Street from Dunn Street to Morgans Street
- Shared path on the north side of Jamieson Street connecting Morgans Street to Elston Street
- Shared path on the south side of Jamieson Street from Elston Street to Ravensthorpe Motel
- Midblock crossing over Morgans Street between Hosking Street and Elston Street
- Zebra crossing over Morgans Street adjacent to Hosking Street
- Crossing over Elston Street adjacent to Jamieson Street
- Crossing over Morgans Street adjacent to Carlisle Street
- Crossing over Carlisle Street adjacent to Dunn Street
- Crossing over Carlisle Street adjacent to Morgans Street
- Crossing over Carlisle Street adjacent to Spence Street
- Midblock crossing over Dunn Street between Queen Street and Carlisle Street
- Crossing over Queen Street adjacent to Spence Street
- Crossing over Moir Road adjacent to Spence Street
- Crossing over Spence Street adjacent to Moir Road
- Shared zone on Morgans Street between Andre Street and Hosking Street
- Install wheelstops at school car park and outside the shops
- Cycle link connecting between Ravensthorpe and Hopetoun

4.3.2 Hopetoun

The key opportunities were developed based on the following findings:

- Missing path connections connecting facilities
- Existing bike parking at the school would facilitate more riding to school in lower traffic speed areas along Buckie Street
- A low speed environment required on the southern end of Veal Street near the beach within the town center area
- A lack of safe crossing points between existing and proposed path networks

Opportunity:

- Shared path around outside edge of Tamar Street industrial area connecting back to Veal Street
- Shared path on the west side of Veal Street from Mary Ann Drive to Birdwood Street
- Shared path on the east side of Veal Street from Buckie Street to Alan Rose Drive
- Shared path on the north side of Canning Boulevard from Esplanade West to Veal Street
- Shared Path on the east side of Esplanade West from Canning Boulevard to West Street
- Shared path continuing the end of Dawn Street to Veal Street
- Crossing over Veal Street adjacent to Moort Place
- Crossing over Veal Street adjacent to Canning Boulevard
- Crossings over Chambers Street either side of Buckie Street
- Potential shared path connecting between either end of Canning Boulevard
- Shared zone on Veal Street from Dawn Street to Esplanade West
- Safe Active Street on Buckie Street from Veal Street to Chambers Street
- Cycle link connecting between Hopetoun and Ravensthorpe
- Cycle link connecting west ultimately through to Bremer Bay

4.3.3 Munglinup

The key opportunities were developed based on the following findings:

- The lack of connectivity between the school and the rest of the town
- Lack of safe crossing facilities where new path routes are proposed
- The school carpark had parked vehicles overhanging the path and restricting the usable width

Opportunity:

- Circular shared path route from the Tubada Street East on the south side, continuation on the west side of Morrel Street to the south side of Yandee Street and continuing on the west side of Hill Street, through laneway between Hall Street and Morrel Street to the north of Morrel Street and Yorrel Street back to Manjart Street
- Crossing over Budjan Street adjacent to Yorrel Street
- Crossing over Budjan Street adjacent to Manjart Street
- Crossing over Manjart Street adjacent to Yorrel Street
- Crossing over Manjart Street Tubada Street West and Tubada Street East
- Crossing over Morrel Street adjacent to Yandee Street
- Crossing over Morrel Street adjacent to laneway
- Install wheelstops at school carpark

4.3.4 Behaviour Change

Opportunities for Behaviour Change programs exist through engagement with the following:

- Schools
- Employers
- Touring cyclists (organised tours)
- Your Move (Department of Transport).

Opportunities can be identified by considering national walking and riding days which encourage people to walk or ride to school or work. Additionally, wellbeing is an important tool in encouraging people to think of their mental and physical health, and active travel can increase people's daily physical activity.

Additionally, activation of new or upgraded infrastructure is important in order to demonstrate its benefits, raise awareness of its existence and promote its use.

Opportunity:

- Engage with the DoT's Your Move officers to identify ways to collaborate with local schools and employers to help facilitate more walking and riding in the community
- Engage directly with schools, workplaces and other advocacy groups to identify specific opportunities to promote walking
- Undertake activation activities as soon as active travel infrastructure has been installed.

4.3.5 Funding Programs

4.3.5.1 WABN Regional Bicycle Network Grants

The WABN grants program is one of the key actions detailed in the Western Australian Bicycle Network Plan 2014-2031. Funding is available to local government authorities in WA, for up to 50 per cent of the total project cost, for the design and implementation of bicycle network infrastructure and programs in accordance with State Government priorities set out in the WABN Plan.

The WABN Grant Applications are anticipated to open annually in July, where local governments are invited to submit an Expression of Interest for grant funding. Following the Expression of Interest process, applicants of shortlisted projects will be invited to submit a full proposal.

4.3.5.2 Roads to Recovery

The Roads to Recovery Program is a federal government program which supports the maintenance of the nation's local road infrastructure asset. This program sets out to reduce fatalities and serious injuries in crashes on Australia's regional roads. Pedestrian and cycling facilities associated with a road can also be funded as part of this grant, to improve the safety of vulnerable road users. Funding is allocated for each financial year.

4.3.5.3 Regional Economic Development Grants

The Regional Economic Development Grants Program is a $28.8m, five-year, State Government initiative to stimulate economic growth and development. Applications for grants are open at the start of the financial year, with details provided on the Wheatbelt Development Commission's website. Previous projects that have been successful in attaining the grants include the construction of a river crossing along the Turquoise Way Path between Jurien Bay and Cervantes, boosting sports tourism.

4.3.5.4 Metropolitan Regional Road Group (MRRG) Rehabilitation and Improvement Programs

There are two MRRG grants, one for Rehabilitation and one for Improvement. These programs are primarily focussed on the road network. However, the potential to assist cycling as part of any project should not be overlooked in order to enhance the overall network. The construction of protected on-road bike lanes may be included as part of a design. Submissions are received annually.

Opportunity:

- Investigate opportunities for obtaining funding for priority projects.

4.3.6 Summary

Following a review of the existing network and consultation feedback, a diverse range of opportunities have been identified in relation to:

- Ravensthorpe
- Hopetoun
- Munglinup
- Behaviour Change
- Funding programs.

These will be prioritised in the following chapters.

4.4 BIKE NETWORK PLAN

Following Consultation with the community, the Shire and the Department of Transport, the following cycling network hierarchy has been prepared. It focuses on improving the form and function of the internal network, and also identifies key strategic networks and directly responds to the community consultation feedback. It is also based on the principles from the Western Australian Cycling Network Hierarchy which is shown in full in Appendix C.

The proposed network for each townsite is shown below and enlarged in Appendix E.

4.4.1 Ravensthorpe Bike Network

Figure 4-92: Bicycle Network (Ravensthorpe)

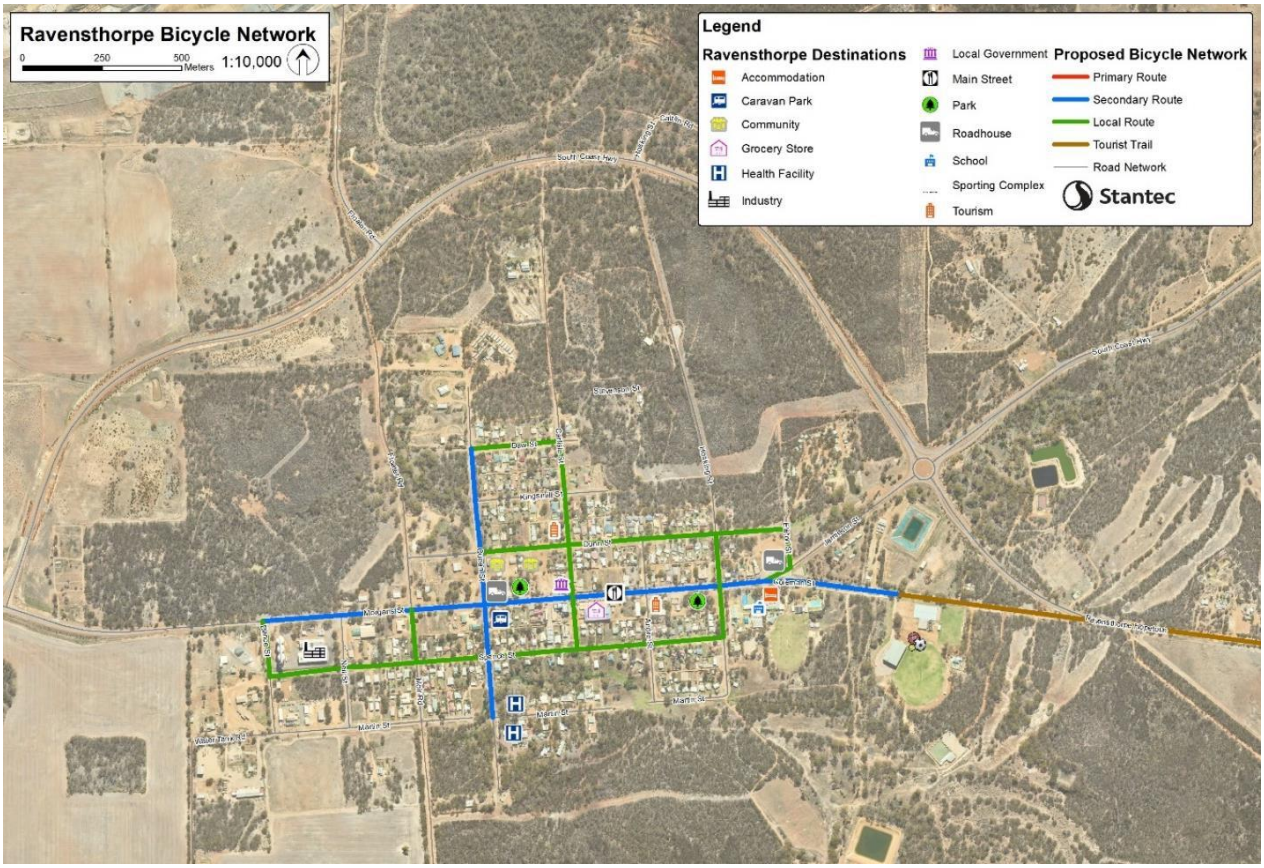


Table 4-3: Ravensthorpe Bicycle Network Route Summary

Primary Route	Secondary Route	Local Route	Tourist Trail
• Nil	• Morgans Street • Coleman Street • Queen Street	• Daw Street • Dunn Street • Spence Street • Dance Street • Moir Road • Carlisle Street • Hosking Street • Elston Street	• Ravensthorpe Hopetoun Road

4.4.2 Hopetoun Bike Network

Figure 4-93: Bicycle Network (Hopetoun)

