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Point Bunbury Walking Track Options Analysis

Final Report



This report was prepared by TRC Tourism in response to Great Ocean Coast and Parks Authority's request for an analysis of realignment options for the Point Bunbury Walking Track, Apollo Bay, Victoria, 2023.

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ACKNOWLEDGEMENT

We acknowledge the Traditional Owners of the lands, waters and communities we work together with. We pay our respects to their cultures; and to their Elders – past, present and emerging.

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Executive Summary

Great Ocean Road Coast and Parks Authority (the Authority) engaged TRC Tourism to identify options for the alignment of a section of informal walking track at Point Bunbury (Apollo Bay, Victoria). The realignment intends to replace a short section of track recently closed to ensure community safety, and to protect the sensitive landscape, its associated ecological and cultural heritage values.

A realignment is necessary to provide connectivity for walkers allowing passage from a new formal access point via a boardwalk from Barham River to Point Bunbury through to the Apollo Bay Harbour Precinct.

While the scope of this study is a short (50 metre) section of now-closed trail located on the Authority-managed land, reflection is made on the existing trail extension, a further 400 metres of informal but well-used track aligned north along the perimeter of the golf course to its terminus at Breakwater Road.

Central to this options analysis is consideration of potential risks related to public safety, environmental values, Aboriginal cultural heritage, erosion and impacts of climate change. Findings included:

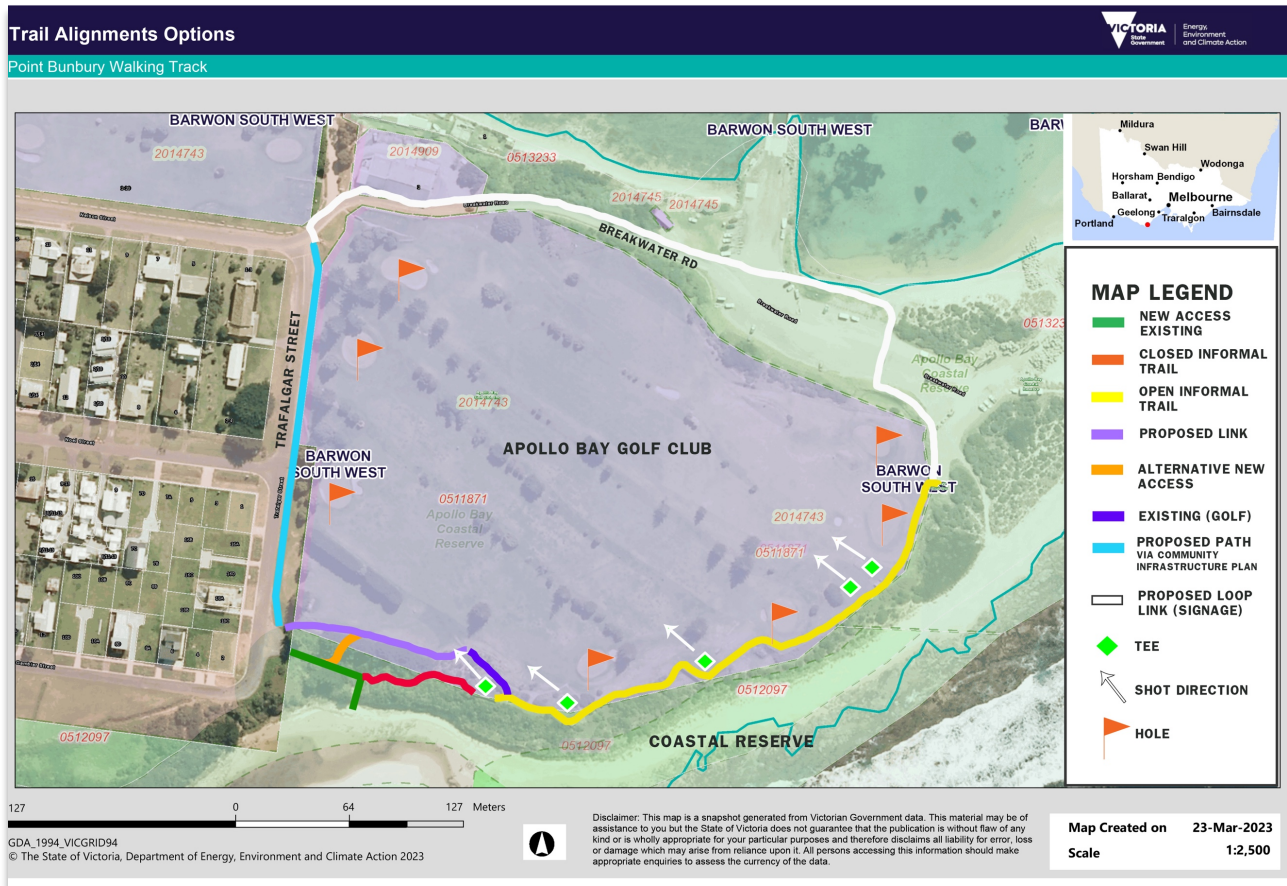
- The land parcel encompassing the now closed informal track that contributes to the whole of the Point Bunbury Walking Track is located on land with demonstrable and sensitive environmental values that prohibit continued use or formalisation of the closed section. This is in accordance with land management regulations and policies, including those described in the Marine and Coastal Policy and the Coastal Marine Management Plan.
- Aboriginal cultural heritage was a consideration in the closure of the track. We are unable to detail further cultural heritage information regarding the track closure because we recognise that cultural heritage and its associated knowledge is not ours to share. We acknowledge that Traditional Owners are keepers of their own knowledge, and we continue to support and respect their right to self-determination.

