

North West TASMANIA



Coastal Pathway Plan 2010



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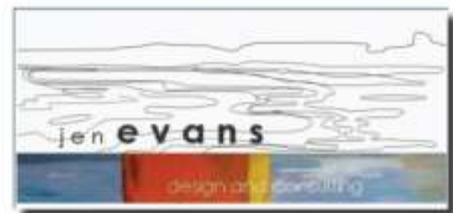
Published by

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Summary

The *North West Coastal Pathway Plan* provides guidance for local councils, State Government agencies and the wider community in regard to the development and operation of the shared pathway between Wynyard and Latrobe. This plan provides a summary of the desired route, its connections to other pathways and proposals for associated pathway infrastructure from a regional perspective. The key purpose of this plan is to assist in the strategic development of a regional shared pathway and to provide useful planning and development tool to the local Councils who may wish to implement sections of the pathway.

The *North West Coastal Pathway Plan* has been developed with the assistance and input from its key stakeholders;

- Waratah-Wynyard Council
- Burnie City Council
- Central Coast Council
- Devonport City Council
- Latrobe Council
- Sport and Recreation Tasmania
- Department of Health and Human Services Tasmania
- Department of Infrastructure Energy and Resources Tasmania
- Cradle Coast Natural Resource Management

The *North West Coastal Pathway Plan* has been made possible through a grant from the State Government of Tasmania and financial contributions from its participating local councils.



Acknowledgements

The authors acknowledge the role and contribution of the *North West Coastal Pathway Project Steering Committee* in the development of the *North West Coastal Pathway Plan* and the time provided in guidance and feedback for the development of this plan;

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The authors also acknowledge the invaluable contribution of the following consultant and technical staff of local Councils in the development of the *North West Coastal Pathway Plan*;

Stage one project consultant

Angela Castles is acknowledged for her work on stage one of this project, providing the steering committee with sound project establishment, research and consultation, and for providing the basis for the following stages of this plan.

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Abbreviations & terminology

CCA – Cradle Coast Authority

The Authority - Cradle Coast Authority

NWCP – North West Coastal Pathway

NWCPS – North West Coastal Pathway Steering Committee

SRT – Sport and Recreation Tasmania

SRCT – Safer Roads for Cyclists Tasmania Incorporated

Pathway – a path used for walking or cycling

Shared pathway – a path used for both walking and cycling

Trail – a path / route used for walking and cycling (usually in a natural setting)

DIER – Department of Infrastructure Energy and Resources, Tasmania

ABS – Australian Bureau of Statistics

Community access path – shared paths located within population centres linking local footpaths to schools, shops parks etc.

Recreation / exercise path – shared paths designed for the primary purpose of recreation and exercise

Community connector path – shared paths that link population centres, villages and towns

Commuter – person using shared and other paths for the primary purpose travel between home and work or other places of interest

Rail Trail – conversion of disused rail lines into walking and cycling pathways

Executive Summary

The North West Coastal Pathway plan provides guidance for local councils, State government agencies and the Cradle Coast community in regard to the development and maintenance of a shared pathway between Wynyard and Latrobe. The plan includes useful development tools for local councils who wish to implement sections of the pathway.

The plan has been made possible through a grant from the State Government of Tasmania and financial contributions from five local councils: Waratah-Wynyard, Burnie City, Central Coast, Devonport City and Latrobe. The plan draws extensively on earlier reports including the *Wynyard to Port Sorell Cycleway (1997)*, *Trails Tasmania Strategy (2007)* and the *Tasmania Physical Activity Plan 2005-2010*.

Development of the plan was assisted by local council technical staff, Sport and Recreation Tasmania and Cradle Coast Natural Resource Management. The project was directed by a steering committee comprised of members from Safer Roads for Cyclists Tasmania, Sport and Recreation Tasmania, Department of Infrastructure Energy and Resources Tasmania, Department of Health and Human Services, Local Councils and the Cradle Coast Authority.

The North West Coastal Pathway plan outlines alternatives for constructing approximately 110 km of shared walking / cycling pathway to connect the communities of the North West coast of Tasmania. The North West Coastal Pathway has the potential to deliver benefits in:

- Health and wellbeing
- Environmental outcomes, particularly as an alternative transport mode, and
- Tourism and the regional economy.

Tasmanians have the second lowest participation rates for exercise and physical activity nationally¹ – 71% of North West Coast Tasmanians are not undertaking 30 minutes of exercise per day which is contributing to poor health outcomes. The North West Coastal Pathway has the potential to provide fundamental infrastructure to allow safe and convenient exercise for people of all ages and abilities in a variety of natural settings.

Recently completed sections of the pathway have been received with great enthusiasm by the community and are already in high use.

The North West Coastal Pathway plan has applied a design model assuming three use-cases for the path: providing community access to local places; providing recreation and exercise; and providing community connectors linking towns and cities.

Proposed pathway typologies include concrete, asphalt and gravel with both off-road and on-road path placement. The path width varies depending on location from 1500 mm to 3000 mm. Barriers are proposed for the pathway where it is off-set from the road or rail tracks.

¹ Tasmanian Government (2005), *Tasmanian Physical Activity Plan, 2005 – 2010*, p.11

The route has been designed to maximise separation between users and motor vehicles and utilise existing pathways and connections. The proposed route also seeks to minimise level road crossings and consider the natural landscape to avoid steep and sudden changes in grade while incorporating scenic views. The North West Coastal Pathway plan provides maps of existing and proposed routes, plus any unresolved sections, in the coastal zone between Wynyard and Latrobe.

The North West Coastal Pathway has been designed as a shared pathway and is classified as such in as many instances as possible. The placement of the route has been designed, where possible, using the following criteria:

- Location within either the current road reserve or rail corridor
- Avoidance of location on private land
- Maximum distance away from vehicular traffic
- Maximum distance away from an active rail line
- If located close to an active rail line, set back far enough so as to avoid installation of fencing
- Location to maximise natural locations and coastal views and avoid places of environmental significance
- Location to maximise existing pathways and connections
- Location to maximise existing and proposed secondary paths that are not directly part of the North West Coastal Pathway
- Alignment and placement to encourage commuting activity, particularly family and children use
- Maximum user safety considering (for example) good visibility of path users, avoidance of sharp curves, best alignment and good visibility and lighting at bridges and enclosed pathways.

Specific places of Aboriginal cultural significance have not been considered as part of this project, but it is noted that they exist along the coastal zone. Potential areas of Aboriginal cultural significance and the impact of pathway placement should be addressed on a case by case basis.

The consultation phase of the North West Coastal Pathway project highlighted two issues in relation to land use planning – sequence and timing of development approval processes. Essentially, if development approval processes are delayed whilst funding is sought, the consideration needs to be given to the manner in which the proposed route corridor can be preserved to ensure that the route remains intact until such a time as it can be developed.

It is important that land owners and land managers are informed of the opportunities to provide public and private infrastructure that will support the future use of the North West Coastal Pathway system. In particular, new residential subdivisions should make allowance for shared paths and connections to existing and proposed sections of the pathway. A cooperative approach needs to be taken with land managers such as Parks and Wildlife and Crown Land Services to progress nodal developments recommended in the plan.

Each council will stage the pathway sections according to their own project and capital funding priorities. The following recommendations for staging are provided in terms of overall North West Coastal Pathway function:

Community access pathway sections – Somerset to Wivenhoe, Penguin to Heybridge, Devonport to Latrobe and Goat Island to Leith/Forth.

Once the community access paths are in place, efforts could be concentrated on creating the community connecting paths – Leith to Devonport, Wynyard to Somerset, Heybridge to Burnie and Goat Island to Penguin.

Estimated cost per linear metre of different path types and construction materials have been identified in the plan. Estimates are preliminary only and vary from \$100 per metre for adapting an existing roadway to \$7,500 per metre for a 2500mm suspended and/or partially supported concrete bridge path with maximum span of 20m. As with all quality project plans, each pathway section development should be considered within its own unique setting.

Total asset lifecycle costs for the pathway have been calculated at \$60.4 M over a projected asset life of 40 years. This includes a capital investment of \$26.4 M to construct the pathway and annual costs of \$832,000 to maintain, operate and renew the asset.

Specific standards apply to the use and requirements for barriers and fences, as outlined in the *Austrroads Guide to road Design Part 6A: Pedestrian and Cyclist Paths 2009*. All sections of the North West Coastal Pathway should comply with this standard. It is noted that Tasmanian Railways requires an additional standard of fencing beyond that of the Austrroads standard.

Universal pathway markers and signage have been suggested including warning signs, directional signs, track head signs and interpretive signs. The plan also proposes locations for support facilities such as public toilets, bike racks and lockers, drinking fountains, viewing points and public showers.

Pathway landscaping should be designed to improve the aesthetics of pathway infrastructure, enhance existing coastal ecosystems and rehabilitate compromised coastal areas. In most instances the use of local native plants are recommended set well back from paths.

Appropriate maintenance and asset management practices are vital to the successful use and safety of shared pathways. Maintenance issues to be assessed in section planning include path structure and surface, earthworks, sightlines, rubbish and debris, and furniture and barrier/fencing condition. The various path types identified in the plan have advantages and disadvantages in terms of capital cost, maintenance and carbon footprint. Consideration of all these factors will be important for councils in planning development of pathway sections.

1.0 Project Background

1.1 Executive summary

The proposed North West Coastal Pathway when complete is planned to connect the communities of the North West Coast of Tasmania from Wynyard to Latrobe, covering approximately 110 km of shared walking / cycling pathways. Once complete, the Coastal Pathway will provide fundamental infrastructure and benefit these communities by;

- improving connections between our communities
- encouraging healthy lifestyles
- creating new tourist experiences
- providing alternative transport routes
- reducing the environmental and health impacts of motorised transport
- improving the environmental condition of sections of the coastal zone
- assisting disadvantaged people who rely on a limited public transport system

The North West Coastal Pathway has been supported by the State Government's Trails and Bikeways Program and recommended as a possible champion trail for the North West region in the Trails Tasmania Strategy in 2007.

This project is underpinned by extensive consultation with the cooperating local Councils and best practice in asset design and management. Parks and Wildlife Service, the Tasmanian Department of Primary Industry Parks Water and Environment and Cradle Coast Natural Resource Management have participated as stakeholders in the development of the North West Coastal Pathway Plan.

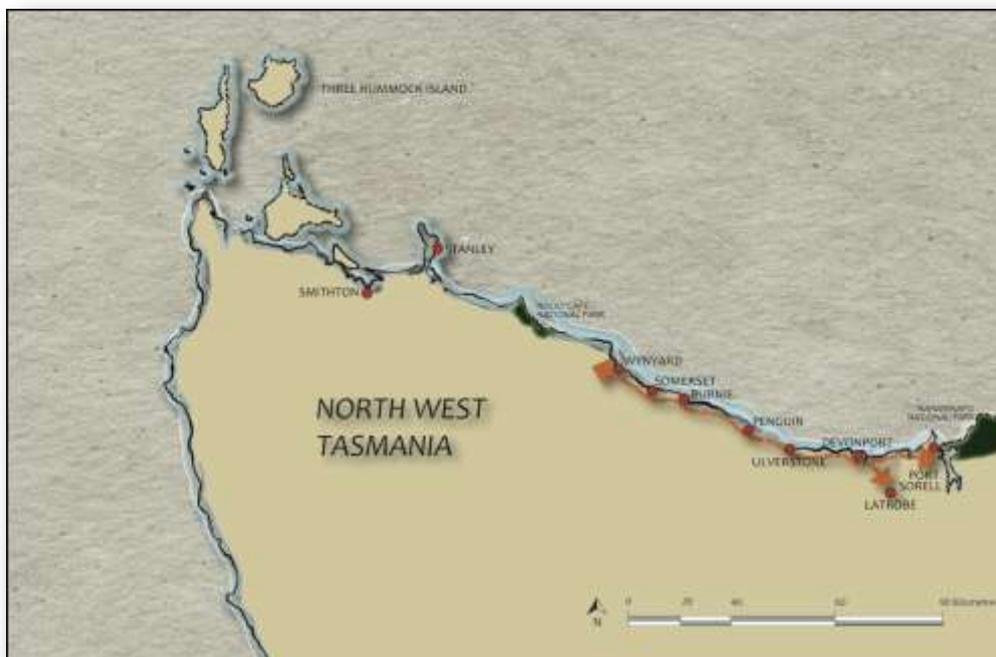


Figure 1. Location Map

The North West Coast of Tasmania, with the proposed extent of the North West Coastal Pathway.

1.2 Background

The Cradle Coast Authority, in conjunction with Safer Roads for Cyclists Tasmania Incorporated, the co-operating local Councils and the State Government of Tasmania initiated the North West Coastal Pathway Project in 2009, as a response to ongoing community demand for accessible shared pathways between coastal communities.

This project has long history and has been discussed for some time. The concept was first documented in 1997, when the North West Coast Councils commissioned the *Wynyard to Port Sorell Cycleway* planning report.² The concept of a regional pathway along the North West Coast has also been highlighted by the Tasmanian Government through its *Trails Tasmania Strategy*³ as a champion recreation trail for the North West area and a priority project for the Cradle Coast region. The *Cradle Coast Tracks Strategy*⁴ also endorsed the regional pathway project.

Since this time, many of the participating Local Councils have completed key sections of the coastal pathway. When accomplished, the coastal pathway will provide essential infrastructure to the North West Tasmanian community, allowing for an improvement in health, social, environmental and economic outlooks.

Of particular concern are the current health outcomes of North West Tasmanian communities. Physical inactivity is significantly higher than other Tasmanians and Australians.⁵ Tasmanians have the second lowest participation rates for exercise and physical activity nationally⁶, - 71% of North West Coast Tasmanians are not undertaking 30 minutes of exercise per day which is contributing to their ongoing poor health outcomes.

North West Coast Tasmanians have the highest death rate in Tasmania and Australia for cancer and diseases of the circulatory system. They also have higher rates of obesity, smoking, lack of exercise and high risk alcohol consumption. The provision of relevant and accessible infrastructure will encourage beneficial exercise for the North West Tasmanian communities. The North West Coastal Pathway will provide fundamental infrastructure required to allow safe and convenient exercise for people of all ages and abilities in a variety of settings.

² Sinclair Knight Merz, *Wynyard to Port Sorell Cycleway – Planning stage Estimate of Fees*, 1997

³ Inspiring Place & Tasmanian Government, *Trails Tasmania Strategy 2007*

⁴ Cradle Coast Authority & Sport and Recreation Tasmania, *Cradle Coast Tracks Strategy, 2004 – 2005*, p. 29

⁵ PHIDU, Australian Government Institute of Health and Welfare, the University of Adelaide Australia, *Population health profile of the North West Tasmanian Division of General Practice, Population Profile Series: No. 116*, November 2005, p. 9 & 12.

⁶ Tasmanian Government (2005), *Tasmanian Physical Activity Plan, 2005 – 2010*, p. 11

1.3 Supporting work

Significant work has been carried out by the Cradle Coast Authority, Safer Roads for Cyclists Tasmania Incorporated, the participating Local Councils and Sport and Recreation Tasmania in regard to this project. There is an extensive list of strategic documents, policies, concept and detailed plans along with well considered engineering solutions, construction details and life cycle costings. Community consultation and inter governmental agency consultation has also been documented and carried out to ensure project success.

