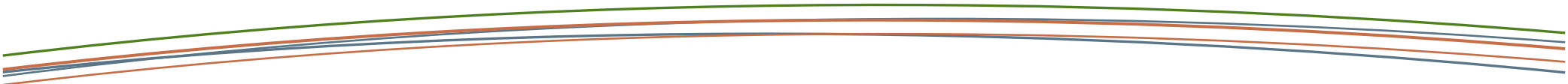
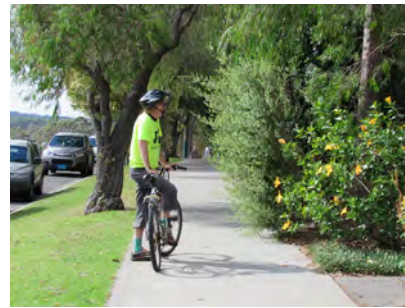


SHIRE OF DENMARK BIKE PLAN

June 2014

20 October 2015 - Attachment 8.5.2a



Version	Date	Author	Details
1	May 2014	Nicole Hodgson Louise Duxbury	Draft Report
2	June 2014	Nicole Hodgson Louise Duxbury	Final Draft Report

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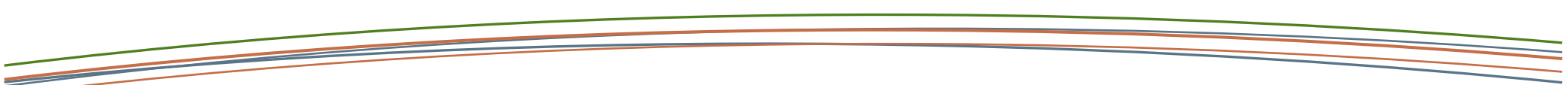


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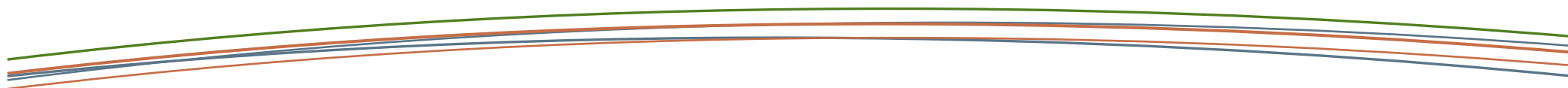
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Executive Summary

Background

The Shire of Denmark commissioned Green Skills to develop a Bike Plan for the Shire.

The Department of Transport, through the Regional Bicycle Network Local Government Grants Program, has provided part funding (of 50%) to the Shire of Denmark to develop the Bike Plan.

The plan was developed around the objectives of:

- Further develop Denmark, Nornalup and Peaceful Bay townsites as cycling friendly destinations
- Have an effective, interconnected, continuous and well maintained bicycle network
- Walking and cycling are the first choice of transport for Denmark, Nornalup and Peaceful Bay townsites
- The communities of Denmark, Nornalup and Peaceful Bay appreciate the social, health, economic and environmental benefits provided by cycling
- Raise/ heighten awareness of drivers by enabling a safer cycling environment
- Develop long term plans for settlement and tourist nodes
- Consult the community in planning activities
- Incorporate cycling Eco Tourism opportunities into bicycle planning

A range of existing policy and planning documents within the Shire highlight the importance of providing a coherent, accessible and connected network for cycling:

- Strategic Community Plan 2031
- Local Planning Strategy
- Settlement Strategy
- Path Development Plan

Process

Key stakeholder groups including the Shire of Denmark Paths and Trails Committee (PATAC) members, Chamber of Commerce, Visitor Centre, Denmark High School and Primary School as well as the general community were engaged through:

- Specific meetings;
- Workshops;
- Saddle surveying;
- Paper based and online surveying.

A large number of Denmark residents had input into the Bike Plan. A survey (both online and paper based) was conducted with variations in the survey instrument to suit adults and children. The total number of responses was:

- Adult - **195** (predominately received online)
- Children - **79** (predominantly paper based as in-class exercises)

Draft versions of the Bike Plan were presented to a small community workshop, meetings of PATAC members and Councillors, the Shire CEO and Shire President.

The consultation outcomes provided detailed information about the cycling habits and cycling routes of nearly 200 Denmark adult residents and nearly 80 children. The survey also provided rich information about the motivators, barriers and opportunities for increasing cycling in Denmark.

Denmark Priority Bike Network Plan

The Shire's Path Development Plan (PDP) has a forward plan for shared use paths and footpaths already in place, therefore the paths proposed in this Bike Plan are mainly additional to the current PDP, and focus on filling gaps in the network.

Longer term recommendations focus on sealing the shoulders of main feeder roads, shared use paths on both sides of the road within the township boundary for these roads, and a substantial upgrade (but maintaining a permeable surface) of the Denmark Nornalup Rail Trail to provide a safe alternative to the Highway.

The Denmark Priority Bike Network Plan shows the major routes within a 2km radius, where cycling easily outperforms walking, or drive and park for short trips to town.

The network plan focuses on:

- Creating Safe Routes to School
- Commuting and Transport Routes
- Recreational and Cycle Tourism Routes
- Sports Cyclist Routes
- Denmark Nornalup Heritage Rail Trail

Cycle Tourism and Recreational Cycling

With the Munda Biddi Trail, local trails and the planned WOW trail, Denmark is well served by a variety of off-road trails for recreation and cycle tourism. Ensuring the end of trip facilities and other supporting facilities are in place, is important to serve these growing group of cyclists.

Executive Summary

Major Recommendations

Construction of new paths

High priority:

- Fyfe St - short connection between Highway and Morgan Rd
- Wattle Way - linking to Mt Shadforth Rd
- Thornton St - short link to Buckley St
- South Coast Highway (West) - to Harpendene Rise (Stage 1) then Cussons Rd (Stage 2)
- South Coast Highway (East) - to entrance of cemetery (Stage 1) and then to Country Club and entrance to Springdale Beach Estate (Stage 2)
- Hardy St - short link to South Coast Highway
- Offer St - between Primary School car park and fence
- Lights Rd - from Ocean Beach Rd to end of residential area
- Riverside path under bridge - extend path under bridge, between upgraded Mokare Trail (at Walker St) and Research Station Ave (on Horsley Rd)
- Traffic bridge - construct a path on the north side of the bridge

Medium priority:

- Traffic bridge - shared use path on north side
- Ti Tree lane extension - to Willow Creek Drive
- Mt Shadforth Rd - between Hardy St and Peace St

Low priority:

- Offer St to Ocean Beach Rd - behind Masonic Lodge
- Powley St to Scotsdale Rd - construct a new short path on the easement
- Hollings Rd to Mt Shadforth Rd - investigate options to integrate path into redeveloped Old Hospital.
- Honey Myrtle Close - to Clarke Close, dependent on development of new lots in area

Upgrade of existing paths

High priority:

- Mokare Heritage Trail - substantial upgrade of eastern side, incorporating a ramp to the path along South Coast Highway
- Hollings Rd - between South Coast Highway and Walker St, widen to safely allow for pedestrians and bikes
- Short St - upgrade narrow footpath for route to Primary School
- Millar St - upgrade to shared use path for route to Primary School

Medium priority:

- Kwoorabup Park - widen path near Adventure Playground
- Mokare Heritage Trail - substantial upgrade of western side
- Mt Shadforth Rd - widen path between Millar St and Hardy St

On-road Bike Lanes

High priority:

- Mitchell St - between Offer St and Strickland St
- Walker St - between Strickland St and Hollings Rd
- Buckley St (East) - between South Coast Highway and Ocean Beach Rd

Medium priority:

- Lights Rd - Ocean Beach Rd to Lights Beach Rd intersection

A range of other recommendations regarding small amendments to existing paths and crossings, improving signage and profile on paths and roads are also contained in Section 4 of the Bike Plan.

Strategic and Policy Recommendations

- 5.1.1 Town Planning Scheme 4** - Incorporate requirement for bicycle path and bike lane provision in relevant sections of the Town Planning Scheme.
- 5.1.2 Requirements for Bicycle Parking Provisions in Town Planning Scheme** - Include provisions for the supply of bicycle parking as well as on-site car parking.
- 5.1.3 Continue to take regard of WAPC DC Policy 1.5 Bicycle Planning** - requiring that new subdivisions provide for safe cycling conditions within the subdivision and linkages to the bike plan network as outlined in this plan.
- 5.1.4 Develop a long-term Integrated Transport Strategy** - In the longer term, the Shire of Denmark should develop a more comprehensive and integrated Sustainable Transport Strategy. The Shire's status as a high growth, coastal community means that the whole range of future transport options, including bicycles, needs to be considered in an integrated way.
- 5.1.5 Providing for safe on-road cycling** - the needs of on-road cyclists should be incorporated into regular road building and maintenance and into the Local Planning Strategy.

Executive Summary

Overall Bike Network - Recommendations

- 5.2.1 **Path Signage** - Bicycle and pedestrian symbols should be marked on all shared paths at the beginning and end, and at road crossings in preparation for the bike plan launch.
- 5.2.2 **Crossings** - Crossings at major intersections should be renewed with painted kerbs, painted grab rails and on path stencilling.
- 5.2.3 **Road signage** - In recognition of the importance of feeder roads as routes for sports cyclists and cycle tourists, 'Share the Road' signage should be installed on these roads as a high (short term) priority.
- 5.2.4 **Information hubs and signage** - Signage throughout the bike network should provide distance and directional information which will assist both pedestrians and cyclists, and be available on paper, online and through websites such as Trails WA.
- 5.2.5 **Integrated End of Trip Facilities** - With the upgrade of the Plane Tree precinct, there may be an opportunity to construct an integrated end of trip facility, featuring secure bike parking, showers and lockers.
- 5.2.6 **Bike Racks** - Extra bike racks should be installed in a range of locations throughout Denmark.

Promoting Cycle Tourism - Recommendations

- 5.3.1 **Support the development of Denmark as a Trail Hub** - partnering with Department of Sport and Recreation.
- 5.3.2 **Assess and grade current cycling trails and routes** - partnering with Department of Sport and Recreation.
- 5.3.3 **Develop themed trails for cycle tourists** - around sports cycling, food and wine, history, discovery trails for children and so on.
- 5.3.4 **Develop a regionally significant loop bicycle trail** - combining the proposed WOW trail, Munda Biddi and the Denmark Nornalup Rail Trail.
- 5.3.5 **Electronic and hardcopy trail maps** - of all cycling trails and routes in local area.
- 5.3.6 **Market cycle trails** - through a range of marketing avenues.
- 5.3.7 **Support completion of Rail Trail** - the missing link between Parker Rd and Peaceful Bay Rd.
- 5.3.8 **Integrated bike facilities for cycle tourists** - secure bike storage and other end of trip facilities in range of locations.
- 5.3.9 **Support development of MTB Park/Trail** - planning support if local group is formed.
- 5.3.10 **Secure bike racks** - at key locations through Denmark. Potential for a design competition in conjunction with Denmark Arts.

Promoting Cycling - Recommendations

- 5.4.1 **Launch Bike Plan with event** - in partnership with Denmark Chamber of Commerce and Munda Biddi Foundation.
- 5.4.2 **Develop electronic and hard copy maps** - update and reprint existing Trails Map for Denmark.
- 5.4.3 **Information and awareness campaign** - partnering with Denmark Bulletin to highlight key aspects of Bike Plan and to correct existing misinformation.
- 5.4.4 **Entry statement signage promoting a 'Cycle Friendly Town'** - as a reminder to residents and visitors to share the road.
- 5.4.5 **Partner with local groups to support cycling promotion events** - such as National Ride to Work Day or WA Bikeweek.
- 5.4.6 **Provide 'Slow Down to 50' stickers** - for residents to place on rubbish bins.
- 5.4.7 **Partner with local schools to support cycling** - work with schools to target promotion efforts for cycling to school.
- 5.4.8 **TravelSmart School program** - encourage Denmark schools to join Travelsmart School program.
- 5.4.9 **Support establishment of Bicycle User Group** - if there is interest in the community to establish such a group.

PART 1: BIKE PLAN CONTEXT

1. BACKGROUND

1.1 Bike Plan Outline

Acknowledging the already high participation rate and growing levels of cycling by the community and tourists, the Shire of Denmark has commissioned the preparation of a Bike Plan with the following objectives:

- Further develop Denmark, Nornalup and Peaceful Bay townsites as cycling friendly destinations
- Have an effective, interconnected, continuous and well maintained bicycle network
- Walking and cycling are the first choice of transport for Denmark, Nornalup and Peaceful Bay townsites
- The communities of Denmark, Nornalup and Peaceful Bay appreciate the social, health, economic and environmental benefits provided by cycling
- Raise/ heighten awareness of drivers by enabling a safer cycling environment
- Develop long term plans for settlement and tourist nodes
- Consult the community in planning activities
- Incorporate cycling Eco Tourism opportunities into bicycle planning

In meeting the brief, the focus of this Bike Plan is on both commuting and recreational cyclists, providing infrastructure and facilities for end of trip which will:

- Encourage existing residents to be more active (i.e. links to schools, town centres) to assist further development of a cycling culture within Denmark;
- Encourage tourists to come to Denmark as a cycling destination.

Denmark has a wide range of excellent recreational cycling trails, and with more encouragement of recreational cycling, overall rates of cycling may be increased in future.

To achieve these aims, this Bike Plan requires:

- Implementation of the Priority Network Plan outlined in Section 4;
- Implementation of directional and distance signage and road/path markings to delineate a safe cycling operating space; and
- Clear routes from the tourist centres, local leisure loops and connections to and upgrades of long distance leisure routes.

Shire of Denmark Vision and Objectives

Denmark in the year 2031 is a leading example of a dynamic, connected, caring and cohesive community, in tune with its environment.

The Shire of Denmark's objectives are:

- **Social** - Denmark's communities, people and places are connected and creative, vibrant and dynamic, healthy and safe.
- **Environmental** - Denmark's natural environment is regionally significant, wild and beautiful, yet so inviting and fragile that its protection and enhancement is carefully balanced in meeting the needs of current and future generations' lifestyle, development and tourism needs.
- **Economic** - Denmark's economy is diverse and vibrant - its primary industries of tourism and agriculture rely on and enjoy natural and other assets that are sensibly managed and promoted.
- **Governance** - The Shire of Denmark provides renowned leadership in sustainability, is effective with both its consultation with its people and its management of its assets, and provides transparent and fiscally responsible decision making.

Local Planning Strategy (2011)

Shire of Denmark's four goals are:

1. Land Use and Town Planning

To devise and apply planning instruments which minimise the negative impacts of development.

2. Economic Development

To encourage economic activities, locally and in the region, which make appropriate use of Denmark's natural and human resources and its primary produce.

3. Environmental Management

To help conserve the natural environment of Denmark and promote its responsible use.

4. Services to the Community

To support the provision of an equitable range of services and facilities.



Development of this Bike Plan has been made possible with part funding (50%) from the **Department of Transport's** Regional Bicycle Network program.

1.2 Bike Plan Development

	Background Research	Data Gathering	Plan Development
	Jan 13 th – Mar 31 st	Feb 17 th – Apr 11 th	Mar 31 st – May 30 th
Process	<p>Review of relevant documents</p> <ul style="list-style-type: none"> • State and Local planning documents • Denmark Path Development Plan • Bike plans of similar sized LGAs <p>Review of previous community consultation</p> <ul style="list-style-type: none"> • PATAC workshops and meetings • Customer Needs & Satisfaction Survey • Munda Biddi trail development <p>Consolidation of maps</p> <ul style="list-style-type: none"> • Recent maps in GIS format • Inventory of existing infrastructure & facilities • Mapping key destinations 	<p>Community & Stakeholder</p> <ul style="list-style-type: none"> • Stakeholder engagement – key organisations • Online survey to gauge current levels of cycling & comments on the bike network (<i>attached</i>) • Stall at Sustainable Living Expo (29th Mar) with surveys and maps • Drop-in consultation at Green Skills • Workshops (consultation & feedback phase) <p>Physical Data</p> <ul style="list-style-type: none"> • Counts of bicycles at schools / various locations • 'Saddle Survey' of bike network, responding to consultation outcomes <p>Other Data</p> <ul style="list-style-type: none"> • ABS Census / National Cycling Survey 	<p>Utilise data on physical bike network</p> <ul style="list-style-type: none"> • Identify priorities for additions to bike network • Identify priorities for maintenance and repair of existing bike network <p>Develop recommendations on promoting cycling in Denmark</p> <ul style="list-style-type: none"> • Desktop research to summarise current best practice in cycling promotion • Develop specific messages relevant to Denmark community based on consultation process
Outcomes	<ul style="list-style-type: none"> • Summary of Local & State planning framework for Bike Plan • Summary of previous relevant consultation processes to build on • Map of existing network including new facilities and generators/ attractors 	<ul style="list-style-type: none"> • Estimation of current levels of cycling in Denmark • Estimation of cycling patterns in Denmark, and most popular routes • Comprehensive feedback on current state of bike network (qualitative - consultation / physical - saddle survey) • Qualitative information on barriers and opportunities to increase cycling levels in Denmark 	<ul style="list-style-type: none"> • Proposed amendments to Path Development Plan • Separate Bike Plan as appendix to Path Development Plan with broader recommendations for future • Recommendations for promoting cycling in Denmark

1.3 Why is Shire of Denmark encouraging cycling?

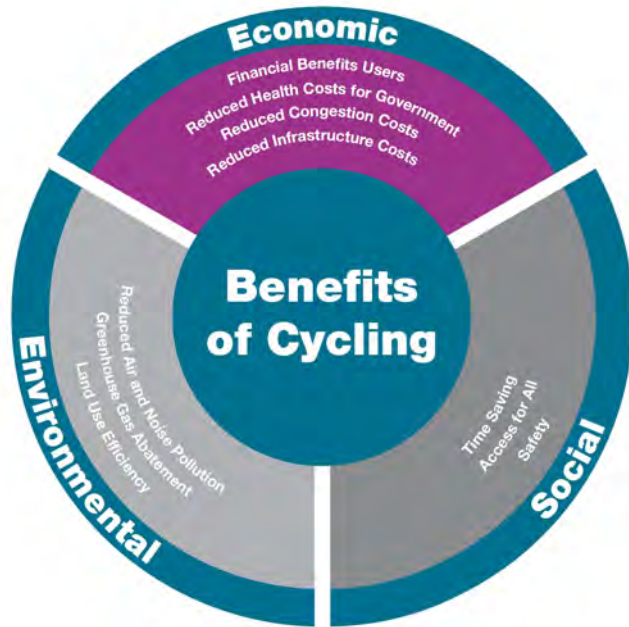


Figure 1: Department of Transport (2014) WA Bicycle Network Plan

Cycling has multiple benefits for individuals and the community

Reduced Infrastructure Costs – reduced road and parking facility costs. Parking is a particular concern for Denmark, especially at peak periods.

Increased health benefits – cycling combats physical inactivity, a major contributor to ill-health, and is also effective in reducing depression and anxiety. A daily 30-minute cycle halves an individual’s chance of becoming obese or diabetic.

Land Use Efficiency – where cycling is a significant transport mode, less land is needed for vehicle infrastructure including roads and car parks and such space savings can be used to increase community public spaces.

Access for All - cycling facilities, particularly shared use paths, meet the requirements of people with disabilities and, consequently, their construction improves accessibility for everyone including the elderly and children.

Department of Transport (2014) WA Bicycle Network Plan

Community Wide Benefits of Cycle Tourism Infrastructure

Local government investment in infrastructure for cycle tourists also provides a range of benefits to the whole community including;

Improved community health - people who live in neighbourhoods which are cycling and walking friendly are more likely to be more active and physically active and enjoy a better quality of life;

Increased mobility - an integrated network of shared paths and bicycle lanes leading to facilities and services will increase residents’ mobility and decrease isolation;

Supporting local businesses - increasing facilities for cycling can boost the viability of local small businesses. People who can walk or cycle to shops are more likely to shop regularly;

Improve community safety - cycling and walking friendly neighbourhoods encourage activity, foster social interactions and reduce the opportunities for crime and anti-social behaviour;

Restoring a sense of community - communities which are cycling and walking friendly are also communities where people are more likely to know each other and look out for each other.

Responding to climate change - approximately half of the greenhouse gas emissions produced by the average household each year are from transport. Cycling is one way to significantly reduce pollution that causes climate change.

Munda Biddi Trail Foundation, 2013

Trends indicate cycling growth - National Cycling Participation Survey (2013)

- From a survey of 884 households, comprising 2,128 individuals in Western Australia, the cycling participation rate was greater than the Australian average.
- Across most of the questions, the level of participation of respondents from regional Western Australia was higher than the Western Australian average.

Increased bicycle sales

The Australian Bicycle Council states sales data show a very strong preference for buying bicycles over motor vehicles. As environmental concerns, and petrol prices and cost of living increase, cycling becomes a more attractive option. In Australia bicycle purchases have substantially exceeded sales of motor vehicles since 2001.

1.4 Policy and Planning Context

Shire of Denmark

Local Planning Strategy

The Denmark Local Planning Strategy provides the vision to guide the future growth of the Shire for the next 20 years.

One of the *Objectives* in 4.10 Transport is:

- To provide a network of shared paths which are safe, well constructed and maintained for cyclists and pedestrians and link focal points in and near the town centre.

Strategies:

- Plan for shared paths throughout the town to provide better pedestrian and cycle connectivity between places of interest throughout the town.
- Ensure the planning process delivers shared paths and general purpose paths when new areas are developed.

Implementation:

- Council secure appropriate contributions for road upgrading and construction of shared paths through the subdivision and planning approval process and the adoption of a Developer Contributions Infrastructure Plan.
- Council review its overall policy for a network of shared paths and general purpose paths.

Strategic Community Plan – Denmark 2031

“With the growing emphasis on healthy lifestyles, the increasing price of petrol and on alternative energy options, provision also needs to be made for cyclists, both within town with parking options, and around residential areas, to encourage cycling as exercise, recreation and as a viable form of transport.”

Settlement Strategy (1998)

The Settlement Strategy establishes the Council’s position for the provision of residential land to cater for urban growth to the year 2020.

One of the *Essential Criteria for Growth* is to:

- Utilise reserves, foreshore reserves and public open space to provide a comprehensive system of pedestrian/cycleways linking the town centre with existing and proposed suburbs and facilities.

Section 13 - Transportation:

- Structure planning for the planning units and the nodal rural settlements must consider the need for cycle and pedestrian forms of movement.

Path Development Plan (2009)

The main aim of the Shire of Denmark Path Development Plan (PDP) is to improve the Pedestrian, Cycling and Trail networks:

- coherence;
- directness;
- safety;
- comfort;
- attractiveness; and
- equity of access.

The plan also aims at providing guidance to Council and Staff in the funding, standards, priority and construction of proposed path, shared use path and trail Infrastructure where identified.

This Bike Plan is designed to work within the structure of the Path Development Plan.

Policy Implications

Our Bike Path - A Strategic Framework for Cycling in WA (2013) makes the important point :

“Key decision makers continue to underplay the contribution that cycling makes to the economy and in public policy areas such as health, transport, community development, environment and tourism.”

Planning for bicycles as a form of transport, like planning for all forms of transport, needs to be from the present situation to a long horizon as part of Local Planning Strategies, The Town Planning Scheme and specific policies and plans. If bicycles are not placed into long term planning they are likely to be omitted as a major future transport option for recreation, transport and tourism.

There are a few obvious gaps in the Shire of Denmark’s policies, for example:

- The Local Tourism Strategy, while mentioning eco-tourism, makes no mention of cycling as either a form of transport for tourists, or as a reason for visiting Denmark.

In researching this Bike Plan it has become apparent that a more comprehensive and integrated Sustainable Transport Strategy should be developed for the Shire of Denmark. It’s status as a high growth, coastal community means that the whole range of future transport options, including bicycles, needs to be considered in an integrated way.

1.5 Spatial Context

Future Growth

Local Planning Strategy

The current town centre will intensify with the proposed infill south of Millers Creek, including potential relocation of the fire station, and expand with commercial development on South Coast Highway between the Denmark River and Ocean Beach Road.

Structure Plans

Current Structure Plans, highlighting areas of future growth, are mapped at the right.

Current Council Policy

It is currently the policy of the Shire of Denmark to require developers to contribute to the pedestrian and cycle network, under the WAPC Development Control Policy 1.5 Bicycle Planning, July 1998.

