



Adelaide Hills 20 Year Trail Strategy & Action Plan

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Foreword

This is a strategy document to guide long term trail development in the Adelaide Hills. The purpose is to provide a cohesive approach to trail development, taking into consideration existing trail assets and the needs of the community.

The Adelaide Hills Council lies on the traditional land of the Peramangk and Kaurna people. The strategy recognises that Aboriginal heritage and traditional values are to be respected and celebrated in regards to trail development, signage, education and promotion.

What is a recreational trail?

“A corridor, route or pathway with strong linkages with the natural environment, open space networks and cultural heritage.

Land based trails typically have a trail corridor that is distinguishable from the surrounding landscape. This is normally a visible trail surface, pathway or series of signs, trail markers or landmarks. Regular use of trails will often ensure the trail retains a visible difference from the adjacent environment e.g. walking trails, mountain bike trails, linear parks and coastal pathways.

In most cases, recreational trails are used for non-motorised recreational pursuits such as walking, cycling, horse riding, canoeing or scuba diving. However, in some circumstances, trails can be designed for use by small wheeled vehicles such as motorised wheelchairs to enable access for people with mobility impairments.” - Draft Recreational Trails Strategy for South Australia¹

This document has been written to provide Council with a vision for long term trail development with a focus on linking townships and existing assets together to increase practicality and usability. The strategy focuses on a ‘core trail’ route through the Hills. The authors recognise there are many local trail loops that could be developed in time that respond to community needs however it was not possible to document all of these possibilities in the scope of this strategy.

The trail strategy proposes key routes and trail sections for Council to implement in time with resources available. Each section of trail will require planning approval, further community consultation, environmental impact assessments, and fire and risk management in accordance with relevant approvals and legislation

The Adelaide Hills 20 Year Trail Strategy & Action Plan was made possible through grant from the Department of Planning, Transport and Infrastructure and links directly to a broader trail master planning exercise undertaken by Meechi Road Consultants for Regional Development Australia.

1. Executive Summary

The Adelaide Hills are home to some of the highest quality natural resource assets in the state, sensational views, village townships rich with history, the production of world-class wine and cheese, fruits and vegetables. The Adelaide Hills 20 Year Trail Strategy and Action Plan is designed to guide development of a comprehensive trail network, linking townships for commuting purposes, provide unique experiences for visitors and provide outlets for recreational activity.

This strategy has been developed in conjunction with the Adelaide Hills Trail Strategy Steering Committee to provide a framework for long term trail development in the Hills. Trail opportunities identified in this strategy include a mix of walking, cycling and horse riding trails; some for shared use. This strategy takes into consideration a range of community needs and balances the demand for trails with other priorities such as environmental protection, ongoing management, maintenance, and safety. The vision is underpinned with guiding principles, developed and refined through community consultation. These principles are the key drivers for trail development and include connectivity, economic innovation, regional identity, family friendliness, safety and the environment.

Community consultation (from locals, SA residents and visitors to the State) revelled strong support for trail development in the Hills with a focus on expanding recreational pursuits and tourism offerings. Key concerns from the community surrounded issues of safety, behaviour and etiquette when using trails, and potential impacts to high value biodiversity areas of the Hills.

Based on community feedback, a number of trail sections have been prioritised for development based on existing safety concerns and to capitalise on popular tourism offerings e.g. wineries (see Section 7. Action Plan). Given the long standing vision for the trail network, below are a range of considerations for Council to seek participation on when resources become available to implement trail sections. Stakeholders include State Government representatives, peak bodies and the community.

Considerations Before Implementation

- Understand trail user groups, their needs and opportunities for shared use. Acceptable trail use should extend to trail etiquette and behaviour e.g. determine if dogs on leash or off leash are acceptable.
- Appropriate trail design to accommodate user needs, Council resources and the surrounding environment to make the best use of available land and gradients. Ongoing maintenance and management of the trail network is also a key consideration in relation to trail design (see Section 6.7 Trail Classifications & Design Considerations).
- Linkages to other trail sections and use. In some circumstances, another trail may have a different set of users. Determine how these trails interact, and provide solutions and alternatives to manage any conflicts.
- Develop trail heads with amenities such as parking, toilets and drinking water. Townships are a logical place for trail heads, with proximity to residential areas and Schools.
- Legislation, approvals and standards for trail development.
- Communication of the trail experience through way finding and interpretative signage but also the role of digital technology to promote and engage trail users, particularly tourists (See Section 6.8 Brand & Signage).

2. Context

The Adelaide Hills Council (AHC) is made up of unique peri-urban environments over undulating terrain. The AHC in many respects acts as a gateway between metropolitan Adelaide and the wider parts of eastern South Australia while supporting a variety of land uses including agriculture, residential, retail and conservation parks. It is the mix of these elements that makes trail development over the next 20 years in the Hills important in order to provide sustainable access for passive transport options and recreation.

The Council area is made up of 795km² and is surrounded by a number of adjoining Local Council areas (see below). The AHC also contains a number of conservation/national parks, and forestry areas managed by the State Government. These areas are key to the landscape character and biodiversity value of the region and treasured by the community and visitors.

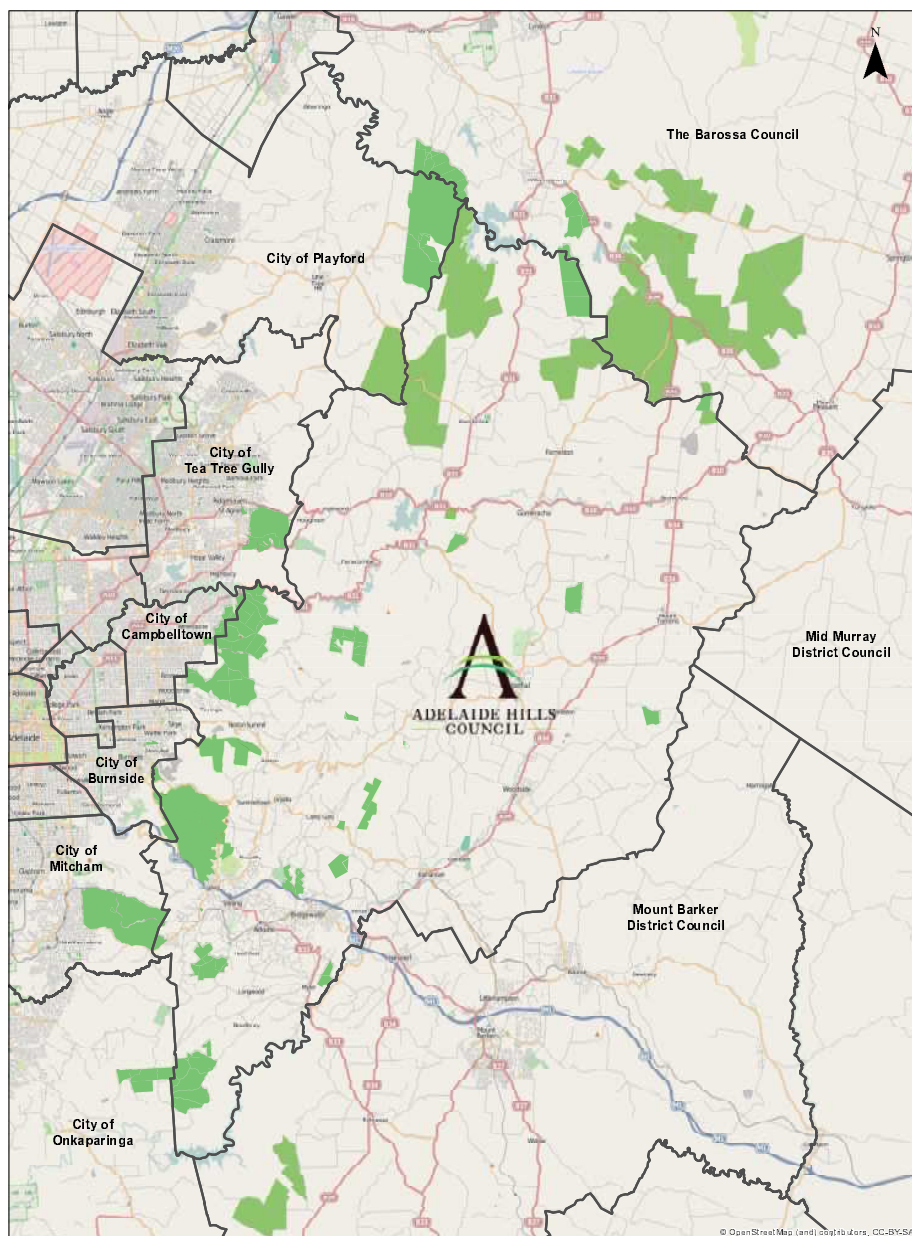


Figure 1: Council Areas

The AHC has a residential population of 39,806 (at June 2011³) and growth is expected to increase to 40,400 by 2016.⁴ The demographic of the Adelaide Hills Council is varied; population density is higher in suburbs of Bridgewater, Crafers, Stirling and Aldgate. The most densely populated area is the Crafers to Bridgewater corridor with a population of over 16,000. Less populated areas include wards of Manoah, Marble Hill, Onkaparinga Valley and Torrens Valley. These wards are more isolated with limited access to public transport. Onkaparinga Valley also supports a slightly higher population of elderly residents.⁵



Figure 2: Council Wards

The Adelaide Hills demographic is seeing a shift to more seniors, retirees and pre-retirees with a reduction in the young work force, parents and home builder age groups, however some growth is also occurring in the 18-24 and 6-11 age groups. This demographic profile is significant when considering trail development as these groups have needs for access to recreational opportunities and to a variety of transport options. In 2006, 12 to 24 year olds made up 17 per cent of the Hills population. Young people living in the hills highlighted a lack of transport as a major lifestyle issue compounded by low income and limited access to local recreation options.⁶ Linking recreational facilities, schools and other popular destinations through trail development can improve independence for these two groups.

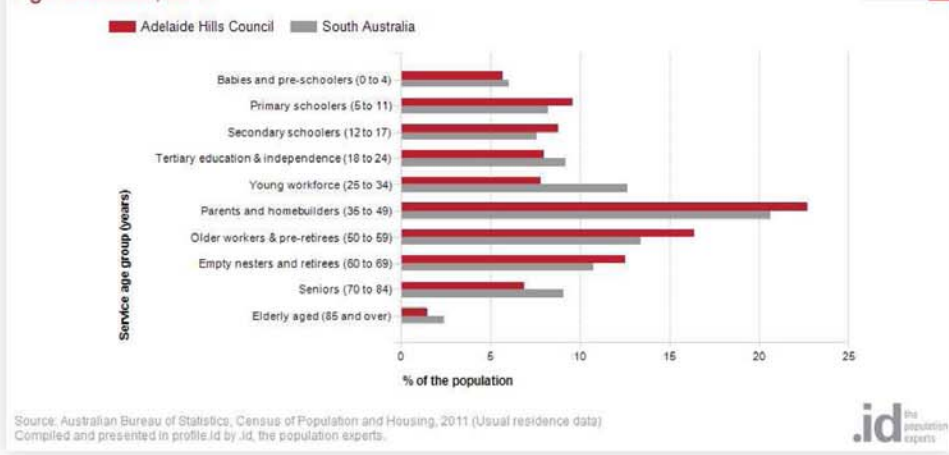
3 Australian Bureau of Statistics, 3218.0 - Regional Population Growth, Australia, 2011, URL: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3218.02011?OpenDocument>, accessed 15/08/12.

4 Adelaide Hills Council (2011), Strategic Management Plan 2011/12 to 2020/2, Adelaide Hills Council, Woodside, South Australia, pg. 5

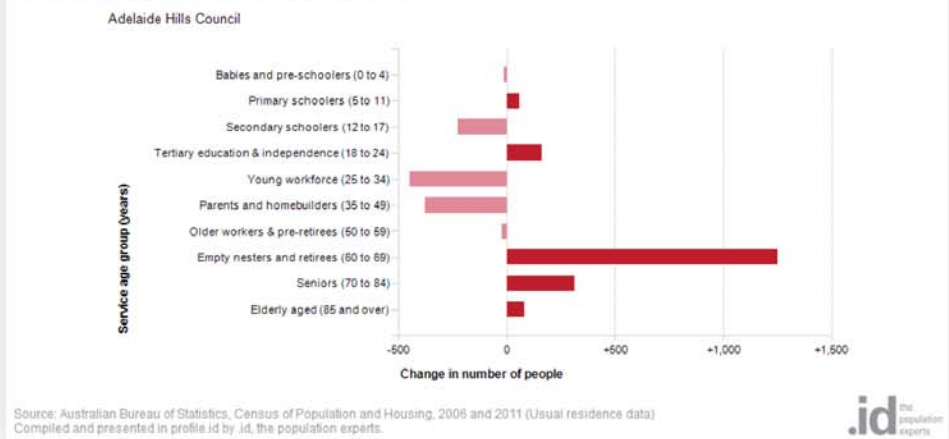
5 Bechervaise, H Seaman (2002), Adelaide Hills Council, Open Space Strategy, Sport and Recreation Strategy 2009-2019, Vol.3, Bechervaise and Associates, Adelaide, South Australia pg. 17

6 Bechervaise, H Seaman (2002), Adelaide Hills Council, Open Space Strategy, Sport and Recreation Strategy 2009-2019, Vol.3, Bechervaise and Associates, Adelaide, South Australia pg. 17

Age structure, 2011



Change in age structure, 2006 to 2011



The AHC Strategic Management Plan, Open Space Strategy, Sport and Recreation Policy, and the Sport & Recreation Strategy all support the development of a connected recreational trail network through the Adelaide Hills. These documents recognise the health and lifestyle benefits of a trail network, but also trail networks as important infrastructure for economic diversification, tourism and transport variety, in readiness for increase transport costs and an aging population. In particular, the Open Space Strategy refers to the development of a recreational trails strategy to link existing trails and to propose new trails, providing access to accommodation, tourist venues, toilets, car parks and scenic points. Based on this, AHC sought the development of a long term trail strategy to deliver on the priorities listed in these documents.

Central to this trail strategy, is the previous and ongoing work of Graeme McVitty, a member of the AHC Sport & Recreation Advisory Group and trail enthusiast who has worked with the AHC for a number of years to plan for and express community support for trails in the area. In August 2008, McVitty with support from Council, prepared a comprehensive 'Adelaide Hills Core Trail' concept report with a number of suggestions on a walking trail route, additional loop trails, popular lookouts and destinations around the Hills area (see Figure 3). Mc Vitty's vision has been updated and adapted in this strategy to create trail experiences suitable for commuting between townships, loops for fitness and recreation, and unique Hills experiences for tourists.

The adjoining Mount Barker Council supports cooperative trail development for the Hills, and has developed a Recreational Trail Strategy which has strong links to the Adelaide Hills through Hahndorf, capitalising on popular tourist attractions. Other key tourist attractions in the AHC include Cleland Wildlife Park, the Mt Lofty Summit, Birdwood National Motor Museum, Gumeracha Toy Factory and Big Rocking Horse, Melba's Chocolate Factory, Mt Lofty Botanic Garden and the Gorge Wildlife Park.

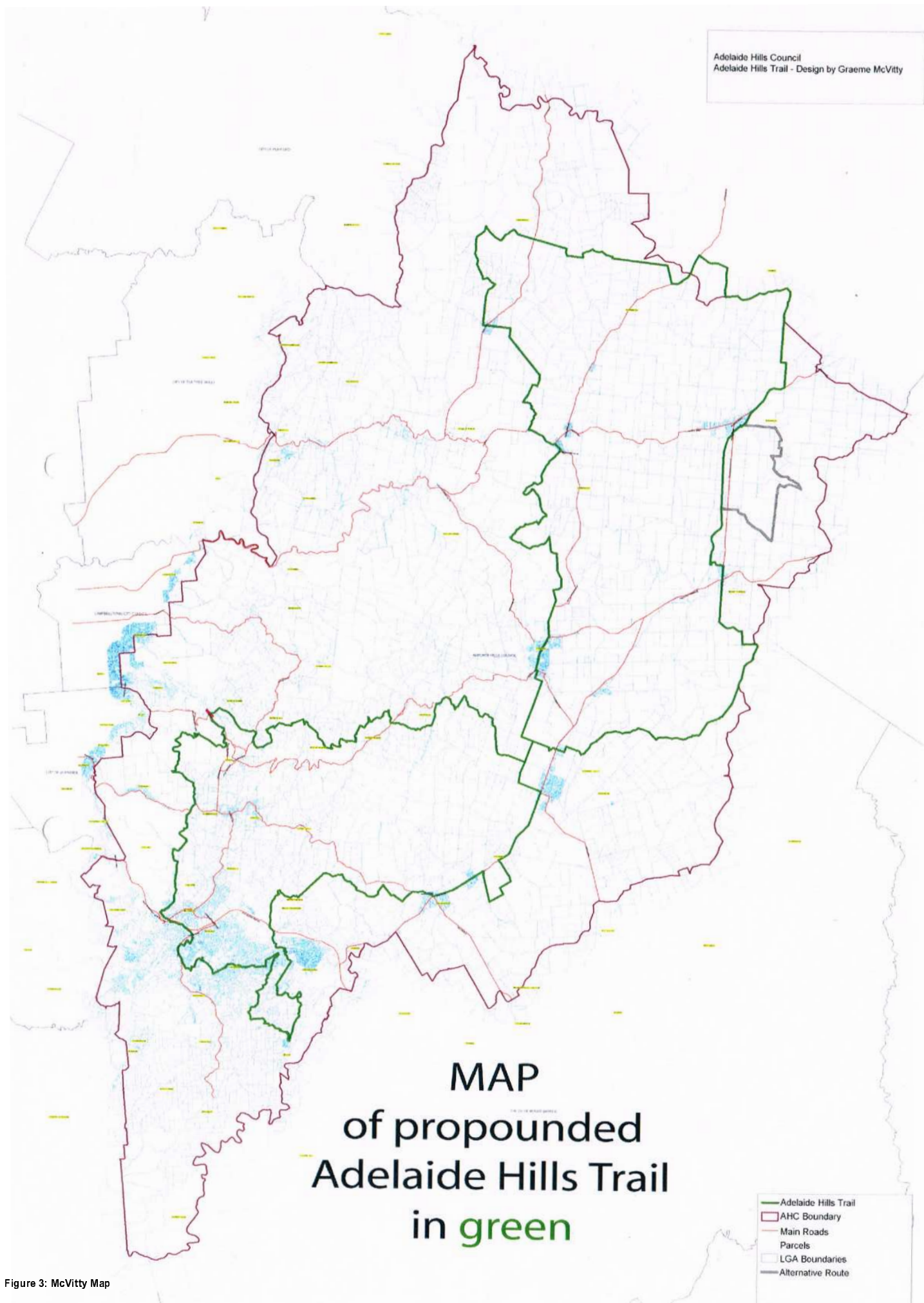
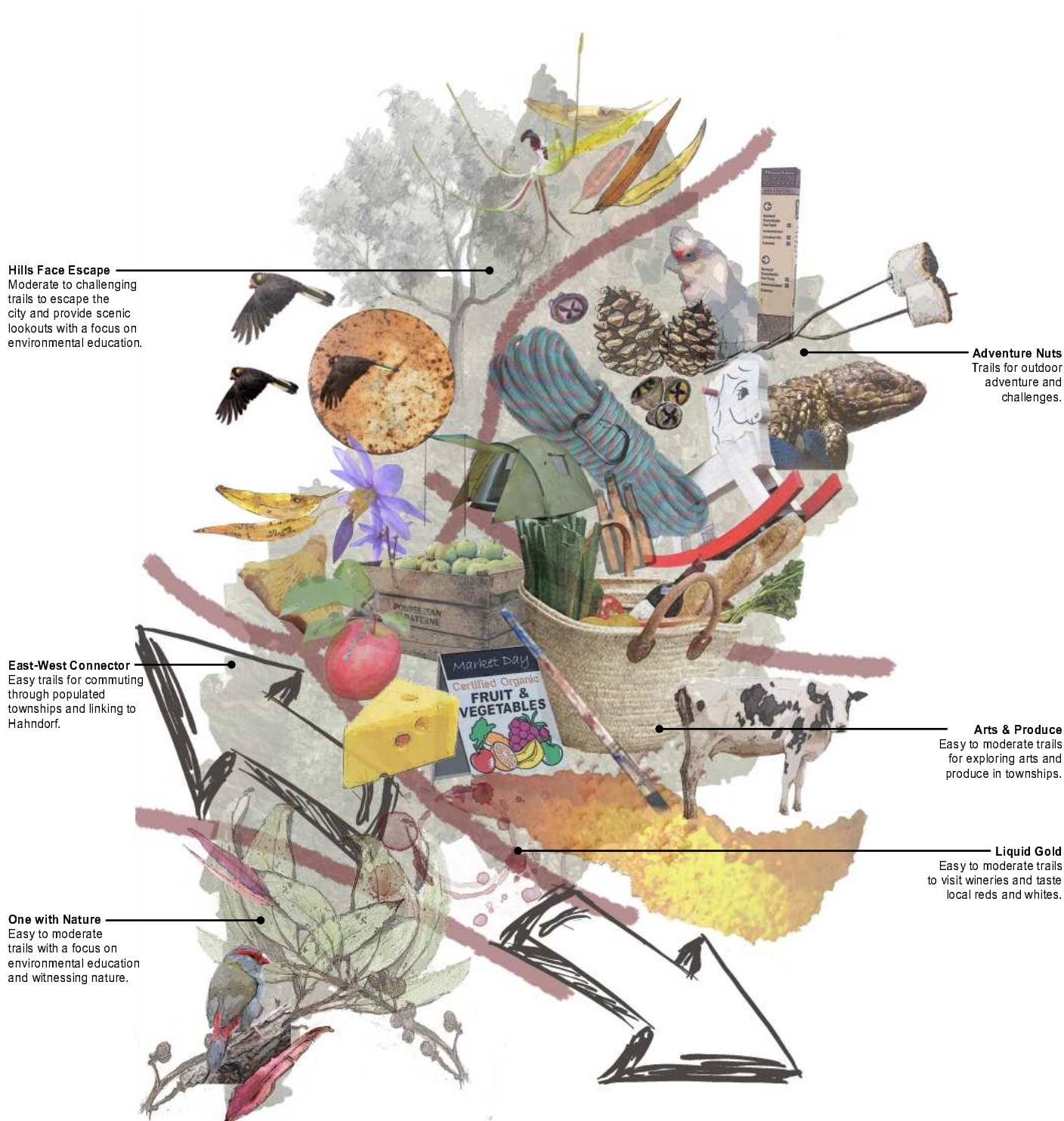


Figure 3: McVitty Map

2.1 Vision

The vision for the Adelaide Hills 20 Year Trail Strategy & Action Plan is to provide a safe and legible network of connected trails for the purposes of commuting between townships, fitness and recreation and to provide unique trail experiences to showcase the Hills for tourism purposes. In order to balance community priorities and provide a truly sustainable trail network, five zones have been established to utilise existing land use, landscape character and terrain. The zones create a variety of trail experiences and guide the most appropriate trail activity in each area, linking to existing tourism offers to provide unique and distinctive trail experiences in the Hills.



Proposed trails will relate specifically to the various land uses in the Hills to support and promote the needs of the surrounding community and environment. In this way visitors experience the Hills 'like a local' becoming intimately aware of unique places, local history, flora/fauna and issues that pose a threat to the Hills e.g. phytophthora and bush fire. An experience based approach allows trail users to have choice and from a branding perspective, positions the Hills with a number of destinations with site specific activities/retail opportunities. For locals, more loops and better connectivity between townships allows for safe commuting options to school or work, and a range of trails with various lengths and gradients for a variety of recreational pursuits.

Recreational trails are also a very effective tool in linking residents and communities to the cultural heritage of the area. The importance of the unique cultural heritage of the larger Adelaide Hills and Fleurieu region is emphasised in the current development of a bid for recognition of the region as a working World Heritage Region. The predominantly agrarian landscapes are a result of the purposes and challenges of original settlement of the area which is still very visible in the region. If successful, the bid will enable sensible development opportunities for local business and tourism that promote the cultural uniqueness of the area. Recreational trails can serve to help connect people and the cultural heritage of the area, and can add to the tourist appeal of the region.

2.2 A Regional Approach

The Adelaide Hills 20 Year Trail Strategy & Action Plan was developed in parallel to Regional Development Australia's (RDA⁷) integrated trail master planning project. The RDA incorporating Adelaide Hills, Fleurieu Peninsula and Kangaroo Island, engaged Meechi Road Consulting to investigate broad scale trail planning for the region to connect townships and communities with a focus on presenting the region in a cohesive and attractive manner for tourism and business development purposes (see figures 4 and 5). This strategy builds upon the regional approach. Developing trails at a regional scale provides a number of benefits including improved access to grant funding and economies of scale. The regional approach considers five key aspects:

Broadening the Local Focus

Councils have focused largely on local community needs in respect of trails with some projects receiving Federal and State support. Examples include the Amy Gillett Bikeway, the Coast to Vines Trail (McLaren Vale) and the Encounter Bikeway (Goolwa to Victor Harbour). These trails are examples of significant trail investment that support tourist attractions and local recreational activities. Most Council plans are focused on local needs. By acting together with a comprehensive plan, gives strength and scale to the development, thereby encouraging greater attraction of visitors and increasing the potential for new development and funding opportunities. As such, a regional trail would become a significant attraction for overseas and interstate visitors, in addition to local recreational utility.

Broadening the Potential User Community

A regional trail promoted as a whole, can cater for the needs of a broad range of interstate and international visitors, adding significantly to the attractiveness of the region. Significant growth in visitor numbers will be encouraged through targeting a low skill and fitness level with modest gradients, regular breaks and co-ordinated rest and refreshment facilities. The regional trail can be promoted as a healthy family activity taken in small parts or as a whole challenge. Local families may undertake a project of completing the whole trail over time, completing one section over a weekend or parts of a school holiday.

Use of Unmade Road Reserves

There are significant numbers of unmade road reserves through the region that could form parts of the regional trail network. These reserves are most often in use by adjacent land holders. The sensitive use of selected reserves as trails is a possible option.

7

Regional Development Australia (RDA) is a partnership between the Australian, state and territory and local governments to support growth and development in Australia's regions. The aim of the RDA Adelaide Hills, Fleurieu and Kangaroo Island is to build partnerships between governments, regional development organisations, local businesses, community groups and key regional stakeholders to provide strategic responses to economic, environmental and social issues affecting the region.