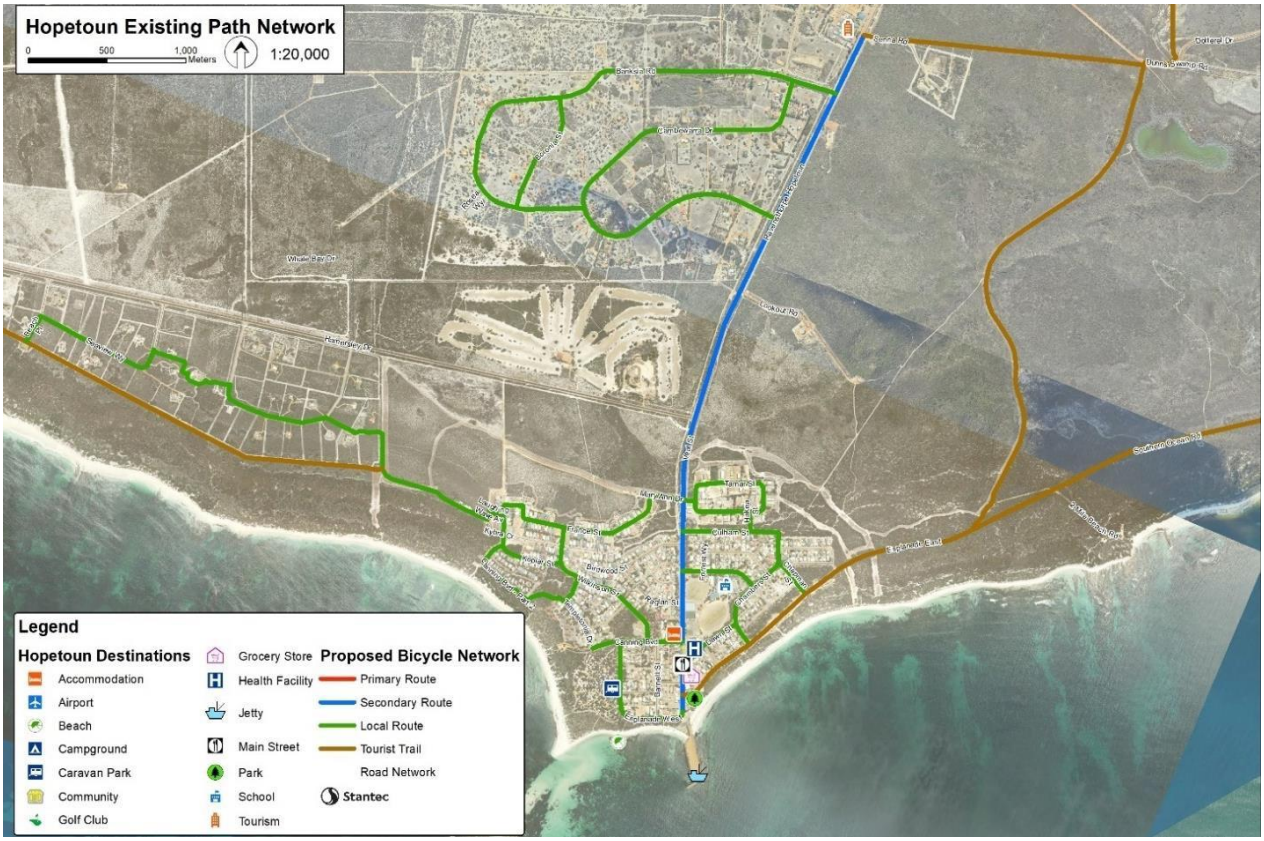


Table 4-4: Hopetoun Bicycle Network Route Summary

Primary Route	Secondary Route	Local Route	Tourist Trail
• Nil	• Ravensthorpe Hopetoun Road • Veal Street	• Banksia Road • Boronia Street • Cambewarra Drive • Beach Place • Seaview Way • Laughing Wave Avenue • Canning Boulevard • France Street • Mary Ann Drive • Keplar Street • Wilkinson Street • Esplanade West • Tamar Street • Hakea Street • Culham Street • Chambers Street • Dawn Street • Chapman Street	• Esplanade East • Southern Ocean Road • Dunns Swamp Road • Senna Road

4.4.3 Munglinup Bike Network

Figure 4-94: Bicycle Network (Munglinup)

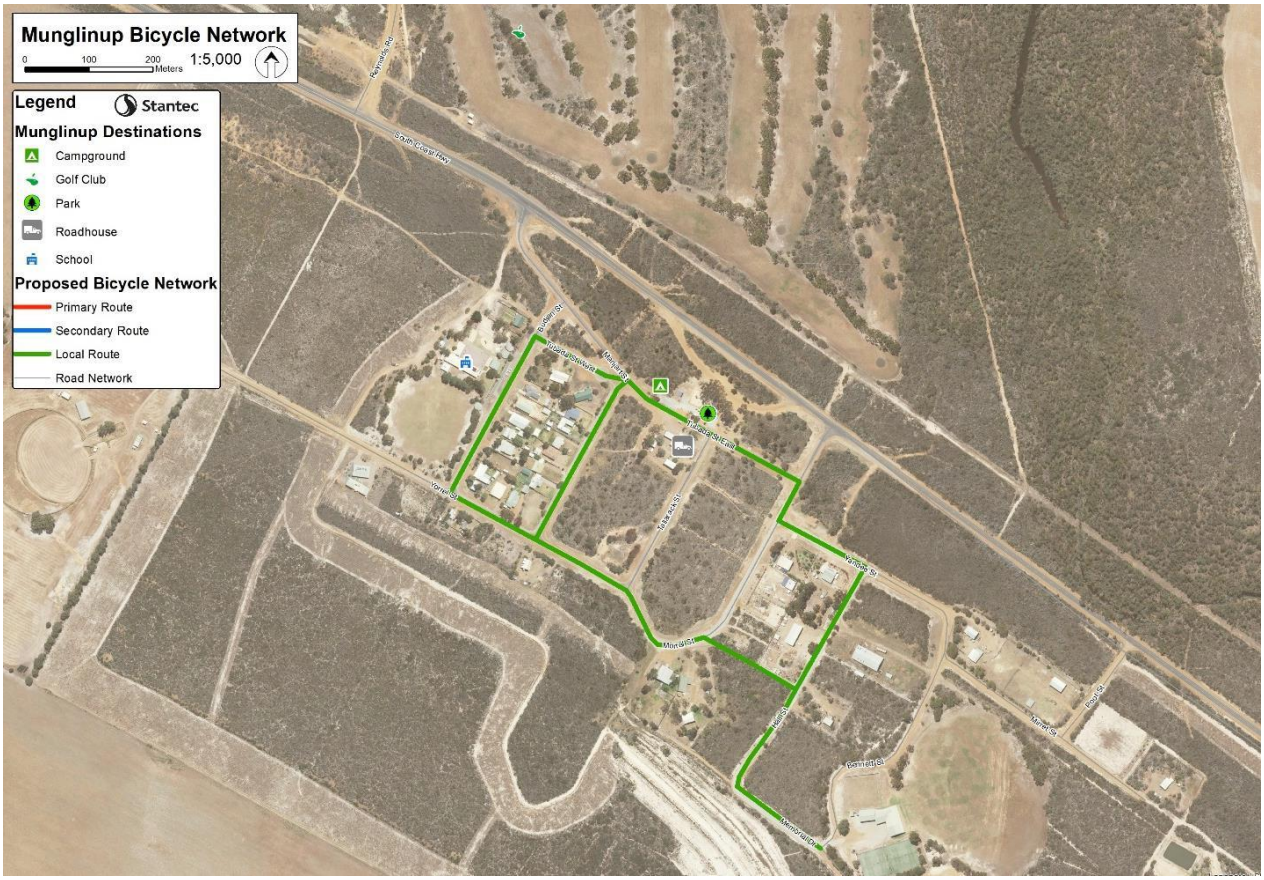


Table 4-5: Munglinup Bicycle Network Route Summary

Primary Route	Secondary Route	Local Route	Tourist Trail
• Nil	• Nil	• Tubada Street • Budjan Street • Hall Street • Yorrel Street • Morrel Street • Yandee Street • Memorial Drive	• Nil

5.0 IMPLEMENTATION SCHEDULE

This chapter outlines the implementation schedule in relation to the opportunities identified in Section 4.0.

Priority timeframes are defined as follows:

- Short term (in 2 years)
- Medium term (within 5 years)
- Long term (within 10 years).

Short term actions are highlighted in **bold**.

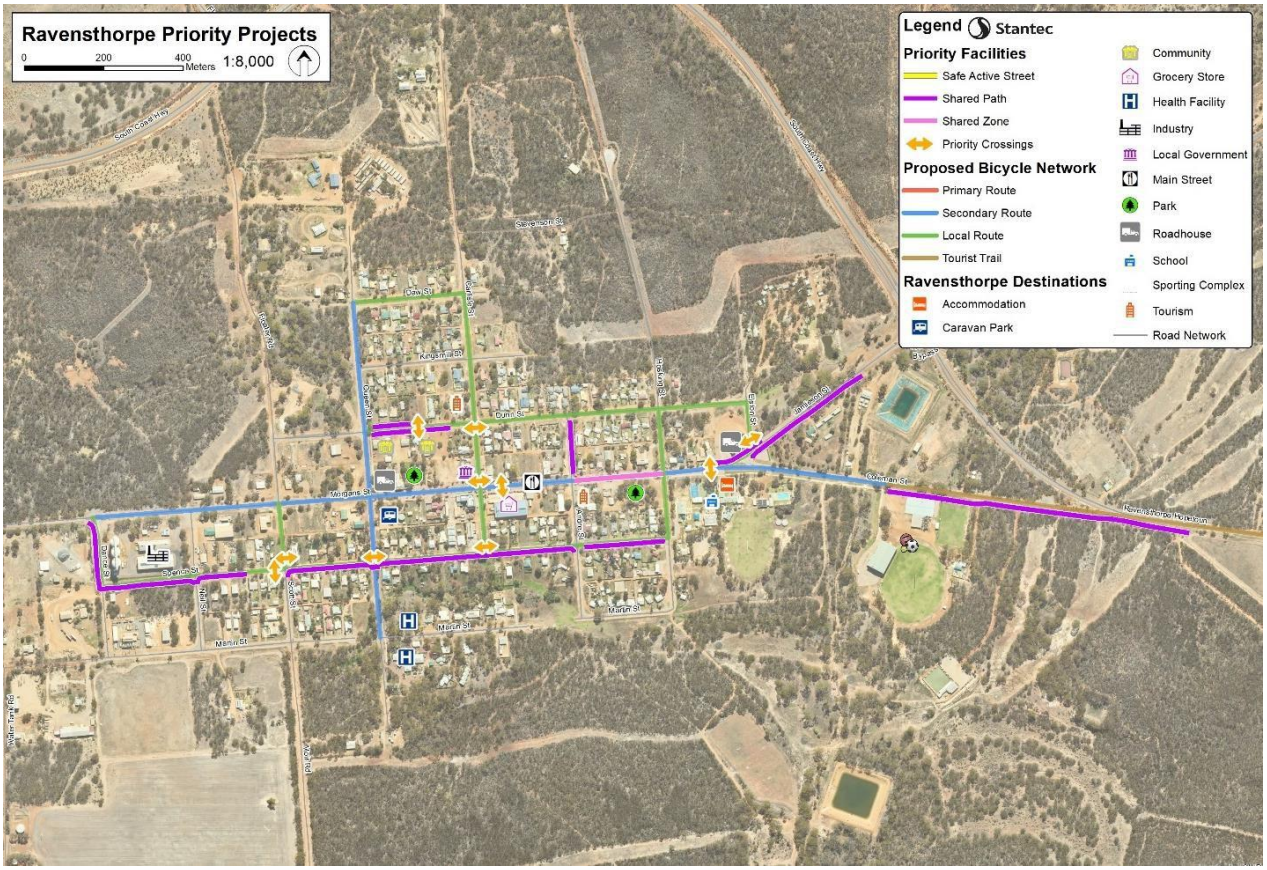
5.1 RAVENSTHORPE

Table 5-1: Ravensthorpe Implementation Schedule

Item	Theme	Opportunity	Route Hierarchy (if applicable)	Priority
R1	Crossing	Crossing over Moir Road adjacent to Spence Street	Access Road	**Short**
R2		Crossing over Spence Street adjacent to Moir Road	Access Road	**Short**
R3		Crossing over Queen Street adjacent to Spence Street	Access Road	**Short**
R4		Crossing over Carlisle Street adjacent to Spence Street	Access Road	**Short**
R5		Crossing over Carlisle Street to Morgans Street	Access Road	Medium
R6		Crossing over Morgans Street adjacent to Carlisle Street	Access Road	Medium
R7		Midblock crossing over Morgans Street between Hosking Street and Elston Street	Access Road	Medium
R8		Crossing over Elston Street adjacent to Jamieson Street	Access Road	Medium
R9		Midblock crossing over Dunn Street between Queen Street and Carlisle Street	Access Road	Medium
R10		Crossing over Carlisle Street adjacent to Dunn Street	Access Road	**Short**
R11	Shared Path	A shared path on the south side of Spence Street from Hosking Street, south to Dance Street on the west to Hosking Street	Local Distributor	Medium
R12		Extend existing paths on both sides of Dunn Street to Queen Street	Access Road	Medium
R13		Connect paths on Coleman Street and Elston Street	Local Distributor	**Short**
R14		A shared path on the south of Jamieson Street	Access Road	**Short**
R15		Ravensthorpe to Hopetoun connection	Primary Distributor	Medium
R16	Shade	Plant trees along verge where possible to improve shade along shared path	Access Road	**Short**

R17	Shared Zone	Shared Zone on Coleman Street from Andre Street to Hosking Street	Local Distributor	Medium
R18	Wheelstops	Install wheelstops to prevent vehicles overhanging pathways	Local Distributor	**Short**

