city of Victor Harbor

ENCOUNTER BIKEWAY REALIGNMENT
HINDMARSH ROAD TO COUNCIL BOUNDARY
FOR PUBLIC CONSULTATION





VERSION	DESCRIPTION	DATE
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1.2	DRAFT FOR INFORMAL GATHERING	09/09/21
2.1	DRAFT FOR COUNCIL	20/09/21
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INTRODUCTION

The purpose of this project is to quantify and visualise available options for realigning the Encounter Bikeway from Hindmarsh Road to the Council boundary, identify connection options to Alexandrina Council that align with the broader Bikeway, and draft an assessment suitable for community consultation.

PURPOSE

This assessment of Encounter Bikeway realignment options considers key inputs such as:

- Site observations and existing conditions assessment
- Background and recent history relevant to possible realignment options
- Selected stakeholder consultation to provide key limitations, requirements, issues and opportunities for each of the possible alignment options
- Plan sets providing:
  - Aerial views of the Hindmarsh Road to Council boundary section of the Encounter bikeway
  - A summary description of alignments
  - Precedent images to show examples of proposed treatments
  - A summary cost opinion to deliver the available alignment options
  - A summary statement of opportunities and constraints/risks of proposed alignment options
  - Demonstration of access and egress points
  - Visualisation of the proposed treatments

PROJECT AREA

The project area extends westward from Hindmarsh Road to Chiton Rocks and is bounded by the Steam Ranger Rail Line to the south and Port Elliot Road to the North. Key features of the project area include:

- The Steam Ranger rail corridor
- Six sets of beach access stairs in the City of Victor Harbor
- Linear stretches of Council-owned road reserves
- Cul-de-sacs and no through roads along the coast front
- Linear sections of Crown Land
- Sand dunes and native vegetation
- Car parks at Hayward Court, Investigator carpark and Chiton Rocks Surf Club

The project area is shown on the next page.



SIX BEACH-ACCESS STAIRS ARE LOCATED ACROSS THE PROJECT AREA


PORT ELLIOT ROAD
HINDMARSH ROAD
CHITON ROCKS SURF LIFE SAVING CLUB
COUNCIL BOUNDARY
STEAMRANGER RAIL LINE
COUNCIL BOUNDARY

RECENT HISTORY

PREVIOUS STUDIES

City of Victor Harbor Bicycle Strategy (2016)

In 2016, the City of Victor Harbor developed the Victor Harbor Bicycle Strategy. Among other strategies and actions, the Strategy looked at issues and opportunities to establish the Encounter Bikeway as a premier coastal bicycle and walking experience. Key issues identified for the Encounter Bikeway between Hindmarsh Road and the Council boundary included:

- Difficult cycling conditions east of Hindmarsh River
- A 'problematic' section of the bikeway at Kleinigs Hill
- Counterintuitive use of residential streets between Kleinigs Hill (Adelaide Road) and the Council boundary

The strategy recommended Council investigate options for a new alignment of the Encounter Bikeway to avoid the footpath on Kleinigs Hill, such as:

- Traveling behind houses on Hindmarsh Road (Kleinigs Hill) to access the existing route at Hayward Court
- Using the northern side of the rail corridor, including some excavation and construction of retain walls at the Hindmarsh Road end to ensure a safe operating buffer from the railway
- Upgrading paths on the southern side of the railway, adjacent to Kleinigs Hill before switching to the northern side below Hayward Street near Olivers Reef.

It also identified key activities that would be required as part of any future alignment options, such as:

- Reclaiming public land that has been assumed by private owners
- Determining safe operational buffer standards for what is a "part-time" tourist railway
- Costing of what may be complex civil engineering works
- Protecting sensitive coastal native vegetation
- Seeking funding to support construction
- Further analysis to gain a better understanding of the legal, civil engineering and ecological issues that are involved in any decision

Feasibility Study to Improve the Encounter Bikeway Experience Between the Hindmarsh River Estuary and the City of Victor Harbor Boundary (2019)

In 2018, Council commissioned a study to examine the feasibility of rerouting the Encounter Bikeway between the Hindmarsh River Estuary and the Council Boundary. The study recommended a shared trail on the seaside of the rail corridor using boardwalks to avoid impact on sensitive coastal dunes and to separate trail users from the active rail line.

Encounter Bikeway Cost Opinions and Options (2020)

In 2020, Council commissioned further investigations into Encounter Bikeway realignment options, focussing on the section of bikeway between Hindmarsh Road and Hayward Street. The report provided five options (Options 0,1,2,2A and 3), it proposed treatments to achieve each option in situ, and provided the associated cost estimates. The options included:

- Option 0: Upgrade existing shared path on west-bound side of Hindmarsh Road and Hindmarsh Court (existing alignment).
- Option 1: Provide a shared path link between Hayward Court and Hindmarsh Road, along the rear of Hindmarsh Road properties (numbers 62-74 inclusive). This option would deliver a 3.5m wide boardwalk atop reinforced concrete piles and may require bank stabilisation and retaining works. This option will require access to undedicated Crown Land (Lot 51), negotiations with residents and the navigation of a private property that disconnects the path to Hindmarsh Road, requiring an option that extends out from the cutting.



- Option 2: Provide a 3.5m shared path on northern side of Steam Ranger rail corridor from Hindmarsh Road to the existing unsealed path at Hayward Street Access. A minimum clearance of 3 metres is required from the outside the rail and fencing to separate the path from the railway. Currently there is approximately 1.5m clearance, therefore this option would require excavation and retaining works



- Option 2A: Provide a 3.5m shared path on the southern side of the rail corridor. There is currently a 5m embankment that will need widening to allow for the shared path, fencing and clearance to the outside rail. This was expected to extend into the dunes and require vegetation removal.



- Option 3: Upgrade the existing 1.5 metre pathway on the coastal side of the railway to a 3.5 metre boardwalk.



Informal Gathering 4 May 2021

Three realignment options (plus the existing alignment) were presented to Council at the City Activation and Strategic Planning Advisory Committee (CASPAC) Informal Gathering 4 May 2021. The intent of the meeting was to obtain feedback from Council prior to seeking approval to commence community engagement on the options.

Feedback included further assessment of an alignment that takes advantage of existing road reserves between the rear of streat-facing properties and the rail corridor cutting/coast. This additional option was marked on the workshop handout in dark blue and is shown opposite. It was also raised that the existing alignment should remain a consideration as part of this project.

Feedback also highlighted a need for further consideration of elements such as:

- Risk and Safety (CPTED)
- Alignment with Alexandrina
- Safety around the train line
- The potential to include lighting on the alignments
- The need to have regular points of access and egress along the alignments

An ownership plan (Overleaf) highlights the need for Council to negotiate with the Department for Environment and Water in order to access undedicated Crown Land for some alignment options.

ENCOUNTER BIKEWAY REALIGNMENT

HINDMARSH ROAD TO INVESTIGATOR CARPARK

city of Victor Harbor

Outcomes

Provide draft concept options for the Encounter Bikeway Realignment from Hindmarsh Road to Investigator Carpark.

This project aims to create:

- ✔ Provide a safer alternative bikeway path
- ✔ Create/upgrade paths for new local recreational cycling opportunities.

This project will assist in developing the City of Victor Harbor as a visible, accessible and accountable city and will help facilitate community growth.

Options 1, 2 & 3
Refer below for closer look at the differences in Options 1, 2 & 3.

ADDITIONAL OPTION RAISED DURING THE CASPAC PRESENTATION

Seagull Ave

NORTH

PORT ELLIOT ROAD

HINDMARSH ROAD

CUDMORE ROAD

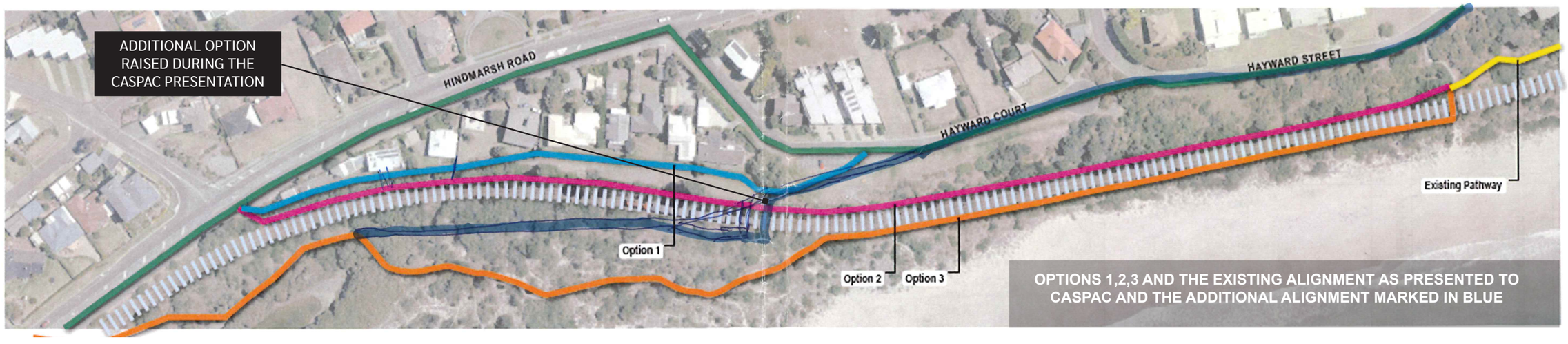
HAYWARK STREET

HAYWARD COURT

OLIVERS PARADE

Legend

- Cockle Train Railway Corridor
- Exiating bike way
- Exiating pathway
  To be upgraded as part of Option 2 & Option 3
- Option 1
  Realignment, using cantilevered boardwalk to rejoin bikeway at Hayward Court
- Option 2
  Realignment, using benching and retaining walls on Northern side of rail corridor through to reserve below Hayward Street
- Option 3
  Realignment, using existing pathways joined by a raised boardwalk between Hayward Court and Hayward Street



OPTIONS 1,2,3 AND THE EXISTING ALIGNMENT AS PRESENTED TO CASPAC AND THE ADDITIONAL ALIGNMENT MARKED IN BLUE

Bikeway Assessment, Encounter Bikeway 2021 (RAA)

As part of the RAA's Fleurieu Peninsula Regional Road Assessment an online survey was circulated to RAA members in the Fleurieu Peninsula Region. In total 1,081 responses were received from the local community between 23 November 2020 and 16 December 2020, highlighting a range of transport and mobility concerns.