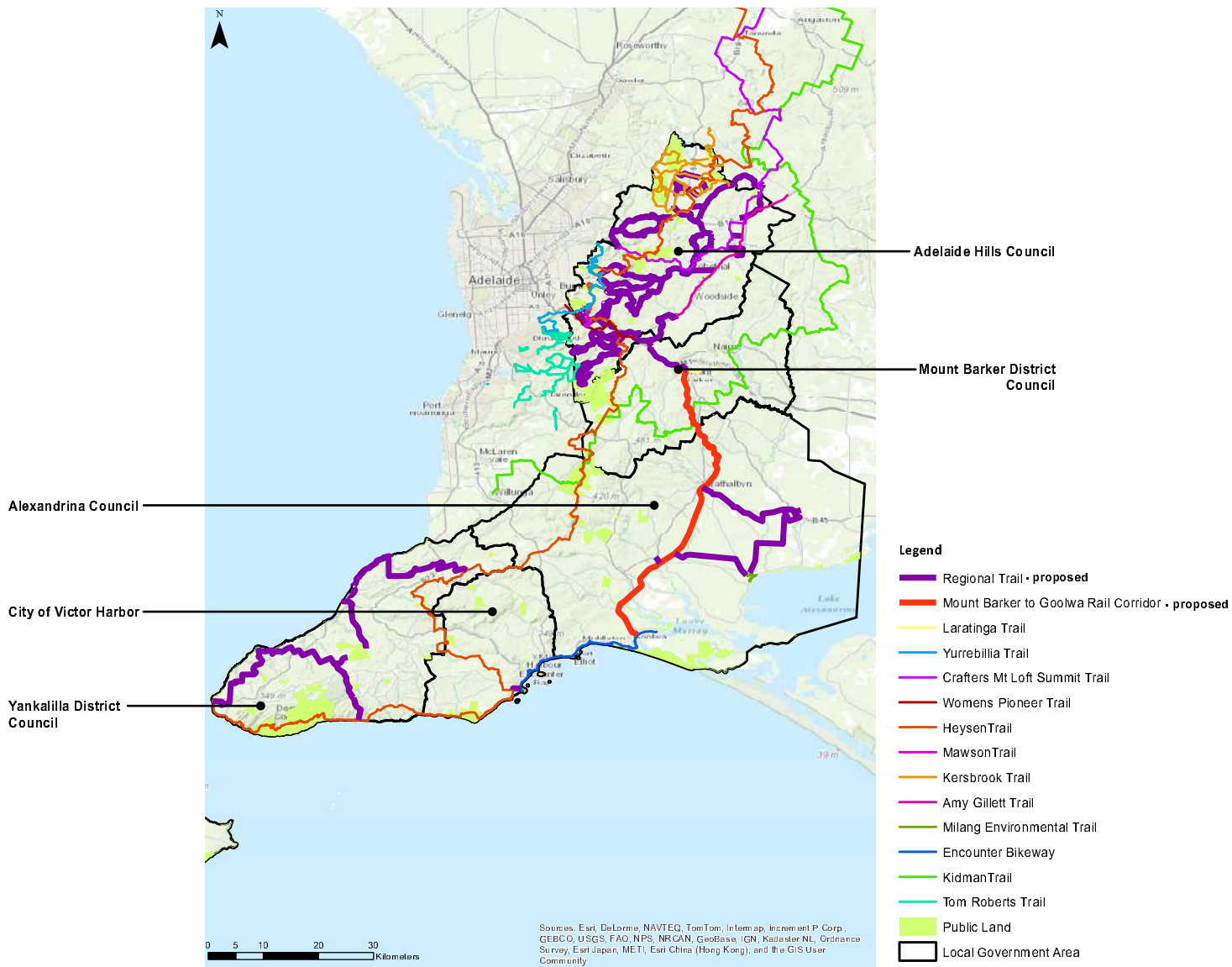


Figure 4: Regional Trail Master Plan - Draft

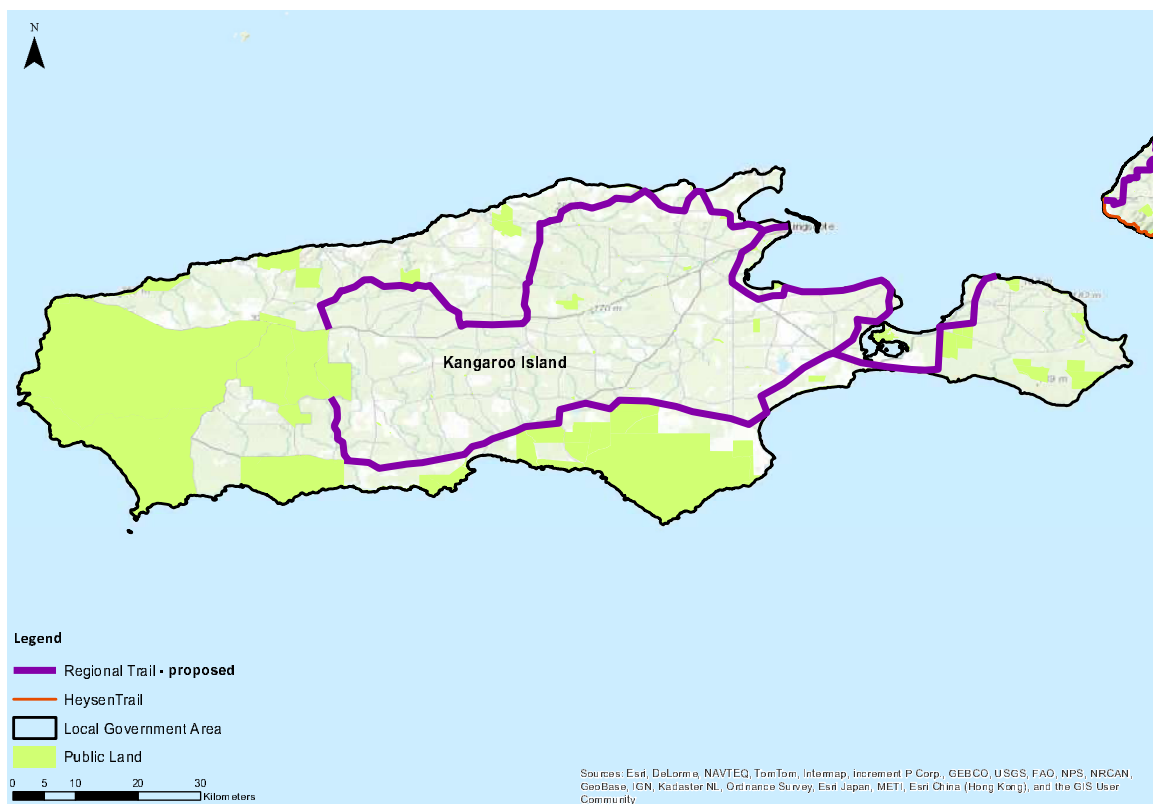


Figure 5: Regional Trail Master Plan - Draft - Kangaroo Island

Integration with Social and Mobile Technology

New technologies and in particular wireless technology provides opportunities for real time trail information and socialisation of the trail experience. Modern navigation and mapping software using mobile devices support safe and accurate identification of routes and any risks associated. This project has established a model database of trail assets which would underpin such systems and allow integration with other tourism based systems.

Consideration of use of the Mount Barker to Goolwa Rail Corridor

There is a national movement to utilise rail corridors to establish rural trails. The Clare Valley's Riesling Trail and the Southern Vales Coast to Vines Trail have been very successful. The Australian Railway Historical Society (SA) branch is a 300 member society that operate the Steam Ranger service along the Mount Barker to Goolwa rail line. The society conducts infrequent trips from June to November from Mount Barker to Strathalbyn and Goolwa. It conducts regular trips for the Cockle Train from Goolwa to Victor Harbor. Although this is a popular facility, particularly in school holiday periods, actual usage numbers are unclear, further consultation can be undertaken to identify opportunities to co-locate a trail along the corridor, linking to the Encounter Bikeway. This would be in line with current community expectations for public land re-use to consider dual use of the corridor for recreational walking and cycle use. This recognises changes in community expectations overtime, that favour public health initiatives and resource efficient approaches to tourist development.

2.3 Aligning Priorities

The development of a recreational trail through the Adelaide Hills responds to a number of priorities outlined across all levels of Government. At a Federal level, the Australian Government has committed to maximising tourism's net economic contribution to the Australian economy and to foster industries and business that promote the principles of environmental responsibility and sustainable development. Australia's National Landscapes Program, managed by Tourism Australia and Parks Australia, is a federal partnership working to achieve environmental, social, and economic outcomes for Australia's most significant natural areas and their surrounding regions. Trail development through the Adelaide Hills can be linked to a wide range of priorities for the Australian Government particularly in tourism, environmental education and sustainable development.

At a State Government level, the strategy responds to many elements of the SA Strategic Plan, in particular priorities related to Community, Prosperity, Health, Ideas and Environment The 30 Year Plan for Greater Adelaide prepared by the Department of Planning and Local Government in 2010, sets out a range of priorities for the state's future to accommodate population and economic growth whilst capitalising on the unique history and natural environment of Adelaide. The plan also responds to challenges brought about by climate change adaptation. The plan supports the development of open space for recreation and the protection and enhancement of the natural environment. The plan also states that "open space can provide safe walking and cycling links between communities and land users". In addition to this rationale, trail development is also supported in the plan through the following policy areas.

Health and Wellbeing: Policy 1

Design pedestrian and cycle friendly areas in growth areas and existing neighbourhoods to promote active communities.

The Economy and Jobs - Services: Policy 35

Provide for sustainable tourism developments across Greater Adelaide, in line with the South Australian Tourism Plan 2009.

Greater Adelaide Open Space System: Policy 1

Provide a Greater Adelaide open-space framework that builds on Metropolitan Open Space System to create quality open space across the region. The open space will feature urban forests and parks, watercourse and coastal and coastal linear parks, trails, greenways and green buffers, and sustainable recreation and sporting facilities.

Greenways: Policy 10

Establish greenways along the major transit corridors, watercourse and linear parks.

The strategy responds and is guided by goals and priorities within the AHC Strategic Management Plan, see below.

Goal 1: A Safe and Connected Community

1.1 Community Planning: Community Needs are addressed through planning for the provision of infrastructure, accommodation, community facilities, programs and services.

- Establish an Infrastructure Development Plan which ensures the provision of new infrastructure (eg playgrounds, footpaths, toilets and stormwater drainage meets community needs

1.2 Community Participation: Opportunities exist for the community to participate in programs and activities to connect, engage and collaborate.

- Provide safe, inclusive and accessible community facilities, including libraries, community centres, leisure infrastructure and informal gathering places, through collaboratively working with the community, service providers, funding bodies and other agencies

1.3 Services, Programs and Infrastructure: the community will have access to a range of services and programs delivered in a coordinated and collaborative manner, and in partnership with agencies and service providers.

- Develop a program to implement key actions of the Adelaide Hills Trails Strategy and identify funding opportunities to assist

1.4 Culture, Arts and Heritage: A strong foundation promoting, supporting and celebrating culture, arts and heritage across the Hills region.

- Support the development and implementation of the Adelaide Hills Sculpture Trail and investigate opportunities to link this with other trails across the Hills region

Goal 2: Sustainable natural and Built Environs

2.1 Natural Systems :To have thriving natural systems achieved through environmental stewardship, water balance management and partnerships.

- Manage, protect and restore native vegetation on Council land in partnership with our partners, volunteers and community

2.5 Landscape Character and Activity Centres: Conservation and enhancement of the district character to maintain the combination of agrarian landscape, scenic beauty, natural character and iconic villages.

- Undertake a District Master plan to identify the integrated spatial relationships between landscape, activity centres, transport routes, residential, heritage, agriculture, biodiversity, visual amenity, rivers and creeks
- Develop a footpath network plan as part of the Infrastructure Development Plan that identifies future pedestrian infrastructure needs based on social factors ; a range of vulnerable users and the places they need to go, major recreational attractions etc.

2.6 Transport and Movement: Encourage safer, greener and more active modes of transport.

- Carry out a pilot study of the provision of bike parking facilities on major public transport commuting routes
- Undertake a program of determining the future status of unmade roads in the district, with a view to identifying those to be retained for social, environmental or infrastructure purposes
- Develop a district Cycle Plan to link to the planned and existing trails network and public transport routes

Goal 3: A Prosperous Economy

3.3 Tourism: A well-promoted, innovative and sustainable tourism industry which complements the Hills setting

- Identify models through which Council can make the most effective use of available resources to encourage, promote and support tourism in the District
- Identify options for branding, marketing and promotion of the Adelaide Hills tourism offer
- Identify ways to functionally and promotionally link accommodation activities with tourist attractors, tourism businesses, farms and other rural activities

Goal 4: A Recognised Leading Performer

4.4 Strategic Planning and Performance

- Proactively plan for the maintenance of infrastructure, facilities, parks and natural assets.

Trail development through the Hills is further supported by the AHC's Sport and Recreation Policy, Sport and Recreation Strategy, and the AHC's Open Space Strategy (prepared by Bechervaise and Associates).

3.5 Recreational Trails Network

Development of a recreational trails strategy would be consistent with the recommendations of other recent strategic planning reports, including that of the SA Government Recreational Trails Working Party. It is recommended that the Council seek funds for the detailed planning of a recreational trails strategy, which would involve the linking of digitally mapped trails (existing and proposed), with attraction nodes such as accommodation, tourist venues, toilets, car parks and scenic points.

“Sport and recreation contributes significantly to the Adelaide Hills being a vibrant and active place for all who live, work and visit the area, as well as making a major contribution to the cultural and social wellbeing of our Community. The economic importance of sport and recreation in the Adelaide Hills is also significant through tourism and event based visits.”

2.4 Benefits

The potential benefits associated with the Adelaide Hills 20 Year Trail Strategy & Action Plan are wide reaching and include;

- encouraging increased physical activity and healthy lifestyles,
- improving community safety,
- reducing traffic congestion,
- reducing the transport related carbon emissions of Adelaide Hills residents,
- protecting biodiversity by utilising low quality areas for high impact trails,
- identifying important historic sites and local stories,
- encouraging increased tourism to the Adelaide Hills to support economic development and diversity, and,
- providing education opportunities through an interpretative signage strategy.

Good quality, integrated trails can have a number of positive social, economic and environmental outcomes for long term sustainability. Passive recreational activities such as walking, cycling and horse riding are not only pleasurable and healthy ways to travel, these modes of transport respond to a host of pressing issues facing Australia and the Adelaide Hills. In particular, traffic congestion, the cost of maintaining transport networks and the increasing rate of obesity and lifestyle related health issues.

Developing integrated trails is increasingly important to encourage healthy and active lifestyles. Safety is a significant concern for individuals when considering passive transport options. Well designed off road trail networks will provide a safe and desirable transport corridor for the community, in particular the East–West Connector, where narrow roads and high use causes conflict. Globally, physical inactivity is estimated to cause two million deaths each year, representing 10-16% of cases of breast and colon cancers, diabetes and over 20% of heart disease.¹¹ In Australia, 16,000 deaths each year can be attributed to physical inactivity.¹² In 2007/08 one quarter of all Australian children aged 5-17 were overweight or obese, and 61% of adults were overweight or obese.¹³ Obesity can affect productiveness at work and the ability to participate in family and community activities. The cost to the health sector to treat obesity related illness in 2008 Australia wide was \$58.2 billion.¹⁴ In the same year the direct impact on the Australian economy related to physical inactivity was estimated at \$13.8 billion.¹⁵ Regular physical activity is key to reducing obesity, cardiovascular disease, type 2 diabetes and some forms of cancer. Physical activity can also improve mental wellbeing by reducing feelings of stress, anxiety and depression. An increasing number of Australian's are interested in walking and cycling for recreational pleasure and exercise, in 2008 over 1.9 million Australians were cycling.¹⁶ Connected recreational trail facilities offer opportunities for more regular physical activity in getting from a to b, recreational pursuits, opportunities for social interaction and organised community events.

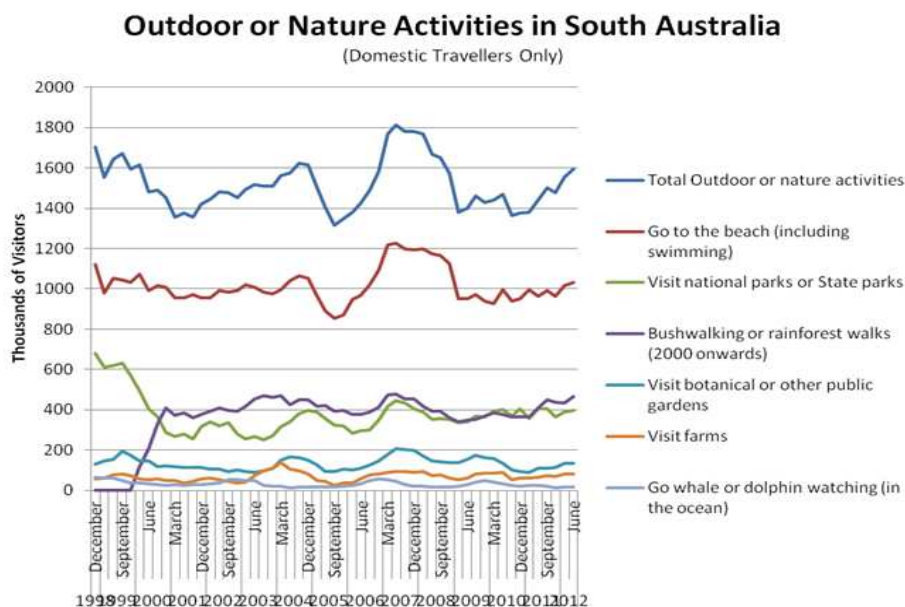
Choosing to walk or cycle locally is becoming a more attractive option for individuals as fuel prices and the cost of maintaining a vehicle increase. In 2004, it was estimated that the cost of maintaining and operating a bicycle were 5% equivalent cost to maintaining and operating a car.¹⁷ It is reasonable to assume petrol prices will continue to rise and more and more people will turn to alternative forms of transport, such as walking and cycling for local trips. Switching to walking and cycling can also reduce carbon emissions. Between September 2008 and 2009, transport was responsible for almost 15% of Australia's carbon emissions, a total of 79 Mt CO₂-e and an increase of 5% since 2000.¹⁸ As zero emission modes of transport, encouraging cycling and walking should be key components of any emissions reduction strategy.

- 11 World Health Organisation: Information sheet on physical activity. URL: http://www.who.int/dietphysicalactivity/media/en/gsfpa_pa.pdf, accessed 09/08/12
- 12 Medibank Private (2008) The cost of physical inactivity. URL: www.medibank.com.au/Client/Documents/Pdfs/The_Cost_Of_Physical_Inactivity_08.pdf, accessed 09/08/12
- 13 Australian Bureau of Statistics (2009): Australian Social Trend – Children who are overweight or obese Cat. no 4102.0. URL: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4102.0Main+Features20Sep+2009>, accessed 09/08/12
- 14 Australian Bureau of Statistics (2007) 4842.0.55.001 - Overweight and Obesity in Adults in Australia: A Snapshot URL: <http://www.abs.gov.au/ausstats/abs@.nsf/Products/B2B67E82EFA3EB2ACA25789C0023DAB9?opendocument#footnote2>, accessed 09/08/12
- 15 Medibank Private (2008) The cost of physical inactivity. URL: www.medibank.com.au/Client/Documents/Pdfs/The_Cost_Of_Physical_Inactivity_08.pdf, accessed 09/08/12
- 16 Victoria Transport Policy Institute (2009) Transportation Cost and Benefit Analysis II – Congestion Costs URL: <http://www.vtpi.org/tca/>, accessed 09/08/12
- 17 Tranter, Paul (2004) Effective Speeds: Car Costs are Slowing Us Down, Australian Greenhouse Office URL: <http://www.environment.gov.au/settlements/transport/publications/pubs/effectivespeeds.pdf>, accessed 17/09/12
- 18 Department of Climate Change and Energy Efficiency (2010) Australia's Emission Projections URL: <http://www.climatechange.gov.au/publications/projections/australias-emissions-projections/emissions-projection-2010.aspx>, accessed 17/08/12

“Even a small reduction in short vehicle trips can generate a significant reduction in emissions; shifting 5% of car trips to bicycle could reduce emission impacts by up to 8%.”¹⁹

Furthermore, motor vehicles are major contributors to the production of air pollutants, such as carbon oxides and sulphur oxides, which are widely known to contribute to chronic disease and respiratory ailments. The Australian Government’s target is to reduce the country’s carbon emissions by between 5% and 15% below 2000 levels by 2020.²⁰

Connected trails can also cater for a wide range of interstate and international visitors. Significant growth in visitor numbers can be encouraged by promoting unique trail experiences, with specific complimentary activities. Increasing tourism to the Hills brings with it a host of opportunities for business diversity e.g. bed and breakfast accommodation, retail and services like tours. Horse riding through the Hills has a long history linked back to early settlement by Europeans and is still a popular activity today. Horse keeping and trail riding activities add to the character of the Hills. This activity offers potential for unique tours, exploring the history of the Hills on horseback. Likewise, targeted mountain bike tours could incorporate skills workshops, long distance tours and competitive events. Friends of the Heysen trail currently run popular walking events and this could be expanded upon in the future. The trail model has proven successful for a number of regional locations in Australia and South Australia to increase tourism e.g. Margaret River WA and Clare Valley’s Riesling Trail SA.²¹ The National Visitor Survey shows a steady increase in overnight trips taken by Australians to South Australia over the last 10 years (see below graph).²² Bush walking activities are increasingly popular with a significant increase over the last few years. The Australian Bureau of Statistics and South Australian Tourist Commission have recorded 1.1 million visitors to the Hills annually.²³



19 Tranter, Paul (2004) Effective Speeds: Car Costs are Slowing Us Down, Australian Greenhouse Office URL: <http://www.environment.gov.au/settlements/transport/publications/pubs/effectivespeeds.pdf>, accessed 17/09/12

20 Department of Climate Change and Energy Efficiency (2012) Reducing Australia’s Emissions URL: <http://www.climatechange.gov.au/government/reduce.aspx>, accessed 17/08/12

21 Rail Trails Australia, The Riesling Trail and Ratter Trail URL: <http://www.railtrails.org.au/trail?view=trail&id=201>, accessed 19/08/12

22 Tourism Research Australia via email to Mark Keough (TRA) 2012

23 Bechervaise, H Seaman (2002), Adelaide Hills Council, Open Space Strategy, Sport and Recreation Strategy 2009-2019, Vol.2, Bechervaise and Associates, Adelaide, South Australia pg. 27

Events such as the Tour Down Under, Bay to Birdwood and the Oakbank races also support visitor numbers to the Adelaide Hills. A connected trail to these and other locations around the hills can support and enhance the tourism experience by identifying places of interest and guide visitors in a structured and logical way to see the best of the hills. Trail development can support existing tourist operators by promoting accommodation and retail outlets, and increase opportunities for new business development or diversification. It is recommended that further consultation with Adelaide Hills Tourism, Tourism SA and the National Trust of South Australia will be beneficial to help understand key tourism sites and branding plans for the future.

Dog walking for recreation and exercise is a popular activity on trails. At the time of writing, the strategy proposes no change to dog access arrangements and that the normal rules around walking dogs (on leash/off leash) will apply as applicable to each area through which trails pass.

Case Study – Albany WA

The town of Albany in WA is a case study of effective cycle tourism through local leadership. Albany has encouraged simple innovations that could be applied through the Hills such as; being welcoming to cyclists, encouraging cyclists to wear cycling attire whilst on the premises, providing free access to water or a tap to refill bottles, providing an identifiable place to lock bicycles either on-site or (if the business is in the CBD) within 100m of the premise, allowing cyclists to use their toilets and allowing cyclists to leave their car at the premises while cycling.

Case Study - New Zealand Cycle Trails

In 2009 as part of an initiative to deal with the global financial crisis the NZ Government initiated an \$80 Million dollar funding partnership to develop a national network of trails (2400KM). The trail development was due for completion in 2013. This project has had significant local impact, especially on local economies.²⁴

“Nga Haerenga, The New Zealand Cycle Trail is designed to showcase the very best of New Zealand’s spectacular scenery, unique culture and first-class Kiwi hospitality. The variety of trails that make up Nga Haerenga cater for everyone whether beginners and families or more experienced and competitive riders. In every case, there are options to stop along the way or head off the beaten track to enjoy the unexpected delights that make up a New Zealand journey. The Government committed NZ\$50 million over three years to build Nga Haerenga. Communities across New Zealand joined us and contributed a further NZ\$30 million to create this world class network of trails.”²⁵

The New Zealand Cycle Trail is being evaluated at time of writing and the results will be published in late 2014. However in January this year a study undertaken by Crown Research Institute Scion showed the median annual recreational value of Rotorua’s Whakarewarewa Forest is \$10.2 Million, well above the \$4.6 Million earned through timber export revenue.²⁶

Signage and branding will form a key part of trail development in the Hills to realise cultural, social, environmental and economic benefits. Trail users can learn about indigenous culture, early European life, local places and characters/stories and endemic flora and fauna. Sections of the trail may provide opportunities for break out spaces and demonstration sites for back yard sustainability e.g. bush food, butterfly and lizard gardens.

24 NZ Cycle Trail URL: <http://www.nzcycletrail.com>, accessed 15/8/12

25 NZ Cycle Trail URL: <http://www.nzcycletrail.com>, accessed 15/8/12

26 New Zealand Herald, Bikes bring more money than wood from Rotorua forest URL: http://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=10779299

2.5 Principles

A series of six design principles were developed to guide the Adelaide Hills 20 Year Trail Strategy & Action Plan. These principles have been developed and refined through community consultation and respond to the key drivers for trail development in the Hills.

1. Connectivity

Increasing connectivity is key to making the Hills accessible and sustainable. Creating links between townships and existing trail assets will help to encourage activity, usability and business development potential of the trail network.

2. Economic Innovation

The trail can support business development and diversity by attracting a wide demographic of visitors to the region for a range of unique experiences. Through sustainable investment and ongoing management, the trail network will provide a physical network to leverage activities and support services.

3. Regional Identity

Through strong branding, physical signage and related technologies the Hills region can be interpreted by visitors and locals alike. Each sector of trail development should be distinct, however feed into an overall branding strategy for region.

4. Family Friendly

The trail strategy supports accessible trails for a range of age groups and fitness levels. Where possible, practical gradients and surface treatments, combined with regular rest points, loops and amenities will increase usability.

5. Safety

Gradients and historic rural road use have led to many narrow roads in the hills. Narrow roads are often the cause of conflict between users and this trail strategy aims to provide a safe off-road alternative using verges and reserves where possible. Some trail sections are intended to be challenging and individual fitness levels should be considered.

6. Environment

The Hills are situated in one of the Australian Government's biodiversity hotspots and encompass a wide variety of ecosystems and significant natural assets that are vital to South Australia's environment and biodiversity. These ecosystems and natural assets bring visitors to the Hills and make townships a desirable place to live. Therefore the trail strategy will undertake sensitive planning with a view to protect these attributes and raise awareness of important ecosystems and any threats to their long term prosperity.

2.6 Methodology

Work on the Adelaide Hills Trail Strategy & Action Plan started in late 2012. A Steering Committee was formed to guide the strategy with representatives from Council staff, Department of Planning, Transport and Infrastructure and the District Council of Mount Barker. Existing trail assets were mapped over townships, Schools and tourism destinations. It showed that existing trails have been built in isolation to showcase natural environments of the Hills, however there were significant gaps in commuting routes, links to townships, amenities and retail offerings.

Using the McVitty vision, a series of maps with indicative trail routes that linked townships was promoted for community feedback linked to an online survey to understand community views and needs related to trail development. During the Tour Down Under event, visitors were also surveyed to give a more holistic perspective. A series of community meetings followed alongside meetings with State Government representatives, peak bodies and interest groups. The response from the community and stakeholders helped to shape the design principles and the planning of the trail strategy. A number of site visits ground-truthed the planned routes and formalised the zoning approach. In some sections of the trail network, use of private land would provide a superior solution. The scope of this document did not allow for direct consultation with owners however these routes have been identified for Council to investigate in the future.

The strength of the trail strategy is in linking existing trail assets together to provide high quality links or loops to navigate through the Hills in a practical, safe and legible manner to compliment tourism offerings.

3. Existing Trail Inventory

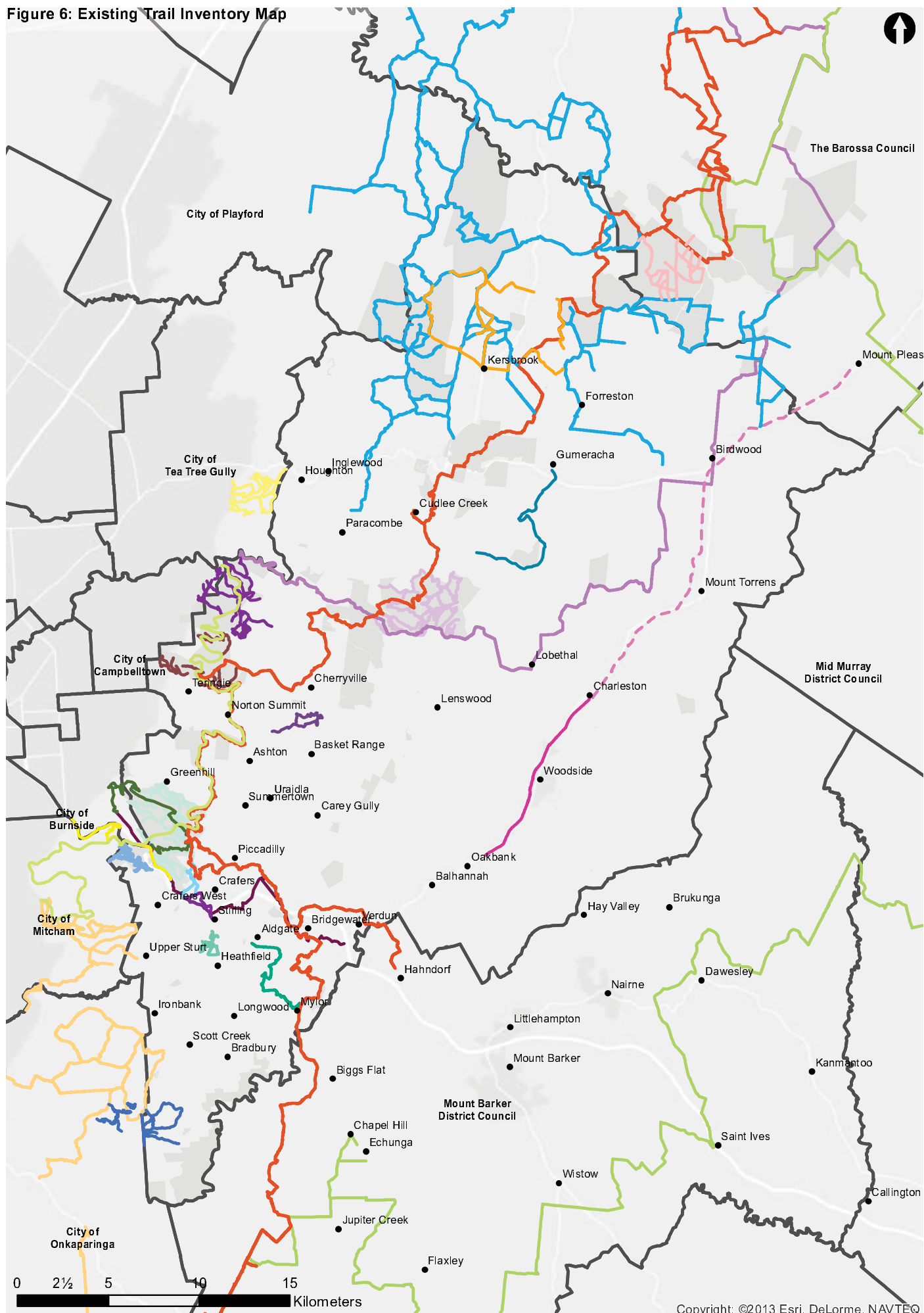
The Hills already has a number of existing trail assets comprising of regional trails e.g. Heysen Trail, and local trails e.g. Aldgate Valley Nature Walk. There are also a number of bordering trail assets which pose good opportunities to link to e.g. Kidman Trail and Tom Roberts Trails. Existing trails tend to focus on the hills face zone where many of DEWNR's conservation parks are located.

Access to the Hills from Adelaide is primarily from the hills face zone and the Crafers Bikeway. Norton Summit Road, old and new, are also used by cyclists to access the Hills, however these tend to be road cyclists uninterested in off-road trails. Some trail users, in particular visitors to the area, tend to drive to a trail head and then spend time at a particular location or on a loop trail e.g. Mount Lofty, Crafers and/or Cudlee Creek. Comparing the existing trail inventory to activities, a majority of trails are for walking, some for cycling (in particular mountain biking) and a few for horse riding, a number being shared-use trails e.g. the Amy Gillett Trail.