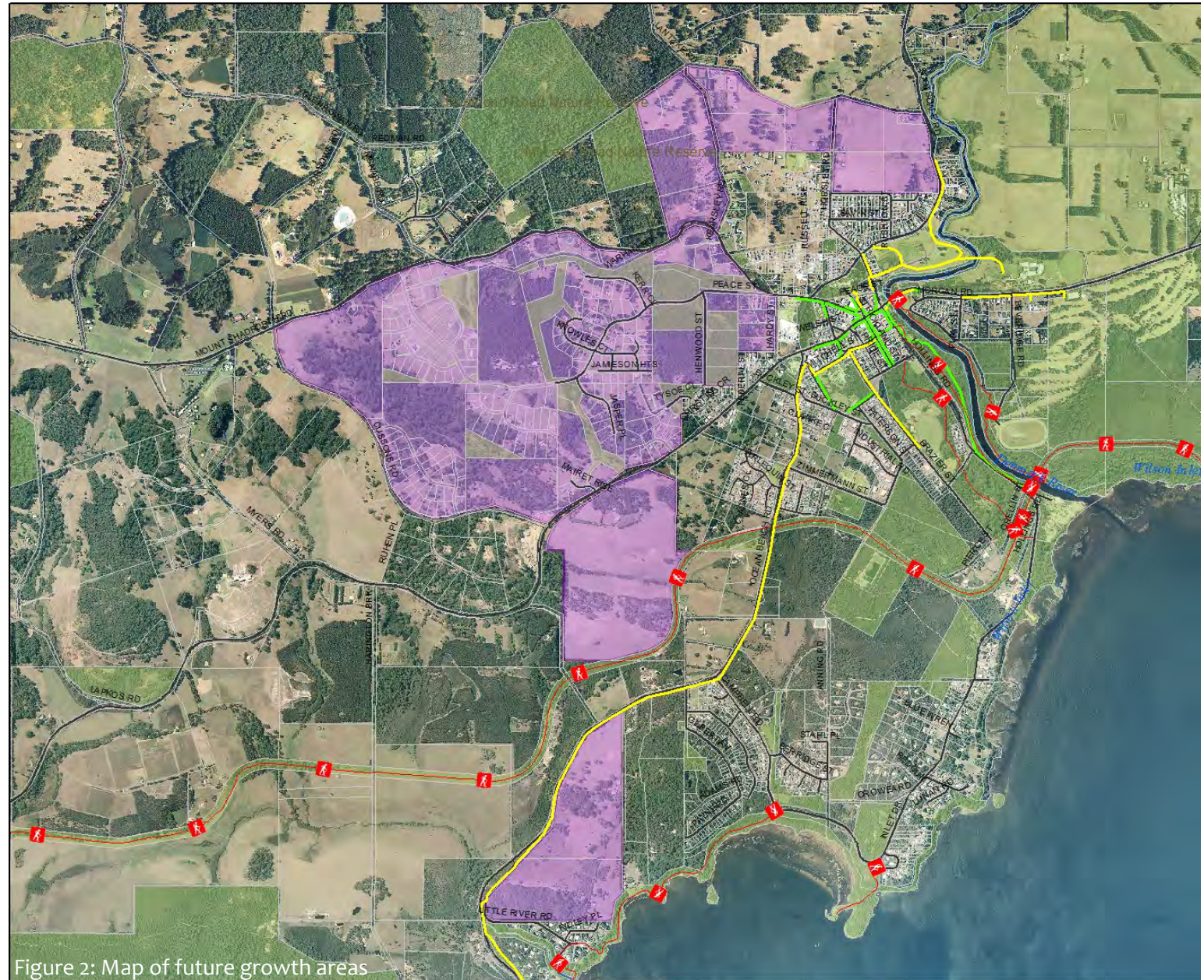
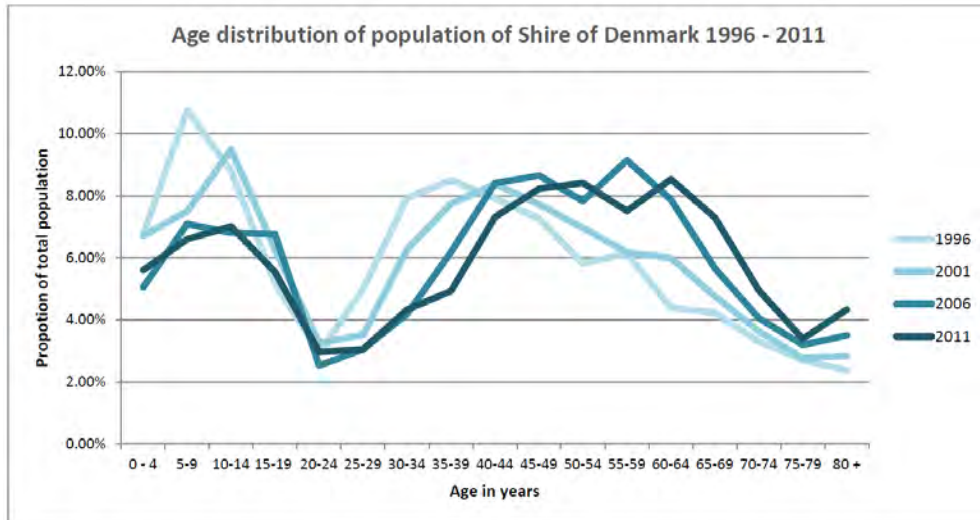
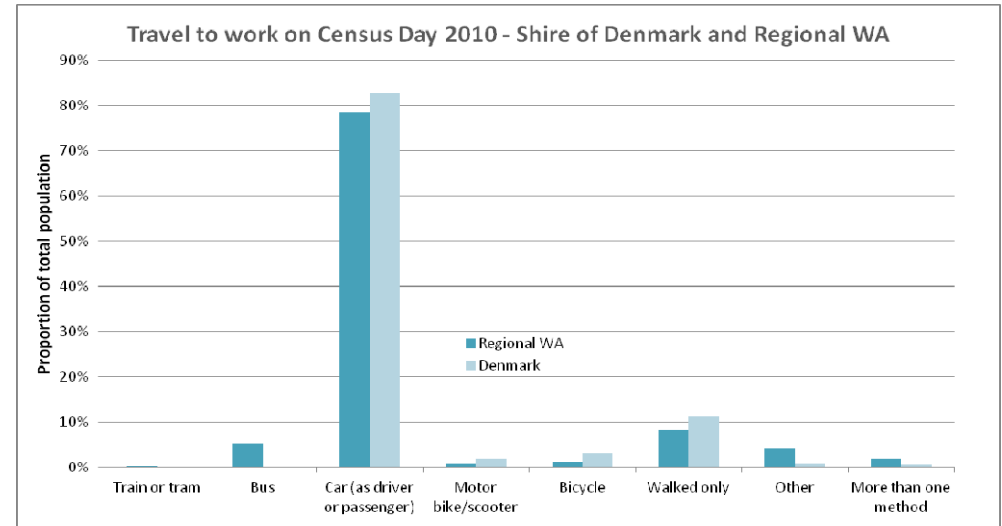
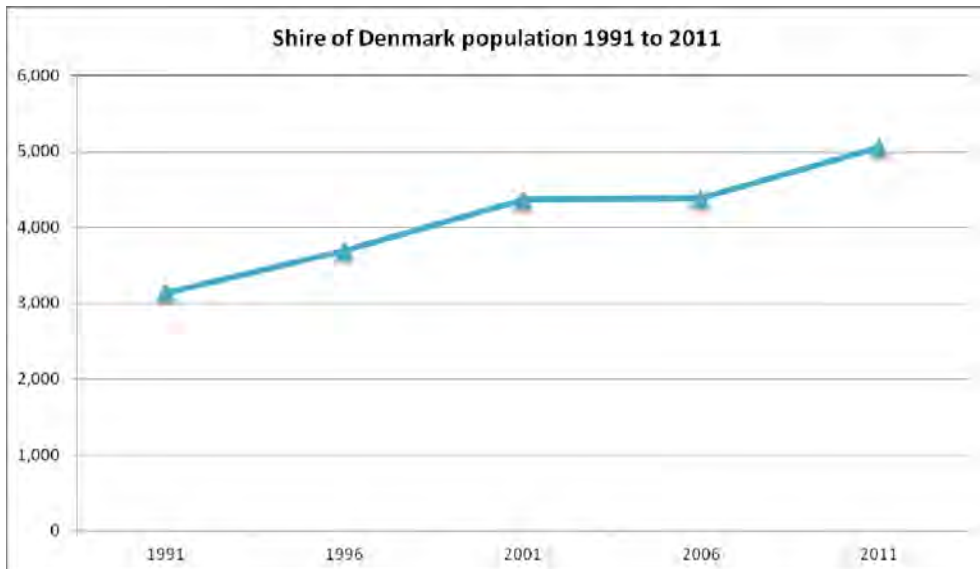


Figure 2: Map of future growth areas

1.6 Demographic Profile



Denmark has an ageing population, especially in comparison with the rest of Regional Western Australia which could present both barriers (for example ill-health and physical capacity) and opportunities (healthy retirees with time for cycling).



Travel to work on census day 2010 showed that just 3% of Denmark residents travelled to work by bicycle. However, travel to work is generally just 20% of all trips, and there are many opportunities to increase cycling for trips for other uses, such as access to recreational facilities, access to shopping, recreation and trips to education facilities.

It is also worth noting that this was higher than the Regional WA figure of 1%. The proportion of residents who walked to work was also higher in Denmark than Regional WA.

Current and potential cycling demographics in Denmark

Prior to conducting community surveying, ABS community profile data was collated as part of analysis of the Denmark Community. The rapidly growing population, and ageing population are both well recognised and needs to be specifically addressed both in terms of facilities to meet an ageing population, as well as an overall increase in facilities to meet the needs of a growing population.

While the 2010 ABS data indicated a low take-up of cycling as a travel to work choice in Denmark, the figure was higher than the state average, the number of cyclists is on the increase generally and cycling for transport has not been the target for Shire paths and trails priorities to date.

1.7 Policy and Planning Context

Federal

National Cycling Strategy – 2011 to 2016

The aim of the NCS is to double the number of people cycling in Australia by 2016, based on the delivery of six key priorities:

1. **Cycling Promotion** - Promote cycling as both a viable and safe mode of transport and an enjoyable recreational activity.
2. **Infrastructure and Facilities** - Create a comprehensive and continuous network of safe and attractive cycle routes and end-of-trip facilities.
3. **Integrated Planning** - Consider and address cycling needs in all relevant transport and land-use planning activities.
4. **Safety**
5. **Monitoring and Evaluation**
6. **Guidance and Best Practice**



Source: www.bikenyork.org

State

WAPC Liveable Neighbourhood Design Code (2009)

A planning framework for development control of structure plans and the subdivision and development of new urban areas.

“Liveable Neighbourhoods has 12 aims including:

- To provide for access generally via an interconnected network of streets giving safe, efficient and pleasant walking, cycling and driving.
- To provide for clusters of walkable neighbourhoods to reduce car dependence for travel to employment, retail and community facilities.”

The policy recognizes that cycling is a critical part of the movement network. Measures can include end-of-trip facilities, slower vehicle speeds, lower traffic volumes, appropriate lane widths, on-road facilities, shared paths and routes parallel to arterial roads.

WA Planning Commission - Development Control Policy 1.5 Bicycle Planning (1998)

This policy describes the planning considerations which should be taken into account in order to improve the safety and convenience of cycling. The policy measures outlined are:

- Bicycles and the Road Network
- Cycling Facilities in New Subdivisions
- Bicycles in Local Area Traffic Management Schemes
- Bicycle Parking and End-of-Trip Facilities
- Dual-mode Transport
- Consideration of cycling in Planning Studies

Regional

Lower Great Southern Regional Strategy (2007)

Objective 3.7.4 of the strategy states: “improve public transport, walking and cycling opportunities in communities”.

The strategy states: “The street network of new residential areas also should be designed so as to be conducive to walking and cycling, as per the WAPC’s liveable neighbourhoods design code, with an adequate provision of footpaths and cycle paths.

Regional recreational trails... should be identified in local planning strategies and protected, given their importance for regional tourism and recreation”.

Main Roads - Policy for Cycling Infrastructure (2000)

Sections of main roads and highways that are regularly used by more than 25 cyclists per day will comply with urban area guidelines, which requires that:

- New roads will be constructed with an edge-line separated shoulder in accordance with Austroads guidelines.
- When this cannot be achieved a shared path will be constructed adjacent to the road, or an alternate route identified and signed.

On existing highways and main roads, the facility described above will only be provided in conjunction with any upgrades involving widening of the road.

WA Bicycle Network Plan (2014)

VISION: To make WA a place where cycling is safe, connected, convenient and a widely-accepted form of transport.

TARGET: To double the number of cycling trips in WA within five years

Objective 1: Build evidence and demonstrate the benefits of cycling for the community;

Objective 2: Encourage cycling to build active and healthy communities;

Objective 3: Provide a high-quality, interconnected bicycle network;

Objective 4: Improve the level of safety for people cycling; and

Objective 5: Build and enhance relationships with advocacy groups and stakeholders.

Some of the initiatives of the WABN relevant in the Denmark context.

The Regional Bicycle Network (RBN) Grants Program has been changed:

- eligible project categories have been amalgamated into four new categories:
 - ⇒ paths;
 - ⇒ on-road facilities (for example bicycle lanes);
 - ⇒ local bicycle plans; and
 - ⇒ other infrastructure (including End Of Trip facilities)
- larger-scale projects of greater strategic significance have been prioritised; and
- the project funding cap has been removed.

The RBN Grants program favours projects that provide connections to schools and generate cycle tourism.

Connecting Schools is a grant program aimed at improving bicycle access and End of Trip facilities for schools. The program aims to increase the number of students cycling to school (significantly reduced in recent decades) - which would have many positive benefits, including improved health, reducing school carpark congestion, and encouraging cycling as a viable transport option for other short trips.

Our Bike Path - A Strategic Framework for Cycling in WA (2013)

There is a growing cycling culture in WA supporting the State Bicycle Network Plan. West Cycle Inc, a peak body for cycling in WA established in 2011, has developed a strategic framework to 'plan for all forms of cycling and for everyone associated with developing and supporting cycling in Western Australia'.

"We already know that over 400,000 Western Australians regularly ride. We want to increase this figure to over 1 million by 2020.

Why? Because we know that if more people were riding we'd all be better off. Less congestion, healthier and happier communities, fewer sick days, longer life expectancy, less pollution and more money in our pockets are just some of the benefits of cycling."

The framework outlines 5 key areas for action:

1. Grow a Cycling Culture

To turn Western Australia into a place where cycling, no matter the reason for riding, is widely supported, accepted, encouraged and celebrated.

2. Create Bike Friendly Communities

Our streets, roads and local communities to become places for people; places where people aren't afraid to ride or let their children do so.

3. Build The Capability Of Our Community

To build the capacity of our cycling organisations, clubs, volunteers and advocates so that they can bring about the positive changes and cycling initiatives needed in our local communities.

4. Strengthen Our Sporting Pathway

To develop a collaborative and integrated cycling pathway that is focused on both growing participation for the benefit of our community as well as our sporting success.

5. Develop a Cycling Economy

The cycling community to partner with business, tourism and government agencies to maximize the economic benefits that cycling can bring to Western Australia.

1.8 Cycle Tourism

Overview

Denmark has a number of important cycling trails readily available to tourists and residents, including Wilson Inlet Heritage Trail, Kwoorabup Community Park, Denmark-Nornalup Heritage Rail Trail, and Munda Bididi Trail. However, there is a distinct lack of signage to these trails, and within areas such as Kwoorabup Park.

Consultation with the Denmark Visitors Centre suggests that:

- Anecdotally, the number of visitors with bikes, asking for trail maps and specifically off-road cycling trails, is increasing
- Mountain biking is growing in popularity and some visitors come expecting a mountain bike facility
- There are opportunities for cycle tourism in cycling routes to wineries (as seen in South Australia)
- Cycle tourists require more end of trip facilities such as bike racks, secure bike storage, showers and lockers.

Munda Bididi Trail

The 1,000 km Munda Bididi Trail from Mundaring to Albany was officially opened in April 2013.

Significant opportunities for cycle tourism have been identified, particularly as cycle tourists travel light and are more reliant on local services than car based tourists. It has been estimated that within 3 years 25,000 people will be using the Munda Bididi annually, injecting an estimated \$13 million into the South West and Great Southern economies.

The Munda Bididi Foundation undertook a strategic planning process for cycle tourism in Denmark, with relevant recommendations highlighted in Section 5.3.

Mountain Bike Trail

A number of survey respondents to the survey highlighted the lack of challenging Mountain Bike circuits in Denmark.

I firmly believe we need some challenging cross country mountain bike trails for cross country and downhill riders, ideally within riding distance of town. If of good standard and length they would be used by clubs for events which would attract a large number of people into the town.

We desperately need some mountain bike specific trails somewhere within easy reach of town for kids to ride and for serious mountain bike riders. There are NO challenging off road cycle routes... Denmark really needs to improve cycling facilities and can easily reap benefits in more active population especially kids and cycle tourism.

Trails Hub Assessment

The State Department of Sport and Recreation developed a 'World Class Trails Hub Strategy for WA' (2012), to support the development of trail hubs in WA rural towns. A trail hub is a town or destination known for offering a network of high quality trails, well marketing, supported by services, facilities and businesses that provide for visitor needs. The Department is offering opportunities for support to towns willing to develop their capacity and resources to market themselves as trail hubs.

A Trails Hubs Assessment was conducted by the Department in Denmark in May 2014. The consensus was that Denmark already has sufficient product and services to be a trails hub but needs a strategy to further develop product and to market it effectively.

MTB Trails and Parks

The WA Mountain Bike Association (WAMBA) highlights a number of MTB trails and parks throughout Western Australia. As pointed out by a number of survey respondents, there is no MTB trail between Pemberton and the Albany downhill track. The development of the Mountain Bike Parks and Trails in Pemberton and Margaret River were community led projects, with funding from a variety of sources.

The Pemberton Mountain Bike Park

The tracks have been built by Three Chillies - Paul Neve and are maintained by volunteers. Funding for the trails have come from various sources including: Lotterywest, South West Development Commission, Federal Government Department of Health and Ageing.

The Margaret River Pines

This project is coordinated and managed by the Margaret River Off-Road Cycling Association (MRORCA). The Association has received funding from Lotterywest (\$100,000) with dollar matched contributions from partners, the Cape to Cape MTB race, Department of Parks and Wildlife, the Augusta Margaret River Tourism Association.

The trails are located on DPaW managed land, and are constructed at an estimated cost of \$30 per metre.

The challenge for Denmark will be finding the right site that is not an important environmental reserve. There may be opportunities to partner with private landholders to find an appropriate site for a Mountain Bike Trail Park.

2. COMMUNITY CONSULTATION

2.1 Previous Community Consultation 2008, 2012/13, 2013

Three previous community consultation exercises are of particular importance for the Bike Plan:

- A cycling survey conducted in 2008 by Shire of Denmark Paths and Trails Committee (PATAC) member Andi Adams, with 50 responses via email.

- PATAC workshop in September 2013 to discuss cycling and the Bike Plan.
- Shire of Denmark Customer Needs and Satisfaction Survey 2012/13, which featured a large number of suggestions about cycling and bike paths.

The outcomes of all three consultation exercises have been combined and summarised below, with more complete summaries of each process available as **Appendix 1**.

Positives	Route suggestions	Overall improvements	Visions for cycling in Denmark
<ul style="list-style-type: none"> • Cycling for recreation more popular than commuting • Well designed Heritage Trail but needs some maintenance (sandy sections, barbed wire etc) • Ocean Beach Rd cycle path but needs some maintenance • South of the Highway has a reasonable level of recreational bike paths/trails with connections • Campbell Rd to Rivermouth Caravan Park via Inlet Drive 	<ul style="list-style-type: none"> • Scotsdale Rd, especially to Steiner School (this is under construction) South Coast Highway, east and west Upgrade Mokare Heritage Trail (a new cycle way adjacent to Inlet Drive is under construction) • Upgrade Rail Trail from Ocean Beach Rd to Mt McLeod Rd, to link with William Bay Rd • Peace St between Mt Shadforth Rd and Jamieson Heights • Cycle path on Mt Shadforth Rd • Upgrade of Poison Point track • Shared use path to Lights Beach • Shared use path to Agricultural College 	<ul style="list-style-type: none"> • Dedicated bike paths - especially north of South Coast Highway Dedicated bicycle lanes on all arterial roads • Encourage more cycling to school with good, safe bike paths provided to all schools and enforcing 50km/hr along Ocean Beach Rd at school times • Signage on South Coast Highway for driver awareness and to promote Denmark as ‘cycle-friendly’ • Signage on roads connecting bike users to CBD • Secure bike racks / lockers at key locations - Denmark Visitors Centre Maintenance of existing paths and trails • More connections to tourist venues such as wineries, Treetop Walk, Peaceful Bay, Scotsdale circuit • Concerns with safety and unsuitable on-road riding conditions 	<ul style="list-style-type: none"> • Planned, well developed ,diverse networks which influence user choice of transport • More awareness from drivers about safely sharing the road with cyclists Ensure cycling is planned for each new housing subdivision • Better information - downloadable map apps, podcasts for future cycle tourism routes • Long term planning for cyclists– especially in future nodes • Bike share schemes • Building cycle tourism with MTB trails, walk trails, connected cycle tourism routes, linking attractions • Linkage of shared paths and on-road bike lanes • Bicycle logos on CBD streets to connect Munda Biddi and shared paths to destinations.

2.2 Stakeholder Engagement - Bike Plan 2014

Key stakeholder groups including the Shire of Denmark Paths and Trails Committee (PATAC) members, Chamber of Commerce, Visitor Centre, Denmark High School and Primary School as well as the general community were engaged through:

- Specific meetings;
- Workshops ;
- Saddle surveying;
- Paper based and online surveying.

Final drafts of the Bike Plan were presented to:

- A small community meeting on 22 May;
- A PATAC and Councilor meeting on 23 May;
- A meeting with CEO Dale Stewart, Shire President Ross Thornton and Councilor John Sampson on 6 June; and
- PATAC meeting on 9 June.

Denmark Chamber of Commerce

Liz Jack, Manager – 4 March 2014

Possibilities for ongoing promotion of cycling in Denmark:

- Could promote cycle-friendly businesses in the Community Directory, as well as including some messages on cycling throughout the Directory
- There could be more information to promote cycling on the map prepared by Chamber of Commerce

Liz Jack also provided comments on a final draft of the report.

Denmark Visitor Centre

Lenore Lyons, Coordinator – 14 March 2014

Bike hire well utilised over peak periods, with a 20% increase in the last year. Obviously weather dependent.

More visitors with bicycles, asking for trail maps, with off road cycling very popular.

Some perceived gaps :

- Having accessible drinking water, especially out of town
- Safety issues with road crossings and road sections of existing trails (like Munda Bididi)
- The decision by the Shire not to keep printing the Trails Map brochure
- There has been a noticeable increase in popularity of mountain biking, but Denmark has no specific challenging mountain biking route. Visitors come expecting that there will be a facility.

Majority of cycling by tourists is done for recreation not for transport.

In terms of cycling infrastructure more broadly:

- Shire has done a good job in many areas, such as the Inlet Drive path
- Lack of infrastructure along William Bay Rd and Scotsdale Rd
- Another opportunity for cycle tourism is a cycling route to wineries (popular in South Australia wine growing regions)

Paths and Trails Committee members

Andi Adams – 2 March 2014

- Biggest hurdle is reversing the dominance of motor vehicles over bikes
- Suggest signs around the edge of town that Denmark is a bike friendly town
- Planning for cycling can be incorporated into TPS / Strategies
- There are a number of short interconnections and links that will make cycling easier
- Need to encourage cycling consciousness / safety – with road markings at intersections of bike paths
- Specifications of road shoulders to include a bike lane
- South Coast Highway / Main Roads – identify upgrade of roads for inclusion of bike lane
- Concentrate on town centre – linkages
- Any way to give better priority to riding bikes?
- Is riding on footpaths legal or not?

PATAC Members Roger Seeney, Donald Clarke and John Schindler also assisted in the Saddle Surveying process.

2.2 Stakeholder Engagement - Bike Plan 2014 (continued)

Denmark Senior High School

Diane Cole, Principal – 29 January 2014

Estimate that less than 6 students cycle to school.
Total enrolment in 2014 - 335 students.

Barriers to increasing level of cycling:

- Wearing helmets – not cool, some students will cycle with helmets in hand
- Safety of road crossing and cycleway along highway
- Alternative cycleway along the river requires going under the bridge, which is subject to flooding and also perceptions of ‘randoms’ in bush
- Bicycle storage not secure – experience of bike theft in past

Denmark Primary School

Jenni Harrison, Teacher - 30 April 2014

Jenni has regularly held bike education classes and class rides with her year 6 and 7 classes. Suggests it is years 5, 6 and 7 we should be targeting.

In terms of making the school more bike friendly, suggests extra bike parking near the music room. Wouldn't recommend upgrading the Brazier St entrance for bikes as it is already so busy with cars and pedestrians.

Some ideas on promoting cycling to school:

- Group riding to school schemes. Currently there is a teacher's aide who meets a group of kids at points along Ocean Beach Rd. This kind of scheme could be expanded, but would require parent / community volunteers to make happen.
- Might also require a parent's education campaign - riding with kids on weekend, talks at assembly, items in newsletters.
- Cycling clubs after school to encourage more cycling involvement. Might be funding available through Be Active programs.
- BMX/MTB track to get more kids enthused.

Staff would be keen to promote cycling if we can come up with good ways of doing it.

Target families living on south side of South Coast Highway (because of concerns about safely crossing the highway). Survey parents about what it would take to get kids riding.

Denmark Mountain Bike Club

Graham Mason, 12 March 2014

The lack of a challenging Mountain Bike Trail in the Denmark area was highlighted by Graham, who pointed out that there is nothing for mountain bikers between Pemberton and Albany's short downhill.

The experience of places like Pemberton and Margaret River suggests that the tourist market for mountain biking is growing substantially, and provides a significant tourism boost to those towns.

Proposals for Mountain Bike Trail have been presented to PATAC previously, based in the Karri Walk Trail area or the foot of Mt Hallowell.

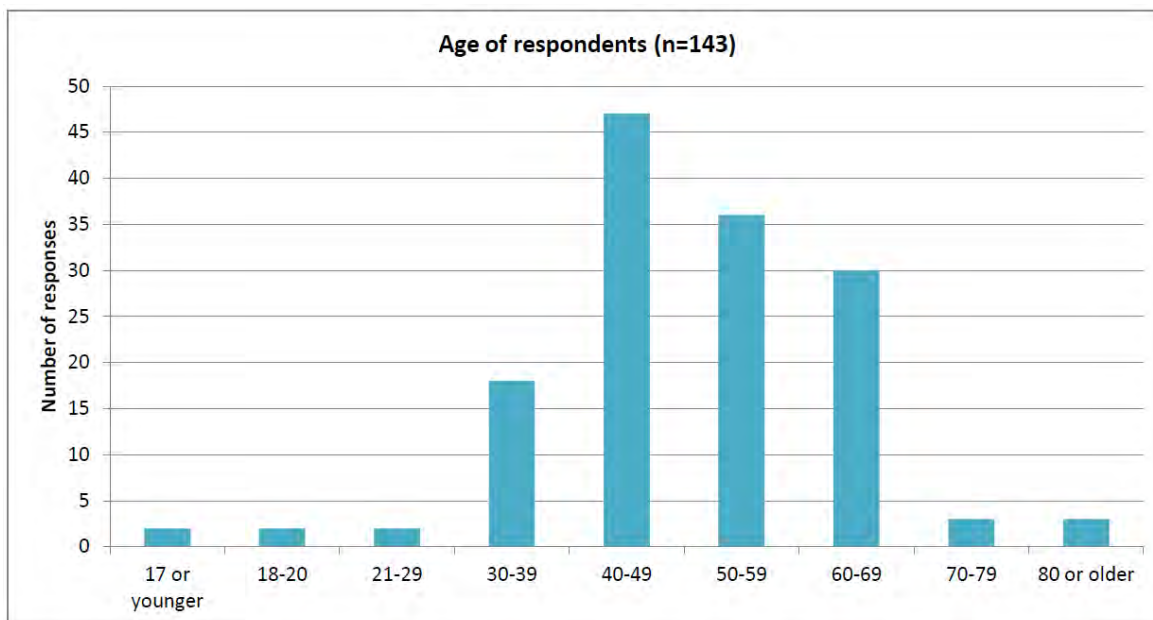
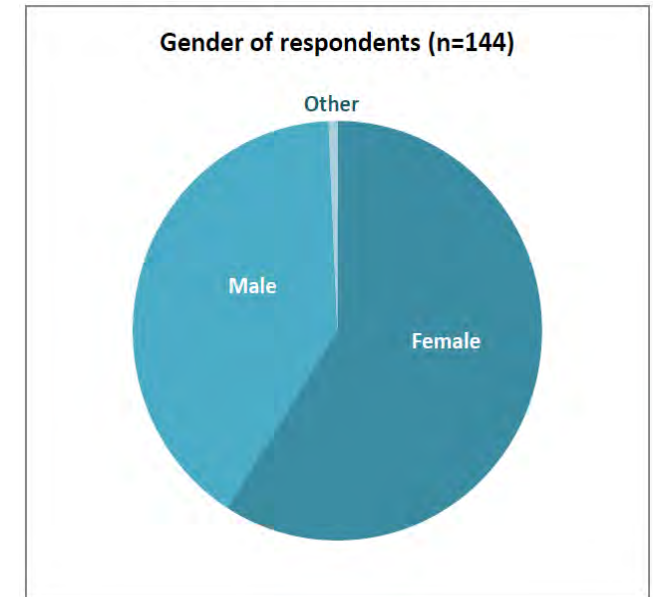
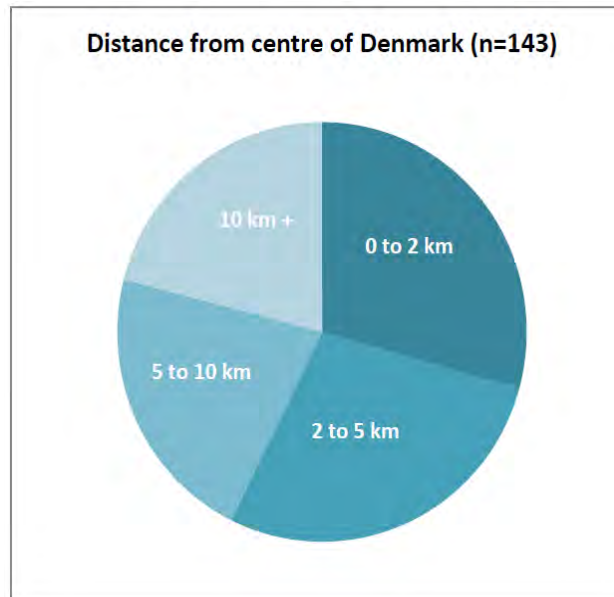
2.3 Community Cycling Survey 2014 - Adults

A survey (both online and paper based) was conducted with variations in the survey instrument to suit adults and children. Information was circulated via email lists, local media articles, Facebook and via the Shire of Denmark website. See Appendix 1 for the full survey.