Figure 5-1: Ravensthorpe Priority Projects



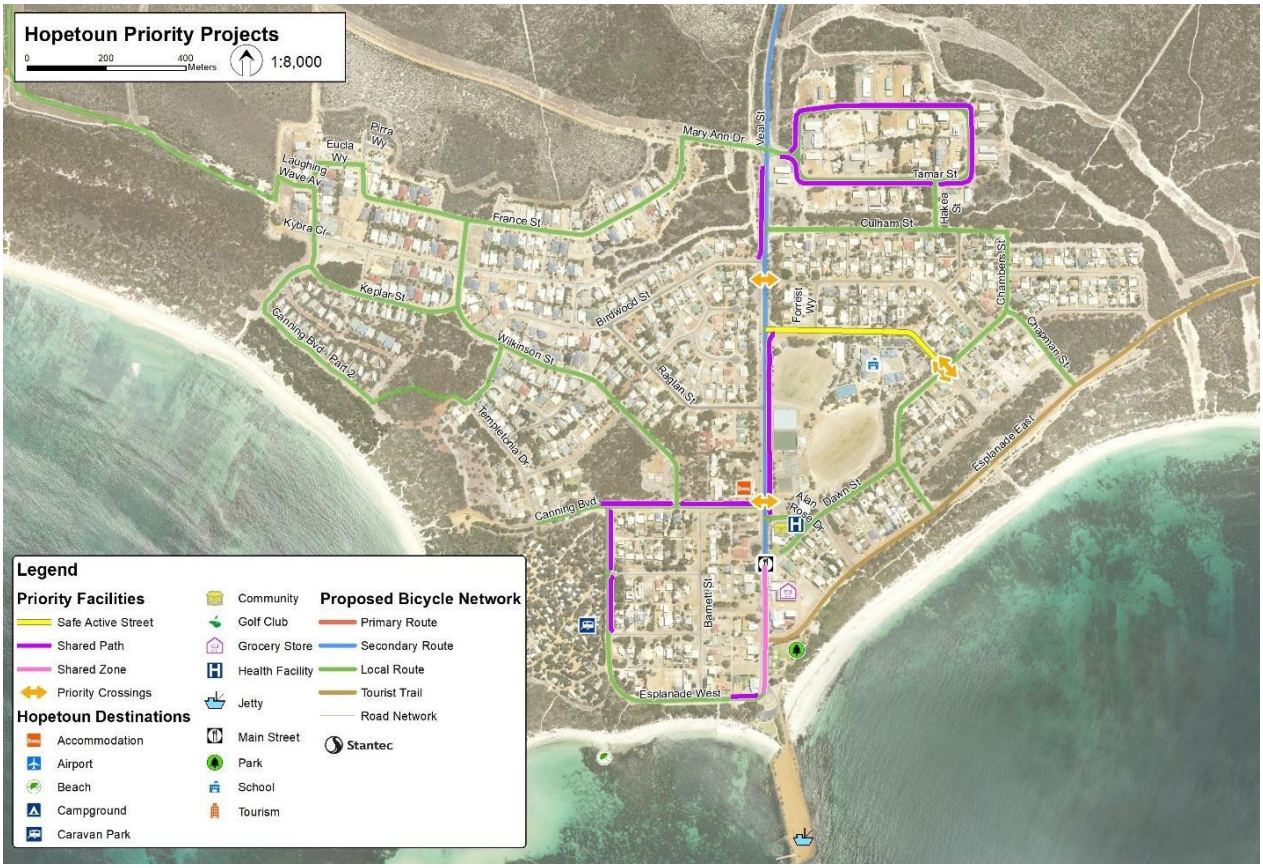
5.2 HOPETOUN

Table 5-2: Hopetoun Implementation Schedule

Item	Theme	Opportunity	Route Hierarchy (if applicable)	Priority
H1	Shared Path	Shared path on the west side of Veal Street from Mary Ann Drive to Birdwood Street	Regional Distributor	**Short**
H2		Shared path on the east side of Veal Street from Buckie Street to Alan Rose Drive	Regional Distributor	**Short**
H3		Shared path continuing the end of Dawn Street to Veal Street	Access Road	**Short**
H4		Shared path on the north side of Canning Boulevard from Esplanade West to Veal Street	Access Road	Medium

H5		Shared Path on the east side of Esplanade West from Canning Boulevard to West Street	Access Road	Medium
H6		Potential shared path connecting between either end of Canning Boulevard	Access Road	Medium
H7		Hopetoun to Ravensthorpe connection	Primary Distributor	Medium
H8		Shared path around outside edge of Tamar Street industrial area connecting back to Veal Street	Access Road	Long
H9	Crossing	Crossing over Veal Street adjacent to Moort Place	Regional Distributor	**Short**
H10		Crossing over Veal Street adjacent to Canning Boulevard	Regional Distributor	**Short**
H11		Crossings over Chambers Street either side of Buckie Street	Access Road	Medium
H12	Shared Zone	Shared zone on Veal Street from Dawn Street to Esplanade West	Regional Distributor	Medium
H13	Safe Active Street	Safe Active Street on Buckie Street from Veal Street to Chambers Street	Access Road	**Short**
H14	Long Distance Tourist Connections	Hopetoun to Bremer Bay	Primary Distributor	Long

Figure 5-2: Hopetoun Priority Projects



In addition to the proposed cycle network, a number of local footpaths that are needed for construction have been identified by local residents along:

- Gibson Way
- Chittick Street
- Forest Way
- The laneway connecting Gibson Way to Culham Street

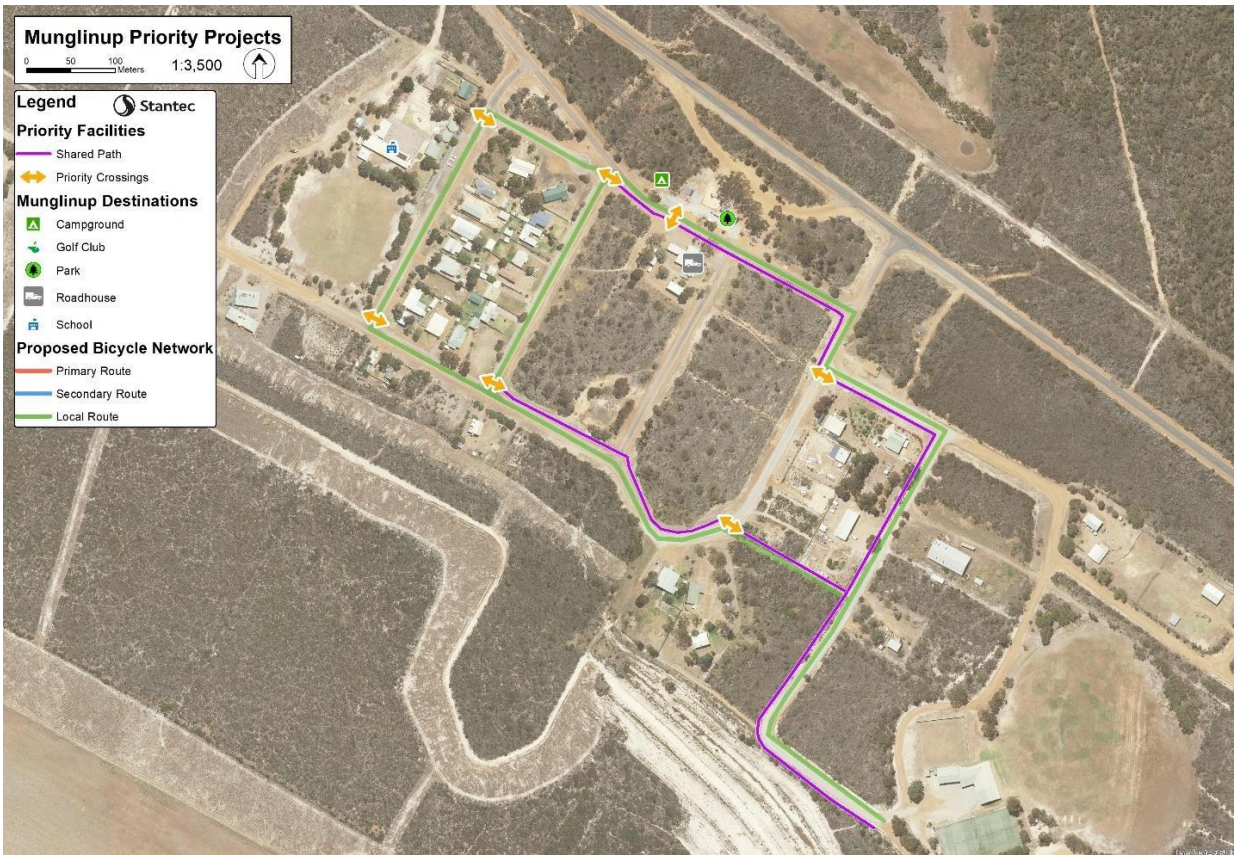
5.3 MUNGLINUP

Table 5-3: Munglinup Implementation Schedule

Item	Theme	Opportunity	Route Hierarchy (if applicable)	Priority
M1	Shared Path Network	Circular shared path route from the start Tubada Street East on the south side, continuation on the west side of Morrel Street to the south side of Yandee Street and continuing on the west side of Hill Street, through laneway between Hall Street and Morrel	Access Road	**Short**

		Street to the north of Morrel Street and Yorrel Street back to Manjart Street		
M2	Crossing	Crossing over Budjan Street adjacent to Yorrel Street	Access Road	**Short**
M3		Crossing over Morrel Street adjacent to Yandee Street	Access Road	**Short**
M4		Crossing over Morrel Street adjacent to laneway	Access Road	**Short**
M5		Crossing over Budjan Street adjacent to Manjart Street	Access Road	Medium
M6		Crossing over Manjart Street adjacent to Yorrel Street	Access Road	Medium
M7		Crossing over Manjart Street Tubada Street West and Tubada Street East	Access Road	Medium
M8	Wheelstops	Wheelstops on school parking to stop vehicles overhanging the pathway	Access Road	**Short**

Figure 5-3: Munglinup Priority Projects



5.4 STRATEGIC ACTIONS

Table 5-4: Strategic Actions Implementation Schedule

Item	Theme	Opportunity	Route Hierarchy (if applicable)	Priority
S1	Behaviour Change	Engage with the DoT's Your Move officers to identify ways to collaborate with local schools and employers to help facilitate more walking and riding in the community	N/A	**Short**
S2		Engage directly with schools, workplaces and other advocacy groups to identify specific opportunities to promote walking	N/A	**Short**
S3		Undertake activation activities as soon as active travel infrastructure has been installed.	N/A	Medium
S4	Funding Programs	Investigate opportunities for obtaining funding for priority projects.	N/A	Medium

6.0 CONCLUSIONS

Based on the analysis of the local network and community consultation findings, the implementation of the initiatives outlined in this plan will support accessibility throughout the Ravensthorpe, Munglinup and Hopetoun townsites for all members of the community. The vision for the Plan is:

"To create a connected and safe cycling network for all members of the community and visitors"

This vision balances the needs of the Shire, Stakeholders and the Community which have been understood and documented through the review and engagement process.

The Literature Review examines relevant planning documents regarding the interface with active transport in the Shire and the State. It identified that, whilst the Western Australian Bicycle Network Plan identifies a vision for cycling in Western Australia, the local policies in the Shire of Ravensthorpe provide a supporting framework for the development of a local bike plan for the townsites of Ravensthorpe, Munglinup and Hopetoun. In particular, the Fleet, Equipment, & IT Asset Management Plan which identifies the need to provide a high-quality path network to support walking and cycling.

Research supports the need to ensure there is safe, connected and high-quality cycling infrastructure and routes to encourage greater participation rates of cycling, particularly in younger age groups and females. Interest in E-rideables will continue to grow.

In addition to consultation with the Shire, three additional engagement events took place during the course of preparing the Plan:

- Online community survey
- Community Workshop in Ravensthorpe
- Community Workshop in Hopetoun.

A saddle survey was also undertaken to which interested community members were invited to participate.

The overarching outcomes from the survey identified:

- Key destinations
- Most frequently used roads
- Desirable projects
- Overarching aspirations from the Shire's point of view.

These investigations resulted in Network Plans for Ravensthorpe, Munglinup and Hopetoun and a corresponding Implementation Schedule.

Short term actions mainly relate to connecting schools, infrastructure on secondary routes and strategic actions that facilitate behaviour change and funding opportunities.

Appendix Subtitle

Appendix A DETAILED LITERATURE REVIEW

A.1 STATE PLANNING STRATEGY (2014)

The State Planning Strategy 2050 identifies cycling as a component of many of key objectives included in the strategy, including in the objective to enable liveable, inclusive and diverse communities and the objective to encourage active lifestyles, community interaction and betterment. This strategy broadly supports the development of a Bike Plan for the Shire of Ravensthorpe.

A.2 WESTERN AUSTRALIAN BICYCLE NETWORK (WABN) PLAN (UPDATED 2017)

The Western Australian Bicycle Network (WABN) Plan was prepared by the Western Australian State Government, through the Department of Transport (DoT). It was originally prepared in 2014 and has since been updated in 2017. It sets out a vision, targets and objectives relating to cycling to the year 2031 across the state. There are a number of programs which are funded through the initiatives of the WABN Plan, including the Principal Shared Path (PSP) Program and local government grants (through the Perth Bicycle Network (PBN) and Regional Bicycle Network (RBN) Grants), as well as the DoT's Safe Active Streets (SAS) grant program. Additionally, the DoT have reviewed local bicycle routes to assist with the development and creation of the Cycle Network Hierarchy, and have also prepared, or are preparing, long-term strategic plans for the Western Australian Regions.