- The location of the closed track has been identified as sensitive habitat for Hooded Plovers, which are listed as 'Vulnerable' under the Advisory List of Threatened Vertebrate Fauna of Victoria (DSE 2013).
- The closed alignment is located in a primary dunes zone recognised as at risk from the impacts of climate change, including erosion, dune shift and storm surge. It is therefore inappropriate to build on primary dunes due to known instability and coastal hazard issues, and increased user risk.
- Given the above, it is recognised that rehabilitation and revitalising of the dune ecosystem via appropriate vegetation management is of highest priority, on reflection against recreation and amenity values. The latter has in part been attended to with the provision of new boardwalk and stair infrastructure improving public access to Barham Rivermouth and beach
- Community use and community feedback indicates a clear desire for a (replacement) trail alignment that follows as best possible the oceanside perimeter above waterline / not on beach proper) of Point Bunbury from Trafalgar Road to Breakwater Rd Car Park.
- There are limited viable re-alignment options given the small parcel of land encompassed in the study area and the neighbouring public golf course.
- While alternative thoroughfare from Barham Rivermouth to Breakwater Road and Apollo Bay Harbour Precinct is available via the beach proper, it is recognised that high tide, storm surges and inclement weather can make passage through this area is unsafe. It is an alternative trail for some pedestrians on some occasions but not for all occasions.
- Four trail options and a fifth 'do nothing' option were identified, with Trail Option 3 the recommended trail alignment which provides for a full loop walk experience.

It is noted that a site visit (midweek, 9am-11am) observed numerous users of the informal trail on golf course land. Some used an alternative exit route to Trafalgar Street, others continued on the now closed section of track ('No Access' signage not apparent from northern entrance).

1 Identified Trail Alignment Options

Figure 1. Trail Alignment Options: Point Bunbury Walking Track



Realignment options identified are:

OPTION 1. A short realignment that enters the golf course property parcel from the small car park adjacent to the new trail head infrastructure. This would link through to existing formal (golfer) and informal trails already sited on golf course land linking through to Breakwater Road Car Park. This would require a new trail alignment of approximately 100 metres on golf club-leased and managed land. This would satisfy connectivity requirements and current community user needs for those seeking recreational walking amenity (assuming remainder of informal trail remains). It takes notice of current informal use of a logical alternative to the now closed section.

OPTION 2. Using a non-foreshore alignment (only) along the eastern side of Trafalgar Street to link to Nelson and Breakwater Roads and the Harbour precinct (and proposed foreshore trail through to Apollo Bay). This is conducive to recommendations in the current Apollo Bay Community Infrastructure Plan (3.3.2 Township Connections). It provides a good transit / commuter connection, however it does not deliver a high quality, recreational experience with the loss of the foreshore environment and ocean view experience. It is unlikely this option alone would meet community user requirements and suggested that walkers would access the foreshore sections regardless i.e. no significant change in current user behaviour would be expected.

OPTION 3. Implementing both alignments – recommended by the consultants

(re-alignment onto golf course and contiguous link to Breakwater Rd plus Trafalgar Street roadside alignment). This would create a logical short, full loop walk experience delivering both transit/commuter and recreational walk experiences while in part delivering better connectivity to the Great Ocean Walk.

This option would require certain safety and risk-minimisation measures particular to zones of potential golfer and golf ball interactions with trail users, specifically those located to the fore and below the 17th tee.

OPTION 4. Out & Back

Maintain current alignment from northern (Breakwater) end with a terminus / no further access at 17th tee. This option requires a no thoroughfare arrangement to the south and requires walkers return to Breakwater Rd trailhead without ability to pass through to Trafalgar Street trailhead. It would not allow any access from southern Trafalgar Street end.

OPTION 5. Take no further action

in implementing a replacement alignment.

Option Considerations

Any alignment using golf course-managed (and leased) land would require agreements with Apollo Bay Golf Club Inc. on alignment, formality preference, design, preferred upgrades, financing, management, maintenance and liability concerns, with particular reference to passage through a 'live' hard ball sports environment and the perceived or real risks associated.

Any realignment would require consultation with Traditional Owners.

The alignment should integrate and connect with the proposed Foreshore Trail Alignment linking Apollo Bay Township to the Apollo Bay Harbour, as identified in the Apollo Bay Community Infrastructure Plan (3.2.9.).

Extension of the Foreshore Trail using the informal trail around Point Bunbury would also be a logical connection to other planned alignments and links to the Great Ocean Walk as identified in the Apollo Bay Community Infrastructure Plan.

Implementation of any thoroughfare should only proceed with an approved signage and wayfinding plan, inclusive of risk mitigation / safety warning signs at trailheads and at points of increased user risk.

2 Recommendations

This report recommends **Option 3** as the preferred outcome to achieve a balance of public amenity, connectivity, environmental and cultural protection, and user safety.

The report recommendation encompasses implementing a short new informal alignment in the south linked to (and retaining) an existing informal alignment on the perimeter of the golf course through to the northern terminus at Breakwater Road. This 600-metre section would then be linked to a partly on-road route and Trafalgar Street, and to the golf club boundary. The Community Infrastructure Plan proposes a new Foreshore Trail which includes Trafalgar Street, however it should be noted that Option 3 is not dependent on this proposal.

This combination of alignments would create a logical short loop walk experience, delivering both transit and recreational walk experiences while delivering connectivity to the Great Ocean Walk.