The Encounter Bikeway was the most frequently nominated cycle infrastructure in the community survey, receiving 22 nominations in questions about cycling.

The Bikeway Assessment considered a range of issues and opportunities across a range of locations between Goolwa and Victor Harbor and made 19 recommendations for Alexandrina Council and the City of Victor Harbor to work towards.

Commentary relevant to the project area includes:

- In Chiton, opportunities to extend an off-road path adjacent the rail corridor should be explored. This could provide a walking and cycling link between the Sixth Avenue/Hindmarsh car park and the Dump Beach/Investigator car park.
- In the longer term, the feasibility of an off-road pathway adjacent to the rail corridor from the Dump Beach car park through to Hayward Court in McCracken should be explored which would significantly reduce the amount of on-road travel required.
- When reaching Hindmarsh Road it is not clear whether cyclists should travel on the road or the footpath, with no bikeway signage present at all. Not only is the road an uncomfortable environment for less confident cyclists (and inconsistent with the rest of the bikeway), but the footpath is also hazardous due to the uneven surface, steep downhill gradient, regular blind driveway access and narrow points past pram ramps and the bus stop.
- RAA considers this section of Hindmarsh Road and the adjacent footpath to be one of the most hazardous parts of the Encounter Bikeway and generally inappropriate for cycling. RAA recommends that an alternative route be constructed in the vicinity as a high priority.
- RAA's preference for the path alignment in McCracken and Hayborough is to construct a 1.9km (approx.) shared use path adjacent to the rail line between Hindmarsh River and the Investigator Carpark at Dump Beach, bypassing Hindmarsh Road. However RAA supports any alignment which is able to provide more off-road sections to the Encounter Bikeway and expects and encourages the State Government to contribute significantly to this project.

Recommendations of greatest relevance to the realignment of the Encounter Bikeway within the defined project area include:

- Recommendation 1: Alexandrina Council and the City of Victor Harbor work towards providing a continuous off-road path between Goolwa and Victor Harbor by investigating and prioritising future alignments for new off-road sections.
- Recommendation 7: Review and Improve placement of Sharrows in Hayborough and Chiton.
- Recommendation 8: Construct a 1.9km (approx.) shared use path adjacent to the rail line between Hindmarsh River and the Investigator Carpark at Dump Beach, bypassing Hindmarsh Road.



THE RAA RECOMMEND BYPASSING THIS SECTION OF HINDMARSH ROAD

CROWN LAND

COUNCIL RESERVE

CROWN LAND AND COUNCIL LAND ACROSS THE PROJECT AREA

STAKEHOLDER PERSPECTIVES

CONSULTATION

Following the informal gathering staff commenced/recommenced engagement with land owners, tenants and key stakeholders. Consultation was undertaken with key stakeholders to assess the feasibility/limitations of Encounter Bikeway realignment options presented to the CASPAC informal gathering. Key points are summarised in the plan (opposite)

Crown Land

Discussions with Crown Land were mostly focused on 'Lot 51' a portion of Crown Land adjacent the rear of Hindmarsh Road properties. There is a history of communication between Council and the Minister/Crown Lands that involves Council seeking the dedication of Lot 51 to Council for recreation purposes.

Crown Land advised that local residents objected to the dedication of this land to Council and its use for a public thoroughfare and that they expressed interest acquiring the land. The Minister declined the request to dedicate the land to Council, however, Council was encouraged to put forward any proposals for the best future use of the land. The department will need to be consulted on all alignments that traverse crown land, however the agency's preference is a coastal path alignment.

It is the intention of Crown Lands to see through a process with residents to purchase the Crown land, given the nature of the parcel and limited access opportunities. Council may also have the opportunity to purchase the land to facilitate an alignment outcome for the Bikeway. Based on previous assessments and interest in Lot 51, it is likely that the Minister will be asked to determine the best future use of this land if both the residents and council follow through on their proposals.

Native Vegetation Council

The Native Vegetation Council provided feedback on the Encounter Bikeway Realignment via email. Key points included:

- The coastline between Hindmarsh River and Chiton contains coastal dunes with remnant native vegetation. In particular this area has value as a corridor for fauna movement across the Encounter Bay area, and provides natural amenity for passive activities such as walking and bird watching.
- It is understood that volunteer groups have undertaken extensive weed control and replanting works in this area over many years.
- Native Vegetation Regulation 12(36) allows for the clearance of native vegetation to establish a track for public recreational use. Use of this regulation also requires that options are considered so that clearance of native vegetation is minimised as far as practicable. As such options that reduce the amount of clearance required (Option 1) would better fit this requirement, while Options 2 and especially 3 would require more extensive clearance associated with widening existing low impact walking tracks.
- An option linking direct to Hayward Ct/St would be least impact and preferable from a native vegetation perspective.

Alexandrina Council

Discussions and an onsite meeting were held with Alexandrina Council staff to confirm the likely/potential connecting points across the Council boundaries. This would influence the continuity of the riding experience for all future users. Alexandrina Council staff confirmed that a connection could be made in alignment with the Investigator Drive car park, it was also identified that road reserves span the Council boundary - both of which could provide an off-road connection between the Councils. Albatross Avenue was also identified as an on-road alignment option that provided a carriageway for cyclists to share with vehicles and pedestrians that is wider than Seagull Avenue.

SteamRanger

A key requirement/limitation to realignment options along the rail corridor is the need to include a three-metre clearance from the outside of the rail track and for a physical barrier, such as a fence, to separate the shared path from the railway. A phone interview was undertaken with SteamRanger August 2021. Key points from this discussion included:

- The need to future proof the rail tracks and maintain access to the tracks for maintenance and repair/replacement. This makes a 3m clearance either side of the rail paramount to SteamRanger
- There could be issues with sightlines that place pedestrian and cyclists at risk where track-side paths and track crossings are planned
- There are existing issues with the cutting collapsing onto the track which is influenced by stormwater erosion
- The proposed alignment between the rail line and the cutting (Option 2) is not supported by SteamRanger. While the issues are not insurmountable there is limited space and the cutting would need to be excavated to make space for a shared path while still maintaining a 3m track clearance for maintenance and emergency access. The retaining and stabilisation would be costly.
- The proposed alignment on the coastal side of the rail line (Option 3) is not supported by SteamRanger. This is on the basis of the space required to maintain a 3m clearance from the track and accommodate a fenced 3.5m boardwalk, the associated vegetation clearance and the rail crossing point.
- The existing informal path that runs along the rail corridor was identified as an access path for Trees for Life planting activities. This path runs close to the train tracks and was not recommended for further widening or formalisation
- The alignment behind the houses facing Hindmarsh Road (Option 1) was viewed most favourably as it elevates the Bikeway into the available open space above the rail line. It was recognised that development approval for 74 Hindmarsh Road could complicate this option as it consumed a direct open space link to Hindmarsh Road and introduced new steps down the cutting.

Coast and Marine Branch (DEW)

Option 2 and 3 option were of greatest interest to agency's various jurisdictions in terms of potential impact on native vegetation clearance and potential risk from coastal processes such as sand drift hazard and shoreline erosion risk.

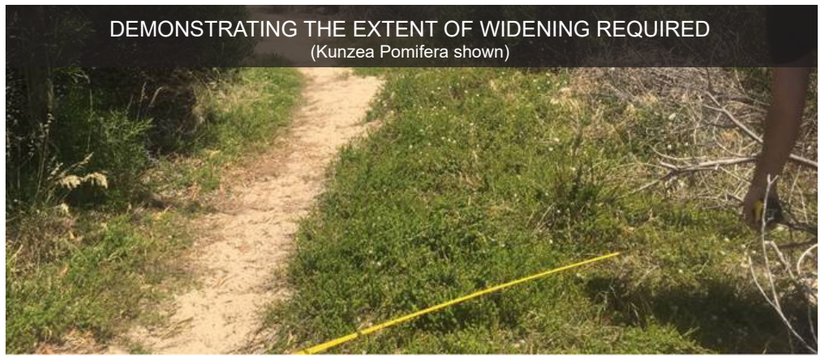
Option 3 winds through a canopy of Melaleuca Halmaturorum, which has a high coastal amenity and a feeling if immersion (shown below). There are existing narrow paths and bridges along much of the Option 3 route, however the proposal will necessitate some widening and replacement of infrastructure to form a shared path. Widening of the path will impact the native Kunzea Pomifera community. If the path was elevated this may require less clearance but may shade vegetation.

There has been significant effort and investment over many years by local Coastcare groups in the control of woody weeds and in revegetation and educational signage along the coast. These groups are likely to have knowledge of high quality or rare vegetation communities to avoid.

This coastline is at risk of shoreline retreat from sea level rise. Option 3 (seaward of the heritage railway) is obviously at the greatest risk of shoreline retreat. Due to luck in the timing of storm surge events and high tides, this section of dunes has fortunately maintained its limited buffer. However, one major storm event at high tide could erode this section of coastline and put bike path infrastructure at imminent risk (at Council's cost and priority management).

An alignment land-side of the railway may still be at risk from top down erosion and stormwater run-off risk. Heritage funds may be available to secure the life of the railway, which could preserve a land-side option from shoreline erosion.

Option 1 is the preferred alignment for the Coast and Marine Branch; linking Hayward Court to Hindmarsh Road. This option would improve the safety of users by eliminating potential conflict with driveways on Hindmarsh Road and the SteamRanger in the rail corridor, minimise vegetation clearance and reduce the risk of coastal processes.


