
Aspirational Pathways Cowes-Rhyll Road From Redwood Dr to Coghlan Feasibility Study

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Abbreviations

“AHD” - Australian Height Datum
 “DELWP” - Department of Environment, Land, Water and Planning
 “PINP” – Phillip Island Nature Park
 “FFG” - Flora and Fauna Guarantee
 “CHMP” – Cultural & Heritage Management Plan
 “NVIM” – Native Vegetation Information Management system
 “NVR” – Native Vegetation Report

Summary

This feasibility study has been prepared for determining the preferred alignment to construct a 2.5-metre-wide concrete shared path that links Cowes to Rhyll via Cowes-Rhyll Road to Rhyll.

The path alignment connects to existing Council path networks with 2 options.

- Option 1 – alignment along northern road reserve of Cowes – Rhyll Road from Redwood Dr to Coghlan Rd.
- Option 2 – alignment along southern side of Cowes – Rhyll Road through (yet to be confirmed) rural & school properties utilizing the land acquisition process from Mary Star of the Sea Catholic Primary School (school crossing) to Coghlan Rd.

To determine the preferred alignment a weighted matrix methodology was adopted which assesses against criteria such as, but not limited to safety and the impact to areas of cultural heritage and environment. The points given to each option have been based on a mixture of desktop-based study and on-site assessments. This was also the method used to determine the weighting of each criterion.

After conducting a matrix analysis for each of the options, it is considered the combination of options 1 has been determined to be the preferred alignment for the connection from Redwood to Coghlan Rhyll. The alignment runs along Cowes – Rhyll Road connecting to the existing shared path network located on the north side of Cowes – Rhyll Road continuing through to Observation lookout located at the McIlwraith Road carpark. The length of the total alignment is approximately 1.36 kilometres.

The next is to present this project to Council with a recommendation for adoption. Once Council has adopted this project, a road safety audit, cultural heritage study and detailed biodiversity study and consultation with other stakeholders can be undertaken as part of the detailed design phase.

Introduction

Background

The Victorian State Government has an ongoing initiative to provide a bicycle network throughout the State of Victoria. The Victorian Government published the Victorian Cycling Strategy "*Cycling into the Future 2013-2023*" in December 2012. The Strategy is accompanied by a series of Action Plans, commencing with a two-year Action Plan in 2013-14. The Victorian Cycling Strategy aims to grow and support cycling in Victoria, making it easier for more people to cycle and to make it safer for people who already ride. It covers all types of cycling; transport journeys, leisure trips, cycling tourism and cycle training.

An existing shared path runs along Cowes-Rhyll Road, from Northeast corner of Thompson Avenue Cowes-Rhyll Road intersection along the north side of Cowes-Rhyll Road to Redwood Dr. Existing shared paths in Cowes extend from Phillip Island Tourist Road to multiple localities

- Sunderland Bay – Surf Beach Estate
- Smiths Beach – Sunset Strip
- Wimbledon Heights
- Red Rocks Via Settlement Road
- Ventnor

All other areas utilise are accessed via the existing road network, with further plans to extend the shared path network along Cowes-Rhyll Road.

This report focuses on a further extension to the network by connecting Cowes to Rhyll and providing a link for recreational/commuter cyclists and pedestrians travelling between these townships and connecting into the Shire's wider shared path network.

This report arises from the Cowes to Rhyll shared path being outlined in Aspirational Network Pathways Plan 2016.

Purpose of This Report

This report has been prepared to make recommendations and provide information for the Redwood Dr to Coghlan Rd path alignment. Investigations that have been undertaken include but not limited to identifying planning, vegetation, cultural heritage requirements as well as road safety and additional infrastructure requirements.

Report

From discussions with a landowner along the south side Coghlan Road, has advised "in principle" to provide land through the land acquisition process to facilitate an alternate shared path alignment, to minimise environmental impacts along Cowes -Rhyll Road southern side road reserve. It is also suggested the Mary Star of the Sea Catholic Primary School has also been engaged but not formally by Council.

The original proposed shared path runs along Cowes-Rhyll Rd northern side of road reserve connecting to the existing Coghlan Road path adjacent "Shearwater on The Island" estate. As welcome as this suggestion is, Council encourages all options from the community with deliberate consideration on their merits.

The standard width of 2.5 metres for a shared path is recommended for the length of the alignment, although this is subject to change depending on detailed investigations. A general cross section of the vegetation clearing required for the path is shown in Figure 1 below.

The length of the general alignment is 1.36 kilometres. A map of the general alignment is shown in Appendix A.