The on-course alignments are recommended in context of precedent examples of walking trails interacting with and on active golf club land, observed relative safety of walking trail user interactions with a live golfing use scenario, along with growing community desire for equitable access to public lands such as golf courses.

It is recommended that:

- sections of the trail that intersect with the golf course remain informal
- limit pruning of foliage that separates the trail from the golf course to promote greater separation of trail users from the practice fairway zone
- signage should be developed to educate and advise trail users of conditions prior to starting their walk with particular attention be given to risk mitigation at the interaction / hold point of the trail as it approaches the 17th tee from the west.
- install a netting structure at the forward lip of the 17th tee to capture down-spin ball flight while not interfering with standard preferred ball flight pathways

- signage and infrastructure such as bollards should be designed conducive to natural values and golf course visual amenity. This signage should be visually sympathetic to surrounds, sustainable in design and low impact in implementation
- all trail design modifications should be made with sustainability principles in mind
- full loop design aim to achieve a trail catering to all abilities with universal access principles applied where possible, meeting strategic aims for improving community access for all.
- Trail sections currently aligned on grass should remain so without the need for change of foot pad surfacing.
- appropriately spaced path-edge bollards be installed where appropriate to delineate the trail alignment from fairway space, along with adequate safety and directional signage
- the remainder of the existing informal trail should benefit from a wayfinding signage placement plan and implementation, including safety signs and warnings as part of user risk management and risk mitigation.
- information regarding user risk and responsibility and appropriate trail / golf course etiquette should be communicated at numerous points: digitally pre trip via council, trail guide and golf club websites and in situ via adequate and clear signage.
- any *realignment* of the existing informal trail on golf course land through to Breakwater Road is not recommended due to a lack of viable corridor. Pushing the trail further east from the Fifth hole, up onto the embankment is not viable, as it encroaches on sensitive dune environment, and trail works would be non-permissible according to policy, regulations, and priorities as per DEECA guidelines and Marine and Coastal Policy.

3 Methodology

In assessing options for a connecting trail for the Point Bunbury zone, TRC tourism undertook desktop research and analysis of all relevant strategies, planning documents and frameworks, mapping and prior findings of associated reports relevant to the study area.

A TRC Tourism consultant visited the study site to assess potential alignment options and consulted with relevant stakeholders as identified by the Authority.

A second collaborative site visit and meeting with Apollo Bay Golf Club Committee Members, the Authority representatives and local trail advisors was undertaken in May to re-assess alignment options, access issues and discuss potential solutions.

All findings and perspectives were analysed and assessed with careful reflection on appropriate legislation and regulation, strategic directions of land managers, local and state government, Eastern Maar Traditional Owners, Apollo Bay Golf Club (as adjacent land leaseholder), local community and user groups.

Further community consultation may be undertaken by the Authority in future.

Figure 2. Views south-west from 17th Tee along informal Point Bunbury Walking Track



4 Background

Access to a section of a popular informal walking track located on Point Bunbury in Apollo Bay (accessed from Trafalgar Street) was closed in September 2022 as part of works undertaken to formalise a beach access point and boardwalk from Barham River to Point Bunbury.

The land manager, the Authority, is obligated under the Marine and Coastal Policy to provide well designed and safe access to marine and coastal Crown land that minimises public safety risk, protects cultural values, protects natural values and respects and considers coastal hazards. In response to this obligation, the Authority successfully obtained a Coastal Public Access and Risk Grant to develop the safe beach access point at Point Bunbury. This application was supported by an action identified in its Coastal Marine Management Plan (CMMP) to investigate dune stability and erosion risks and access issues for the foreshore south of the Apollo Bay Golf Club.

Works were permitted under a Marine and Coastal Act 2018 consent issued by the Department of Energy, Environment and Climate Action (DEECA, formerly DELWP). The Eastern Maar Aboriginal Corporation (EMAC) was engaged during the planning stages and in obtaining the Marine and Coastal Act 2018 consent. An EMAC representative was present onsite for all construction of the new access point infrastructure (stairs and balustrade).

Signs advising of the track closure due to construction were put in place during project works.

The three considerations that informed the project works were:

- Environmental
- Public safety
- Aboriginal cultural heritage

It has been recognised that the local community highly valued the connection that the informal section of track provided for recreational walking. It has since been recognised by the Authority that it did not adequately engage community to inform them of the planning and delivery of the project works. The Authority has publicly acknowledged that it should have better informed the local community of the rationale for constructing the beach access prior to closing a section of the informal walking track and commencing works.

Post construction of the new access point infrastructure, a Barham River Beach Access Risk Assessment (January 2023) conducted by an Authority Occupational Health and Safety (OHS) representative further informed closure of the informal track to public. It identified the following:

- The environment was compromised by (informal) foot traffic
- There existed evidence of erosion, tree fall and land slip risks
- There was significant user risk via steep terrain, trip hazards, uneven ground, faulty informal infrastructure (steps)
- There had been no Authority-led maintenance to manage user risk
- There was recognition of the site being a snake habitat and associated risks
- The site's Ecological Vegetation Class was listed as depleted and requires increased protection
- The localised vegetation was identified as "generally good condition with some small excellent areas".
- The area is listed as a Biodiversity 2037 priority area, meaning it is identified as valued on a State Government level.
- The area supports important vegetation for the Hooded Plover, an Environmental Protection and Biodiversity Conservation Act 1999 and Fauna and Flora Guarantee Act 1988 listed species.
- There were inadequate site controls (i.e. signage)
- There was potential for pedestrian incursion on sensitive dune zone
- The site exhibited an initial 'Medium' risk rating
- On balance, the study alignment was deemed as an inappropriate site for footpath.