Some of these documents are;

- *North West Coastal Pathway Project - stage one - Emerging Issues and Themes - Cradle Coast Authority 2010*
- *Tasmania Physical Activity Plan 2005 - 2010 -Tasmanian Government*
- *Healthy By Design - PPAC, Heart Foundation and Tasmanian Government 2009*
- *Greenways Project – University of Tasmania Bachelor of Regional Resource Management students 2009*
- *Cradle Coast Tracks Strategy 2003*
- *Trails Tasmania Strategy - Inspiring Place 2007*
- *Burnie Coastal Pathway: Cooee to Emu River - Inspiring Place 2009*
- *Devonport City Council Cycle way Master Plan 2009 - Devonport City Council*
- *Devonport City Cycling Network Strategy 2010*
- *Ulverstone Wharf Development Plan 2009*
- *Turners Beach to Ulverstone Shared Pathway Minor Project Business Plan 2009*
- *Wynyard Waterfront Revitalisation Plan 2010*
- *Wynyard to Port Sorell Cycleway - Sinclair Knight Merz 1997*



Cradle Coast Authority 2010

1.4 Rationale

The concept of a walking and cycling pathway linking the coastal towns of North West Tasmania is not new, but one which has continued to display broad community and strategic support over a number of years. Recently completed sections of the pathway have been received with great enthusiasm by the community and are already in high use. The community has a broad expectation that the pathway concept will continue to grow and that increasing efforts are made to provide the essential links in and between coastal communities.

There is strong evidence to support the idea of the coastal pathway's ability to deliver great community benefits through improving community connectedness, increasing lifestyle options and health outcomes as well as providing an alternative transport opportunity.

There is widespread agreement on the benefits of shared pathway infrastructure and drivers for such projects across the nation.

Active communities are those that provide built and natural environments that promote physical activity, social and mental wellbeing and community interaction. Important elements shown to assist these are access to open space and recreational facilities, good pedestrian facilities, urban design that encourages connecting paths for pedestrian and cyclists and proximity to walkways and paths.⁷

Key benefits and drivers for the North West Coastal Pathway have been identified as;

- Health and wellbeing
- Environmental benefits, particularly through promotion of alternative transport modes
- Tourism and economic benefits



Ulverstone's Fairway Park & shared pathway.

⁷ Tasmanian Government (2005), *Tasmanian Physical Activity Plan, 2005 – 2010*, p. 11.

1.5 Scope

The project brief and work plan provided a specific scope for the development of the North West Coastal Pathway Plan as follows;

The North West Coastal Pathway Plan is to provide a framework for the development of a regional shared walking and cycle pathway along the North West Coast. It will enable key stakeholders to make informed decisions in relation to route selection, supporting infrastructure, budgets and construction standards by;

- *Consolidating previous work and project outcomes;*
- *Supporting planning and feasibility for those sections yet to be considered;*
- *Focusing current interest and activities on critical decisions;*
- *Providing a regional approach to the resolution of key issues relating to access to road and rail easements and bridges, investment attraction, construction standards etc;*
- *Providing a sound basis for informed budgeting and estimation of construction and lifecycle costs for specific elements or complete sections of the pathway.⁸*



Ulverstone, looking east toward Turners Beach and Devonport.

⁸ Cradle Coast Authority, *Regional Shared Pathway Project – Project Brief and Work Plan*, 2009, p. 1

1.6 Methodology

The North West Coastal Pathway Project commenced in 2009, made possible through funding from the State Government's *Trails and Bikeways Program* at Sport and Recreation Tasmania based on contributions from the Cradle Coast Authority (The Authority), Waratah-Wynyard, Burnie City, Central Coast, Devonport City and Latrobe Councils. The funding allowed for the appointment of a project manager to carry out the specific tasks as described below.

The Authority and SRCT created a steering committee to assist with the development of the project.

This plan has been developed in four main stages, and guided by North West Coastal Pathway Steering Committee (NWCPSC) using the following methodology:

Project stage	Tasks
Stage one Project establishment	<ul style="list-style-type: none"> Establishment of the NWCPSC to guide the project
Project background & research	<ul style="list-style-type: none"> Literature review of relevant materials relating to the coastal pathway concept Inventory of completed sections of the pathway with participating Councils
Consultation	<ul style="list-style-type: none"> Preliminary consultation with Council technical staff to determine local issues Development and implementation of a project communications plan by The Authority Completion of background paper – <i>emerging themes and issues</i> Consultation with political parties / representatives to ensure general awareness of the project to facilitate successful funding approaches

Table 1. Project methodology

<p>Stage two Project evaluation</p>	<ul style="list-style-type: none"> • Identify constraints and opportunities for the pathway route • Consultation with State Government agencies in regard to pathway route and implementation issues • Consultation with Local Council planning staff to determine specific pathway route issues and implications
<p>Project design</p>	<ul style="list-style-type: none"> • Identify pathway route and carry out mapping for the same • Consultation with Local Council technical staff in regard to overall pathway route, and intercommunity linkages
<p>Stage 3 Project completion</p>	<ul style="list-style-type: none"> • NWCPSC approval of proposed pathway route • Estimation of project capital costs and lifecycle maintenance costs • Development of project toolkit for Local Council use • Completion of conceptual plans for the pathway route
<p>Stage 4 Stakeholder feedback</p>	<ul style="list-style-type: none"> • The Authority / SRCT to carry out direct consultation with the Local Councils for adoption of the North West Coastal Pathway Plan

Table 1. Project methodology (cont.)

2.0 Pathway Proposal

2.1 Project summary

The North West Coastal Pathway Plan provides a strategic plan for linking the following coastal-zone communities;

- Wynyard
- Somerset
- Camdale
- Cooee
- Burnie
- Wivenhoe
- Heybridge
- Sulphur Creek
- Preservation Bay
- Penguin
- West Ulverstone
- Ulverstone
- Turners Beach
- Leith
- Devonport
- Latrobe

This equates to approximately 85 kilometres of continuous linear pathway and in most instances a shared pathway. As part of the consultation associated with this plan, the following additional community pathway links that could connect with the main proposed route (NWCP) were identified;

- Fern glade
- Forth
- Spreyton
- Port Sorell

This equates to an additional 24 kilometres of links, creating an overall pathway experience of approximately 110 kilometres.



Three Sister Island Reserve looking west toward Penguin

2.2 Shared pathway design

Throughout the consultation process, the Local Councils raised the issue of provision of affordable and realistic standards and design specifications for the NWCP. The cost implication of providing a path of maximum width (3 metres) and reinforced concrete construction for the entirety of the pathway was flagged as being unrealistic due to the prohibitive construction costs.

Demonstrated public demand for pathway provision was also noted by the Local Councils, with the view that sections already identified by local communities (and part of current strategic planning) be given particular priority.

The following design model has been applied to the NWCP in order to determine a pathway hierarchy for the NWCP. This model has been based upon guidelines set out in Austroads, Guide to Road Design, Part 6A: Pedestrian and Cyclist paths.⁹

Path type	Demand	User speed	Sharing
Community access to schools / shops / local parks / town centre etc.	Medium – high (≈ 40 users / h)	Average walking (3 - 4 km/h) Slow cycling (10 km/h)	Shared use path
Recreation / exercise primarily for exercise & recreation	Medium (≈ 20 users / h)	Brisk walking (5 - 6 km/h) Medium & slow cycling (10 - 20 km/h)	Shared use path
Community connectors paths linking centres	Low (< 10 users / h)	Fast cycling (30 km/h) Brisk walking (5 - 6 km/h)	Shared use path

Table2. Proposed path types

Councils provided feedback in relation to existing shared pathways in current use. It was their view that shared pathways that provided for 1 hour of exercise by brisk walking (≈5 km/h) are popular with people who wish to exercise for fitness. A pathway that provides 1 hour of slow cycling (say with children) (10km/h) has been well received by the community. This allows for one way use or circuit options within a 5km radius catchment area. The success of existing pathways is contingent upon easy access from residential areas, away from traffic, in safe and open locations (Turners Beach and South Burnie Beach pathways are such examples).

The following catchment design model (*figure 2*) has been used in order to determine the path type and location for the NWCP. Community access paths should be concentrated around areas of population, in some cases a 3km radius from the Town centre or more ideally the extent of well connected residential areas. Recreation paths should link comfortably to the community access paths and service a catchment of at least a 5km radius to population centres in order to facilitate a minimum of exercise of 1 hour walking or cycling. Community connector

⁹ Austroads, 2009, *Guide to Road Design, Part 6A: Pedestrian and Cyclist Paths*, p. 7

paths should be treated as a pathway of lesser demand with features that are more likely to encourage / facilitate commuting between population centres.

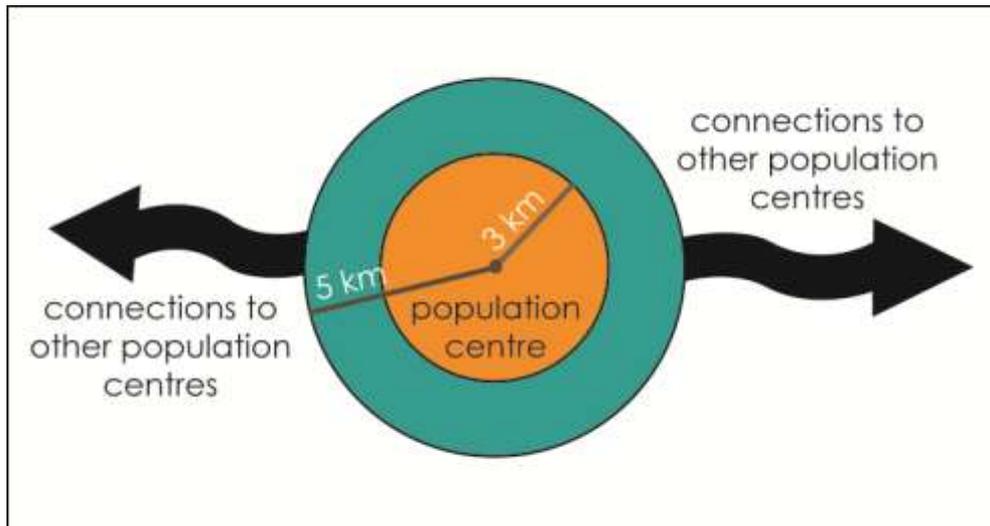


Figure 2 – catchment design model

The following table provides a rule of thumb for a proposed hierarchy for the development of the NWCP.

Path type	Use	Features
<p>Community access path</p> <p>Within population centres, well connected to local footpaths, providing access to schools, shops, parks etc.</p>	<p>Medium – high, children, elderly, walking, cycling, prams etc.</p> <p>general access, school children commuting on bikes etc.</p>	<p>(Refer to Austroads standards 2009)</p> <p>Councils prefer 2.6 m – 3 m width, easy grade, away from roads where possible; located in areas of natural landscape desirable, open and good visibility for safety.</p>
<p>Recreation / exercise path</p> <p>Within a 5km catchment radius of population centres.</p>	<p>Medium use with aspirations to have high use as a result of future social marketing.</p> <p>children, elderly, walking, prams etc. slightly heavier cycling use.</p>	<p>(Refer to Austroads standards 2009)</p> <p>Councils prefer 2.6 m – 3 m width, away from roads; loop back to residential areas or 10 km return trip; some change in surface type and elevation acceptable to encourage cardio-vascular exercise; clear signage and community use education to facilitate slightly faster speed use.</p>

Table3. Proposed path hierarchy

<p>Community connector paths</p> <p>Linking all centres / villages / Towns from Wynyard to Latrobe.</p>	<p>Low use with aspirations to have medium use as a result of future social marketing.</p> <p>Independent children (teenagers), adults and those seeking more exercise opportunity and those who are cycling as a mode of transport between centres.</p>	<p>(Refer to Austroads standards 2009)</p> <p>2.6m width minimum, allowing for faster speed, good sight lines, located away from the road corridor if possible, designed to suit 30 km/h cycling speed.</p>
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Table3. Proposed path hierarchy (cont.)

Pathway catchments

The pathway catchment maps propose community access pathways at each population area from Wynyard to Port Sorell. At concentrated areas of settlement, 3km minimum catchment radiuses for community access pathway are recommended. This creates areas of concentration for local pathways that will provide useable distances for recreation and local access to facilities such as shops, schools etc. From these, a 5km catchment radius for recreation / exercise pathways is recommended. Obvious overlaps emerge with the 5km catchment radius to create areas of concentrated local pathways and ideal path location. These aggregated local pathways can then be joined by connector paths to make the complete NWCP circuit.

Pathways between communities have been referred to as *community connector* paths. These provide the essential links between population areas and create the overall North West Coastal Pathway. Some are quite short in distance such as the West Ulverstone and Penguin links as well as the Turners Beach and Devonport link. When connected, this creates two distinct segments of the NWC pathway; (central) – Heybridge to Devonport and (western) – Wynyard to Burnie. (Refer to pathway catchment maps 1, 2 & 3.)

Pathway use

The catchment design model ensures shared pathway infrastructure at key population centres creating opportunity for minimum daily exercise as recommended by the health and physical activity industry. That is 30 minutes of moderate intensity exercise all days of the week to improve health, e.g. brisk walking.

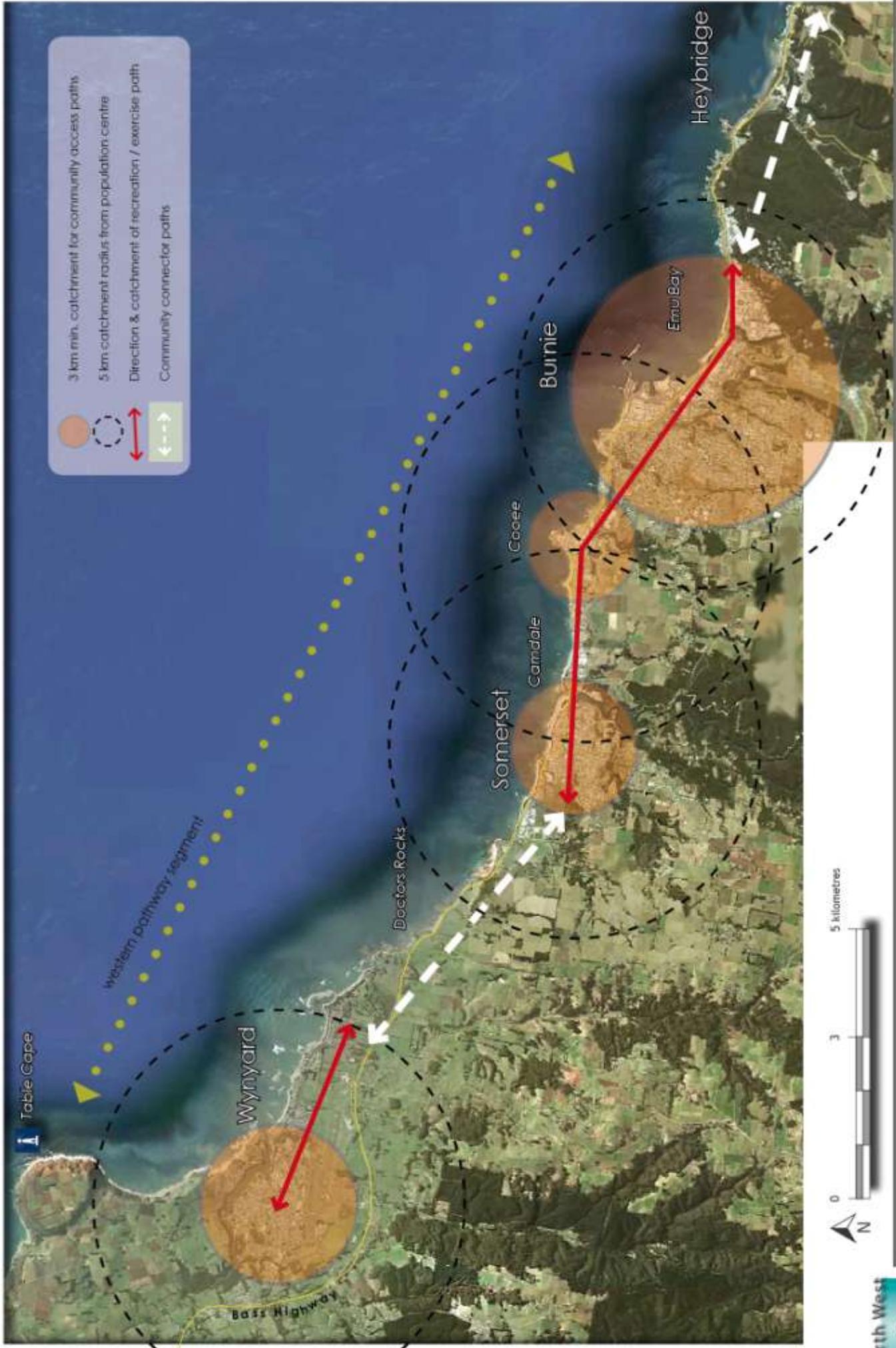
The community access paths when utilised one way (3 km) will provide opportunity for minimum daily exercise (walking) and twice minimum daily exercise if used as a return circuit (6 km). The recreation / exercise paths when utilised as a return circuit (10 km) will provide opportunity for minimum daily exercise (cycling). (Refer to the table 4. below)

Exercise type	Minimum duration	Minimum distance
Brisk walking 5 – 6 km / hr	30 minutes	3 km
Medium – fast cycling 20 – 30 km / hr	30 minutes	10 – 15 km

Table4. Exercise duration and pathway distances



Community running group event, Ulverstone August 2010

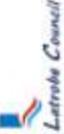


North West Coastal Pathway Plan
pathway catchment map, November 2010





North West Coastal Pathway Plan
pathway catchment map, November 2010



2.3 Pathway route proposal

The following plans provide an overall guide of the proposed route for the NWCP. As mentioned earlier in the pathway route planning section, the location of the proposed NWCP has been designed to;

- maximise separation between users and motor vehicles where possible
- respond to the natural landscape to maximise views and avoid steep and sudden changes in grade
- minimise level road crossings where possible
- maximise existing pathway routes and connections

The following section provides a description of each section of the pathway and the general issues associated with its route location based on knowledge of current issues and policies of landowners and managers.