The total number of responses was:

- Adult - **195** (predominately received online)
- Children - **79** (predominantly paper based as in-class exercises)

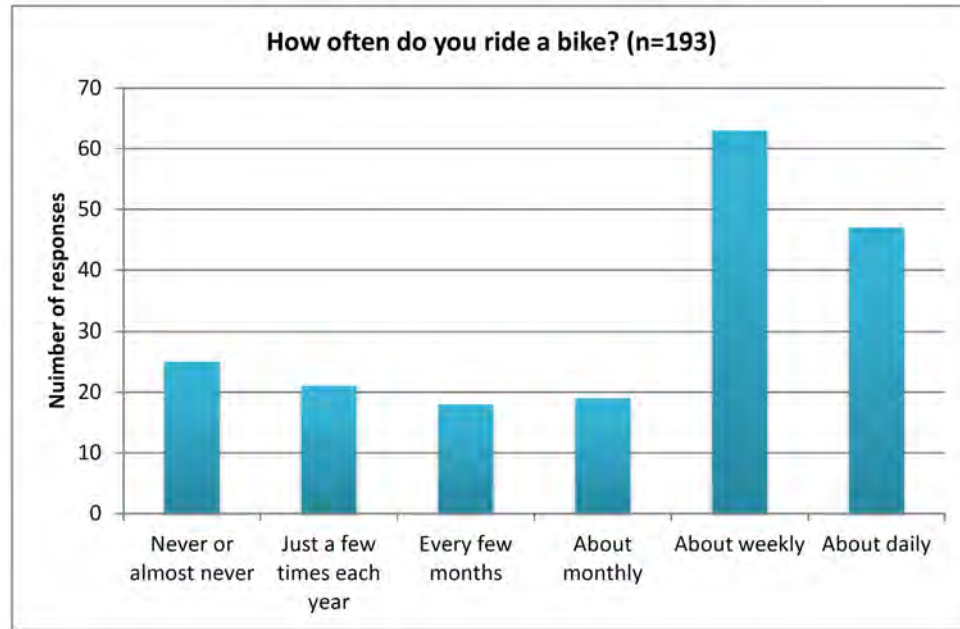
Demographic details of the adult survey respondents are outlined in the figures on this page.



Survey Results

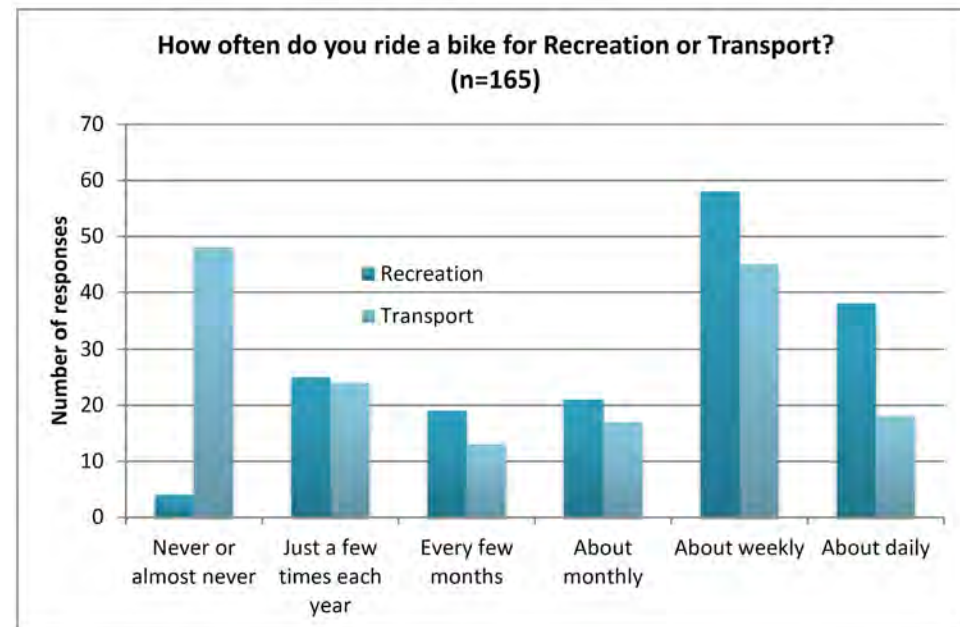
While the surveying is not a random or representative sample, due to the self selecting nature of the survey respondents, the results do provide rich insights into the barriers and benefits of cycling in the current Denmark context.

The survey also provides specific feedback about the usage of particular parts of the bike network, and recommendations on its enhancement and upgrading.



Survey results

Just over half of the survey respondents were regular cyclists (about weekly or daily), and just over 10% of respondents answered never or almost never to the question ‘How often do you ride a bike?’

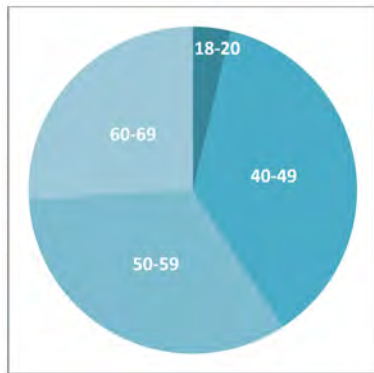


As anticipated, recreational cycling is more common in Denmark than commuting or transport, with 46% of respondents only cycling for transport purposes every few months or less, with 26% of respondents saying they never or almost never cycle for transport purposes. Current bicycle paths are predominantly designed for recreational use.

As the table on the following page highlights, meeting the needs of the wide variety of different cyclists requires quite specific approaches. The different categories of cyclist are quite evident in Denmark, ranging from the sports cyclists who cycle long distances most days, to the weekly recreational cyclists, to the slightly smaller number of people who cycle regularly for transport purposes.

Recreational

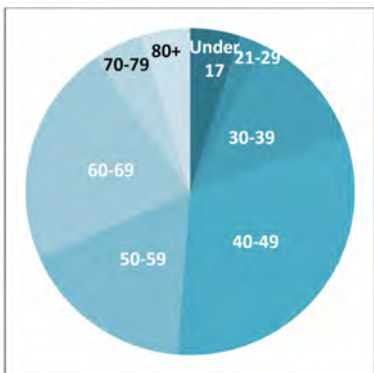
About Daily



Of 27 respondents:

- Slightly more males (56%) than female (44%)
- Almost all aged between 40 and 69
- Majority living within 10km of the CBD, with 40% within 2km and 22% within 5km of the CBD

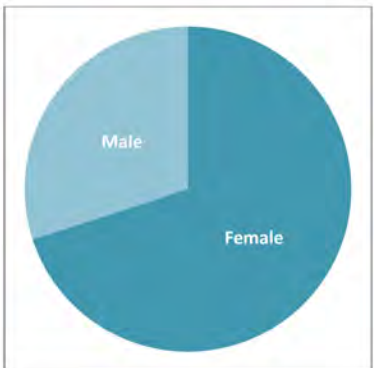
About Weekly



Of 41 respondents:

- Slightly more males (54%) than female
- A spread of ages, with most in 40 to 49 age group (31%)
- Majority living within 10km of the CBD, with 32% within 2km and 29% within 5km of the CBD

About Monthly



Of 20 respondents:

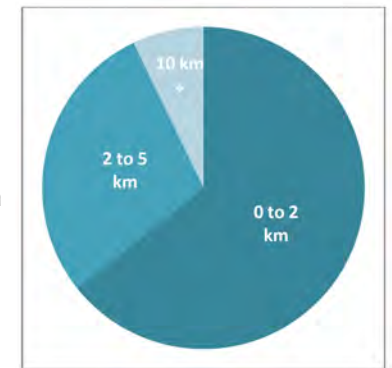
- Many more women (70%) than men
- 65% between 40 and 59
- Majority living 5 to 10km of the CBD, with 25% further than 10km from CBD

With more women reporting less regular recreational cycling, there is an opportunity to focus on what women might need to cycle more often.



Transport

About Daily

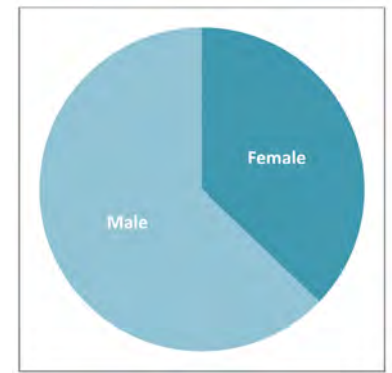


Of 14 respondents:

- More females (57%) than male
- 60% in the 40 to 49 age group alone
- 64% living within 2km of the CBD, 28% living within 5km and just 1 respondent more than 10km from CBD

Close proximity to the Denmark CBD is clearly a very important factor in regular transport cycling.

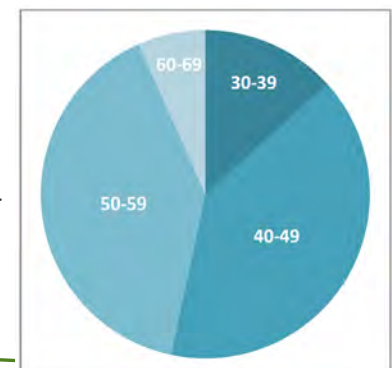
About Weekly



Of 35 respondents:

- More males (63%) than females
- Majority (83%) between 40 and 69, with most in the 40 to 49 age group (37%)
- Majority living within 10km of the CBD, with 34% within 2km and 29% within 5km of the CBD

About Monthly



Of 15 respondents:

- More females (60%) than male
- 40% in the 40 to 49 and 40% in 50 to 59 age group
- 33% within 5 to 10km of CBD, with 47% under 5km from CBD

Types of cyclists and meeting their needs

Table 2.4: Categories of cyclists and their characteristics

Category	Rider characteristics	Riding environment
Primary school children	Cognitive skills not developed, little knowledge of road rules, require supervision.	Off-road path, footpath (where permitted) or very low volume residential street.
Secondary school children	Skill varies, developing confidence.	Generally use on-road facilities or off-road paths where available.
Recreational	Experience, age, skills vary greatly.	Desire off-road paths and quiet local streets, avoid heavily trafficked routes, more experienced will prefer to use road system for long journeys.
Commuter	Vary in age, skill and fitness, some highly skilled and able to handle a variety of traffic conditions.	Some prefer paths or low-stress roads, willing to take longer to get to destination, others want quick trips regardless of traffic conditions, primarily require space to ride and smooth riding surface, speed maintenance.
Utility	Ride for specific purposes (shopping), short length trips, routes unpredictable.	Not on highly trafficked roads, needs include comprehensive, low-stress routes, appropriate end-of-trip facilities.
Touring	Long distance journeys, may be heavily equipped, some travelling in groups.	Often route is similar to that of other tourists.
Sporting	Often in groups, two abreast occupying left lane, needs similar to commuters.	Travel long distances in training on arterials, may include challenging terrain in outer urban or rural areas, generally do not use off-road routes because of high speed and conflict with other users.

Source: Austroads (2014a) Table 4.12.

2.3 Community Cycling Survey 2014 - Adults

Responses to the question: *What are the major benefits you get from cycling?*

**Exercise, fitness, physical health
(91 % of responses)**

**Transport, saving fuel, saving money
(34 %)**

**Fun, enjoyment, recreation
(31 %)**

**Fresh air, outdoors, scenery
(29 %)**

Community, social connection (16 %)

Mental health & wellbeing (12 %)

I work off my "Flab" to get "Ab". My stress levels go down. I get a sense of relaxation when I am outside.

Fresh air, beautiful scenery, exercise and the opportunity to stop and talk to friends along the way.

Good for the environment (emissions), good for the economy (back pocket / wallet) and good for your health.

Time with my kids - we commute together, a sense of freedom, better mental health, better physical health.

Exercise, fun, being in nature, feeling alive, cheap transport, a way to join in with family and friends.

Mental health, chance to take in my community and its happenings, fresh air, quiet, quicker than driving.



2.3 Community Cycling Survey 2014 - Adults

Responses to the question: *What stops you from riding a bike more often?*

Personal constraints - work, time, age,

Lack of cycle paths and other cycling infrastructure (31 %)

Traffic, driver behavior, safety (21 %)

Topography, distance (19 %)

Weather (12 %)

Logistics of using a bike (8 %)

Other (13 %)

Not having more bike tracks - ie on Scotsdale and Mt Shadforth roads I find it too stressful to ride on the road with speed limits more than 60km/hr. I'd love to ride to Green's Pool and generally to use my bike for more functional purposes.

Absence of cycle paths. More driver awareness of cyclists needed. Cars with caravans need to give cyclists more room.

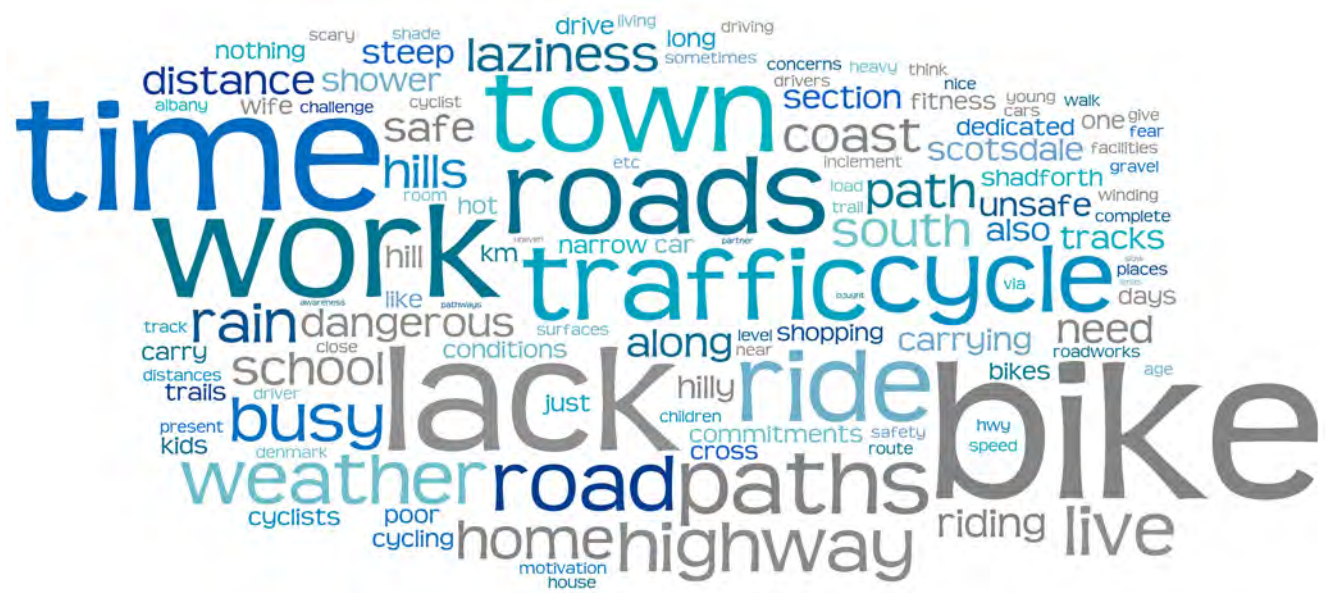
Busy roads - dangerous, fast driving cars, unaware of cyclists.

Children and time poverty, and laziness and lack of cycle paths, and hills.

Fear of falling, inclement weather- too hot, too windy, too wet.

Indirect or unsafe route. Also: size of load, rain or wind-factor, or perceived lack of time.

Poor surfaces on trails and busy traffic conditions on highway with no cycle lane.



2.3 Community Cycling Survey 2014 - Adults

Responses to the question: *What would help you to ride a bike more often in the future?*

Bike paths and off-road bike trails (46 % of responses)

Personal - attitude, company, time, motivation (25 %)

On-road bike lanes and sharing roads (13 %)

Other cycle infrastructure (12 %)

Other - driver education, MTB trail (18 %)

Feeling that as a cyclist I am catered to as much as roads for cars and paths for pedestrians are - i.e. increased infrastructure - connectors, signage, line demarcations to name some.

A dedicated Mountain bike track catering to all levels of ability such as that in Pemberton. I drive there just to ride their track.

Greater choice of bike paths or at least a safe road shoulder width.

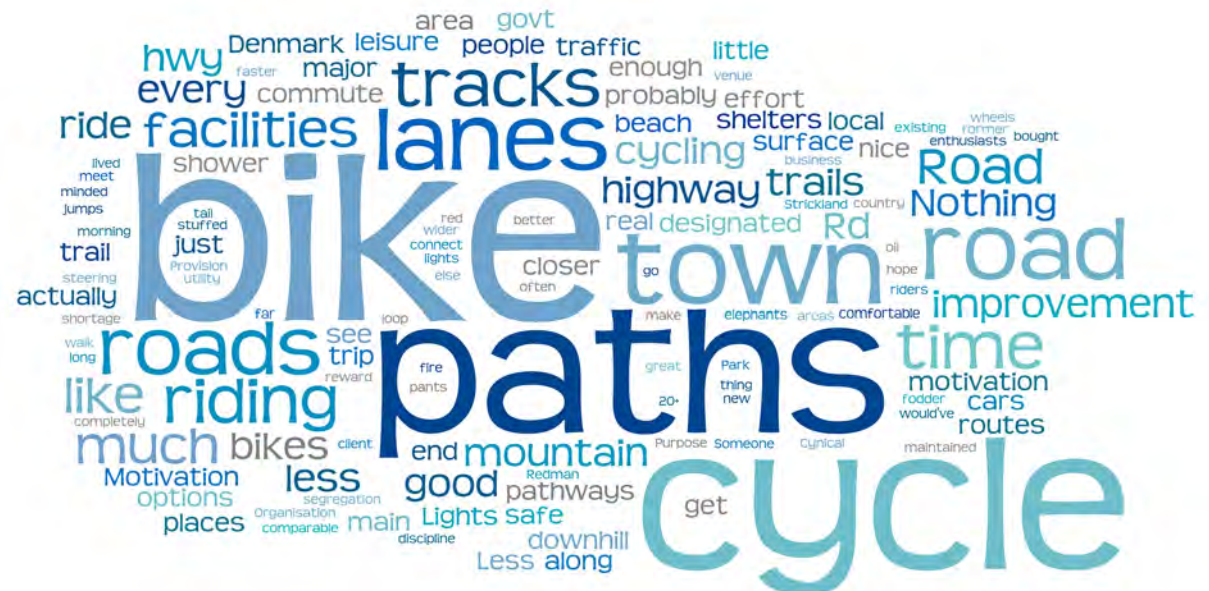
Safe access by bike to Munda Biddi trail i.e. link paths to avoid having to transport bikes to trail by car.

A sense of safety i.e. better awareness by car drivers. Also more bike paths.

A cycle path maintenance (and creation) regime that pays close attention to the details that assist safe cycling.

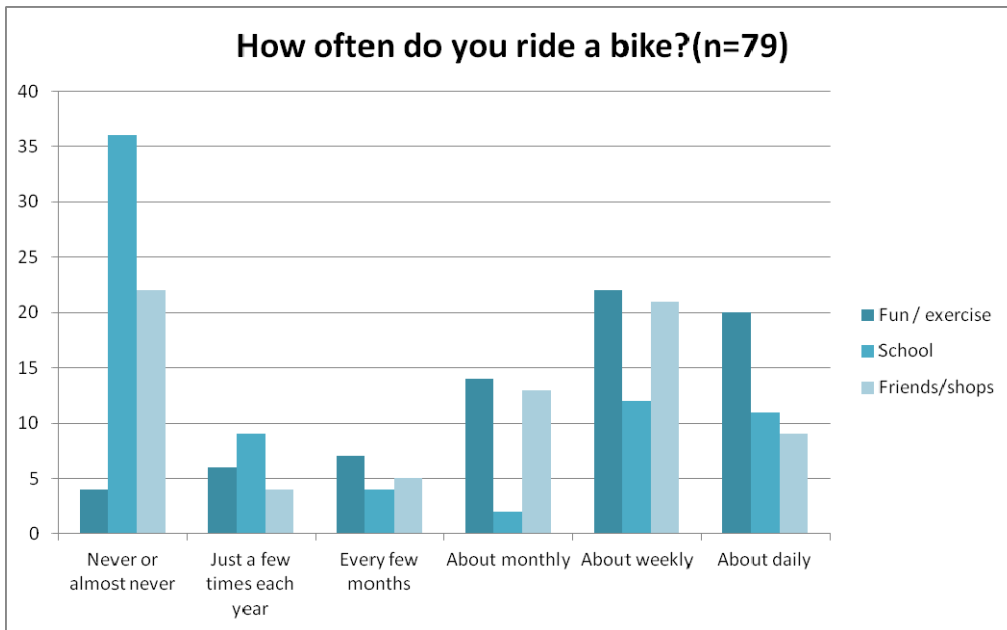
On-road cycle lanes and shared paths. Improved maps and signage.

If socially bike riding was more popular, paths for bikes only, designed to commute faster and connect between housing developments...



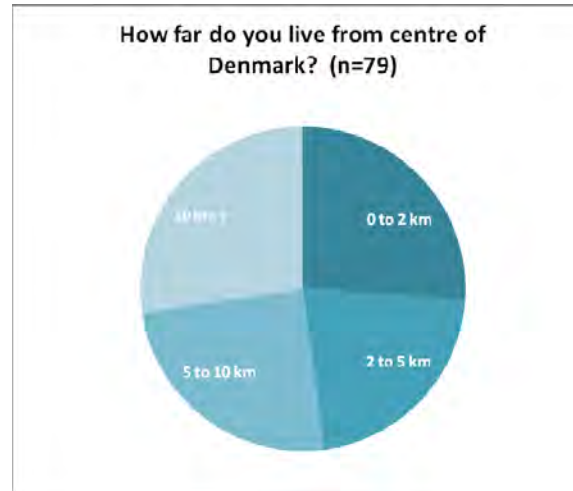
2.4 Community Survey 2014 - Children

A survey, similar to the adults survey, was created for children, and was posted online, which received just 4 responses from High School students at the Agricultural College. A paper version of the survey was completed in class, by Year 6 and 7 students at the Denmark Primary School.



The results show that cycling to school is much less common than cycling for fun or for transport.

The number of students claiming to ride to school about daily (11) or about weekly (12) was not borne out by a number of audits of number of bicycles in the bike racks at both the Denmark Primary School and Denmark High School. On various (fine) days between February and April 2014, the number of bikes at each school ranged between 11 and 14, a small percentage of overall staff and students at each school.



Similarly to the respondents of the adult survey, nearly 50% of the children answering the survey live within 5km of the centre of Denmark, meaning it is quite an easy distance to cycle.

What do you like about riding a bike?



Like the adult survey survey respondents, a majority of children highlighted the exercise and fitness benefit of cycling.

The fun aspect of riding a bike was the most popular answer, along with varieties of 'liking to go fast' or 'getting places more quickly'.

Interestingly, like the adult survey respondents, the 'fresh air' and 'wind in the hair' theme emerged again.

2.4 Community Survey 2014 - Children

What stops you from riding a bike more often?



What could you help you to ride a bike more often in future?



Overall comments

- Maybe if we could get more people riding it would really help our future
- Maybe from the Denmark Ag College they should put more cycle paths for those who like a smooth ride or have a racer that needs to be on the road or a path.
- Bike races in Denmark / footpaths for safety
- It's a great place to ride a bike
- Bike paths, kids racing through Denmark on bikes...
- More people should ride their bikes
- Its just really peaceful and its great to go riding with friends
- More people should have to ride bikes because its good exercise
- More bike paths and a group on Saturday afternoon riding places
- Be careful to all cyclists

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3. REVIEW OF EXISTING BIKE NETWORK

3.1 Neighbourhood Connector Roads

Section 6.13 of the Local Planning Strategy outlines the Traffic and Movement Network, identifying a number of neighbourhood connector roads. The status of the current bike network facilities for those roads are outlined here.

Peaceful Bay Ring Rd

The Shire of Denmark is currently completing (by next financial year) a shared use path in conjunction with the Peaceful Bay Ring Rd.

The new Munda Biddi Trail and the Denmark-Nornalup Heritage Rail Trail provide off-road links to

Denmark-Nornalup Heritage Rail Trail

In addition, Denmark has an important off-road cycling route in the Denmark-Nornalup Heritage Rail Trail. It provides significant recreational opportunities for residents and visitors. Also emerging from the community consultation was the number of people also using the Rail Trail as a commuting route. However, with some seasonal inundation and some sandy patches, its use as an year-round commuting route is currently limited.

Any upgrades to the Rail Trail do need to acknowledge and plan for the shared use (bicycles and horses) of the trail.

Neighbourhood Connector Road	Review of Cycling facility
Ocean Beach Road	Good quality and well used bicycle path along the length of Ocean Beach Rd. In future, when Ocean Beach Rd is upgraded, a shared use path on the other side of the road should be constructed.
Hollings Rd / Inlet Drive / Campbell Rd	New cycle paths on Inlet Drive and being constructed on Hollings Rd. In future, when Inlet Drive is upgraded, a shared use path on the other side of the road should be constructed.
Hollings Road/Scotsdale Road (in the vicinity of the Denmark townsite)	New Scotsdale Rd path but narrow intermittent paths on Hollings Rd in the township vicinity.
Mt Shadforth Road (in the vicinity of the Denmark townsite)	Narrow intermittent paths in the township and narrow winding roads make cycling difficult.
Cussons Road	Limited cycling facility but with a steep incline, the opportunities for increasing cycling is limited.
McLean Road / Kearsley Road / Horsley Road / Scotsdale Rd	New growth areas, with currently limited road and cycling facilities, but opportunities with new developer contributions. However, with steep inclines, the opportunities for increasing cycling in this area is fairly limited.
Riverbend Lane and East River Road from Denmark-Mt Barker Road to the Denmark River	Without a current road, opportunities for increasing the cycling facility along this road are limited.
The proposed roads associated with the development of Lot 5 South Coast Highway that link South Coast Highway to Ocean Beach Road	Supports the need for an extension of the shared use path along South Coast Highway and an upgrade of the Rail Trail.



3.2 Community Consultation Outcomes

Community Consultation Outcomes - Lights Road

Positives	Negatives	Suggestions
<ul style="list-style-type: none"> Scenery, surface good in most places Flattish, nice bush, road not too busy, some cycle tracks 	<ul style="list-style-type: none"> Having to ride on Lights Rd where there is no track Lights Rd has no cycle path Sharing Lights Rd with car traffic 	<ul style="list-style-type: none"> Cycle path along Lights Rd Bike track on Lights Rd

Heritage Rail Trail West

Positives	Negatives	Suggestions
<ul style="list-style-type: none"> No traffic Scenery / picturesque Beautiful safe and flat 	<ul style="list-style-type: none"> Sandy (especially in summer) and not well maintained Patches are sandy, others are rough especially McLeod to Wentworth Road. Gates to open and close. Very sandy and wet in places / Needs a bit more hard surfacing Surface rutted in winter from tractors and utes I'm really keen to go riding with the kids along rail trail. Be good is cycling info and signs were really clear and obvious.... 	<ul style="list-style-type: none"> More access points from South Coast Highway Improve surface condition / more grit? Compacted gravel on sandy and rough sections. Are all the gates necessary? More gravel, funding for bitumen would make it a fantastic tourist attraction Signage If the Denmark -Nornalup Trail was in better condition I would definitely use it regularly as transport by cycle route into Denmark. The trail west of Wentworth Road has not been suitable for walking or cycling this summer because the grass has grown so high that it is a definite snake hazard, especially as the trail runs between two swampy areas.