The report recommended additional risk controls such as no access, risk/hazard (i.e. trip) and snake warning signage be installed for public direction.

With the informal section now permanently closed, an options analysis of potential alternative trail connections was commissioned to understand what, if any, feasible options are available to improve connection and circulation to this formal access point.

This report seeks to provide better public amenity via establishing the feasibility of an alternative trail alignment according to environmental, cultural and community standards of sustainability.

Figure 3. New boardwalk and stairs at entrance to Barham River from Trafalgar Street.



5 Site Overview

5.1 Prior Alignment

Point Bunbury is a peninsula bounded by Barham rivermouth to the south, open beach to the east, Breakwater Road to the north and Trafalgar Road to the west. Almost the entirety of the land to the east of Trafalgar Road is occupied by the Apollo Bay Golf Course, which is under lease by Apollo Bay Golf Club Inc from lessor, Great Ocean Road Coast and Parks Authority.

The trail alignment corridor in question - where the now permanently closed trail alignment link is located - is on the southern sector presenting as a wedge of coastal dune environment separating the beach at sea level from the 8th and 17th tees, from where golfers strike towards north-west, away from the track alignment. The 7th hole is located to the east with the continuation of the informal walking trail linking up to a car park at the terminus of Breakwater Road in the north-east.

The now closed trail alignment routed to the rear of the 17th tee, before crossing over the front of the 8th tee.

The still-open continuation of the informal trail is located on leasehold land managed and operated by the Apollo Bay Golf Club. It also passes in front of one tee, behind three more and passes behind (ocean side) three golf holes.

Walkers followed the entirety of the informal trail across both the Authority and Golf Club-managed land parcels, providing some precedent of access and use of operational golf course land and associated interaction with golf club users.

Walkers continue to use the informal alignment despite the closure. There is no data available on walker movements before or since closure, however walkers observed during consultancy continued along the south-western perimeter of the golf course next to the practice fairway, to exit at the car park on Trafalgar Street.

Figure 4. Current Alignments - Point Bunbury Walking Track

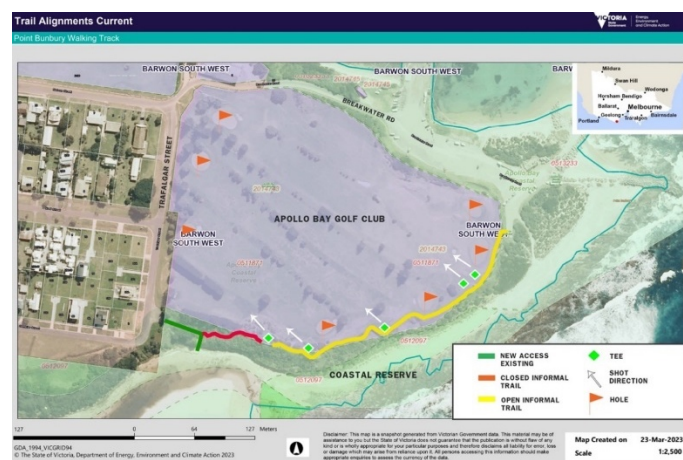
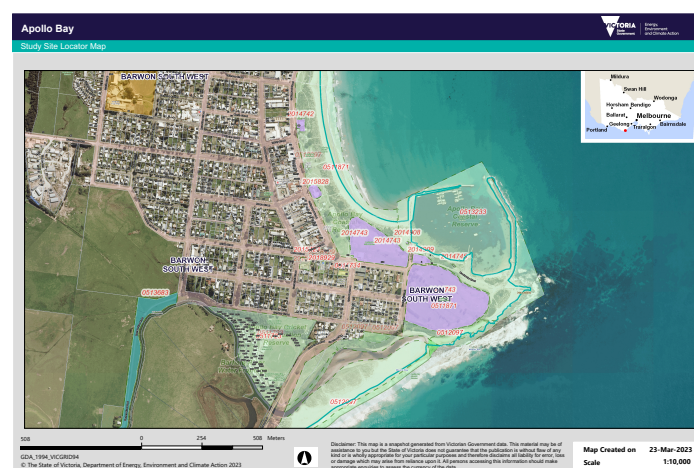


Figure 5. Point Bunbury and Apollo Bay Golf Course location in township context



6 Context

6.1 Identified Stakeholders

- Eastern Maar – Traditional Owner, Knowledge Keepers and Custodian of the land upon which the study area is sited.
- Community – local residents including users (and non-users) of the informal trail under review.
- Great Ocean Road Coast and Parks Authority – land manager of the study area and lessor of the associated land on which the Apollo Bay Golf Club (and associated informal trail) is sited.
- Colac Otway Shire Council – responsible local authority for the Shire and community in which Apollo Bay and the study area is sited.
- Apollo Bay Golf Club – lessee and operator of the Apollo Bay Golf Course sited adjacent to the study area and including land containing the informal trail that forms the critical extension of the Point Bunbury Walking Track and corridor for a proposed trail re-alignment.

6.2 Land tenure

6.2.1 Great Ocean Road Coast and Parks Authority (the Authority)

The Authority is the identified land manager of the study site land parcel under the Crown Land (Reserves) Act. The parcel is Crown Land Parcel 13B~2\PP5014 (Pnumber P081501).

6.2.2 Apollo Bay Golf Club

The Apollo Bay Golf Course is located on land parcel 13A~2\PP5014 (Pnumber P081500), located in the Colac Otway Shire.