Road cyclists prefer to cycle on roads and have a low demand for off-road trails. This however comes with a host of issues regarding cyclist and vehicle conflicts on narrow roads in the Hills, this was a concern during consultation. The focus of the Adelaide Hills 20 Year Trail Strategy & Action Plan is on off-road trails and will not attempt to deal with this issue, only to note that both road cyclists, and drivers of vehicles would benefit from more education and signage to encourage safer practices when using roads in the Hills.

Figure 6 below shows existing trails through the AHC. The map shows that many trails have been developed in isolation from one and other. This strategy does not seek to promote a competing trail network, instead is looking for opportunities to link or connect to existing trails, to create loops and increase usability through townships. This approach has benefits for biodiversity by minimising the footprint and to encourage tourism through discreet loops with specific offerings (see Section 6. Trail Strategy).

Figure 6: Existing Trail Inventory Map



Legend

 Heysen Trail	 Crafters Bikeway
 Mawson Trail	 Crafters to Stirling Trail
 Kidman Trail	 Crafters Mt Lofty Summit Trail
 Amy Gillett Trail	 Mount Lofty Trail
 Amy Gillett Trail - Extension	 Cleland Conservation Park Trail
 Mount Crawford Forest Reserve Trail	 Eagle MTB Park Trail
 Kersbrook Trail	 Stirling Linear Park Trail
 Kersbrook Fitness Trail - Proposed	 Aldgate Valley Nature Walk
 Mt Lofty Walking Trail	 Scott Creek Conservation Park Trail
 Anstey Hill Recreation Park Trail	 Tom Roberts Trail
 Yurrebilla Trail	
 Pioneer Womens Trail	
 Kenton Valley Ambience Walk	
 Black Hill Conservation Park Trail	
 Mount Crawford Forest Cudlee Creek	
 Morialta Walks	
 Laverder Federation Trail - Tungkillo Loop	
 Ashton Shape-Up Trail	

4. Framework

The Adelaide Hills 20 Year Trail Strategy & Action Plan sits within an existing legislative context, supported by a range of strategic plans (listed in Chapter 2.3 Aligning Priorities). Council will lead trail development in conjunction and consultation with peak bodies, relevant state government agencies and the community. A collaborative approach to trail implementation will ensure the best possible outcome.

4.1 Role of Council

In relation to trail development, the AHC provides leadership and performs a number of roles including trail planning, implementation, maintenance and endorsement (as per the Sport & Recreation Policy). Council responsibilities are documented in the Local Government Act 1999.²⁷

Section 6 – Principle Role of Council

To encourage and develop initiatives within its community for improving the quality of life of the community.

Section 7 – Functions of a Council

The functions of a council include:

- (a) to plan at the local and regional level for the development and future requirements of its area;
- (b) to provide services and facilities that benefit its area, its ratepayers and residents, and visitors to its area including general public services or facilities (including electricity, gas and water services, and waste collection, control or disposal services or facilities), health, welfare or community services or facilities, and cultural or recreational services or facilities);

The role of Council is to ensure that trail development meets the expectations and needs of the community, is designed and constructed to best practice standards, kept well maintained and promoted for use. Council must ensure trail development complies with relevant legislation and best practice design, construction and maintenance. Legislation that relates to trail development includes, but is not limited to, the following:

- Forestry Act 1950
- National Parks and Wildlife Act 1972
- Aboriginal Heritage Act 1988
- Local Government Act 1999
- Native Vegetation Act 1991
- Roads (Opening & Closing) Act 1991
- Environment Protection Act 1993
- Development Act 1993
- Recreational Greenways Act 2000

In relation to planning, the Development Act 1993 dictates planning zones for a specific area. Trails may require development approval in accordance with the Act. Consideration should also be given to the trail strategy in the assessment of large scale development applications/proposals to create suitable links to the network, particularly

²⁷ Attorney-General's Department South Australian Legislation (2011) Local Government Act URL: <http://www.legislation.sa.gov.au/LZ/C/A/Local%20Government%20Act%201999.aspx> , accessed 9/8/12

for any new housing developments or retail/commercial sectors.

The Recreational Greenways Act 2000 allows State Government Ministers to enter into land use agreements with willing private owners to create trail corridors. The Act provides trails on private land with land use status and indemnity to the land holder for any public injury. A greenway can be considered if the land is;

- (a) unalienated land of the Crown; or
- (b) land that is vested in or is under the care, control or management of a Minister, agent or instrumentality of the Crown on behalf of the Crown; or
- (c) land held from the Crown under a pastoral lease or under a licence; or
- (d) land that is vested in, or is under the care, control or management of, a council; or
- (e) dedicated land; or
- (f) private land that is subject to an access agreement or an easement in favour of the Minister for the purposes of the greenway.

Council should collaborate with the Office of Recreation and Sport and seek legal advice where necessary when investigating private land access opportunities.

Unmade road reserves often provide good opportunities for trails. Unmade road reserves are managed under the Roads (Opening & Closing) Act 1991. Roads can be opened or closed by a Road Process Order with confirmation by the relevant State Government Minister and public notification in accordance with the Act. Unformed road reserves use and function are outlined in the AHC Unformed Public Roads Strategic Direction and Use Instruction Manual. This manual recognises the recreational and biodiversity value of unmade roads, the manual in conjunction with this strategy will give the Council a methodology to pursue road reserves for trail use.

4.2 Land Ownership

The AHC has a number of large conservation parks, recreation areas and undeveloped road reserves that would benefit from connections to a wider trail network. The Open Space Strategy organises the ownership of these parks and reserves into four categories:

1. AHC Managed Land
2. Community Land
3. Department of Environment, Water and Natural Resources (DEWNR) Land
4. State and Commonwealth Land

Almost 60% of land in the AHC is owned by State and Commonwealth bodies, mainly the Mt Bold catchment and extensive Forestry SA land²⁸. DEWNR owns approximately 27% of land within the council area through the many parks in the Hills area (listed below).²⁹

²⁸ Bechervaise, H Seaman (2002), Adelaide Hills Council, Open Space Strategy, Sport and Recreation Strategy 2009-2019, Vol.2, Bechervaise and Associates, Adelaide, South Australia pg. 27

²⁹ Bechervaise, H Seaman (2002), Adelaide Hills Council, Open Space Strategy, Sport and Recreation Strategy 2009-2019, Vol.3, Bechervaise and Associates,

DEWNR are considered a key stakeholder in relation to the trail strategy and are working with the Council to ensure the best outcomes for regional biodiversity and sustainable trail development.

Popular DEWNR parks in the Hills include (see map);

- Mt. George Conservation Park
- Horsnell Gully Conservation Park
- Cleland Conservation Park
- Mount Lofty Botanic Gardens
- The Knoll Conservation Park
- Montacute Conservation Park

Some parks have an individual Park Management Plan, guiding activities within the park. These plans will help to guide the trail strategy. In areas of high biodiversity value, the trail will seek to deliberately avoid connections or disrupt road side vegetation. The strategy has prioritised the use of public land for trail development and sought to link existing recreational facilities, schools and retail centres together. In some cases identified in the maps below, a trail alignment on private land may offer better gradients, access or connections. In this case, the opportunity has been identified only as an option for Council to explore.

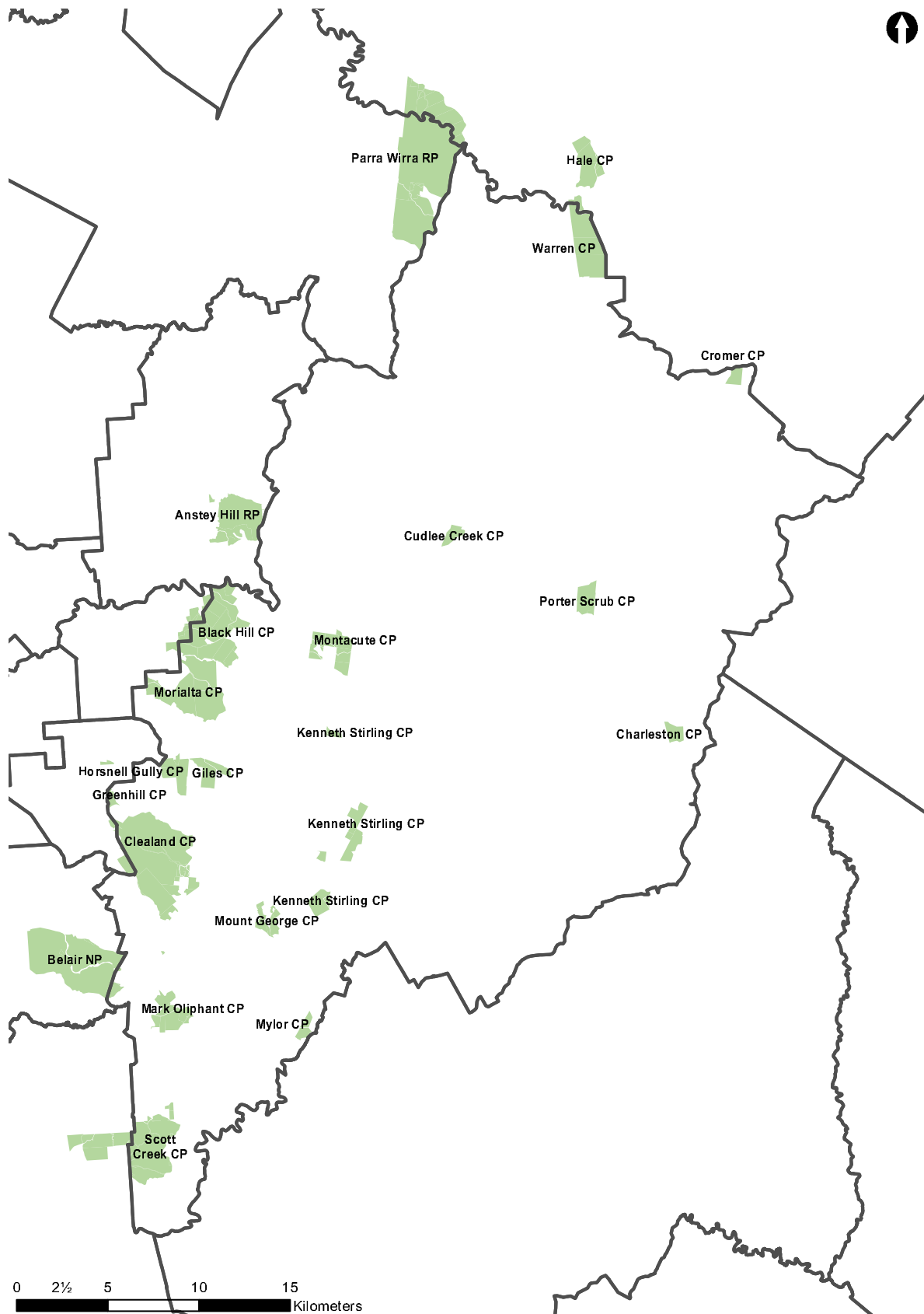


Figure 7: DEWNR Land Ownership Map

5. Community Views

The community have greatly helped to shape the Adelaide Hills 20 Year Trail Strategy and Action Plan through enthusiastic discussion, submitting ideas for trail routes and sharing intimate knowledge of the Hills. In order to begin engaging with the community a draft set of design principles and a mapping document were sent out for public consultation. It was important for the strategy to receive a range of feedback from locals, visitors (Adelaide based visitors and interstate visitors) and where possible input from international guests. Draft design principles and maps were promoted and distributed to the community through a number of avenues, these included;

1. the Council website,
2. posters (200) displayed in local shops,
3. flyers (4000) distributed at Tour Down Under events (Stirling and Lobethal stages), Crush festival at Hahndorf, local markets (including Uraidla, Mount Pleasant and Stirling), Australia Day celebrations at Ashton, Mylor, Gumeracha and Woodside,
4. information and maps sent via email and hardcopy to peak bodies, State Government, Schools and community groups, and,
5. a notice in the Courier newspaper.

The methods for collecting feedback included;

- An online survey (327 responses).
- Written feedback to Council staff (88 responses).
- Community workshops and meetings with Council staff, peak bodies, State Government and the community (5 workshops with approximately 60 attendees overall).

There was keen interest and support for trail development in the Hills from both locals and visitors. In particular, linkages between existing trail assets and trails for recreation and fitness were the most desirable. The feedback indicated that locals and visitors alike could see huge potential for trail development in the Hills to spur tourism.

Some specific concerns raised during initial consultations included possible environmental impacts, safety, privacy and land ownership. These topics will be explored in more detail below. Some lessons learnt during the initial consultation were that internet based methods of feedback were difficult for those that do not have web access and that mapping documents needed to be split into smaller sections to allow for faster and easier downloading. The community also commented that timeframes for consultation felt rushed, particularly for those working full time. This led to the consultation timeframe being extended and more workshops put on for the community to attend. The stakeholders that provided input and feedback on the trail strategy to date through workshops and written correspondence include;

Internal

Elected Members

Adelaide Hills Council Staff

Graeme McVitty, member of the Recreation & Sport Advisory Committee

Peak Body

Bike SA

International Mountain Biking Association (IMBA) – Australia

South Australian Mountain Biking Association (SAMBA)

Horse SA

Orienteering SA

Adelaide Hills Tourism

State Government

Department of Environment, Water and Natural Resources
SA Water
Adelaide & Mount Lofty Regions Natural Resource Management Board

Community Groups

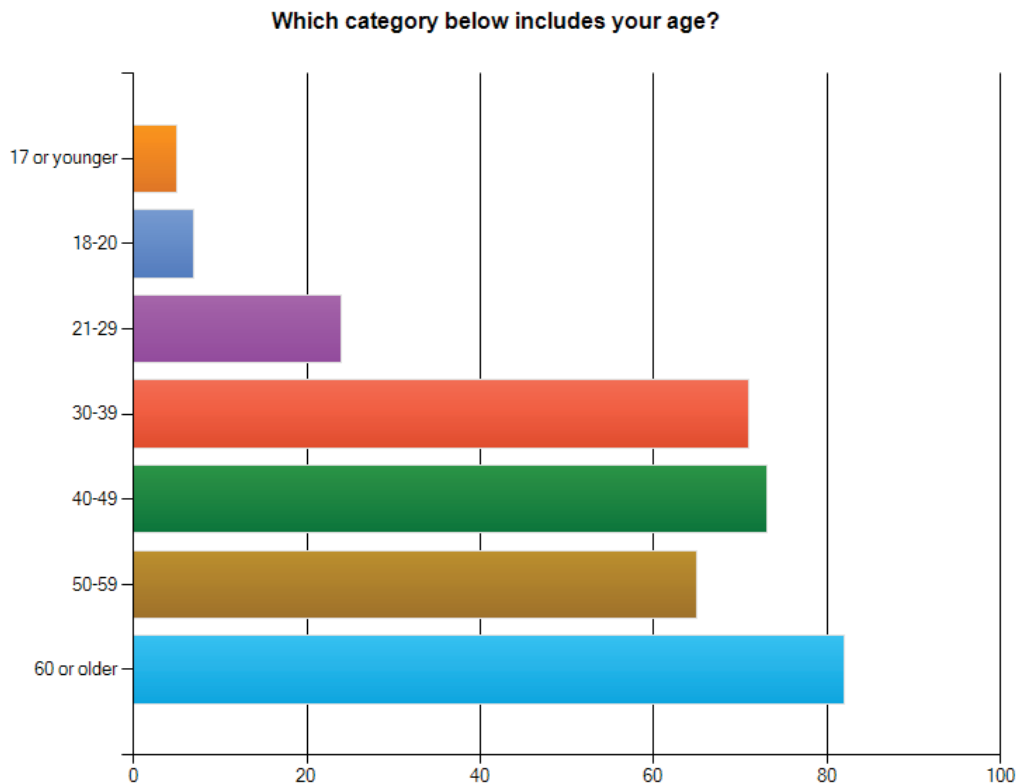
Friends of the Heysen Trail and Other Walking Trails
Aldgate Valley Landcare Group
Kersbrook Residents Association
Upper Sturt Reaches Landcare
Minimal Disturbance Bushcare
Mt Torrens and District Community Association
Friends of Scott Creek Conservation Park
Bushcare
Friends of Moors Road
Sixth Creek Landcare Group
Teringie Resident Association
Lobethal Community Association
Lenswood & Forrester Community Association
The Adelaide Trail Horse Riding Club
North East Hills Environmental Conservation Association
Friends of Mark Oliphant Conservation Park
South Australian Recreational Trails Inc.
SA Trail Running Committee
Scott Creek Progress Association
Natural Trust of South Australia

Many landowners with a particular interest or concern attended workshops and provided written feedback to Council staff. All input was gratefully received and has been essential in the development of the strategy. Council has a great opportunity to benefit from the energy and enthusiasm shown during consultation to help deliver the trail network by collaborating with locals, State Government and peak bodies. Many of the community groups above expressed a desire to be part of detailed design, ongoing management and maintenance of trails. This is a positive outcome of the consultative process and if managed well throughout implementation, will provide the trail network with long term supporters and custodians.

“Brilliant initiative to encourage healthy recreation in the hills. May also serve as a draw card for tourism.”

5.1 Consultation & Feedback

Feedback was collected through responses to an online survey, written responses and direct feedback during workshops and meetings. Of the responses received through the online survey, 44% were Hills residents. A majority of survey respondents were in age brackets between 30-60+. This may be due to the Hills demographic and/or attendance profile at targeted events. The largest response age bracket was 60+. This is significant when considering interest in trail use, seniors are increasingly interested in passive recreational activities, and this age group is a growing demographic. A quarter of respondents to the online survey worked in the Hills. This is important when considering the potential benefits of linking townships with trails for safer commuting to work.



“I think it’s a great idea and if more people can feel safe they will enjoy their environment - this can only have positive effects on human health and the health of the environment we live in.”

“The idea of developing better trails is a really good one, we see increasing numbers of people in our age group (over 60) who like this concept. As we get older, (we) want to keep being fit and healthy, I believe that we will use trails more.”

“I believe that The Adelaide Hills has the potential to grow as a recreational destination both for locals and visitors. I think that strategies such as the trail plan if executed well and incorporated into the natural surroundings could attract visitors to the state and to the Hills towns.”

Walking and Running in the Hills

Walking and running were the most popular activities reported, with a majority of respondents walking or running for recreation and leisure, for fitness and to commute. The SA Trail Running Committee applauded the Council for developing a strategic plan related to trails and made a number of suggestions to improve the draft, some of these include:

- Give major (and minor) trails a name
- Signpost regularly, particularly at intersections of other trails
- Include information boards for historic locations or sites of aboriginal significance
- More loops could be created for running by utilising both proposed and existing trails in conservation parks
- Support for new trails in unused road reserves
- Toilet facilities are important
- Indicate trail users
- Would like to discuss the possibility of undertaking regular trail maintenance

Cycling in the Hills

Cycling was the second most popular activity reported with a focus on recreation and leisure and fitness. 45 respondents reported cycling for commuting purposes, higher than walking and running. Key concerns from cyclists were around safety on roads and the lack of connectivity between existing mountain bike parks.

“I’m really glad to hear about this. Adelaide Hills is a great place to cycle, is one of the reasons I live where I live. At the moment for cyclists wanting to explore the hills, you are more or less forced onto the main roads and they are often busy with cars, and that puts people off. Would be great to have alternatives to meander around.”

Horse Riding in the Hills

There was a limited response from horse riders in the online survey however there was support for well-designed shared use recreation and leisure trails. Many respondents provided comments about horse riding in the Hills, and expressed concerns for the safety of horses but also for the impacts horses have on trails and surrounding vegetation. Horse SA were represented at all the workshops and provided a detailed list of feedback on the trail alignments which were valuable.

“One of the challenges to our hobby is the lack of good trail riding and the dangers associated with speeding traffic along roads. Horse riding has changed greatly over the last 30 years due to increase in traffic and population.”

Existing Trail Facilities in the Hills

Almost 75% of respondents reported using a designated trail for their chosen activity. There are many well used and loved trails in the Hills namely the Heysen Trail, Amy Gillett Trail, Waterfall Gully, Pioneer Women’s Trail, Cleland and Mount Lofty Trails. There was a general trend towards the use of a designated trail due to safety concerns with existing roads. Respondents said they felt “very safe” or “reasonably safe but careful” on designated trails. The lack of connectivity and loops in the Hills was frequently raised throughout consultation. Existing trails are linear in nature or have been planned as ‘adventure’ routes, taking users off the beaten track and away from townships. Many respondents called for more connectivity with links to retail offerings to buy lunches, restock water supplies and visit bathroom facilities.

Another common subject was the behaviour of users on trails. A number of concerns were raised by community members about illegal trail use e.g. bikes on walking tracks and dogs off leash. There were also a number of near-miss stories and reported road rage between walkers, cyclists and car drivers in the Hills. The passionate response received by the community highlights the need for designated trails to help move walkers, cyclists and horse riders off vehicular roads which are becoming increasingly busy.

“With younger children we would love some off-road interesting trails! I do not feel safe taking them on the roads.”

“It would make it cheaper and better to live in the hills giving people a better option of transport.”

Connecting Townships

An overwhelmingly positive response was received to the suggestion of more off-road, well signed trails between townships (79.4% in support). Another 11.1% had very specific concerns about trail development for example the impact on bio-diversity and therefore would only use trails if land-use and environmental protection was well thought-out, including provisions to reduce the spread of phytophthora.

“What a fabulous lifestyle and visitor amenity this would be. More people out enjoying nature more often”

“It depends on whether the trails interfere with the efforts my community has made to restore and maintain biodiversity. I would not use a trail that impacts on high diversity areas and I strongly oppose bikes and horses using such trails.”

The Draft Mapping Document

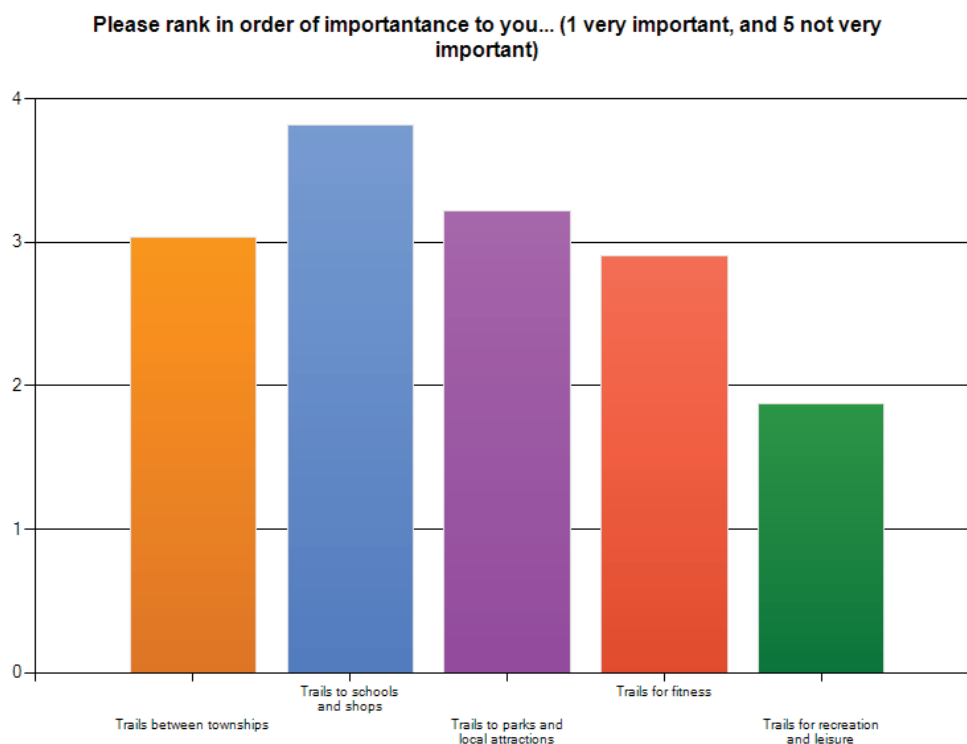
Most respondents (196) said that no other destinations/townships are sought and that the draft covered the main tourist destinations and populated townships, some improvements were suggested to the alignment based on local knowledge. When asked in the future what activities respondents would like to use the trail for, walking was most popular 71.5% next to cycling 62.3%. Other interests included skate boarding, bird watching, dog walking, rollerblading and gophers. There were concerns raised that trails sometimes are, and could be used in the future for motorised trail bikes and that this activity needs more policing. There were some specific areas of concern related to environmental protection and biodiversity in the areas of Aldgate, Cherryville and Scott Creek. Revised trail alignments have taken these concerns into consideration and input from community members has assisted the development of the trail strategy in this respect.

Planning and Priorities

When asked to rank the importance of trail use, trails for recreation and leisure were most popular, followed by trails for fitness, trails between townships, trails to parks and attractions and lastly to schools and shops. In particular, town to town priorities were identified through consultation and these include connecting Hahndorf and Verdun and Lenswood with Forest Range. Uraidla and Summertown were identified by survey respondents as having very few facilities for walking. There was also strong support voiced from the Mount Torrens community for more trail facilities around the township. Links were also requested to Onkaparinga and Tea Tree Gully.

From bordering Councils, the City of Tea Tree Gully are currently working on a trail development and are interested in potential links to the Hills. Campbelltown City Council are also interested in developing further links from Norton Summit to Magill and Teringie. These links have the potential to feed into the Magill Urban Village Precinct Master Plan.

The mountain biking community expressed support for the draft plan and identified a current lack of connectivity between existing mountain bike facilities e.g. Cudlee Creek Forest Reserve and Eagle Mountain Bike Park. IMBA



suggested a link between these two facilities (by extending the Mawson Trail) could form an 'epic' half-day or full day mountain bike experience.

The Blackwood/Belair and District Community Association were impressed with the planning and the long term strategy. They commended Council on a considered approach that would not result in piece-meal trails.

Design Considerations

Respondents provided a host of suggestions for trail design considerations, this section of the survey became a Pandora's box of ideas. There were some key themes that were reiterated by many in the community and these include;

- Shared use trail design for walking and cycling were popular.
- Clear and legible signage is vital.
- Lighting would be acceptable only if close to townships to avoid light pollution. Lighting and signage could utilise solar and LED technology.
- Community revegetation projects or similar could occur on the verges of trails.
- At road intersections, speed limits should be considered and reduced to improve safety.
- Universal access was important to the community, particularly around and between townships. Trails further away from towns could be used for more adventure type trail activities.
- Providing extended verges along existing roads was suggested as a way to minimise impacts of trails on the natural environment. This can be considered when road width allows and road-side vegetation is of low biodiversity quality. This is in contrast to a number of other respondents who requested a more natural trail experience e.g. in the bush.
- Loop designs are desirable as they provide for a range of fitness levels.
- Park and ride facilities, particularly at Stirling, Verdun and Mount Torrens.
- Look to utilise existing railway corridors to align trails making the most of good gradients.
- Support for fewer trails if that means the trail assets are maintained to a high standard over time.
- Consider facilities along the trail e.g. water re-fill stations, outdoor fitness stations and toilets. A composting toilet was suggested similar to the New Zealand Parks model.²⁹
- Free wi-fi for accessing web based trail information where possible.
- Solar Battery (phone/bike) recharging stations.

“Universal access needs to be considered for people with prams, wheelchairs and other walking aids.”

Biodiversity

There was overwhelming support for the strategy to protect and enhance the Hills environment and biodiversity. An environmental design principle was suggested to make this a stronger part of the strategy, which has been developed by Council staff (see Chapter 2.6 Principles). Some community members and groups were concerned that new trails may have negative environmental impacts if not well considered. The Hills environment is the key driver for many to live in the Hills and make it an inviting and interesting place for visitors. Trails that do not protect and enhance the Hills environment and biodiversity would not be supported by the community. During implementation phase, particular consideration, research and consultation with DEWNR are needed in relation to:

- Natural asset identification
- Minimisation of weed carrying and spread of phytophthora
- Droppings from horse and dogs on/near trails and the spread of weeds
- Identify sensitive areas and utilise poor quality biodiversity areas for trails
- Environmental risk management for any new potential trail site
- Signage and education about local flora and fauna
- Signage and education about the phytophthora virus and ways to manage the risk to local environments

(even an incentive scheme for those that use cleaning stations)

- Facilities for shoe/bike cleaning along trails
- Quality trail maintenance and erosion control
- Clear rules about pet access and waste management
- Waste management along trails
- Increased environmental stewardship through the engagement with the community on environmental themes and related volunteer programs.

“Include provisions for retention and redevelopment of native bush land plan. This is not only sensible for developing natural resilience (and therefore sustainable communities), but will also contribute to the beauty (the spiritual connection) and the value (commercial connection) of the trails.”

The North East Hills Environmental Conservation Association are supportive of trail extensions providing that the building and maintaining of trails does not conflict with their objectives and they are,

1. Maintain and where necessary enhance the quality of the natural environment of the North East Hills
2. Conserve local and regional bio-diversity on public and private land, including but not restricted to threatened species. The protection of water quality and water catchments, the conservation of road, stone, water and other reserves and roadside vegetation.
3. Protect indigenous wildlife, natural features and sites of scientific and aesthetic interest and to work for the conservation of these sites.

The Association also expressed that physical signage cannot be replaced by GPS technology.

DEWNR supports the principle of utilising existing trails to reduce potential environmental impacts and aid overall management of trail assets. Environmental risk management is an ongoing and evolving conversation between the Council and DEWNR with enthusiasm and goodwill from both groups to work together to deliver long term, environmentally sound outcomes across the 20 Year Trail Strategy and Action Plan.

Safety

The safety of trail users was a key theme throughout consultation. There were a number of useful suggestions for improving safety and these include:

- Fire risk management, close trails on high risk days.
- Access for emergency service vehicles.
- Code of conduct for trail users to improve behaviour and overall safety of shared use trails.
- Signage to alert trail users of risks, including snake bite risk.
- Consider slowing speed limits at intersections.
- Quality maintenance standard and allocation of budget to support this.
- Well understood grading system for trails for varied fitness levels.