DEMONSTRATING THE EXTENT OF WIDENING REQUIRED
(Kunzea Pomifera shown)



THE RAA AND GADBUG DO NOT SUPPORT HINDMARSH ROAD FORMING PART OF THE FUTURE ALIGNMENT FOR SAFETY AND AMENITY REASONS



LOT 51 IS CROWN LAND NOT DEDICATED TO COUNCIL AND THEREFORE CAN NOT FORM PART OF THE ENCOUNTER BIKEWAY ALIGNMENT WITHOUT COUNCIL PURCHASING OR THE CROWN DEDICATING THE LAND





ALIGNMENTS UTILISING STEAM RANGER RAIL CORRIDOR, EASEMENT AND CROSSING POINTS WILL NEED TO BE CONSULTED ON WITH CROWN AND STEAMRANGER AND TREATED TO RETAIN STEAM RANGER ACCESS AND IMPROVE BIKEWAY SAFETY



THE DUNE SYSTEM, RAIL CORRIDOR AND NATIVE VEGETATION FORM A FAUNA CORRIDOR THAT IS SENSITIVE TO DEVELOPMENT. (Melaleuca halmaturorum shown)

VISUAL ASSESSMENT

PRELIMINARY OBSERVATIONS

A site visit was undertaken on the morning of 25 August 2021 to obtain a visual assessment of the Encounter Bikeway's current conditions. The walk was conducted from Hindmarsh Road through to the Council boundary and included a visual assessment of the rail corridor, road reserves and secondary road networks - all of which make up the existing and potential realignment options.

Preliminary observations of cycling conditions and realignment constraints and opportunities include:

- Hindmarsh Road has a continuous flow of vehicle traffic. The footpath has mixed treatments and widths (due to bus indent and in-path infrastructure/furniture) and there are no trees or protection from the elements. There are a number of concealed driveways **(A)**. Students were observed using the path for journey to school.
- There is limited signage and wayfinding directing users onto the bikeway or remain on the bikeway throughout the extent of the journey. Small signage does exist but it is not obvious and is inconsistent.
- There is alienated Crown Land at the rear of properties facing Hindmarsh Road. Utilising this open space for an alignment that connects Hayward Court to Hindmarsh Road will require a design solution that overhangs the edge of the reserve.
- Access to the rail corridor from Hayward Court is very steep and only currently possible by the use of beach access stairs.
- The rail corridor at Hayward Court and Hayward Street is narrow and is likely to restrict access for the installation of a bikeway without earth works on the northern side of the rail line or vegetation clearance on the dunes on the coastal side of the rail line **(B)**. There is evidence of recent erosion to the cutting from stormwater.
- There are two single-trail access paths to the beach from the Hayward Court Stairs. One is a boardwalk that goes direct to the beach. The second is a natural/sand path that takes users to the lagoon or the beach. Access is narrow and would require clearance to cater for a shared use bikeway. Bike riders were observed using this path with off-road bikes.
- The existing Bikeway alignment provides convenient movement along the secondary road network utilising road reserves from Hayward Court to Olivers Parade via Hayward Street. **(C)**
- The new Hayward Street Beach-access stairs provide a location where the Bikeway could transition down to the rail corridor. From this location to the Council boundary the rail corridor widens out and an informal but frequently utilised path exists. **(D)**
- At the end of Hayward Street/beginning of Olivers Parade there is a road reserve between residential properties and the edge of the railway corridor cutting. This reserve could provide a continuation of the bikeway and an alternative to the indirect existing alignment that follows the street network.
- Coastal views are blocked by residential properties on sections of the on-street Bikeway where housing is on the coastal side of the road (Olivers Parade and Seagull Avenue). Properties appear to be actively under development which could increase the scale of properties between the bikeway and the coast in the future and increase the vehicle activity (heavy vehicles parking, trade vehicles etc.) on the bikeway.
- Beach access stairs are provided at regular intervals. If the rail corridor becomes the preferred Bikeway alignment, the spacing of the beach access stairs could reflect the access and egress intervals for users wanting to get on or off the Bikeway. A treatment other than/in addition to the stairs may need to be considered to improve accessibility. **(E)**
- Olivers Parade leads directly to the opening of Investigator car park. There is potential to utilise the car park to transition to a rail corridor alignment between the carpark and Alexandrina Council/ Chiton Rocks Surf Life Saving Club.
- Above Investigator car park is a road reserve that extends from First Avenue to Chiton Rocks between the edge of the rail corridor cutting and residential properties facing Seagull Avenue. This could provide a contiguous off-road alignment that provides coastal views for Bikeway users and forms a Bikeway connection to Alexandrina Council. **(F)**
- The existing alignment travels from First Avenue to Seagull Avenue. Seagull Avenue **(G)** appears to have a narrow carriageway by comparison to the parallel Albatross Avenue. There was limited vehicle movement, congestion on the road was contributed to by construction/ excavation work, and trade vehicles on site. Albatross Avenue could be considered as an alignment option connecting to Alexandrina Council.



SIGNAGE AND WAYFINDING EXAMPLE - HINDMARSH ROAD









COUNCIL BOUNDARY

COUNCIL BOUNDARY





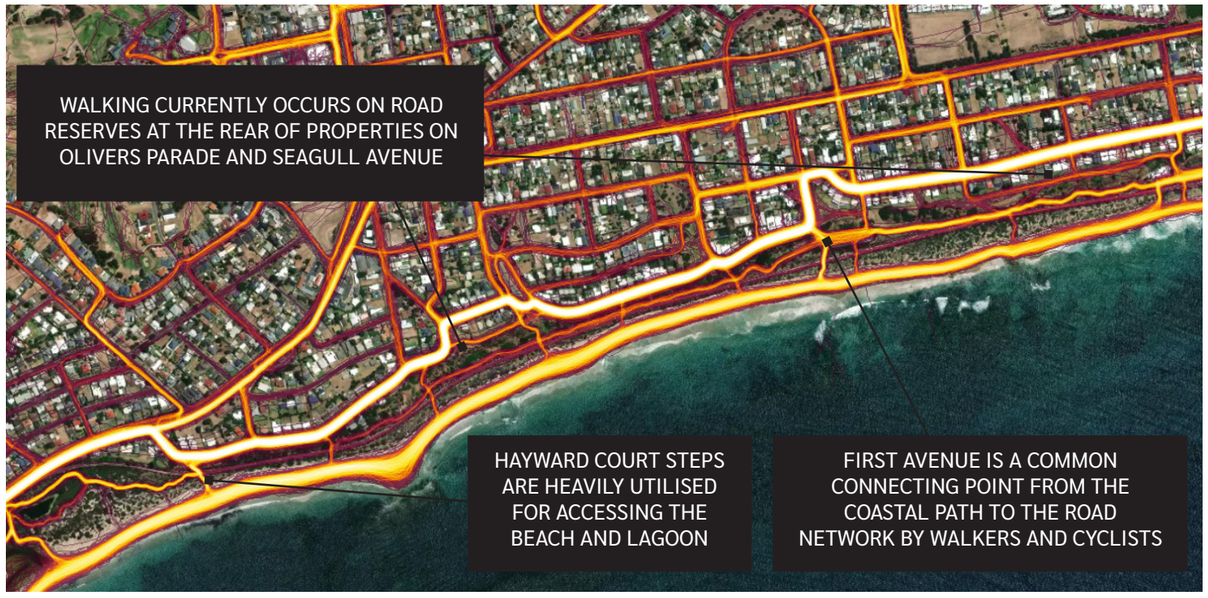


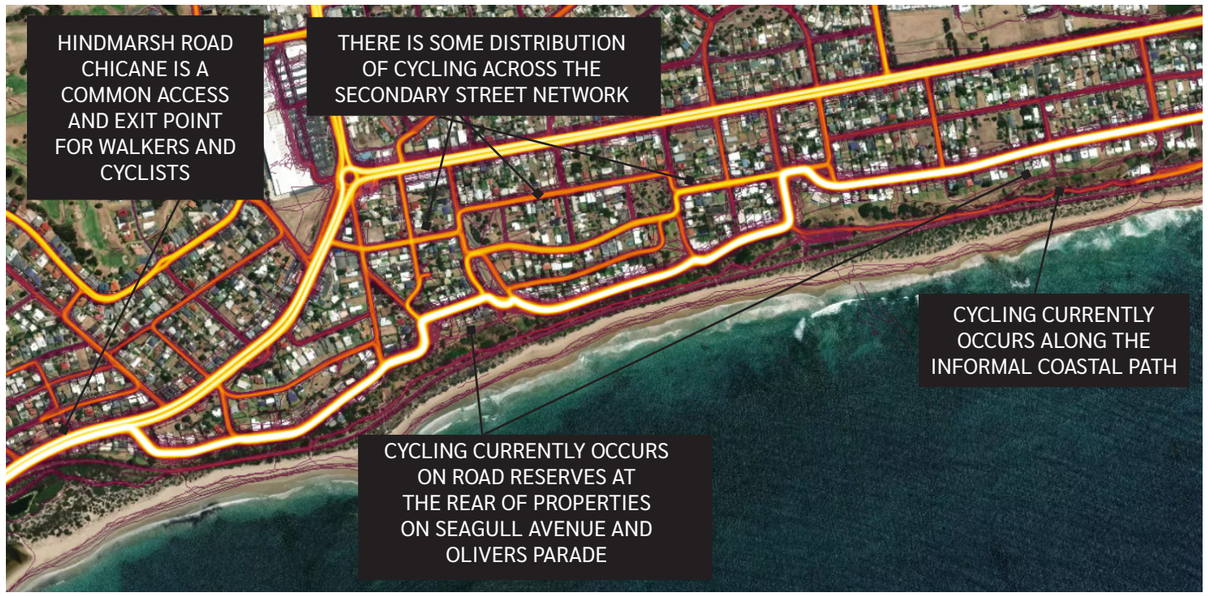
ALIGNMENT CONSIDERATIONS

Indicative Current Use

Strava is an internet based exercise tracker that allows members to record GPS data of physical activity with the resultant data being available in the form of ‘heat maps’. Strava ‘heat maps’ provide indicative intensity of activity (walking, cycling, water craft/swimming) by location. The lighter/whiter the colour, the more heavily used.

Two ‘heat maps’ have been generated for the project area to provide an indication current walking (top) and cycling (bottom) across the available path network.