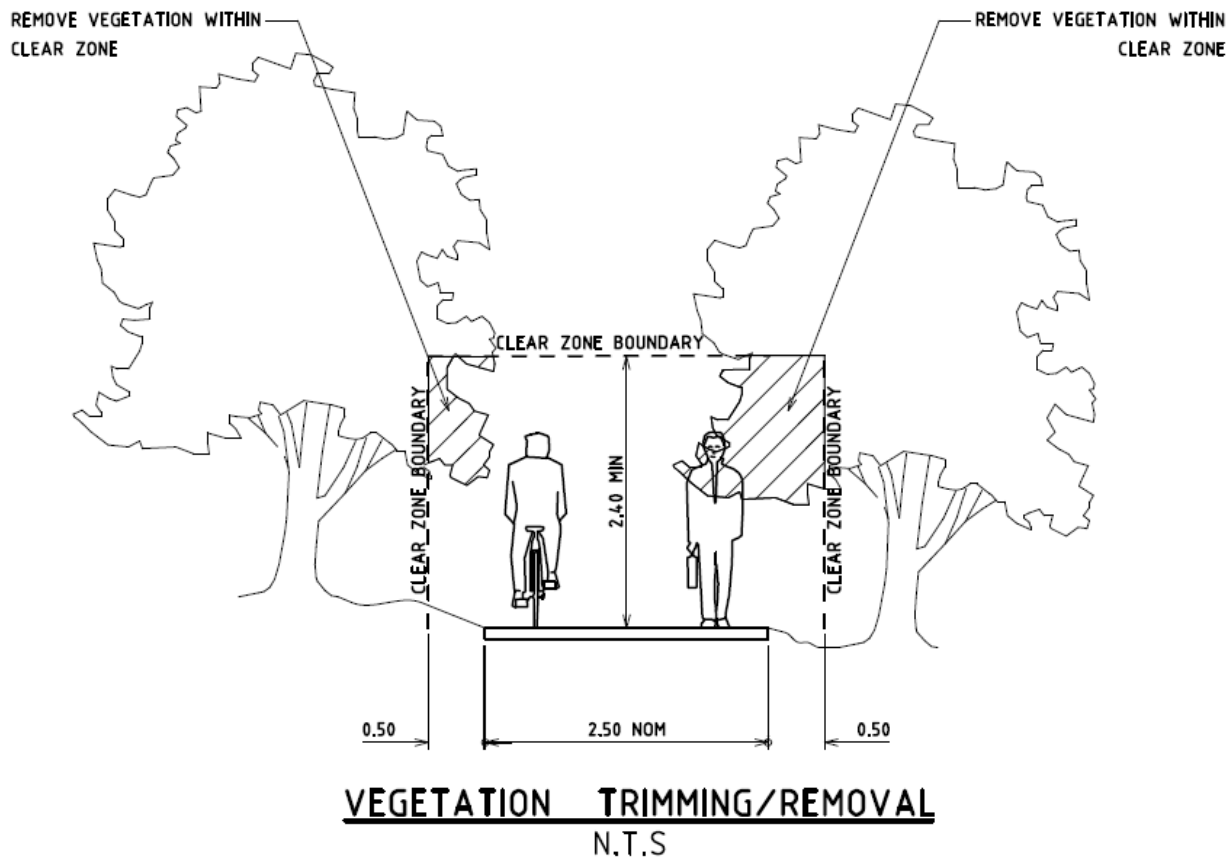


Figure 1. Vegetation clearing required for a 2.5m shared path.

The length of options 1-2 are shown in Table 1 below and a map showing the alignment of each option is shown in Appendix A.

Table 1. Length of each option in lineal metres.

Option Number	Length (Li.m)
1	1360
2	1450

The general alignment consists of undulating terrain for most of its length, with a steady 2.5-3% slope on average with some isolated steeper sections for all alignments. The general alignment begins with an elevation of approximate 24 metres AHD at the connection from Cowes Coughlan Road end, with a final elevation of approximately 5 metres AHD at Cowes-Rhyll & Coughlan Rd intersection.

There are multiple areas along the length of the southern side path option, which are subject to inundation, at these points it is recommended to construct boardwalks to minimise environmental impacts and along the northern side existing swales would require culvert crossing to be installed. Although this is to be determined in the detailed design stage. Based on preliminary investigations areas have been identified where boardwalks and culvert crossings may be required due to the width of flow and space constraints.

Following preliminary discussions, the following permits have been noted to be required, but not limited to.

- Planning Permit for Vegetation Removal
- Permit to Take Protected Flora (FFG permit)
- CHMP

Dial Before You Dig enquiries were made regarding existing services along the length of the alignments with no detectable clashes identified.