There were concerns raised by land owners that privacy and security of homes needed to be considered in the strategy. Lack of mobile phone range though the Hills was also raised as a concern as this could impact on calls to emergency services and web based information/maps.

Economics and Tourism

There was much interest generated by the concept of trail tourism and the potential for economic benefits associated with trails in the Hills. A strong branding position and signage strategy for the trail network was supported with identified links to the new state brand and Adelaide Hills Tourism campaigns. Bike SA encouraged the Council to look at 2-3 day trail experiences for visitors with a destination focus. There were concerns that web based information may not be successful due to limited internet access in the Hills. There were also concerns from the

about funding commitments from Council for such a long term trail strategy and the need for a strong investment plan to explore a range of possible funding sources (see Chapter 7.3 Sustainability Framework).

The community expressed a range of ideas for tourism offers including signage along the Pioneer Women's Trail featuring important women in Hills history. Specific environmental education programs for a range of age groups including primary school, high school, university student research sites and specific tours e.g. bird watching, orchid identification etc. Friends of the Heysen trail expressed an interest in working with the Council on the promotion of walking experiences and a collaborative approach to signage. The South Australian Recreational Trails Inc expressed great interest in the strategy and links to the Lavender Trail.

"This is a fantastic opportunity to create an iconic trail network that will have global appeal and bolster small business and tourism to the Adelaide Hills."

"Don't be cheap, spend money to get this right, Adelaide Hills are one of the best tourists assets and natural/historical regions SA has."

Trail tourism is a great opportunity for the Hills and widely supported by the community, peak bodies and State Government involved in consultation.

6. Trail Strategy

It is clear that no one-fit-all solution will be suitable for a trail network through the Hills due to its unique and sensitive environment, gradients, narrow roads and existing land use. Well considered trail development that protects and enhances biodiversity, provides opportunity for tourism and improves safety is likely to be popular and well used by residents and visitors. To achieve a balanced approach, five trail zones have been established across the AHC. These zones respond to existing site conditions, biodiversity requirements, land use and tourism offerings. The approach is opportunistic, positioning the Hills with five unique trail experiences to explore as loops while providing links between townships and existing trail assets for locals to improve connectivity. This is particularly important between Crafers, the Amy Gillett Trail and Hahndorf, to provide a gateway to the Hills.

Hills Face Escape

Moderate to difficult trails best suited for walking to escape the city and provide scenic lookouts with a focus on environmental education.

Adventure Nuts

Trails for outdoor adventure and challenges, most suited for hiking, horse riding and mountain biking with variable terrain and surface treatments. Destinations include Kersbrook trails, Cudlee Creek, the Mawson Trail, the Lobethal brewery and markets.

Arts & Produce

Easy to moderate trails most suited for walking and cycling for exploring arts and produce in townships. Destinations include the Adelaide Hills Sculpture Trail, Uraidla and Summertown market gardens, the Uraidla produce market, and cafes at Woodside.

Liquid Gold

Easy to moderate trails most suited for walking or cycling to visit wineries, to taste local reds and whites. Destinations include Maxamillians Winery and Restaurant, Hahndorf Hill Winery, The Lane Vineyard, Somerled Wines, Shaw & Smith Winery, Glenhurst Wines, Bastian West Wines and Nepenthe Wines.

One with Nature

Easy to moderate trails best suited to walking with a focus on environmental education and witnessing nature. Destinations include the Mark Oliphant Conservation Park and Scott Creek Conservation Park.

East-West Connector

Easy trails for commuting best suited for walking and cycling through populated townships and linking to Hahndorf. Destinations include boutique shops and restaurants of Stirling, Aldgate and Bridgewater.

Other key considerations for Council to consider when implementing the trail network include:

- The issue of motorised trail bikes in parks or on designated walking or cycling trails. In the future Council should consider a location for this type of activity.
- An adventure playground near Mount Torrens linked to the trail strategy would provide an additional tourism offering and provide an outlet for local young people.
- Landowners raised concerns about privacy regarding new trail development. Council should consider vegetation buffers and/or fencing to a reasonable level for the best outcome for all parties.
- Some landowners were so supportive of the draft principles that they have offered their property for trail use. These offers are greatly valued and have been considered within the strategy.
- Community groups also expressed the immediate and ongoing need for existing trail upgrades to improve safety, particularly through sections of the Heysen Trail.

Hills Face Escape

Moderate to challenging trails to escape the city and provide scenic lookouts with a focus on environmental education.

Adventure Nuts

Trails for outdoor adventure and challenges.

East-West Connector

Easy trails for commuting through populated townships and linking to Hahndorf.

Arts & Produce

Easy to moderate trails for exploring arts and produce in townships.

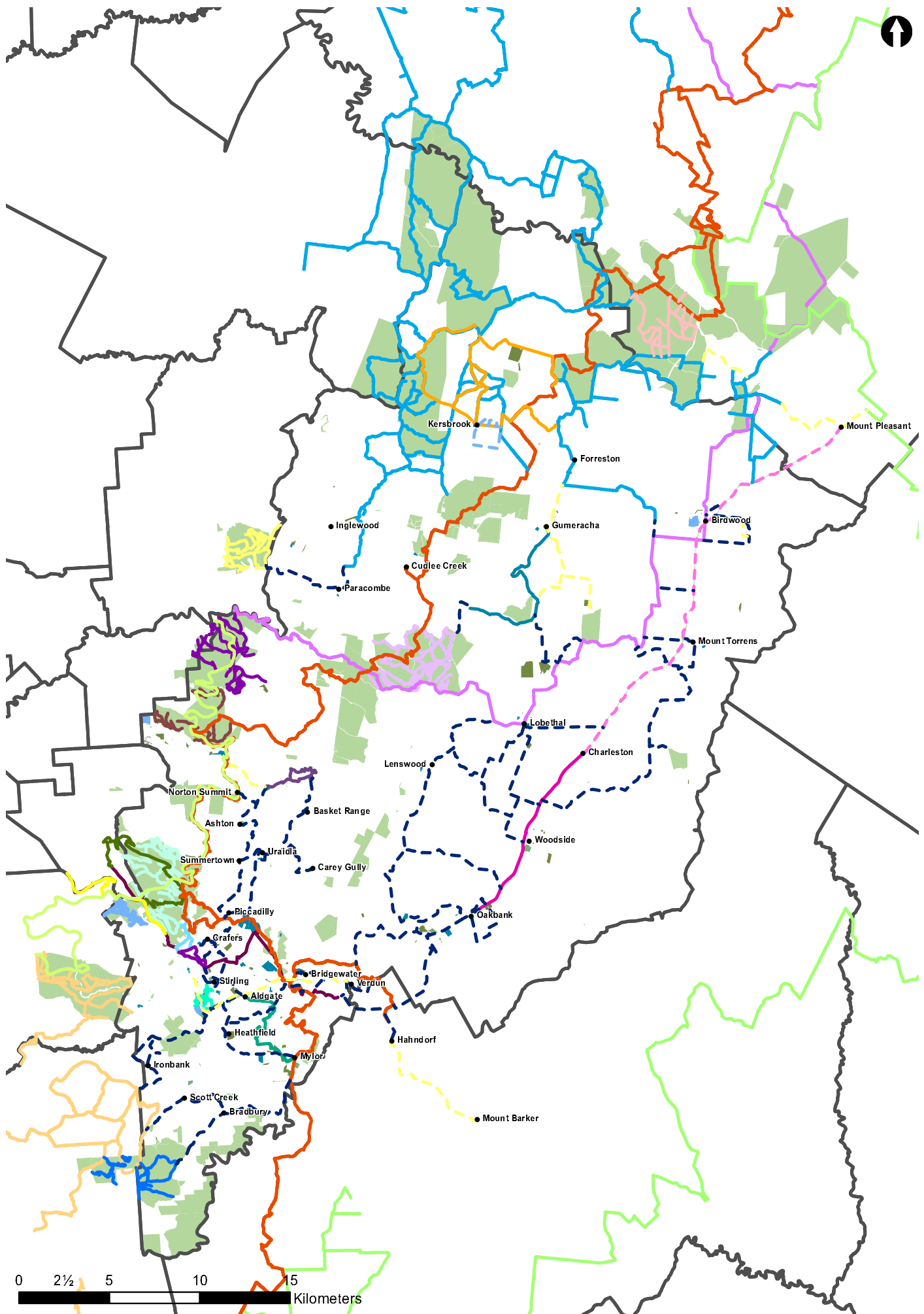
One with Nature

Easy to moderate trails with a focus on environmental education and witnessing nature.

Liquid Gold

Easy to moderate trails to visit wineries and taste local reds and whites.



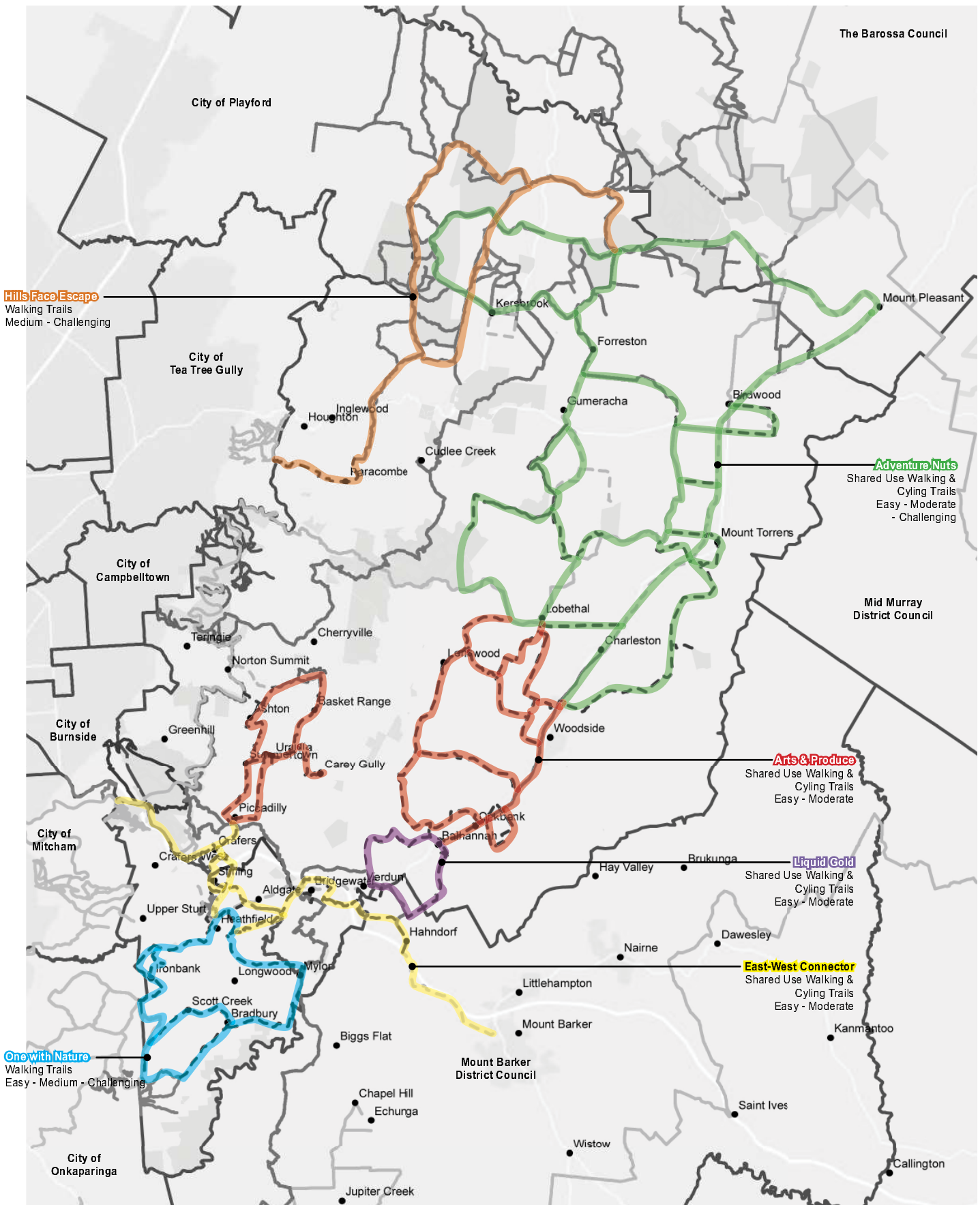


Adelaide Hills Trail Strategy

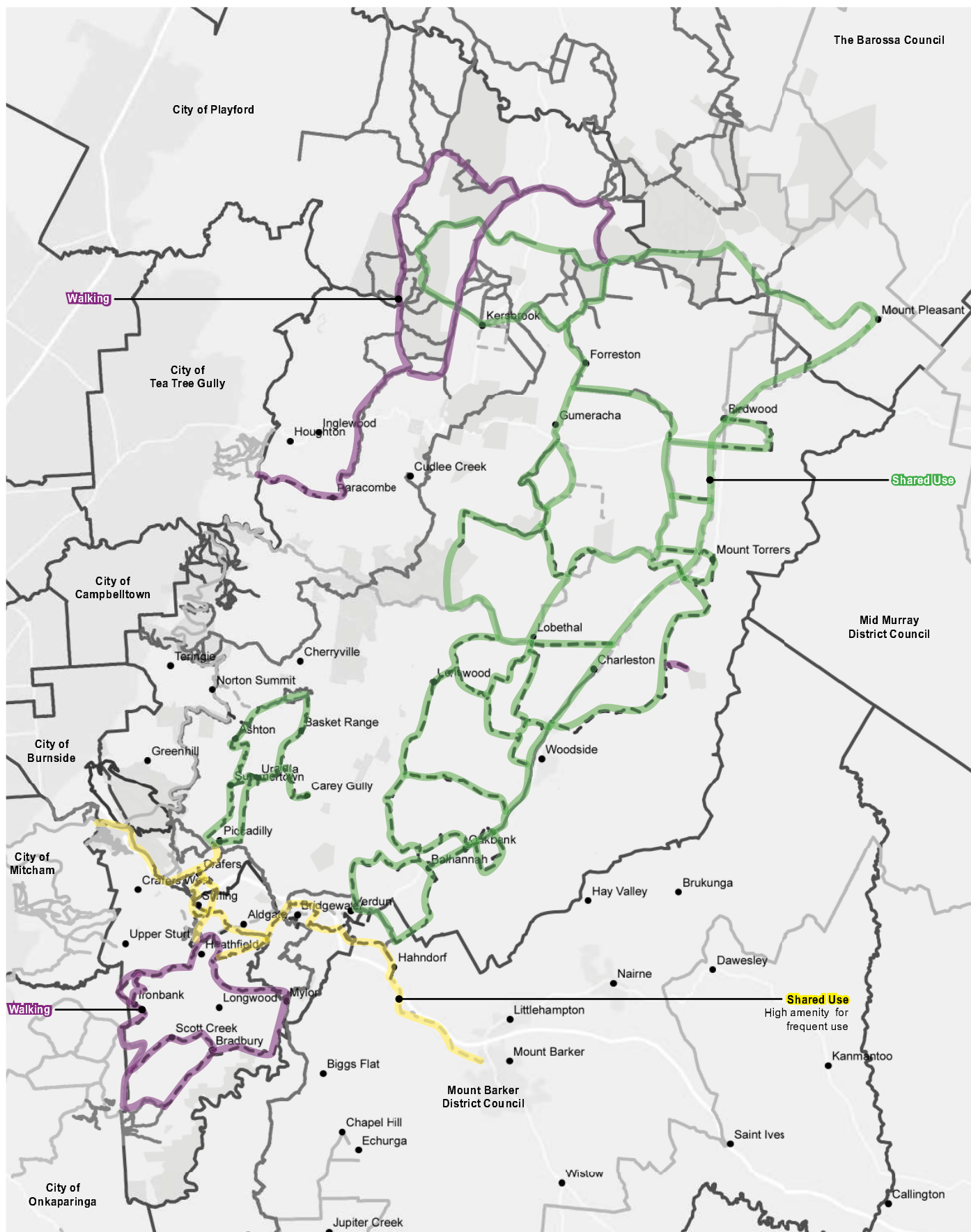
Legend

— Adelaide Hills 20 Year Trail Strategy	— Crafters Bikeway
— Trail Opportunities to Investigate	— Crafters to Stirling Trail
— Kersbrook Fitness Trail - Proposed	— Crafters Mt Lofty Summit Trail
— Heysen Trail	— Mount Lofty Trail
— Mawson Trail	— Cleland Conservation Park Trail
— Kidman Trail	— Eagle MTB Park Trail
— Amy Gillett Trail	— Stirling Linear Park Trail
— Amy Gillett Trail - Extension	— Aldgate Valley Nature Walk
— Mount Crawford Forest Reserve Trail	— Scott Creek Conservation Park Trail
— Kersbrook Trail	— Tom Roberts Trail
— Mt Lofty Walking Trail	— Craighburn
— Anstey Hill Recreation Park Trail	— Lynton Trail
— Yurrebilla Trail	— Conservation Park
— Pioneer Womens Trail	— Council Boundary
— Kenton Valley Ambience Walk	— Ovals
— Black Hill Conservation Park Trail	— Reserves
— Mount Crawford Forest Cudlee Creek	— Primary Education/Child Care
— Morialta Walks	— High Schools
— Laverder Federation Trail - Tungkillo Loop	
— Ashton Shape-Up Trail	

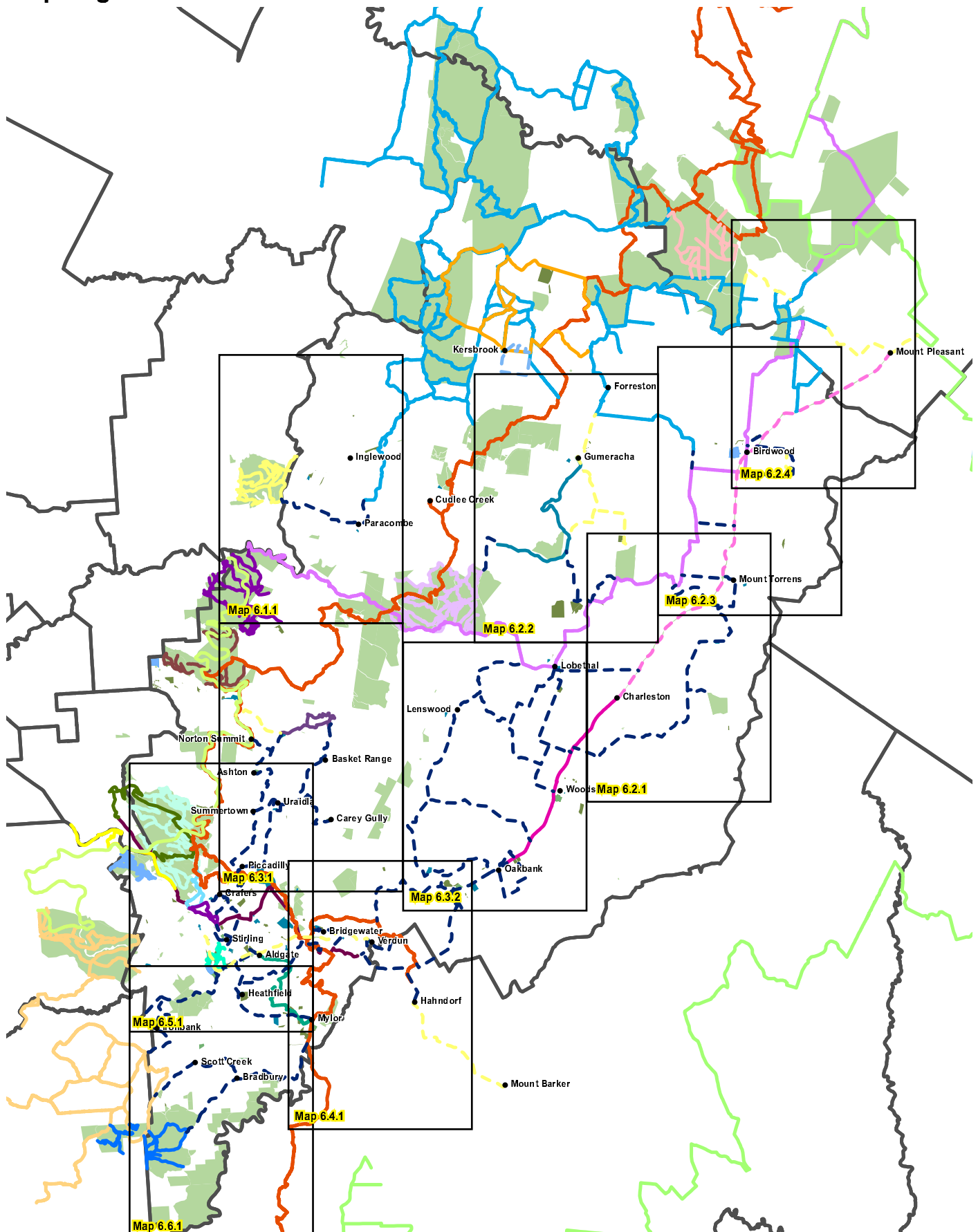
Trail Zones



Intended Trail Use (subject to site conditions & community consultation)

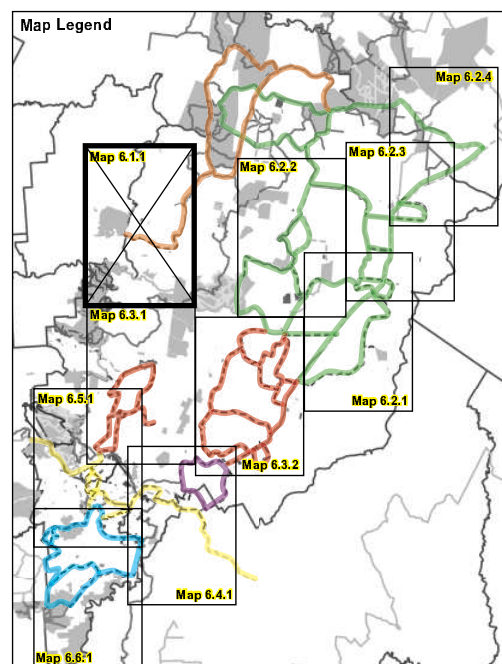


Map Legend

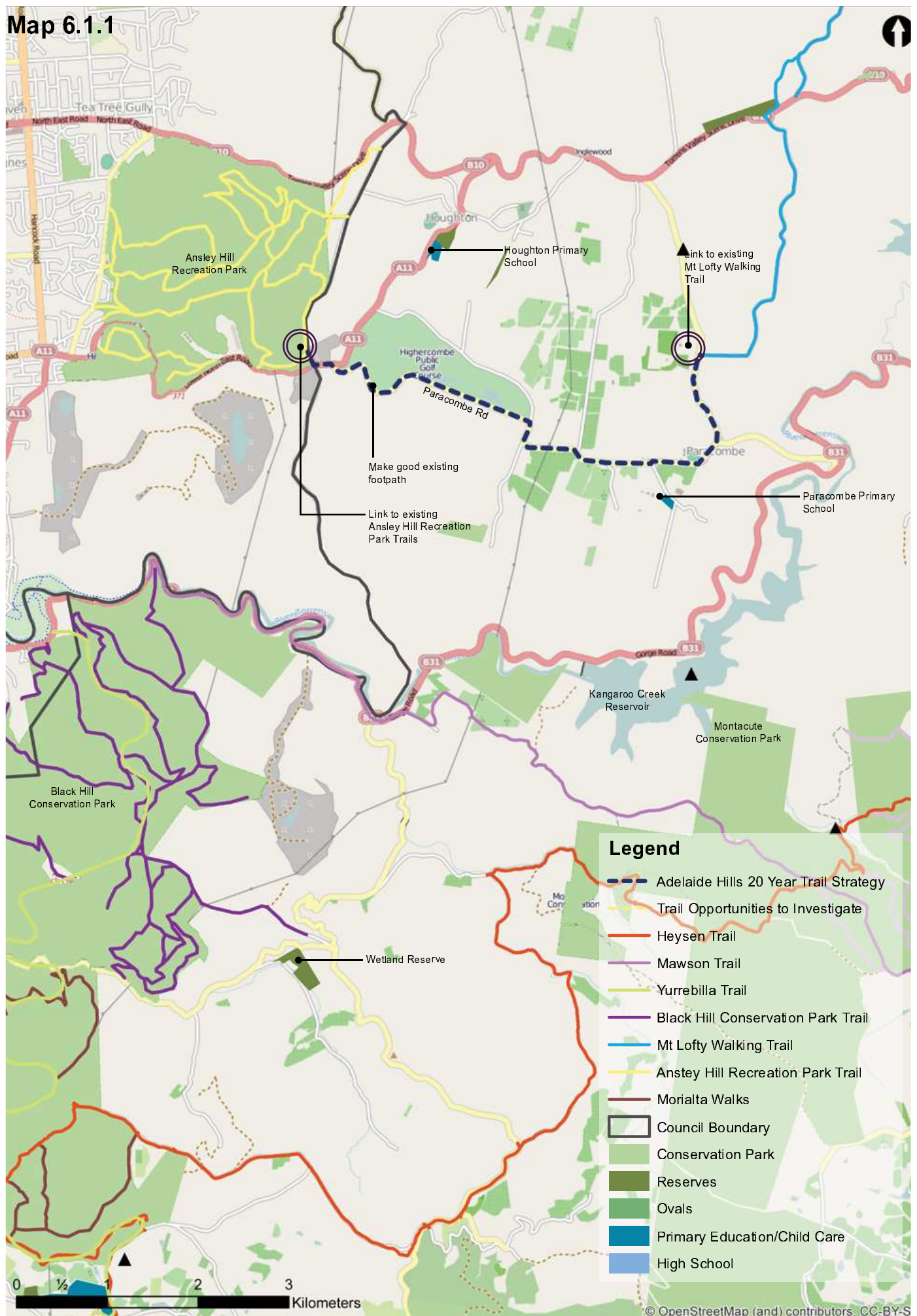


6.1 Hills Face Escape

The Hills face is the geographical boundary between the Hills and the Adelaide Plains. It is an area of significant natural beauty, with views to the sea. A significant number of trails already exist through the Hills Face Escape zone including, the Ansley Hill Recreation Park, the Mount Lofty trail network, Black Hill Conservation Park walks, Morialta walks (very popular with water falls), Yurrebilla Trail, Heysen Trail and, the Mawson Trail which takes users from the end of the River Torrens Linear Park through the Hills face zone towards Lobethal. The extensive network of trails through this area of high quality bio-diversity required the strategy to simply look at making meaningful connections between existing assets. One gap was found between Ansley Hill Recreation Park just outside Council boundary and the start of the Mount Lofty Trail network in Paracombe. It is suggested a trail be made along Paracombe Road, making good use of the existing verge for walking to connect both trails and provide access to the Hills from the City of Tea Tree Gully. This link would allow trail users to access an entire network of existing trails to the north and the east.



Map 6.1.1



6.2 Adventure Nuts

The Adventure Nuts zone was developed to leverage existing recreational activities and to provide loops of various lengths for a variety of fitness levels. The Mawson, Kersbrook and Cudlee Creek MTB trails offer great outdoor adventures with camping facilities nearby. Proposed trails link these assets together to provide a wide range of activities with retail hubs at Lobethal, Woodside and Mount Pleasant. New trails have been developed off the Amy Gillett Trail and stretch over the valley. The Kenton Valley Ambience Walk has been utilised (Berry Hill Rd) which offers stunning views of the valley.

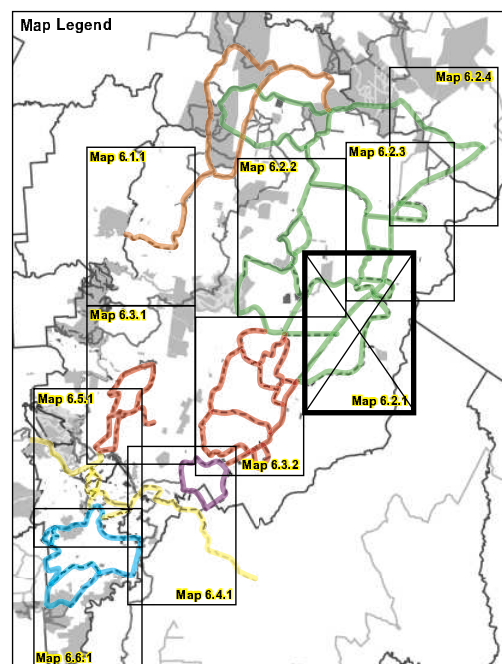
A number of unmade road reserves could be utilised to make connections, these routes have not had DEWNR feedback yet from a biodiversity perspective however based on available information at the time of reporting, these routes have good potential. Community groups in this zone were enthusiastic about trail development. Some individuals suggested many ideas for loops and links extending off the core trail. These opportunities have been recorded and could form extensions off the core trail. The Mount Torrens community are very keen to see more trails around their township as they have a number of youth's interested in BMX.