Apollo Bay Golf Club Inc holds a lease under Section 17D Crown Land (Reserves) Act 1978 (non-retail) of the site directly adjacent to the study site. It also hosts informally the remainder of the informal trail linking to Point Bunbury and the Breakwater Road Car Park.

Land under its leasehold is of interest for an alternative trail alignment to provide connectivity and public amenity, as a replacement for the informal Pt Bunbury Track now closed.

7 Legislative and regulatory overview

The land parcel under review for the Point Bunbury Path project is managed in line with the following legislative, regulatory and planning overlays:

7.1 Victorian Marine and Coastal Act 2018

The new *Marine and Coastal Act 2018* came into effect on 1 August 2018 to establish an integrated and coordinated whole-of-government approach to protect and manage Victoria's marine and coastal environment. As defined in the Act, the marine and coastal environment includes all private and public land and waters between the outer limit of Victorian coastal water and five kilometres inland of the high-water mark of the sea. The *Marine and Coastal Act 2018* requires the development of a coastal and marine management plan (CMMP) by marine and coastal Crown land managers.

It includes objectives and guiding principles for the planning and management of the marine and coastal environment. The principles are:

- Integrated coastal zone management
- Ecosystem-based management
- Ecologically sustainable management
- Evidence-based decision-making
- Precautionary principle
- Proportionate and risk-based principle
- Adaptive management.

These principles must be applied when planning for use or development of the marine and coastal environment. Adaptation actions should be considered in the following order: non-intervention, avoid, nature based methods, accommodate, retreat and protect as defined in the Marine and Coastal Policy.

Under provisions of the *Marine and Coastal Act 2018*, all use and development on coastal Crown land requires consent of the Minister for Energy, Environment and Climate Change, or a delegate, through application to the Department of Environment, Land, Water and Planning (DELWP).

7.2 Coastal and Marine Management Plan (CMMP)

CMMP identifies statutory approvals and planning oversight for works on relevant land parcels including:

- Consent from the Minister under the *Marine and Coastal Act 2018* is required to use and develop marine and coastal Crown land.
- Consent from the Minister under the *Crown Land Reserves Act 1978* is required to use and develop Crown land. We must ensure any application for consent is consistent with federal and state policy and strategy, including the objectives and guiding principles of this CMMP.

Actions may also require approval from local government under the *Planning and Environment Act 1987*. Reserves are zoned Public Park and Recreation Zone (to provide land for recreation and open space) or Public Conservation and Resource Zone (to conserve the natural environment and processes).

The vision for the CMMP has been aligned to the *Marine and Coastal Act 2018* and updated to address current management issues and reflect contemporary community aspirations for the coast.

Supporting the vision are a set of six goals, that provide the direction and focus of management for the five-year planning period. These include:

- i. Increase Traditional Owner inclusion and community participation.
- ii. Protect and enhance natural, cultural and heritage values.
- iii. Improve coastal infrastructure, access and facilities along the coast.
- iv. Manage risks from coastal hazards and climate change.
- v. Manage use and development effectively and sustainably.
- vi. Increase awareness and knowledge of marine and coastal environments.

Further regulatory overlays include:

- *Native Title Act 1993*
- *Aboriginal Heritage Act 2006*
- *Flora and Fauna Guarantee Act 1988*
- *Planning and Environment Act 1987*
- *Crown Land Reserves Act 1978*

8 Identified Values

8.1 Environmental Values

The informal walking track sits on a primary dune, which is a sensitive ecological system that the Authority is obliged to protect under the *Marine and Coastal Act 2018* with policy guiding best practice management outcomes.

Cumulative damage through walking on and over the dune and natural landslips impact the site's ecological values. This was one of the reasons why beach access was formalised to the beach and the informal trail closed off.

Coastal dune scrub is the dominant vegetation in the area where the track is located. This Ecological Vegetation Class is listed as depleted (NatureKit – Bioregional Conservation Status) and the area is identified as a 'Biodiversity 2037 priority area'.

8.2 Fauna Values

There are several records of hooded plovers on the Victorian Biodiversity Atlas for the general area around Point Bunbury. They are listed as Vulnerable under the Department's Advisory list of threatened vertebrate fauna of Victoria (DSE 2013). The species is also listed as threatened under the Flora and Fauna Guarantee Act and as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Hooded Plovers nest on the beach using sand scrapes either directly on the beach or the frontal dune system as a nest. They are vulnerable to impact by beach users through the destruction of the nest sites. Hooded Plovers generally nest from August through to March. During this time the young and adults will be actively foraging along the beach for food.

8.3 Cultural Values

Point Bunbury is an area of cultural heritage significance. We are unable to detail further cultural heritage information regarding the track closure because we recognise that cultural heritage and its associated knowledge is not ours to share.

We acknowledge that Traditional Owners are keepers of their own knowledge, and we continue to support and respect their right to self-determination.

8.4 Heritage Values

Broadly the Point Bunbury site has some significance as a site of heritage value, being identified as the first landing site and probable site of first residency by European Apollo Bay settlers beginning in 1850, along with being the site of the Apollo Bay Company Station. It was one of the first sites to develop timber supply routes. Impacts from timber loading harbour construction, road building and golf course construction (1932) are expected to have inflicted heavy damage to any archaeological remains of human habitation on the Point.

There are no specific post-settler sites identified as impacted by the trail closure or suggested re-alignment.

8.5 Climate Change Risks

Mounts Bay (of which Point Bunbury is the northernmost section) has been the subject of numerous coastal assessments which collectively demonstrate the dynamic nature of this coastal area due to factors such as storms (causing erosion), riverine influences, the nearshore environment and sediment stock and transport etc.