Wynyard to Somerset

location no	location description
W1.	The pathway connects the existing waterfront shared paths with new sections linking the Wynyard Town centre along the south edge of the river.
W2.	The pathway then heads east along the Old Bass Highway, via a shared path on the southern side of the road incorporating a landscape verge to provide maximum possible separation with motor vehicle traffic.
W3.	The pathway utilises the Bass Highway underpass approximately 1 km west of the Wynyard turn off. <i>(Improvements are required as discussed in the pathway route planning section of this report).</i>
W4.	Alignment of the shared path continues along the southern side of the Bass Highway <i>(using the highway reserve)</i> providing maximum possible separation with highway traffic to Somerset.
W5.	There is an unresolved access issue at Doctors Rocks, where space is not available. There may be an opportunity at this location to develop a lookout subject to access options on private land.
W6.	An on road cycle lane is required at the approach to the Somerset town centre due to the constraints of the Highway and existing footpath.

Somerset to Cooe

location no	location description
W7.	The pathway utilises existing dedicated on road lanes from Somerset to Cooe.

- W8. The existing pedestrian access is used on the Cam River Bridge. Signage requesting users to dismount their bicycles for this short distance would be required.
- W9. An off road section of the Pathway would continue around Cooe Point, utilising existing pedestrian crossings over the Bass Highway.

Coee to Burnie

location no	location description
C1.	The pathway utilises the existing traffic lights at the Red Rock node to allow for access to the northern side of the Bass Highway where the existing shared path continues on along the rail corridor to West Park.
C2.	A new shared path has been constructed around the northern side of West Park connects to the west side of the existing (now widened) Burnie waterfront boardwalk.
C3.	Users may be requested to dismount for this short section along the waterfront, <i>(dependant upon Burnie City Council policy)</i> .
C4.	The pathway would then continue along a new off road section proposed along Marine Terrace, linking the Oakleigh Park overpass then onto the existing South Burnie waterfront shared pathway.
C5.	Existing traffic controlled pedestrian access across the Bass Highway would be utilised with additional pedestrian signal controls and signage to allow continuation along to Wivenhoe.
C6.	A widened and appropriately signed section of the existing footpath at Wivenhoe would bring access to the Wivenhoe shopping area where users would be requested to dismount <i>(walk only)</i> for a short section.

Burnie to Sulphur Creek

location no	location description
B1.	A new controlled crossing is recommended at the Stowport Road, to be utilised by the school also to ensure safe crossing of this busy intersection.
B2.	From here the existing service road network that runs parallel to the Bass Highway would be utilised along to Round Hill. <i>(Interventions would vary from footpath widening to a new path system and tidying up of existing business entrances)</i> .
B3.	An on road section is required around Round Hill due to the lack of space and cliff edge.
B4.	A new off road shared path would continue along the southern edge of the Bass Highway to Titan Point.

- B5. There is an unresolved section at Titan Point, where the cliff edge creates a bottle neck. *(There may be opportunity to utilise the Old Bass Highway benching alignment above to create a lookout and rest stop).*
- B6. The pathway continues on its highway southern off road alignment to the Blythe River Bridge.
- B7. The existing pedestrian access on the southern side of the bridge would be utilised, and users would be requested to dismount their bicycles along this short distance.
- B8. The pathway would then continue along the existing shared pathway to Sulphur Creek. *(note some sections of this pathway are narrow at 2200 mm and may require widening in the future, also traffic barriers to the Bass Highway need assessing in some sections to provide user comfort and security).*
- B9. There are incomplete sections of the pathway along this area; it is proposed that on road lanes be marked in the service / access lanes to houses where possible to allow for an obvious and uninterrupted path of travel.
- B10. The pathway meets the existing bus stop 1 km west of the Howth roundabout. There is an existing level road crossing (across the service lane) onto the existing pathway which terminates at the Hogarth Street underpass.

Sulphur Creek to Penguin

location no	location description
S1.	The Hogarth Street footpath requires widening to allow for a shared path.
S2.	The pathway then proposes to cross the Sulphur Creek Road (Old Bass Highway) onto the northern side of the road to the pathway which would be located between the rail line and the northern side of the road. <i>(Note a parking arrangement and site plan is required at Dunkie's Takeaway to resolve road crossing, parking and safe separation between shared path users and motor vehicles).</i>
S3.	It is proposed that the pathway continues along to Penguin utilising the existing space between the road and rail corridor and the road corridor <i>(which has maintained its highway width – which is no longer required).</i>
S4.	The pathway connects to the existing waterfront pathway at Penguin.
S5.	Once in Penguin Town Centre, a short on road section is required due to the lack of space.

Penguin to Ulverstone

location no	location description
P1.	The pathway utilises widened sections of residential access lanes and footpaths along Penguin Road toward the Three Sister Island Reserve. This section may require some road drainage works and excavation to create space on the southern side of the road.
P2.	There is an unresolved section at <i>Lonah</i> where the physical constraints of the cliff, road, rail line, and high tide mark do not allow space for any additional infrastructure.
P3.	From here the shared path continues on the southern side of Penguin Road along to Westland Drive.
P4.	The path stops here and users are required to cross Penguin Road (60km / hour zone) onto the northern side of Penguin Road where it is proposed that the path be located between the rail line and road reserves.
P5.	This arrangement would continue along to the West Ulverstone Caravan Park entrance, where a level road crossing would be required across the access road in order to connect to the existing pathway.
P6.	From here the new path would continue along Braddon Street to the western bank of the Leven River.

Ulverstone to Turners Beach

location no	location description
U1.	The pathway would connect to the new Leven River Bridge which allows for 3 metre wide shared access on the northern side and along to the Wharf area and through <i>Shropshire Park</i> and the <i>Dinosaur Park</i> to Beach Road.
U2.	Improvements are recommended at Beach Road (cycle lane markings) to delineate cyclists and other vehicle access. The pathway then connects to the existing shared path through to Turners Beach.
U3.	A level road crossing is required at Turners Beach Road to provide access to the Old Bass Highway east of Turners Beach roundabout. Here the pathway would be located between the road (northern side) and the rail line. This alignment would continue eastward to the Forth River.

Turners Beach to Devonport

location no	location description
T1.	A new shared path bridge is required at the Forth River. It would need to be located in-between the existing Bass Highway Bridge and the rail bridge.
T2.	The path is proposed to continue along the alignment south of the rail line and north of the Bass Highway along to the Leith underpass. Works are required at the underpass to allow for access in an easterly direction <i>(on the southern side of the highway)</i> .
T3.	The Highway reserve is utilised for a short section through to the rail line underpass, where a suitable graded access can be created to the southern side of the rail reserve.
T4.	From here the pathway would continue <i>(on the southern side of the rail line, in the rail reserve where possible)</i> through to Don Hill. This alignment allows for a gentler climb to Don Hill than via a highway option. <i>(Note the fencing to the rail reserve / line seems to be inconsistent and needs further investigation to determine extent of available space)</i> .
T5.	The path would peel off onto the west side of the Bass Highway along to the Cutts Road underpass. <i>(Improvements are required at the underpass to address safety and security issues)</i> .
T6.	From here a marked on road cycle path is required on Cutts Road to connect to the existing shared path system of Devonport at the west banks of the Don River, <i>(near the Sawdust Bridge)</i> .

Devonport to Latrobe

location no	location description
D1.	Devonport has an extensive shared path system. The NWCP would link from the proposed Formby Road elevated shared path through to and over the Mersey River Bridge.
D2.	Access would continue as an on road dedicated cycle lane along Ambleside to River Road.
D3.	A shared path section along the western bank of River Road brings the NWCP to its end at Latrobe.

Route alternatives

A number of route alternatives were raised by the Local Councils during the consultation phase of the project that could be considered in the future should they prove to provide better cost benefits than the route outlined. These alternatives include;

1. Linking Turners Beach and Leith via the Esplanade and a pedestrian bridge over the Forth River north of the existing rail bridge then linking to Short Street (Leith) to the Bass Highway underpass.
2. Continue along the rail corridor at Don Heads and cross the Bass Highway at Don Hill via a suspended pedestrian bridge (attached to the existing rail bridge) to the Don River. From here cross the Don River by another suspended bridge off the rail bridge and connect to the existing shared path network at Coles Beach.

Proposed route

The following maps indicate the proposed route for the North West Coastal Pathway. The *North West Coastal Pathway Plan* maps (S01 to S12) provide a location number that corresponds with the location number and descriptions above. The maps also indicate the proposed path type number that corresponds with the *proposed path types cross sections* (P01 to P06) and *proposed path types plans* (T01 to T07) located in section 2.4 Proposed pathway typologies.



EXISTING PATH
 environment: off road
 path type: shared
 width: 1800 - 2000 mm
 surface: concrete & recycled plastic
 barriers: none

LOCATION W1
PROPOSED PATH TYPE 01
 environment: off road
 path type: shared
 width: 3000 mm
 barriers: site specific

LOCATION W2
PROPOSED PATH TYPE 02
 environment: southern side of road
 path type: shared
 width: 3000 mm
 barriers: site specific

LOCATION W3
PROPOSED PATH TYPE 03
 environment: southern side of Bass Highway
 path type: shared
 width: 3000 mm
 barriers: site specific

LOCATION W5

Doctor Rocks

- completed pathway
- proposed shared pathway
- on road cycleway
- walking only
- level road crossing
- highway underpass
- unresolved connection



North West Coastal Pathway Plan

proposed pathway, November 2010





- completed pathway
- proposed shared pathway
- on road cycleway
- walking only
- level road crossing
- highway underpass
- unresolved connection



North West Coastal Pathway Plan
 proposed pathway, November 2010





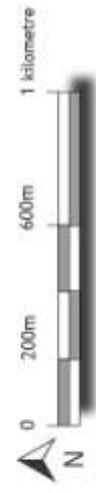
- completed pathway
- proposed shared pathway
- on road cycleway
- walking only
- level road crossing
- highway underpass
- unresolved connection



North West Coastal Pathway Plan

proposed pathway, November 2010



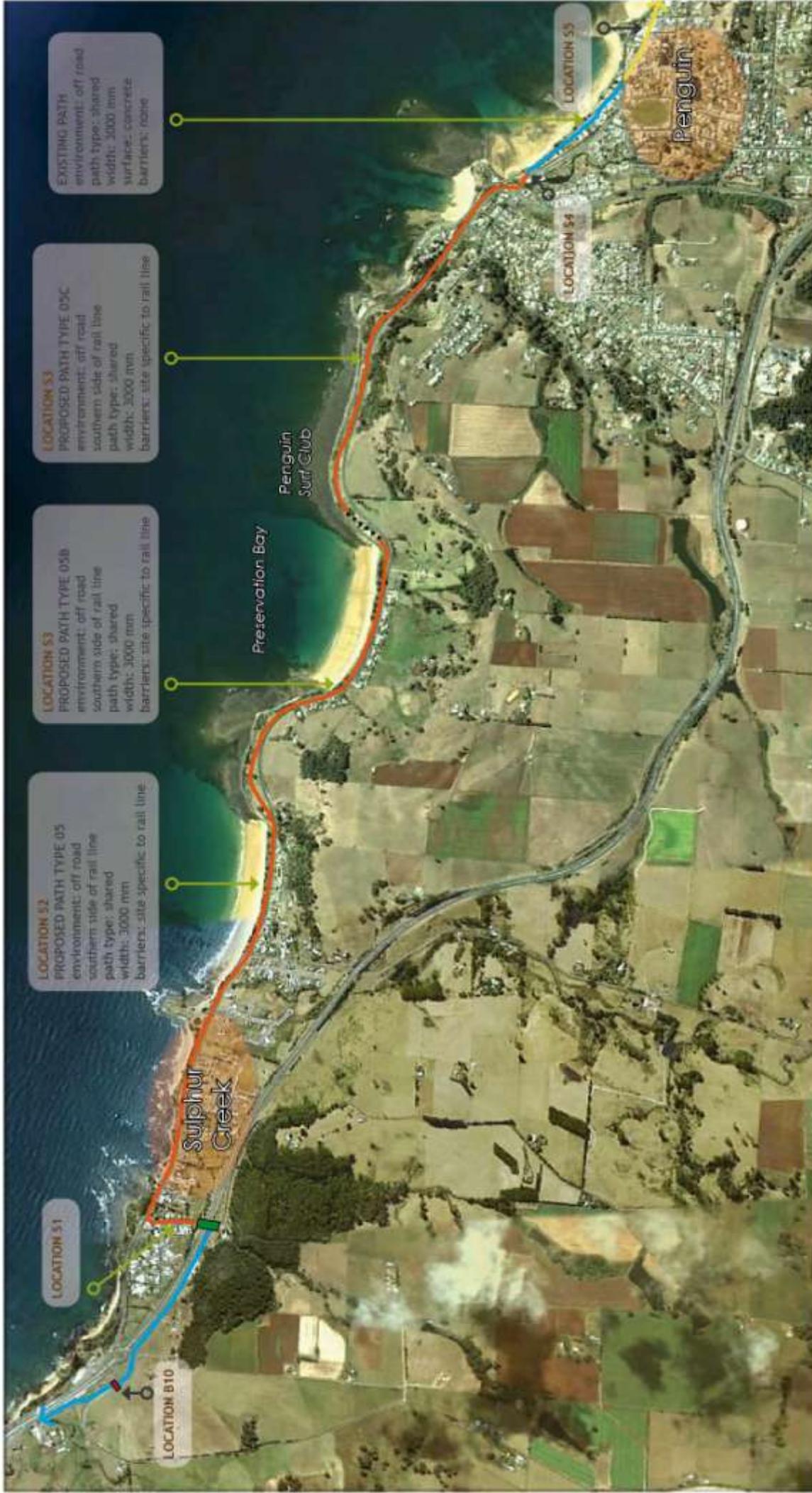


- completed pathway
- proposed shared pathway
- on road cycleway
- walking only
- level road crossing
- highway underpass
- unresolved connection