Community Consultation Outcomes - Ocean Beach Road

Positives	Negatives	Suggestions
<ul style="list-style-type: none"> • Great safe bike path • Easy ride off the road • Mostly on designated cycle paths, therefore safe • Picturesque, good air quality • Beautiful scenery • Riding next to the water • Relaxing—great to have a cycle path to the beach • Beautiful inlet vista 	<ul style="list-style-type: none"> • Roughness of track in some parts / some of path in poor condition / path can be treacherous without a mountain bike • Overhanging branches & trees sometimes block view when crossing roads • Poor drainage near Gum Grove cottages makes surface slippery • Bike path intersection at Weedon Hill Rd needs improving • Poor surface on cycle way and lack of ramps when crossing roads • Not really any loops • Concrete path southwest of Weedon Hill Rd needs to be kept clear of debris especially during winter / drainage / honky nuts • Uneven surface, pot holes, path is more pedestrian than cycle • We (sports cyclists) ride on the road as our bikes have narrow tires and we go 30 to 40 km/h. Can't get off the road between a) Weedon Hill Rd and Little River Rd and b) Greenbury Cl to Ocean Beach Caravan Park as shoulder is raised. • No dedicated cycle lane. The pedestrian path is a raised path that provides no possibility for cyclists to mount from the road in case of dangerous vehicle traffic. The recreational path does not provide right of way to cyclists at intersections. 	<ul style="list-style-type: none"> • Improve surface condition in some parts / Maintenance on Ocean Beach Rd path/ Resurface path as far as Campbell Rd • More regular tree pruning along Ocean Beach Rd bike path , especially near Prawn Rock channel • Make road at Prawn Rock channel one way—tourists using that bridge forget to look for cyclists. Extra signage. • Right of way to cyclists at intersections. Commuting lane on side of road lanes required. • Lack of logically placed cutouts / ramps from path to road / Handrails at all major crossings • Fix drainage issues on path near Gum Grove Cottages Dedicated cycle path, or mark existing path with keep left painted markings • Clearing surface of honky nuts and gravel • Keep the kerbs same height as road with lane marked by reflector markers which can flatten and pop up as on Inlet Drive. • Make all bike paths wide enough for bike trailers and double prams.

Existing Cycling Network



Community Consultation Outcomes - Central Business District

Positives	Negatives	Suggestions
<ul style="list-style-type: none"> • Its quick and easy • Bike path to bridge (from Beveridge Rd), Mt Shadforth Rd is lovely with its Karri trees • Visually pleasing • Little to no traffic. Quick and easy. Scenery. • Little traffic 	<ul style="list-style-type: none"> • No cycle paths through town , from bridge onwards • Brazier street - with its recent street works is not a great pathway to ride down as it's often wet and with gravel from the road works • No bike path up the hill in town (south coast Highway) where the bike gets real slow • Bumpy open ground between Morgan Rd and Cycle Track • No bike lanes on Zimmerman St • All around the Primary School we've noticed that people tend to drive WAY too fast. Especially Buckley & Brazier. 	<ul style="list-style-type: none"> • Create cycle paths through town • Possibly a bike path along Mt Shadforth Rd • Bike path along south coast highway through town would be great • Construct path on small area near Riverside Club and Morgan Rd unsurfaced • Install bike lanes on Zimmerman St • More signage around the school? Something is needed as we've witnessed some very close calls.

Mokare River Trail

Positives	Negatives	Suggestions
<ul style="list-style-type: none"> • Beauty / scenic • Scenic, quiet • Location and scenic 	<ul style="list-style-type: none"> • Uneven surface, flooded in winter, over grown shrubs and fallen trees. • Uneven/broken levels of pathway also a little too narrow in areas • Crossing Drainage channels • Quite often flooded or overgrown in parts • Bumpy connection from Beveridge Rd to Mokare; Mokare under water in winter 	<ul style="list-style-type: none"> • Re- surface track, or build it up on to a boardwalk similiar to the one at Moore River - where you can actually walk and ride around SAFELY and without incident. • Mend broken paths • Drainage, upgrade path, mark separate lanes for bikes and walkers • Place foot bridges over drainage channels in two places • Maintenance • Lift sections of Mokare that are under water in winter: there are several starting near the Dragon Boat site and continuing to the old rail bridge

Kwoorabup Trail

Positives	Negatives	Suggestions
<ul style="list-style-type: none"> • A little bit bumpy - good fun, plenty of places to stop and ponder. Not busy. • Great scenery / a beautiful link between East River Rd and town. • Scenic on the river bank 	<ul style="list-style-type: none"> • No signage or track maintenance • Stony track - muddy at times 	<ul style="list-style-type: none"> • Perhaps if it gets busy to remind people to treat it with respect • No passing sections as its a shared use walk/bike track. Dog walkers use it also! • Grade or level track

Community Consultation Outcomes - Scotsdale Rd to Steiner School

Positives	Negatives	Suggestions
<ul style="list-style-type: none"> • Easy distance and gradient for commuting with children • Take kids to school • Most of it is away from traffic • Good distance 	<ul style="list-style-type: none"> • Narrow road (in the past) and roadworks (presently) • Passing timber trucks drive too close when they come along • Roadworks where no cycle path is available makes it dangerous • Continual roadworks since May 2013 has made this impassable • Scotsdale Rd - dangerous! Pathway along river - Mokare Trail overgrown • Bike path not ready yet • The down hill is easy 	<ul style="list-style-type: none"> • Cycle path- under construction • When the bike path finally gets finished it will be a relief • The whole family is waiting for a bike track to get us from town to the Steiner school - we would use it often to get to work/school • More cycle paths • Make a dedicated bike path like Ocean Beach Rd • Cycle path along Scotsdale Rd, improve width and clear along Mokare route / trail • Bike path

Denbarker Rd / East River Rd

Positives	Negatives	Suggestions
<ul style="list-style-type: none"> • Little traffic • Pleasant • No traffic • Good distance 	<ul style="list-style-type: none"> • Dust from gravel road • Traffic along South Coast Highway 	<ul style="list-style-type: none"> • Surface on McIntosh Rd • Cycle path along South Coast Highway to Denbarker Rd • Bike paths • I'd like to see the Kwoorabup Walk Trail that connects the western end of East River Road to the pedestrian bridge between the Hospital site to the High School surfaced so that it is more bike friendly.

Lower Denmark Rd

Positives	Negatives	Suggestions
<ul style="list-style-type: none"> • Fairly flat, not too much traffic • Less traffic on Lower Denmark Rd • Good road surface, less traffic volume 	<ul style="list-style-type: none"> • Trucks sometimes • Cars very dangerous on the highway - overtake on double white lines near top of road near Boston Brewery • First 17 Kms to turn off is busy and rough with no cycle lane. 	<ul style="list-style-type: none"> • Surface hideous where resurfaced in chunky blue metal, signage "share the road" rather than just a picture of a bike, bike lanes • Add a cycle path alongside the road with a smooth surface.

Existing Cycling Network



Community Consultation - Heritage Rail Trail East

Positives	Negatives	Suggestions
<ul style="list-style-type: none"> • Good condition track (mostly), no traffic so safe for kids • No need to travel on road or foot paths • Easy ride and off road • No need to travel on road or foot paths • Beautiful and very safe for children • Scenic, good path, close to nature, convenient • Lovely peaceful landscape to be in • It's fantastic • Love cycling through the trees, also enjoy the wide gravel track from Rivermouth Bridge to Crusoe Bch 	<ul style="list-style-type: none"> • Not useful for commuting • Sometimes gets too sandy (not good for my lack of confidence) • Floods in winter so only passable during a few months of summer • Some of path next to busy road or cars traveling at high speed • Trail a little overgrown in part (snakes) • Gravel is lumpy, sandy pot holes. Need to get off bike and push. Dangerous if new to track • Track sometimes sandy and rough • Lack of signage, poor (narrow) pathway into town from bridge • Some trees and shrubs need more regular pruning to keep track clear • Gets very waterlogged/boggy in winter, and overgrown 	<ul style="list-style-type: none"> • Perhaps maintenance to improve drainage of water off the track during wet months • If nothing else raise up the path so it doesn't get flooded • More gravel / Add gravel to all sandy sections during routine maintenance • Oh how lovely if it could be sealed... otherwise surface and compact with limestone rubble • Keep up maintenance • Some gravel? or drainage? • Some improvement in signage possible • Regular pruning & maintenance of track during winter • Like the variable surfaces, don't change Rivermouth to Crusoe beach please!

South Coast Highway East

Positives	Negatives	Suggestions
<ul style="list-style-type: none"> • Direct, fitness generated by hills • Well paved 	<ul style="list-style-type: none"> • Lack of any safe bike path/lane • No bike lanes, therefore dangerous • No cycleway on left hand side of the road from the bridge. • Major traffic route • It's better with the recent addition of paths near Berridge Park. Mum worries about the big Karri that keeps dropping branches on the fence close to the high school. 	<ul style="list-style-type: none"> • On-road lane delineation and associated signage, possibly link up with existing Wilson inlet rail trail • Install bike lanes, or at least a one meter bitumen strip outside the solid white line • It would be good to have a cycle way that goes on the left hand side of the road to TAFE round the back of the former CSL building • Bicycle lane on South Coast Hwy and pedestrian crossings signs. • Check out that Karri in the property opposite tafe. It's broken the fence twice in the last year or two. Bit of a worry with kids riding and walking under it so regularly.

Existing Cycling Network



Community Consultation – Weedon Hill, Inlet Drive, Hollings Rd

Positives	Negatives	Suggestions
<ul style="list-style-type: none"> • Pleasure riding, fitness, stress reduction, spiritual freedom and meditation • Great, River Trail sometimes a bit overgrown and plants whip your face • Beautiful scenery • A circle, a nice mix of bushland 	<ul style="list-style-type: none"> • Traffic and associated air pollution, inadequately smooth surfaces, garbage, risk of branch fall from stressed karri trees • No cycle way on Hollings Rd so must cycle on the road (NB under construction) • Inlet drive bike path road crossing poor traffic visibility • Absolutely no commuting shoulders. The path is not consistent, and requires crossings over the road. • From Rivermouth to town - poor quality paths although lovely to cycle thru the trees. • The track from Redgum Lane to Campbell St has been torn up by 4wds :(<ul style="list-style-type: none"> • On-road demarcated lanes where bike path is inadequate or incomplete • Build a cycle way along Hollings road to connect with the shared use path along Inlet Drive (NB under construction) • Keep vegetation trimmed and surface clear • Resurface bike track so not slippery with tarmac impervious to fungus! • Commuting cycle shoulders. Rights of way for recreational cyclists across Inlet Drive and Hollings Road where applicable, via zebra crossings, or something like that. • Signage - I'm not sure if I should be riding on the paths. • Widen path near Berridge Park. • Please fix the ugly 4WD holes near Redgum Lane.

Community Consultation Outcomes - South Coast Highway West

Positives	Negatives	Suggestions
<ul style="list-style-type: none"> • Parry' beach road is relatively quiet • Beautiful scenery, generally quiet traffic. • Direct and an easy distance and gradient for commuting • Beautiful scenery. Good road surface. • Low traffic density compared to city riding. • Wide road, good surface 	<ul style="list-style-type: none"> • Crossing the major highway and cars tend not to stick to the speed limit • No cycle lane • Very scary when there is lots of traffic and trucks, not safe enough to take children. • High speeds on highway, vehicles overtake without sufficient space and ignore white lines • Risk of being hit by traffic. • High speeds on highway, vehicles overtake without sufficient space and ignore white lines • No path nor shoulder on road out to Harpendene Rise • South Coast Hwy - dangerous traffic overtaking bicycles • It's scary riding on the highway • No good path to cycle with kids into town, quite dangerous along the Hwy • No cycle lane shoulders on any part of the road. The pedestrian paths are not designed for cycle commuting. 	<ul style="list-style-type: none"> • Signage for vehicles to slow down especially its close to the school bus stop • Add a marked cycle lane, 1-1.5 m wide • Cycle path or at least a sealed shoulder along the highway from Kwoorabup Tavern west, ideally to William Bay Rd • Cycle lane/path at side of South Coast Highway • Implement signage in relation to "A Metre Matters" • More access points to Rail Trail network • Create Path • Educate drivers about how to safely overtake bikes - or build a cycle path • Signage would be helpful (Cyclists ahead, please slow down). A cycle pathway would be tops. • Improve condition of foot paths along Hwy to make them bike friendly or have designated bike lane • Cycling shoulders from Cussons Road to Denmark Mount Barker Road. • Improve condition of foot paths along Hwy to make them bike friendly or have designated bike lane

Other Off-Road Trails and Routes

Positives	Negatives	Suggestions
<ul style="list-style-type: none"> • Beautiful and good surface • Great scenery. Spectacular section between Madfish and Lights Beach. 	<ul style="list-style-type: none"> • No designated single trail riding, mixed use with pedestrians • Munda Biddi Section between McLeod Road and William Bay Road along the highway is almost unrideable. Easier to ride on the highway. • From Madfish to Greens Pool have to ride on gravel road with traffic, undulating therefore cars see you at last minute. Very corrugated. 	<ul style="list-style-type: none"> • Create a designated single-trail technical mountain bike route • Munda Biddi Section between McLeod Road and William Bay Road needs to be fixed • Signage of Madfish to Greens Pool section is cheapest option, more attention to maintenance of road surface but accept it is a minor road and question whether cost effective. • It would be great to have a 5 km loop somewhere that is mostly in the bush close to town so I can take the kids and wife. Most of the other loops are too long 15km or more and puts them off going out and back.

Community Consultation Outcomes - William Bay Rd

Positives	Negatives	Suggestions
<ul style="list-style-type: none"> • Nice scenery • Gets me there, not too much traffic usually, extra shoulder on highway Bells Rd to Greens Pool Rd • Pleasant and direct 	<ul style="list-style-type: none"> • William Bay Rd is a bit narrow and getting busy • 1 metre shoulder on South Coast Hwy/speed restriction on William Bay road • Max. speed on William Bay Road still too high • Traffic in summer 	<ul style="list-style-type: none"> • Build Munda Biddi Trail next to road • Reduce max speed on William Bay road to 60-70k

Community Consultation Outcomes - Scotsdale Rd (outer Denmark)

Positives	Negatives	Suggestions
<ul style="list-style-type: none"> • Scenic / Good hills and lovely views • Long even surfaces. • Elevation • Beautiful scenery. Good road surface • Wide road, 80km speed limit, generally good line of sight • Close to home, beautiful 	<ul style="list-style-type: none"> • Rough surface on Scotsdale Rd - blue metal very coarse, edges crumbly / Scotsdale road surface- highway is so much better • Poor quality road / very rough surface • Risk of being hit by traffic • No bike lanes, therefore dangerous • Road surface of Scotsdale is hideous to ride a road bike on. Drivers are less than courteous on the highway, generally good on Scotsdale • Not enough room for bikes and cars at times 	<ul style="list-style-type: none"> • Dedicated bike paths (off road is fine doesn't have to be sealed) also water stops • Smoother surface especially on descent side • Make a bike track! • Install bike lanes • Share the Road signs like they have in Victoria would be great, or cycle lanes on the roads. They have those in a lot of Victoria also - particularly cycling friendly towns • There are no cycle paths on Peace St, and the down hill can be dangerous as drivers cut corners. A bike 'shed' would be useful at the bottom of the hill to store bikes so we don't have to ride up the hill. • Create a cycle-friendly path system on Scotsdale Road to promote cycle tourism with the wineries.

3.3 Review of Existing End of Trip Bike Facilities

Bike Racks and Bike Parking



Older bicycle racks are located at Berridge Park, Ocean Beach, and the CRC.

Newer bike racks are located near the Supa IGA, with some individual bike locking structures on signposts on Strickland St.

However, some of the older bike racks do not meet Australian Standards as they do not provide a two point connection between the rack and bike frame. This means that bicycles can fall over and become a trip hazard and they do not provide adequate security as the bicycle frame and both wheels are unable to be locked to the rack.

Secure Bike Storage

Research has also shown that secure bike storage is very important for cycle tourists and Munda Biddi cyclists, who may have expensive bikes, and be carrying luggage.

Secure bike storage was mentioned in the survey by a small number of people.

Some bike racks with shelter from rain would also be beneficial, particularly at schools, and in the centre of town.

Showers

Few offices in the Denmark CBD have shower facilities available for commuting cyclists.

This lack of showers in the Denmark CBD for commuting cyclists was mentioned by a number of survey respondents and the Chamber of Commerce.

The lack of showers for cycle tourists, especially Munda Biddi cyclists, was also mentioned by the Visitors Centre.

Loan or hire bicycles

Bikes can be hired at the Denmark Visitor Centre, Rivermouth Caravan Park and Blue Wren Travellers Rest YHA.

There is an additional opportunity for accommodation businesses to loan or hire bikes to encourage more visitors to cycle as a form of transport. This has an added benefit of taking cars off the road in the CBD.

Cycling support businesses

The Munda Biddi Tourism Strategic Plan highlighted the existing cycling businesses in Denmark:

- Small number of bicycle repair supplies from Ricketts & Co.
- Gareth Stoakes bicycle repairs.
- Ian Sefton from Ian's Bicycle Service repairs.

Recent developments include:

- Graham Mason from Blue Wren Travellers Rest YHA expanding his bicycle repair service.
- Great Southern Solar will be stocking electric bikes.

A number of survey respondents were keen to have more opportunities for purchasing bike equipment and repairs. Knowledge of what is available in terms of bicycle parts and repairs seems fairly limited, and should be part of the Council's overall promotion of cycling.

End of Trip Facilities – Best Practice

Bike Racks

As mentioned in the Munda Bididi Cycle Tourism Strategy Plan, there is the potential to partner with Denmark Arts, to combine art and functionality in the design and construction of bike racks for town.



Source: www.sinoconcept.com



Source: www.artplusdesign.com.au

Secure Bike Storage

Secure bike storage was mentioned in the survey by x people

Also significant for cycle tourists and Munda Bididi cyclists.

Some examples from elsewhere around the world below.



Source: www.schooljotter.com



Source: www.cyclingresourcecentre.org.au

Integrated End of Trip Facilities



Source: <http://properties.curtin.edu.au/parking/cycling.cfm>

Curtin University has installed four Bike Pods on campus, each providing:

- Space for 24 Bikes
- Electric Charging Stations for Electric Bikes
- 24 Lockers
- Dedicated male and female showers in each pod

Communication with Curtin University confirmed that each pod cost approximately \$75,000 to construct, with an extra \$25,000 in site costs and planning costs.

3.4 Review—Promoting Cycling

Motivators

Getting Australia Moving (2008)

Research indicates that key facilitators to greater participation in cycling by Australian adults are:

Individual factors: motivations for cycling are focused on individual concerns, such as health and fitness, social interaction and the convenience and low cost of cycling for transport.

Bicycle infrastructure: bicycle infrastructure provision has a significant impact on cycling participation.

POLICY RESPONSE

Widespread adoption of bicycle friendly design, such as integrated, connected on and off road bicycle routes is essential. Secure bicycle parking and showers at workplaces were also found to help more people make the daily commute by bicycle.

Safety concerns - fact or fiction?

Our Bike Path—A Strategic Framework for Cycling in WA identifies that:

- Lots of people don't ride because they think it is unsafe to ride on our roads.
- The number of children riding to school is on the decline, mainly because of safety concerns of parents.

However, research shows that the risks from cycling can be overstated. E.g. the hospitalisation rate from cycling is seven times lower than that of football, per 100,000 participants.

POLICY RESPONSE

The more cyclists there are, the safer it becomes.

Barriers

Getting Australia Moving (2008)

A number of substantial barriers exist for large segments of the population.

Individual barriers - such as a lack of skills and confidence.

Social and cultural factors - low income areas were found to have reduced opportunities for cycling and their residents make less short trips by either foot or bicycle.

Environmental factors - urban design and bicycle infrastructure are a major influence on levels of cycling. Higher density development reduces trip distance and this provides a major boost for cycling, as does the provision of on and off road bicycle routes.

Safety concerns - were consistently found to be among the most significant barriers preventing people from cycling. It was even found to be a concern for those that cycle regularly. Yet the perception of risk from cycle accidents is often disproportionate to the actual risk. (See box to the right).

Policy and regulatory factors - governing key influences on cycling, such as congestion charging, urban density and motor vehicle speed limits have been identified as non-health sector issues that nonetheless have important outcomes for public health through their effect on cycling.

POLICY RESPONSE

Together with physical infrastructure, developing a cycling culture, through social cycling opportunities (especially aimed at the less confident), engaging with the range of cycling promotional events (such as National Ride to Work Day).

Benefits from a Denmark perspective

Denmark survey respondents echoes other research on individual perceived benefits of cycling:

- 91% highlighted exercise, fitness and physical health, with a smaller number specifically mentioning mental health and wellbeing
- 34% identified cycling as a form of transport, saving fuel and money
- 31% mentioned fun, enjoyment, recreation

Two particular themes emerged, which appear more specific to Denmark:

- 29% mentioned fresh air, being outdoors, appreciating the environment, the scenery
- 16% mentioned the sociability aspect and connection with the community or friends

Motivators from a Denmark perspective

In response to the question about the what would help them to cycle more in the future, Denmark survey results were:

- 46% mentioned more cycle paths, better maintenance of the existing network, and more off-road trails
- 25% mentioned overcoming personal barriers such as attitude, time, motivation, company
- 13% specifically mentioned provision of on-road bike lanes and better sharing of roads
- 12% mentioned other cycle infrastructure and supporting facilities

PART 2: RECOMMENDATIONS

4. PROPOSED BIKE NETWORK ENHANCEMENT

4.1 Summary of Proposed Bike Network Enhancements

The Shire of Denmark's Bike Plan brief focused on both commuting and recreational cyclists, and providing infrastructure and end of trip facilities to:

- Encourage existing residents to be more active to assist further development of a cycling culture within Denmark;
- Encourage tourists to come to Denmark as a cycling destination.

The Path Development Plan (PDP) has a forward plan for shared use paths and footpaths already in place, therefore the paths proposed in this Bike Plan are mainly additional to the current PDP, and focus on filling gaps in the network.

Longer term recommendations focus on sealing the shoulders of main feeder roads, shared use paths on both sides of the road within the township boundary for these roads, and a substantial upgrade (but maintaining a permeable surface) of the Rail Trail to provide a safe alternative to the Highway.

The Denmark Priority Bike Network Plan outlined in Figure 6 shows the major routes within a 2km radius, where cycling easily outperforms walking, or drive and park for short trips to town.

Safe Routes to Schools—Figure 3

Creating safe cycling routes to schools has been emphasised in this Bike Plan for a number of reasons:

- Increasing rates of cycling to school has many benefits, including health and wellbeing, reducing traffic congestion around schools, reducing transport costs for parents;
- As major sources of employment in Denmark, these routes can also benefit commuting cyclists;
- The new guidelines for the Regional Bike Network funding program “favours projects that provide connections to schools”.

Commuting Routes - Figure 3

Given that schools in Denmark are major sources of employment, or are adjacent to major sources of employment, the emphasis on safe cycling routes to schools will also meet the needs of many current and potential commuting cyclists.

Future upgrades of major feeder or arterial roads should incorporate on-road bike lanes for safer commuter cycling.

Recreational and Cycle Tourism Routes - Figure 4

With the Munda Biddi, local trails and the planned WOW trail, Denmark is well served by a variety of off-road trails for recreation and cycle tourism. Ensuring the end of trip facilities and other supporting facilities are in place, is important to serve these groups of cyclists. There is also a keen group of mountain bikers in Denmark, eager to see an established MTB trail or park, similar to Pemberton or Margaret River. This is discussed further in **Section 5**.

Sports Cyclist Routes

The Shire of Denmark will continue their medium to long term project of upgrading major feeder roads, and widening the road shoulders on Scotsdale Rd, Mt Shadforth Rd, McLeod Rd and Lights Rd. Main Roads have advised the difficulties of doing the same on South Coast Highway with roadside vegetation and drainage structures in place. However, the Shire of Denmark should continue to negotiate with Main Roads to enable on-road cycling with appropriate shoulders and on-road bike lanes on the Highway.

In the short term, ensuring these routes are signposted with ‘Share the Road’ signage is recommended. Ongoing driver awareness and education can also lead to safer cycling conditions.

Denmark Nornalup Heritage Rail Trail

The Rail Trail provides an off-road alternative to the South Coast Highway, and should be progressively upgraded (retaining the permeable gravel surface and/or a dual surface to accommodate horses as well) to build on its current importance for commuting, recreational and tourism use. Together with the planned WOW Trail and the Munda Biddi, the off-road trails provide significant recreation and cycle tourism opportunities.

Categories

Proposed changes to the bike network of Shire of Denmark have been categorised as follows:

- a. Construction of new link path
- b. Development of on-road bike lanes
- c. Upgrading (widening or renewing) existing path
- d. Repairs or maintenance of existing paths and crossings
- e. Improving signage and profile on paths & roads
- f. Bike racks and other end of trip facilities

Prioritisation

Prioritisation of the proposed changes has been undertaken on the basis of:

- Connectivity - filling in gaps in the existing network
- Future growth areas - ensuring that cycling access to these areas are being planned for now
- Routes to School - creating safe routes to schools in Denmark
- Other safety concerns

Minor Repairs and Maintenance

Many comments received in the consultation survey were for minor repairs and maintenance of the bike network. These been submitted separately to the Shire of Denmark Engineering Department.

Overall comments from Community Consultation Survey

I love the idea of developing Denmark into a family cycling holiday destination with great bike facilities, plentiful bike racks, great ideas for families who want to explore Denmark via bike. To keep encouraging a healthy fit alternative holiday immersed in nature.

I only took up riding when the track went in from town to the beach - it is a wonderful amenity. Now riding is one of my great pleasures - the more tracks the better.

Keep in mind possible options and keep expanding the network. Concentrate on creating safe paths for children.

Providing and maintaining safe cycling and pedestrian paths along major routes like South Coast Highway, Ocean Beach Road, Scotsdale Road and Mount Shadforth Road, to a distance of at least 5km from hubs such as the town centre and all our schools, should be a high priority for our community. This will improve our safety, health, and the resilience of our community in the face of rising fuel costs. Public education to assist drivers to safely share roads with cyclists, including children, would also be of benefit.

Compared to many other countries there is a lack of rights of way for bicycles and walkers outside of the road network. Residential areas are poorly served by interconnecting paths, cycle ways and access routes to established cycling tracks. It would be beneficial for new subdivisions, at the planning stage, to include additional access routes (short-cuts) for cyclists and walkers to encourage and support alternatives to short journeys in the motor car.

There are many places in town that need relatively short connectors to make cycling anywhere in town as a normal daily activity more attractive.

Communal bike shelter and bike paths on main arteries to Denmark for at least a 10km radius to aid safe commuting & leisure riding.

I'd like to see bike lanes on the road rather than having shared foot/bike paths.

Need central charge points for electric bikes. More provision for parking.