This section of the coastline has been identified as having a medium risk of erosion through Coastkit, a State Government decision-making tool, and the 2017 Barwon Southwest Local Coastal Hazard Assessment (LCHA).

Short term (storm bites) erosion events have changed the morphology of the dune. This has been confirmed through analysis of the Victorian Coastal Monitoring Program (VCMP) data which illustrates movement of a section of dune between May 2022 and August 2022

This coastline is susceptible to sea level rises over various planning horizons (to 2100), which will continue to influence the site's dynamics. Together with coastal hazards, this suggests a progressive retreat of the shoreline will occur over time. The VCMP will continue to refine this analysis.

Under the local planning scheme, the area is subject to an Erosion Management Overlay (EMO) and a Land Subject to Inundation Overlay (LSIO). Estuary/riverine systems can have significant influence on the stability of coastal dune systems, as seen in Wye River, and the proximity of this site to the Barham River estuary is a consideration.

8.6 Recreational and Community Amenity Values

The alignment corridor of the Pt Bunbury Walking Track sits outside current planning priorities identified in the Apollo Bay Community Infrastructure Plan, or in any other Open Spaces, Trail, Recreation or town planning strategies or directions.

Relevant recommendations as per Apollo Bay Community Infrastructure Plan do propose a Foreshore Trail link to the existing Great Ocean Walk alignment in the south (towards Marengo), heading north east with a new foreshore alignment to the corner of Gambier and Trafalgar (location of the new Barham River and beach access point and infrastructure). The proposed new formal alignment

then routes north adjacent Trafalgar St to connect to the Apollo Bay Harbour precinct.

Continuous community use (until track closure) of the Point Bunbury Trail around the headland linking to Breakwater Rad Car Park indicates a 'missing link' preference for recreational walkers to route around the headland rather than up Trafalgar St, assumedly for best nature-based experience value. Conversely, transit users seeking most direct access to town for commuting purposes would likely use Trafalgar Street.

The golf course proper is used by members and visitors, with any proposed on-course trail alignment (incorporating the end-to-end track through to Breakwater Car Park) interacting with or adjacent to five tees and four golf holes.

9 Identified Walking Trail Alignment Option Risk Analysis

9.1 Option 1: Golf Course Boundary Alignment

Description	Rationale	Risk Identified	Risk Level	Mitigation	Recommendation
<p>Create a short realignment from the corner of the Trafalgar Street Car Park, in an easterly direction maintaining tight alignment along the perimeter of practice fairway.</p> <p>Introduce risk mitigation measures, specifically at 17th tee approach.</p> <p>Link to existing section of formal trail (hardened surface) approaching 17th.</p> <p>Link to remainder of existing informal Point Bunbury Walking Trail that maintains a perimeter alignment until exiting at Breakwater Road. No change to alignment required.</p>	<p>Provides missing link of connectivity.</p> <p>Maintains (and improves) public amenity.</p> <p>Recognises and responds to existing use and demand for access (informal).</p> <p>Low level of works and investment required.</p> <p>Maintains continuity of community use.</p> <p>Improves access equity of public lands.</p> <p>Meets golf course lease conditions (including requirement for 'Community Benefit Contribution' \$3k of funds contributed by Golf Club towards "works that are primarily for the benefit of the greater community on and around the premises").</p>	<p>Walker injury from golf ball flight</p> <p>Walker – golfer interactions (in the negative)</p> <p>Golf course proper incursion by users</p>	<p>Low</p> <p>Low</p> <p>Medium-Low</p>	<p>Maintain alignments on permitter.</p> <p>Install netting for short trail section in front of 17th tee only.</p> <p>Install horizontal 'lip' netting at front of 17th tee.</p> <p>Visually separate trail alignment from golf course proper (i.e., spaced bollards) to dissuade 'wandering'.</p> <p>Adequate trailhead and en route signage.</p> <p>'At User Risk' Warnings</p> <p>User etiquette signage at trailheads</p> <p>Golfer-directed signs informing of walker use (at increased interactions zones and golf club course entry zones).</p> <p>Pre-trip communication (digital, online)</p> <p>Communication/s directed at golfers and walkers</p>	<p>Risk warning, safety and directional signage plan and implementation to address risk mitigation.</p> <p>Specific design and netting installation measures for 17th tee risk mitigation</p> <p>Maintain permitter alignment and use existing informal alignment where possible.</p> <p>Low to no trail surfacing required.</p> <p>No realignment of existing informal trail on golf course land due to lack of permissible or appropriate space</p> <p>No realignment of existing informal trail on golf course due to permissibility and suitability</p>