The WABN Plan notes that short vehicle trips are the easiest to convert to cycling trips, with the majority of short trips being less than 5km, which is the equivalent to a 20 minute trip by bike. The WABN Plan identified that the barriers to riding a bike for people includes:

- Too far (33% of the population surveyed)
- Don't have a bike (18%)
- Not Safe (13%)
- Need to carry stuff (13%)
- Didn't occur to me (7%)
- Not fit enough (5%)
- No facilities (3%).

The transport, economic, health, environmental and social benefits are also identified in the WABN Plan. Key actions of the WABN Plan are:

- Long Term Cycle Strategy for Regional WA
- Long Term Cycle Strategy for Perth
- Expansion of the PSP network
- Perth Bicycle Network Grants Program
- Regional Bicycle Network Grants Program

- Development of a cycling counting and monitoring strategy
- Connecting Stations
- Perth Central Area Transport Plan Cycling Projects
- Safe Active Streets
- End of Trip Facilities in Perth CBD and Activity Centre
- Connecting Schools.

The DoT's Long Term Cycle Strategy for Regional WA is consistent with the Department's approach for the Long-Term Cycle Strategy for Perth, and sets out a hierarchy which is applied to designate primary, secondary and local routes in addition to training routes and tourist trails as shown in Appendix C. The Inter-Modal Hierarchical Prioritisation (I'M HiP) information sheet is also shown in Appendix D.

The DoT have also identified the typology for each of these route types, as shown in the figure below:

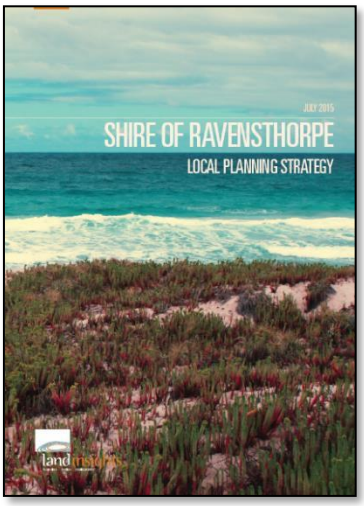
Dedicated cycling infrastructure - five typologies of route						
		Primary Routes	Secondary Routes	Local Routes	Tourist Trials	Road Cycling Routes
Type of trips	Commuting	✓	✓	✓	×	×
	Utility	✓	✓	✓	×	×
	Recreation	✓	×	×	✓	×
	Touring	✓	×	×	✓	✓
	Training	✓	×	×	×	✓
Responsible agencies (planning, delivery and support):		Department of Transport, Main Roads, Public Transport Authority, Local Government	Department of Transport, Main Roads, Local Government	Department of Transport, Main Roads, Local Government	Department of Biodiversity, Conservation and Attractions, Local Government, Public Transport Authority, Department of Transport, Department of Local Government, Sport and Cultural Industries, LotteryWest Main Roads,	Department of Local Government, Sport and Cultural Industries, Road Safety Commission, Department of Transport, Main Roads, Local Government
Infrastructure should be designed for:		The 8 to 80 user group	The 8 to 80 user group	The 8 to 80 user group	The 8 to 80 user group	Confident cyclists

The Infrastructure Hierarchy and Hierarchy Typologies provide a framework within which the recommendations for this Plan will be developed.

A.3 SHIRE OF RAVENSTHORPE LOCAL PLANNING SCHEME NO. 6 (2018)

Regarding cycling, the Local Planning Scheme No. 6 identifies providing sufficient supply of land for recreation as important and also advocates for a coordinated approach to providing footpaths and infrastructure generally. These points support the development of a Bike Plan for the Shire of Ravensthorpe.

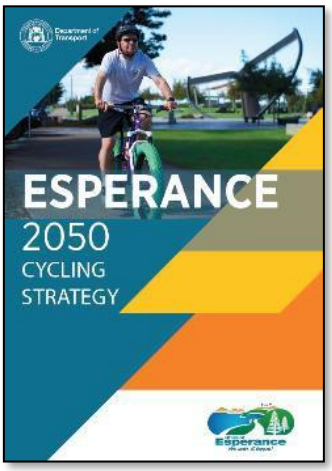
A.4 SHIRE OF RAVENSTHORPE LOCAL PLANNING STRATEGY (2015)



Like the Local Planning Scheme for the Shire of Ravensthorpe, the Local Planning Strategy supports the provision of adequate recreation facilities for residents and also acknowledges the role of the townsites, particularly Hopetoun, as a tourist destination. As such, this plan supports the development of a Bike Plan, which will help achieve the goals outlined in the Local Planning Strategy document.

A.5 ESPERANCE 2050 CYCLING STRATEGY (2018)

While the Esperance 2050 Cycling Strategy, developed by the DoT, is focused on the Shire of Esperance, it does make reference to key regional linkages. The plan supports a long-distance connection to Albany, which would support tourism across the Great Southern and Goldfields-Esperance regions. The Munda Biddi trail, which currently runs between the Shire of Mundaring and Albany, is proposed to be extended in the direction of Esperance. Naturally, as any such trail would traverse the Shire of Ravensthorpe, coordination with the Shire as well as other stakeholders will be fundamental to realizing this long-term vision. The Bike Plan effort should endeavor not to preclude such a linkage being realized at a later date.



A.6 COMMUNITY SAFETY PLAN (2009)

The Community Safety Plan was reviewed for relevance to the Shire's Bike Plan. While cycling was not mentioned directly, the Community Safety Plan does reference using Crime Prevention through Environmental Design (CPTED) techniques to ensure that public spaces are designed with safety in mind. All proposed cycle facilities in this plan should strive to include CPTED principles in their design, e.g. provide

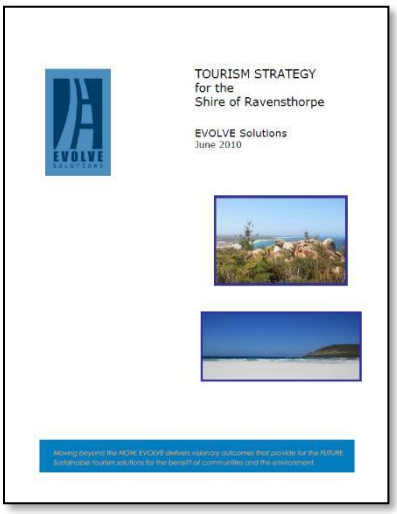
adequate lighting, etc. This plan also supports the additional development of recreational opportunities in the Shire.

A.7 TRAIL MASTER PLAN FOR THE SHIRE OF RAVENSTHORPE (2013)

The Trail Master Plan for the Shire of Ravensthorpe identifies five priority trails, the Hopetoun Town Heritage Trail, the Ravensthorpe Heritage Walk, the Kundip Loop, the Mt. Desmond Circuit, and the Ravensthorpe Town Heritage Drive Trail. Mountain bikers are mentioned as possible users of Ravensthorpe trails, though the Trail Master Plan focuses primarily on walkers. While the Bike Plan predominantly centres on cycling for transport, providing linkages to the priority trails outlined in this plan will be an important consideration.

A.8 TOURISM STRATEGY FOR THE SHIRE OF RAVENSTHORPE (2010)

While tourism has always been a component of the economic profile of the Shire of Ravensthorpe, this plan outlines strategies to increase the economic impact of tourism in the Shire. Cycling is mentioned in the document in relation to strategies for creating links between townsites (e.g. Heritage Trail repurposed as dual mountain bike and walking trail), opening reserve areas for walking/cycling, providing mountain bike hire opportunities, and highlighting opportunities to enjoy the unique natural areas in the region by bike. This plan emphasizes the role that a safe and connected cycling network in the Shire can play in attracting tourism to the region.



A.9 INTEGRATED PLANNING SUITE 2020-2030 (2021)

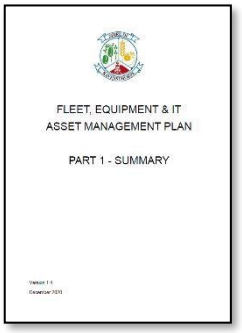
The integrated planning suite encompasses numerous documents, including:

- Our Community, Our Future: Shire of Ravensthorpe Strategic Community Plan 2020 – 2030
- Corporate Business Plan
- Long-Term Financial Plan
- Fleet, Equipment & IT Asset Management Plan
- Property Asset Management Plan
- Recreation Asset Management Plan
- Transport Asset Management Plan
- Workforce and Diversity Plan.

Only those plans that contain information specific to cycling are referenced below.

A.9.1 Corporate Business Plan

The Corporate Business Plan outlines a plan to provide an effective network of footpaths and cycleways to facilitate safe movement through the community; this strategic guideline directly underpins the development of this Bike Plan. Additionally, the plan includes an objective to ensure that it is easy to move around the townsites and that each townsite has an attractive street environment.



A.9.2 Fleet, Equipment, & IT Asset Management Plan (2020)

The Fleet, Equipment, & IT Asset Management Plan notes that walking is the most popular activity for recreation, followed by other activities, most notably cycling/bmxing. For this reason, this document identifies the need to provide a high-quality path network to support walking and cycling. This document also references that tourism has increased in the region, while the median age has also risen from 37 to 45 between 2001 and 2016. Both trends support the provision of infrastructure that supports active transport options.

A.9.3 Cycling and Walking Australia and New Zealand - National Walking and Cycling Participation Survey (WA) 2021

The National Walking and Cycling Participation Survey provides insight into walking and cycling activity across Australia and is a successor to the National Cycling Participation Survey which was conducted biennially from 2011 to 2019. The survey is administered using telephone interviews with a representative sample of Australians using both mobile and landline telephone numbers.

The key research findings from this study related to this project include:

- Around 21.4% of residents rode a bike (including e-bikes) in the previous week and 46.7% in the previous year
- The participation rate has increased in metropolitan Perth and remained steady in regional areas of WA (around 24% in the last week and 51% in the last year)
- Cycling participation is much higher in males (26.5%) than females (16.4%)
- The participation rate has increase significantly among both genders since 2019
- Among both genders the participation rate declines as young children become teenagers and then precipitously from teenagers to young adults.
- Across Western Australia 40.0% of residents aged 15 and over were classified as interested in riding; that is, they do not ride currently but would like to do so or currently ride only off-road.
- It is estimated that 1.9% of the Western Australian population ride an electrically assisted rideable such as an e-scooter, e-skateboard or Segway in a typical week.

Appendix B COMMUNITY ENGAGEMENT SURVEY

B.1 OBJECTIVES

B.2 OVERVIEW

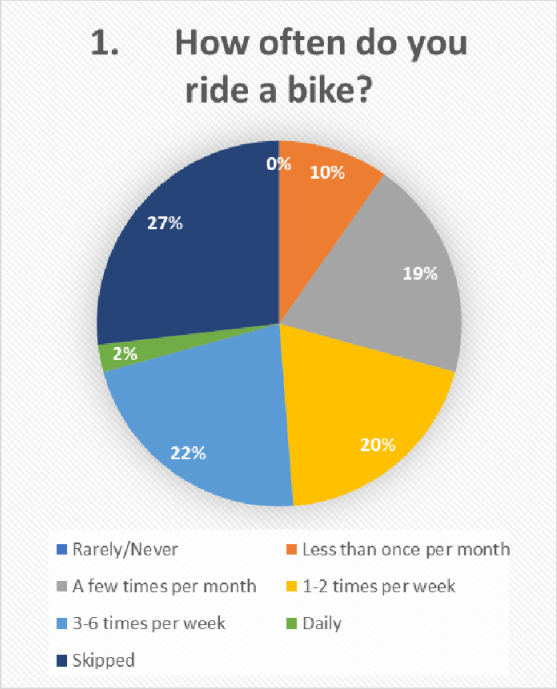
Stantec were engaged to undertake a community survey through SurveyMonkey which involved asking community members within the Shire a series of online questions relating to cycling within their community. The survey also involved questions relating directly to cycling within Ravensthorpe, Hopetoun and Munglinup. A summary of the question themes is provided below:

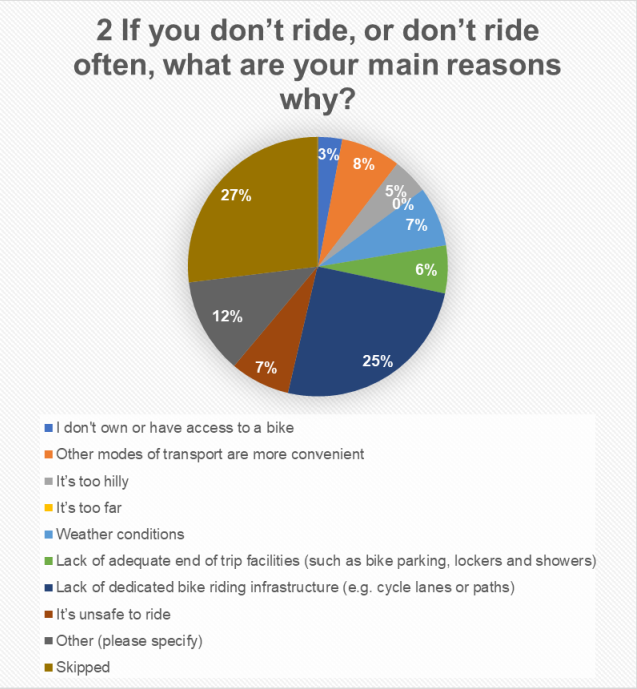
- Questions 1-7: general cycling questions relating to cycling behaviour, most common cycling times, and reasons for and against cycling
- Questions 8-20: location specific cycling questions with 4 specific question per town relating to cycling origins/destinations and priority projects
- Questions 21-23: general feedback and personal profile questions.