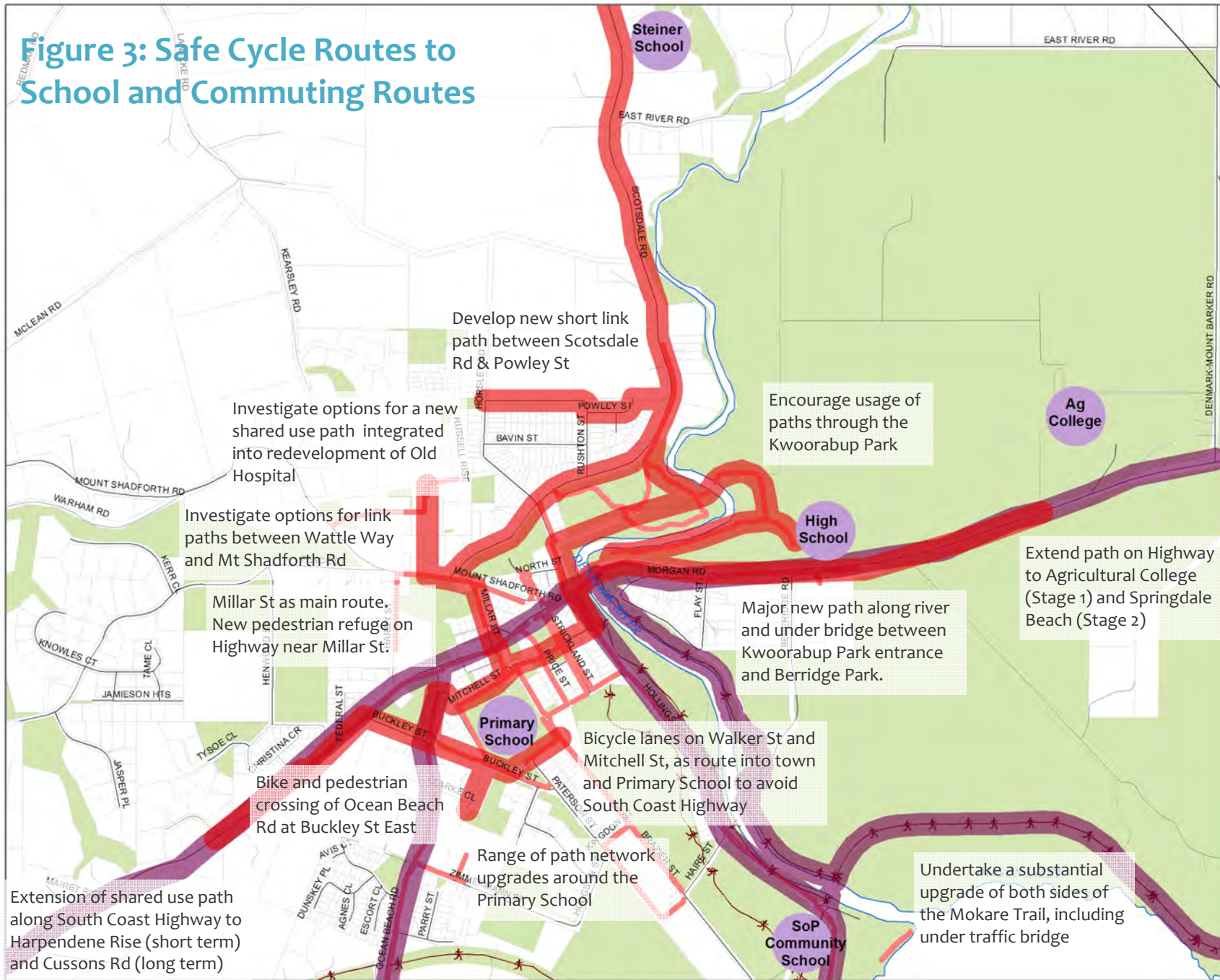
I think cycle tourism is a growing area and we should be encouraging more of it. Unfortunately there are still a lot of cars who take risks overtaking cyclists. On roads like Scotsdale it is not always possible to ride near the edge as there are often branches and debris there that would cause a road bike to crash. Maybe some driver education via the Bulletin that they should overtake with at least a metre gap from the cyclist.

The bike path to the beach has significantly increased the use for bikes and walkers to get to the beach with out using a car increasing health and wellbeing of our community.

I would love to do more of it, but lack confidence limits my usage...perhaps if the cycle paths that I use were better maintained I would feel safer and therefore use the cycle paths more.

Making Denmark a cycle-friendly town would distinguish us from most other country towns in a powerful way. It would attract residents, tourists, and keep the population healthier and fitter. It is an important sustainability move.

Figure 3: Safe Cycle Routes to School and Commuting Routes



Denmark Bike Plan Major School and Additional Commuting Routes

v 11/06/2014

- Major School Routes
- Major Additional Commuting Routes

Shire Paths and Trails

- Denmark Shire Walk Trails
- Denmark Shire Footpaths

Roads

- Sealed
- Unsealed
- Tracks

Hydrography

- Major Hydrography

Crown Land

- Crown Reserves

Distances from CBD

- 3,5 & 10km

Reference:
Data licence:
South Coast NRM,
DoW, DAFWA
Projection:
Universal Transverse
Mercator
MGA Zone 50
Datum: GDA94



Green Skills Inc
Working for a sustainable future

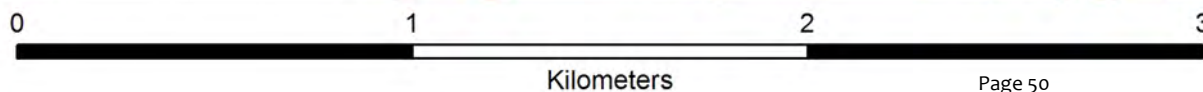
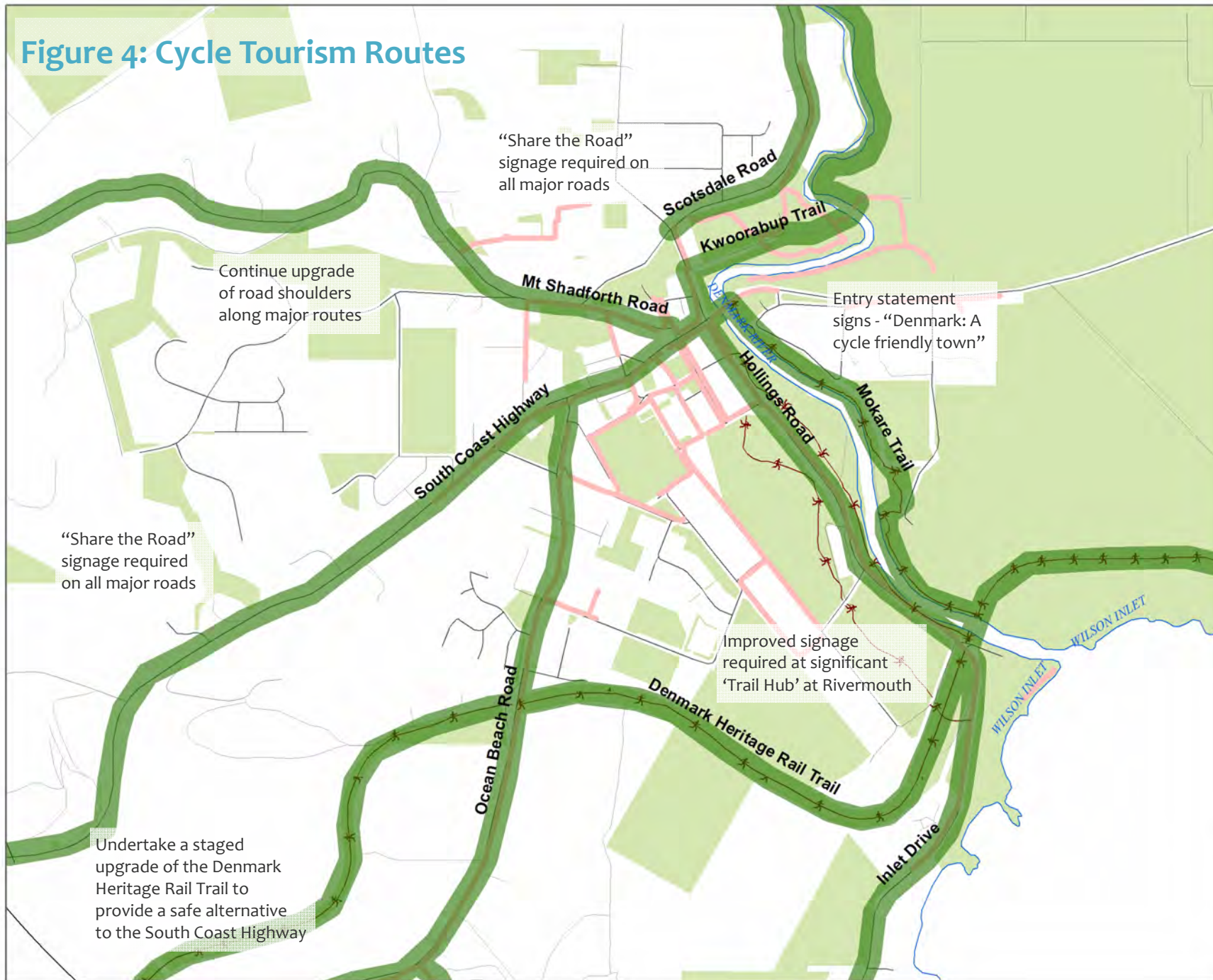


Figure 4: Cycle Tourism Routes



Kilometers

**Denmark Bike Plan
Major Cycle Tourism
Routes**

v 11/06/2014

Major Cycle Tourism Routes

Shire Paths and Trails

Denmark Shire Walk Trails

Denmark Shire Footpaths

Roads

Sealed

Unsealed

Tracks

Hydrography

Major Hydrography

Crown Land

Crown Reserves

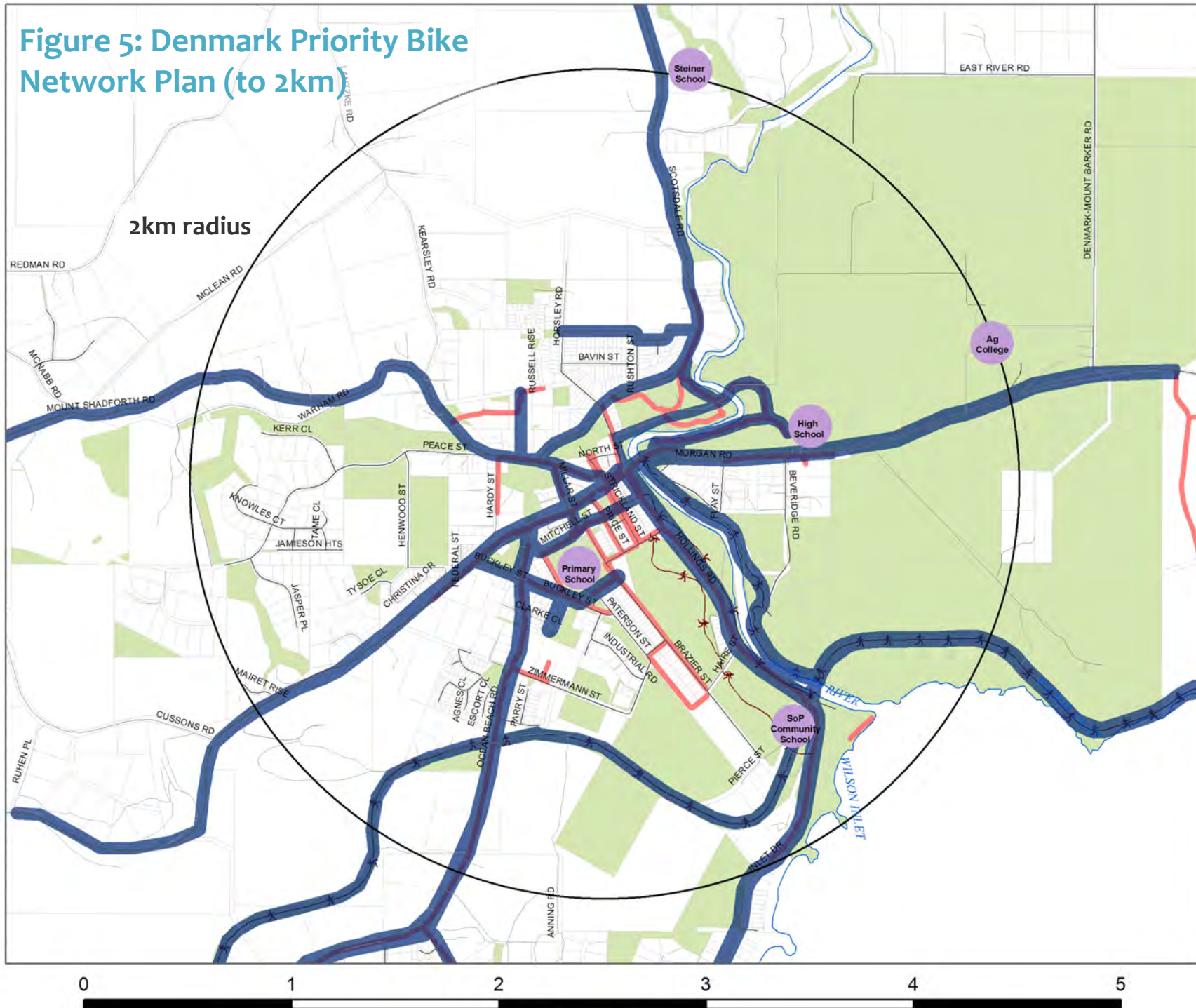
Distances from CBD

3,5 & 10km

Reference:
Data licence:
South Coast NRM,
DoW, DAFWA
Projection:
Universal Transverse
Mercator
MGA Zone 50
Datum: GDA94



Figure 5: Denmark Priority Bike Network Plan (to 2km)



Denmark Priority Bike Network Plan

v 11/06/2014

Denmark Priority Bike Network Plan

Shire Paths and Trails

Denmark Shire Walk Trails
 Denmark Shire Footpaths

Roads

Sealed
 Unsealed
 Tracks

Hydrography

Major Hydrography

Crown Land

Crown Reserves

Distances from CBD

2 and 5 km

Reference:
 Data licence:
 South Coast NRM,
 DoW, DAFWA
 Projection:
 Universal Transverse
 Mercator
 MGA Zone 50
 Datum: GDA94

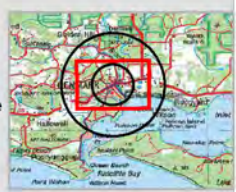
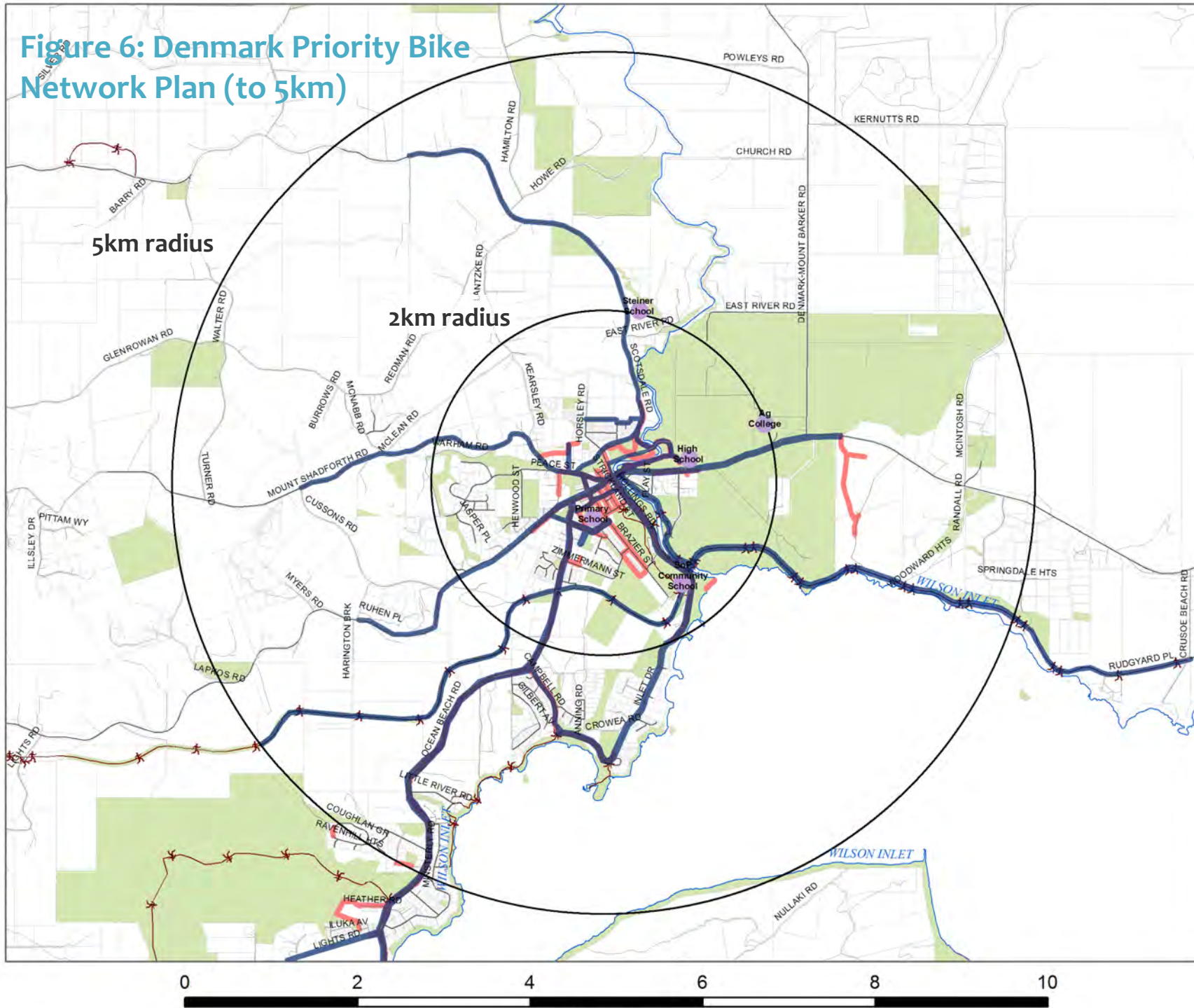


Figure 6: Denmark Priority Bike Network Plan (to 5km)



Denmark Priority Bike Network Plan

v 11/06/2014

Denmark Priority Bike Network Plan

Shire Paths and Trails

Denmark Shire Walk Trails
 Denmark Shire Footpaths

Roads

Sealed
 Unsealed
 Tracks

Hydrography

Major Hydrography

Crown Land

Crown Reserves

Distances from CBD

2 and 5 km

Reference:
 Data licence:
 South Coast NRM,
 DoW, DAFWA
 Projection:
 Universal Transverse
 Mercator
 MGA Zone 50
 Datum: GDA94



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4.2 Recommendations: Denmark Township

Denmark Bike Plan Proposed Network Enhancements

v 11/06/2014

ID Number corresponding to ID number in Spreadsheet

- Construction of new link path
- Upgrading - widening or renewing -existing path
- Repairs or maintenance of existing paths and crossings
- On-road bike lanes
- Improving signage, markings on path

Shire Paths and Trails

- Denmark Shire Walk Trails
- Denmark Shire Footpaths

Roads

- Sealed
- Unsealed

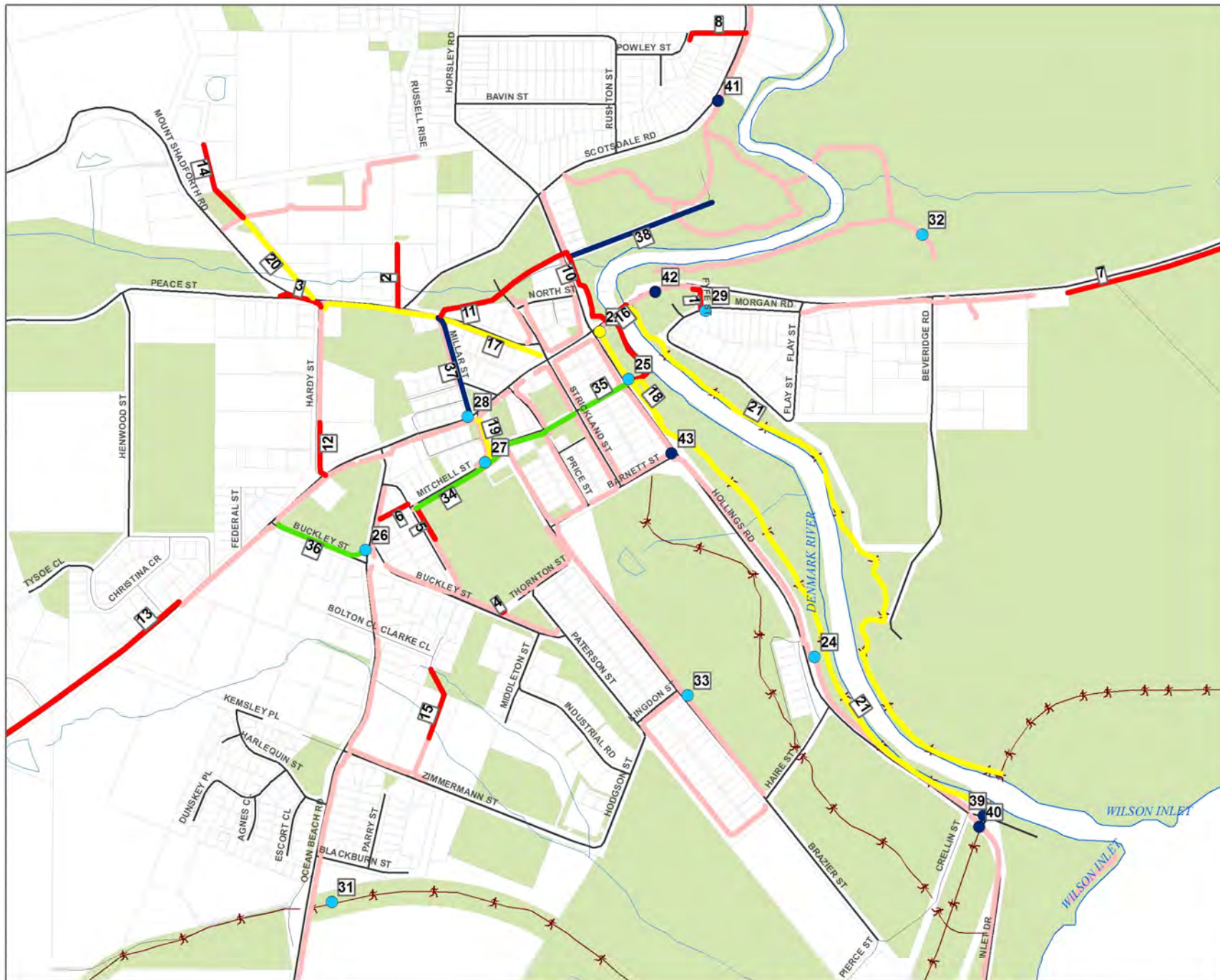
Crown Land

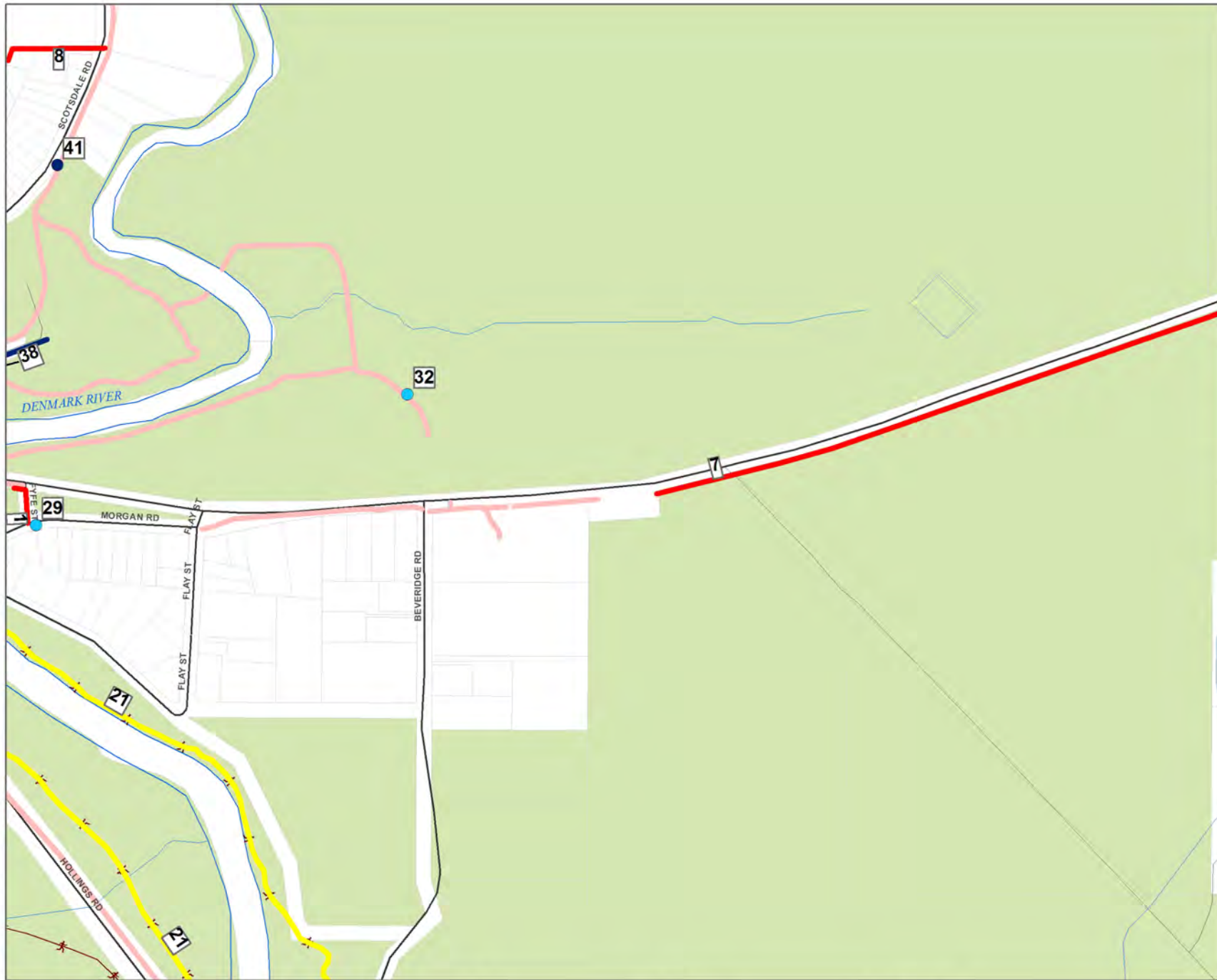
- Crown Reserves

Distances from CBD

- 3,5 & 10km

Reference:
Data licence:
South Coast NRM,
DoW, DAFWA
Projection:
Universal Transverse
Mercator
MGA Zone 50
Datum: GDA94





Denmark Bike Plan Proposed Network Enhancements

Map Sheet: B (North East)

ID Number corresponding to ID number in Spreadsheet

- Construction of new link path
- Upgrading - widening or renewing -existing path
- Repairs or maintenance of existing paths and crossings
- On-road bike lanes
- Improving signage, markings on path