Towards Lobethal



Gumeracha - Lobethal Road



Map 6.2.1

Link to Kenton Valley Ambience Walk

Porter Scrub Conservation Park

Link to Mawson Trail

Unmade Road

Link to Mawson Trail

Link to Mawson Trail

Unmade Road

Unmade Road

Springhead Rd

Trinity Lutheran School

Link to Mawson Trail

Lobethal Lutheran School

Lobethal Cinema

Lobethal Mill

Fairyland Village

Jungfer Rd - challenge

Link to Amy Gillett Trail

Link to Amy Gillett Trail

Link to Amy Gillett Trail

Naughton Rd

Barristers Block Wines

Tomich Wines

BMX Track

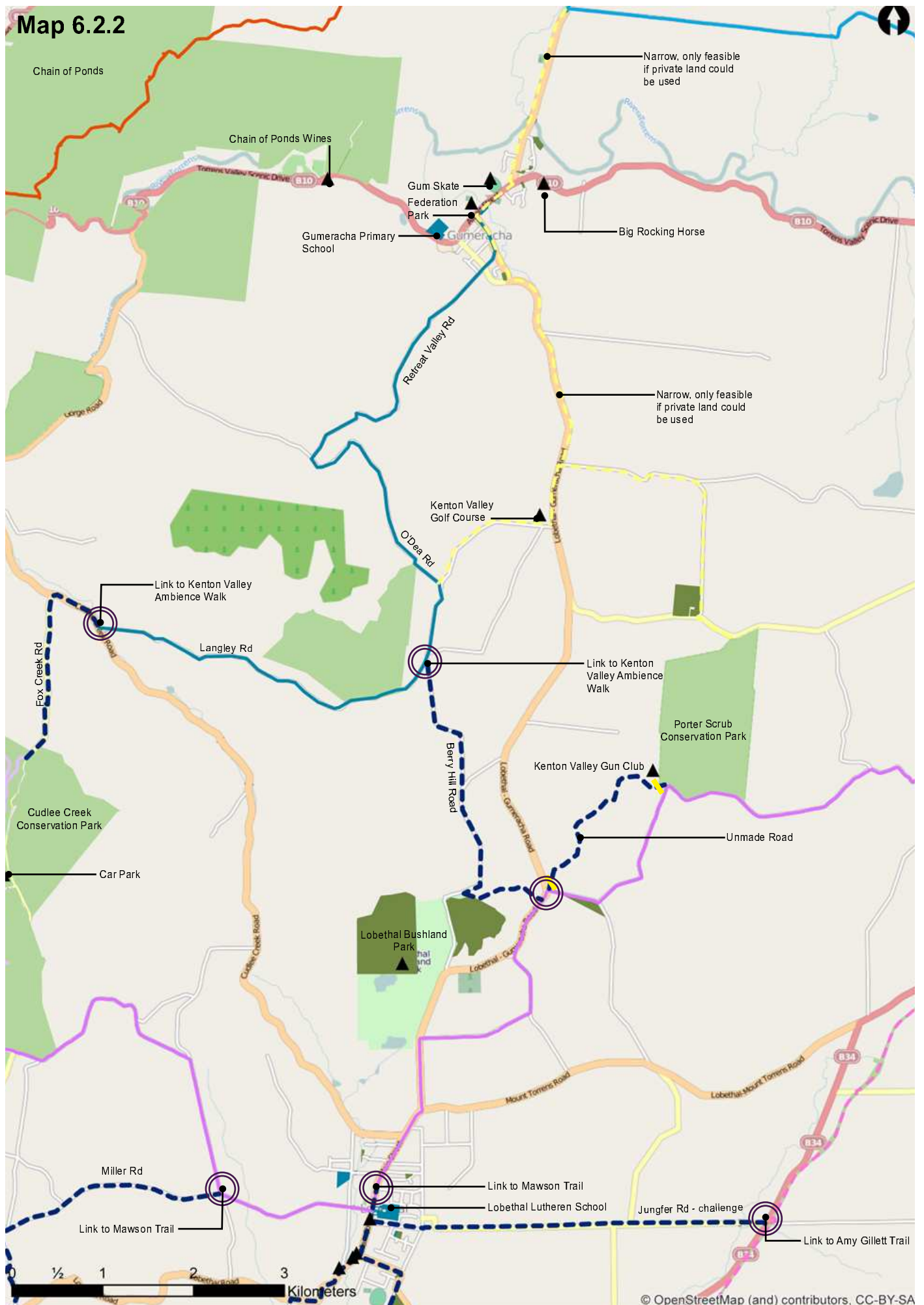
Legend

- Adelaide Hills 20 Year Trail Strategy
- Trail Opportunities to Investigate
- Heysen Trail
- Mawson Trail
- Amy Gillett Trail
- Amy Gillett Trail - Extension
- Kenton Valley Ambience Walk
- Council Boundary
- Conservation Park
- Reserves
- Ovals
- Primary Education/Child Care
- High School

0 1/2 1 2 3 Kilometers

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Map 6.2.2





Berry Hill Rd



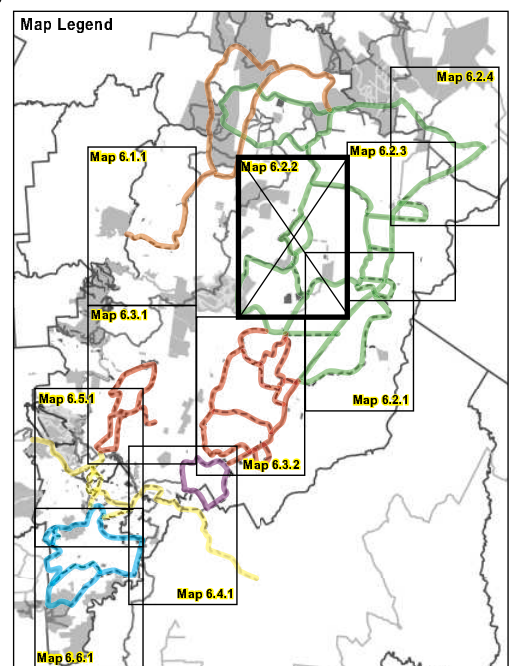
Gumeracha - Lobethal Road - Very narrow



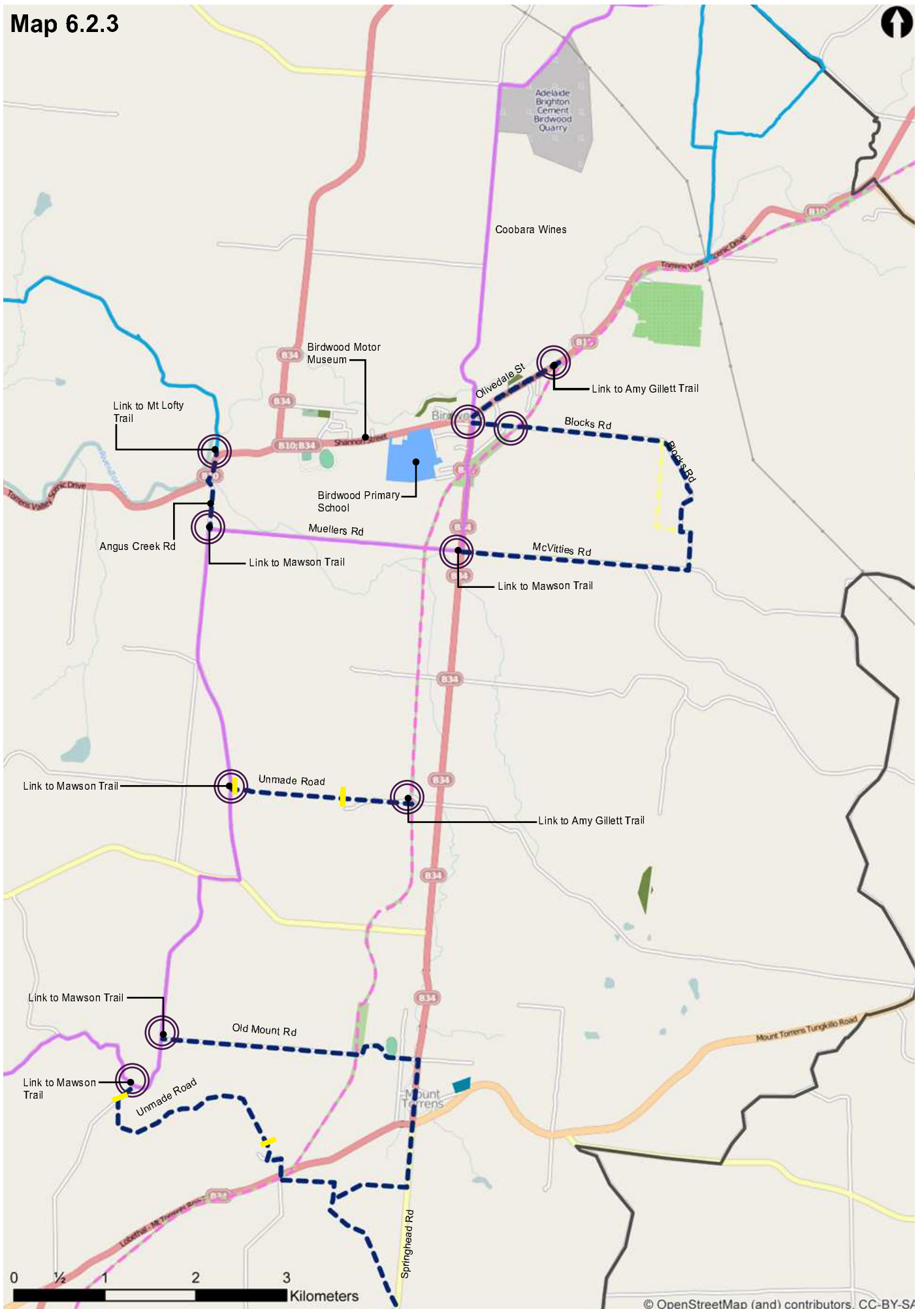
Kenton Valley Golf Course

Legend

- Adelaide Hills 20 Year Trail Strategy
- Trail Opportunities to Investigate
- Heysen Trail
- Mawson Trail
- Kenton Valley Ambience Walk
- Mount Crawford Forest Reserve Trail
- Mt Lofty Walking Trail
- Council Boundary
- Conservation Park
- Reserves
- Ovals
- Primary Education/Child Care
- High School



Map 6.2.3





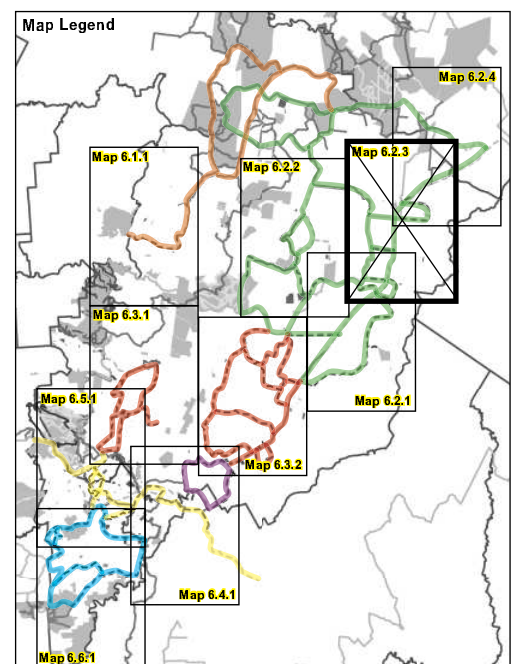
Blocks Rd



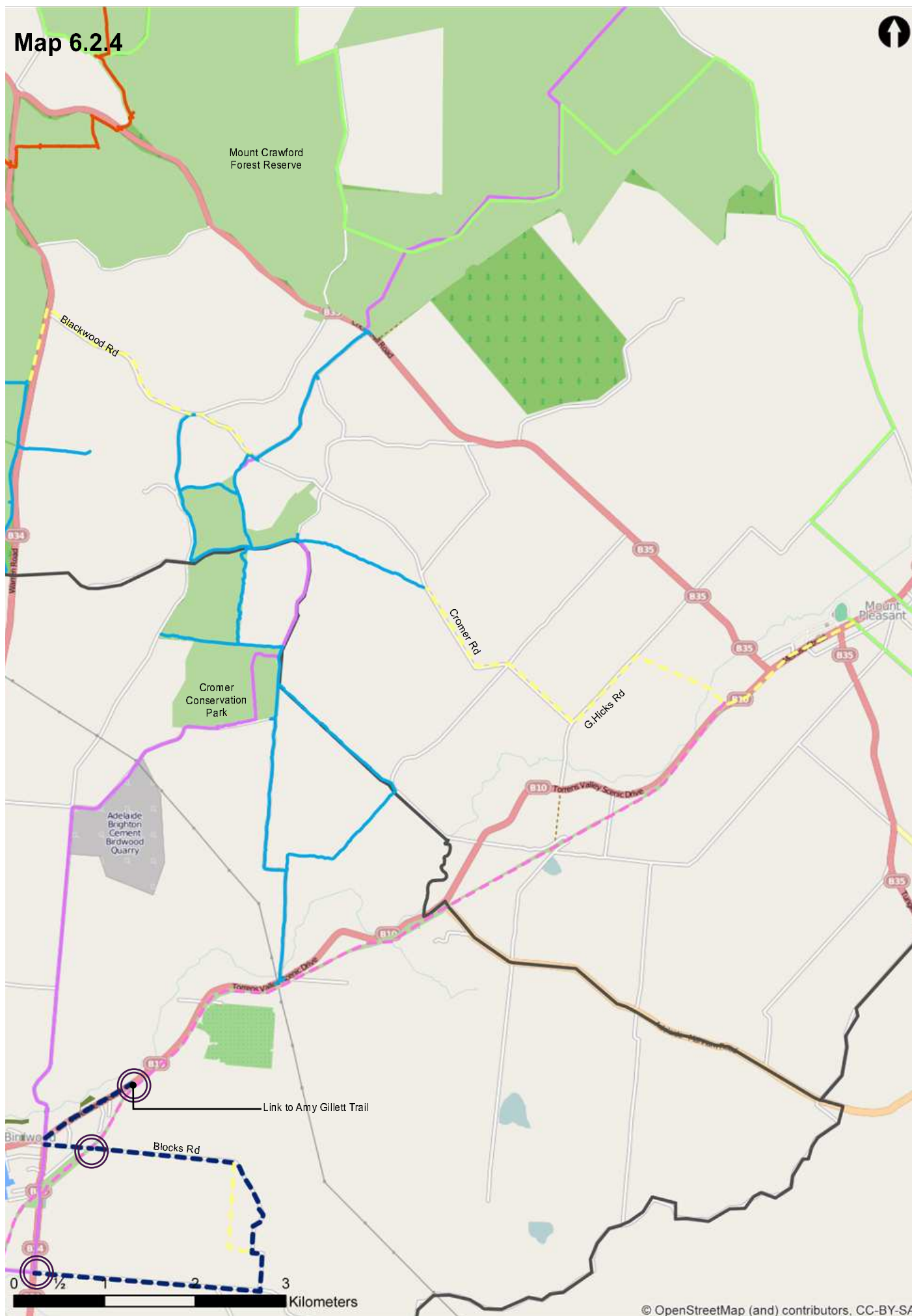
Blocks Rd

Legend

- — — Adelaide Hills 20 Year Trail Strategy
- — — Trail Opportunities to Investigate
- — — Mawson Trail
- — — Amy Gillett Trail
- - - Amy Gillett Trail - Extension
- — — Mt Lofty Walking Trail
- Council Boundary
- Conservation Park
- Reserves
- Ovals
- Primary Education/Child Care
- High School



Map 6.2.4

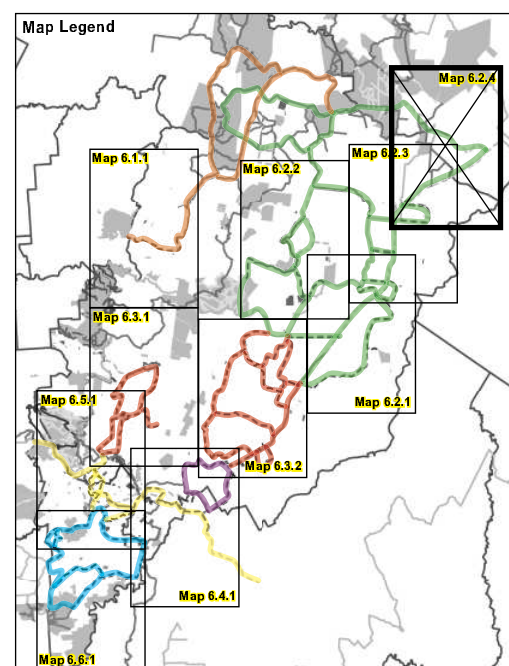


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Legend

- — — Adelaide Hills 20 Year Trail Strategy
- — — Trail Opportunities to Investigate
- Heysen Trail
- Mawson Trail
- Kidman Trail
- Amy Gillett Trail
- - - Amy Gillett Trail - Extension
- Mt Lofty Walking Trail
- Council Boundary
- Conservation Park
- Reserves
- Ovals
- Primary Education/Child Care
- High School



6.3 Arts & Produce

The Arts & Produce Trail consists of two loops (approx. 85km) to connect the market garden townships of Summertown, Uradila, Piccadilly, Balhannah, Oakbank, Mount Torrens and Lenswood. The loops provide a range of recreational opportunities for various fitness levels. The eastern loop connects to the Liquid Gold wine trail at Balhannah. This link is strategically important to bring visitors from the East-West Connector into the north-east area of the Hills and onto the Amy Gillett Trail.

Some trail sections, in particular Udys Rd, are considered challenge options with stunning views of the market garden valleys. A number of verge alignments and unmade roads could be utilised. A key consideration for this zone is the safe crossing of the Onkaparinga River, engineered solutions such as bridges and causeways may be required. With produce market events in townships and a focus on local art nearby, the trail offers a very unique Hills experience and could link with the Adelaide Hills Sculpture Trail and a planned Mural Trail.

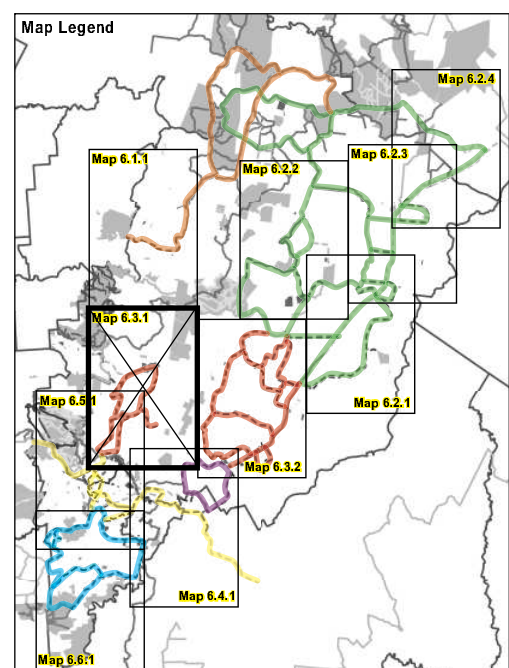
The community in this zone offered a range of ideas for links and loops to come off the core trail, in particular along Martians Road, and a short cut off Lobethal Road at Lenswood to Tiers and Bonython Roads to avoid busy Lobethal Road as much as possible. These links will be investigated further during implementation.



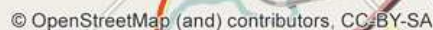
Udys Rd - Challenge section



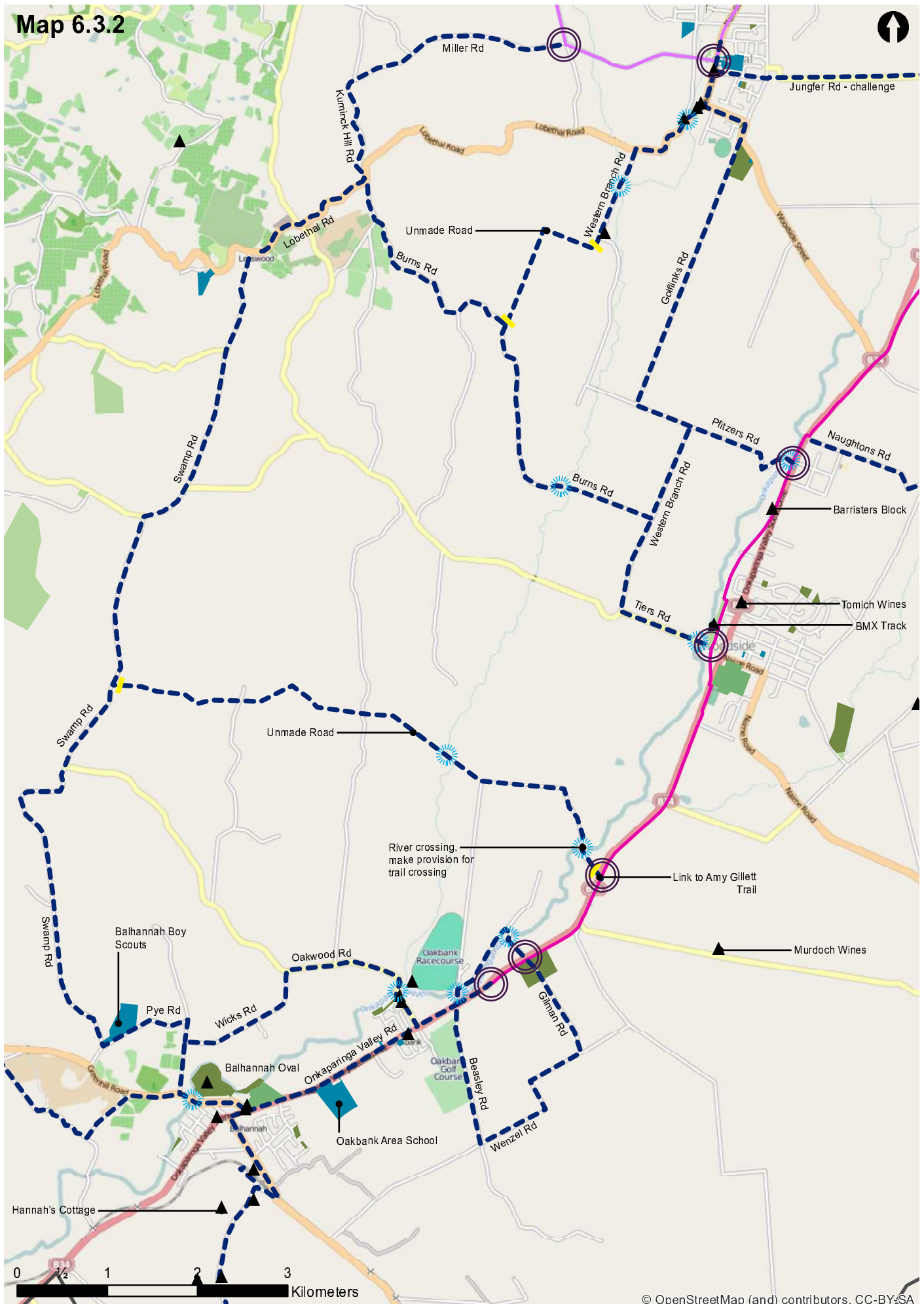
Piccadilly Rd



Existing footpath between Uradila and Summertown - Make good for shared use



Map 6.3.2



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Burns Rd



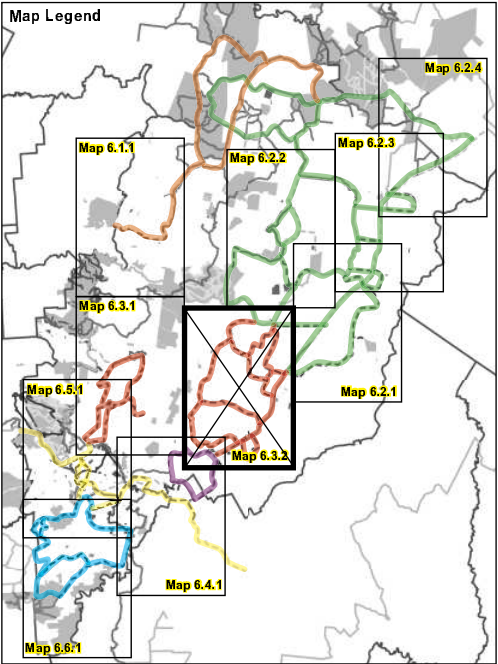
Oakwood Rd



Wicks Rd

Legend

- — — Adelaide Hills 20 Year Trail Strategy
- — — Trail Opportunities to Investigate
- Amy Gillett Trail
- Mawson Trail
- Council Boundary
- Conservation Park
- Reserves
- Ovals
- Primary Education/Child Care
- High School



6.4 Liquid Gold

Liquid Gold is a wine trail, approximately 8km in length designed specifically for visiting some of the most popular wineries and pubs in the Hills including, the German Arms, Rockbare, Hahndorf Hill Winery, Nepenthe, Shaw & Smith and Grumpy's Brewhaus. The alignment takes mainly back-roads, offering beautiful scenery in rolling terrain. The route is for easy-moderate use, suitable for tourists and families. Pains Rd and Beaumont Road are more undulating and may prove challenging for those with little experience. The Liquid Gold trail is a strategic link between the East-West Connector and Arts and Produce zones, linking visitors into the north-east area of the Hills and onto the Amy Gillett Trail.

A key consideration for this route is crossing the Onkaparinga River in three places; once at Sandow Road, and twice on Mount Barker Road. These crossings will require significant investment in bridge engineering and therefore Council should look at a range of funding opportunities and partnerships to achieve a high quality trail asset, building on the popularity of similar trails in SA including the Riesling Trail and the Shiraz Trail. Without safe passage over the river, the tourism value of the loop is compromised. A portion of the trail lies within Mount Barker therefore both Councils have a role to play to ensure a consistent approach.

The Walking Federation are currently seeking to extend the Pioneer Women's Trail across the Onkaparinga Valley River to Hahndorf and are investigating bridge design options with both Councils. The Liquid Gold loop connects the Pioneer Women's Trail to Hahndorf by making a safe walkway beneath the underpass.

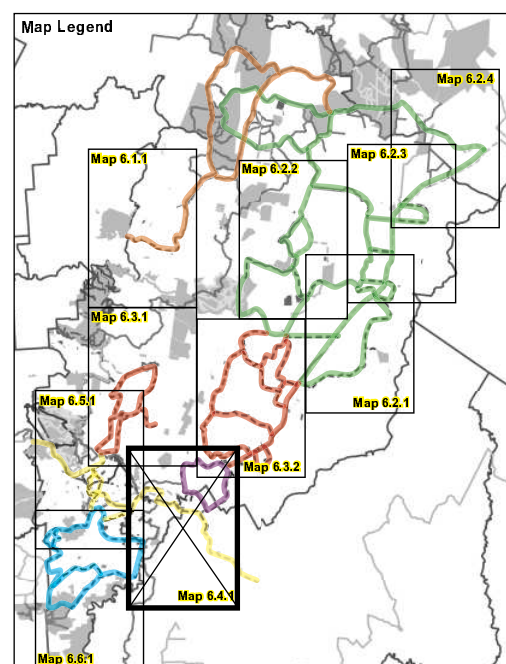
Many community members had safety concerns regarding Onkaparinga Valley Road, The road is very narrow and has a few blind corners. Council should engage with surrounding landowners to find a safe trail solution, incorporating the existing School crossing if required. Connecting the Hills and Hahndorf with a designated trail was a priority for the community during consultation. Walkers in particular cited safety concerns on Onkaparinga Valley Road and Mount Barker Road.



Rockbare Winery, Hahndorf Main St



Shaw & Smith Winery - Jones Rd



Map 6.4.1



6.5 East-West Connector

The East-West Connector is a series of loop trails, utilising various sections of the Pioneer Women's Trail between Crafers and Hahndorf. This zone is focused on linking the Hills Face Zone (Crafers Bikeway and Cleland CP) with the rest of the Hills and Mount Barker. The trail takes users into the heart of populated townships of Aldgate, Bridgewater and Stirling, through to Hahndorf and Mount Barker. Eventually through Hahndorf and the Liquid Gold zone, trail users meet the Amy Gillett Trail. The East-West Connector utilises existing verges to create a designated off-road trail linking many local Schools, existing playgrounds and ovals. Connecting townships with trails was important to the community throughout consultation. Based on community consultation, trails in this zone would be well used due to proximity to residential areas and current safety concerns. These trails may require a high level of amenity with lighting, furniture and water re-fill stations. It is suggested Council consider bitumising trails in this zone for sustainable maintenance long term. There are two important opportunities for the East-West Connector for Council to investigate further.

Railway Co-location

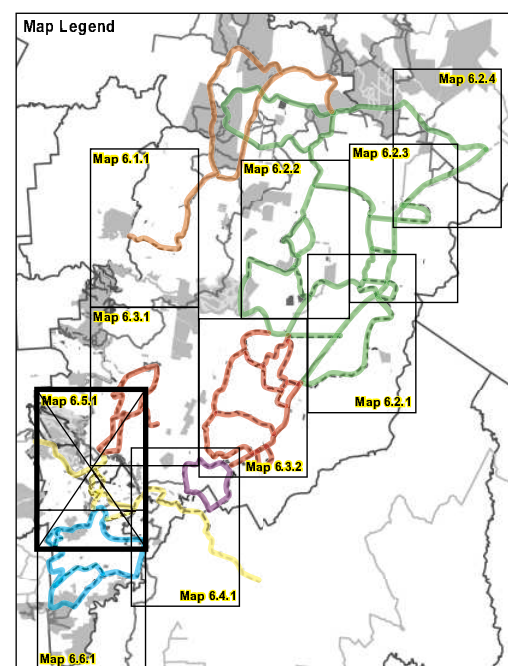
The Australian Rail Track Corporation (ARTC) railway line runs through the Belair National Park, to Stirling, Balhannah and Mount Barker. Co-locating a trail along the rail corridor would offer a cohesive east-west link between populated townships with fairly even gradients. There are currently a number of very narrow sections along the railway, engineering solutions/links or loops may need to be considered to utilise the railway line safely. This opportunity has been identified for Council to explore further with DPTI and ARTC as it falls outside the scope of this report.