North West Coastal Pathway Plan
 proposed pathway, November 2010



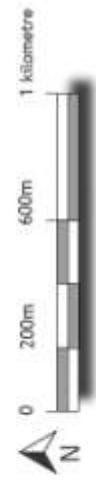


LOCATION S1
PROPOSED PATH TYPE 05
 environment: off road
 southern side of rail line
 path type: shared
 width: 3000 mm
 barriers: site specific to rail line

LOCATION S2
PROPOSED PATH TYPE 05B
 environment: off road
 southern side of rail line
 path type: shared
 width: 3000 mm
 barriers: site specific to rail line

LOCATION S3
PROPOSED PATH TYPE 05C
 environment: off road
 southern side of rail line
 path type: shared
 width: 3000 mm
 barriers: site specific to rail line

EXISTING PATH
 environment: off road
 path type: shared
 width: 3000 mm
 surface: concrete
 barriers: none



- completed pathway
- proposed shared pathway
- on road cycleway
- walking only
- level road crossing
- highway underpass
- unresolved connection



North West Coastal Pathway Plan
 proposed pathway, November 2010





LOCATION S5
 PROPOSED PATH TYPE 06
 environment: on road
 path type: cycle only
 width: 2500
 surface: asphalt & line marked
 barriers: none

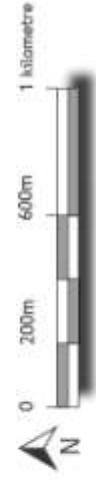
LOCATION P1
 PROPOSED PATH TYPE 02
 environment: southern side
 of road
 path type: shared
 width: 3000 mm
 barriers: site specific

LOCATION P1
 PROPOSED PATH TYPE 02
 environment: southern side
 of road
 path type: shared
 width: 3000 mm
 barriers: site specific

Three Sister Island Reserve

Penguin

Goat Island



- completed pathway
- proposed shared pathway
- on road cycleway
- walking only
- level road crossing
- highway underpass
- unresolved connection



North West Coastal Pathway Plan
 proposed pathway, November 2010



Goat Island

LOCATION P4
PROPOSED PATH TYPE 02
 environment: southern
 side of road
 path type: shared
 width: 3000 mm
 barriers: site specific

LOCATION P5
PROPOSED PATH TYPE 05
 environment: off road
 southern side of rail line
 path type: shared
 width: 3000 mm
 barriers: site specific to rail line

LOCATION P6
PROPOSED PATH TYPE 01
 environment: off road
 path type: shared
 width: 3000 mm
 barriers: site specific

EXISTING PATH
 environment: off road
 path type: shared
 width: 2000 mm
 surface: asphalt
 barriers: none

LOCATION U2
PROPOSED PATH TYPE 06
 environment: on road
 path type: cycle only
 width: 3500
 surface: asphalt & line marked
 barriers: none

EXISTING PATH
 environment: off road
 path type: shared
 width: 3000 mm
 surface: cobble and asphalt
 barriers: 1800 to rail

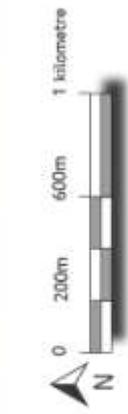


- completed pathway
- proposed shared pathway
- on road cycleway
- walking only
- level road crossing
- highway underpass
- unresolved connection



North West Coastal Pathway Plan
 proposed pathway, November 2010





- completed pathway
- proposed shared pathway
- on road cycleway
- walking only
- level road crossing
- highway underpass
- unresolved connection



North West Coastal Pathway Plan
 proposed pathway, November 2010



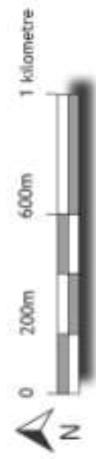


LOCATION T4
PROPOSED PATH TYPE 05
 environment: off road
 path type: shared
 width: 3000 mm
 barriers: site specific to rail line

EXISTING PATH
 environment: off road
 path type: shared
 width: 2000 - 2500 mm
 surface: asphalt & gravel
 barriers: varies

LOCATION T5
PROPOSED PATH TYPE 03
 environment: western
 side of Bass Highway
 path type: shared
 width: 3000 mm
 barriers: site specific

LOCATION T6
PROPOSED PATH TYPE 06
 environment: on road
 path type: cycle only
 width: 2500
 surface: asphalt & line marked
 barriers: none



- completed pathway
- proposed shared pathway
- on road cycleway
- walking only
- level road crossing
- highway underpass
- unresolved connection



North West Coastal Pathway Plan
 proposed pathway, November 2010





North West Coastal Pathway Plan

proposed pathway, November 2010





LOCATION D2
PROPOSED PATH TYPE 06
 environment: on road
 path type: cycle only, two way
 separated
 width: 1500 each
 surface: asphalt, B, line marked
 barriers: to suit environment

LOCATION D3
PROPOSED PATH TYPE 08
 environment: western
 side of River Road
 path type: shared
 width: 3000 mm
 barriers: site specific



- completed pathway
- proposed shared pathway
- on road cycleway
- walking only
- level road crossing
- highway underpass
- unresolved connection



North West Coastal Pathway Plan

proposed pathway, November 2010



2.4 Proposed pathway typologies

The following section indicates the proposed typologies for sections of the NWCP. These include suggested design arrangements for a range of sites including;

- residential areas
- non residential areas
- natural areas
- Highway environments

The following table provides a brief summary of the proposed path types and their approximate location;

proposed path no.	environment	path type	width (mm)	barriers	locations	location no.
01	off road	shared	3000	site specific	Wynyard Town Centre to existing waterfront pathways. Burnie CBD along Marine Terrace. Ulverstone west bank of Leven River to new bridge. Devonport CBD along Formby Road to Mersey River Bridge.	W1. C4. P6. D1.
02	southern side of road	shared	3000	site specific	Existing Wynyard Waterfront along Old Bass Highway to Bass Highway underpass. Old Coast Road (Penguin Road) to West Ulverstone (Westland Drive).	W2. P3.
03	Southern side of Bass Highway	shared	3000	site specific	Wynyard Bass Highway underpass to Somerset. Wivenhoe to Round Hill. Round Hill to Titan Point. Titan Point to Blythe Heads. Sections along Bass Highway from Blythe Heads to Sulphur Creek. Leith Bass Highway underpass to convergence with rail corridor. Don Hill to Cutts Road Bass Highway underpass. Ambleside to Latrobe along River Road.	W3. W4. B2. B4. B6. B8. T3. T5. D3.

04	on road	cycle only	2500	site specific	Somerset (sections to Cooee existing on road). Round Hill along short section of the southern side of the Bass Highway. Penguin CBD. Beach Road Ulverstone. Cutts Road to Don River pathway.	W6. B3. S5. U2. T6.
05	off road	shared	3000	to rail corridor and Bass Highway & roads where appropriate	Sections of Sulphur Creek, near Dunkie's take away.	S2.
05B	off road	shared	3000	to rail corridor and Bass Highway & roads where appropriate	Sulphur Creek to Penguin. West Ulverstone (Westland Drive) to West Ulverstone Caravan Park. Turners Beach to Leith Bass Highway Underpass. Rail corridor along Lillico Strait to Don Hill.	S3. P5. U3. T4.
05C	off road	shared	3000	To road and cliffs where appropriate	Sections of the Old Bass Highway, west of Penguin.	S3.
06	on road	cycle only (two way)	2500	rubber delineation to road	Penguin CBD. Beach Road Ulverstone. Cutts Road, Don. East Devonport, Wright Street. East Devonport (Victoria Bridge) along Ambleside to beginning of River Road(rural section).	S5. U2. T6. D4. D2.
07	off road	shared	3000	site specific	East Devonport (Tea Tree Lane) to Moorlands Beach.	D5.
07B	off road	shared	2500	site specific	Moorlands Beach to Port Sorell.	D6.
08	off road	shared	2400	site specific	Ambleside to Latrobe.	D3.

Table 5. Proposed path types for the North West Coastal Pathway.

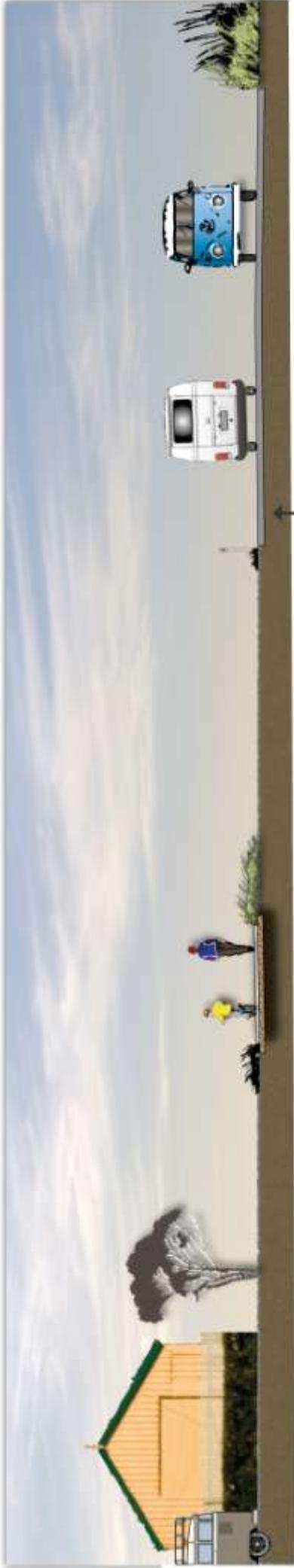


PROPOSED PATH 01
 environment: off road
 path type: shared
 width: 3000 mm
 surface: concrete
 barriers: site specific

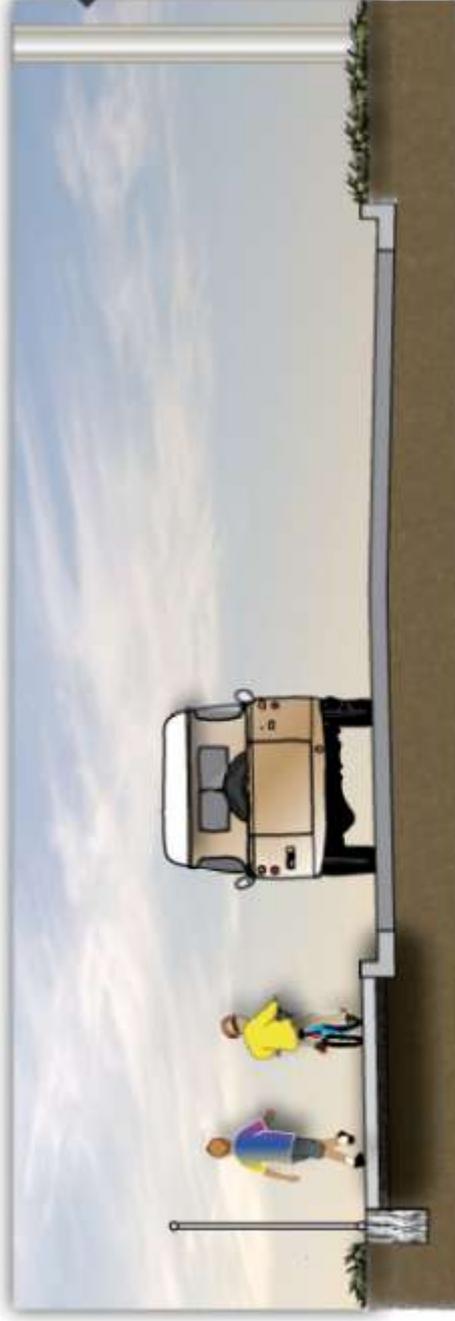


PROPOSED PATH 02
 environment: off road
 path type: shared
 width: 3000 mm
 surface: concrete
 barriers: offset 1500
 from path edge





PROPOSED PATH 03
 environment: off road
 path type: shared
 width: 3000 mm
 surface: concrete
 barriers: none



PROPOSED PATH 04
 environment: off road
 path type: shared
 width: 3000 mm
 surface: concrete
 barriers: to properties



North West Coastal Pathway Plan

proposed path types, November 2010





PROPOSED PATH 05
 environment: off road
 path type: shared
 width: 3000 mm
 surface: concrete
 barriers: offset 3000 mm
 to rail & 500mm to highway

PROPOSED PATH 5B
 environment: off road
 path type: shared
 width: 3000 mm
 surface: concrete
 barriers: site specific





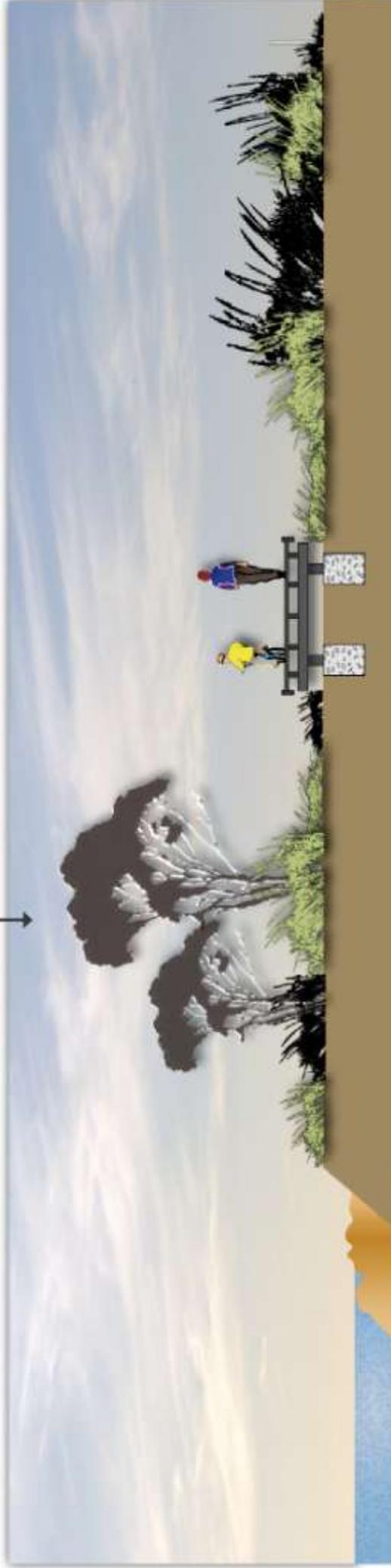
PROPOSED PATH 05C
 environment: off road
 path type: shared
 width: 3000 mm
 surface: concrete
 barriers: offset 500mm to road & to suit cliff edge





PROPOSED PATH 06
 environment: on road
 path type: cycle only, 2 way
 width: 2200 mm
 surface: asphalt
 barriers: 300 mm
 wide on road

PROPOSED PATH 07
 environment: off road
 path type: shared
 width: 3000 mm
 surface: raised platform
 barriers: site specific

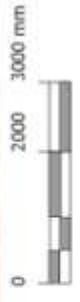




PROPOSED PATH 07B
 environment: off road
 path type: shared
 width: 3000 mm
 surface: raised platform
 barriers: site specific



PROPOSED PATH 08
 environment: on road
 path type: shared
 width: 2400 mm
 surface: concrete
 barriers: offset 750 mm to road