Shire Paths and Trails

- Denmark Shire Walk Trails
- Denmark Shire Footpaths

Roads

- Sealed
- Unsealed

Crown Land

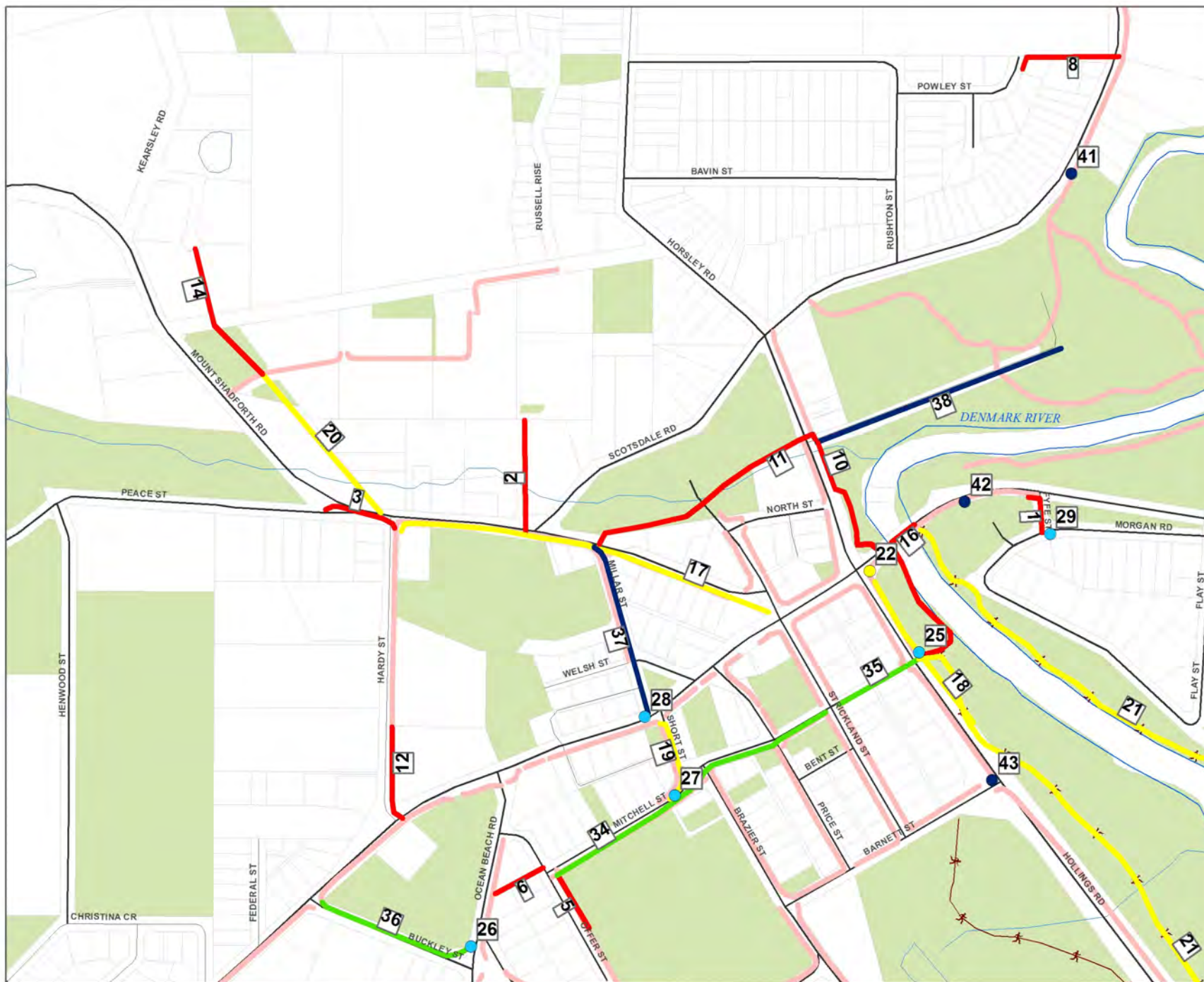
- Crown Reserves

Distances from CBD

- 3,5 & 10km

Reference:
Data licence:
South Coast NRM,
DoW, DAFWA
Projection:
Universal Transverse
Mercator
MGA Zone 50
Datum: GDA94





Denmark Bike Plan Proposed Network Enhancements

Map Sheet: A (North West)

ID Number corresponding to ID number in Spreadsheet

- Construction of new link path
- Upgrading - widening or renewing -existing path
- Repairs or maintenance of existing paths and crossings
- On-road bike lanes
- Improving signage, markings on path

Shire Paths and Trails

- Denmark Shire Walk Trails
- Denmark Shire Footpaths

Roads

- Sealed
- Unsealed

Crown Land

- Crown Reserves

Distances from CBD

- 3,5 & 10km

Reference:
Data licence:
South Coast NRM,
DoW, DAFWA
Projection:
Universal Transverse
Mercator
MGA Zone 50
Datum: GDA94




Green Skills Inc
Working for a sustainable future



Denmark Bike Plan Proposed Network Enhancements

Map Sheet: D (South East)



ID Number corresponding to ID number in Spreadsheet

-  Construction of new link path
-  Upgrading - widening or renewing -existing path
-  Repairs or maintenance of existing paths and crossings
-  On-road bike lanes
-  Improving signage, markings on path


Shire Paths and Trails

-  Denmark Shire Walk Trails
-  Denmark Shire Footpaths

Roads

-  Sealed
-  Unsealed

Crown Land

-  Crown Reserves

Distances from CBD

-  3,5 & 10km

Reference:
Data licence:
South Coast NRM,
DoW, DAFWA
Projection:
Universal Transverse
Mercator
MGA Zone 50
Datum: GDA94



Denmark Bike Plan Proposed Network Enhancements

Map Sheet: C (South West)

ID Number corresponding to ID number in Spreadsheet

- Construction of new link path
- Upgrading - widening or renewing -existing path
- Repairs or maintenance of existing paths and crossings
- On-road bike lanes
- Improving signage, markings on path

Shire Paths and Trails

- Denmark Shire Walk Trails
- Denmark Shire Footpaths

Roads

- Sealed
- Unsealed

Crown Land

- Crown Reserves





Distances from CBD

- 3,5 & 10km




Reference:
Data licence:
South Coast NRM,
DoW, DAFWA
Projection:
Universal Transverse
Mercator
MGA Zone 50
Datum: GDA94







A. Construction of new link paths

	Description	Map Ref	Notes	Priority	Estimated cost
	<p>South Coast Highway (East) Extension of shared use path along South Coast Highway to Agricultural College, from Commuter car park to entrance of the Cemetery (and past the Agricultural College).</p> <p>Stage 2 should extend the shared use path to the Country Club and Springdale Beach.</p>	7	<p>As a connector to a school and on a major highway it is a high priority even though the usage is low.</p> <p>This is Path number 15a in Path Development Plan.</p>	<p>Stage 1 - High</p> <p>Stage 2 - Low</p>	<p>Stage 1 to Ag College: \$77,600</p> <p>Stage 2 to Springdale Beach: \$85,800</p>
	<p>Fyfe St Completion of shared use path from South Coast Highway up to Morgan Rd.</p> <p>Connection between this path and the launch facility should be part of the redevelopment Stage 2 of the Riverside Club.</p>	1	<p>Path Number 1a in Path Development Plan.</p> <p>With increased traffic expected with the upgrade of the Riverside Club, as well as this path being a major route to the High School, this stretch of path is a very high priority.</p>	High	\$6,040
	<p>Hollings Rd/Horsley Rd When the bridge over the creek is upgraded, ensure that a shared use path is built on the east side of the road, linking to the entrance to the Kwoorabup Park.</p>	10	<p>Ensure a consistent link to the Kwoorabup Park is possible by bicycle on the east side of the road. This path will also link to the existing shared use path leading up to Scotsdale Rd.</p>	High	\$24,583
	<p>Riverside path under bridge - West Extend path to river side of car park, going under the bridge on the west side of the river to link up with proposed new riverside path.</p>	10	<p>The stretch of Hollings Rd between South Coast Highway and Scotsdale Rd is currently difficult to navigate by bicycle, particularly with the parking at IGA Express. As a major link to the town centre and the paths through Kwoorabup Park, and a safe crossing of South Coast Highway this is high priority upgrade.</p>	High	See above




A. Construction of new link paths (continued)

	Description	Map Ref	Notes	Priority	Estimated cost
	<p>Riverside path - Bridge to Walker St intersection Construct a new shared use path adjoining the river that links to the proposed path under the bridge, the upgraded Mokare walk trail (approx 300 metres), and a link to the Walker St intersection (approx 50 metres)</p>		As a major linkage in the recreational river trails (Mokare and Kwoorabup), Berridge and Kwoorabup Parks, and being a segment of the Munda Bididi, a new riverside trail in this area would be an important addition to the recreational cycling opportunities in Denmark. In addition, it provides an important safe crossing of the Highway, and access to both the High School and Primary School (via Walker St and Mitchell St).	High	\$35,000 for path + Extra engineering under bridge to enable the construction of a shared use path on both sides of the river?
	<p>Traffic bridge Construct a shared use path on north side of bridge, to link up to the riverside Heritage Trail</p>	16	<p>To enable safe negotiation of the river crossing and South Coast Highway, and to meet up with the riverside Heritage Trail a shared use path should be constructed on the north side of the bridge.</p> <p>This could be part of any upgrades of the Hollings Rd / South Coast Highway intersection to be undertaken by Main Roads in the future.</p>	Medium	Main Roads responsibility
	<p>Powley St to Scotsdale Rd Construct a short new path on the easement between Powley St and Scotsdale Rd (near Glendale Close). Will require barriers at Scotsdale Rd end to ensure cycling traffic slows down at intersection.</p>	8	This link provides a less steep access to the Horsley Rd area, and some of the areas of future growth (potential for developer contributions?). With the proximity of the new Scotsdale Rd path, and paths through the Kwoorabup Park, this provides an off-road alternative route to access the centre of Denmark (in place of Rushton St or Horsley Rd).	Low	Possible developer contribution given proximity to new subdivisions?




A. Construction of new link paths (continued)

	Description	Map Ref	Notes	Priority	Estimated cost
	<p>Hollings Rd to Mt Shadforth Rd Investigate options to integrate a shared use path through the redeveloped Hospital and Lodge, to link Mt Shadforth and Scotsdale Rds.</p> <p>This will require some extra engineering with the steep bank at the Mt Shadforth Rd end. As part of Old Hospital redevelopment planning, this will require negotiation with Denmark Arts and Denmark Community Resource Centre.</p>	11	<p>This would provide a major link between northern and eastern precincts of the Denmark townsite, and would provide a significant off-road route option for accessing a number of schools.</p> <p>This is currently a low priority, however with future development in McLean/Kearsley Rd areas, it could become more important.</p>	Low	<p>\$33,444</p> <p>+ Extra engineering costs with bridge over creek, and steep bank at Mt Shadforth end</p>
	Investigate options to develop a new 2.0m shared use path to link Wattle Way and Mt Shadforth Rd (pending the vesting of those lots involved).	2	Formalising this informal path provides an off-road access to Mt Shadforth Rd / Millar St (Primary School and CBD) from the Willow Creek Drive area, and further beyond to the Horsley Rd precinct. There are potentially three private lots involved here, which would obviously require negotiation with those land-holders.	High	\$15,163
	Extend existing path on Mt Shadforth Rd between Hardy St and Peace St.	3	Mt Shadforth Rd is narrow and winding, and an extension of the off-road path would provide an option for Willow Creek Drive area (especially if linked to a path on Ti Tree lane) and beyond to Kearsley Rd. Use would increase with proposed shopping centre.	Medium	\$10,055
	Investigate options to develop a new shared use path on Ti-Tree lane to Willow Creek Drive.	14	Provides a safer option for residents along Willow Creek Drive and Cherax Lane, with a long term possibility to extend to Kearsley Rd. Use would increase with proposed shopping centre at the top of Hardy St.	Medium	<p>Stage 1: to Willow Creek Drive</p> <p>\$23,000</p>




A. Construction of new link paths (continued)

	Description	Map Ref	Notes	Priority	Estimated cost
	<p>Hardy St Extend existing shared use path on Hardy St between Amaroo Village and South Coast Highway</p>	12	Path C18 in Path Development Plan, listed as low priority. Developer contribution through new shopping centre. Use of this path will increase with this development.	High	Developer contribution
	<p>Thornton St to Buckley St Construct short new section of shared use path to link Buckley St and the existing path on Thornton St.</p>	4	Short link to Buckley St currently in the wrong place - taking bikes and pedestrians straight into the car-park.	High	\$1,000
	<p>Offer St Construct, at minimum a footpath, and preferably a shared use path, between the school fence and the carpark.</p>	5	There may be some potential for reclaiming space from the carpark to allow a wider path here.	High	\$8,125





A. Construction of new link paths (continued)

	Description	Map Ref	Notes	Priority	Estimated cost
	<p>Ocean Beach Rd to Offer St Investigate possibilities of constructing a shared use path behind the Masonic Lodge to link Ocean Beach Rd and Offer St, given that it is currently a private lot.</p>	6	<p>An informal path exists in this area, and would allow cyclists to avoid the intersection of Ocean Beach Rd and Offer St.</p> <p>With possible redevelopment of that site, there may be an opportunity to create an easement.</p>	Low	\$7,230
	<p>Honeymyrtle Close to Clarke Close Upgrade the informal path that links Honeymyrtle Close and Clarke Close.</p>	15	<p>A longer term project that would provide another off-road link to reach the Primary School.</p> <p>This will be dependent on future development of the lots in that area.</p>	Low	\$16,900
	<p>South Coast Highway (West) Extend the shared use path along South Coast Highway from the Denmark Tavern, to Harpendene Rise (short term) and Cussons Rd (longer term). Path could be constructed on north side of the highway to link with current residential developments.</p>	13	<p>With the existing residential demand, added to the two pending areas of future growth of Denmark townsite, an extension of a shared use path along South Coast Highway to Harpendene Rise (short term) and Cussons Rd (longer term) is the minimum required.</p> <p>Will require upgrade to drainage (Main Roads responsibility) and therefore negotiation with Main Roads WA.</p> <p>Currently Path 15a in Path Development Plan, marked as a Low Priority.</p>	High	TBC Negotiation with Main Roads





B. On-road bike lanes

	Description	Map Ref	Notes	Priority	Estimated cost
	<p>South Coast Highway - CBD Continue to negotiate with Main Roads WA regarding the creation of on-road bike lanes on South Coast Highway, in the CBD area.</p>		<p>Some survey respondents were keen to see bicycle lanes on South Coast Highway (East and West). However, consultation with Main Roads highlighted that the South Coast Highway through the Denmark townsite is too narrow to incorporate a bike lane and maintain the minimum lane width of 3.5m to accommodate trucks, and Main Roads are therefore unlikely to support this.</p>	High	Main Roads
	<p>Walker St Mark on-road bicycle lanes on Walker St in both directions.</p>	35	<p>Upgrades to Walker St footpaths are high priority in the Path Development Plan. Walker St and Mitchell St are an important route for bicycles to avoid South Coast Highway. However with current levels of traffic and lack of shared use paths, more visible signs will be required to alert drivers to the need to share the road equitably with cyclists.</p>	High	\$2,000
	<p>Mitchell St Mark on-road bike lanes on Mitchell St. This may require a one way traffic street between Offer St and Brazier St.</p>	34	<p>The path next to the Primary School is just 2.0m wide and has overgrown vegetation and trees - difficult sight lines for cyclists. Propose to mark on-road bike lanes on Mitchell St, with possible one way traffic?</p>	Medium to High	\$3,500





C. Upgrading existing paths or crossings

	Description	Map Ref	Notes	Priority	Estimated cost
	<p>Mokare Trail - Eastern side of river Upgrade the Mokare River Trail on the eastern side of the river, between the Heritage Bridge at the rivermouth, and the Traffic Bridge. This will require a substantial upgrade and possibly a ramp at the Riverside Club.</p>	21	As an important recreation and tourist route, the Mokare Trail requires a significant upgrade on the Eastern side. With substantial winter flooding and a very uneven path, a boardwalk may be required. With the construction of the new shared use path along Hollings Rd, an upgrade of the western side is not required. (\$150 / lin m)	High	\$235,000 + Extra drainage works required. Investigate boardwalk options?
	<p>Kwoorabup Park A small section of path requires upgrading near the toilet block in the Community Park to make a more direct route. Widen the path next to the Adventure Playground to minimise conflict with pedestrians (especially children).</p>		To ensure a continuous bike network through the Kwoorabup Park, the stretch of path near the toilet block and Adventure Playground requires upgrading for consistency, and possibly widening.	Medium	\$7,700
	<p>Mt Shadforth Rd Upgrade footpath along Mt Shadforth Rd to 2.5m shared use path.</p>	17	Current path is 1.6m wide, so not wide enough for shared use path, or use by gophers from Lionsville and Amaroo.	Medium	\$26,500
	<p>Hollings Rd Widen path between bridge Walker St intersection to potentially include a marked bicycle lane on the river side of the path.</p>	18	Brickpaved footpath is narrow @ 2.1m, with heavy pedestrian traffic and parking opening out onto the path. It is also marked as part of the Munda Biddi route. Upgrading is required in order to link up with the new path being constructed on Hollings Rd.	High	\$11,400




C. Upgrading existing paths or crossings (continued)

	Description	Map Ref	Notes	Priority	Estimated cost
	<p>Hollings Rd With the upgrade of the path on Hollings Rd, build new ramp crossing, incorporating stencilling signage for cyclists to lead them across the intersection of the carpark, and across the road to the new shared use path.</p>	25	<p>Despite the path being marked as a Munda Biddi route, the intersection at the carpark is impassable for bicycles and a confusing junction.</p> <p>Modifications to the parking and crossings are currently being developed by the Shire.</p>	High	TBC
	<p>Hollings Rd (near Haire St) Build an appropriate ramp crossing, incorporating stencilling signage for cyclists to lead them across the road between the two new shared use paths.</p>	24	<p>The shared use paths on Hollings Rd currently under construction require clear and visible crossings to lead cyclists across the road safely.</p>	High	TBC
	<p>Short St Upgrade the narrow path on Short St to a 2.5m shared use path to link Millar St, South Coast Highway to Mitchell St and the Primary School.</p>	19	<p>With an appropriate crossing on South Coast Highway, Short St becomes an important access point to the Primary School.</p>	High	\$11,500
	<p>Mitchell St Upgrade crossing at corner of Short St and Mitchell St, to include grab rails and trimming vegetation.</p>		<p>Linking to the crossing of South Coast Highway, the crossing of Mitchell St at this point is an important route to the Primary School.</p>	High	TBC





C. Upgrading existing paths or crossings (continued)

	Description	Map Ref	Notes	Priority	Estimated cost
	South Coast Highway (near Millar St) Investigate with Main Roads the option of constructing a pedestrian refuge across South Coast Highway.	28	A safe crossing with a centre lane refuge at this point will create a route to the Primary School, as well as a crossing point for wheelchairs and gophers (with a number of retirement homes in the vicinity).	High	TBC Main Roads responsibility
	Millar St Upgrade path to shared use path standard 2.5m	37	With a possible crossing of South Coast Highway at Millar St, and a direct link to the proposed new path through the Old Hospital redevelopment, Millar St becomes an important link in the cycling network.	High	\$11,000
	Denmark High School Undertake maintenance of the shared use path that ends at the back of the High School.	32	This route to the High School, through the Kwoorabup Park could be an important route to the High School, especially from areas of future growth in the Horsley Rd area.	Medium	
	Ongoing upgrade of paths in CBD With the width constraints of existing roads in the CBD, ensure all footpaths are a minimum of 3.0m wide to allow less confident cyclists to share the footpath with pedestrians.		There are limited options for including on-road cycle lanes on South Coast Highway through the CBD, so other options need to be created for children and less confident cyclists.	Medium	




D. Amendments to existing paths/crossings

	Description	Map Ref	Notes	Priority
	<p>Morgan Rd At corner of Morgan Rd and Fyfe St the crossing is unclear and needs to link to a new short path going up Fyfe St.</p>	29	<p>With increased traffic expected with the upgrade of the Riverside Club, managing the pedestrian and cycling interactions at this point will be important. It is a path used for school students.</p>	High
	<p>South Coast Highway (near Fyfe St) An upgraded crossing over South Coast Highway is required to safely access the Heritage Trail along the river. Incorporate painted grab rails at each side of the road and consider marking a crossing on the road.</p>	42	<p>This is likely to be a more temporary measure until the Traffic Bridge is upgraded with a shared use path on the north side. However, as an important route to the High School it is a high priority.</p>	High
	<p>Brazier St Amend the entrance to the Recreation Centre where the path ends abruptly at a fence.</p>	33	<p>The shared use path along Brazier St is very good quality, but ends abruptly at a fence. An access through the fence for cyclists and pedestrians is required.</p> <p>Extending the path as far as Haire St is listed in the Path Development Plan, as a low priority.</p>	High

E. Improving signage and profile on paths and roads





	Description	Map Ref	Notes	Priority
	<p>Trail Hub signage at Rivermouth Develop distance and direction signage for the range of different trails (Mokare Heritage Trail, Rail Trail/Munda Bididi, Bibbulmun Track, Karri Walk Trail, Inlet Drive shared use path) available from this point.</p>	39	This junction is an important hub for a range of trails, for both residents and tourists. Signage is currently almost non-existent.	High
	<p>Trail Hub signage Develop distance and direction signage for range of trails in a range of key locations throughout Denmark, such as Berridge Park, Visitors Centre, current Information Bays, new Plane Tree redevelopment area.</p>	Various	<p>The proposed development of Denmark as a Trail Hub should include development of a network of shelters with maps and signage including this location which has been identified by PATAC in previous planning.</p> <p>Physical signage should link to a paper Trails map and an online Trail guide through website such as Trails WA.</p>	High
	<p>Research Station Ave Improve signage with 'Share the Road' signs of the lane/road into the Kwoorabup Park.</p>	37	With the new Scotsdale Rd shared use path nearly completed and some of the proposed longer term upgrades to the network, the paths through the Kwoorabup Park become very important transport linkages (not only routes into the park). Signage and maps will be required to raise community awareness of these routes.	High
	<p>Scotsdale Rd (entry to Kwoorabup Park) Route signage required at this important hub for cycling routes.</p>	41	The newly constructed entrance to the Kwoorabup Park from Scotsdale Rd is an important hub for a range of important cycling routes - to the High School, into town via the Community Park and beyond to the Primary School.	Medium

E. Improving signage (continued)


	Description	Map Ref	Notes / Community Consultation	Priority
	<p>Hollings Rd (new shared use path) Stencilling signage for shared use path (possibly incorporating a centre line) is required.</p>	43	Clear signage of this path to avoid being used as parking. Also clear signage of the crossing near the intersection into the carpark is required.	High
	<p>Millar St Install signage or stencilling to specify that this path is dual use.</p>	37	With a possible crossing of South Coast Highway at Millar St, and link to substantial new housing areas around Kearsley Rd, Millar St becomes an important link in the cycling network.	High
	<p>South Coast Highway (near Fyfe St) Shared use path across bridge requires stencilling, and possibly a central line as a reminder of use by both pedestrians and cyclists.</p>	42	As a major route to the Denmark High School and Agricultural College, and with a reasonable amount of pedestrian traffic, extra signage is required on the path to communicate the shared use of the path.	High

4.3 Recommendations: Outer Denmark

A. Construction of new link paths

	Description	Notes / Community Consultation	Priority	Estimated cost
	<p>WOW Trail Construct the 7km ridgeline trail from the Wind Farm at Wilson Head to Lights Beach, joining the Munda Biddi Trail.</p>	<p>Continue to apply for top-up funding to fully fund the WOW Trail in future.</p>	High	TBC
	<p>Lights Rd (to end of residential area) Extend the shared use path past Yarimbah Rd, to the end of the residential area.</p>	<p>This is already in the Path Development Plan.</p>	High	\$35,000
	<p>Ocean Beach Rd With future upgrades of Ocean Beach Rd likely, ensure that the installation of a shared use path on the western side of the road is part of the upgrade process.</p>	<p>A medium term vision for the Shire of Denmark should be shared use path on both sides of the road for major feeder / neighbourhood connector roads, at least to the radius of the township boundary. Any proposed upgrades for these roads should incorporate the construction of shared use paths.</p>	Medium	In conjunction with future upgrades of road
	<p>Inlet Drive With future upgrades of Inlet Drive, ensure that the installation of a shared use path on both sides of the road is part of the upgrade process.</p>	<p>A medium term vision for the Shire of Denmark should be shared use paths on both sides of the road for major feeder / neighbourhood connector roads, at least to the radius of the township boundary. Any proposed upgrades for these roads should incorporate the construction of shared use paths.</p>	Medium	In conjunction with future upgrades of road



A. Construction of new link paths

	Description	Notes / Community Consultation	Priority	Estimated cost
	<p>Scotsdale Rd With future upgrades of Scotsdale Rd, ensure that the installation of a shared use path on both sides of the road is part of the upgrade process. Given the recent upgrade of this road, it is acknowledged this is a longer term priority.</p>	<p>A medium term vision for the Shire of Denmark should be shared use paths on both sides of the road for major feeder / neighbourhood connector roads, at least to the radius of the township boundary. Any proposed upgrades for these roads should incorporate the construction of shared use paths.</p>	<p>Low</p>	<p>In conjunction with future upgrades of road</p>



B. On-road Bike Lanes / Sealed Shoulders

	Description	Notes / Community Consultation	Priority	Estimated cost (@ \$50 per lin m)
	<p>Lights Rd Seal the road shoulder on Lights Rd, from the end of the residential area to the intersection of Lights Beach Rd (approximately 3.5km).</p>	<p>With the major attractor of Lights Beach, and as part of the Munda Biddi route, Lights Rd should have a sealed shoulder for safety of cyclists.</p>	<p>High</p>	<p>\$175,000</p>
	<p>Scotsdale Rd Continue with the sealing of the road shoulder, as a designated bike lane, to at least a width of 1.0m, in stages.</p>	<p>As a popular sports cycling route, with potential for cycle tourism, based around wineries and natural attractions, this is an important route.</p>	<p>Medium</p>	<p>In conjunction with planned upgrades of the road</p>
	<p>Mt Shadforth Rd Seal the road shoulder, as a designated bike lane, to at least a width of 1.0m, in stages.</p>	<p>As a popular sports cycling route, with potential for cycle tourism, based around wineries and natural attractions, this is an important route.</p>	<p>Medium</p>	<p>In conjunction with planned upgrades of the road</p>
	<p>William Bay Rd Seal the road shoulder, as a designated bike lane, to at least a width of 1.0m, in stages.</p>	<p>As a popular recreational route, with potential for cycle tourism, and some important loop trails in combination with the Munda Biddi and the Heritage Rail Trail this is an important route.</p>	<p>Medium</p>	<p>In conjunction with planned upgrades of the road</p>




B. On-road Bike Lanes / Sealed Shoulders

	Description	Notes / Community Consultation	Priority
 	<p>South Coast Highway - West To meet the needs of cyclists continuing to use this route (especially sports cyclists) the recommendation is for extensive signage on these routes to ‘Share the Road’ and ‘A Metre Matters’ (see Section 5.2.3 for more information).</p> <p>The Shire of Denmark should negotiate with Main Roads to ensure this kind of signage is installed.</p>	<p>In regards to creating sealed shoulders on South Coast Highway (West), Main Roads advise that with a combination of large trees along the route, and requirements for drainage works on the roadside, there is limited opportunities for a comprehensive upgrade of the road shoulders on South Coast Highway (West).</p>	<p>High</p>

C. Upgrade existing path and crossing

	Description	Notes / Community Consultation	Priority	Estimated cost
	<p>Denmark-Nornalup Heritage Rail Trail With the challenges of creating sealed shoulders or on-road bike lanes along South Coast Highway, consider a long-term, staged upgrade of the Heritage Rail Trail to provide a safe cycling route alternative to the South Coast Highway.</p>	<p>As a multi use trail, incorporating a sandy trail at the side for horses will be required. The Rail Trail provides several good opportunities for creation of loops for recreational cycling and cycle tourism.</p> <p>With the proposed subdivision for the area between Ocean Beach Rd and South Coast Highway, the section of Rail Trail between Ocean Beach and Cussons Road should be upgraded to share use path standard to provide an off-road link into town</p>	<p>Medium</p>	<p>Developer contribution (for link between Ocean Beach Rd and South Coast Highway)</p>
	<p>Regular maintenance of the Denmark-Nornalup Heritage Rail Trail (East and West)</p> <ul style="list-style-type: none"> • conduct an annual audit of maintenance and upgrade requirements of the Rail Trail in terms of vegetation management, surface and drainage condition, signage maintenance and interpretative information. • carry out regular (at least once per annum) slashing of vegetation along the Denmark Heritage Rail trail as part of maintaining this Trail in a safe and user friendly condition. • provide an annual budget allocation for upgrade of this trail, including improvements to drainage, signage, interpretation and surface management. 	<p>The community consultation highlighted the importance of the Rail Trail as a recreational cycling route, but also as a commuting cycle route.</p> <p>However, many comments did point to the need for ongoing maintenance, and areas where drainage and vegetation can be a hindrance.</p> <p>The recommendation of this Bike Plan is that a regular annual budget be allocated for the maintenance of this Rail Trail in recognition of its current importance and future potential.</p>		<p>Annual audit - approx \$2,000 pa</p> <p>Annual slashing - approx \$6,000 pa</p> <p>General improvements - approx \$15,000 to \$20,000 per annum</p>

C. Upgrade existing path and crossing

	Description	Notes / Community Consultation	Priority
	<p>Denmark-Nornalup Heritage Rail Trail Loop with Ocean Beach Road shared use path A road reserve opposite Little River Road leading north from Ocean Beach Road would provide a connector between the two trails.</p>	<p>The need for loop trails for local recreational use and cycle tourism has been raised in past and current consultation. This connector would make a good length loop from town to Weedon Hill and return via the Rail Trail.</p>	<p>Medium</p>
	<p>Lake View Place Upgrade existing informal path between Lake View Place and Heritage Rail Trail.</p>	<p>An upgraded path leading down to the Heritage Rail Trail could encourage more residents of Springdale Heights to cycle on the Rail Trail.</p> <p>The intersection at Springdale Beach is a good example.</p>	<p>Low</p>
	<p>Denmark-Nornalup Heritage Rail Trail (East) Upgrade existing informal path between Lake View Place and Heritage Rail Trail.</p>	<p>Beyond the intersection of the Rail Trail with Randall Rd, the track becomes very sandy, and with recent vegetation trimmings still over the track. Regular maintenance of this important tourism and local use trail is needed to attract ongoing usage and for safety.</p>	<p>High</p>

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5. OTHER RECOMMENDATIONS

5.1 Strategic Recommendations

Ensuring that planning for cycling - on the roads, on shared use paths, and for end of trip facilities, should be central to future planning within the Shire of Denmark. The current Local Planning Strategy does a reasonable job of providing for cycling facilities, however in future upgrades of this document, this could be strengthened. The following is recommended:

5.1.1 Town Planning Scheme 4 (TPS4)

Incorporate requirement for shared use path and on-road bike lane provision in relevant sections of the Town Planning Scheme, for example, Section 5.4 Special Rural Zone Provisions, 5.4.1 (b).