Freeway Co-location

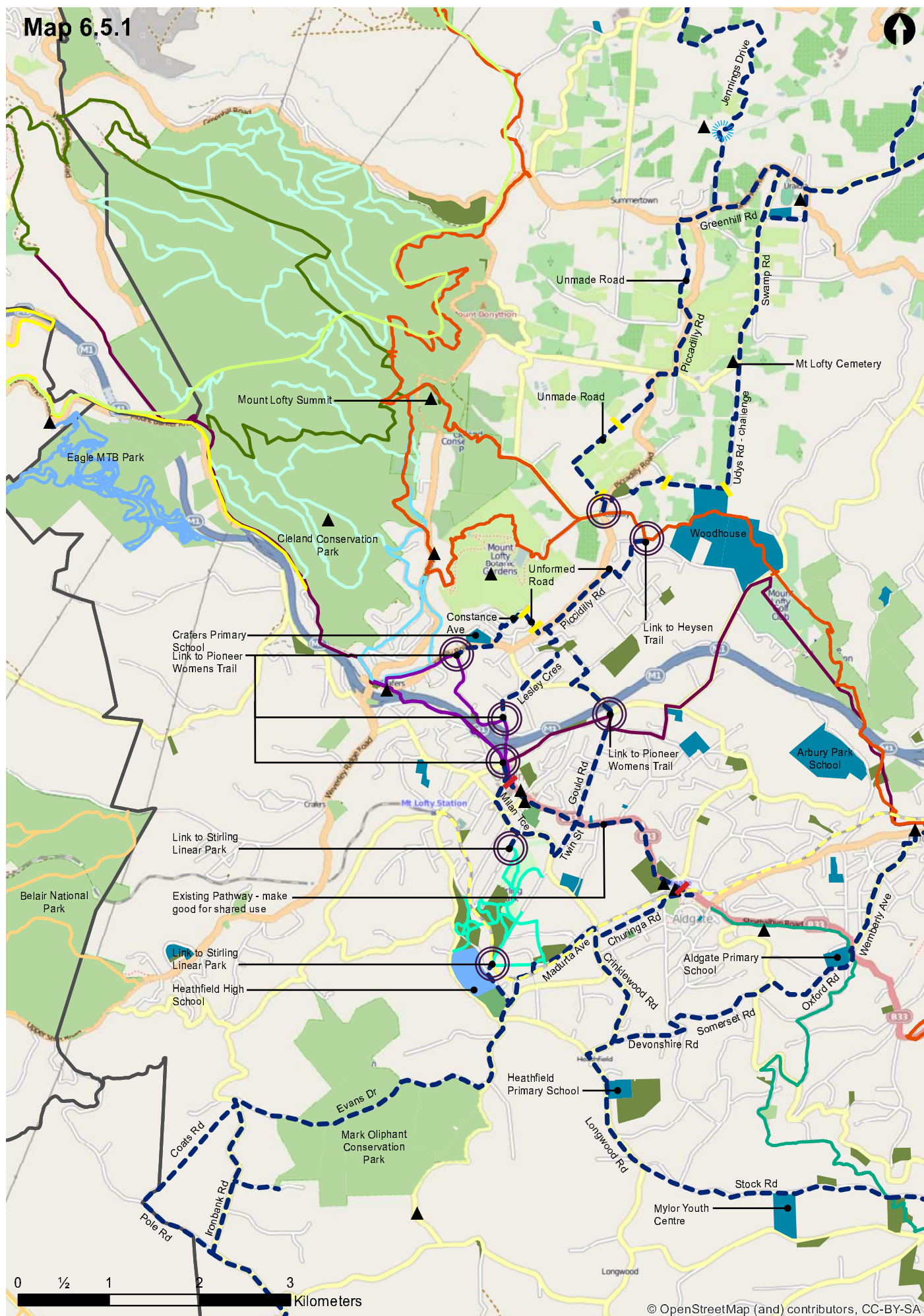
By utilising the freeway verge, a trail could be co-located (on public land) starting in Crafers, continuing along the freeway through Totness Park to Mount Barker. Similar to the railway option, this corridor would also offer a cohesive link between many populated townships with fairly even gradients. This opportunity has been identified for Council to explore further with DPTI as it falls outside the scope of this report.

Legend

- Adelaide Hills 20 Year Trail Strategy
- Trail Opportunities to Investigate
- Heysen Trail
- Mt Lofty Walking Trail
- Yurrebilla Trail
- Pioneer Womens Trail
- Crafers Bikeway
- Crafers to Stirling Trail
- Crafers Mt Lofty Summit Trail
- Mount Lofty Trail
- Cleland Conservation Park Trail
- Eagle MTB Park Trail
- Stirling Linear Park Trail
- Aldgate Valley Nature Walk
- Scott Creek Conservation Park Trail
- Tom Roberts Trail
- Conservation Park
- Council Boundary
- Ovals
- Reserves
- High School
- Primary Education/Child Care



Map 6.5.1



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Wemberly Ave - Make good existing path



Piccadilly Rd - Make good existing path



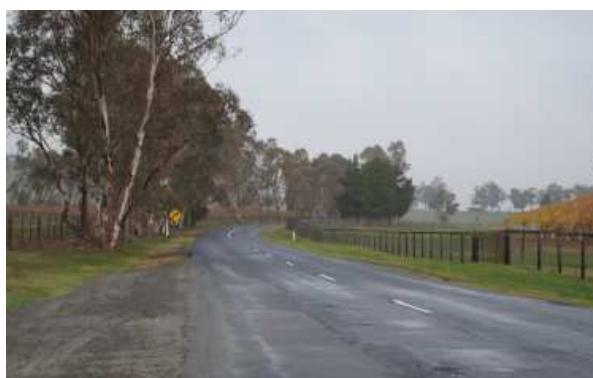
Rail co-location



Sandow Rd - Unmade road



Gould Rd - Make good existing verge



Jones Rd



Mount Barker Road - Verge path, continue on existing footpath. Two crossings at the Onkaparinga River



Onkaparinga Valley Road - Narrow, speak to land owners to investigate possible trail alignments between the School and the round-a-bout

[illegible]

6.6 One with Nature

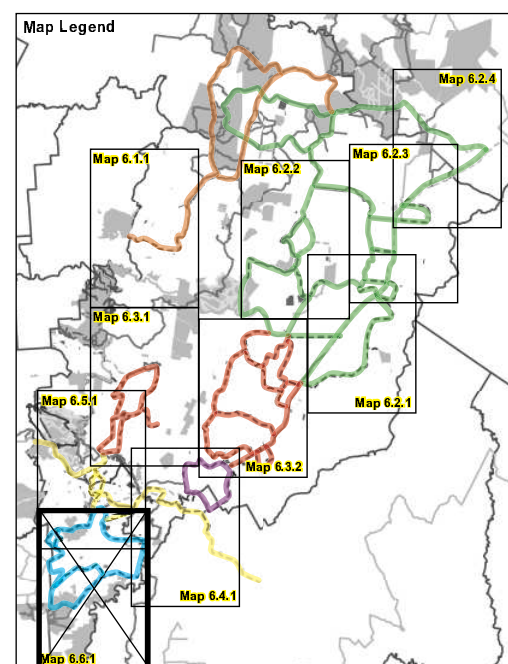
This zone is for experiencing and understanding the rich bio-diversity of the southern Hills. Therefore, 32km of walking trails are suggested to safely connect townships of Bradbury and Mylor, to the Mark Oliphant Conservation Park and Scott Creek Conservation Park. These trails also link to the existing Tom Roberts Trails in Onkaparinga. Existing roads, in particular Red Hill Road, is fairly narrow, however a 'walking track' could be formed similar to the Aldgate Valley Nature Walk along the verge. Turnstiles, bollards or similar infrastructure may be considered at linkage points to ensure the trail remains for walking only. During consultation, Friends of the Mark Oliphant CP asked Council to consider closing Evans Drive to vehicles, except for emergency services vehicles to improve safety for walkers and runners. The road closure is supported by this strategy to improve the One with Nature experience for visitors to the Hills. This trail zone could focus on environmental education through interpretative signage, demonstrations sites and activities for students.



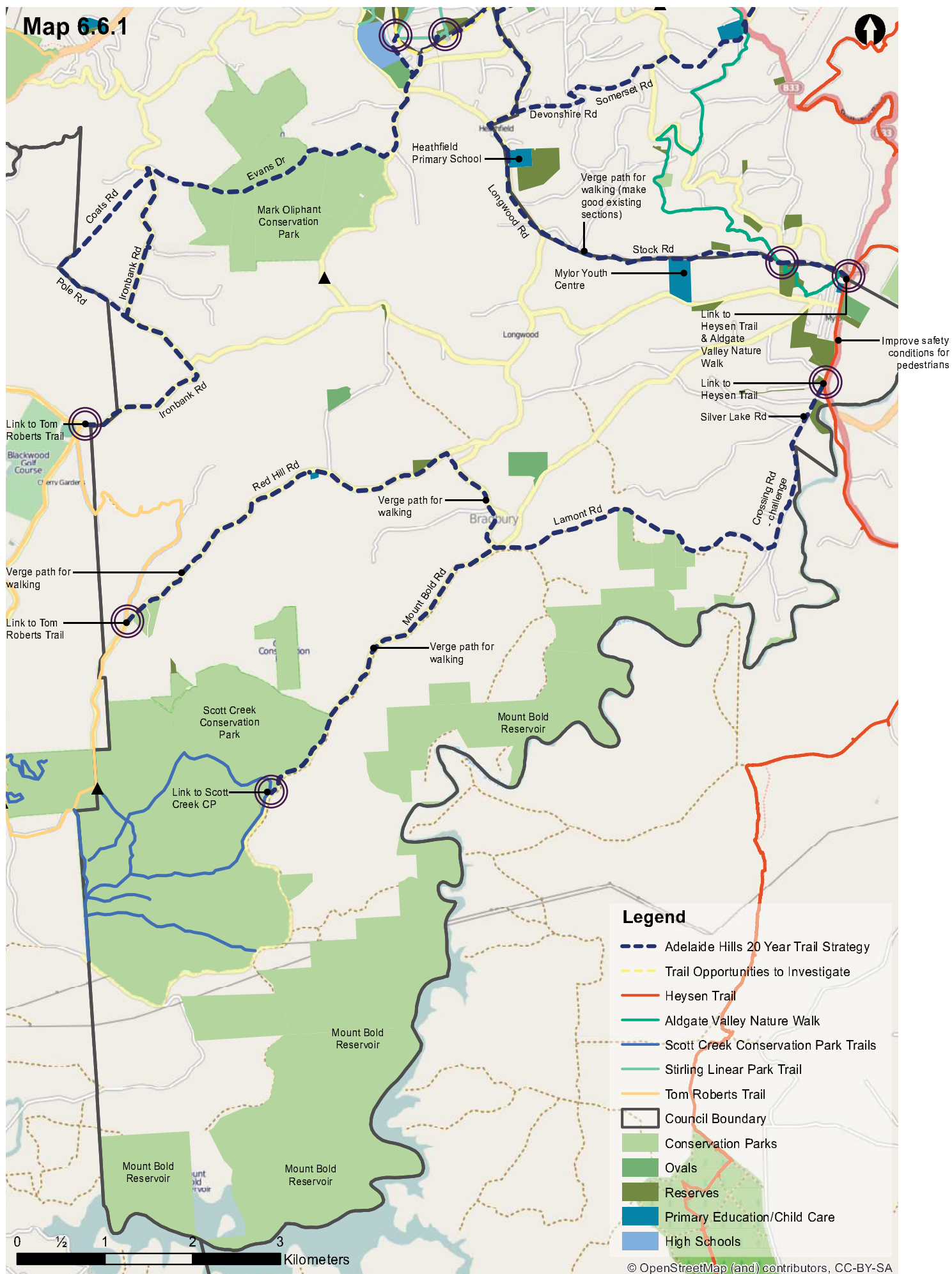
Crossing Rd - challenging walk



Coats Rd



Map 6.6.1



6.7 Trail Classifications & Design

Trail classifications specify the appropriate design, amenity and maintenance of trails based on the anticipated user group. There are a number of approaches to trail design for example rocky single track, compacted rubble paths and wide stretches of bitumised trail to name a few. All of these approaches are relevant for this trail strategy. The final design and classification of trail sections will be determined through further consultation and detailed design work to meet the needs of the community and to provide valuable experiences for visitors. The information below has been provided for context and to help guide indicative costings. National trail classifications have been developed for walking trails, mountain bike trails and horse trails (see table below)³². These classifications outline design requirements centred on trail use.

	Easy	Moderate	Challenging
Fitness Level	Basic	Moderate	Advanced
Slope	Gentle	Moderate	Steep sections
Surface	Hardened	Variable but distinct	Variable or indistinct
Accessibility	Easily accessible	Accessible	Less accessible
Signage	High signage levels, directional, trail head and interpretative.	Directional with limited trail head and interpretative signage.	Very low or no signage.
Management & Maintenance	High	Moderate	Low
Use	Shared Use	Shared Use	Single Use
Classifications			
Walk	C1-2	C3-4	C5-6
Mountain Bike	C1	C2	C3-4
Horse	C1	C2	C3

Based on the trail strategy's principles and development sectors, the following trail classifications are ideally appropriate for the respective trail experiences, although site conditions may require variances.

	Trail Use	Difficulty
One with Nature	Walking	Moderate – Challenging
East – West Connector	Shared Use Walking & Cycling	Easy - Moderate
Hills Face Escape	Walking	Moderate – Challenging
Adventure Nuts	Shared Use Walking/Cycling/Horse Riding	Moderate – Challenging
Arts & Produce	Shared Use Walking/Cycling/Horse Riding	Easy - Moderate
Liquid Gold	Shared Use Walking/Cycling	Easy - Moderate

Trails can be designed in a number of ways for a number of users. The strategy recognises that unique site conditions and community needs will impact upon trail implementation. However, any trail should seek to promote, where appropriate, shared use as this provides increased usability for trail assets.

In South Australia, there are two main types of trails built for shared use. The International Mountain Bicycling Association (IMBA) approach can be adopted to suit walkers/hikers, mountain bikers and horse riders e.g. Mawson Trail. These trails usually provide a natural surface of varying width and gradient and may include obstacles e.g. tree stumps, berms or other designed features to challenge and create interest along the trail. The other type of

³² Based on trail classifications, AS 2156.1 (2001), IMBA Australia Difficulty Rating System (2009) URL: <http://www.gcta.asn.au/documents/IMBATDRSVersion2009.pdf>, accessed 27/11/12 and South Australian Trails, Horse Trail Classifications URL: http://www.southaustraliantrails.com/pdf/HORSE%20TRAIL%20CLASSIFICATIONS_FINAL.pdf, accessed 27/11/12

shared use trails built in South Australia are based on Ausroads standards, for walking and cycling e.g. Amy Gillett Trail. These trails are generally suitable for people with disabilities and the elderly (walking aids, wheelchairs, gophers), in-line skates and prams. The Ausroad standard includes both sealed and unsealed surface treatment options with varying maintenance requirements.

The IMBA and Ausroad approaches to trail design will be valid in different development sectors, depending on the type of experience, site conditions (including soil strength, loading and available materials) and community needs. Elevated subgrades are often used on Ausroad standard trails to improve the strength and long term performance of trail construction. This highly engineered approach to trail building requires significant works and overall a larger trail footprint. This approach does not fit with the principles of the strategy, however may be acceptable in areas of low biodiversity value.

No matter which approach, drainage and erosion control need careful consideration in relation to detailed trail design. Surface drainage and erosion control techniques will often increase the width of trail construction. Subsurface drainage will also need consideration and may be required to reserve the strength of a subgrade where a spring, seepage flow and/or excessive irrigation is present. The surrounding landscape and vegetation will also need careful consideration in detailed trail design, both to minimise damage to the vegetation and to minimise damage to the trail from the movement of trees and shrubs. Likewise the identification and provision for existing (and future) services and access to these services is another design consideration.

6.8 Brand & Signage

Creating a strong brand for the trail strategy is a key element to its success; this and a consistent signage strategy were supported widely through consultation. Quality branding and promotion of trails will ensure they are leveraged for tourism purposes. From a legibility and usability perspective, regular signage along the trail will provide assurance of the correct route, alert users to any safety issues and provide opportunities to read and learn about the Hills along the way. At a regional level, branding and signage was identified as a key component of a successful trail strategy. Consultants engaged a local creative agency to develop a Regional Trail Identity and Signage Concept that could be utilised by all Councils in the RDA district. These concepts were presented at a regional trail signage symposium run by the RDA and Meechi Road Consultants in November 2012 for local Councils and interested parties. There was a general consensus from those who attended (representation from all Councils but Kangaroo Island, SAMBA, Walking SA and Forestry SA) that a regional approach to trail signage and branding makes sense on many fronts including:

- Consistent way-finding and gradient information to best practice industry standards.
- A collective brand and identity to leverage trail tourism.
- Economy of scale related to the design, production and installation of trail signage.

The creative agency adopted the Yellow-tailed Black Cockatoo with its striking black and yellow colours and dots as the inspiration and identity for the trail. The birds are often seen in flocks across the region and their slow flight is said to evoke the spirit of relaxation that trails will inspire. The species was also chosen for its significance to the Indigenous peoples of the region.

“These cockatoos visit many areas in the region, viewing the landscape from a great height. This broader vision ties in with that of the regional trail network, as they move from place to place to forage before returning home to nest in tree hollows.”

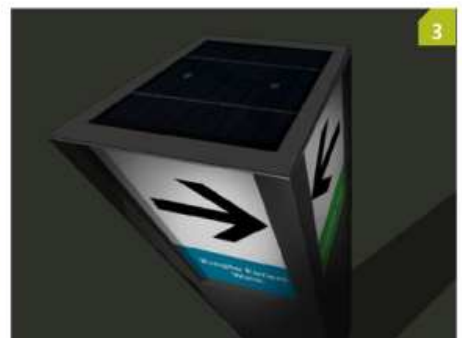
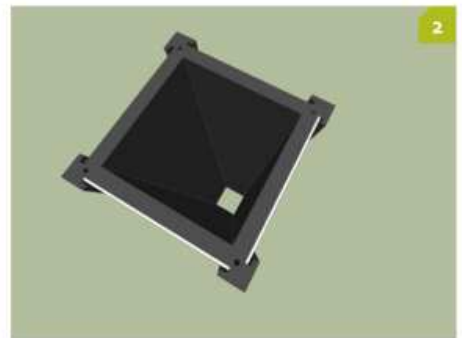
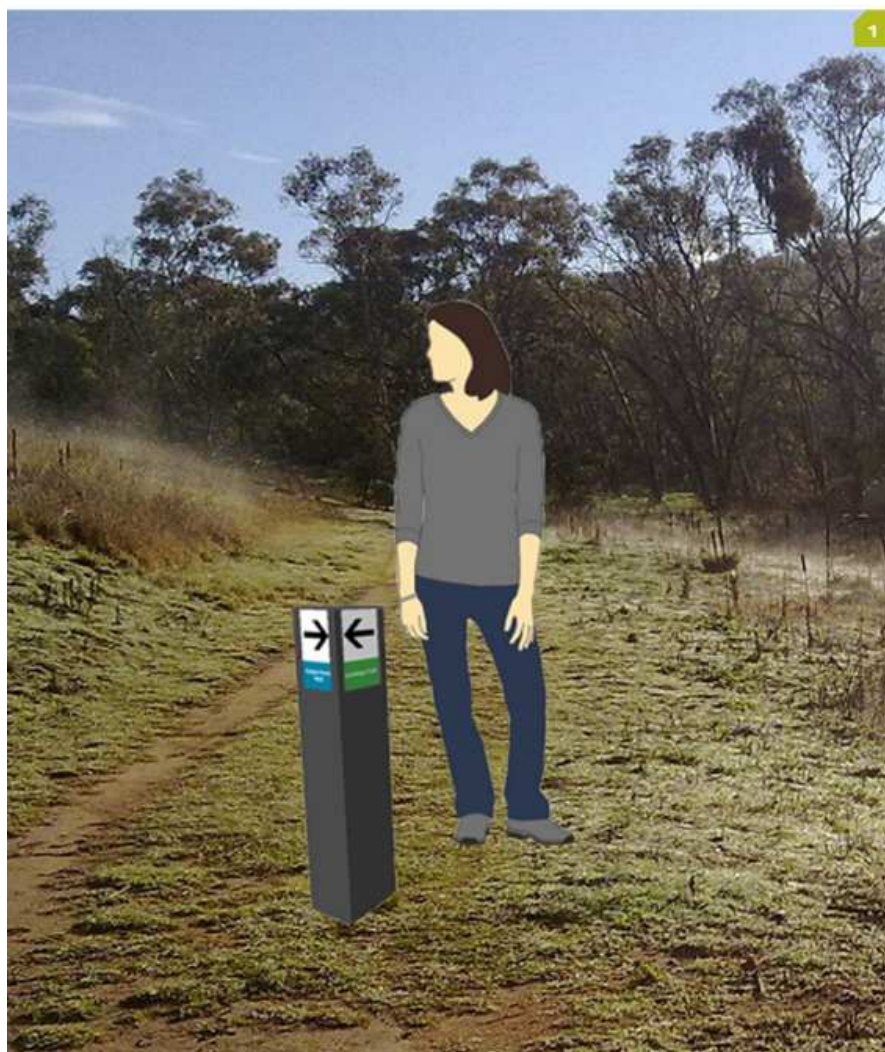
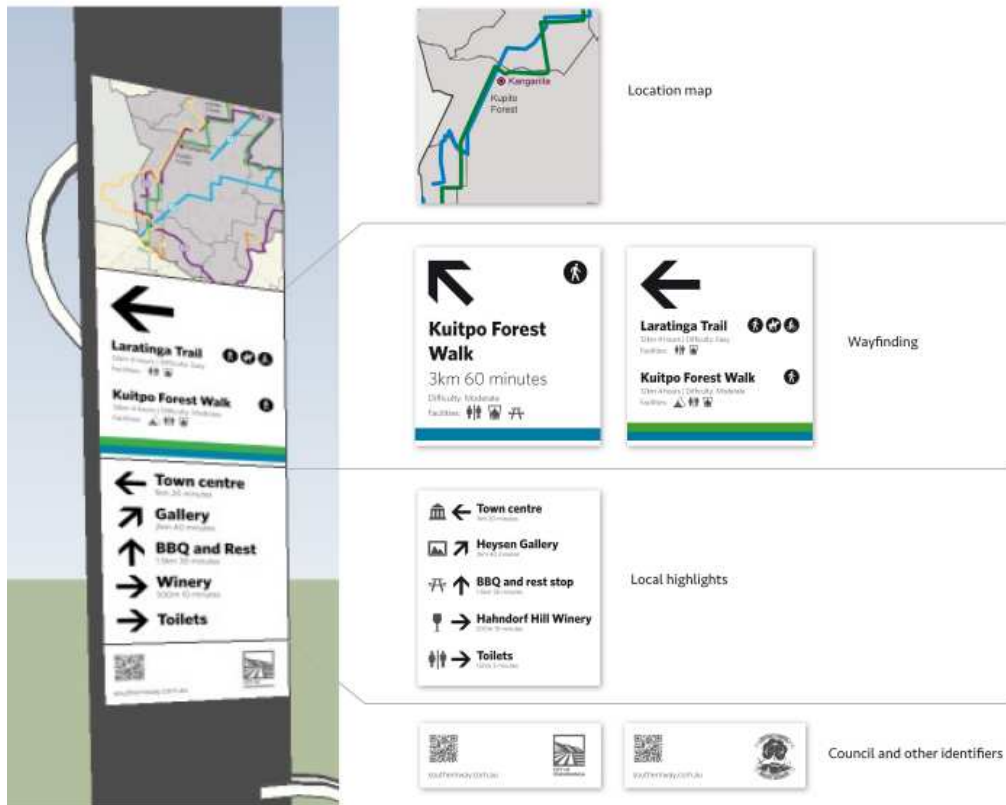
“Known as ‘willampa’ by the Kaurna, records indicate that it (the Yellow-tailed Black Cockatoo) is commonly associated with the Kaurna, Ngadjuri, Ngarrindjeri and Peramangk nations.”

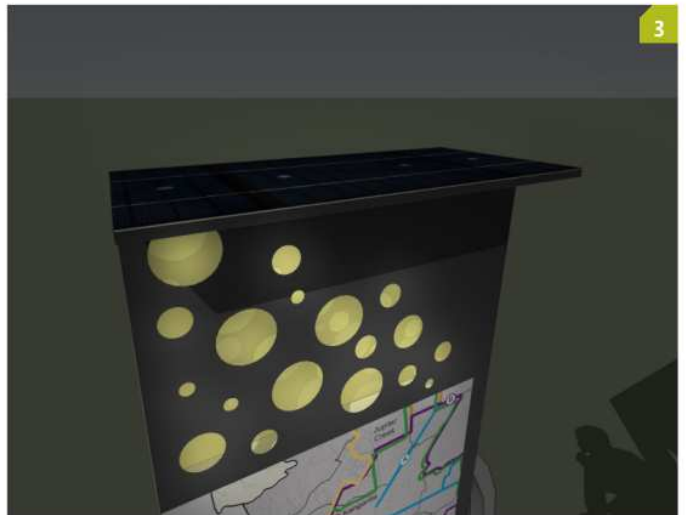
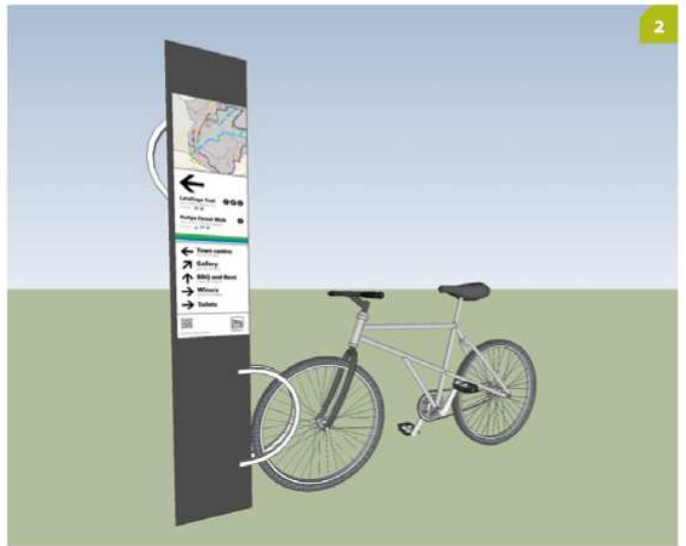
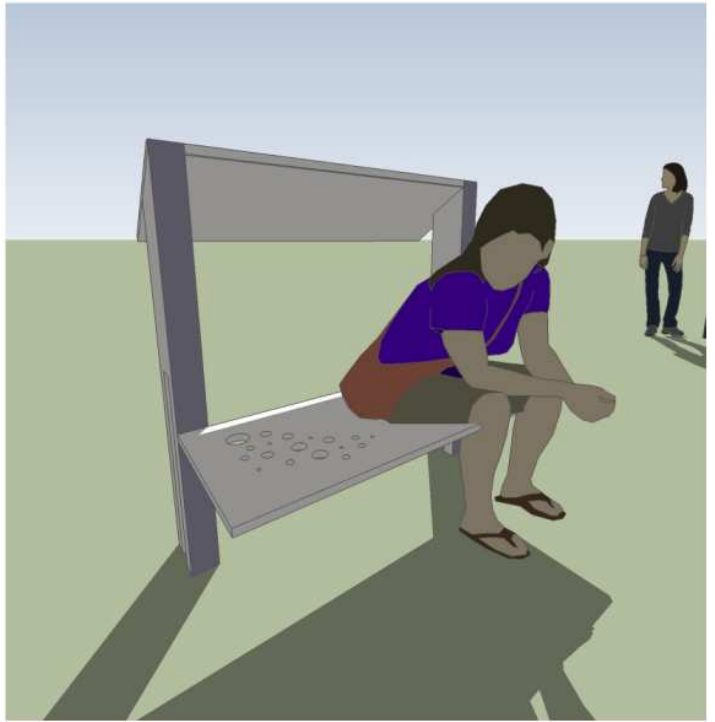
Yellow-tailed Black Cockatoos feed on plants common to the Fleurieu region and this could link with existing conservation projects underway, leading links with ecotourism ventures. The signage strategy lays out a hierarchical approach which includes:

1. Totem signs – tall and iconic signs for trail heads and key points/junctions to reinforce location, indicate retail outlets, water refill stations and other trails nearby.
2. Interpretative signs – present text, photos, diagrams and maps to explain significant information.
3. Directional signage/markers – placed frequently along the trail to indicate correct direction and a time indication for the trail.

Made from recycled plastic with the inclusion of optional solar cells for lighting, signage would be robust and environmentally sound. Careful placement of illuminated signage will be key to avoid disruption to nocturnal wildlife. Physical signage can be complimented with collateral for local businesses e.g. flyers and posters, and online applications such as apps and GIS mapping. Signage could also point to relevant public transport access point and travel information. The Regional Trail Identity and Signage Concept document is included as an appendix to this document.









6.9 Maintenance

Council is responsible for maintaining trail assets to provide safe and productive use and to protect initial investment in trail construction. Implementation of trails will need to consider maintenance requirements and associated costs beyond the initial construction. These costs could be directly or indirectly related to:

- Frequency of trail use
- Pavement loads
- Site conditions and environmental factors
- Materials selected
- Construction methods and quality
- Maintenance treatments

Community groups and peak bodies already play a key role in the maintenance of many existing trail assets around the state by collaborating with local Councils. During consultation a number of groups expressed interest in collaborative trail maintenance efforts; this is a very desirable approach, encouraging local stewardship of the trail network for long term success.

The surface treatment of a trail is important for long term structural integrity. DPTI have advised that for Ausroad type trails, unsealed, spray seal and asphalt surfaced pavements will normally require re-surfacing after 20 years, however concrete pavements can last 40 years.³² IMBA style trail surfacing life expectancies could not be found at time of reporting.