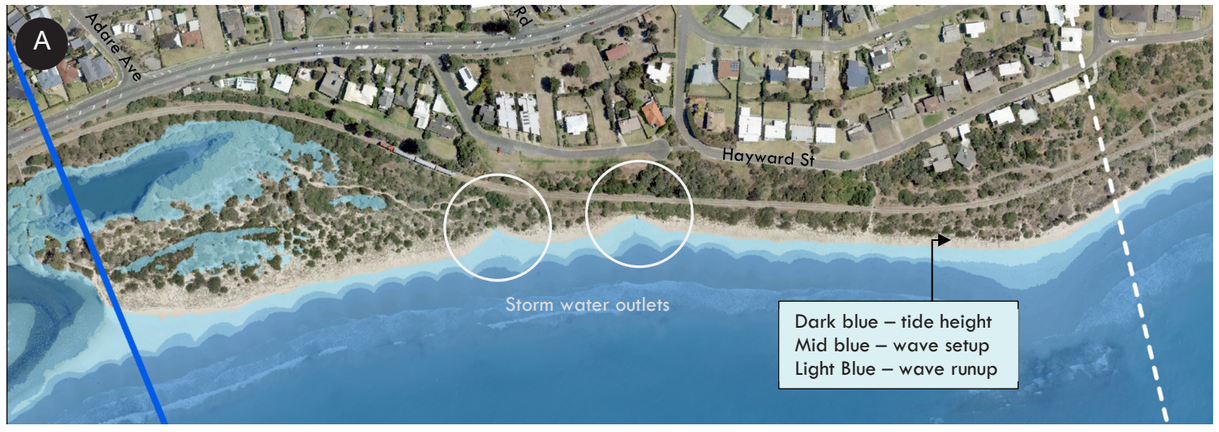


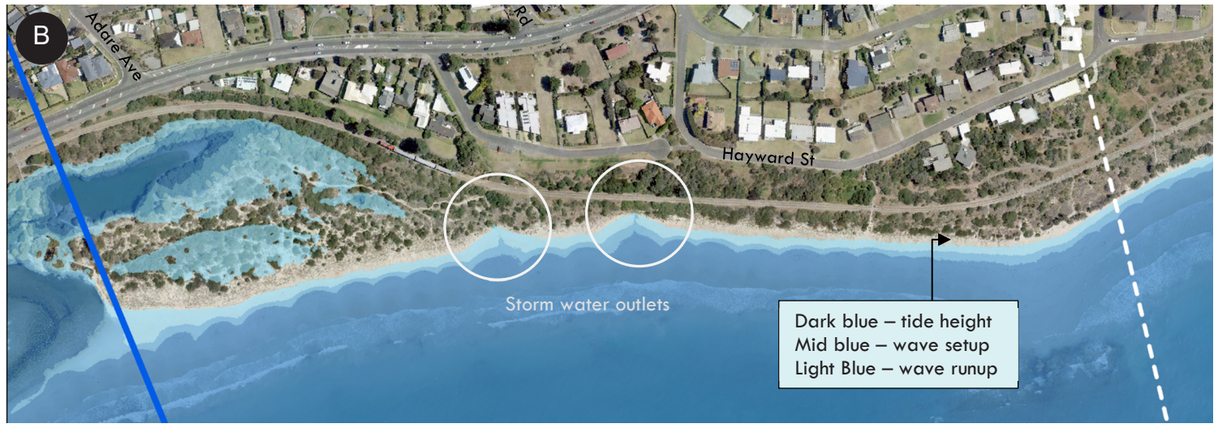
Coastal Adaptation Study and Strategy

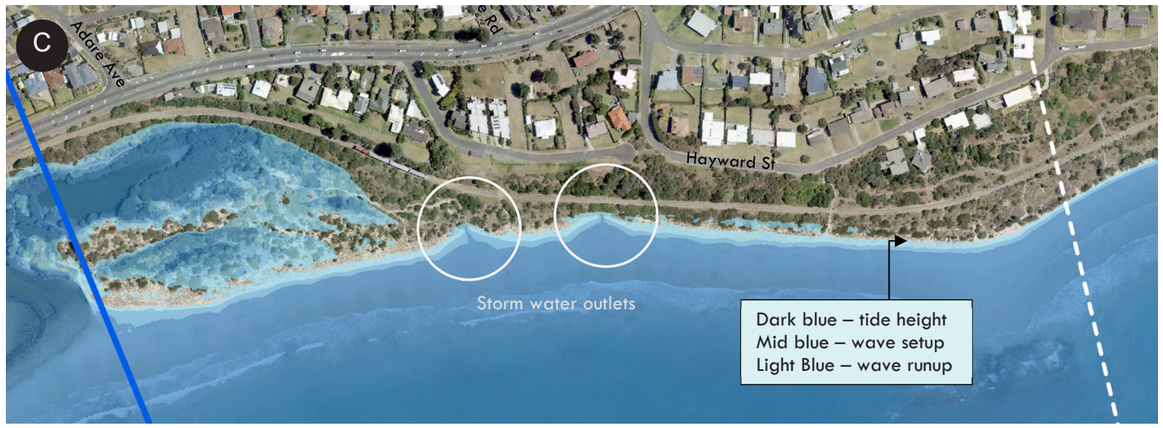
Council recently drafted a Coastal Adaptation Study and Strategy for the Victor Harbor coastline, from the Investigator Car Park to the Bluff Boat Ramp. The project looked at the potential impact of sea level rise to the coast and identified key coastal issues, vulnerabilities and management options. If seas rise as projected, then the trend for the coast line at this section of the Encounter Bikeway is expected to recede.

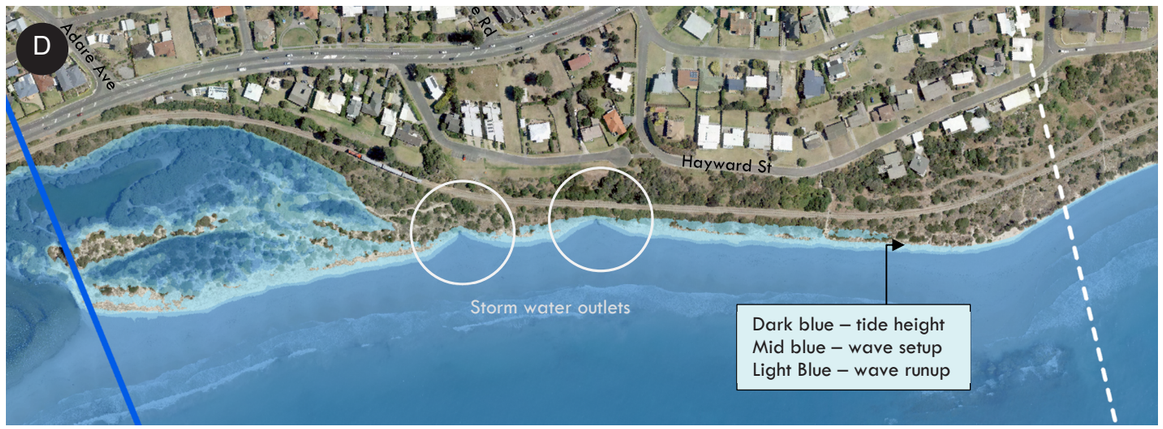
The short to mid-term strategy to protect the coast is to monitor and maintain the existing vegetated dune system. This will have implications for a bikeway alignment that traverses to the seaward side of the train line and results in vegetation clearance on the existing dune system. Sea level rise and storm impacts at this part of the coastline could have implications for any long term infrastructure constructed seaward of the train line.

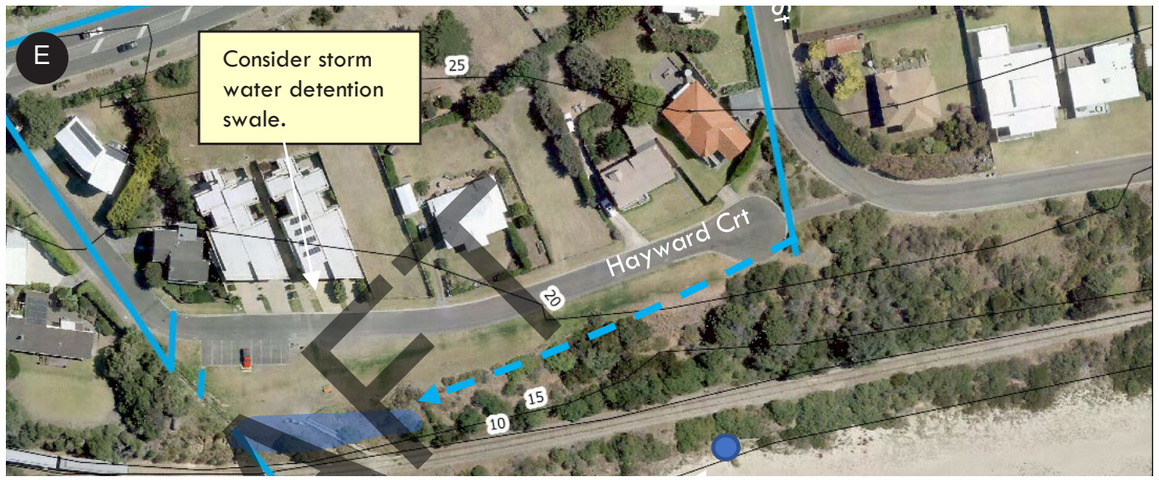
The Coastal Adaptation Report also recommends changes to stormwater management at Hayward Court and Hayward Street to minimise scouring on the beach. A recommended solution is for the slowing of stormwater flows by the use of a detention basin or swale at Hayward Court Reserve. This will need to be considered by alignment utilising the road reserves at this section of the Bikeway. The following diagrams show the routine high water for 2020 (A) and storm surge 2020 (B), routine high water 2050 (C) and storm surge 2050 (D) and the proposed location of a potential future detention basin (E).












NEW HAYWARD STREET BEACH ACCESS STAIRS

Project Area Ride Over

A project area ride over was undertaken Sunday 29 August. The purpose was to assess the feasibility of connecting the existing 'desire lines'/informal paths into a contiguous bikeway between Chiton Rocks and Hindmarsh Road. GPS recording was used to plot the journeys (shown below).