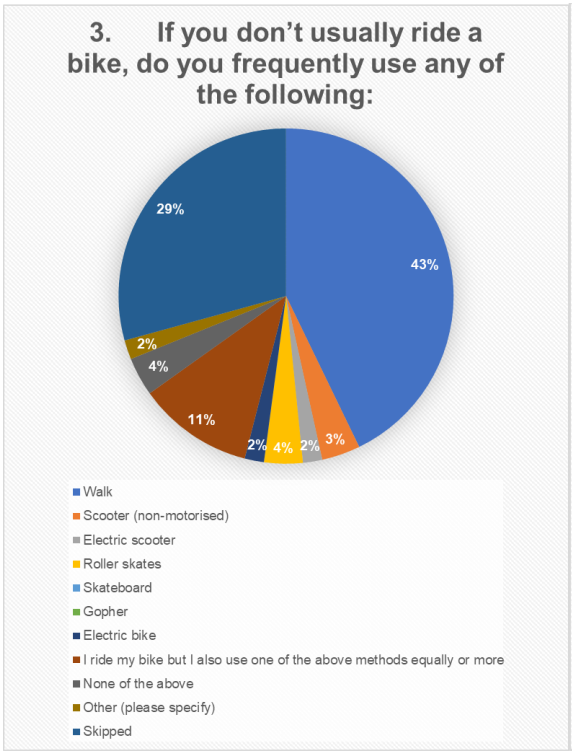
A total of 41 people responded to the survey and the survey tool is provided in Appendix A.

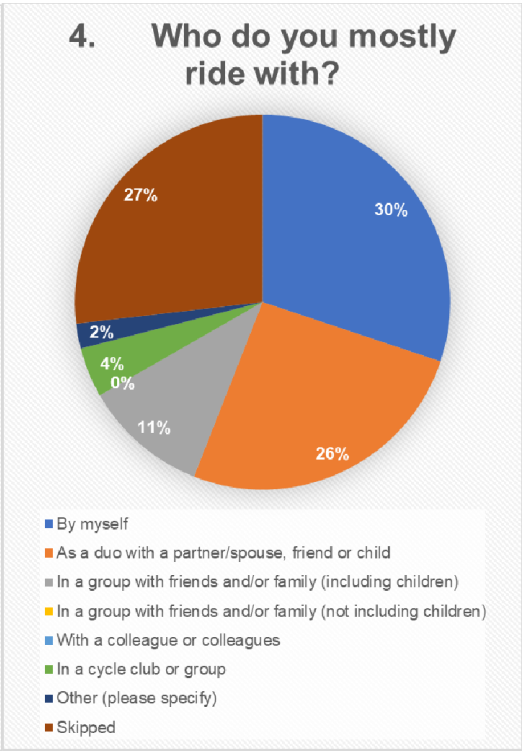
B.3 SURVEY RESULTS

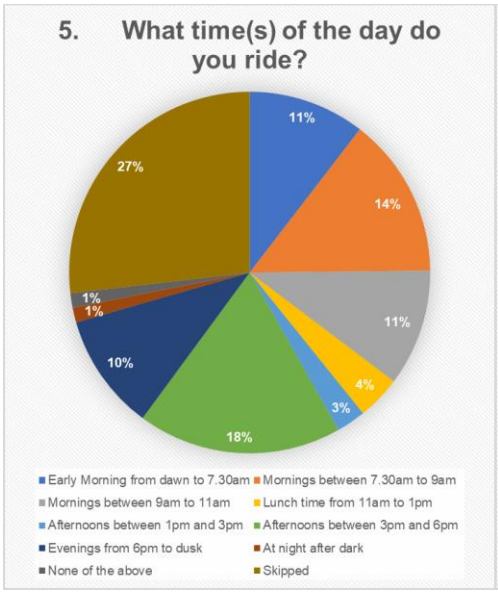
B.3.1 Cycling Behaviour

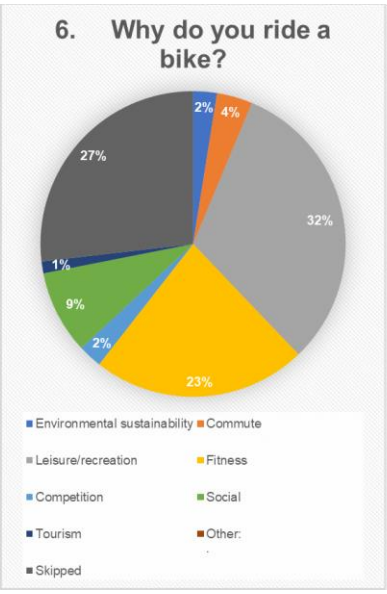


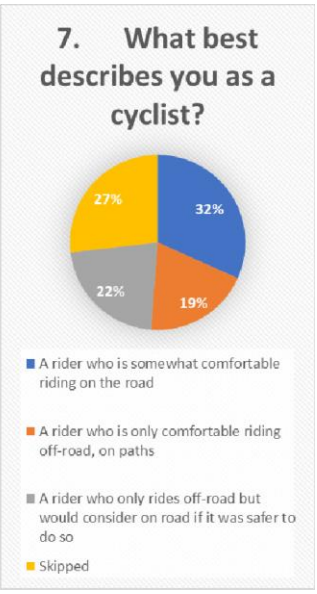



3. If you don't usually ride a bike, do you frequently use any of the following:
43%
3%
2%
4%
2%
11%
4%
2%
29%
Walk
Scooter (non-motorised)
Electric scooter
Roller skates
Skateboard
Gopher
Electric bike
I ride my bike but I also use one of the above methods equally or more
None of the above
Other (please specify)
Skipped

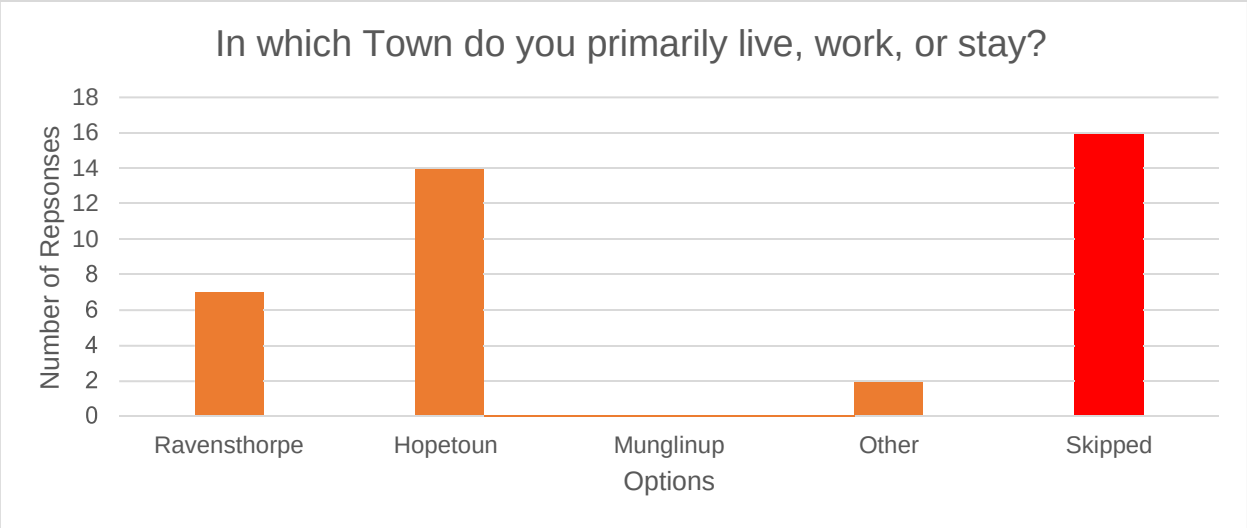

4. Who do you mostly ride with?
30%
26%
11%
0%
4%
2%
27%
By myself
As a duo with a partner/spouse, friend or child
In a group with friends and/or family (including children)
In a group with friends and/or family (not including children)
With a colleague or colleagues
In a cycle club or group
Other (please specify)
Skipped


5. What time(s) of the day do you ride?
11%
14%
11%
4%
3%
18%
10%
1%
1%
27%
Early Morning from dawn to 7.30am
Mornings between 7.30am to 9am
Mornings between 9am to 11am
Lunch time from 11am to 1pm
Afternoons between 1pm and 3pm
Afternoons between 3pm and 6pm
Evenings from 6pm to dusk
At night after dark
None of the above
Skipped

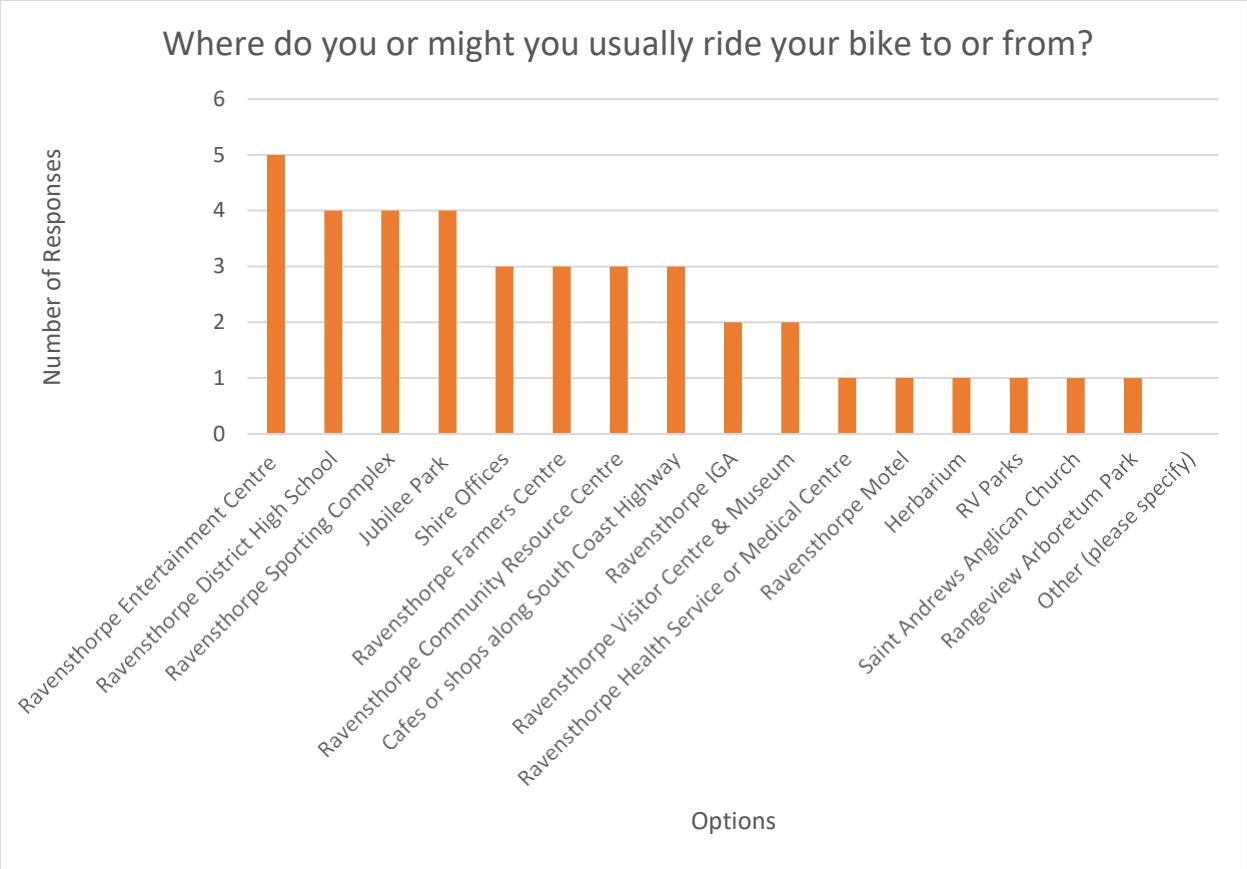

6. Why do you ride a bike?
2%
4%
32%
23%
2%
9%
1%
27%
Environmental sustainability
Commute
Leisure/recreation
Fitness
Competition
Social
Tourism
Other:
Skipped