Typical Surfacing Life Expectancies³³

Surfacing Type	Expected Service Life of Surfacing (years)
Spray sealed 5mm/7mm	5 to 10
Double application seals	8 to 15
Dense graded asphalt	10 to 20
Fine gap graded asphalt	15 to 20
Slurry & Microsurfacing	8 to 15
Concrete	20 to 40
Concrete Block Pavers	15 to 25

Maintenance responsibilities for Council related to trails include:

- Monitoring of conditions
- Scheduling of routine on -site maintenance
- Co-ordination of volunteer groups
- Identify and respond to emergency trail maintenance and safe closure of trails (and possible re-routing)

Maintenance duties include, but are not limited to:

- Trail surface integrity
- Trail edging and drainage integrity
- Graffiti removal
- Up-keep and cleanliness of trail signage and any associated outdoor furniture e.g. bollards, bins, dog bag dispensers, water re-fill stations, bike racks or similar
- Cutting back/pruning of encroaching vegetation to maintain safe sight lines
- Waste management of any receptacles

³² Department of Planning, Transport and Infrastructure, 2011, Transport Services Division, Guide to Bikeway Pavement Design Construction & Maintenance for South Australia pg.5

³³ Department of Planning, Transport and Infrastructure, 2011, Transport Services Division, Guide to Bikeway Pavement Design Construction & Maintenance for South Australia, Table 4.1 pg.5

- Removal of fallen trees
- Filling of cracks, patching of surface treatments
- Sweeping to remove debris
- Cleaning of signage

Maintenance may also include the de-construction of illegal trails and the policing of these types of activities in problem areas. These tasks and frequency are dependent on the final design of the trail, use and weather conditions. At all times trails should be maintained in a manner that ensures emergency services can gain access.

Some maintenance tasks can be complemented through volunteer programs; however these programs require a managed approach with appropriate education, supervision and safety. A reporting system should also be considered to help identify trail maintenance requirements. Trail users could report issues to Council through an app with GPS capabilities and/or a location marker on nearby directional signage.

7. Action Plan

7.1 Priorities & Indicative Costings

During community consultation, a number of priorities for trail development came to light, in particular linking Hahndorf to both Verdun and Oakbank for tourism and recreational purposes. The trail strategy has been split into town-to-town sections or loops to help prioritise and provide Council with indicative costings. It is desirable for trails to be built in stages that provide a connection either to another trail or to a township.

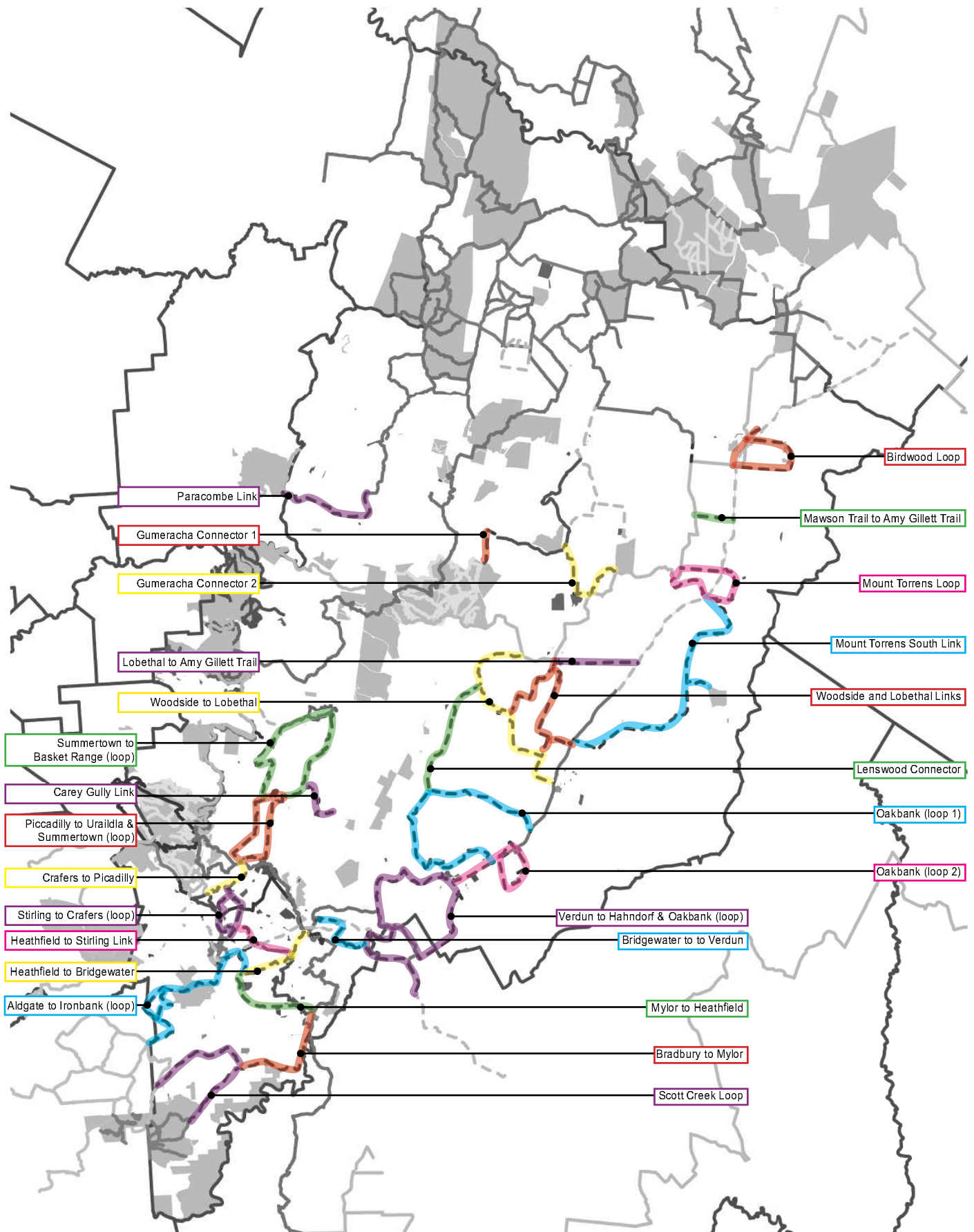
Costing trails in a strategy document has its difficulties; trail classification, use, engineering requirements, the surrounding environment and Council's ongoing maintenance regime are all factors that will impact upon costs. The Hills are also faced with the inherent difficulties of varying gradients, narrow roads and underground springs. An indicative square metre rate has been provided from a local trail builder to assist in future planning. For a compacted rubble finish, assuming typical treatments and applications, trail construction component in or on a regular surface, a cost of \$120m² can be expected. The costs are subject to site access, transfer sites and location from trail sections. The rate does not cater for the integration of known or unknown services and infrastructure, surveying of the alignment or engineering, native vegetation surveys, heritage site surveys, bridges, fords, armoured gullies and/or culverts, raised or hardened shoulders, road crossings, driveway crossings, open drains, water cause permits, cable location, tree surgery, rock breaking, raised treads in low lying areas and signage. It is important to note that not all trails will require a compacted rubble finish. Some trails in the strategy have been aligned to existing tracks or verges that could be formalised at less cost. Based on site visits, some trails in the strategy will require significant engineering works to transverse rivers and culverts which will greatly impact costs. The indicative m² rate has been provided to assist with budgeting. It is recommended for trails near townships and retail centres be wide enough for shared use (3m+ with a 300mm shoulder) and bitumised to increase longevity and use by the disabled. In more rural settings trails can become narrower, assuming less frequent use by more experienced trail users. Walking trails in particular can be narrow (1m with a 300mm shoulder). Passing opportunities or 'fat spots' can be created along the trail where width allows.

Priorities have been determined through community consultation. High priority sections are of value to create or formalise important links between assets, for tourism potential and/or to address existing safety concerns. Low priority areas were sections where the community did not see an immediate need or value.

Name	Zone	Indicative Trail Use	Km	Priority (H=High, M=Medium, L=Low)
Mount Torrens Loop	Adventure Nuts	Shared-Use Walking & Cycling & Horse	9.8	H Strong community support for trail implementation during consultation.
Mount Torrens South link	Adventure Nuts	Shared-Use Walking & Cycling & Horse	14.46	L-M
Gumeracha connector 1	Adventure Nuts	Shared-Use Walking & Cycling & Horse	2.58	L
Gumeracha connector 2	Adventure Nuts	Shared-Use Walking & Cycling & Horse	6.45	L
Lobethal to Amy Gillett Trail	Adventure Nuts	Shared-Use Walking & Cycling & Horse	4.4	M
Birdwood Loop	Adventure Nuts	Shared-Use Walking & Cycling & Horse	10.99	M
Mawson and Amy Gillett link	Adventure Nuts	Shared-Use Walking & Cycling & Horse	1.98	L
Woodside to Lobethal	Arts & Produce	Shared-Use Walking & Cycling & Horse	13.66	M
Piccadilly to Uraldia & Summertown (loop)	Arts & Produce	Shared-Use Walking & Cycling & Horse	12.02	M-H Existing safety concerns from the community.
Oakbank (loop 1)	Arts & Produce	Shared-Use Walking & Cycling & Horse	17.41	L
Summertown to Basket Range (loop)	Arts & Produce	Shared-Use Walking & Cycling & Horse	16.13	M
Lenswood Connector	Arts & Produce	Shared-Use Walking & Cycling & Horse	10.29	L
Woodside and Lobethal Links	Arts & Produce	Shared-Use Walking & Cycling & Horse	10.28	L
Oakbank (loop 2)	Arts & Produce	Shared-Use Walking & Cycling & Horse	6	M
Bridgewater to to Verdun	East-West Connector	Shared-Use Walking & Cycling	5.26	H Existing safety concerns from the community.
Stirling to Crafers (loop)	East-West Connector	Shared-Use Walking & Cycling	5.3	M
Crafers to Picadilly	East-West Connector	Shared-Use Walking & Cycling	3.66	H
Heathfield to Stirling Link	East-West Connector	Shared-Use Walking & Cycling	5.29	M-H Existing safety concerns from the community.
Heathfield to Bridgewater	East-West Connector	Shared-Use Walking & Cycling	6.69	M-H Existing safety concerns from the community.
Paracombe Link	Hills Face Escape	Walk	6.65	M
Verdun to Hahndorf & Oakbank (loop)	Liquid Gold	Shared-Use Walking & Cycling	7.36	H Strong support for tourist based trail.
Mylor to Heathfield	One with Nature	Walk	4.73	L-M
Bradbury to Mylor	One with Nature	Walk	5.53	L
Aldgate to Ironbank (loop)	One with Nature	Walk	12.06	L
Scott Creek	One with Nature	Walk	9.74	L
Carey Gully Link	Arts & Produce	Shared-Use Walking & Cycling	3.35	L

See map below to identify these sections.

Trail Sections (for costing and priority purposes)



7.2 Resourcing Models

In January 2012, the Australian Bicycle Council released the results of Local Government and Cycling Survey undertaken in July 2011. The survey is an initiative of the Australian National Cycling Strategy 2011-16, which aims to double the number of Australians cycling by 2016. The survey was undertaken to understand how councils prioritise and fund cycling initiatives, the types and extent of cycling infrastructure in place and how the Australian Bicycle Council can better facilitate local government encouragement of cycling.³² Key results from the survey as follows;

- Councils spent more than \$72 million on bicycle-related programs in 2009-10.
- Survey participants reported receiving \$26m from Australian government and \$26 m from State governments.
- More than two thirds of responding councils either have a bicycle strategy or are working towards one.
- There has been a significant increase in the proportion of councils undertaking cycling counts from 12% in 2007 to 21% in 2011.
- As at June 2010, participants reported having constructed 11,704km of cycling infrastructure. When their cycle networks are complete the infrastructure will measure 17,842km.
- Survey participants reported the installation of 508 sporting and recreational facilities including: 36 velodromes, 113 mountain biking facilities and 360 BMX/skate facilities.

For the AHC, these results indicate that trail design and development is a popular investment in recreational infrastructure, and that there is willingness to help fund such projects (extending to shared use trails) from State and Federal Governments.

The simplest method to fund trail development would be a joint funding arrangement between Council and other levels of government grants. The potential power of this approach is to deliver significant physical sections of the trail quickly and efficiently. To justify the significant work required to be successful in this competitive and often fickle funding arena, the project would need significant professional assistance and committed partners who are also able to contribute. One of the major advantages of the trail as described is that it can be delivered incrementally in few or many stages. Considering the ways to harness resources to deliver the trails, potential funding support has been identified which may be engaged to provide assistance not only in delivering the trail, but embedding the trail in the local community. For the AHC, these results indicate that trail design and development is a widespread investment in recreational infrastructure, and that there is willingness to help fund such projects from State and Federal Governments.

The simplest method to fund trail development would be a joint funding arrangement between Council and other levels of government grants. The potential power of this approach is to deliver significant physical sections of the trail quickly and efficiently. To justify the significant work required to be successful in this competitive and often fickle funding arena, the project would need significant professional assistance and committed partners who are also able to contribute. One of the major advantages of the trail as described is that it can be delivered incrementally in few or many stages. Considering the ways to harness resources to deliver the trails, potential funding support has been identified which may be engaged to provide assistance not only in delivering the trail, but embedding the trail in the local community.

Potential Funding Sources by Type of Organisation

- Federal government – departments, special programs, qangos Grants.gov.com.au
- State government departments, programs, initiatives,
- Local governments
- Non-government organisations (NGO's) and peak bodies
- Philanthropic organisations which offer grants (Philanthropy Australia offer a directory)

³² Australian Bicycle Council (2011) Australian Local Government Bicycle Account 2011. URL: <http://www.austroads.com.au/abc/australian-local-government-bicycle-account-2011>, accessed 19/08/12

- Community organisations at the regional and local level
- Individual benefactors (including encouraging bequests)
- Local businesses
- State or national business enterprises
- International organisations (world heritage registers, UNESCO etc.).
- Health, regional development, tourism, skills development (education and training), , community development, heritage, indigenous cultural development; or by
- Walking, cycling – exercise and activity programs.

Potential Source of Partners committed to good causes:

- Volunteering organisations and coordinators
- Men's sheds
- Kesab

Potential Sources of Supporters seeking to demonstrate their Corporate Good Citizenship:

- Mining industry
- Financial Institutions
- Potential Sources of Supporters seeking to meet business operating requirements:
- Greenhouse gas abatement targets
- Irrigation land offsets
- Disposal opportunities e.g. clean fill, broken or redundant vineyard posts
- Traineeship requirements
- Green operating requirements or sources of credentials
- Organisations seeking to develop or buy carbon credits.

Example Programs which could be used as models for developing sections of the trail and broader linkages:

- Adopt-a-Road model could be used for trail sections/viewing spots/ seats/shelters
- Adopt-a-(animal/ bird/plant) which might need nesting boxes, plant maintenance/ watering spot.
- Build-a-brick supporters or memorial pavers/bricks to contribute, celebrate or remember loved ones.
- Rails-to Trails is a well-established model with a successful method of converting disused railway tracks into walking trails (<http://www.railstotrails.org/index.html>).

7.3 Ongoing Trail Sustainability Framework

The Adelaide Hills 20 Year Trail Strategy is ambitious and will require ongoing energy and momentum to maintain the integrity of the broad scale planning. A five piece sustainability framework has been developed for the strategy to ensure design principles are met and the outcomes include sustainability considerations for the community, the environment and the economy. After the last implementation step, this framework can be used again and again to enhance the quality, value and experience of existing trails by looking for further possibilities of commitment, design elements and engagement opportunities. This framework is a blend of strategic sustainable development (FFSD model based on The Natural Step framework, Jonas Oldmark) and participatory design process model (The Weave, Tracy Meisterheim, Steven Cretney and Alison Cretney).

5 Piece Sustainability Framework

1. Feasibility – Explore Opportunities

Explore opportunities for the trail in all three sustainability fields (see diagram above). Understanding the key drivers is important; however there may be more opportunities and considerations that will result in a more holistic outcome for the community.

2. Commitment, Knowledge and Resources

Understanding the level of commitment and resources is key as trail development is often a balance between different user/interest groups with various needs and agendas. A range of investment models can be considered aside from usual budgets and grant funding.

3. Planning and Sustainable Design

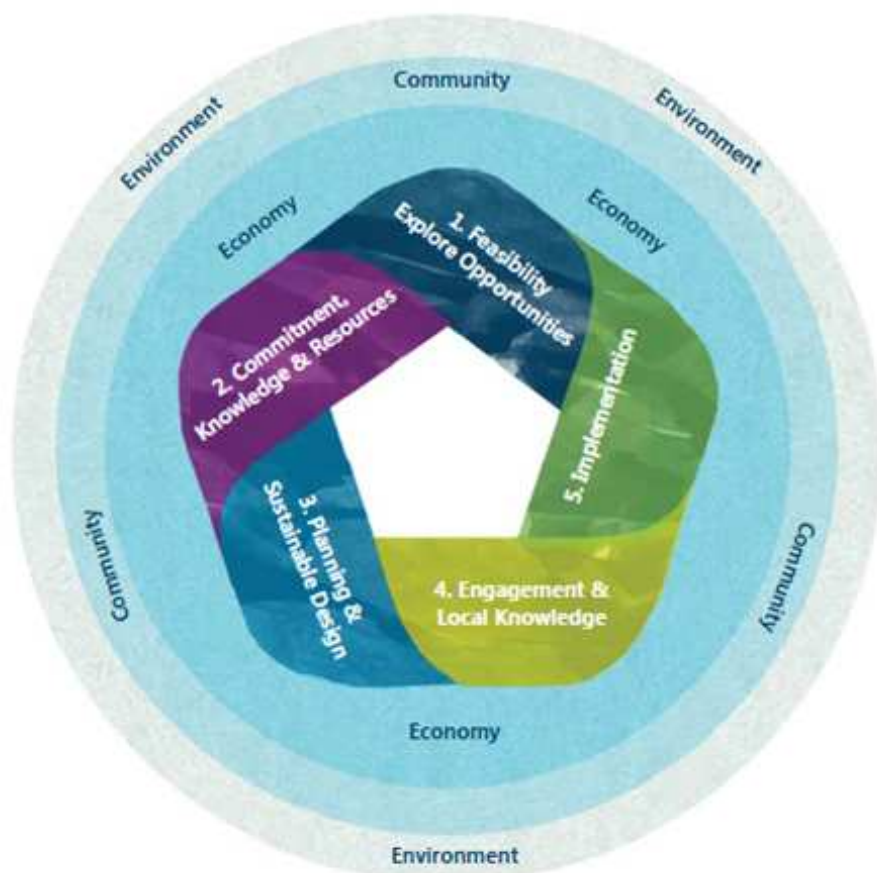
Planning and designing the trail section in a sustainable manner is important for long term use and low ongoing maintenance requirements. Importantly the trail section should link into a township or another trail at both ends.

4. Engagement and Local Knowledge

Engaging with the community will bring out a range of local issues and needs for which they can often provide solutions or suggestions for having intimate knowledge of the area thereby directing funds to the highest value use. Establishing an outlet/s for local groups (e.g. Landcare or school groups) to become a part of the trail can foster stewardship of local environments.

5. Implementation

The fifth step involves the implementation of the trails. A marketing and communication plan needs to go hand in hand with construction so the asset can reach maximum exposure.



	Environmental Sustainability	Social Sustainability	Economic Sustainability
Feasibility	<p>Understand sensitive environments (areas to protect). Consider existing bio-diversity and sensitive habitats and vegetation.</p> <p>Identify natural assets to see/engage with along the trail.</p> <p>Seek any viable links to other natural assets e.g. Conservation parks.</p> <p>Understand risks of disease areas and weeds. Map these areas</p>	<p>Understand the cultural landscape and key values.</p> <p>Understand the need for connections and links to townships or existing trails/recreation facilities.</p> <p>Understand the desired trail experience.</p> <p>Understand the user group/s needs and drivers for the trail.</p> <p>Locate any education, shops, child care facilities, retail outlets or support services that would benefit from connection to the trail.</p> <p>Consider facilities for drinking water, toilets, picnic facilities and tourist info centres.</p> <p>Appeal to the widest user group to promote,</p> <ul style="list-style-type: none"> • active lifestyles and physical health • disease prevention, and, • mental health through community interaction and exercise. 	<p>Locate any retail outlets, winery's/cellar doors, food or accommodation services that would benefit from a connection to the trail.</p> <p>Understand potential for tourism and impacts.</p> <p>Prioritise trails that link population centres, tourist attractions, existing transport services, link to existing trails, links to nature and scenic areas.</p>
Commitment	<p>Understand support from State Government environmental agencies.</p> <p>Identify local environmental champions and interest groups.</p> <p>Consider any carbon offset opportunities.</p>	<p>Understand support from State Government agencies and advocacy groups.</p> <p>Involve people with the right experience and expertise.</p> <p>Identify local champions and interest groups related to recreational activities.</p>	<p>Understand support from State Government agencies and advocacy groups involved in tourism and economic investment.</p> <p>Consider a wide range of investment options, not only grant funding or operational budget.</p>

Planning	<p>Map sensitive ecosystems and natural assets – plan to go around these.</p> <p>Follow existing contours to avoid erosion and unnecessary construction. Avoid very steep or very low areas.</p> <p>Make use of any undeveloped roads. Protect biodiversity corridors and take people through lower value biodiversity landscapes, with views of features. Consider if any boardwalks, bridges or significant engineering required is required and then if it can be avoided by using an alternate route.</p> <p>Develop risk assessments and management plans for:</p> <ul style="list-style-type: none"> • Fire & Emergency Service Access • Biodiversity <p>Engage with local flora and fauna experts to plan interpretative locations.</p> <p>Consider shoe/bike cleaning stations.</p>	<p>Prioritise trails that create important links for the community.</p> <p>Support the widest group of users the trail can safely accommodate.</p> <p>Consider the future needs of the community e.g. gophers.</p> <p>Plan access for emergency services vehicles. Avoid private property.</p> <p>Consider trail classifications and design standards and safety of trail users/ shared use requirements.</p> <p>Design to suit user group/ s e.g. sightlines, widths and sweeping turns.</p> <p>Plan facilities for drinking water, toilets, picnic facilities and tourist info centres.</p> <p>Engage with local historians and cultural experts to plan interpretative sites/ themes/stories etc.</p>	<p>Understand maintenance resources and develop a plan.</p> <p>Link and engage with any retail outlets, winery's/ cellar doors, food or accommodation services that would benefit from a connection to the trail</p>
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Engagement	<p>Engage with local flora and fauna experts to plan interpretative content.</p> <p>Link to existing environmental programs such as Landcare.</p> <p>Link to existing environmental education programs and local schools.</p> <p>Consider verge treatments for bush food education and native habitat development.</p> <p>Develop an education campaign for the trail related to impacts of disease, weeds, cats and dogs.</p>	<p>Involve many staff members in trail development as possible so knowledge is shared.</p> <p>Engage with local historians and cultural experts to plan interpretative content.</p> <p>Link to existing activities, events, art, diversional therapy programs and travel smart workplace programs.</p>	<p>Consider methods of data collection for trail use and surrounding economic activity.</p> <p>Finalise the trail management plan and detailed maintenance program outlining the role of the council and the role of community groups. Consider if an MOU is required.</p> <p>Engage with local businesses and plan for signage content.</p> <p>Develop a marketing and communications strategy.</p>
Implementation	<p>Consider material selection and local sources .</p> <p>Ensure sustainable construction methods, accounting for site access, water run-off and erosion and biodiversity protection.</p>	<p>Involve the community in the implementation of the trail. Provide outlets for local ownership, shared meanings/learning and transparency.</p> <p>Launch the trail with an event and media.</p>	<p>Execute the marketing and communications strategy.</p> <p>Provide information/tools for local businesses to market themselves for trail users.</p>

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9. Appendix

9.1 Australian Standard AS 2156.1

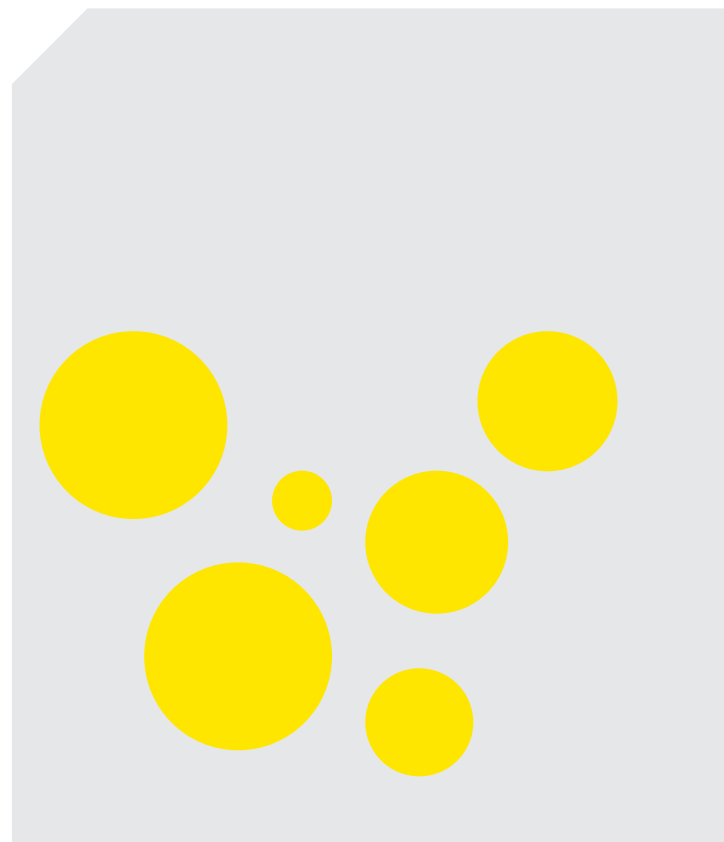
Australian Standard AS 2156.1

Class	Item	Description
Class 1	Description	<p>Opportunities: walks for a large number of visitors, including visitors with reduced mobility.</p> <p>High level facilities and interpretation.</p> <p>Numerous opportunities to learn about the natural environment (by the use of interpretive signs or brochures)</p> <p>Regular encounters with other visitors.</p>
	Track Conditions	<p>Wide track with hard surface (appropriate for wheelchairs).</p> <p>Width: 1.2m or more. Good maintenance, minimum intrusions.</p>
	Gradient	<p>The grades are compatible with the AS 1428 series</p> <p>Steps only when ramp is also available.</p>
	Signage	<p>Frequent use of signs for interpretation and management purposes.</p> <p>Intersections should have arrow type track markers</p>
	Infrastructure	<p>Facilities may include lookout platforms, seats and barrier rails.</p> <p>No camping permitted along the track in general.</p>
	Terrain	<p>No need of previous experience is required for the user.</p> <p>Personal Safety: exercise normal care</p>
	Weather	N/A
Class 2	Description	<p>Opportunities: Trails are easy to walk. Offered to a large number of visitors.</p> <p>High level facilities and interpretation.</p> <p>Moderate to plentiful opportunities to learn about the natural environment (by the use of interpretive signs or brochures)</p> <p>Regular encounters with other visitors.</p>
	Track Conditions	<p>In general, modified hardened surface.</p> <p>Width: 0.9m or more</p> <p>Good maintenance, minimum intrusions</p>
	Gradient	In general no steeper than 1:10. Keep the use of steps to a minimum.
	Signage	Signs for management and interpretation often used. Intersections should have arrow type track markers
	Infrastructure	<p>Facilities may include lookout platforms, seats and barrier rails.</p> <p>No camping permitted along the track in general.</p>
	Terrain	<p>No need of previous experience is required for the user.</p> <p>Personal Safety: exercise normal care</p>
	Weather	N/A
Class 3	Description	<p>Opportunities: Slightly modified natural environments. Require a moderate level of fitness.</p> <p>Provision of facilities and interpretation not common.</p> <p>Opportunities to observe and appreciate the natural environment (limited use of interpretive signs or brochures)</p> <p>Sporadic encounters with other visitors.</p>
	Track Conditions	<p>In general, modified surface and some sections hardened.</p> <p>Width: variable and less than 1.2m</p> <p>Minimum intrusions and obstacles.</p>

	Gradient	Short sections may exceed 1:10, but in general no steeper than 1:10. Steps may be commonly used.
	Signage	Signs for management and interpretation with limited use. Signs and trackers for direction may be used.
	Infrastructure	Facilities not provided in most of the cases. Only for safety and environmental considerations. No camping permitted along the track in general.
	Terrain	No need of bushwalking experience necessary. Minimum level of specialised skills. Common natural hazards include steep slopes, unsuitable surfaces and minor water crossings.
	Weather	Navigation and safety may be affected by storms.
Class 4	Description	Opportunities: Relatively undisturbed natural environments. Require a moderate level of fitness. Minimal facilities. Opportunities to observe and appreciate the natural environment without provision of signage. Opportunities for solitude with few encounters with others.
	Track Conditions	In general, distinct but without major modifications. Width: variable. Encounters with fallen debris and obstacles likely.
	Gradient	Only limited by environmental and maintenance considerations.
	Signage	Minimal signage for management and directional purposes only.
	Infrastructure	Facilities not provided in most of the cases. Only for safety and environmental considerations.
	Terrain	Moderate level of specialised skills e.g. navigation, emergency first aid. Users need to be self-reliant.
	Weather	Storms and severe weather may affect navigation and safety.
Class 5	Description	Opportunities: for visitors to find their own way along often indistinct tracks in remote locations. Require advanced outdoor knowledge and skills. Few encounters with other visitors. Frequent opportunities for solitude.
	Track Conditions	Little modification to natural surfaces. The alignment of the track may be unclear in places. Minimum clearing. Debris along the track.
	Gradient	Steep sections of unmodified surfaces may be present.
	Signage	Limited. Only for management purposes.
	Infrastructure	Facilities: generally not available. Only provided for safety and environmental considerations.
	Terrain	High degree of specialised skills required, including navigation. Maps and navigation equipment necessary to complete the track. Users are self-reliant in the case of an emergency and weather hazards or in the need of first aid.
	Weather	Storms and severe weather may affect the navigation and safety of visitors.
Class 6	Description	Opportunities: for experienced walkers to explore remote and challenging natural areas. No reliance on managed tracks. Long periods of solitude. Limited encounters with others.
	Track Conditions	Natural environment, non-modified.
	Gradient	Steep sections of unmodified surfaces.
	Signage	Not provided, generally.
	Infrastructure	Facilities: generally not provided.
	Terrain	Users require previous experience in the outdoors. High level of specialised skills, including navigation. Maps and navigation equipment necessary to complete the track. Users are self-reliant in the case of an emergency and weather hazards or in the need of first aid.
	Weather	Storms and severe weather may affect the navigation and safety of visitors.