Members of the Goolwa and Districts Bicycle Users Group (GADBUG) and Coast Cruzers undertook a mountain bike ride 18 July 2021. Feedback was obtained on the existing use of the Encounter Bikeway for group rides. Feedback indicated that MTB riders use the existing informal coast path from Chiton Rocks to the new Hayward Street steps, continue on the train line between the Hayward Street steps and the Hayward Court steps, then take the existing coastal path from the Hayward Court steps to the Hindmarsh Lagoon.

A GPS record of a group ride undertaken 18 July 2021 is provided (inset).

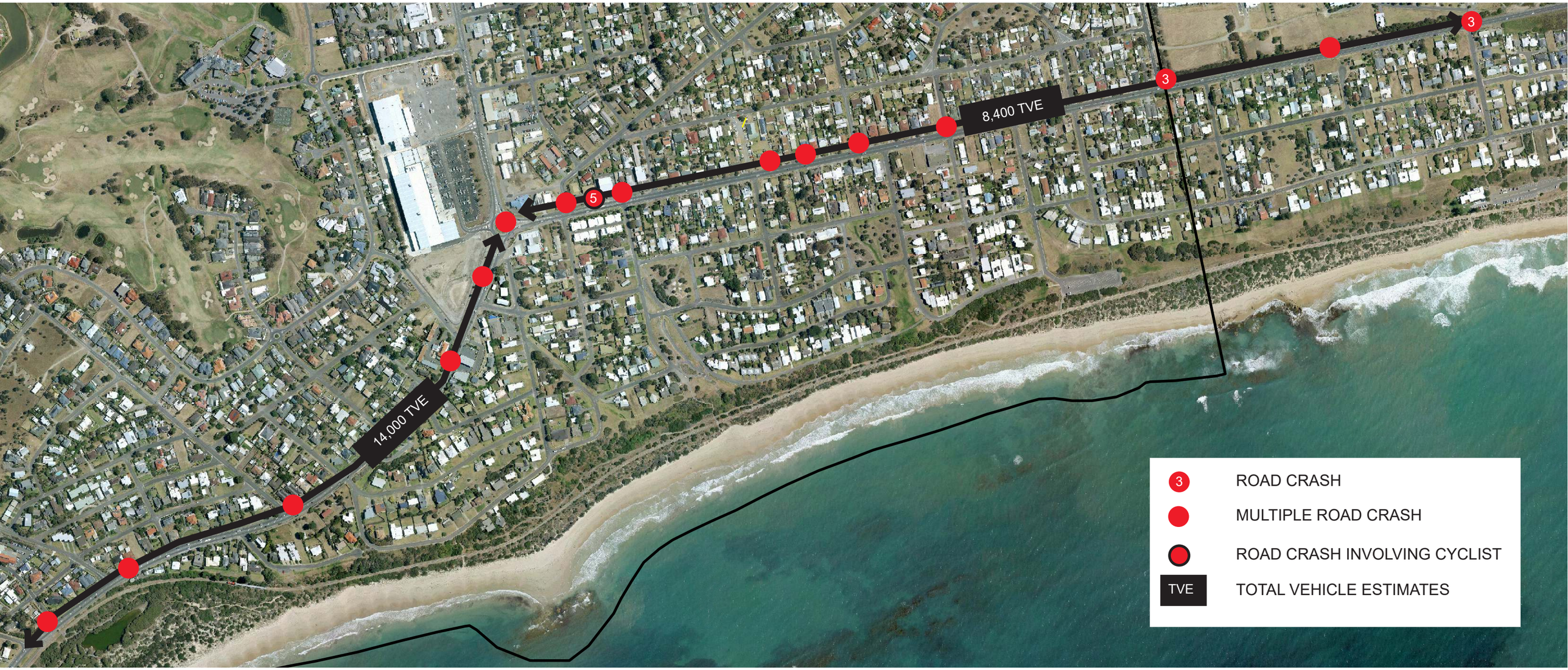


Traffic Environment

The Department for Infrastructure and Transport (DIT) keeps data on Traffic Volume Estimates (TVE) for DIT roads. This data indicates that Port Elliot Road experiences 8,400 vehicles per day and Hindmarsh Road experiences 14,000 vehicles per day.

DIT also maintain road crash data between 2016 and 2020. Based on this data, the secondary street network within the project area has not experienced road crashes. Port Elliot Road had recorded 14 road crashes during this period, including one incident involving a cyclist. Hindmarsh Road recorded five road crashes, two of which occurred on the Encounter Bikeway section of the road.

Continued use of Hindmarsh Road as part of a future Encounter Bikeway Alignment may benefit from improved cycle safety treatments/



Secondary Road Network

The existing bikeway alignment follows a series of streets along the secondary road network of Hayborough and McCracken. The secondary road network that makes up the existing alignment includes both 'through roads' and 'no through roads' of varying widths and treatments (eg. Kerbing). There are no footpaths across the entirety of the existing alignment. This means pedestrians, vehicles and cyclists share the roadway. Road widths for the existing alignment from Hindmarsh Road to Seagull Avenue are shown below.

The road widths shown below reveal narrow sections at Olivers Parade (between Millewa Tce and Rosetta St) and Seagull Avenue. Olivers Parade is a no through road that provides vehicle access to 14 properties (5 properties have rear access from Peroomba Tce) and therefore is not subject to frequent, high volume or high speed vehicles. If Olivers Parade remains part of the future Encounter Bikeway this section may need safety treatments such as improved signage and sharrows to indicate the road is shared with bicycles and that it forms part of the wider Bikeway.

Seagull Avenue is the narrowest of the 'through roads' that make up the existing Encounter Bikeway alignment in the City of Victor Harbor. If Seagull Avenue remains a part of the future Encounter Bikeway Alignment, some safety treatments may need to be introduced in consultation with Alexandrina Council.

There is an opportunity for Council to explore Albatross Avenune as an alternative option for this section of the Bikeway. It runs parallel to the existing alignment and offers a wider carriageway for mixed traffic.



Owner-Occupancy Across the Project Area

Traffic characteristics are likely to be influenced by the tenure of properties along the alignment. By interrogating data in Council's rates data base it is possible to identify owners of properties with postcodes outside of the Council area. This information provides a good indication of owner-occupancy rates across Council or for selected areas. As assessment of properties along the existing alignment identifies:

- 122 properties
- 7 properties are vacant allotments and 115 are residential properties
- 10 properties are occupied by owners
- 112 owners reside outside of the Council area

This indicates that there is an 8% owner-occupancy rate across the existing alignment that could be made up of holiday homes or holiday rentals. As a comparison, the owner occupancy rate across properties in the project area is 22% and owner occupancy for the whole of City of Victor Harbor in total is 61%. Low owner occupancy rates is likely to influence low local traffic volumes for the majority of the year and could result in peak periods of traffic during holiday periods.

Traffic Count

Alexandrina Council undertook a traffic count on Seagull Avenue for six weeks in Marsh and April 2021, taking in the Easter weekend. Traffic counters were placed at three locations between Fifth Avenue and Second Avenue (shown below). The data captured was summarised as:

- 95% speed average of 51 kilometres per hour
- Commercial vehicles ranged from 3.5% to 8.5% of total vehicles
- Average daily vehicle counts ranged from 167 to 258 vehicles.

Austroads Guide for cycling identifies that roads experiencing less than 1,000 vehicles per day in a speed environment of 50 kilometres per hour are suitable for mixed traffic (pedestrians, cyclists and cars). This identifies that Seagull Avenue is currently suitable for mixed traffic. However, given the potential volume of Bikeway users, an on-road Bikeway alignment may still be improved through cycle safety and amenity treatments.

There is potential to improve rider safety through better signange and treatments such as updated sharrows to indicate the road is a priority zone for cyclists.

In addition (although not required) Austroads does support the provision of separated bicycle facilities (such as a bicycle lane or shared use path) where space permits/there is capacity within the road reserve.

Further, the RAA recommended off-road treatments for the Encounter Bikeway in its most recent member survey on roads within the Fleurieu Region.



Site Assessment - Hindmarsh Road and Seagull Avenue

A site assessment was undertaken Friday 17 September to capture the local conditions in more detail and a technical opinion was obtained from a traffic engineer to identify:

- what improvements could be considered for Hindmarsh Road and Seagull Avenue
- What constraints could limit implementation
- What solutions could be recommended from a traffic and technical standards perspective.

The site assessment identified that:

- The Hindmarsh Road road reserve offers potential to widen the shared use path on the southern side or introduce a separated bike treatment, resulting in a narrowed carriageway. There is approximately two metres of space available on the northern side of Hindmarsh Road **(A)**.
- Seagull avenue has narrow road reserves that measure approximately 2.8 metres between established fence line/survey pegs and the kerb on both sides **(B)**.
- The northern road reserve slopes down to the road and the southern road reserve drops away from the road **(C)**.
- There are services along the northern road reserve (sewer and telecommunications) **(D)**.
- Stobie poles run the length of Seagull Avenue at between 400mm and 800mm from the kerb **(E)**.

Technical Assessment - Hindmarsh Road and Seagull Avenue

A technical assessment was obtained from a traffic consultant on the improvement opportunities available at both locations. The existing Bikeway was assessed using:

- Australian Standard 1742.9 Bicycle Facilities
- Austroads Guide to Road Design Part 6A Paths for Walking and Cycling
- Cycling Aspects of Austroads Guide
- Australian Standard 2890.1 Off-Street Car Parking (design of domestic driveways)

The Bikeway is classified under the Guide as a Recreational Path. The desirable width for a recreational path is 3.5 metres but can be reduced to 3.0 metres - noting that for the Encounter Bikeway a width of 3.5 metres should be achieved. Key comments include:

Hindmarsh Road Near Hayward Court
Improvements to the Hindmarsh Road shared path could be possible if the kerb line was altered and the carriageway was subsequently narrowed. This would require Department for Infrastructure and Transport approval.