A title re-establishment survey would be required to be undertaken along the southern side length of Cowes-Rhyll Road. This is required to identify conflict points and property boundaries to define the proposed alignment more accurately within the constraints of road reserve and acquired portions of property. It was identified that the property No.130 Cowes-Rhyll Rd & No.200 Cowes-Rhyll Rd boundary has insufficient space within the road reserve for the path and will require acquiring property to implement the shared path.

A Cultural Heritage Due Diligence report will be required to be undertaken under the Aboriginal Heritage Regulation 2021. Due to the varying alignment options, it is recommended to delay the investigation until an agreed alignment has been confirmed.

A Native Vegetation reports will be required. The impact of the path may be reduced through the refinement of the alignment in the detailed design phase. With consideration on the land acquisition for the southern side path option yet to be formalised vegetation offset costs are yet to be calculated.

“Probable estimate of costs” for the general alignment of the path as per option 1 indicate an approximate construction cost of \$600 thousand, with additional supervision and provisional costs bringing the total to approximately \$702 thousand. “Probable estimate of costs” for the general alignment of the path as per option 2 is subject to proposed land acquisition agreements, costs shown are on known items only. The costs of each of the options are outlined in Table 2.

Table 2. Preliminary estimates
for path options

Option	Construction Cost	Total Cost
Option 1	\$600,000	\$702,000
Option 2	\$2,100,000	\$TBA

The 2 options were created based on desktop discussion with site visits. To determine the order of preference for each concept design option a matrix analysis method was used to evaluate the advantages and disadvantages. A number of points were considered as important for the successful implementation of the project to meet the needs of the community. Each of these criteria was weighted, with a maximum of 5 in terms of the importance of each and are shown in Table 3. When evaluating each option against the criteria a scoring system out of 5 has been adopted and is, shown in Table 4.

Table 3. Path option criteria and weighting

Criteria	Description	Weight
1.	Public Safety; Interaction between vehicular and bicycle/pedestrian traffic	5
2.	Provide a good walking and riding experience for pedestrians and cyclists	4
3.	Minimise loss to existing vegetation	4
4.	Minimise disturbance to areas where cultural heritage sites may be present	4
5.	Impacts to traffic movements & management	4

Table 4. Scoring description

Score	Description
0	Not acceptable
1	Marginally Acceptable
2	Acceptable
3	Good
4	Very Good
5	Excellent

The following section outlines each of the options and the points considered when choosing the score for each of the criteria.

Option 1:

Connects from the existing shared path along the northern side road reserve at the intersection of Redwood Dr & Cowes-Rhyll Rd continuing along the northern road reserve to join with the existing pathway on the north-western corner of Cowes-Rhyll Rd & Coghlan Rd intersection. The alignment then runs along the northern side heading east along Cowes-Rhyll Rd to finish at Coghlan Rd.

Points to consider:

- Vegetation loss unavoidable – requires more detailed investigation
- Travelling through a meandering alignment would provide a very pleasant walking/riding experience.
- Alignment is indicative only further refinements would occur during the detail investigation phase due to access issues.
- Minimised impacts to traffic movements.
- Universal access design standards.
- Consistent connection to urban development – residential side.
- Safety for all users reduced conflict points.

Path Option 1 matrix scoring is shown in Table 5 below.

Table 5. Option 1 matrix scoring

Criteria	Weighting	Raw Score	Weighted Score	Comment
1.	5	4	20	Conflict points at minor road intersections. Good sight lines on all approaches. 60kmh posted along Cowes-Rhyll Rd. Universal design standards for users. Northern side alignment provides for majority of users- residential side.
2.	4	3	12	Majority of alignment meanders through areas of vegetation with separation to motorists. Completes residential pathway circuit connectivity.
3.	4	2	8	Vegetation removal is required. Avoid & minimise vegetation impacts. The alignment can be refined further and would require a detailed biodiversity investigation.
4.	4	3	12	Yet to be evaluated, majority of alignment is undisturbed considered area of cultural significance.
5.	4	4	12	Minimal impacts, on minor roads only. Traffic management devices (signage) to inform approaching motorists.
		Total Score	68	

Option 2:

Connects from the existing Our Lady Star of the Sea Catholic School southern side road reserve at the 50m west of the intersection of Redwood Dr & Cowes-Rhyll Rd continuing along the southern road reserve to join with the existing pathway on the southwestern corner of Cowes-Rhyll Rd & Coghlan Rd intersection. The alignment then runs along the southern side heading east along Cowes-Rhyll Rd to finish at Coghlan Rd.