5.1.2 Requirements for Bicycle Parking Provisions in TPS4

Within TPS4 include provisions for the supply of bicycle parking as well as on-site car parking. Austroads provides guidelines as to the requirements for bicycle parking. Long term bicycle parking facilities should be designed in accordance with the requirements of Australian Standard AS2890.3

5.1.3 Continue to take regard of WAPC DC Policy 1.5 Bicycle Planning

This policy requires that new subdivisions provide for safe cycling conditions within the subdivision and linkages to the bike plan network as outlined in this plan.

5.1.4 Develop a long-term Integrated Transport Strategy

In the longer term, the Shire of Denmark should develop a more comprehensive and integrated Sustainable Transport Strategy. The Shire's status as a high growth, coastal community means that the whole range of future transport options, including bicycles, needs to be considered in an integrated way.

The WAPC DC Policy 1.5 on Bicycle Planning requires that "Local Governments undertaking local area traffic management schemes give consideration to cycling."

5.1.5 Providing for safe on-road cycling

The Local Planning Strategy articulates policy for development of shared use paths, however it does not articulate a strategy for safe on-road cycling for commuting cyclists, sports cyclists and cycle tourists. The needs of on-road cyclists should be incorporated into regular road building and maintenance.

As outlined in the WAPC DC Policy 1.5:

"In view of cycling being a predominantly on-road activity, road planning authorities should give adequate consideration to cyclists' needs and ensure that cycling is safely integrated with other road users. Consideration and implementation of the AUSTRROADS bicycle facility engineering guidelines.... will assist in providing safer on-road conditions for cyclists.

5.2. Overall Bike Network Recommendations

5.2.1 Path Signage



Australian Standards (AS 1742.9) require the appropriate signage, pavement and line marking on shared paths for people to legally cycle on them. All pavement marking should be jade green in colour on concrete surfaces, and white on asphalt surfaces.

Bicycle and pedestrian symbols should be marked on all shared paths at the beginning and end, and at road crossings in preparation for the bike plan launch. This signage educates residents and visitors on available cycle ways and is an effective and ongoing visual cue to promote cycling.

5.2.2 Crossings



In line with this good example of a crossing at Buckley St, all crossings at major intersections should be renewed with painted kerbs, painted grab rails and on path stencilling.

5.2.3 Road signage



The Shire of Denmark has a medium to long term plan to seal the shoulder of major feeder roads such as Mt Shadforth Rd and Scotsdale Rd. In recognition of the importance of these routes for sports cyclists and cycle tourists, 'Share the Road' signage should be installed on these roads as a high (short term) priority.

5.2.4 Information hubs and signage



The junction of the Heritage Rail Trail at Springdale Beach is an excellent example of a trail junction. Through the Trail Hub initiative further hubs of this kind as focal points for maps and signage should be planned in key locations such as the Rivermouth, Berridge Park, Visitors Centre, Plane Tree precinct, Kwoorabup Park. Signage throughout the bike network should provide distance and directional information which will assist both pedestrians and cyclists, and be available on paper, online and through websites such as Trails WA.

5.2.5 Integrated End of Trip Facilities



Source: <http://properties.curtin.edu.au/parking/cycling.cfm>

With the upgrade of the Plane Tree precinct, there may be an opportunity to construct an integrated end of trip facility, featuring secure bike parking, showers and lockers.





5.2.6 Bike Racks






Source: www.projectlink.com.au

Extra bike racks should be installed in a range of locations throughout Denmark, outlined in detail on the following page.

5.2.7 Bike racks and end of trip facilities

	Description	Notes	Priority	Estimated cost
	New bike racks at Primary School Include bike racks at the back of the High School	New bike racks should be placed at the back of the High School, near the end of the path through Kwoorabup Park.	High	Department of Education responsibility
	Upgrade bike racks at Primary School The current bike racks at the Primary School require updating. New bike racks should be placed near the music room on the other side of the grounds.	The current bike racks at the primary school have the potential to damage bicycles and require upgrading.	Medium	Department of Education responsibility
	Integrated End of Trip Facilities—Horsley Rd Possible location for bike services hub (e.g. showers, sheltered bike racks, secure bike storage, water fountain etc)	More end of trip facilities are required in the centre of Denmark for both commuting cyclists and cycle tourists.	Medium	Seek specific funding to upgrade current facilities
	Integrated End of Trip Facilities—Corner of Mitchell and Strickland Streets Possible location for bike services hub (e.g. showers, sheltered bike racks, secure bike storage, water fountain)	More end of trip facilities are required in the centre of Denmark for both commuting cyclists and cycle tourists. This location would make another ideal hub in a Denmark Trail Hub plan, with its central location, access to all relevant facilities, and on the suggested major cycle route into town.	Medium	Seek specific funding for bike pod within redeveloped area

5.2.7 Bike racks and end of trip facilities (continued)

	Description	Notes	Priority	Estimated cost
 <p>Figure x: www.streetandpark.com.au</p>	<p>Shire of Denmark Administration Building Install bike racks at front of building</p>	There are currently no bike racks at the front of the building for visitors	High	\$2,000
	<p>Denmark Visitors Centre Install bike racks under cover</p>	The Visitors Centre requires bike racks for the increasing number of cycle tourists	High	\$2,000
 <p>Figure x: http://2.bp.blogspot.com</p>	<p>Kwoorabup Park Install bike racks close to the Adventure Playground</p>	There are currently no bike racks at Kwoorabup Park	High	\$2,000
	<p>Redeveloped Hospital and Old Lodge Install bike racks under cover</p>	Bike parking also needs to be provided here	High	\$2,000
 <p>Figure x: www.essenceinphotography.com</p>	<p>Riverside Club redevelopment Install bike racks</p>	Ensure adequate bike parking is provided in the Riverside Club redevelopment	High	\$2,000
	<p>Hollings Rd Install bike racks close to the IGA Express</p>	There are currently limited bike parking options near IGA Express	High	\$2,000

5.3 Promoting Cycle Tourism - Recommendations

Recommendations in this Plan related to Promoting Cycle Tourism are also informed by the Munda Bididi Trail Foundation Denmark Cycle Tourism Strategic Plan May 2013, and the Trail Hub consultation May 2014 and include:

Recommendation	Description	Notes	Priority	Potential key partners
5.3.1	Support the development of Denmark as a Trail Hub	Develop a Trail Hub strategy for Denmark with key partners and seek support from the State Department of Sport and Recreation (DSR) to implement key elements of the strategy.	High	DSR, Denmark Visitors Centre, Munda Bididi and Bibbulmun Foundations
5.3.2	Assess and grade current cycling trails and routes	Assess all cycling trails and routes to meet the standard grading system as part of the development of Denmark as a World Class Trails Hub.	Medium	DSR
5.3.3	Develop themed trails for cycle tourists	In conjunction with the development of a Trails Hub strategy, seek funding to develop further cycling related trails with possible themes around sports cycling, food and wine, history, discovery trails for children, geo-caching and so on.	Medium	
5.3.4	Develop a regionally significant loop bicycle trail	Building on the proposed WOW trail, and the new Munda Bididi, the Shire of Denmark has an opportunity to develop a regionally significant loop bicycle trail connecting Denmark with Greens Pool via Ocean Beach Road shared use path, the proposed WOW trail, the Munda Bididi trail between Lights Beach and McLeod Road, and the Denmark Rail Trail back into Denmark. This approximately 35km loop bicycle trail, if properly presented, marketed and maintained has the potential to be a major tourist attraction for Denmark. It is also recommended that the Shire of Denmark develop and maintain user friendly signage and recreation facilities to support this loop trail.	High	Munda Bididi Foundation, Denmark MTB Group, DPaW
5.3.5	Electronic and hard copy trail maps	Develop informative hard copy and electronic maps (that link to websites such as Trails WA) of all cycling trails and routes in the local area that includes bicycle friendly accommodation, attractions, bicycle repair, bicycle racks and toilets. This is a priority action in its own right and is part of the development of Denmark as a Trail Hub.	High	Denmark Visitor Centre, Munda Bididi Foundation
5.3.6	Market cycle trails	Upload maps and information on Shire and Visitor Centre websites, Facebook and on associated businesses to maximize access by cycle tourists. Make hardcopies of maps and information available through the Visitor Centre and other central locations.	Medium	Denmark Visitor Centre, DSR, Trails WA

5.3 Promoting Cycle Tourism - Recommendations (continued)

Recommendation	Description	Notes	Priority	Potential key partners
5.3.7	Support the completion of the Rail Trail	The Shire to support completion of the 'missing link' of the Denmark to Nornalup Heritage Rail Trail between Parker Road and Peaceful Bay Road.	High	Green Skills
5.3.8	Integrated bike facilities for cycle tourists	Install bike racks at the Visitor Centre and other key locations - e.g. Ocean Beach, Berridge Park, Kwoorabup Park and the proposed Plane Tree Precinct. The Munda Biddi Trail Foundation Strategic Plan specifically mentions "If cycle tourists are to be encouraged to visit, then secure, enclosed cycle parking provision is required. Cycle stands are not sufficient due to the perceived danger of luggage being stolen off bikes."	Medium	Local businesses, Denmark Visitors Centre
5.3.9	Support the development of a Mountain Bike Park / Trail	The Shire to provide planning support if a local group to develop a new Mountain Bike Park, similar to Pemberton and Margaret River is formed.	High	Denmark MTB Club (or similar)
5.3.10	Secure, well located bike racks that comply with Australian Standards	Continue to design and install unique themed bike racks at key locations in the CBD and outside businesses that want to become accredited cycle friendly business. A design competition could be developed in partnership with Denmark Arts.	High	Denmark Arts

5.4 Promoting Cycling in Denmark - Recommendations

Recommendation	Description	Notes	Priority	Potential key partners
5.4.1	Launch Bike Plan with a small cycling event	In partnership with Denmark Chamber of Commerce and Munda Bididi Foundation, have a public launch of the Denmark Bike Plan to feature the cycling businesses in town and new opportunities such as electric bikes. The launch could feature any new maps and trails information available, as well as garner community support and involvement for other projects such as: a Bicycle User Group, a Mountain Bike Trail Group	High	Chamber of Commerce, Denmark Bulletin, Munda Bididi Foundation, community groups such as Green Skills
5.4.2	Develop hard copy and electronic maps	Update and reprint the Trails Map for Shire of Denmark, aimed at both residents and visitors, with all on-road and off-road trails (for walking and cycling). Map could include and promote bicycle friendly accommodation, attractions, bicycle repair and bike racks. Make the map available online via websites. Investigate possible phone app map access.	High	Denmark Visitor Centre, Chamber of Commerce
5.4.3	Information & awareness campaign	Partner with the Denmark Bulletin, and utilise the Shire of Denmark website to highlight key aspects of the Bike Plan, and to correct misinformation such as: <ul style="list-style-type: none"> • Safely sharing the road with cyclists, • Status of different paths in Denmark and legality of riding on footpaths. • Partner with Chamber of Commerce to include trails on their counter map, identify cycle friendly businesses and support new businesses to become cycle friendly, integrate bikes into the Spirit of Denmark Street Party - formally Christmas parade. 	High	Denmark Bulletin, Chamber of Commerce
5.4.4	Entry statement signage promoting a 'Cycle Friendly Town'	As a reminder to residents and visitors to share the road, install an entry statement highlighting that Denmark is a Cycle Friendly town.	High	Main Roads
5.4.5	Partner with local groups to support cycling promotion events	There are a range of national and state organised events to promote cycling as a form of transport: <ul style="list-style-type: none"> • National Ride to Work Day - Wednesday 15th October. • WA Cycle Instead in Spring - incorporating the Bike to Work Challenge - September and October • WA Bikeweek - featuring a range of events - mid March • National Ride to School Day - during March Funding is available for some of these programs and could be sought by Council.	High	Green Skills, other local community groups, Chamber of Commerce

5.4 Promoting Cycling in Denmark - Recommendations

Recommendation	Description	Notes	Priority	Potential key partners
5.4.6	Provide 'Slow Down to 50' stickers	To create safe conditions for cycling on quiet neighbourhood roads, provide to all households within the Denmark township boundary, "Slow down to 50" stickers to be placed on rubbish bins.	High	
5.4.7	Partner with local schools to promote cycling	<p>Work with schools to target promotion efforts for cycling to school. For example:</p> <ul style="list-style-type: none"> • Denmark Primary School. Survey parents of children living on the south side of South Coast Highway (in recognition of the current safety concerns regarding crossing the highway) regarding current travel to school behavior and opportunities to increase rates of cycling. • Denmark High School. Work with staff at the High School to promote the health and fitness benefits of cycling. Promote the path access through Kwoorabup Park. 	High	All schools in Denmark
5.4.8	TravelSmart School program	Encourage Denmark schools to join the Travelsmart School Program to promote and increase rates of cycling to school. This will also enable the Shire of Denmark to seek funding through the Connecting Schools funding program under the WA Bicycle Network Plan.	High	Department of Transport
5.4.9	Support the establishment of a Bicycle User Group	Community connection was identified as a possible motivator for increasing cycling in Denmark, and a Bicycle User Group that promotes cycling could assist in developing community events such as group rides, and events to increase cycling confidence.	Medium	Local community groups

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6. COSTINGS AND IMPLEMENTATION SCHEDULE

Categories	Road	Start/ Location	Finish	Map ID	Comments	Length in m	Cost in \$	PRIORITY
Construction of new link path	Fyfe Street	Morgan Road	South Coast Hwy	1	Extend shared use path up Fyfe Street to meet crossing at Morgan Rd.	60	6,040.00	H
	Wattle Way	Wattle Way	Mt Shadforth Road	2	Investigate possibility of constructing shared use path between Wattle Way and Mt Shadforth Rd? Potentially important link to CBD / Primary School.	152	15,163.00	H
	Thornton/ Buckley Street	Buckley Street	Thornton Street	4	Short link to Buckley St in wrong place - taking bikes and pedestrians straight into the car-park. A diagonal link leading straight onto footpath on Thornton St is recommended.	8	838.00	H
	South Coast Hwy	Tavern	Harpdene Rise/later Cussons Road	13	Extend shared use path, on northern side of highway, out to Harpendene Rise initially. In longer term extend to Cussons Rd, for future growth proposed in area.	1262	TBC / Main Roads	H
	South Coast Hwy	Commuter Carpark	Agricultural College	7	Stage 1 - Extend shared use path from Commuter Carpark to Agricultural College and entrance of Cemetry. Formalise informal path on northern side of highway.	776	77,600.00	H
	Hardy Street	Amaroo Village	South Coast Hwy	12	Complete shared use path from Amaroo to SC Highway	127	Developer	H
	Offer Street	Mitchell Street	end of car parking area	5	Require at minimum a footpath, and preferably a shared use path between the school fence and the carpark. Scope for some space to be reclaimed from carpark.	81	8,125.00	H
	Lights Rd	Ocean Beach Rd	End of residential area		Extend shared use path past Yarimbah Rd, to end of residential area	350	35,000.00	H

Categories	Road	Start/ Location	Finish	Map ID	Comments	Length in m	Cost in \$	PRIORITY	
	Riverside Path	Cnr of Walker St and Hollings Rd	Cnr of Horsley Rd and Research Station Ave	10	When small bridge on Horsley Rd is upgraded, have a shared use path built on that side of road, extending it to river side of car park, along river bank, under the traffic bridge and linking to the upgraded Mokare Trail on the South West of the River. Include small link from riverside path to intersection at Walker St.	550	55,000.00	H	
	TOTAL ESTIMATED COST FOR HIGH PRIORITY NEW PATH CONSTRUCTION							\$197,766.00	
	South Coast Hwy	on Bridge		16	Construct a cantilevered extension to the bridge to create a shared use path on the other side of the bridge.	39	TBC / Main Roads	M	
	Ti Tree Lane extension	Willow Creek Drive	Kearsley Road	14	Ti - Tree lane could be extended to provide an off-road shared use path, parallel to Mt Shadforth Rd. This could also extend between Willow Creek Drive and Kearsley Rd?	340	33,991.00	M	
	Mt Shadforth Road	Hardy Street	Peace Street	3	Shared use path connector up to Peace St, would help provide an option for Willow Creek Drive area.	101	10,055.00	M	
	TOTAL ESTIMATED COST FOR MEDIUM PRIORITY NEW PATH CONSTRUCTION							\$44,046.00	
	South Coast Hwy	Commuter Carpark	Agricultural College	7	Stage 2 - Extend shared use path from entrance of Cemetary to Springdale Beach.	800	80,000.00	L	
	Offer Street	Offer Street	Ocean Beach Road	6	Investigate possibilities of formalising a shared use path behind the Masonic Lodge to avoid the dangerous intersection of Ocean Beach Rd and Offer Street.	72	7,230.00	L	
	Scotsdale Road	Powley St	Scotsdale Rd	8	Investigate possibility of a new shared use path through the easement under the powerlines up to Powley Street.	139	Developer?	L	

Categories	Road	Start/ Location	Finish	Map ID	Comments	Length in m	Cost in \$	PRIORITY
	Old hospital path	Hollings Road	Mt Shadforth Road	11	Integrate a new shared use path through the redeveloped Hospital and Lodge. The end of the path at the Mt Shadforth end should be veering left, to cross Mt Shadforth Rd over to Millar St. (Costed at \$200/lin m due to complexity at Mt Shadforth end)	334	66,800.00	L
	Honeymyrtle Close	To Clarke Close		15	Upgrade the existing informal path - dependent on development of new lots in area.		Developer?	L
	TOTAL ESTIMATED COST FOR LOW PRIORITY NEW PATH CONSTRUCTION							\$154,030.00
Upgrading - widening or renewing - existing path	Mokare Heritage Trail	Traffic Bridge	Heritage Bridge	21	Substantially upgrade the eastern side of Mokare River Trail, incorporating a ramp entrance to the path along South Coast Highway.	1570	157,000.00	H
	Hollings Road	South Coast Hwy	Barnett Street	18	Narrow footpath (2.1m) requires widening to 3.5m to incorporate bike lane, to accommodate parked cars, heavy pedestrian traffic and Munda Bidli route.	228	11,400.00	H
	Short Street	Mitchell Street	South Coast Hwy	19	Narrow footpath (1.3m). Upgrade to minimum 2.5m shared use path to enable use as cycling route to Primary School.	115	11,517.66	H
	Millar St	South Coast Hwy	Mt Shadforth Road	37	Upgrade path to DUP standard 2.5m	222	11,100.00	H
	South Coast Hwy	Cnr Holling Road		22	Widening of paved path at corner to accommodate shared use path around the corner onto Hollings Rd (with relatively frequent use by cyclists and pedestrians)		500.00	H
TOTAL ESTIMATED COST FOR HIGH PRIORITY PATH UPGRADES							\$191,517.66	
	Kwoorabup Park	Near toilet block			Widen path next to Adventure Playground to minimise conflict with pedestrians	154	7,700.00	M
	Mokare Heritage Trail	Traffic Bridge	Heritage Bridge	21	Substantially upgrade the Western side of Mokare River Trail, between the Heritage Bridge, and the Skate Park area.	900	90,000.00	M

Categories	Road	Start/ Location	Finish	Map ID	Comments	Length in m	Cost in \$	PRIORITY
	Mt Shadforth Road	Millars Street	Hardy St	17	Narrow footpath (1.6m) requires widening to 2.5m shared use path to incorporate cyclists and gophers.	265	26,545.34	M
TOTAL ESTIMATED COST FOR MEDIUM PRIORITY PATH UPGRADES							\$124,245.34	
On-road bike lanes and shoulder sealing	Mitchell Street	Offer Street	Strickland Street	34	Create on-road bike lanes on Mitchell St, along Clearway. Investigate option for one way street between Offer and Brazier Streets to facilitate all traffic movement.	350	\$3,505	H
	Walker Street	Hollings Road	Strickland Street	35	Create on-road bike lanes linking to Mitchell St, to create a clear path to river and CBD.	126	\$1,258	H
	Buckley Street	Ocean Beach Road	South Coast Hwy	36	Mark bike lane on road to link to new crossing and Buckley St route to Primary School	212	\$2,123	H
	TOTAL ESTIMATED COST FOR ON-ROAD LANES AND SHOULDER SEALING - HIGH PRIORITY							\$6,886.20
	Lights Rd	Ocean Beach Rd	Cnr Lights Beach Rd		Seal road shoulder to width of 1.0m (Costed @ \$50/lin m)	3500	\$175,000	M
TOTAL ESTIMATED COST FOR ON-ROAD LANES AND SHOULDER SEALING - MEDIUM PRIORITY							\$175,000.00	

Costings and Implementation Schedule—Summary

Costing of the key projects of the Bike Plan include:

- Construction of new paths (@ \$100/ lin m)
- Upgrade of new paths (@\$100/lin m or \$50/sq m)
- On-road bike lanes (@ \$10 / lin m)
- Sealing road shoulders (@ \$50 / lin m)
- End of trip facilities such as bike racks and the Integrated Bike Pod
- An estimated annual maintenance budget of the Denmark-Nornalup Heritage Rail Trail

The following have not been costed in this Bike Plan:

- Path construction and upgrades that are the responsibility of either developers or Main Roads
- Sealing road shoulders or constructing new shared use paths that will be undertaken in conjunction with future road upgrades
- Minor amendments to existing paths and crossings
- Various signage of either bike paths or Trail Hub signage

HIGH PRIORITY	
New path construction	\$197,766.00
Upgrade of path	\$191,517.66
On-road bike lanes & shoulder sealing	\$181,886.20
End of Trip Infrastructure - Bike racks	\$12,000.00
Annual maintenance of Denmark-Nornalup Heritage Rail Trail	\$30,000.00
TOTAL HIGH PRIORITY	\$613,169.87
MEDIUM PRIORITY	
New path construction	\$44,046.00
Upgrade of path	\$124,245.34
End of Trip Infrastructure - Integrated Bike Pod	\$110,000.00
TOTAL MEDIUM PRIORITY	\$278,291.34
LOW PRIORITY	
New path construction	\$154,030.00
TOTAL LOW PRIORITY	\$154,030.00

REFERENCES & FURTHER INFORMATION

References

Australian Bicycle Council (2011) *National Cycling Strategy – 2011 to 2016*

(2013) *National Cycling Participation Survey*

Bikewest (2008) *Local Government Bicycle Plans - Guidelines for Preparing Bicycle Plans.*

Department of Sport and Recreation (2012) *World Class Trails Hub Strategy for WA*

Department of Transport (2014) *WA Bicycle Network Plan*

Main Roads WA (2000) *Policy for Cycling Infrastructure.* Main Roads WA. Doc 37/09/01.

Munda Biddi Trail Foundation (2013) *Cycle Tourism Strategic Plan, Denmark*

Shire of Denmark (2011) *Local Planning Strategy*

(2013) *Strategic Community Plan – Denmark 2031*

(1998) *Settlement Strategy*

(2009) *Path Development Plan*

West Cycle (2013) *Our Bike Path - A Strategic Framework for Cycling in WA*

Western Australian Planning Commission (1998) *Development Control Policy 1.5 Bicycle Planning*

(2007) *Lower Great Southern Regional Strategy*

(2009) *Liveable Neighbourhood Design Code*



Further Information

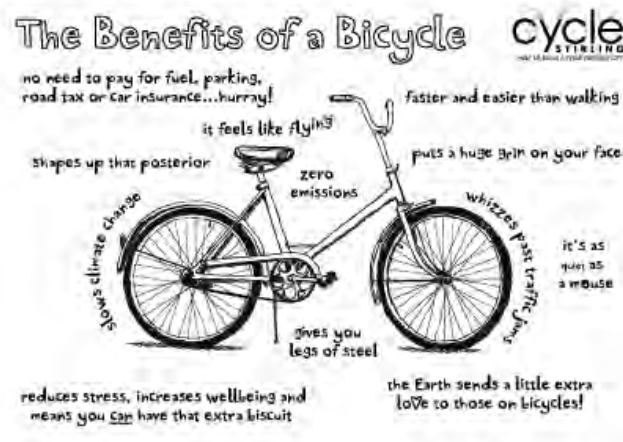
Australia Bicycle Council
<http://www.bicyclecouncil.com.au>

Bicycle Network
<http://www.bicyclenetwork.com.au>

Bicycle Transport Alliance
<http://www.btawa.org.au>

West Cycle
<http://www.westcycle.org.au>

Munda Biddi Trail Foundation
<http://www.mundabiddi.org.au>



APPENDICES

APPENDIX 1 - CONSULTATION SURVEY



8. Do you have any other comments or suggestions about cycling in Denmark?

9. What stops you from riding a bike more often?

10. What would help you to ride a bike more often in the future?

11. Approximately how many km do you live from the centre of Denmark?

- 0 to 2 km
- 2 to 5 km
- 5 to 10 km
- 10 km and over

12. What is your gender?

- Female
- Male

13. What is your age?

- 20 or younger
- 21 to 29
- 30 to 39
- 40 to 49
- 50 to 59
- 60 to 69
- 70 to 79
- 80 and over

14 Please enter your contact information if you would like to be kept informed about the progress of the Denmark Bike Plan. (Please note that all names will be removed from the data).

Name _____ Phone number _____

Email _____

Green Skills is developing a Bike Plan for the Shire of Denmark.

We would like to hear from everyone: non-cyclists, occasional cyclists and regular cyclists! Help us with your ideas on how to improve cycling in Denmark, and information on how much you cycle.

This survey will take around 5 minutes to complete. All responses are confidential, and names will be removed from the data.

Thanks for taking the time to fill in this survey!

1. How often do you ride a bike?

- Never or almost never
- Just a few times each year
- Every few months
- About monthly
- About weekly
- About daily

If you answered Never or almost never—please turn to the last page of the survey, answering from question 8 onwards

Contact Green Skills: Louise Duxbury & Nicole Hodgson
 info@greenskills.org.au | www.greenskills.org.au
 P 08 9848 3310 | F 08 9848 3455

2. On average, how often do you ride a bike for recreation/sport/fitness?

- Never or almost never
- Just a few times each year
- Every few months
- About monthly
- About weekly
- About daily

3. On average, how often do you ride a bike for transport or commuting (e.g. travel to work, shops or school)?

- Never or almost never
- Just a few times each year
- Every few months
- About monthly
- About weekly
- About daily

4. What are the major benefits you get from cycling?

5. Please describe the route (roads, paths and trails) that you cycle most often within the Shire of Denmark.

From

Via

To

Purpose of Trip

Positives about Route

Negatives about Route

Suggestions to improve Route

Suggestions to improve Route

Suggestions to improve Route

6. If relevant, please describe the route (roads, paths and trails) that you also cycle within the Shire of Denmark.

From

Via

To

Purpose of Trip

Positives about Route

Negatives about Route

Suggestions to improve Route

Suggestions to improve Route

Suggestions to improve Route

APPENDIX 2 - PREVIOUS COMMUNITY CONSULTATION

Previous Community Consultation

2008 Cycling Survey

Shire of Denmark Paths and Trails Committee member Andi Adams conducted a cycling survey, with 50 responses via email.