Seagull Avenue
If the Bikeway was going to continue utilising Seagull Avenue, a shared path would need to be considered. However, any shared path would be below the minimum requirement due to the lack of space available in the road reserve (verge). In addition, any shared path would require excavating or filling the verge to create a flat surface, and rebuilding of the existing driveways to be trafficable and meet Australian Standards.

Excavating within one metre of a stobie pole is generally not allowed and will require South Australian Power Network approval. A subsequent narrow path, with approval, would potentially meander the stobie poles. To accommodate a 3.5m shared path, the cross section of the road would need to be amended without narrowing the carriageway. This would involve widening the northern verge and narrowing the southern verge. This scenario could include the removal of stobie poles on both sides of the road; undergrounding the power lines. The shared path would be constructed on the northern/high side of the road, requiring excavation of the verge and rebuilding driveways. Based on the existing gradient, driveways will need to be reshaped.

A cost effective option would be to build a 1.2m footpath against the kerb to reduce the impact on driveways and install sharrows on the road to current standards for cyclists. The footpath would be compromised by stobie poles.

Undergrounding Powerlines

Undergrounding of powerlines is assessed by the Power Line Environment Committee (PLEC). The PLEC scheme assesses applications against key eligibility criteria:

- Routes carrying high volumes of traffic (major arterial roads)
- Prominant heritage and tourism locations
- Routes of high symbolic value
- Areas of intense public activity
- Major thoroughfares through townships

Council recently considered the topic of undergrounding powerlines at its meeting 24 May 2021. It resolved at this meeting to only consider the undergrounding of powerlines where proposed works meet the PLEC scheme criteria.

If Seagull Avenue remains a part of the preferred future alignment, any undergrounding of powerlines is likely to be subject to coordinated funding from the City of Victor Harbor and Alexandrina Council and a successful assessment of the project against the PLEC scheme criteria.

Summary

The entire secondary road network is suitable for cycling as a mixed traffic environment. Traffic advice considered that Seagull Avenue is not suitable for a high-use recreational path such as the Encounter Bikeway.

Another option is for Council to designate an alternate route for the Encounter Bikeway where a 3.5m wide path can be built clear of obstructions, such as the rail corridor, road reserves along the coast, or wider road reserves such as Albatross Avenue. Ideally, thesse options will need to be done in consultation with Alexandrina Council, and these conversations have commenced.



THE HINDMARSH ROAD CROSS SECTION COULD BE REVIEWED TO WIDEN THE SHARED PATH ON THE SOUTHERN SIDE



PRIVATE SIGNAGE SIGNALLING TO CYCLISTS USING THE HINDMARSH ROAD SECTION OF THE ENCOUNTER BIKEWAY

B



THE ROAD RESERVE AVAILABLE BETWEEN ESTABLISHED FENCES AND STOBIE POLES

C



GRADIENT ON THE SOUTHERN SIDE OF SEAGULL AVENUE

E



STOBIE POLES HAVE DIFFERENT SET BACKS FROM THE KERB

D



GRADIENT AND SERVICES ON NORTHERN SIDE OF SEAGULL AVENUE

ALIGNMENT OPTIONS

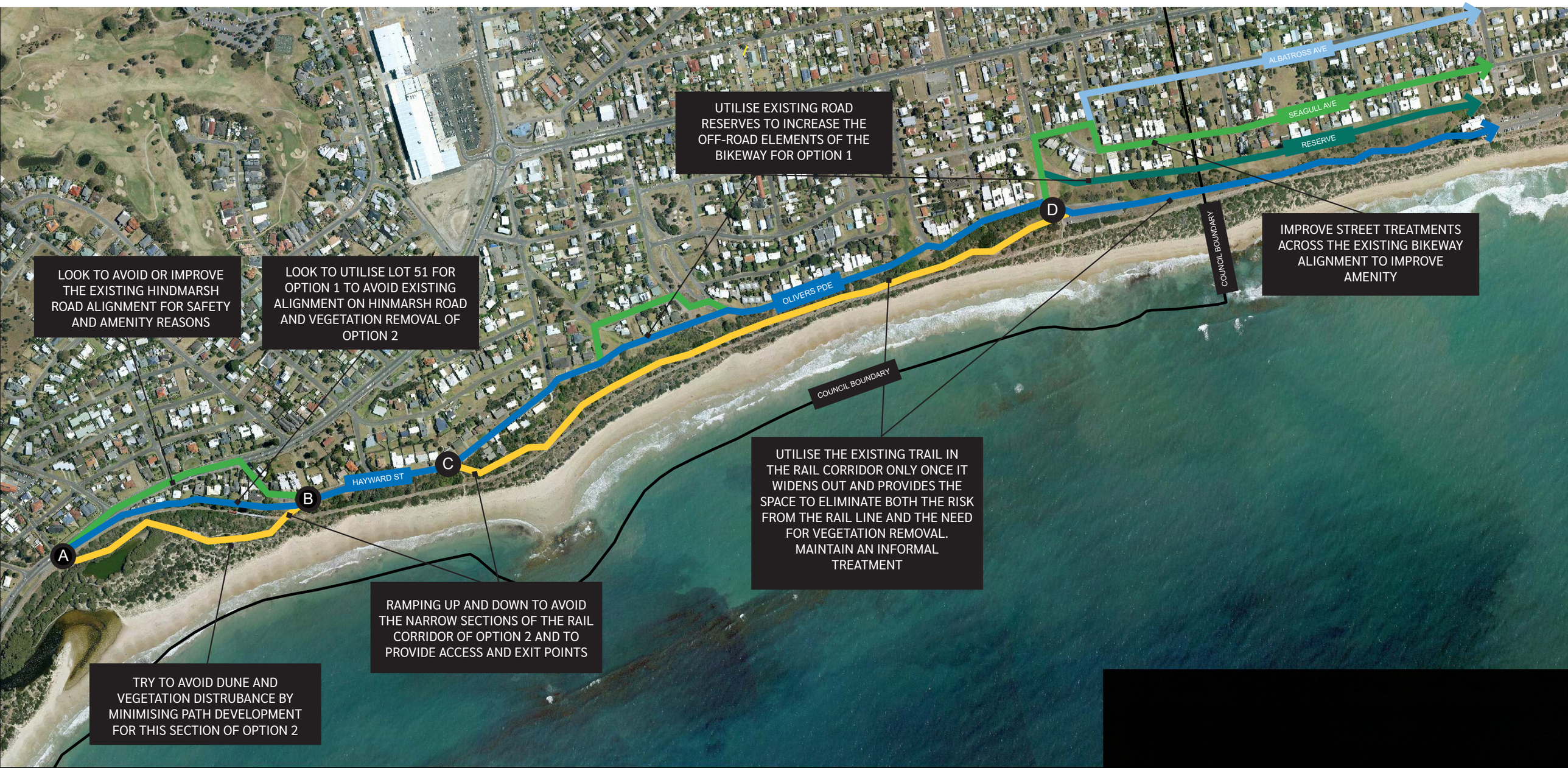
Based on recent history, stakeholder engagement and selected alignment considerations it is possible to arrive at two realignments of the existing Encounter Bikeway between Chiton Rocks and Hindmarsh Road which could in turn generate three new options for connecting the bikeway between the City of Victor Harbor and Alexandrina Council.

While two main realignment options have emerged through this process, there are multiple ‘decision points’ across the project area that could allow a combination of the two options to be implemented.

OPTION 1 ALIGNMENT
OPTION 2 ALIGNMENT
EXISTING ALIGNMENT

DECISION POINTS FOR CONSULTATION (A)

CONNECTION TO ALEXANDRINA RAIL CORRIDOR
CONNECTION TO ALEXANDRINA SEAGULL AVE
CONNECTION TO ALEXANDRINA BY RESERVE
CONNECTION TO ALEXANDRINA ALBATROSS AVE



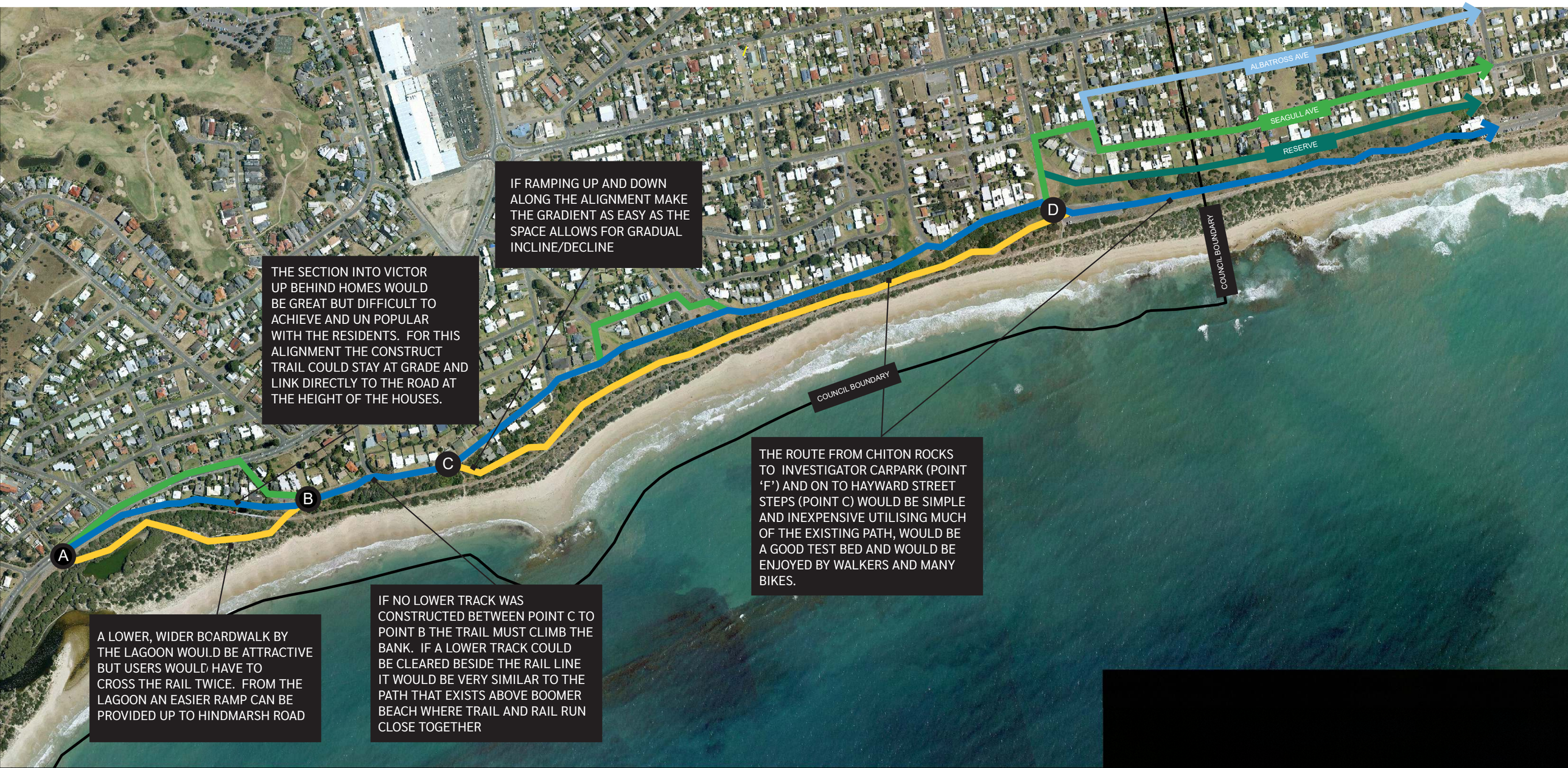
The GADBUG undertook a preview assessment of the options that emerged from the research and consultation and provided thoughts on the possible alignment from a user perspective.