Points to consider:

- No property acquisition has been formally discussed with impacted property owners.
- Alignment is indicative only.
- Suggestion includes shared path alignment on School property – consideration of security, asset ownership & management
- Travelling on this alignment on southern side would provide a very pleasant walking/riding experience. However, negotiating crossing points detracts from this.
- This alignment would require vegetation removal and clearing along this path section as well as significant ground disturbance.
- Additional infrastructure requirements – multiple crossing points.
- Impacts to traffic movements & management. Increased conflict points including “outside hours” school crossing.

Path Option 2-matrix scoring is shown in Table 6 below.

Table 6. Option 2 matrix scoring

Criteria	Weighting	Raw Score	Weighted Score	Comment
1.	5	0	0	Multiple conflict points along major & minor road intersections. Good sight lines on minor road approaches, extremely poor on major road due to undulating vertical geometry along Cowes -Rhyll Rd. 60kmh posted along Cowes-Rhyll Rd. Road widening and lighting to fit pedestrian refuges to incorporate Universal design standards. Southern side alignment provides for a minority of users- residential side.
2.	4	2	8	Particularly pleasant experience for users within the south side alignment. For most of the residential side multiple major road conflict points creates a less than enjoyable experience for universal access and young families.
3.	4	3	12	Vegetation clearing required. Alignment yet to be determined
4.	4	3	12	Significant ground disturbance through boardwalk sections through undisturbed areas.
5.	4	1	4	Significant upgrade to the existing infrastructure is required. Multiple impacts along Cowes – Rhyll Rd. Traffic management

				devices (signage, linemarking, Etc.) to inform approaching motorists and path users.
		Total Score	36	

Conclusion

The proposed shared path runs along the northern road reserve Cowes – Rhyll Rd and intersects with several side streets.

The alternative path options run through (yet to be confirmed) private & and School property on the southern side of Cowes – Rhyll Rd.

Both alignments trigger Cultural Heritage Management Plan, biodiversity reports and Permit to Take Protected Flora (FFG) are governed by the same regulatory statutes. Property boundaries (south side) would require title re-establishment surveys to be conducted.

Property owners are receptive to provide (compulsory acquisition) land to facilitate the alternate alignment pathway option with consideration for the Primary school who have a properties management department (yet to be engaged).

Each of the two options have undergone a matrix analysis. Table 9 summaries the scores from the matrix analysis where a higher score is preferred. Option 1 scores the highest at 68 and Option 2 scores the least at 36. The safety of users is paramount to the path as well as a high consideration on environmental impacts, as a result Option 2 scored lower as there are major impacts to user safety & impacts on traffic movements. Option 1 scoring the highest as there are points of conflict with minor roads only, however, does present challenging environmental impacts.

Table 9. Summary of option scores

Option	Matrix Analysis Score
Option 1	68
Option 2	36

Option 1 scored lowest because the alignment along land which is disconnected from much of the Urban residential township. The alignment would present concerns on providing connectivity from a universal access, traffic safety and management perspective. Cowes – Rhyll Road vertical geometry is undulating. This presents major concerns with site lines for users and oncoming traffic additional links (gaps) between minor roads would still need to be considered if to minimise crossing (conflict) points along Cowes – Rhyll Road. The intention from the immediate rural property owners on the south side is to minimise environmental impacts which is welcome, however the compromise is community/user safety. Please note land acquisition has not been formally discussed with any of the parties concerned.

Option 2 scored highest having the lowest impact on community/user safety and provides the best solution for universal access. The location is optimal for its user experience which is safer and more accessible for universal access & families. However, this alignment does require further investigation to avoid and minimise vegetation impacts, which is demonstrated with the construction of the shared path from Thompson Ave to Redwood Dr. This option aligns with Councils connecting communities and closing gaps

Recommendations

Construct a 2.5 metre concrete shared path following the alignment as proposed on the northern road reserve and connecting to Cowes to Rhyll using Option 1. Further refining of the alignment in the detailed design phase with intent minimise vegetation losses without compromising safety.

Along with further development of the alignment, the following should be undertaken, but not limited to.

- Road Safety Audit.
- Detailed Biodiversity Assessment report.
- Cultural Heritage Due Diligence report.

Appendix A: General Alignment & Options

[Option 1](#)

[Option 2](#)

References

Bass Coast Shire Council, Bass Coast Shire aspirational network pathways plan 2016, 2016, [ED16/37785](#).

Bicycle Network, Cycling into the future 2013-23, 2012, https://www.bicyclenetwork.com.au/media/vanilla_content/files/Cycling-Strategy-Cycling-into-the-Future-2013-23.pdf.