9.2 Option 2: Trafalgar Street Alignment

Description	Rationale	Risk Identified	Risk Level	Mitigation	Recommendation
<p>Pathway constructed on the eastern side verge of Trafalgar Street, from car park at corner of Gambier Street and Trafalgar in the south to Breakwater Road / Nelson Street in the north.</p> <p>This pathway should link to further signed wayfinding to direct pedestrians to the Apollo Bay Harbour precinct, and further around to the terminus of Breakwater Road to link to the informal Point Bunbury Walking Track northern entrance.</p> <p>Wayfinding should be dual direction.</p>	<p>Identified as priority link trail project in the Apollo Bay Community Infrastructure Plan.</p> <p>Completes logical loop link connecting to informal Point Bunbury Walking Track.</p> <p>Provides safer transit / commuter alignment for community between southern township and Apollo Bay</p> <p>Potentially links to further Foreshore Trail planning</p> <p>Encourages walkers using Point Bunbury Walking Track to continue around in loop to return to car park trailhead instead of crossing over golf course land</p>	<p>Walker injury from golf ball flight</p> <p>Vehicle interaction</p>	<p>Low</p> <p>Low</p>	<p>Vegetation barriers in place</p> <p>Adequate trailhead and en route signage, especially at identified interaction points (i.e. Tee 8)</p> <p>Pre-trip communication (digital, online)</p> <p>Communication/s directed at golfers and walkers</p>	<p>Part / extension of preferred option, in conjunction with small upgrades of infrastructure and signage</p> <p>Risk warning, safety and directional signage plan and implementation to address risk mitigation.</p> <p>New trail surfacing required.</p> <p>Located in roadway reserve.</p> <p>Discussion with Colac Otway Shire.</p> <p>Potential to extend / connect with new trail on western side of Gambier Street, aligned north-south to connect with Great Ocean Walk – as per link preference identification in Apollo Bay Community Infrastructure Plan.</p>

9.3 Option 3: Combined Golf Course and Trafalgar Street loop alignment

Description	Rationale	Risk Identified	Risk Level	Mitigation	Recommendation
Combination of Option 1&2	<p>Creates full logical loop link connecting informal Point Bunbury Walking Track with Trafalgar Street and Breakwater Road (on road) alignments.</p> <p>Provides safer transit / commuter alignment for community between southern township and Apollo Bay</p> <p>Potentially links to further Foreshore Trail planning.</p> <p>Encourages walkers using Point Bunbury Walking Track to continue around in loop to return to car park trailhead instead of crossing over golf course land.</p>	<p>As per options 1 & 2</p> <p>Breakdown of coordination between three land managers and stakeholders</p> <p>Concept opposition to development by stakeholders or community</p>	As per options 1 & 2	<p>As per options 1 & 2</p> <p>Early, continued communication and engagement with all stakeholders and community.</p>	Preferred option. Pursue agreements and development as per options 1 & 2.

9.4 Option 4: Out and Back Trail Only

Description	Rationale	Risk Identified	Risk Level	Mitigation	Recommendation
<p>Maintain current alignment from northern (Breakwater) end with a terminus / no further access at 17th tee.</p> <p>Requires a no thoroughfare arrangement to the south and requires walkers return to Breakwater Rd trailhead without ability to pass through to Trafalgar Street trailhead. It would not allow any access from southern Trafalgar Street end.)</p>	<p>Maintains public amenity access to most but not all of the current informal Pt Bunbury Walking Trail.</p> <p>No negative impacts on environmental, cultural and heritage values of site.</p> <p>Requires no significant upgrades or infrastructure beyond trail terminus / no entry signage.</p> <p>Low financial implication.</p> <p>Eliminates user risk of 17th tee interaction zone.</p>	Community frustration / dissatisfaction at lack of connectivity / no through trail	High	<p>Confirm other course of action if possible</p> <p>Engage in early, regular and consistent communication with all stakeholders and community</p>	Not a recommended option
		Restricts community amenity	High		
		Fails to deliver on multiple strategic community planning and project objectives	High		
		Likely causes community angst and protest at loss of amenity	High		
		Users continue to ignore no thoroughfare past 17 th tee presenting uncontrolled risk	High		
		Prompts potential agitation and confrontation between users and those charged with policing access restriction			

9.5 Option 5: No realignment implemented

Description	Rationale	Risk Identified	Risk Level	Mitigation	Recommendation
Maintain closure of informal trail.	No negative impacts on environmental, cultural and heritage values of site. Allows for site regeneration No to little financial implication Eliminates user risk	Community frustration at lack of action	High	Confirm other course of action if possible	Not a recommended option
Do not pursue implementation of alternative alignment/s.		Restricts community amenity	High	Engage in early, regular and consistent communication with all stakeholders and community	
Signage advises of permanent no access zone (with indicative reasoning).		Fails to deliver on multiple strategic community planning and project objectives	High		
Pursue regeneration of site.		Likely causes community angst and protest at further loss of amenity if closing off informal trail on golf course land	High		
lose off informal extension alignment on golf course permitter (no access signage)		Prompts potential agitation and confrontation between users and those charged with policing access restriction	High		

10 Case Study – Golf Course-Walking Track interactions

10.1 Risk

A precedent review of walking or shared use trails that intersect with golf courses in the United States¹ indicated that despite high levels of perceived risk during design and implementation of trail phase(s), there exists low levels of actual risk and next to no incidents recorded of trail users being injured or otherwise by golf balls in play. Records of injury by golf balls (or clubs) to persons on golf courses note extremely low likelihood of injury, minor injury where cases recorded, low level of litigation and notably all incidences were to golf players, rather than other members of the public.

Most case studies recorded zero record of incidents between trail users and golf balls or carts. One site (of 25 total in review) recorded one (non-fatal) incident in 16 years (The Washington & Old Dominion Trail, Northern Virginia).

Other studies conclude that the risk of serious injury from golf ball flight is low due to the slowed flight speed by time of impact and the risk of fatality inconsequentially low, noting that other golf players on course are exposed to greater risks of ball collision based on increased exposure time and increased intersection with ball flight paths compared to a public access trail user.

Risk mitigation generally includes signage and wayfinding to inform and direct trail users, including safety warning, own risk agreement, caution and specific 'stop and observe' (or similar) signage at identified hold points assessed as higher risk. Some golf courses included safety infrastructure such as chain fence at various heights (and some with 'J' curves above head height pending context of pathway interaction with flight zones).