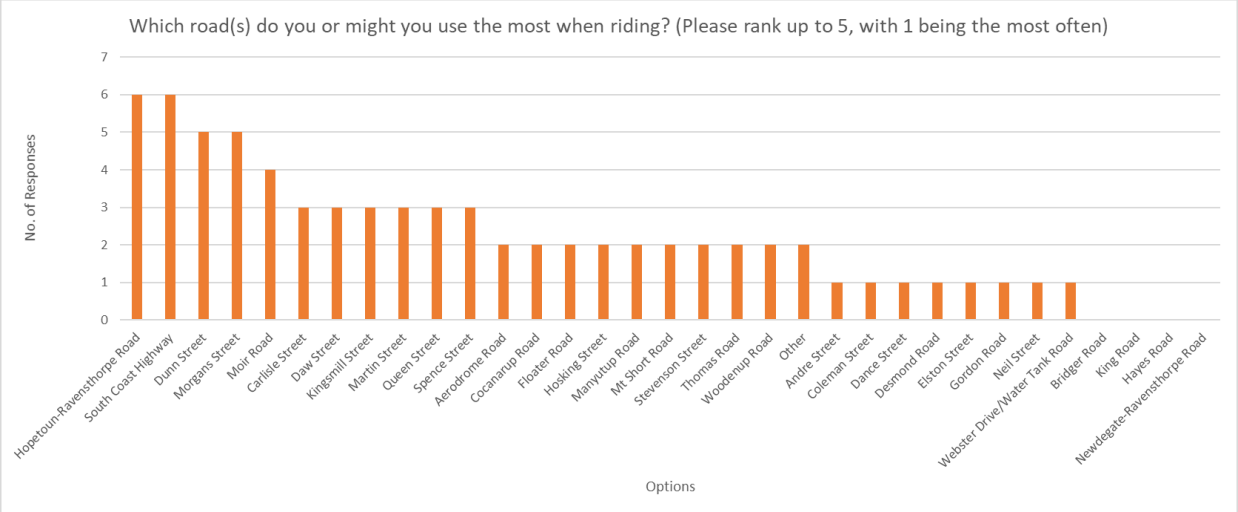

7. What best describes you as a cyclist?
32%
19%
22%
27%
A rider who is somewhat comfortable riding on the road
A rider who is only comfortable riding off-road, on paths
A rider who only rides off-road but would consider on road if it was safer to do so
Skipped

B.3.2 Location



Ravensthorpe

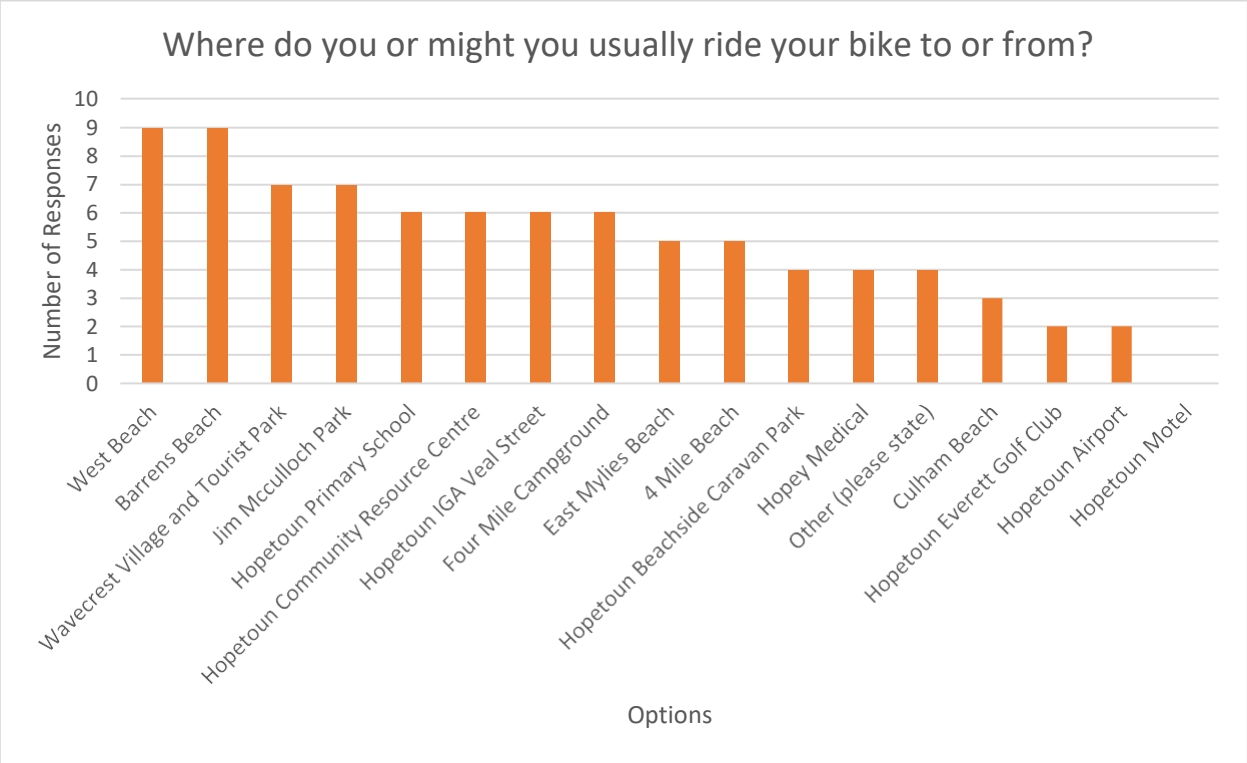


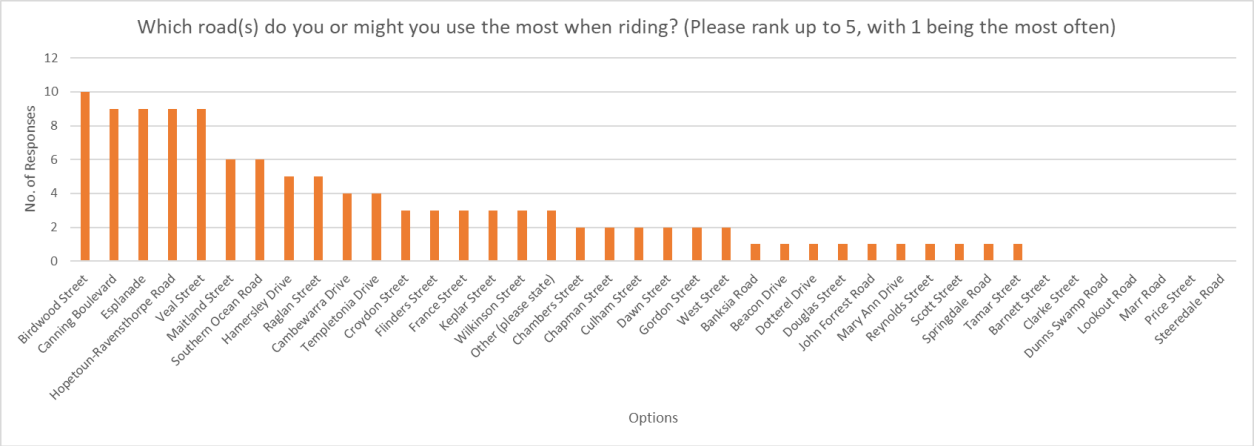


The community members ranked a list of projects in order of their preferred priority from 1 to 15 with 1 being the preferred priority and 15 being the least preferred priority. Each project was scored a point depending on their rank which was then averaged to give a weighting with the lowest total having a higher priority. The results were ordered into the following list:

1. Improved crossings over South Coast Highway (Morgans Street)
2. Cycle lanes separated from vehicles
3. More shade
4. Provision of end of trip facilities (lockers, repair stations etc.)
5. Increased bike parking
6. Improved access to employment area
7. Water fountains
8. Some parking bays on Morgans Street relocated elsewhere
9. Connecting to existing trails (e.g. Hopetoun-Ravensthorpe Railway Heritage Trail)
10. Improved footpath conditions (please specify where)
11. Lowering vehicle speeds along Morgans Street/Jamieson Street
12. A link between Ravensthorpe and Hopetoun
13. Better wayfinding (directional signage)
14. Better connections between paths
15. A link between Ravensthorpe and Munglinup

Hopetoun





The community members ranked a list of projects in order of their preferred priority from 1 to 18 with 1 being the preferred priority and 18 being the least preferred priority. Each project was scored a point depending on their rank which was then averaged to give a weighting with the lowest total having a higher priority. The results were ordered into the following list:

1. Dedicated cycle route along Esplanade
2. Dedicated cycle route along Hamersley Drive
3. Dedicated cycle route along Hopetoun-Ravensthorpe Road
4. Dedicated cycle route along Veal Street
5. Dedicated cycle route along Southern Ocean Road

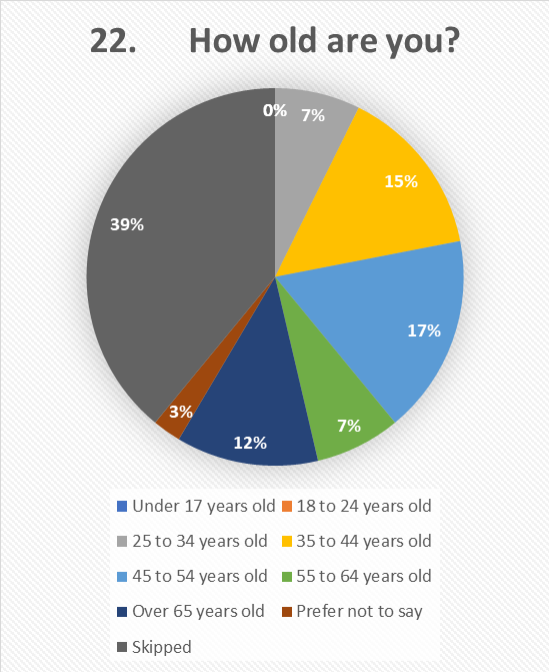
6. Improved crossings over Veal Street
7. Cycle lanes separated from vehicles
8. Improved crossings over Esplanade
9. Lowering vehicle speeds along Veal Street
10. Increased bike parking
11. Provision of end of trip facilities (lockers, repair stations etc.)
12. Water fountains
13. Better connections between paths
14. More shade
15. Improved footpath conditions (please specify where)
16. A link between Hopetoun and Ravensthorpe
17. Better wayfinding (directional signage)
18. A link between Hopetoun and Munglinup.

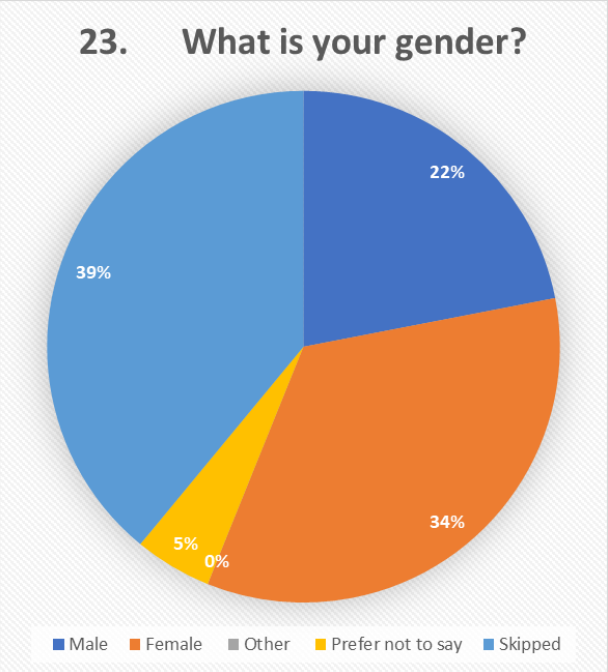
Munglinup

Munglinup had only one participant respond to the survey questions. In both of the questions relating to route and origins/destinations, “other” was selected from the list with “all these are within easy walking distance. Bike trail along Mungy River/Oldfield Estuary is a better idea” given as the specified answer for where they would ride to or from. Additionally, “none” was given when asked about routes they take. This respondent also answered for Ravensthorpe questions. The ranking given for Munglinup projects by the single participant is shown in the list below. However, the fact that only one participant responded should be taken into account when considering the responses in relation to Munglinup.