North West Coastal Pathway Plan
 proposed path types, November 2010



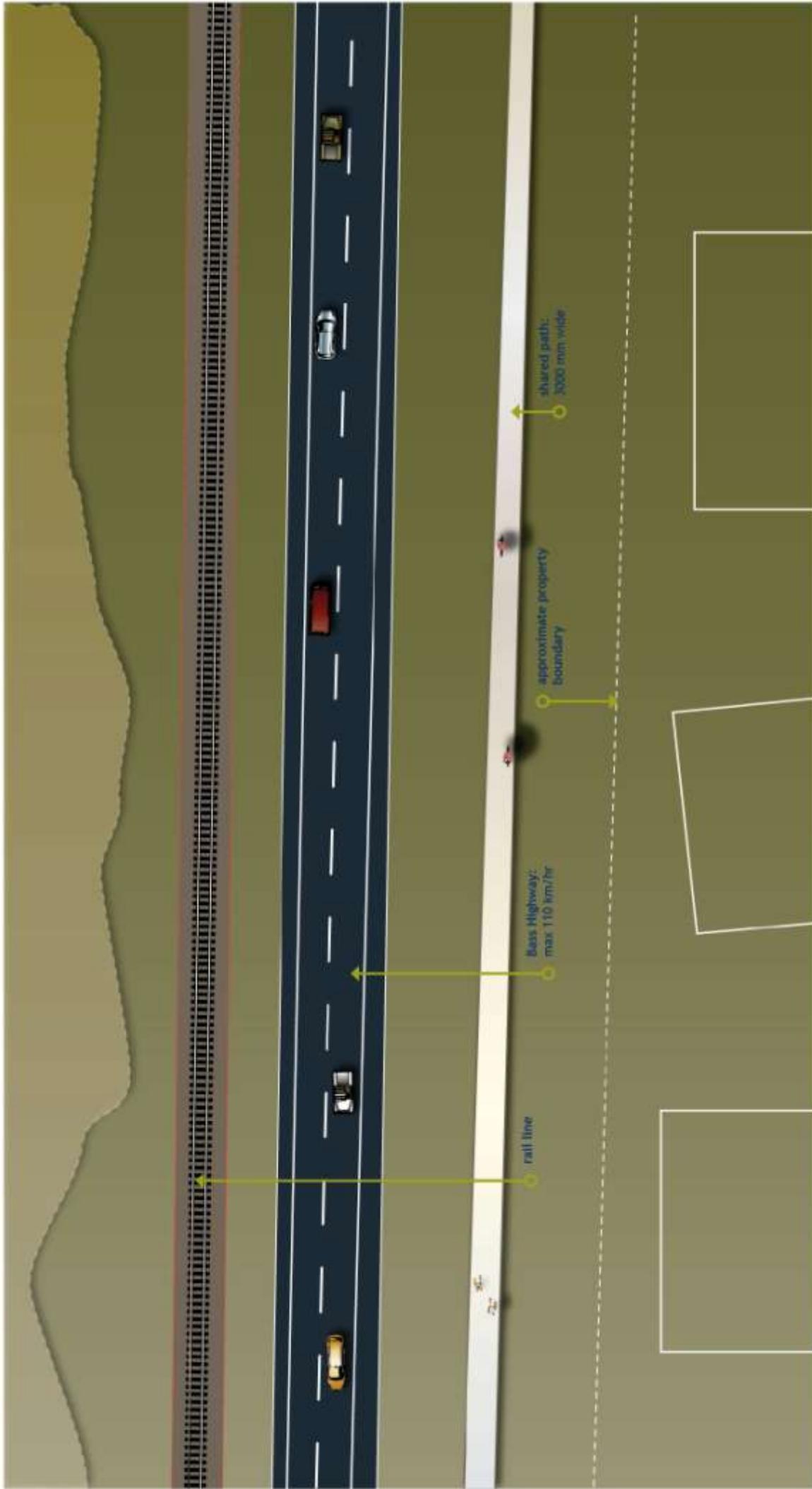


PROPOSED PATH 02
 environment: southern side of road
 path type: shared
 width: 3000 mm
 barriers: site specific



North West Coastal Pathway Plan
 proposed path types, November 2010





PROPOSED PATH 03
 environment: southern side of Bass Highway
 path type: shared
 width: 3000 mm
 barriers: site specific





PROPOSED PATH 05
 environment: southern side of rail line
 path type: shared
 width: 3000 mm
 barriers: site specific to rail line



North West Coastal Pathway Plan
 proposed path types, November 2010





PROPOSED PATH 05B
 environment: southern side of rail line
 path type: shared
 width: 3000 mm
 barriers: site specific to rail line



North West Coastal Pathway Plan
 proposed path types, November 2010



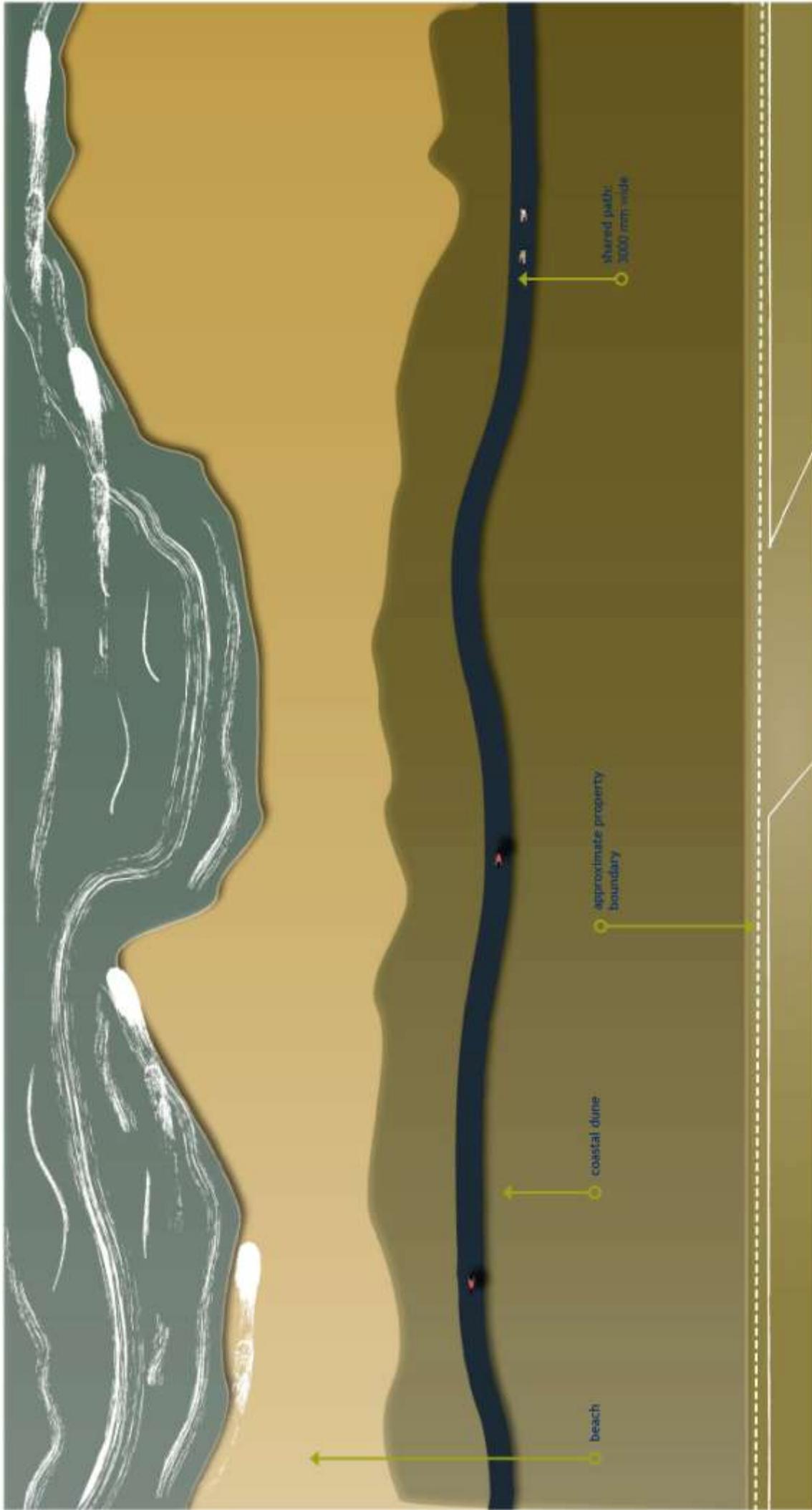


PROPOSED PATH 05C
 environment: southern side of rail line
 path type: shared
 width: 3000 mm
 barriers: site specific to rail line



North West Coastal Pathway Plan
 proposed path types, November 2010





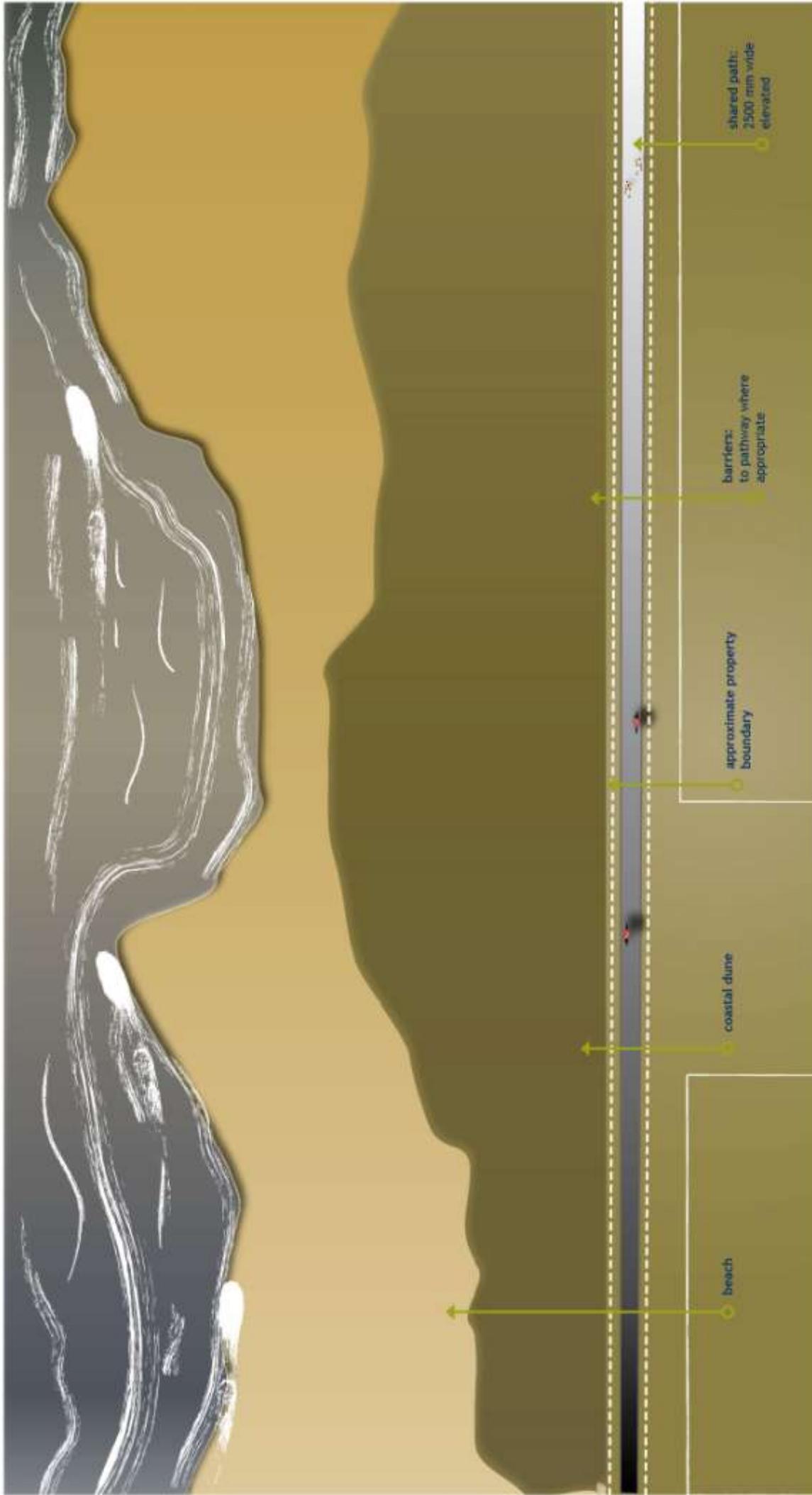
PROPOSED PATH 07
 environment: natural active dune
 path type: shared
 width: 3000 mm
 barriers: site specific



North West Coastal Pathway Plan

proposed path types, November 2010





PROPOSED PATH 07B
 environment: natural high value habitat
 path type: shared
 width: 2500 mm
 barriers: site specific



North West Coastal Pathway Plan
 proposed path types, November 2010



2.5 Pathway Estimates

The following estimates are a guide only and reflect the conceptual level of design resolution that has been provided as part of this plan. Estimates are based upon the rates as described in Part Two of the NWCP document under the design tool kit, page 8.

location no	locations	length (km)	path no.	costing (\$)
W1	connect to wharf	0.6	01	240,000
W2	Bluewater Cres to Bass Hwy	3	02	1,200,000
W2	detour to Wynyard Bass Hwy underpass	2	02	800,000
W3	allowance for improvements to underpass		–	200,000
W3	Doctors Rocks to Somerset Tennis Club	5	03	2,000,000
W6	Somerset on road bike lane	2	04	200,000
				<u>4,640,000</u>
C4	Burnie CBD	2.4	01	800,000
C5	Emu bridge to Round Hill	3.2	03	1,280,000
B3	Round Hill	0.7	04	70,000
B4	Round Hill to Blythe River	4.5	03	1,800,000
				<u>3,950,000</u>
B8, B9	sections between Blythe Heads & Sulphur ck	1.4	03	560,000
S2, S3, S4	Sulphur Creek to Penguin	5.5	05	2,200,000
S5	Penguin town on road	0.3	06	30,000
P1, P3	Penguin to Goat Island	7	02	2,800,000
P4, P5, P6	Goat Island to Leven River Bridge	4.5	02	1,500,000
U2	Beach Road	1.2	06	120,000
U3	Turners Beach to Forth River	1.6	05	640,000
T1	bridge allowance over Forth River	0.16	–	1,600,000
				<u>9,450,000</u>
T2	Forth River to Leith underpass	1	03	400,000
	allowance for improvements to underpass Leith		–	200,000
T3	Leith underpass to Lilloo Strait	0.6	03	240,000
T4, T5	Lilloo Strait to Cutts Road	5.5	05	2,200,000
	allowance for level crossing		–	50,000
	allowance for improvements to underpass Cutts Rd		–	200,000
T6	Cutts Rd to Don	1.2	06	120,000
D4	East Devonport Link (Victoria Bridge to Wright St)	2	06	200,000
D2, D3	Latrobe Link (River Road to Latrobe)	6.5	06 & 03	4,800,000
				<u>8,410,000</u>
		<u>61.86</u>		<u>26,450,000</u>

Table 6. Proposed pathway estimates.

Total asset lifecycle cost

The following table (table 7.) provides a summary of the total asset lifecycle cost of the proposed NWCP based upon current capital project business case practices adopted by Local Councils.¹⁰ The calculations in table 7 indicate that whilst the proposed NWCP is estimated to cost \$26.4 M to construct, additional total asset lifecycle costs need to be considered. It is estimated that the new 62 km of pathway will incur annual costs (operational, maintenance and asset depreciation and renewal) of approximately \$832,850. Over the life of the asset (40 years) this equates to a total asset lifecycle cost of \$34.5 M additional to the capital investment (construction cost) of \$26.4 M. This provides a full picture of the potential cost of the NWCP proposal of approximately \$60.4 M to develop and maintain the asset.

item	total lifecycle cost (\$)
estimated project construction cost	26,450,000
asset useful life	40 years
operational costs <ul style="list-style-type: none"> social marketing, community education, user information @ \$30,000 pa minimal lighting of some sections @ \$60,000 pa 	3,600,000
maintenance costs <ul style="list-style-type: none"> average rate of \$1,800 per km applied for shared pathway maintenance (refer to the toolkit for further detail) 62 km of proposed NWCP @ \$111,600 pa 	4,464,000
asset depreciation / renewal costs <ul style="list-style-type: none"> annual depreciation / renewal costs @ \$661,250 pa 	26,450,000
total annual costs <ul style="list-style-type: none"> (operational, maintenance and depreciation / renewal costs) @ \$832,850 pa 	-
total asset lifecycle cost	34,514,000

Table 7. Total asset lifecycle cost estimates.