The criteria that need be met to classify a track include track conditions and gradient, signage and infrastructure and also terrain and weather. Each class contained in this standard includes 'guidance for management'. This information has not been considered under the scope of this report, as this does not affect the classification of the trails. The full document can be found at www.standards.com.au

9.2 Regional Trail Identity and Signage Concepts



REGIONAL TRAIL IDENTITY AND SIGNAGE CONCEPTS

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Overview

The proposed trail network for Meechi Road required a long-term, versatile wayfinding system to connect a network of councils throughout the Adelaide Hills, Fleurieu Peninsula and Kangaroo Island.

This concept package indicates the direction we propose for signage forms and visual elements and potential identifiers.

II. INSPIRATION

Regional trail identity and signage concepts
Date: November 2012 | Job no: MEE1591
Phase: Scoping > **Concept** > Development > Final



Inspiration

1. Directions in time (as well as kilometres) makes it easier for the average person to determine how long a walk will take, reassuring trail users with little experience.
2. Trail users on bikes will require places to lock their bikes up if they want visit other attractions.
3. A dedicated colour for each trail will provide easy identification. This effective system is famously used on the London underground. It provides instant identification of the route being used and provides clarity when two routes are intersecting.
4. Giving the trail users rest stops at key points along the signage trail will encourage resting, preventing excess fatigue and promoting safe trail usage.

II. INSPIRATION

Regional trail identity and signage concepts
Date: November 2012 | Job no: MEE1591
Phase: Scoping > **Concept** > Development > Final

Existing local examples



II. INSPIRATION

Regional trail identity and signage concepts
Date: November 2012 | Job no: MEE1591
Phase: Scoping > **Concept** > Development > Final

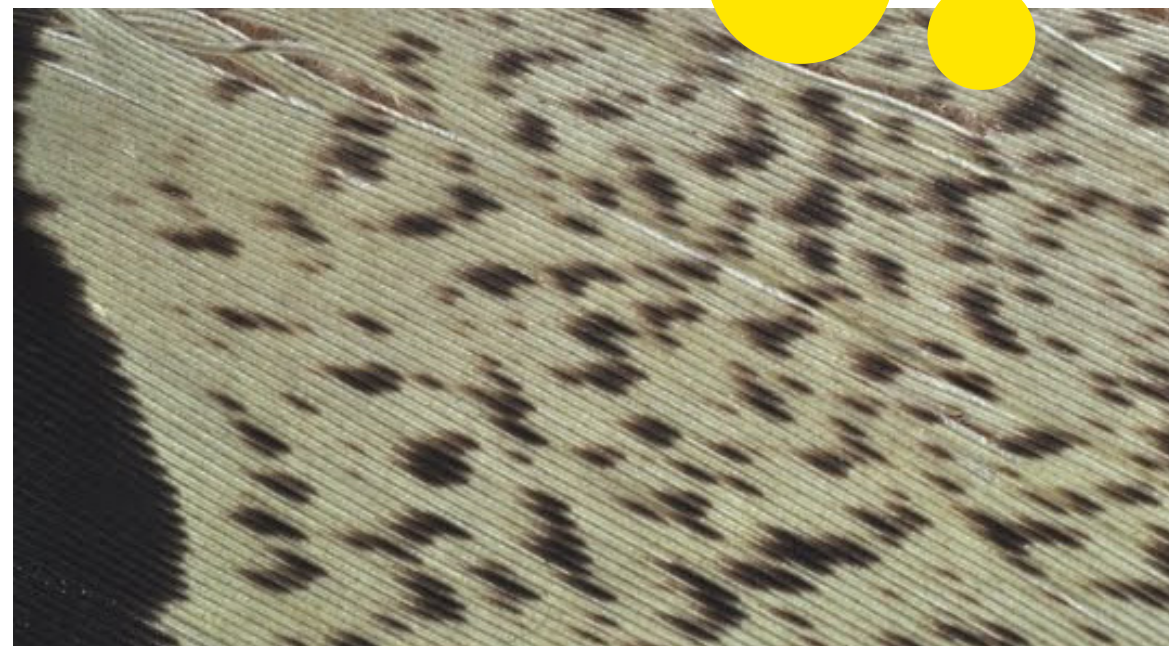
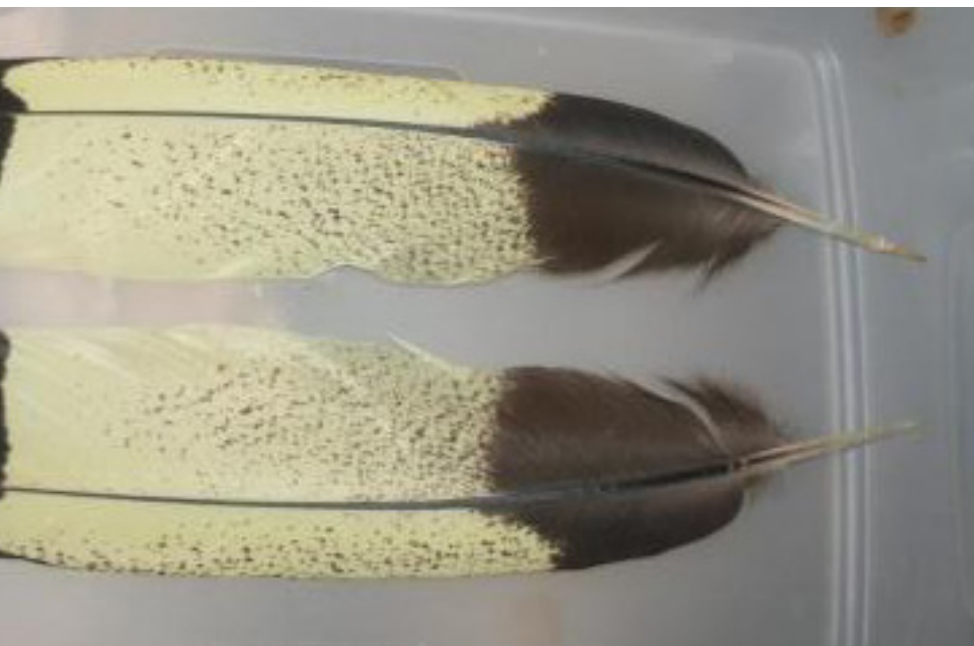
Flexible signage systems

These are some examples of configurable signs that can be easily maintained and labelled without the need for unique signs to be developed for each use. Making signs modular enables savings to be made due to larger quantities being produced in a single printing, and leaves the option of adding, modifying and removing signs later.



II. INSPIRATION

Regional trail identity and signage concepts
Date: November 2012 | Job no: MEE1591
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Yellow-tailed Black Cockatoo

Flocks of Yellow-tailed Black Cockatoos are found across the trail region. Their elegant, slow flight evokes something of the spirit of relaxation the trail network will inspire. These cockatoos visit many areas in the region, viewing the landscape from a great height. This broader vision ties in with that of the regional trail network, as they move from place to place to forage before returning home to nest in tree hollows.

The sight of these large birds munching away at seed pods or cones is one of the delights of many walkers who venture into even the lightest scrub! As food (and wine) are so much of a tourist's experience, there is sense in associating the network with a distinctive group forager.

Another important motivator for this choice of icon species is its significance to the Indigenous peoples of the region. Known as 'willampa' by the Kurna, records indicate that it is commonly associated with the Kurna, Ngadjuri, Ngarrindjeri and Peramangk nations. Although this requires more investigation and consultation, the Yellow-tailed Black Cockatoo may be an important unifying symbol to be built into interpretive and cultural tourism ventures.

Although it is considered to be of conservation concern, it is a regular and iconic sight throughout the region. In part, this is due to their broader diet that includes plants common to many areas of the broader Fleurieu region. There are also many community projects underway to improve habitats, potentially leading to good linkages with interpretive themes, conservation areas and ecotourism in the future.

The yellow-dotted tail feathers of the cockatoo are quite distinctive and referencing a part of these beautiful markings on the signs will create a visual style that is in sync with the surrounding wildlife.

In future potential applications, the dots are a versatile design element, particularly for a project based on maps and location, to act both as location markers and a reminder of the importance of native flora in maintaining a balance in the natural environment connected through council areas.

The yellow circles also evoke the blossoms of many Acacia (Wattle) species, including Australia's floral emblem, the Golden Wattle.

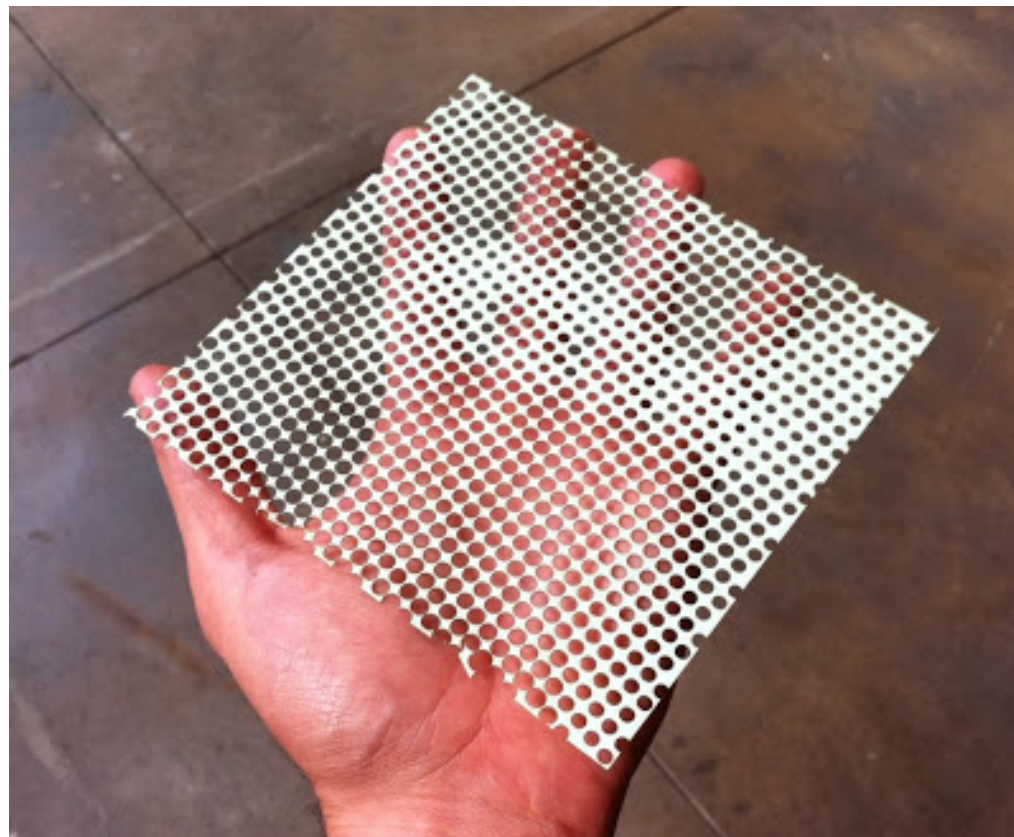
II. INSPIRATION

Regional trail identity and signage concepts
Date: November 2012 | Job no: MEE1591
Phase: Scoping > **Concept** > Development > Final



Inspiration

With a project such as a regional trail network, many parts make the whole. Diverse organisations are working together to deliver a broad range of trail experiences of many, many places. Along with its natural connection to the bird markings, or the dimples on a eucalyptus leaf, an array of perforations could evoke a scattering, or mosaic of localities (as on any map of the region) and make the linkage to people living in harmony within the landscape. The differing sizes of dotted perforations supports this theme and poses questions about connections to place (and how you might go from one experience to another).



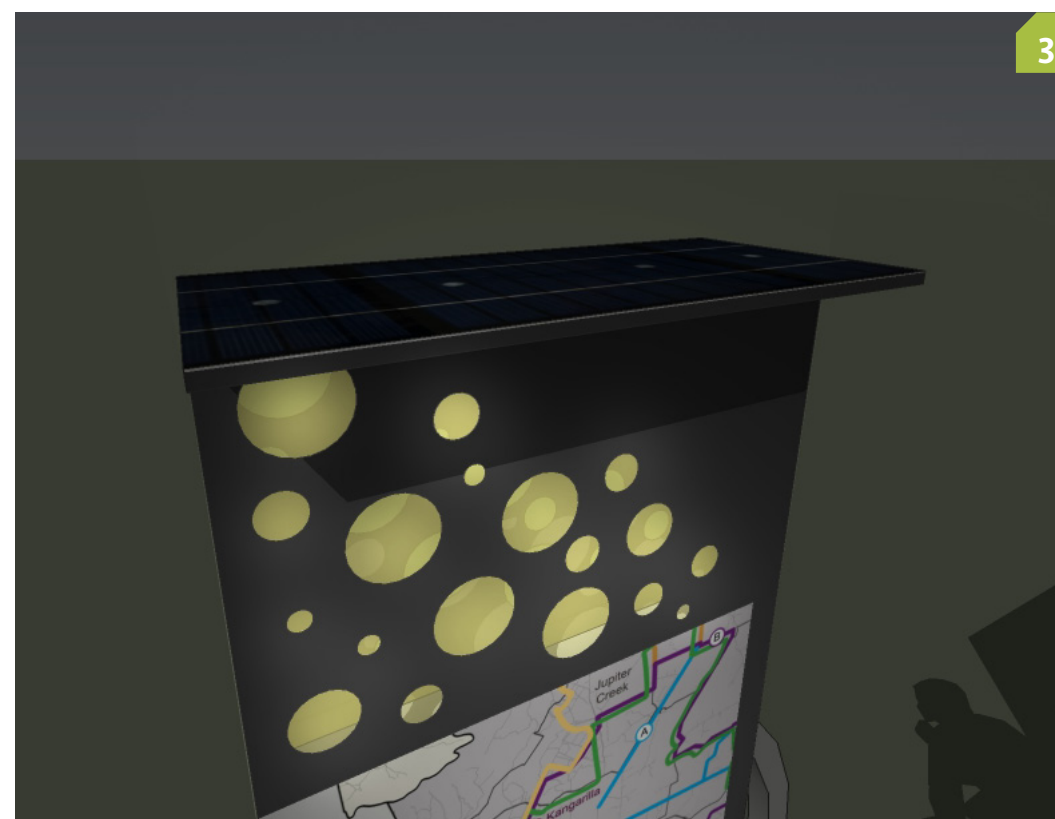
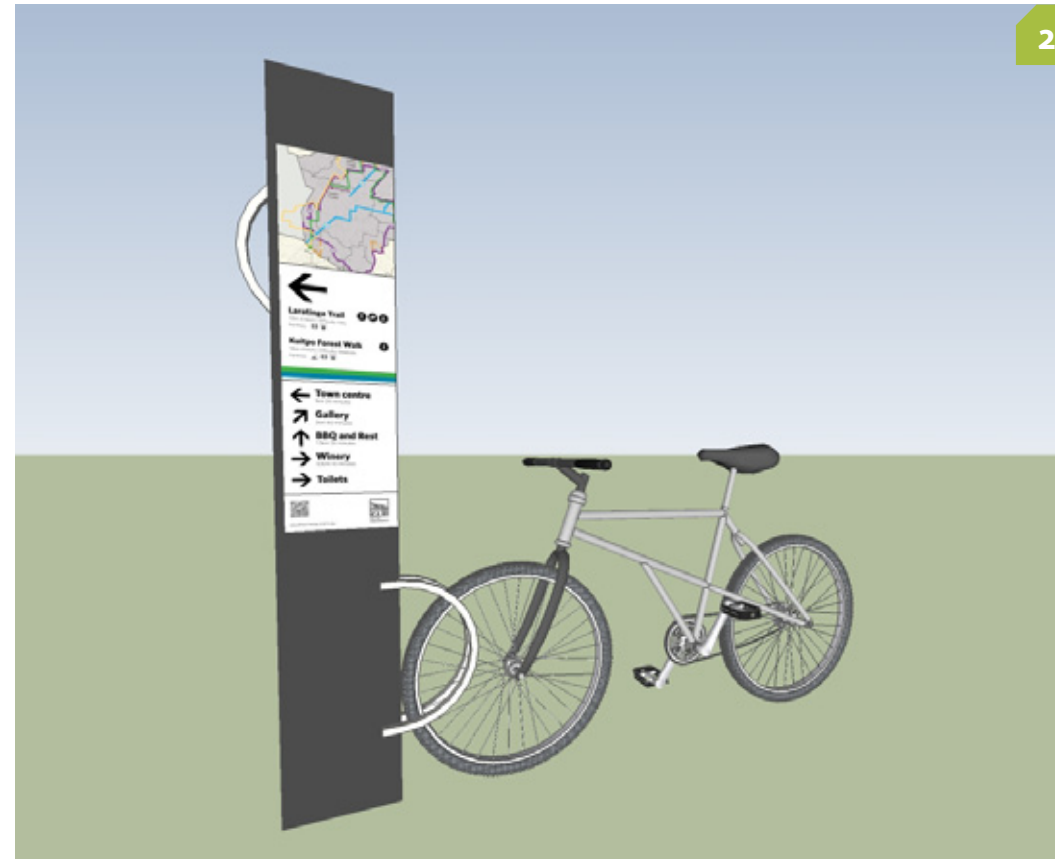
III. SIGNAGE CONCEPTS

Regional trail identity and signage concepts
Date: November 2012 | Job no: MEE1591
Phase: Scoping > **Concept** > Development > Final

Signage concepts

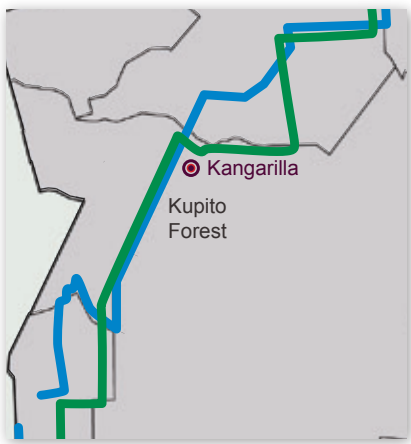
The following pages display concepts for three types of signs that will reflect the SA Trail Signage Standard, Australian Standards and DPTI design requirements.



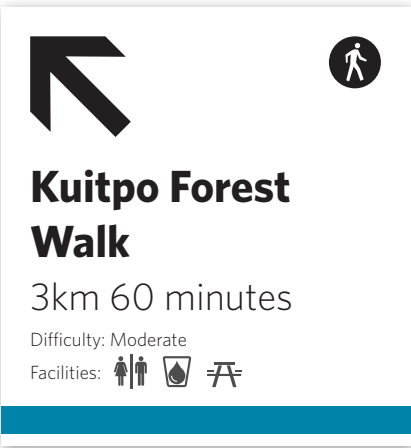


Totem signs

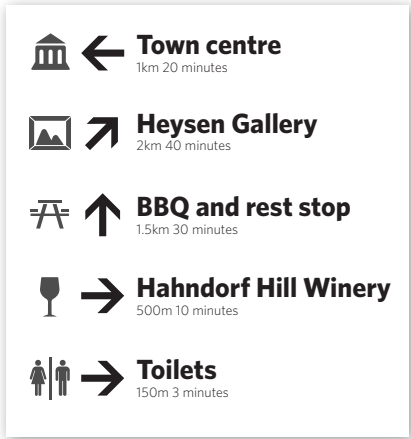
1. Tall and iconic signage to be placed at key points and junctions along the trail which can reinforce location as well as indicate facilities and tracks nearby. Coloured lines underneath the track information can aid cyclists (and other fast movers) in finding the direction they need quickly.
2. The signs incorporate a handle for cyclists to hold while inspecting the information as well as a wheel rack lock their bike up if they want to walk.
3. A solar panel could power lights at the top of the sign to create a beacon when it is getting dark.



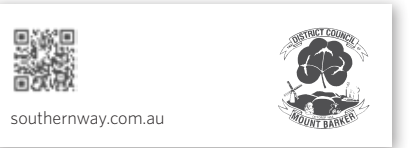
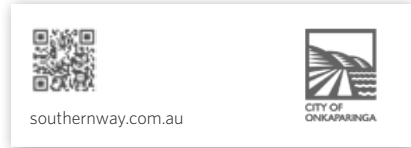
Location map



Wayfinding



Local highlights



Council and other identifiers

Totem sign faces

Typeface

Typefaces for catalogues and brochures need to be narrow enough to work in crowded environments, yet energetic enough to encourage extended reading. In contrast, typefaces designed for wayfinding programs need to be open enough to be legible at a distance, and sturdy enough to withstand a variety of fabrication techniques.

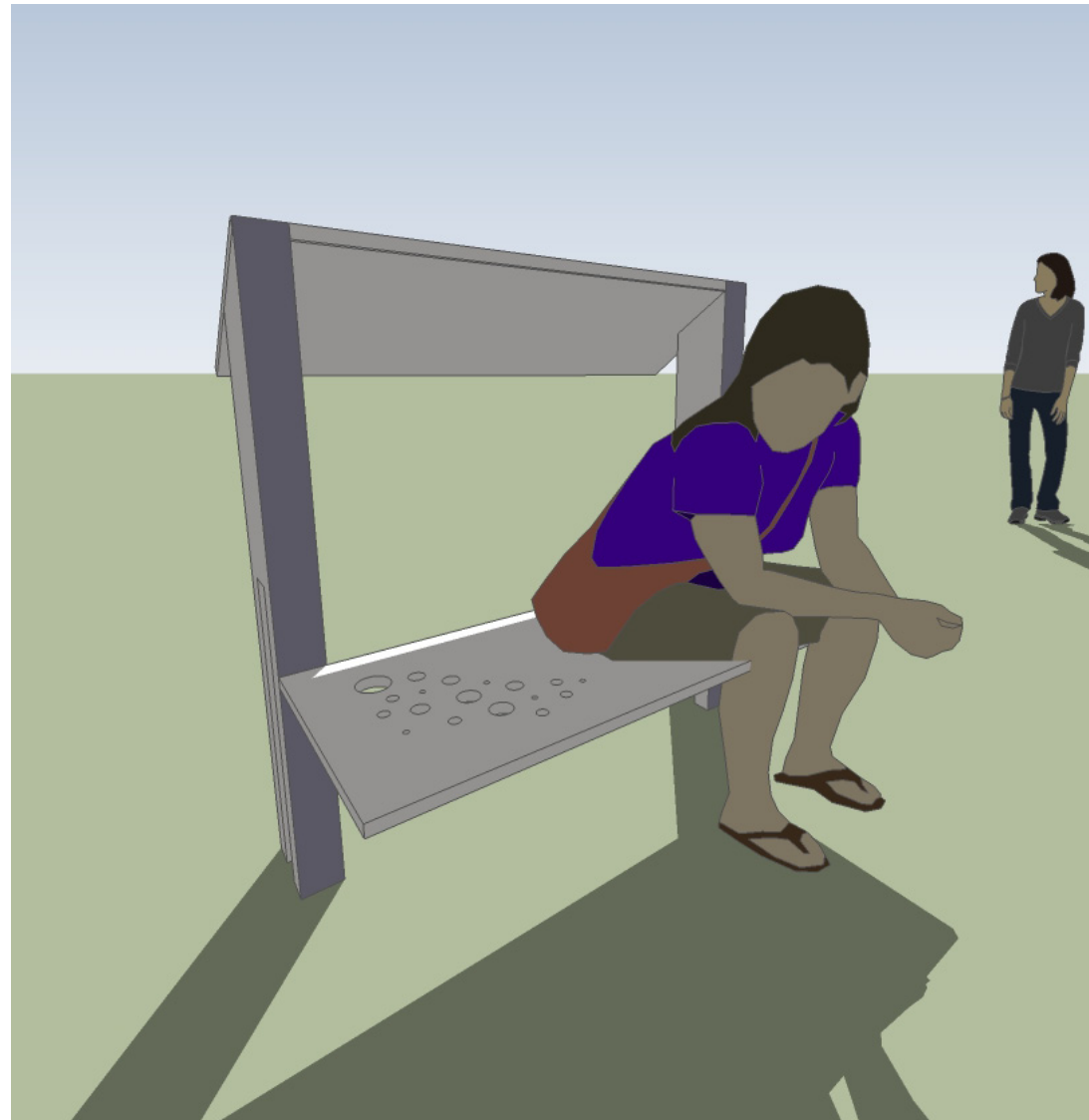
We have chosen the typeface 'Whitney' as the typeface as it was designed with both print and signage in mind, and has an extensive catalogue of different thicknesses, providing great flexibility for a range of applications.

Council and other Identification

Any council information and logos will appear on the extra sign face at the bottom of the totems. The content on this strip is flexible and may be customised on a per-council basis.

Examples of information that could appear here include:

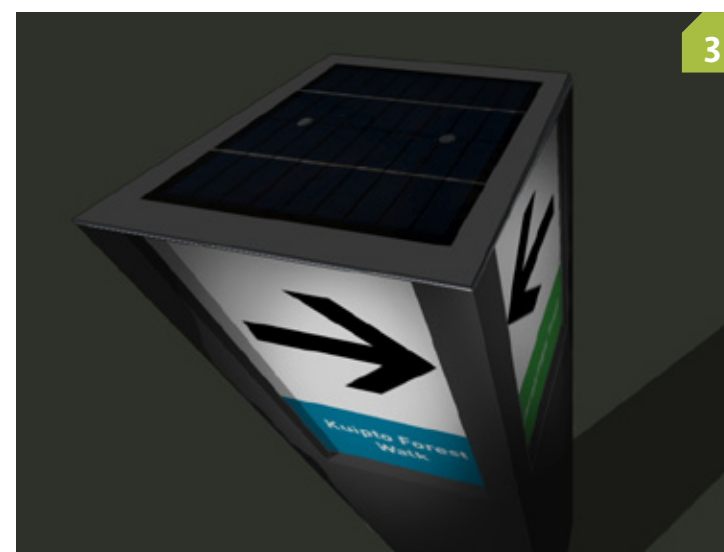
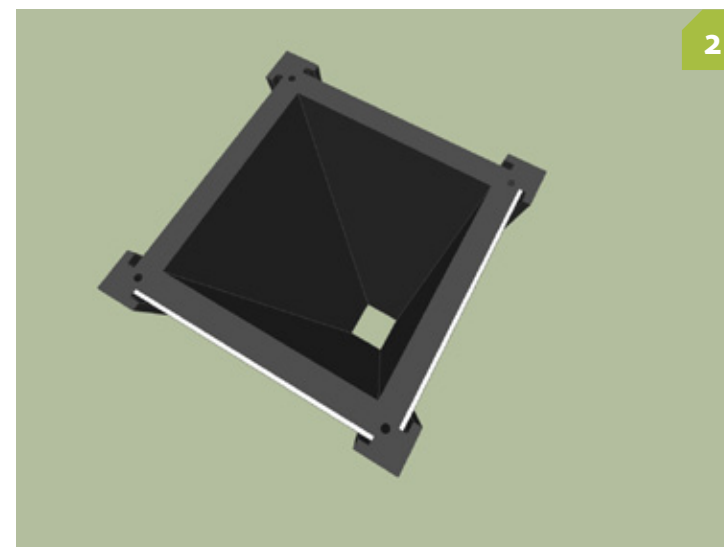
- Indigenous land information
- QR codes
- credits for funding
- warnings such as fire ban dates or emergency numbers.



Interpretive signage

The interpretive sign is intended to present text, photos, diagrams and maps to explain locations such as a historic site, a place of environmental significance or an entry into a township.

We have considered opportunities for trail users to stop, read and learn whilst having a break.



Directional signage/markers

1. These directional signs are to be placed along the track (approximately every kilometre) to give the trail user some comfort and encouragement by indicating clearly that they are on the correct track. They will also appear at junctions and can be approached from all sides. Using a colour in conjunction with the trail name will be used for quick identification.
2. The posts may be moulded to create slots for sign faces to slide in and out, which will keep costs down in production and maintenance. Hollowing out the middle will also reduce the weight in transporting and use less material. Using this system will allow all arrows to be the same dimensions, making the arrow flexible to rotate on each individual sign.
3. As an option, a solar panel could be installed on the top to power lighting for the signs.

Materials and maintenance

All of the signs have been designed to standard construction proportions to keep transport and handling costs down. The weight of these signs has also been considered to aid in transport to hard-to-reach areas. The signs will also include a graffiti-proof finish to minimise vandalism.

- 1. We recommend using Ecotuff for any structural posts, which is a recycled material stronger and more reliable than wood as it does not twist, split or bow and is durable in sun and marine environments. This material can be manufactured in a variety of colours and has the ability to be moulded to custom profiles.
- 2. Installing tags on the posts will help with maintenance management as well as numbering for damage reporting.
- 3. The signs will be concreted into holes that are up to 600mm deep (depending on the size of the sign).
- 4. The design would later be developed to facilitate simple installation with basic tools and procedures that could be installed by unskilled labourers such as people on Dole programs or a Green Corp project.





App, map and online application

- Promote the trail through social networks
- Encourage dialogue about the attractions along the way
- Create leaderboards for athletes using the tracks regularly
- Promote local businesses and attractions
- Aid in navigation
- Aid in maintenance reporting
- Scannable QR codes along the way for further information
- Augmented reality tours

REGIONAL TRAIL IDENTITY AND SIGNAGE CONCEPTS

Meechi Road Consulting

Important considerations

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Signature

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Date