In response to whether they cycled for recreation, commuting or both equally:

- Recreation (18)
- Both equally (13)
- Commuting (8)

In response to 'what don't you like about cycling in Denmark' the top 3 responses were:

- Lack of appropriate bike paths / bike lanes (18)
- Safety concerns and unsuitable roads (12)
- Driver behavior (5)

In response to where further bike lanes to be built the top responses were:

- Scotsdale Rd (mainly to Steiner School) (12)
- South Coast Highway (both east and west) (12)

Other general comments of interest:

- More awareness of drivers about sharing the road with cyclists safely
- Encourage more cycling to school, with bike paths provided to all schools
- Ensure cycling is planned for each new housing subdivision
- Secure bike racks / lockers at key points

PATAC Workshop 2013

The Shire of Denmark's Paths and Trails Committee held a workshop in September 2013 to discuss cycling

Bikes in Denmark - Positives:

- Heritage Trail- well designed
- Denmark to Mt McLeod
- Denmark to Hay River
- Ocean Beach
- South of Highway reasonable level of recreational bike paths/ trails with connection
- Campbell Rd to Rivermouth Caravan park- off road safety/ peaceful
- Peaceful Bay circuit
- Clear shoulder marked on Scotsdale Rd
- Fire Access trail network maintained and useable

Infrastructure:

- Narrow along Strickland St
- Signage along South Coast Hwy for driver awareness
- Denmark cyclist friendly signage on border of Shire
- Bike racks at DVC (responsibility of DVC to supply)
- End of trip facilities – not to take away income from local camping grounds/ caravan parks.

Bikes in Denmark - Negatives:

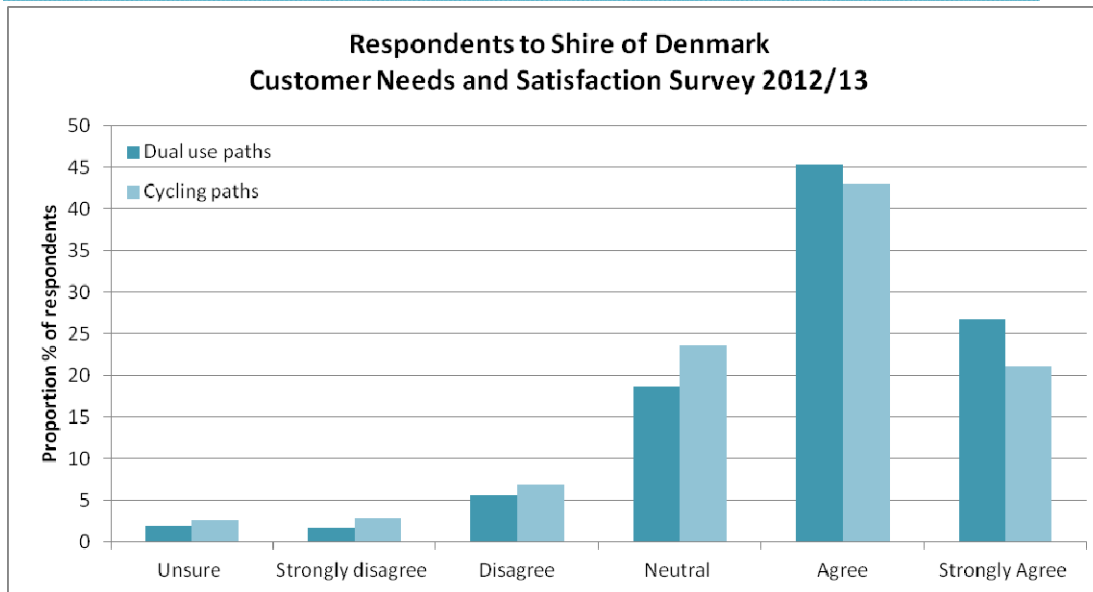
- Heritage Trail - barbed wire, sandy section, missing sections, no circuit
- Etiquette along shared use paths is not good
- Lack of on road facilities (Scotsdale Rd is a new facility)
- Not many paths north of South Coast Hwy
- Need strategic signage on roads & connecting bike users to the CBD
- Cars parking on dual paths
- Need connections to tourist venues eg; wineries, Tree Top Walk, Peaceful Bay, Scotsdale Circuit.

PATAC Vision for Cycling in Denmark

- Electronic downloadable maps that are smart phone compatible with GPS capacity.
- All schools to have good, safe paths connecting to town.
- Eco Tourism- Mountain Bike Trails, Walk Trails. Safe connected themed (tour de fork) on road cycle tourism routes, with podcasts, linking attractions. Linkage of shared paths and on-road bike lanes.
- Data collection - find out how many people are currently cycling and establish goals eg: 20% of all trips by bike.
- Prioritise transport: Walk -> Bike -> Public Transport -> Car.
- Bicycle logos on CBD streets to connect Munda Biddi and shared paths to destinations.
- Long term plan for nodes.
- Provision of communal bikes – ie: racks of bikes at destinations - grab a bike, ride to destination then leave, take another, great for tourists and link it to credit card payment.
- Mountain bike planning for Mt Lindesay and other locations.
- Planned well developed diverse networks which influence user choice of transport and support the development of a non-seasonal affected tourism sub-sector related to cycling.
- Safety on the highway to raise/ heighten awareness of drivers.

Previous Community Consultation

Shire of Denmark Customer Needs & Satisfaction Survey 2012/13



The Shire of Denmark *Customer Needs and Satisfaction Survey 2012/13* featured two relevant questions. As the chart above demonstrates, there was strong support from respondents to the statements:

“There should be more and better quality shared use paths around the Shire of Denmark.”

“Council should provide more cycling paths/tracks.”

Recurring themes in the comments included:

- Support for existing facilities, such as the Ocean Beach Rd and Inlet Drive paths
- Strong support for more ongoing maintenance of existing paths and trails, including surfaces
- Marking dedicated bicycle lanes on all arterial

- “Dual Use paths are not suitable for riding for fitness. Safer cycling would encourage more people to ride into town”
- Strong support for more shared use paths
- Managing storm water on some paths - Inlet Drive, Ocean Beach Rd, Zimmerman St, Community Park

Specific Route Suggestions

- Very strong support for upgrading Mokare Heritage Trail around the river
- Very strong support for shared use path to Hospital and Golden Hill Steiner School
- Invest in Rail Trail from Ocean Beach Rd to Mt McLeod Rd to link with William Bay Road

- Shared use paths at top end Hardy Street
- Shared use path on Peace Street between Mt Shadforth Road and Jamieson Heights Roundabout
- Cycle path on Mt Shadforth Rd
- Upgrade / maintenance of Poison Point track
- Shared use path to Lights Beach
- Maintain surface of Ocean Beach Rd path to Weedon Hill
- Shared use path to Agricultural College
- Minsterly Rd loop to Ocean Beach Rd

APPENDIX 3 - DESIGN GUIDELINES

Design Features

On-road bike lanes

Table 4.3: Exclusive bicycle lane dimensions in urban areas

Road posted speed limit (km/h) ⁽¹⁾	Lane width ⁽²⁾⁽³⁾ (m)		
	60	80	100
Desirable	1.5	2.0	2.5
Acceptable range	1.2–2.5	1.8–2.7	2.0–3.0

- 1 The posted or general speed limit is used, unless 85th percentile speed is known and is significantly higher.
- 2 Interpolation for different speed limits is acceptable.
- 3 The width of the lane is normally measured from the face of the adjacent left-hand kerb. The width of road gutters/channels (comprising a different surface medium) should be less than 0.4 m where minimum dimensions are used. The figures in the table presume that surface conditions are to be of the highest standard. Where there are poor surface conditions (see GRD 6A, Appendix B) over a section of road adjacent to the gutter, then the width of the exclusive bicycle lane should be measured from the outside edge of that section.

Source: Austroads (2010b) Table 4.17.

Figure 4.1: An example of an exclusive bicycle lane



Note: Green coloured surface treatments should only be used to increase driver and cyclist awareness of an exclusive bicycle lane, and to discourage drivers from encroaching into an exclusive bicycle lane. The treatment should be used sparingly to maintain its effectiveness. Refer to Section 9.4 of this document and Section 6.6 of GTM 10. Source: Austroads (2010b) Figure 4.24.



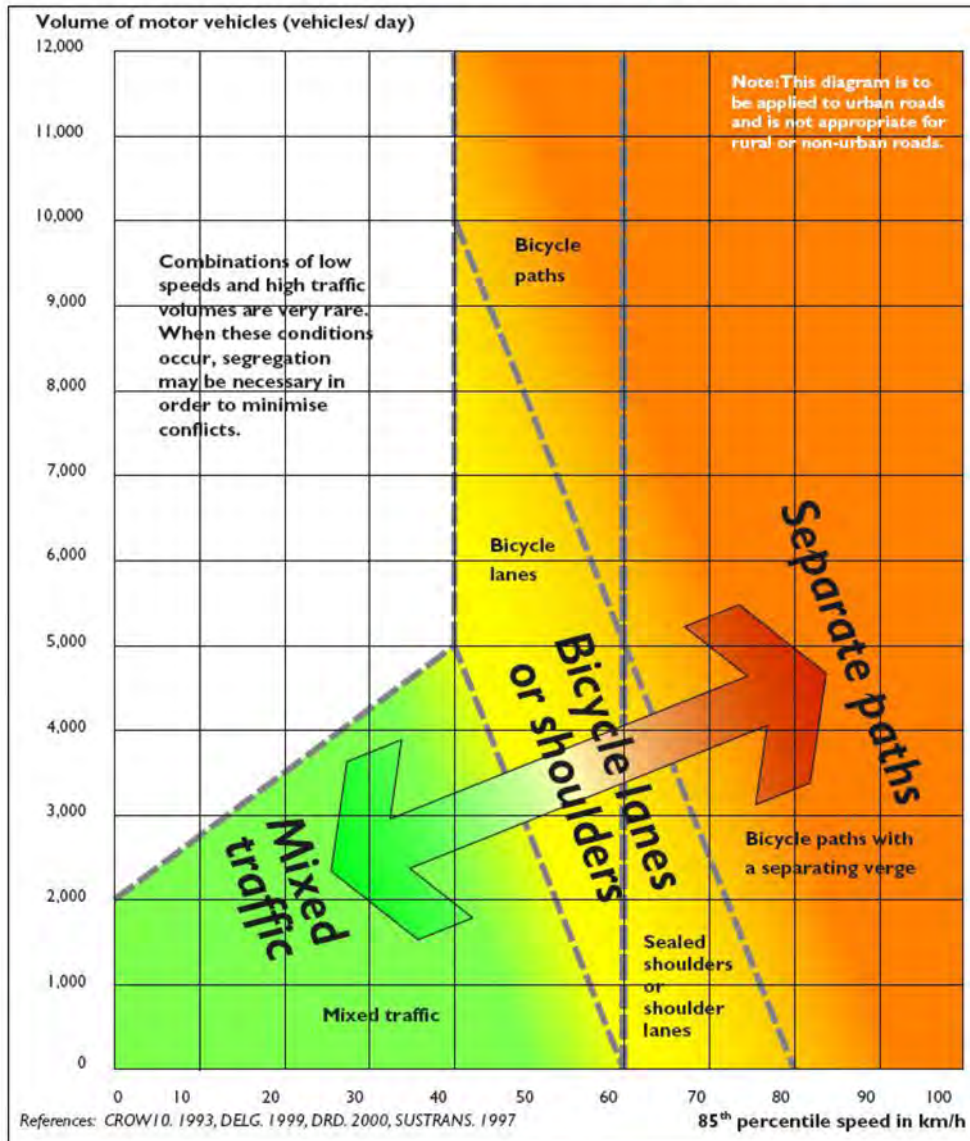
Good practice guidelines suggest that painted bike lanes should be used sparingly - notably at intersections or other areas where bikes could come into conflict with cars.

Figure 2.3: Bicycle lane example



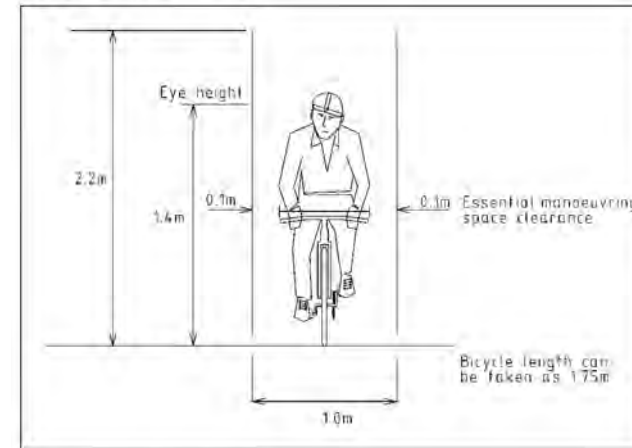
Source: *Guide to Traffic Management* (Austroads 2008a) Figure 7.32.

Figure 2.2: Separation of cyclists and motor vehicles by speed and volume



Source: Austroads (2014a) Figure 4.7, and Roads and Traffic Authority NSW (2005) Figure 3.2.

Figure 3.1: Cyclist envelope



Source: Austroads (2010a) Figure 4.18.

Table 4.2: Clearance to cyclist envelope from adjacent truck

Speed limit (km/h)	60	80	100	100+
Desirable clearance (m)	1.0	1.5	2.0	2.0+

Source: Austroads (2010b) Table 4.16.

Table 4.4: Wide kerbside lane dimensions

Road posted speed limit ⁽¹⁾ (km/h)	Lane width ⁽²⁾⁽³⁾ (m)	
	60 km/h	80 km/h
Desirable minimum	4.2	4.5
Acceptable range	3.7-4.5	4.3-5.0

- 1 The posted or general speed limit is used, unless 85th percentile speed is known and is significantly higher.
- 2 Interpolation for different speed limits is acceptable.
- 3 The width of the lane is normally measured from the face of the adjacent left-hand kerb. The width of road gutters/channels (comprising a different surface medium) should be less than 0.4 m where minimum dimensions are used. The figures in the table presume that surface conditions are to be of the highest standard. Where there are poor surface conditions over a section of road adjacent to the gutter, then the width of the wide kerbside lane should be measured from the outside edge of that section.

Source: Austroads (2010b) Table 4.20.

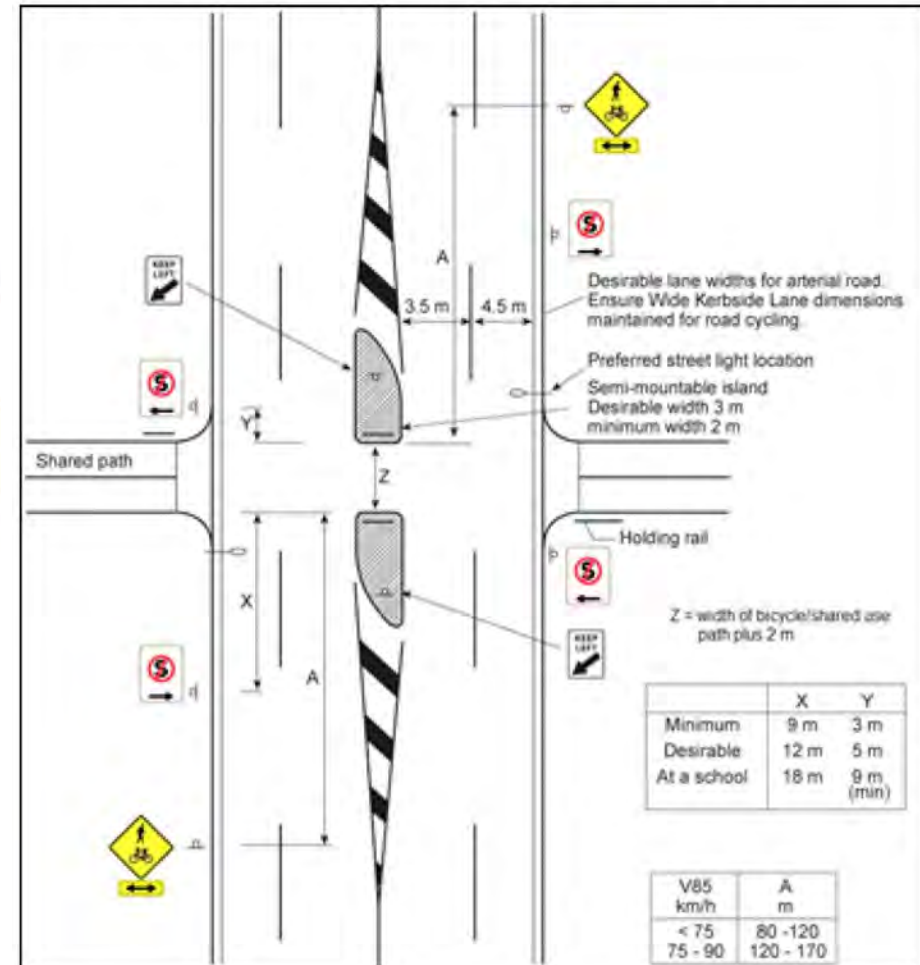
Table 4.6: Bicycle/car parking lane dimensions (parallel parking)

Road posted speed limit (km/h)	Overall facility width (m)	
	60 km/h	80 km/h
Desirable minimum	4.0	4.5
Acceptable range	3.7-4.5	4.0-4.7

Source: Austroads (2010b) Table 4.18.

In order to accommodate a bicycle which is typically 1.75 m long, it is desirable that a refuge be at least 2.0 m wide. However, 1.8 m may suffice in tight situations. Where there are concentrated cyclist demands at certain periods of the day (e.g. secondary schools) a wider and longer storage area may be required within the refuge to provide additional space and separate areas for cyclists and pedestrians.

Figure 7.8: Example of a cyclist and pedestrian refuge at a mid-block location



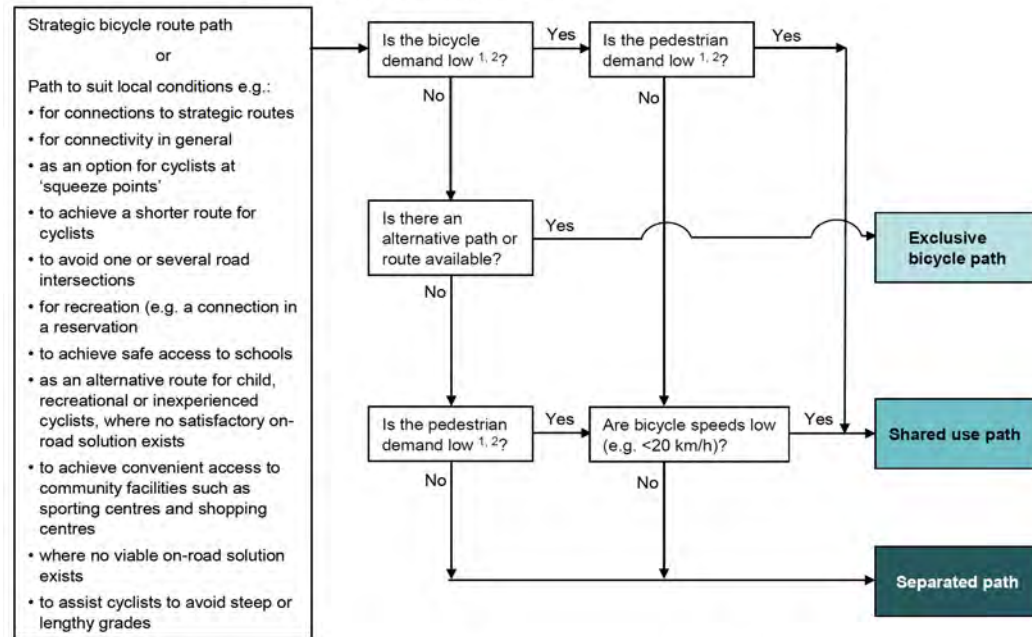
Notes:

Where required, tactile ground surface indicators should be provided on paths and ramps in accordance with AS/NZS 1428.4.1-2009 and jurisdictional guidelines.

This figure is identical to Figure 9.2 of GRD 4 except that an error has been corrected in the definition of dimension 'Z'.

Source: Based on AS 1742.10-2009.

Figure 7.1: Guide to the choice of path treatment for cyclists



- 1 The level of demand can be assessed generally on the basis of the peak periods of a typical day as follows:
 - a. Low demand: Infrequent use of path (say less than 10 users per hour)
 - b. High demand: Regular use in both directions of travel (say more than 50 users per hour).
- 2 These path volumes are suggested in order to limit the incidence of conflict between users, and are significantly lower than the capacity of the principal path types.

Source: Austroads (2009f) Figure 2.1.

Table 7.5: Bicycle path widths

	Path width (m)	
	Local access path	Major path
Desirable minimum width	2.5	3.0
Minimum width – typical maximum	2.5 ⁽¹⁾ –3.0 ⁽²⁾	2.5 ⁽¹⁾ –4.0 ⁽²⁾

- 1 A lesser width should only to be adopted where cyclist volumes and operational speeds will remain low.
- 2 A greater width may be required where the number of cyclists is very high.

Source: Austroads (2009f) Figure 7.3.

Table 7.6: Shared path widths

	Path width (m)		
	Local access path	Commuter path	Recreational path
Desirable minimum width	2.5	3.0	3.5
Minimum width – typical maximum	2.5 ⁽¹⁾ –3.0 ⁽²⁾	2.5 ⁽¹⁾ –4.0 ⁽²⁾	3.0 ⁽¹⁾ –4.0 ⁽²⁾

- 1 A lesser width should only to be adopted where cyclist volumes and operational speeds will remain low.
- 2 A greater width may be required where the numbers of cyclists and pedestrians are very high or there is a high probability of conflict between users (e.g. people walking dogs, roller bladers and skaters etc.).

Source: Austroads (2009f) Figure 7.4.

Appendix H Bicycle Parking Provision Rates

Table H 1 gives an indication of the levels of bicycle parking needed to be provided for various land uses. These bicycle parking provision rates may be used to provide guidance if local standards or data are not available. It should be noted that the application of these types of provision rates needs to be undertaken with caution as local circumstances may often render them inappropriate.

Table H 1: Bicycle parking provision

Land use	Employee/resident parking spaces	Class	Visitor/shopper parking spaces	Class
Amusement parlour	1 or 2	1 or 2	2, plus 1 per 50 m ² gfa	3
Apartment house	1 per 4 habitable rooms	1	1 per 16 habitable rooms	3
Art gallery	1 per 1500 m ² gfa	2	2, plus 1 per 1500 m ² gfa	3
Bank	1 per 200 m ² gfa	2	2	3
Café	1 per 25 m ² gfa	2	2	3
Community centre	1 per 1500 m ² gfa	2	2, plus 1 per 1500 m ² gfa	3
Consulting rooms	1 per 8 practitioners	2	1 per 4 practitioners	3
Drive-in shopping centre	1 per 300 m ² sales floor	1	1 per 500 m ² sales floor	3
Flat	1 per 3 flats	1	1 per 12 flats	3
General hospital	1 per 15 beds	1	1 per 30 beds	3
General industry	1 per 150 m ² gfa	1 or 2	–	3
Health centre	1 per 400 m ² gfa	1 or 2	1 per 200 m ² gfa	3
Hotel	1 per 25 m ² bar floor area 1 per 100 m ² lounge, beer garden	1 1	1 per 25 m ² bar floor area 1 per 100 m ² lounge, beer garden	3
Indoor recreation facility	1 per 4 employees	1 or 2	1 per 200 m ² gfa	3
Library	1 per 500 m ² gfa	1 or 2	4, plus 2 per 200 m ² gfa	3
Light industry	1 per 1000 m ² gfa	1 or 2	–	3
Major sports ground	1 per 1500 spectator places	1	1 per 250 spectator places	3
Market	–	2	1 per 10 stalls	3
Motel	1 per 40 rooms	1	–	3
Museum	1 per 1500 m ² gfa	1	2, plus 1 per 1500 m ² gfa	3
Nursing home	1 per 7 beds	1	1 per 60 beds	3
Office	1 per 200 m ² gfa	1 or 2	1 per 750 m ² over 1000 m ²	3
Place of assembly	–	2	–	3
Public hall	–	1 or 2	–	3
Residential building	1 per 4 lodging rooms	2	1 per 16 lodging rooms	3
Restaurant	1 per 100 m ² public area	1 or 2	2	3
Retail show room	1 per 750 m ² sales floor	1	1 per 1000 m ² sales floor	3
School	1 per 5 pupils over year 4	2	–	3
Service industry	1 per 800 m ² gfa	1	–	3
Service premises	1 per 200 m ² gfa	1	–	3
Shop	1 per 300 m ² gfa	1	1 per 500 m ² over 1000 m ²	3
Swimming pool	–	1 or 2	2 per 20 m ² of pool area	3

Land use	Employee/resident parking spaces	Class	Visitor/shopper parking spaces	Class
Take-away	1 per 100 m ² gfa	1	1 per 50 m ² gfa	3
University/Inst. of Tech	1 per 100p/t students 2 per 100ft students	1 or 2 2	–	3

Notes:

gfa – gross floor area.

Refer to Table 11.2 for Class definitions.

The dash '–' mark in the table indicates that no parking demand information is available, and therefore planners should make their own assessment of the required bicycle parking provisions on an individual project basis.

It is sometimes appropriate to make available 50% of the level of provision recommended in the table at the initial installation stage; however, space should be set aside to allow 100% provision in the event that the full demand for bicycle parking is installed.

Source: Austroads (2008b) Table C2 7 Commentary 2.

Draft Bike Plan

SUMMARY OF SUBMISSIONS

NO.	NAME & ADDRESS	SUBMISSION
1.	Lindsay McCartin- Network Manager Main Roads WA	<p>Main Roads has reviewed the Bike plan and has the following comments;</p> <ol style="list-style-type: none">1. Construction of new paths on South Coast Highway – Main Roads is supportive of the construction of new paths adjacent to the South Coast Highway. Main Roads has a preference to separate paths, however accepts that in some cases additional sealed shoulders will be utilized as bike lanes.2. Any sealed shoulders to be utilized as bike lanes shall meet the minimum Main Roads Standards. Main Roads shall be consulted prior to any proposed design and construction of any bike lanes in the Main Roads road reserve.3. Crossings- Main Roads is supportive of improved crossings and road signage at major crossings. Main Roads will review and install “share the road” signage at locations requested by the Shire on the South Coast Highway.4. Funding of cycling facilities on the South Coast Highway- main Roads would consider the provision of cyclist facilities on the South Coast Highway in the immediate Denmark area when undertaking capital works on the highway. Main Roads have no identified capital works planned for these sections of the South Coast Highway in our current 10 Year network plan. Any funding for facilities planned in the short and medium term on the South Coast Highway would be the responsibility of the Shire of Denmark. Main Roads would need to be consulted with regard to standards and construction.5. Traffic Bridge- Main Roads have no planned Capital Works on the South Coast Highway Traffic Bridge in the short or medium term. Any cycling facilities on the bridge would need to be funded by the Shire of Denmark. <p>Although Main Roads have no identified funds to support the Shire of Denmark Bike Plan, Main Roads do support these initiatives and are able to assist with the signing and line marking and also would be able to assist with the administration costs of any land acquisition on the South Coast Highway.</p>