¹⁰ Latrobe Council has developed a process for assessing capital projects using 'Capital Project Business Case – Reference document' that is underpinned by principles from IPWEA 2006, *International Infrastructure Management Manual (IIMM)*, Institute of Public Works, Engineering Australia, Sydney, plus other reference materials produced by Austroads.

2.6 Staging

Pathway sections are to be staged according to each individual Local Council's project and capital funding priorities. The following recommendations for staging are a suggestion in terms of overall NWCP function rather than local community aspirations or council priorities.

Community access pathway sections

It is important that coastal communities all have the opportunity to enjoy local pathways that provide the basis for general access and recreational use and exercise. This enables a cultural shift toward greater pathway use and sustainability for future community connector pathways.

A general approach for prioritising construction of the NWCP may be to complete sections as follows;

1. pathways close to population centres
2. high population centres
3. shared use sections before single use sections
4. short pathway connections before long connections

Additional to this approach (if funding sources are not fully available to provide for complete standards) would be to stage sections of the pathway (**only in instances where gravel surfaces do not compromise safety**);

1. select the alignment of the pathway, secure and clear the corridor and construct the pathway using affordable surface, ie. gravel
2. upgrade the gravel surface as funding becomes available

Considering this approach, it is proposed that the following community access pathway segments be developed as a priority from;

1. Somerset to Wivenhoe
2. Penguin to Heybridge
3. Devonport to Latrobe
4. Goat Island to Leith / Forth

Once community access pathways are in place, efforts should be concentrated on creating the community connecting paths. The following community connector paths would create the completion of the central, western and eastern pathway segments;

1. Leith to Devonport
2. Wynyard to Somerset
3. Port Sorell to Devonport
4. Heybridge to Burnie
5. Goat Island to Penguin

2.7 Unresolved issues

There are number of unresolved issues that each Local Council will need to consider as the implementation of the NWCP is carried out. Theses include;

1. Unresolved connections where the physical constraints of cliffs / road / highway / rail line and high tide water mark do not accommodate the space required for the shared pathway at;
 - Doctors Rocks (east of Wynyard)
 - Titan Point (east of Burnie)
 - Lonah, Ladders Point, Three Sisters Island Reserve and some sections between Penguin and Goat Island
2. Determination of Policies in regard to accessing the rail and Bass Highway corridors and underpasses for placement of the shared pathway
3. Determination of the environmental impacts of any shared pathway proposals east of Devonport to Port Sorell and Hawley
4. investigations on the impact of the NWCP on Aboriginal heritage values, high value coastal habitats and exposure to coastal vulnerability
5. Feasibility of providing shared pathway bridge over the Forth River
6. Fencing and barrier solutions to the rail reserve and the Bass Highway
7. Identification of Crown Reserves that the NWCP may pass through or near by

3.0 Pathway Planning

3.1 Pathway land use planning

The initial consultation phase of this project highlighted two key issues in relation to land use planning – sequence and timing of development approval processes. Essentially, if development approval processes are delayed (e.g. due to funding issues), then consideration needs to be given to the manner in which the selected route corridor can be embedded and preserved. This will ensure that the route remains intact until such a time as it can be developed.

Development approval processes

A statutory development approval process will be required for the development of the regional pathway and will involve up to six councils. At present, these councils have different requirements and prescriptions around the development of recreational pathways, including what processes the planning scheme requires, what use category they are considered under and what zone they are most usually located in. In at least one case, the planning scheme prescriptions in relation to the rail corridor prohibit any other form of development occurring, which has implications for unused edges of rail corridors in this area.

The statutory development process will require the proposed route to demonstrate that it meets the requirements of all these planning schemes which are underpinned by the sustainable development objectives of the *Land Use Planning and Approvals Act 1993*. Each planning scheme at present outlines the requirements for development on land that will become part of the NWCP corridor and these requirements will need to be addressed as part of any development application.

A decision will need to be taken on how development approval will be sought, given that the use or development approved in a planning permit must be substantially commenced within two years of the permit being issued with a possible two year extension if required. It is assumed that in most instances that approval processes will be initiated by Councils or the Crown.

The magnitude of the NWCP project means that a decision to secure development approval for the whole project as part of one process is, under the current parameters, a significant and complex task. This underscores the need to investigate the potential for a regionally combined assessment to streamline the process and ensure that a consistent set of land use planning parameters are applied to the development of the regional shared pathway.

Route preservation

The second critical element in relation to land use planning issues is how to preserve the preferred route so that it is available for future shared pathway development. If the decision is made to wait for funding prior to seeking development approval for the whole regional pathway, then consideration must be given to this key issue.

Planning schemes

In the medium to long term, planning schemes of coastal councils need to reflect the importance of shared pathway planning. In particular planning schemes need to allow for:

- Shared pathways as a use in planning schemes under definitions such as 'passive recreation'
- creating a network of safe roads for cycling which are efficiently interconnected to pathways so that cyclist have a greater choice and flexibility of route
- well connected, safe shared pathways that connect residential areas and major activity nodes
- new developments that are likely to attract bicycle trips (such as workplaces, retail centres, schools and community facilities) incorporate support facilities including secure bicycle parking, lockers, showers and change rooms.

In order to plan for the future development of cycling facilities, it would be desirable to create overlay provisions in planning scheme maps indicating the location of existing and proposed shared pathways and cycling networks and their related support infrastructure, including;

- preferred routes, links and desirable shared path characteristics
- off-road shared pathways, exclusive bicycle and or pedestrian paths
- on-road cycling lanes, shared car parking cycling lanes and shared public transport lanes

This approach would apply in the instance where shared pathways may be excluded from various zones (e.g. lands in industrial estates). Ideally local planning schemes should allow for shared path development as a standard routine aspect of passive recreation and community connectedness. Best practice approach to shared path planning should be incorporated within open space design of subdivisions; providing for pathway links to residential areas and subdivisional layouts. Issues such as landscape, safety and amenity as well as criteria for grades, cross falls and widths etc. need to be considered as part of a best practice approach.

Coastal Vulnerability

The Tasmanian Government has released a document dealing with the indicative mapping of coastal vulnerability to climate change and sea level rise. This report provides mapping for areas of potential coastal vulnerability and is cautioned as **indicative only**;

...vulnerability mapping must be regarded as indicative only (see Section 4.2.2), and underlines the need for site specific assessments of any coastal areas indicated as potentially vulnerable.¹¹

The report indicates that sections of the proposed location for the NWCP may be subject to a variety of coastal vulnerability such as;

- potential flood vulnerability

¹¹ Sharples, Chris, Indicative Mapping of Tasmanian Coastal Vulnerability to Climate Change and Sea Level Rise: Explanatory Report, 2nd Edition, May 2206, p. 133

- erosion and recession vulnerability
- rock fall and retreat
- progressive erosion and slumping
- unclassified vulnerability

It is recommended that site specific assessments be carried out for each individual section of the pathway at the project planning phase. Coastal vulnerability is an important issue to consider when providing valuable public infrastructure such as pathway networks. Links and overall functioning can be greatly affected if a small portion becomes affected by climate change impacts such as flooding and erosion.

The following images illustrate the dynamic nature of the coastal zone, and the changing nature of the fore dunes, consistent with many of the beach areas along the North West Coast.



Figure 3. Moorlands Beach fore dune located in the Latrobe Municipality.

Land acquisition processes

Overall placement of the NWCP has been designed to maximise the use of public lands, and only seek acquisition / access to private land as a last resort therefore the land acquisition process should be dealt with on a case by case basis by each individual Local Council, with the following guiding principles;

- all land acquisition / access processes be dealt with in a sensitive manner, that is fair, reasonable, transparent and well communicated to landowners and residents
- sequencing must be considered in terms of the proposed timetable for the implementation of the NWCP sections
- land acquisition / access should be prioritised to enable completion of critical links
- consultation must be well planned so that there are no surprises for private land owners

- alternative plans are put in place (eg. use of road for some sections of the NWCP) in case land acquisition / access fails to be negotiated
- government agencies need to be briefed and coordinated so as not to hold up or compromise land acquisition / access processes
- community education programs need to be in place around the positive values of the NWCP in order to assist potential land acquisition processes

It is vital that the community and private individuals affected by the proposed pathway route appreciate the greater community benefit of the NWCP in order to achieve its goals.



Burnie Waterfront boardwalk, Burnie Municipality.

3.2 Landowners and managers

As the NWCP is implemented, it is important that land owners and managers are made aware of the opportunities to provide private and public infrastructure that will support the ongoing use and growth of the pathway system. In particular, from a Local Council planning perspective, new residential subdivisions should make allowance for suitable footpaths / shared paths and sound connections to existing and proposed sections of the NWCP. Given that demand for residential development in coast areas is continuing, there will be many instances for future growth and complimentary pathway connections. Developers could see this opportunity as a competitive advantage to providing real lifestyle benefits to their target markets.

A cooperative approach needs to be taken with land managers such as the Tasmanian Parks and Wildlife Service and Crown Land Services to progress nodal developments recommended in the plan. Early planning and consultation is recommended in order to ensure that all relevant input is gathered and approval processes completed.

Sections of the proposed NWC pathway may fall within Tasmanian Parks and Wildlife Service and Crown Land Services jurisdiction. Those sections that do may be subject to the Reserve Activity Assessment (RAA) and the Crown Land Assessment and Classification Project (CLAC) processes. Examples of such areas include coastal reserves and lands as follows;

- Three Sister Island Reserve
- Goat Island Reserve
- Crown Land along West Ulverstone (Penguin Road)
- Forth River at the existing bridge crossing area
- Don Heads area
- Sections of River Road between Devonport and Latrobe
- Sections of the coast near of Tea Tree Lane and Moorland Beach (this area is managed by the Northern Office of Tasmanian Parks and Wildlife Service based in Prospect)

Development applications through the revised RAA process will need to address triple bottom line principles including social and environmental impacts and will be assessed according to project merit.



Cradle Coast Authority 2010

3.3 Pathway route planning

The following section outlines the general design principles that could be applied to the planning of the proposed NWCP. This summary includes some of the issues that have affected / influenced the proposed route alignment and include the following;

- pathway system (linear versus loop configuration)
- pathway classification (shared versus single use)
- placement of the pathway route (what constraints and opportunities exist)
- areas of environmental and cultural significance (what impact these may have on the location of the route)
- safety (key areas of consideration)
- surface treatment (what types)
- pathway markers and information signage (types and functions)
- support facilities (location and types)

Pathway system

The NWCP responds to the linear nature of settlement on the North West Coast – it aims to link the population points along the coast, thus takes on a linear form. This way the community connecting parts of the pathway can act as additional recreation paths as people access the path at differing points and eventually extend their use of the path toward a more commuter focus.

The local community access paths and various existing links in and around the population centres act as small systems / circuits in their own right. These are then completed by sections of the NWCP.

Classification

Given the desire to encourage the community to participate more actively in exercise, it is important that the NWCP is classified as a shared pathway where ever possible. There may be sections that due to physical and financial constraints as well as low user numbers where pathway specifications may fall below that of a shared pathway – but this should only be the last resort case over very short distances. It is vital that all pathway linkages are complete in order to provide a meaningful stock of infrastructure. It may be viable to create single use sections of the pathway as a first step to ensure that pathway connections are made.

Route placement

As a general rule, shared pathways should be located where they will receive a high level of use and natural surveillance. Pathways that become underutilised will be perceived by the community as unsafe and therefore deter and limit its further use.

The NWCP route has been placed using the following criteria;

- Location within either the current road reserve or rail corridor
- Avoidance where possible of location on private land
- Maximum distance away from vehicular traffic
- Maximum distance away from active rail line
- If located close to the active rail line, set back far enough so as to avoid installation of fencing

- Location to maximise natural locations and coastal views
- Location to maximise existing pathways, connections and access points
- Location to maximise existing and proposed secondary paths that are not part of the NWCP
- Alignment to encourage commuting activity
- Alignment and placement to encourage family and children use
- Maximise user safety

Areas of environmental and cultural significance

Some areas nearby the proposed route include environmental and cultural significance. Examples include penguin colonies, migratory bird breeding areas, and active dunes. These areas have been avoided in the placement of the route. Specific places of Aboriginal cultural significance have not been considered as part of this project, but it is noted that they exist along the coastal zone. Potential areas of Aboriginal cultural significance and the impact of pathway placement on them should be dealt with on a case by case basis (*this is issue is mentioned earlier in the report under the land owners and managers section*)

Safety

Safety issues that have been taken into account in the placement of the NWCP include;

- Achievement of the best alignment possible, to allow cyclists to travel at their chosen speed
- Avoidance of sharp horizontal curves
- Providing adequate sight distances and clear sightlines to hazards such as cars entering or crossing the path
- Ensuring good public visibility of the path – especially in non populated areas
- Provision of emergency and maintenance access vehicles at strategic points
- Open landscape so as to avoid overgrown or dense vegetation or significant vegetation removal – set new plants well back from paths
- Position crossing points at convenient and busy locations – high activity areas such as shops, public transport stops, schools / parks etc.
- locate pathways in direct line of route to ensure quick access to destinations
- eliminate any potential entrapment spots with a reasonable distance (30m) of well used paths
- ensure lighting and good visibility at bridges, enclosed pathways and stairways

Surface treatments

Consultation with the Local Councils indicated a preference for concrete, asphalt or gravel surfaces dependant upon use levels, site conditions and finances. Some sections of pathways have been completed using recycled plastic materials with success. It is ideal that the surface treatment be selected upon the basis of use levels, site conditions and finances. The only section of the NWCP that should have a specific surface treatment would be the Moorland Beach area, where sensitive beach dunes should only be traversed with elevated construction methods and open FRP (fibre reinforced plastic) mesh so as to minimise impacts.

Pathway markers and information signage

Standard universal pathway markers and signage should be used where possible, including;

- Warning signs
- Directional signs
- Track head signs
- Interpretive signs

Proposals for signage are included in the design toolkit section of this plan.

Bridges

It is proposed that existing bridges will be utilised where possible so as to reduce the capital cost and improve utilisation of existing infrastructure. Bridging sections have been limited to situations where alternative path location would not be feasible or would compromise its usability. In some circumstances existing pedestrian sections of local road bridges do not meet the width requirement for a shared pathway. In these instances, it is suggested that cyclists dismount and wheel their bikes across these few bridging sections of very short distances.

Bass Highway

A large portion of the NWCP is proposed to be located within the existing Bass Highway corridor. Further consultation is required with DIER to determine the feasibility of this approach. It is proposed that existing pedestrian lanes on Bass Highway bridges are utilised for providing essential pathway links over some of the large coastal rivers such as;

- Cam River (southern side)
- Emu River (northern side)
- Blythe River (southern side)
- Forth River (unresolved)

Likewise, there are several public underpasses along the Bass Highway that are proposed to be utilised in order to facilitate safe access to the pathway. These include;

- Wynyard underpass (approximately 1 km west of the Wynyard eastern turnoff)
- Leith underpass (approximately 100m west of the northern Leith / Bass Highway turnoff)
- Cutts Road underpass (approximately 100m south of the Bass Highway / Cutts Road turn off)

As mentioned earlier, further consultation is required with DIER to address specific issues within underpasses. These may include;

- 24 hour artificial lighting
- Painting internally with light colour to lift the light levels
- improved access sight lines
- surveillance cameras
- bike friendly grating and stairways

- improved warning signage
- delineation of lane directions
- drainage



Figure 4. Bass Highway underpass near Wynyard.