1. Improved crossings over South Coast Highway
2. Lowering speeds along South Coast Highway
3. Improved safety features along Tubada Street
4. Increased bike parking
5. Provision of end of trip facilities (lockers, repair stations etc.)
6. Better wayfinding (directional signage)
7. More shade
8. Water fountains
9. A link between Ravensthorpe and Munglinup
10. A link between Munglinup and Hopetoun
11. Improved footpath conditions (please specify where)

B.3.3 General Feedback and Personal Profile Questions





Feedback and respondent information

The useful feedback given by respondents is as below:

Comment	Response
Would like to see accessible MTB trails, just for fun	Noted for upgrades to existing trails
The Ravensthorpe-Hopetoun Heritage Trail should be upgraded to a dual use path and extended along or near the main road where the original railway now passes through farmland. Existing trail sections are currently being cleared for general use by the Fitzgerald Bicycle User Group (Fitzy BUG).	Noted as part of tourist trail in the bike plan network
I think the dirt roads should be a priority of push bikes. So many tourists came in to complain about corrugated roads are so uncomfortable to travel on when wanting to site see. Cars not 4wd turning back from where they want to go. So bad for future business and tourism in the region. Needs to be a priority more than push bike routes.	Noted, road and path upgrades have
Veal Street would benefit from better footpaths on both sides of road.	Noted and included as part of the implementation plan
Paths in general in Hopetoun have dead ends are poorly planned. Proper paths and upgrades should be of a high priority. Dedicated paths for bikes and walking should be constructed to key landmarks in the Hopetoun area to improve livability and tourism. The continuation and upgrade of the path along the Esplanade onto 2mile would be a great tourism route. Improving the path from town to Wavecrest should also be upgraded to a hard surface for all uses. The Esplanade from the caravan park past the pub should also be included in upgrades	Noted and generally included within the implementation plan

Mountain bike track in ranges / carlingup Rd to attract events of this nature	Noted, tourist trails included in bike plan network
There are no current footpaths in some of the streets in the old part of town in Hopetoun, like Gibson way. Paths would make it safer. A zebra crossing on buckle Street would also make it safer for kids riding to school.	Noted, improved routes and crossing included in network plan
We need downhill tracks and promote competition. The money it would bring the town would be great	Noted, outside of scope
The biggest need is for MTB trails around or between towns. I don't think there is any need to put in cycling paths in Hopetoun. The roads are quiet anyway.	Noted, bike plan is funded to improve connectivity
The Heritage Trail from Hopetoun to Ravensthorpe is a special trail that would easily and cost-effectively be upgraded to a safe and enjoyable bike trail and be attractive for visitors and locals.	Noted, included as part of network plan
Questions were a bit leading/ pre-determined. Be nice for tourists to have a bike trail to ride around and view the wildflowers. Downhill mountain bike trail in Ravensthorpe Range	Noted, tourist trails inclusive in network plan
Happy to ride on paths, but paths in ravy need a massive upgrade to be safe! There's holes, bumps, rough surfaces etc make it too hard at present	Noted, path widening and maintenance high priority
Could not delete numbered preferences when a mistake made. Not esplanade. Southern ocean red as 3. Delete the rest.	Noted
Mountain bike infrastructure too please! I know this is not the scope of this survey but our area would benefit greatly from it	Noted, existing trails and tourist trails in the network plan may satisfy this criteria
Please consider a coastal bike/ militi use path from 2 mile beach through to west beach including lookouts along the way	Noted and considered in network development

Appendix C WA CYCLING NETWORK HIERARCHY

Department of **Transport** **Main Roads** Western Australia
Public Transport Authority

GOVERNMENT OF WESTERN AUSTRALIA

WESTERN AUSTRALIAN

CYCLING NETWORK HIERARCHY

The Western Australian Cycling Network Hierarchy designates routes by their function, rather than built form. Function considers the type of activities that take place along a route, and the level of demand (existing and potential).
The built form of a route is based on the characteristics of the environment, including space availability, topography, traffic conditions (speed, volumes), primary users, and so on.

When considering appropriate built forms for primary, secondary and local routes, an all ages and abilities design philosophy should be adopted.

	1. PRIMARY ROUTE	2. SECONDARY ROUTE	3. LOCAL ROUTE
Function	Primary routes are high demand corridors that connect major destinations of regional importance. They form the spine of the cycle network and are often located adjacent to major roads, rail corridors, rivers and ocean foreshores. Primary routes are vital to all sorts of bike riding, including medium or long-distance commuting / utility, recreational, training and tourism trips.	Secondary routes have a moderate level of demand, providing connectivity between primary routes and major activity centres such as shopping precincts, industrial areas or major health, education, sporting and civic facilities. Secondary routes support a large proportion of commuting and utility type trips, but are used by all types of bike riders, including children and novice riders.	Local routes experience a lower level of demand than primary and secondary routes, but provide critical access to higher order routes, local amenities and recreational spaces. Predominantly located in local residential areas, local routes often support the start or end of each trip, and as such need to cater for the needs of users of all ages and abilities.
Design Philosophy	An all ages and abilities design philosophy is about creating places and facilities that are safe, comfortable and convenient for as many people as possible. By planning for and designing infrastructure that caters for the youngest and most vulnerable users, we create a walking and bike riding network that everyone can use. At the heart of this approach is fairness and enabling all people to use the network regardless of age, physical ability or the wheels they use.		
Form	All routes can take a number of different forms and are designed to suit the environment in which they are located. These forms include: • Bicycle only, shared and/or separated paths; • Protected bicycle lanes (uni or bi-directional, depending on the environment); and • Safe active streets Principal Shared Paths (PSPs) are often built along primary routes. A PSP is a high quality shared path built to MRWA PSP standard which generally means the path will be 4m wide, have adequate lighting and be grade separated at intersections (where possible). In some locations, quiet residential streets incorporating signage and wayfinding may be appropriate for local routes.		

Road Cycling Routes and Transport Trails form part of the complementary network, supporting more select user groups, primarily for recreational, sport and/or tourism purposes.

	Road Cycling Route	Transport Trail
Function	Road cycling routes are designated routes for bike riders undertaking long distance rides in (predominantly) on-road environments, for training, sports or recreational purposes.	Transport trails provide long-distance, off-road (predominantly unsealed) riding experiences through natural settings, away from motorised traffic. They often support recreational and tourism trips between towns and regions.
Form	Road cycling routes are predominantly located on lower order, rural or semi-rural roads on the outskirts of cities and towns. Sections may follow busier roads, particularly as road cycling routes typically begin and end in built up areas and often follow scenic roads popular with other road users. These routes support bike riders undertaking challenging longer distance rides by raising awareness and encouraging safe behaviour by all road users. This is achieved through advisory signage, warning technology and other road safety initiatives.	Transport trails are typically located within underutilised transport and service corridors in rural areas. Due to their relatively gentle gradients, former railways and certain utility corridors make excellent candidates for these trails. Transport trails should be constructed from materials appropriate to the environment and level of service required. Well drained, compacted gravel with supporting infrastructure such as wayfinding signage is a common form. In some instances transport trails will be sealed, such as where they intersect with busy roads or run through town sites. They will often change classification to a primary or secondary route when they pass through a town, reflecting the more holistic role they perform in the transport network in these situations.

Appendix D INTER-MODAL HIERARCHICAL PRIORITISATION (I'M HIP) INFORMATION SHEET

Department of
Transport

INTER-MODAL HIERARCHICAL PRIORITISATION (I'M-HiP)

In Western Australia, it is common practice for off-road active transport infrastructure (footpaths, shared paths, bicycle paths) to terminate at minor road intersections. This lack of priority can signifcantly impact network continuity, reduce the attractiveness of off-road paths and ultimately, disadvantage people who choose to ride or walk.

High-order active transport routes should not stop and start by default each time they intersect with a low-order road. Consideration should be given to the relationship between the route within the functional Cycling Network Hierarchy, and the intersecting road within the MRWA road hierarchy. We call this 'inter-modal hierarchical prioritisation' or 'I'M-HiP' for short.

The Department of Transport encourages priority across minor roads for people riding and walking, where safe to do so.

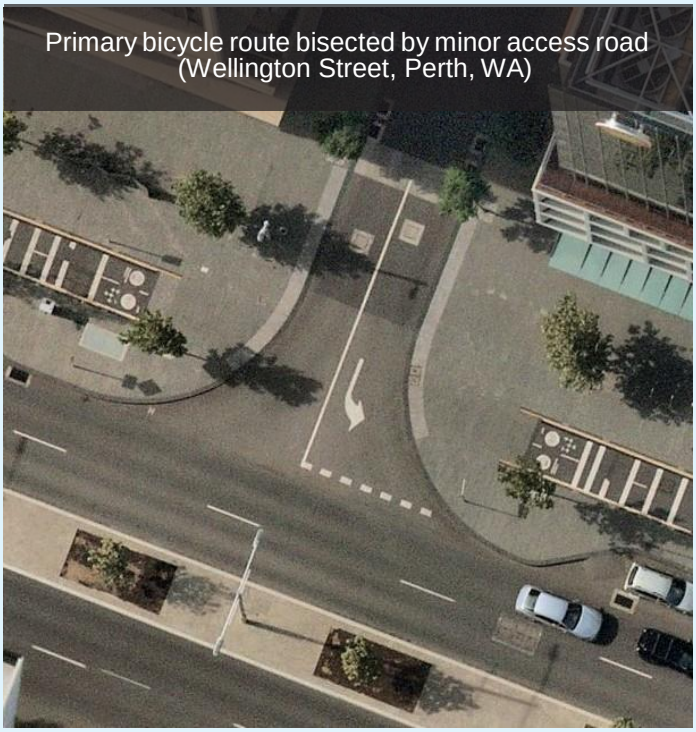
Local Context

Where active transport infrastructure crosses minor roads, intersections should be designed in a manner that ensures safe use by everyone. This means:

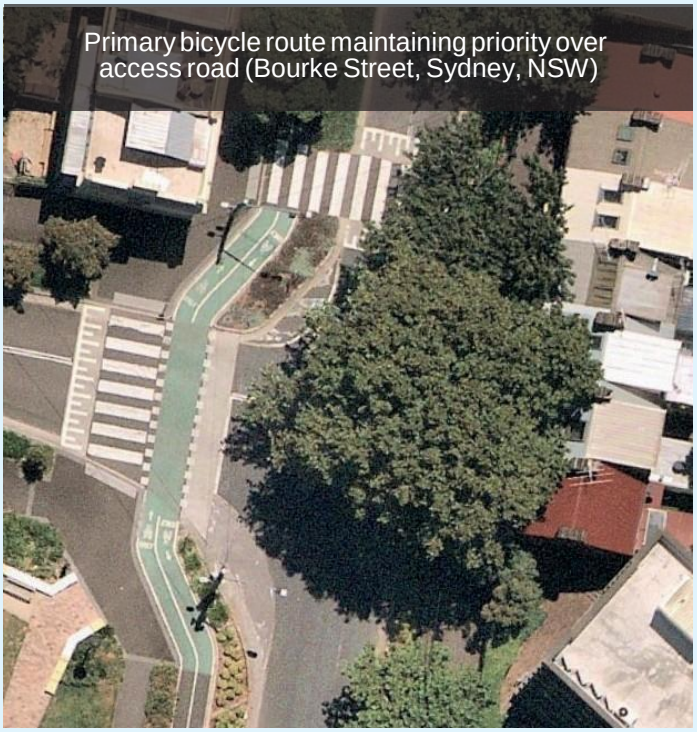
- Both people driving and those on the path are aware of the existence of the crossing, and the priority that applies; and
- The location and design of the crossing, and the priority adopted, does not put people, whether on the road or on the path, at risk when turning.

Application

The local appropriateness of continuing active transport infrastructure and/or surface treatments through intersections should be considered, and road infrastructure should not automatically sever path infrastructure as a standard intersection treatment.