Commentary is provided below.

OPTION 1 ALIGNMENT
OPTION 2 ALIGNMENT
EXISTING ALIGNMENT

DECISION POINTS FOR CONSULTATION A

CONNECTION TO ALEXANDRINA RAIL CORRIDOR
CONNECTION TO ALEXANDRINA SEAGULL AVE
CONNECTION TO ALEXANDRINA BY RESERVE
CONNECTION TO ALEXANDRINA ALBATROSS AVE



OPTION 1

Description

Option 1 stays high on top of the rail corridor cutting, utilising a combination of the coast-front secondary road network (Olivers Parade, Hayward Street and Hayward Court) and coast front road reserves between Investigator carpark and Hindmarsh Road.

Visual concepts and example treatments are shown opposite.

Opportunities and Constraints

This alignment provides a convenient and attractive option for Bikeway users as it takes advantage of coastal views for the entirety of the Bikeway between Investigator carpark and Hindmarsh Road.

It does introduce new sections across road reserves close to existing private property boundaries and it maintains on-road sections meaning users share the Bikeway with vehicles.

Order of Cost

The entirety of the Option 1 alignment from Chiton Rocks Surf Life Saving Club to Hindmarsh Road is estimated at $3.74M.

This alignment is cost effective in that it utilises the existing path within the rail corridor and the existing secondary roads and road reserves. The major cost element for this alignment is the connection between Hayward Court and Hindmarsh Road.















Visualisations of a boardwalk treatement (A) and compacted gravel treatement (B) behind houses facing Hindmarsh Road and of a boardwalk connecting Hayward Court to Hindmarsh Road (C).

Pictures depicting the type of fencing treatment (D) to minimise visual impact, compacted gravel path for the rail corridor (E) and boardwalk treatement example that could be used to connect Hayward Court to Hindmarsh Road (F).

OPTION 2

Description

Option 2 utilises the rail corridor from Investigator carpark to Hayward Street before climbing the cutting at the Hayward Street beach access steps and following coast-front secondary streets (Hayward Street and Hayward Court) before descending back to the rail corridor at the Hayward Court beach access stairs. The Bikeway then crosses the rail line and arrives at the Hindmarsh Road pedestrian chicane via the coastal dunes and Hindmarsh River Lagoon.

Visual concepts and example treatments are shown opposite.

Opportunities and Constraints

This alignment utilises the rail corridor to provide a convenient and attractive alignment that remains, for the most part, off-road. There may be a lack of surveillance of Bikeway users and there are potential concealment opportunities along the rail corridor; lighting would be an evening consideration. This alignment has two rail crossing points and, as it travels along the rail corridor, brings Bikeway users into proximity and potential conflict with trains. This option takes the Bikeway into the dune system and will result in vegetation clearance and shading, this will trigger an assessment and require approval in order to proceed.

Order of Cost

The entirety of the Option 2 alignment from Chiton Rocks Surf Club to Hindmarsh Road is estimated at $8.8M.

This cost is largely attributed to the creation of access ramps to and from the rail corridor at Hayward Street and Hayward Court and the installation of new path infrastructure between the Hayward Court beach access ramp and the Hindmarsh Road chicane.





COMPACTED GRAVEL ALONG THE RAIL CORRIDOR FROM HAYWARD STREET STAIRS



BOARD WALK FROM HAYWARD COURT STAIRS INTO THE DUNES AND HINDMARSH LAGOON



EXAMPLE OF RAMPING DOWN FROM HAYWARD COURT TO THE RAIL CORRIDOR



EXAMPLE OF SENSITIVE BOARDWALK FOR THE DUNES AND LAGOON



EXAMPLE OF COMPACTED GRAVEL PATH FOR RAIL CORRIDOR



EXAMPLE OF BOARDWALK MATERIALS FOR RAMPING



EXAMPLE OF NARROW SINGLE TRACK OPTION FOR DUNE BOARDWALK

OPTION 3 - EXISTING

Description

The existing option utilises the secondary road network for the entirety of the project area, following improved signage from Hindmarsh Road to Seagull Avenue.

Opportunities and Constraints

The secondary road network provides an existing sealed path for cyclists, making it a suitable surface for all bikes in all weather conditions, and providing regular access and exit points. This alignment is within a mixed traffic environment; vehicles, parking, bicycles and pedestrians share the roadway. It does meander and take cyclists away from a coastal experience at times. To deliver an improved experience along the existing alignment, Council will need to negotiate with the Department for Infrastructure and Transport for the amendment of Hindmarsh Road and with the South Australian Power Network for works affecting powerlines.

Order of Cost

The order of cost for this alignment is dependant on the treatments that are achievable and negotiated at key points. There are two main treatment options for the existing alignments. Both options include narrowing Hindmarsh Road to allow for path widening, improved wayfinding and sigange. Option 3.1 ($2.3M) proposed a pedestrain footpath at the back of kerb on Seagull Avenue and onroad bicycle marking. Option 3.2 ($10.0M) proposes the realignment of Seagull Avenue to provide space for an off-road shared path and the undergrounding of all powerlines.

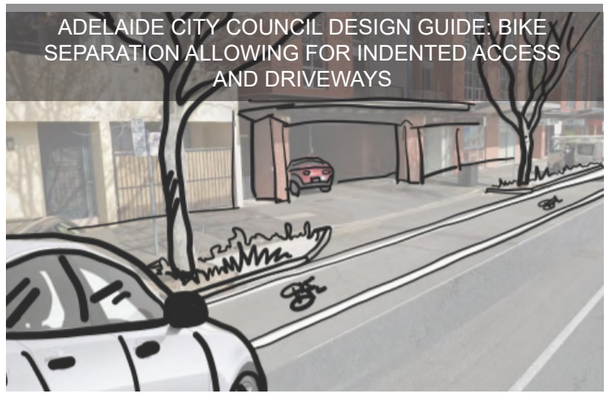




PLAN VIEW OF THE SECTION OF HINDMARSH ROAD THAT COULD BE NARROWED TO ALLOW A 3.5 M SHARED PATH ALONG THE SOUTHERN SIDE OF THE ROAD