Wynyard Bass Highway underpass, proposed to allow for safe crossing of the Bass Highway into Wynyard



Figure 5. Bass Highway underpass near Leith.

Leith Bass Highway underpass, proposed to allow for safe crossing of the Bass Highway from Leith



Figure 6. Bass Highway underpass near Cutts Road, Don.

Cutts Road Bass Highway underpass, proposed to allow for the safe connection to Devonport sections of the pathway

Road crossings

The proposed NWCP involves the controlled crossing of the Bass Highway via underpasses at the following locations;

1. Wynyard, 1km west of the Bass Highway turn off into Wynyard
2. Sulphur Creek, via the existing Hogarth street underpass
3. Leith, at the Bass Highway turn off into Leith
4. Don Hill, at Cutts Road

The proposed NWCP involves the controlled crossing of the Bass Highway via traffic lights / pedestrian crossings at the following locations;

1. Cooe / Brickport Road junction
2. Wivenhoe, at the River Road / Bass Highway junction (this requires extending the pedestrian controls to complete the crossing)

The following uncontrolled crossings on local roads within 60km/h residential areas are proposed;

1. Wivenhoe, on Stowport Road near the Leighland Christian School
2. Penguin Road, near the Westland Drive junction
3. Beach Road, near the new Turners Beach / Ulverstone shared pathway

4. Lilloco road at the existing level rail crossing (this is in a rural area and may not be within a 60km/h zone)

Rivers

The proposed NWCP involves the crossing of following rivers utilising the existing pedestrian sections of the Bass Highway bridges (*cyclists would be requested to dismount*);

1. Cam
2. Emu
3. Blythe
4. Penguin Creek
5. Leven
6. Don
7. Mersey

A new shared pathway bridge is proposed at the Forth River as there is currently no facility for pedestrian crossing.

Small bridging will be required throughout the length of the NWCP in order to negotiate wet areas and existing drainage systems. This would be resolved during the next design phase by the Local Councils.



Figure 7. Forth River and Rail line and Bass Highway bridges near Leith looking east.

3.4 Pathway constraints & opportunities

Land management issues in regard to placement of the proposed pathway have been highlighted throughout the process as creating both constraints and opportunities to the success of the NWCP. Issues fall into two broad categories – those relating to a) the rail corridor (rail reserve) and those relating to b) land tenure.

The Rail Corridor

There has been an expanding trend in Australia and overseas for the development of rail trails – walking and cycling trails following former railway lines. These trails utilise the rail corridor to maximum advantage, creating gentle gradients suitable for both walking and cycling. Sections of the Devonport cycle way (near Don) and the Railton to Sheffield Rail Trail are examples of Rail Trails in the North West of Tasmania.

Overseas rail trails such as the *Confederation Trail* (see below)¹² in Prince Edward Island offers a 400km experience utilising disused rail corridor. It passes through towns and villages and has enjoyed significant success.



Options for the use of the rail corridor (rail reserve) were raised almost universally during the initial Local Council consultations. Identified as both an opportunity and a constraint, a clear policy position is required in order to allow for access to the rail corridor. Brokering access to the rail corridor has been historically a very difficult process. A key matter for determination is resolving a consistent approach to use of sections of the rail corridor in order to advance the NWCP.

The recently completed Turners Beach to Ulverstone pathway (June 2010) allowed for some access to the rail corridor. Other areas such as sections of the Burnie foreshore (near Parklands) have been made possible through use of lands in the rail corridor. Both examples have been negotiated with the land manager independently.

Four major issues were raised during the early stages of consultation of this project, by Local Councils in regard to access to the rail corridor;

1. The future of the Wiltshire line west of Burnie
2. Access to rail reserve edges
3. Rail crossings
4. Policy articulation

¹² Images sourced from www.tourismpei.com/pei-cycling

Future of the Wiltshire line

The Burnie to Wiltshire rail line was temporally closed to rail traffic for three years between 1996 and 1999 and permanently closed in 2003. The line formed part of a larger rail corridor known as the Far Western Line, which originally included connections from Wiltshire to Smithton (25.6km) and to Stanley (8.8km). The line between Burnie and Wiltshire is estimated at being 80.3km in length and is the only part of the Far Western Line still relatively intact. This section of track is owned and managed by the Tasmanian Government, who now acts as owner / manager of main line rail infrastructure and rolling stock under the banner of the Tasmanian Rail Company.¹³

Since the Wiltshire line's closure in 2003, the track and rail corridor has not been used for any purpose, other than by individuals crossing it to access coastal reserves/beaches, or who use it as an informal walking track. Closure of the track is achieved by signage and barricades at various points along it but the track infrastructure itself appears to have remained mostly in place. The consultation process identified that crossing infrastructure and ad hoc pieces of track in some township areas may have been removed.

The intentions of the Tasmanian Railway Company in relation to the Burnie to Wiltshire line are critical to the pathway planning process west of Burnie. Discussions with the Waratah-Wynyard Council have indicated that should the Wiltshire line be formally decommissioned, then it would make for an ideal corridor for the pathway. Concerns were raised in regard to taking a temporary approach and investing any infrastructure on the Wiltshire line void of any long term guarantee.

It is noted that provisions for the management of obsolete, unused or rail infrastructure in disrepair are included in the *Rail Infrastructure Act 1997* and include powers to remove infrastructure that falls into the above categories.



Figure 8. Wiltshire Line near Doctors Rocks, Wynyard

¹³ Rails Tasmania 2009, Far Western Line, http://www.railtasmania.com/lines/farwestern_line.htm accessed 2 April 2010.

Access to rail reserve edges

Opportunity exists for Local Councils to access lands within the rail reserve, on its edges to place sections of the pathway. As mentioned above, a consistent regional approach is required in order to facilitate agreements for land access. Utilisation of such edges of the corridor can be positive as often such areas are left unkempt, overgrown, and a potential safety and/or fire hazard and a cause of community concern. More productive use of these sections of the rail corridor is embraced by the community and Local Councils.

A clearly articulated policy in regard to access to lands within the rail corridor would provide certainty for Local Councils when implementing sections of the NWCP. Access to such lands would ensure that the NWCP is located in some of the most optimal scenic and natural areas of the North West Coast, given that the current rail corridor hugs the coastline in a number of places.

It is noted that the rail reserve varies in width considerably along the entirety of the NWCP route. Application of a policy for the placement of the NWCP within the rail reserve will need to take into account width variation of the reserve.



Figure 9. Ladders Point, Three Sister Island Reserve, West Ulverstone as viewed from the rail reserve

Rail crossings

The key to future developments is an understanding of what is required by the Tasmanian Railway Company in relation to crossing points and from council perspectives, ensuring that crossing points maximise safety and access for community members. A clear policy position is required that addresses the following;

- crossing design
- access to active rail corridor for pathway development
- access to disused rail corridor for pathway development

The following images highlight the range of crossing types (of differing legal status) in use.



Figure 10. West Ulverstone chicane crossing

Authorised pedestrian chicane crossing at West Ulverstone, (note the differing signage to the other examples)



Figure 11. Mersey River uncontrolled crossing

Unauthorised chicane crossing at Devonport toward the Mersey River – (note the lack of signage and very loose chicane arrangement)



Figure 12. Coles Beach uncontrolled crossing

Unauthorised chicane crossing at Devonport near Coles Beach (note the lack of signs and casual arrangement of the crossing)



Figure 13. Turners Beach casual crossing

Unauthorised crossing at Turners Beach (note the very informal nature of this crossing)

Policy articulation

Discussions with Local Council stakeholders highlighted that pathway planning processes are suffering from uncertainty and delays as a result of the lack of a clearly articulated policy position in relation to the use of the rail corridor and associated issues. This is a significant issue for the project as well as stakeholders involved in pathway planning. Securing a clear policy position would greatly facilitate route planning by clarifying the situation in relation to the above issues.

Land tenure

The issue of land tenure has been raised as critical to the successful resolution of pathway routes. In the first instance, land that falls within the Local Council, Crown land, rail and road reserve have been targeted for placement of the pathway route. In some instances, private land may be required at 'pinch points' in order to ensure ideal route planning and flow. The management of community expectations and communication will be critical to the success of the NWCP for areas where private land may be involved.

Crown Land Services has established application and approval processes to enable organisations to seek approval for the use/occupations of Crown land by way of purchase, license or lease.¹⁴

An additional mechanism may be through the use of Local Council/regional partnership agreements to negotiate agreement on the future use of Crown land for pathway development projects.



¹⁴ The Northern representative for Crown Land Services is Sophie King, who can be contacted on 6336 4978

4.0 Pathway Demand

4.1 Cycling user data

Over 1.68 million Australians cycled in 2006, an increase of 244,000 from 2001.¹⁵ Australian capital cities have also experienced an average 22% increase in bicycle commuting to work, with Melbourne experiencing an astonishing growth of 42% between 2001 and 2006.¹⁶

Tasmanian ERASS data states that in 2008, approximately (162,200 people), 42.1% of survey respondents indicated that they took part in some form of walking activity (non bushwalking) and (37,000 people) 9.6% in cycling activity.¹⁷ In 2006, approximately 886 individuals indicated that they cycled to work in Hobart.¹⁸

Devonport City Council conducted a local bike survey in 2010 queering users about the type of cycling activity they undertook.¹⁹ The survey concluded the following;

- 53% cycled for recreational purposes
- 22% cycled for commuting purposes
- 20% cycled for health benefits
- 5% cycled for touring experiences

Anecdotal feedback received about the recently completed Turners Beach and Ulverstone link shared pathway indicates popular support. Already this section of the pathway is being well utilised with averages of between 10 to 20 people at any given time during the evenings and more on weekends.

Recent statistics indicate that the strongest area of growth (nationally) for cycling has been for transport purposes to work (commuting).²⁰ Local information suggests that most cycling taking place is for recreational purposes. Anecdotal evidence suggests that the major barrier to commuting cycling is safety, especially given the lack of respect people on bikes encounter on our coastal roads. This has been reiterated in the *Cycling: Getting Australia Moving* report.²¹ The same report also states that the more cyclists there are, the safer it becomes for them – if cycling doubles, the risk per kilometre falls by 34%.²²

¹⁵ Australian Government Department of Health and Ageing, *Cycling: Getting Australia Moving*, 2008, p. i

¹⁶ *Ibid*, p. i

¹⁷ Australian Sports Commission (2009), *Participation in Exercise, Sport and Recreation Survey 2008, Annual Report, State Tables for Tasmania*.

¹⁸ Australian Government Department of Health and Ageing, *Cycling: Getting Australia Moving*, 2008, p. 3

¹⁹ Devonport City Council, *Devonport City Cycling Network Strategy – Bike Plan, May 2010*, p. 7

²⁰ Australian Government Department of Health and Ageing, *Cycling: Getting Australia Moving*, 2008, p. 3

²¹ *Ibid*, p. i

²² *Ibid*, p. iv

The NWCP will provide safe and user friendly pathway routes and connections in order to increase the number of people who would take the opportunity to commute to work by bicycle.

In terms of age distribution of those who are recreational or commuter cyclists, there is a strong correlation between younger ages (25 – 44 years of age) who are more likely to be commuter cyclists than those from older ages (55 – 65+ years of age). (Refer to figure 14 Participation in Cycling by Age)

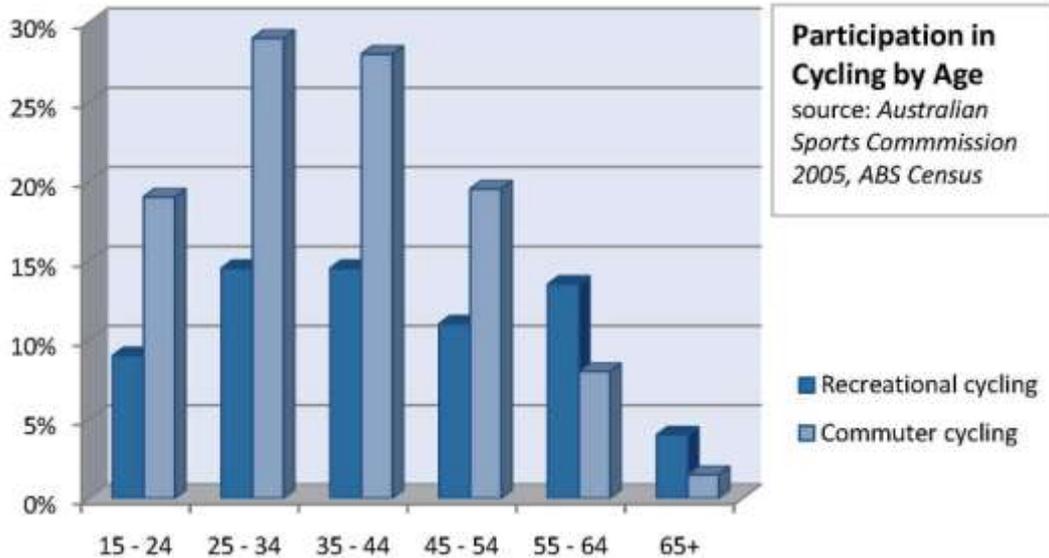


Figure 14. Participation in Cycling by Age

Even though cycling is the third most popular recreational activity in Australia, only one percent of all trips are made by bicycle.²³ These figures are similar in New Zealand and the USA but are in sharp contrast to trips by bicycle in European cities.²⁴

The Australian Bureau of Statistics in 2002 indicated that 4.2 % of Tasmanians participated in off-road cycling or mountain biking, 3 500 for the Mersey – Lyell area.²⁵ The Tasmanian Mountain Bike Plan argues that these figures would have increased significantly since 2002.²⁶ Approximately 70 % of bikes sold in Australia in 2005 were mountain bikes.²⁷

According to ABS Census data, approximately 62,850 people live within the direct catchment of the NWCP. ²⁸ This figure represents the populations of the following communities; Wynyard, Somerset, Burnie, Heybridge, Sulphur Creek, Penguin, Ulverstone, Turners Beach, Leith, Forth, Devonport, Latrobe and Port Sorell.

²³ Rissel *et al.* *International Journal of Behavioural Nutrition and Physical Activity* 2010, 7:8, p. 1

²⁴ *Ibid*, p. 1

²⁵ Australian Bureau of Statistics, 1362.6 – Regional Statistics Tasmania, 2006, source: Leisure and Cultural Participation, Tasmania (cat. No. 4904.6)

²⁶ Tasmanian Government, *Tasmanian Mountain Bike Plan 2009*, p. 8

²⁷ Australian Bicycle Industry (2006), *The Australian Bicycle Industry Report 2006*, p. 11.

²⁸ Australian Bureau of Statistics, 1986 to 2001 Censuses.