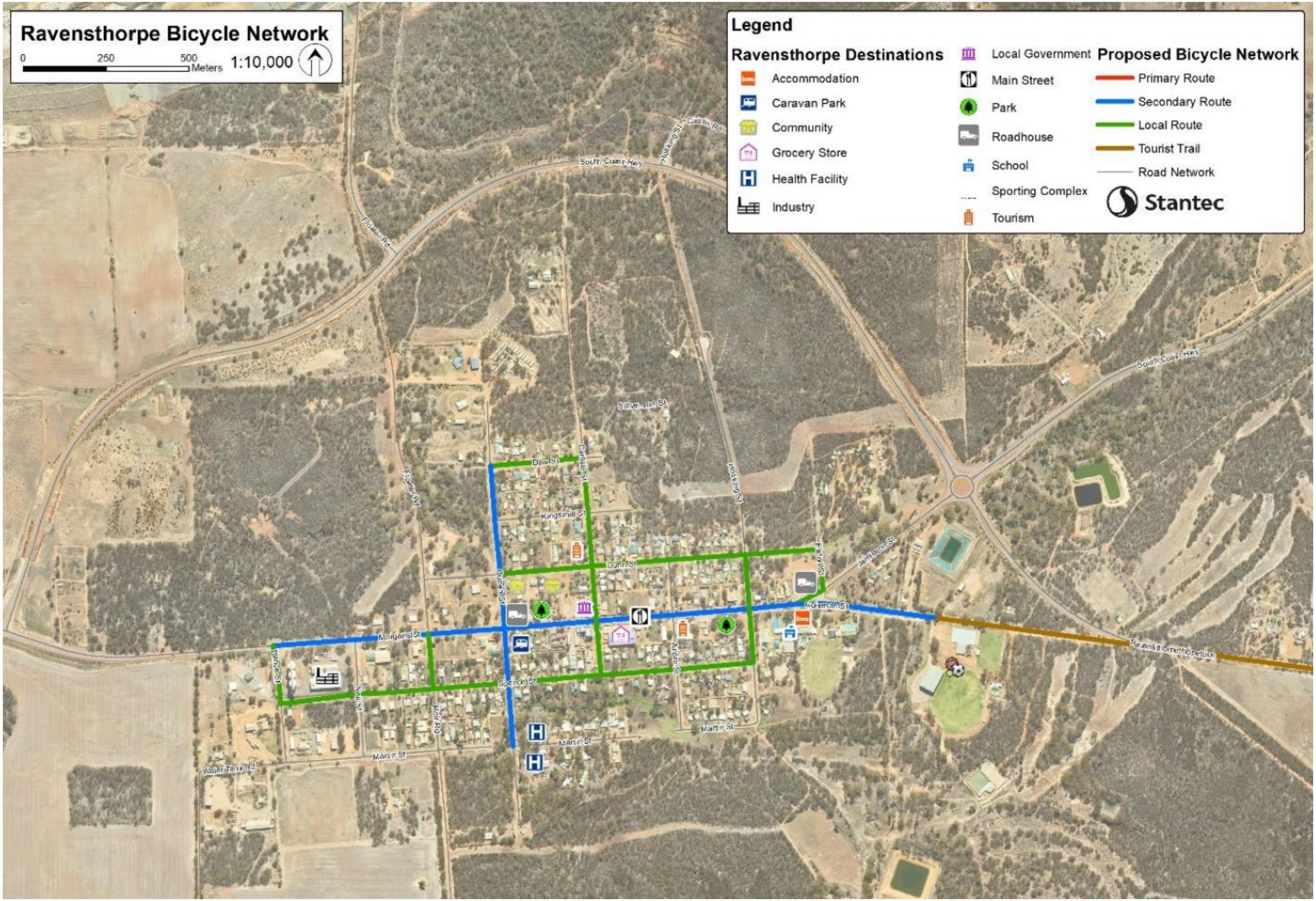
Primary bicycle route bisected by minor access road (Wellington Street, Perth, WA)



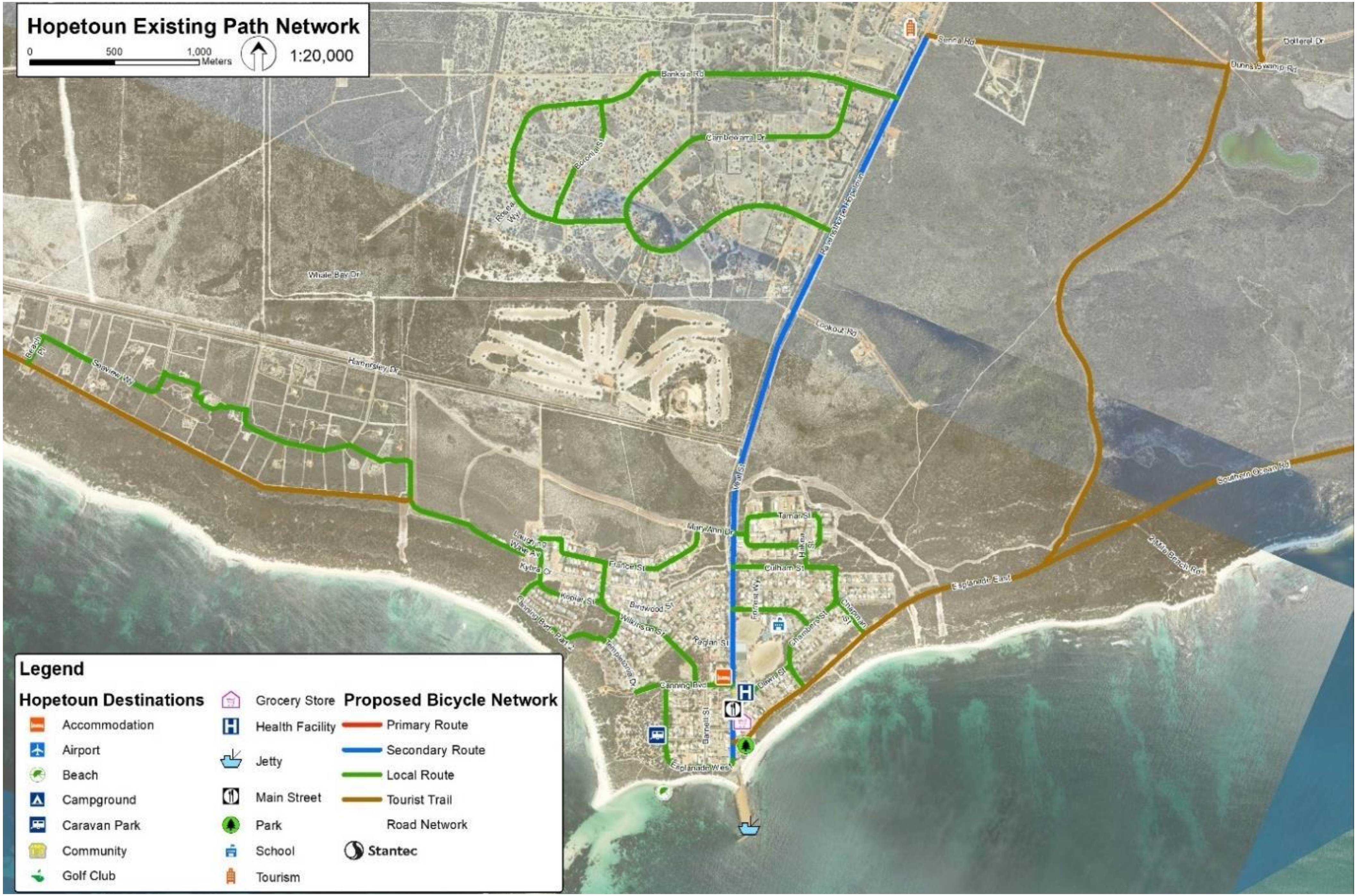
Primary bicycle route maintaining priority over access road (Bourke Street, Sydney, NSW)

Note: For further guidance on applying priority at intersections, please refer to Department of Transport – Planning and Designing for Bike Riding in Western Australia: Shared and Separated Paths.

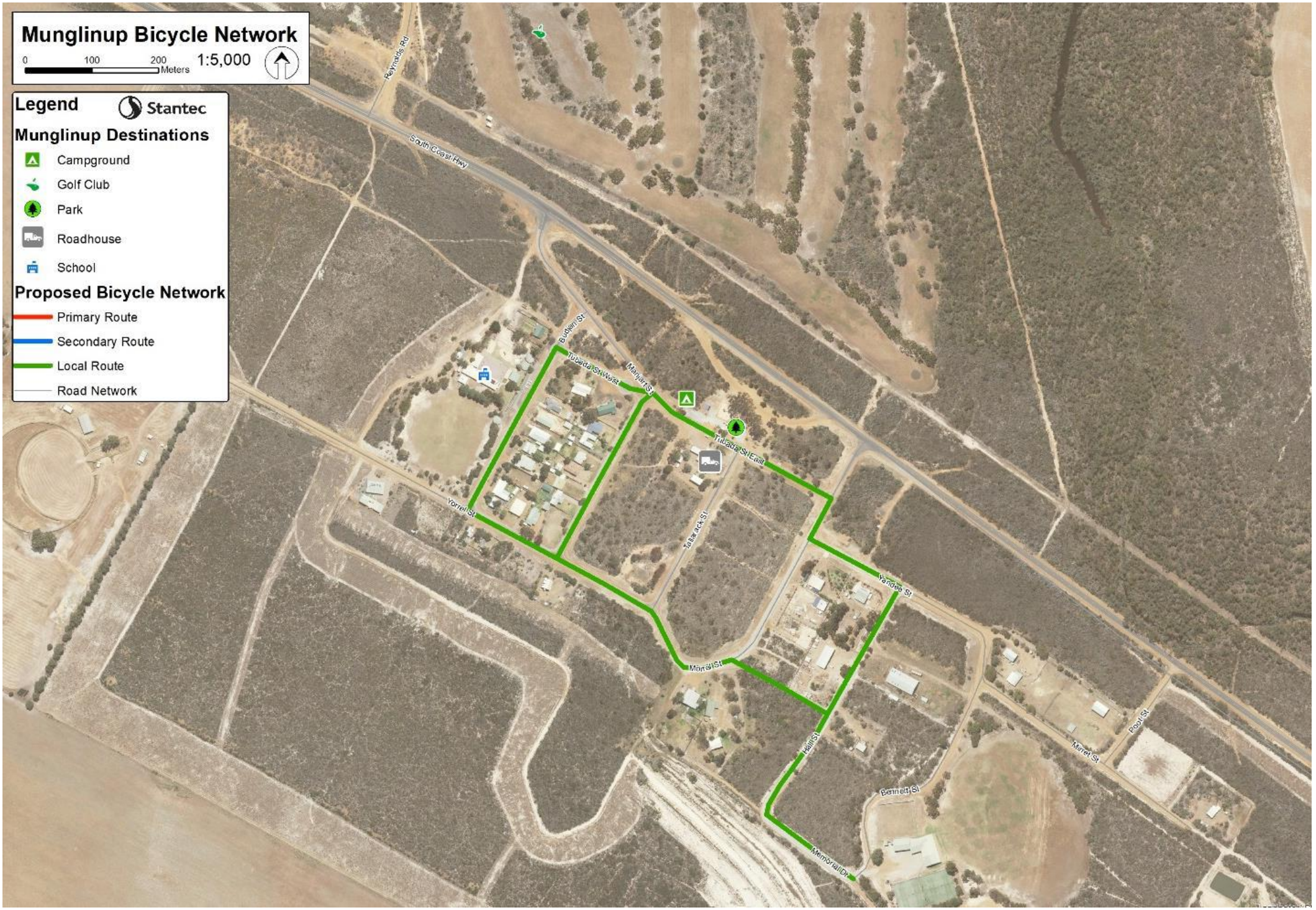
Appendix E MAPS TOWN BIKE NETWORKS



Ravensthorpe Bicycle Network
0
250
500
Meters
1:10,000
Legend
Ravensthorpe Destinations
Accommodation
Caravan Park
Community
Grocery Store
Health Facility
Industry
Local Government
Main Street
Park
Roadhouse
School
Sporting Complex
Tourism
Proposed Bicycle Network
Primary Route
Secondary Route
Local Route
Tourist Trail
Road Network
Stantec
South Coast Hwy
Morgans St
Dunn St
Carlisle St
Kingsmill St
Dew St
Spence St
Martin St
Hosking St
Floater Rd
Esperance St
Ravensthorpe-Hopetoun



Hopetoun Existing Path Network
0
500
1,000
Meters
1:20,000
Banksia Rd
Climbewarra Dr
Boronia St
Rosea Wy
Whale Bay Dr
Hamersley Dr
Seaview Wy
Beach Pl
Lookout Rd
Veal St
Mary Ann Dr
Tamar St
Culham St
France St
Kybra Dr
Birdwood St
Wilkinson St
Raglan St
Canning Bvd
Barnett St
Esplanade West
Esplanade East
Dawn St
Southern Ocean Rd
2 Mile Beach Rd
Dunns Swamp Rd
Sinna Rd
Legend
Hopetoun Destinations
Accommodation
Airport
Beach
Campground
Caravan Park
Community
Golf Club
Grocery Store
Health Facility
Jetty
Main Street
Park
School
Tourism
Proposed Bicycle Network
Primary Route
Secondary Route
Local Route
Tourist Trail
Road Network
Stantec


Munglinup Bicycle Network
0
100
200
Meters
1:5,000
Legend
Stantec
Munglinup Destinations
Campground
Golf Club
Park
Roadhouse
School
Proposed Bicycle Network
Primary Route
Secondary Route
Local Route
Road Network
Reynolds Rd
South Coast Hwy
Budden St
Tubadal St West
Margaret St
Tubadal St East
Yorrel St
Tabarack St
Vandale St
Morrell St
Hall St
Bennett St
Memorial Dr
Muirel St
Pool St