ADELAIDE CITY COUNCIL DESIGN GUIDE: BIKE SEPARATION ALLOWING FOR INDENTED ACCESS AND DRIVEWAYS



ADELAIDE CITY COUNCIL DESIGN GUIDE: BIKE SEPARATION ALLOWING FOR INDENTED ACCESS AND DRIVEWAYS



OPTION 3.1: SEAGULL AVENUE WITH FOOTPATH AND LINE MARKING



OPTION 3.2: SEAGULL AVENUE OFF-ROAD SHARED USE PATH

SUMMARY OF OPTIONS

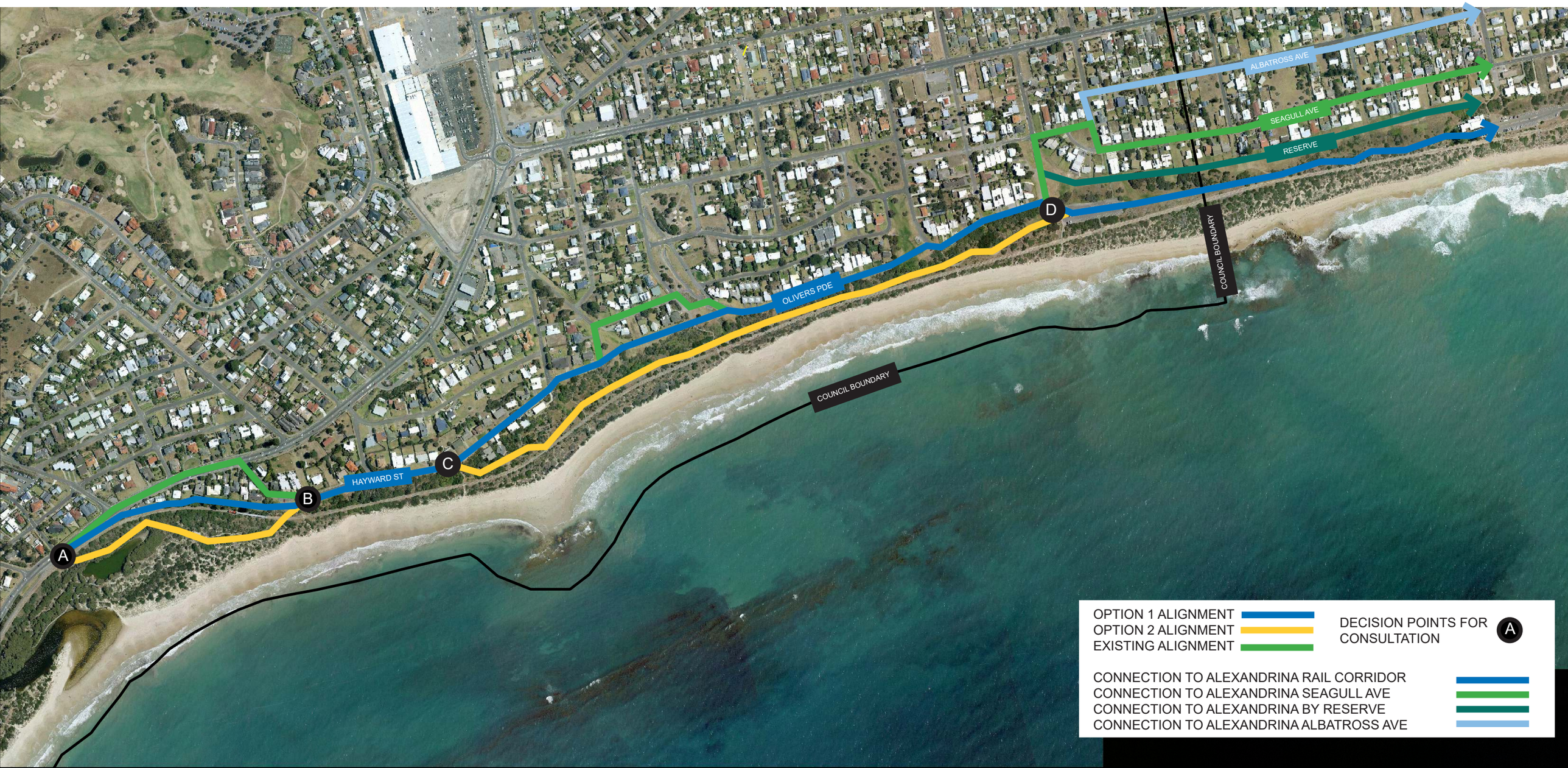
A summary of key aspects of the alignment options is provided below. The table highlights the potential difficulty of realising the alignment, the likely cost impact, and any safety or amenity elements that would contribute to or detract from a preferred alignment.

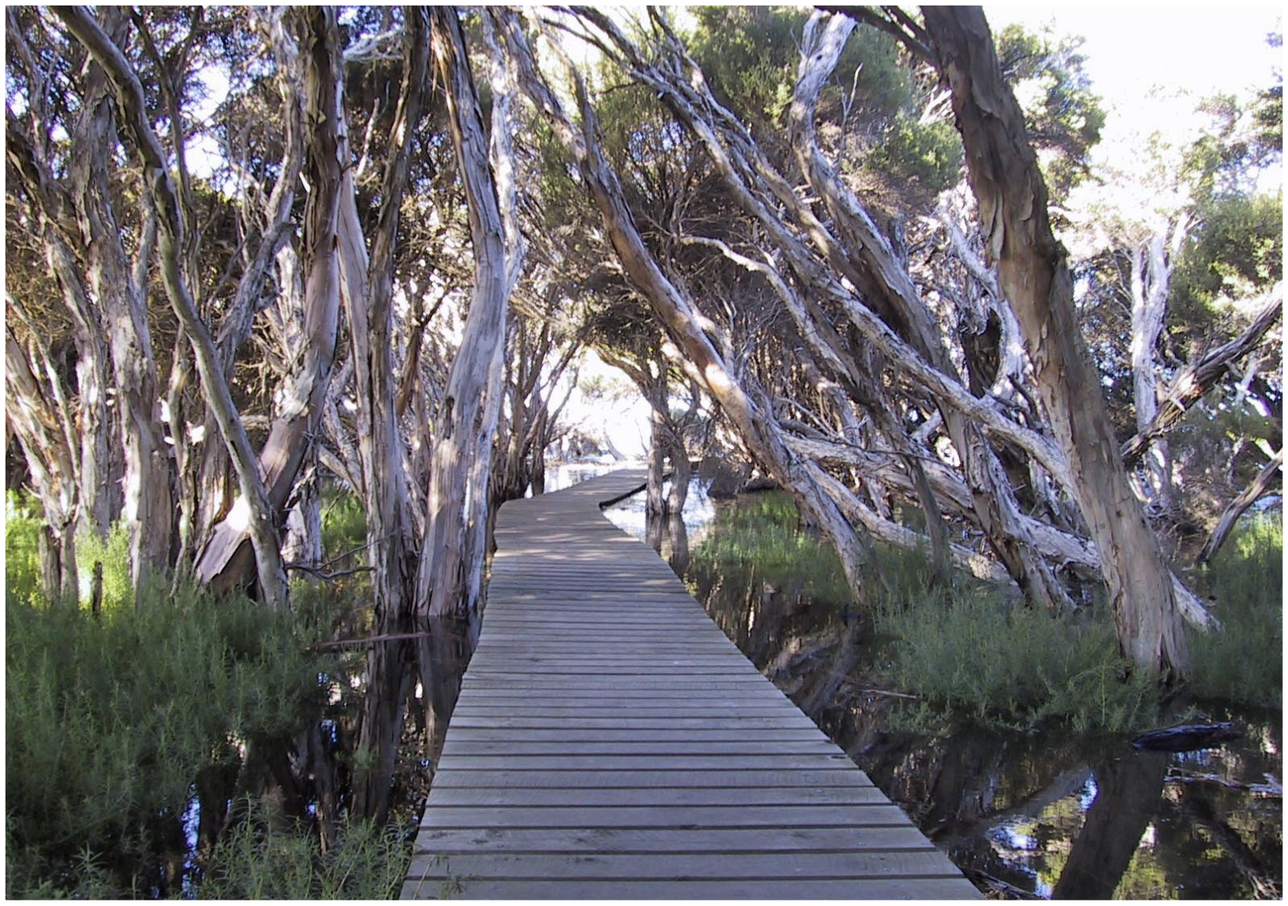
ELEMENTS	OPTION 1	OPTION 2	OPTION 3.1	OPTION 3.2
CHALLENGES	Option 1 requires access to undedicated Crown Land (Lot 51) in order to provide an alignment that avoids Hindmarsh Road. This will require approval from Crown Land or require Council to purchase the land and is likely to involve a consultative process with adjacent residents.	Option 2 will need to manage any impact it has on native vegetation along the rail corridor and the dune system near the Hindmarsh River. This is likely to require an application for vegetation removal to the Native Vegetation Council. Much of this option is on Crown Land under tenure by SteamRanger and will therefore rely on approval from Crown Land and involve consultation with SteamRanger.	Option 3.1 involves changing the Hindmarsh Road to provide a wider shared path on the southern side. This will rely on consultation with, and approval by, Department for Infrastructure and Transport. This option considers the construction of a footpath on the northern side of Seagull Avenue which will rely on consultation and matched treatment by Alexandrina Council, consultation with all residents.	Option 3.2 involves changing Hindmarsh Road to provide a wider shared path on the southern side. This will rely on consultation with, and approval by, Department for Infrastructure and Transport. This option also involves the realignment of Seagull Avenue, construction of a new path and undergrounding of powerlines. This will rely on consultation and matched treatment by Alexandrina Council, consultation with all residents and successful application to the PLEC scheme for funding support.
COST	Option 1 is cost effective in that it utilises existing roads, road reserves and paths. The major cost item is the proposed connection between Hayward Court and Hindmarsh Road at the rear of Hindmarsh Road properties.	Option 2 utilises an existing informal path along the rail corridor, this provides a cost effective approach for the majority of this alignment. The major cost item for this alignment is the proposed ramps at Hayward Court and Hayward Street.	Option 3.1 utilises the existing road network and road reserves. The major cost item for this alignment is narrowing Hindmarsh Road to provide a wider shared path. Also, the installation of a 1.2m footpath at Seagull Avenue (Cyclists will remain on-road).	Option 3.2 utilises the existing road network and road reserves. However, it has major cost items that include the reshaping of both Hindmarsh Road and Seagull Avenue, construction of new shared path and undergrounding powerlines.
SAFETY	Option 1 retains an alignment that utilises the secondary road network and therefore users will be in a mixed traffic environment including vehicles and pedestrians.	Option 2 is almost completely off-road. However, the alignment is in proximity to the SteamRanger rail line for almost the entire extent of the project area, including two crossing points. As this alignment meanders through existing vegetation there may be limited surveillance of users and there could be concealment opportunities.	Option 3.1 remains on road for the full extent of the alignment keeping users in a mixed traffic environment. This option takes in Hindmarsh Road which has significantly higher traffic volumes and concealed driveways.	Option 3.2 remains on road for the full extent of the alignment keeping users in a mixed traffic environment. This option takes in Hindmarsh Road which has significantly higher traffic volumes and concealed driveways.
AMENITY	Option 1 provides uninterrupted views of the coast and ocean. It increases the use of existing reserves and therefore provides more off-road ‘green’ sections.	Option 2 immerses users in the native vegetation, dunes and lagoon along the rail corridor. It is almost completely off-road and takes advantage of the coastal landscape.	Option 3.1 provides coastal views for the majority of the alignment. It does lose sight of the coast and become a secondary road experience at Olivers Parade and Seagull Avenue. There are limited trees along this alignment.	Option 3.2 provides coastal views for the majority of the alignment. It does lose sight of the coast and become a secondary road experience at Olivers Parade and Seagull Avenue. There are limited trees along this alignment.

NEXT STEPS

Council will be undertaking stakeholder and community consultation over October and November 2021. There will be opportunities to provide feedback online at Council's Your Say page, and/or in person at different consultation events and activities planned along the alignments.

While each option presents opportunities and challenges, it may be that people have a preference for a mixture of the options presented in this report. Therefore, while consultation is being undertaken on each of the alignments, there will be opportunities to discuss 'decision points' along the alignments. These decision points (labelled A-G and shown below) will allow stakeholders and community to target feedback to sections of alignments or suggest a mixture of alignments to achieve a desired experience of the future Encounter Bikeway.






Olivers Parade
Currents
Steep Steps
Submerged Rocks
Look for Trains