A key focus of the NWCP should be to link and utilise the existing population catchments of Burnie, Somerset & Wynyard (west) and Devonport, Ulverstone & Penguin (east). These major centres contain population bases which will utilise shared pathways in larger numbers (refer to Figure 15. Population Catchment of the North West Coastal Pathway)

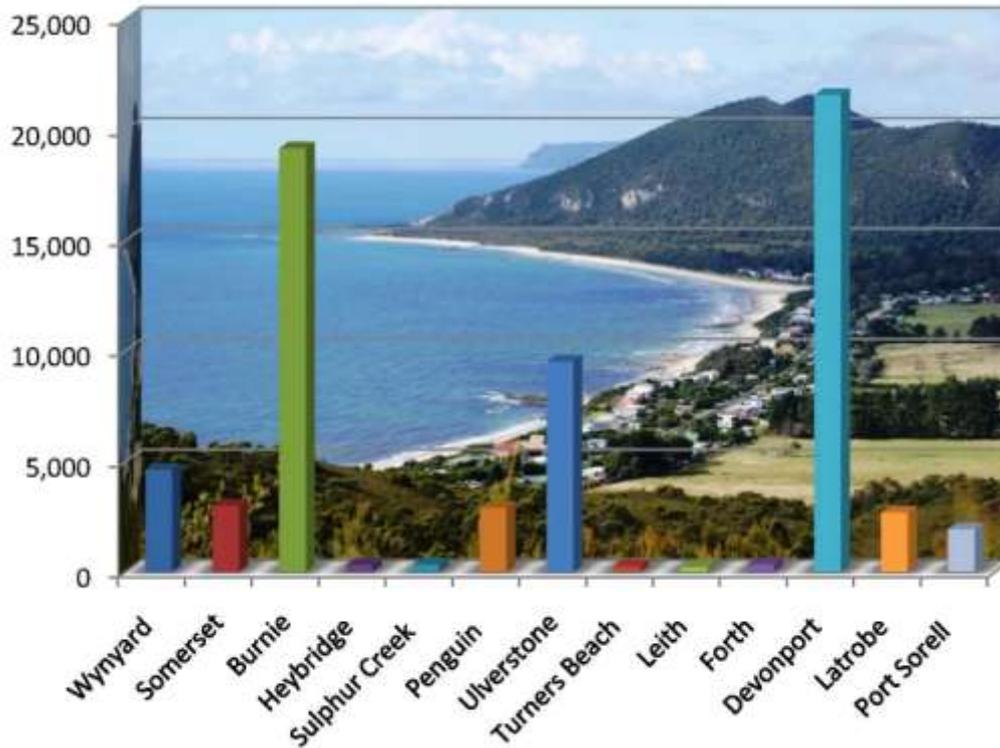


Figure 15. Population Catchment of the North West Coastal Pathway

A key advantage of the North West Coast is the fact that smaller population centres are dispersed along the coast, making it ideal for a linear share path configuration. This way everyone can enjoy the economic and well being benefits and infrastructure as it passes through their coastal communities.

Children

Being able to ride a bike is a developmental milestone – it creates independence, freedom and is essential to commencing a life long interest in physical activity and health and well being.

ABS data from 2000 indicated that 64% of children aged 5 to 14 years (71% of boys and 56% of girls) rode a bike outside of school hours. It also noted that 60% of children living in the six State capital cities rode bikes outside of school hours compared with 69% of children living elsewhere. Of the bike riders, boys spent more time riding than girls: the average time was 7 hours for boys and 5 hours for girls over a two week period. About one-quarter (27%) of boys who rode bikes spent at least 10 hours bike riding (in the same two week period) compared with 16% of girls.

The difference in participation between the sexes is not as significant for younger children aged 5 to 8 years. However, for children aged 14 years, the percentage of boys riding bikes (61%) is over twice that of girls (28%).²⁹ (Refer to Figure 16. *Participation in Bike Riding*)

Riding to school is an excellent way for children to participate in regular exercise. Bicycle education programs in schools elsewhere in Tasmania and interstate are becoming popular, with many successful outcomes.

There are approximately 45 schools within the direct catchment areas of the NWCP. It is desirable that local councils ensure that safe pathway links are made between the NWCP and schools so as to strengthen the viability and ongoing use of the pathways generally. Children under 10 years of age should be supervised in traffic environments at all times. Routes to Primary Schools require special attention and support through community safety programs³⁰ to encourage the participation of younger children in riding to school. This would have a positive effect on the rapid decrease in the number of children cycling as they reach high school years.

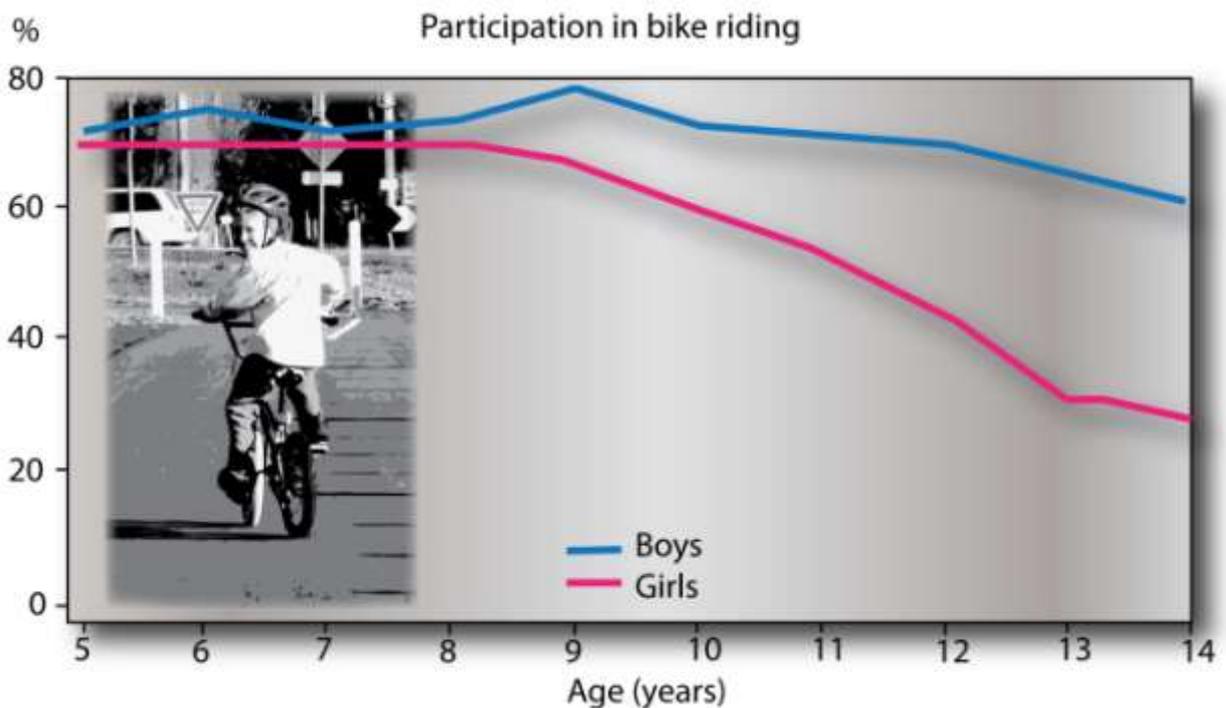


Figure 16. *Participation in Bike Riding*

²⁹ Australian Bureau of Statistics, Participation of Children in Outside of School Hours in Organised Sport, April 2000.

³⁰ Bicycle Victoria has a successful program called *ride2school* with many useful templates to be found at www.bv.com.au. Bicycle Victoria also promotes a complementary program known as *travel smart maps*, which provides detailed information to students and parents on locations of pathways and related information to assist with children riding to school.

4.2 User demand

Whilst determining potential user demand can be challenging, research indicates that potentially 30% of all trips shorter than 15km are capable of being made by bicycle, requiring very little change to people's decision making processes.³¹ Given the ribbon settlement pattern of the North West Coast, and the close proximity of services / attractions, it can be suggested that NWCP could provide the infrastructure required to affect such decision making. That is, the NWCP will provide essential transport infrastructure within 15km radius to the majority of residents.

Further, there are many policies that can be put in place that will positively affect take up of bicycle use. Austroads Australia³² has published some key findings in this regard;

Policies to positively affect bicycle use

- extend and enhance bicycle networks both on-road and off-road
- reduce speed and volumes of vehicular traffic on and near bicycle networks
- provision of end of trip facilities
- subsidies for bicycle use / cost imposition on vehicle use
- integrate public transport and bicycle use (bike parking at bus stops, interchanges etc.)
- encourage high density urban development
- social marketing to increase sustainable transport modes and discourage vehicle use

Policies / regulatory practices that would negatively affect bicycle use

- registration and regulation of the use of bicycles that will affect the cost, convenience and social status of cycling
- exclusion of bicycles to roads / areas
- increasing travel time by rearranging network configurations and features
- promoting negative safety aspects of bicycles



Turners Beach shared pathway August 2010.

³¹ Brög, W. (1982), *The acceptance of policies to encourage cycling*, Transportation Research Board, Washington, Socialdata, Munich, Germany.

³² Austroads, *Forecasting Demand for Bicycle Facilities*, 2001, p. 3

4.3 Health and community wellbeing

The health and wellbeing benefits of shared pathway infrastructure are well recognised and accepted nationally and internationally. There is significant statistical and anecdotal data to support this fact. Both the *Trails Tasmania Strategy 2007* and the *Tasmanian Physical Activity Plan 2005 -2010* provide information reinforcing such benefits, for example;

- Participation in exercise improves fitness, health and wellbeing
- Participation in unstructured recreational activities is increasing³³
- Trails / pathways are used as a means to spend time with family and friends³⁴
- Trails / pathways provide a strong incentive to exercise³⁵
- Pathways that are safe and accessible encourage physical activity ('healthy design approaches')
- Pathways are a great way to reduce the number of Tasmanians suffering from a range of lifestyle related health issues

Riding a bicycle has considerable health benefits, such as decreased mortality for regular riders by 30 -40% and decreased risk of diabetes.³⁶ Those who cycle for commuter purposes (cycling to work) have less likelihood to being overweight or obese.³⁷

From a Tasmanian perspective this plan, there is the substantial concern for the current health outcomes of North West Tasmanian communities. Tasmanians have the second lowest participation rates for exercise and physical activity nationally³⁸, - 71% of North West Coast Tasmanians are not undertaking 30 minutes of exercise per day which is contributing to their ongoing poor health outcomes.

Appropriate design of shared pathways cannot be understated in order to ensure that more North West Coasters make a change to their lifestyle and get active daily. Local Governments play a major role in local infrastructure and therefore have considerable opportunity to pursue local solutions to local problems.



³³ Australian Sports Commission (2009), *Participation in Exercise, Sport and Recreation Survey 2008, Annual Report, State Tables for Tasmania*.

³⁴ Research undertaken by Market Equity in 2004, quoted in SA Government, undated, p. 4

³⁵ *Ibid*, p. 4

³⁶ Rissel *et al.* *International Journal of Behavioural Nutrition and Physical Activity* 2010, 7:8, p. 1

³⁷ *Ibid*, p. 1

³⁸ Tasmanian Government (2005), *Tasmanian Physical Activity Plan, 2005 – 2010*, p. 11

4.4 Evaluation of costs and benefits

The North West Coast Tasmanian communities have invested \$3 million in the 2009 - 2010 financial year toward the completion of critical links and pathway connections. Local Councils have identified investment ready sections of the pathway (33.3 km) which are resolved in terms of community support, design, engineering and costing, equating to \$14.4 million. Local Councils have completed approximately 44 km of shared pathway to date approximating \$17.6 million in capital investment. A further 62 km has been identified as part of this project equating to \$26 million in capital.

Based on economic analysis of similar experiences in Victoria, estimates indicate the pathway has the potential to attract an additional 10,000 visitors to the North West Coast annually, equating to an injection of \$2.5 million into the local economy per annum.³⁹ Recent Australian and international research indicate a cost benefit ratio of 1:3⁴⁰ for the development of cycle ways⁴¹ (excluding tourism income streams). This equates to an overall benefit of \$132 million (including the benefits of an existing 44 km of cycle way) to the community in savings.

An annual cost benefit of \$5 million can be applied to this project, making it an excellent return on investment over a short period of five years⁴².

The capital estimates for this project have been calculated on the basis of completed cycle way contracts delivered by the Local Governments of the North West Coast for the 2009 -2010 financial year.



³⁹ Dr Sue Beeton, *An Economic Analysis of Rail Trails in Victoria, Australia*, August 2003, p. 9 & 24.

⁴⁰ This ratio considers the capital investment cost only and excludes full asset lifecycle costs.

⁴¹ PriceWaterhouseCoopers, *Evaluation of the costs and benefits to the community of financial investment in cycling programs and projects in New South Wales*, February 2009, p. 4 & 58.

⁴² This figure is based upon total asset lifecycle costs over a 40 year asset life cycle (refer to section 2.5 *Pathway estimates* of this document and section 2.6 *Operational maintenance and sustainability of the Design Toolkit*).

4.5 Tourism benefits

Shared pathways are now being recognised nationally and internationally not only as vital infrastructure for local communities, but as having significant tourism potential.⁴³ The 2010 Tasmanian Visitor Survey reported that 22,600 visitors engaged in a cycling experience (ride a bicycle or mountain bike) whilst in Tasmania, spending \$51m and accounting for 390,100 room nights.⁴⁴

The North West Coast of Tasmania has as one of its key assets its stunning coastal landscape. This project has been identified as having high tourism potential and creating a significant draw card to an area under utilised and under explored. Tasmania experiences cycling visitation and annual spend of \$51 million.⁴⁵ This project will further enhance and capture the latent demand for regional cycling experiences nationally.

Latent demand for regional cycling experiences may exist in Tasmania, and local feedback from tourism operators in the North West see the NWCP as providing an excellent opportunity to for attracting cycling orientated visitor segments. The North West Coastal Pathway has the potential to appeal to adventure / nature based and active tourism visitor markets, as it provides opportunities for an active walking / cycling experience through scenic coastal towns, quality natural habitats and coastal landscapes.

The NWCP will provide opportunities for alternative and safe modes of active transport along the coast, which will have appeal to specific visitor segments such as backpackers and others who find it difficult to rely on public transport. But also those who choose not to rely on public transport.

Recent research by Tourism Victoria indicated that 1,094 visitors were counted using one section of the Murray to Mountains Trail on Easter Sunday in 2002⁴⁶. A conservative estimate of an additional 10,000 visitors to the North West Coast annually would be a reasonable scenario to suggest for application to the coastal pathway experience. This could equate to an injection of \$2.5 million into the local economy per annum.

Popular mountain bike events such as *Wildside MTB* (a four day event based on the West Coast of Tasmania) which is internationally recognised is continuing to grow, and has done so by 40% over the last two years. This event is attracting a field of up to 500 annually thus injecting significant economic benefits to the North West and West coasts of Tasmania.

Therefore increased visitation to the North West from cycle and multisport events would positively boost the local economy and tourism industry.

⁴³ Dr Sue Beeton, *An Economic Analysis of Rail Trails in Victoria, Australia*, August 2003, p. 9 & 24

⁴⁴ Tourism Tasmania, *Web Forecaster Data 09 – 10 season source:*
www.webreporter.asteroid.com.au

⁴⁵ Tourism Tasmania, *Web Forecaster Data 09 – 10 season*

⁴⁶ Dr Sue Beeton, *An Economic Analysis of Rail Trails in Victoria, Australia*, August 2003, p. 24.

4.6 Environmental benefits

The potential to develop an alternative transport mode through the implementation of the NWCP has been highlighted as a key project driver through consultation phases of this project. There is widespread agreement on the need to facilitate alternative transport forms with lower green house gas emissions in order to assist in the overall reduction of the carbon footprint of current transport methods. Cycling for transport produces zero carbon emissions (excluding the carbon emissions created in the production of bikes).

The key to positive utilisation of shared pathways is to ensure that they are well connected to places where people live and work. Thus the NWCP has been designed with this in mind to ensure easy and safe access, well connected pathways not only for improved health outcomes but as a real alternative mode of transport.

The affordability of walking or riding a bicycle will create a greater degree of mobility given the limited routing and cost of current public transport systems and the increasing costs of petrol.

This plan recommends supporting end of trip infrastructure such as bicycle lockers, rest and toilet stops, showers etc. to provide comfort for commuting users of the pathway.

Additionally the NWCP can provide rehabilitation of coastal areas as part of infrastructure installation. Some sections of the route traverse coastal areas that are weed infested and require intervention. Opportunities exist for revegetation of local endemic species, improvements in habitats and interpretation of natural values as part of the implementation of the pathway.



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Published in November 2010
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