10.2 Community Access and Amenity

In Victoria, consultation on the future shared use of the Northcote Public Golf Course report in 2022² found that spatially sharing open space of a golf course via integration of walking and/or shared use trails was popular with the community: "Footpaths and cycling tracks should be located at the perimeter, or through the golf course whilst maintaining the site as a golf course. This allows access to other green spaces and maintain uninterrupted golfing activity."

The Northcote Community & Golf Hub will now include a walking trail on the perimeter (but within the golf course lands).

A study³ in Toronto, Canada, of municipal golf courses found that Improving trail access and connectivity, tree planting, and natural area restoration were the three preliminary opportunities that most resonated with community. Across five municipal golf courses 'improved (public) trail access' was a top three consideration for all.

It also found that interest in public space has increased with an emphasis on equitable access. Debate and discussion on whether golf course lands are publicly accessible or equitably accessible occurred throughout the engagement process of the Project. As publicly owned lands, the city-operated golf courses were seen by a significant proportion of the community as an inequitable allocation of public space due to the requirement to pay for entry and cost of equipment or rentals. In the case of Apollo Bay and Point Bunbury, a similar community sentiment may be offset by allocation of an on-course trail alignment that delivers connectivity to and between key points of public interest and access to the foreshore recreation zone.

¹ <https://www.americantrails.org/resources/golf-course-bike-trails-examples-from-several-sources-nationwide>

² <https://yoursay.darebin.vic.gov.au/northcotegolfcourse>

³ <https://www.toronto.ca/legdocs/mmis/2022/ie/bgrd/backgroundfile-174602.pdf>

10.3 Examples of golf courses with public walking or shared use trail interactions



Figure 6. Southern entrance to golf course intersection track of Camperdown to Timboon Rail Trail, Victoria

Example: Cobden Golf Course

The Camperdown to Timboon (Crater to Coast) Rail Trail directly dissects the golf course passing between fairways, tees and greens. The Cobden Golf Club maintains the track to ensure the grass is mown to indicate the trail path. A bypass bridge on the golf course was replaced in February 2020.

There are signs in place to guide the trail users along the course.

The alignment and permissibility includes public use of toilets managed by the golf club.

<https://www.railtrails.org.au/trails/camperdown-to-timboon/>
<https://www.corangamite.vic.gov.au/files/assets/public/documents/have-your-say/draft-camperdown-timboon-rail-trail-management-plan.pdf>

Example: Heritage Golf Course Loop

12.2-km loop trail in and around the St John Golf Course and Heritage Golf Club, located in Wonga Park on the edge of greater Melbourne, Victoria.

<https://www.alltrails.com/explore/trail/australia/victoria/heritage-golf-course-track?mobileMap=false&ref=sidebar-static-map>

Example: Dorset Recreation Trail

A bushy track looping around the attractive Dorset Public Golf Course and expansive playing fields.

<https://walkingmaps.com.au/walk/5247>

10.4 Examples of golf course safety netting

The website / image references below illustrate examples of netting used in golf course and trail context.

Examples shown give indication of the materials and design that may be used for primary separation fencing below the 17th tee. Simple, custom netting and engineering solutions would be required for recommended netting attached to the front wall of the 17th tee.



Figure 7. 22mm Golf Impact Ball Stop Netting
SOURCE: www.networldsports.com.au



Figure 8. Meadowbrook Golf Course
SOURCE: www.gabba.com.au/golf-netting-and-surfacing/



Figure 9. Murwillumbah Golf Course
SOURCE: www.cclsafetyfencing.com.au/projects/



Figure 10. Unknown golf course
SOURCE: www.networldsports.com.au

11 Summary

The study found that the closure of the trail accessing the Point Bunbury Walking Trail from the south recognises and responds to the six categories of adaptation actions from the Marine and Coastal Policy 2020: Non-intervention, Avoid, Nature-based protection, Accommodate, Retreat and Protect.

The study identifies the project land parcel's natural and existing built assets as being vulnerable to climate change and thus a priority risk site. The retreated position of the preferred alignment meets the aim of the Coastal and Marine Management Plan's implementation of preferred adaption response (Strategic Action 12).

Upon further investigation into applicable regulations pertaining to the land parcel traversed by the now-closed informal trail, the Authority confirms that formalisation and/or remedial upgrade of that alignment would not be permissible according to relevant land management regulations.

Community use of the informal Point Bunbury Walking Track was and remains significant, although no trail use count or data exists, and use is based on observation. Feedback received from community indicated a demand for continued access to the track and a solution to the now missing link created as a result of the trail closure.

There exists a logical realignment, recommended of approximately 100 metres from the corner of the Trafalgar Street Car Park, aligned alongside the existing practise fairway, to link to an existing (golfer-use) hard trail that rises to the 17th tee. At this point, the alignment re-joins with the informal Point Bunbury Walking Track that remains in use. It is recommended that no alteration be made to the alignment of this onward section.

It is suggested that the new link remain an informal pathway, matching current status of the remainder of the Point Bunbury Walking Track.

Access from the Trafalgar Street end can be considered from two entry points:

1. Directly from Trafalgar Street Car Park. This takes users to a slightly longer section open to practice fairway golf play; or
2. From a newly constructed trail diverting from the new boardwalk section through / underneath the conifer forest. This delivers slightly increased safety as users approach the trail alongside practice fairway looking directly at any golf in play and able to visually assess safety to proceed. It is also an improved 'user experience' given the short 'forest walk' section. The alignment would be over already disturbed ground.

Particular attention should be paid to the approach of the trail (currently in place and used) to the 17th tee. User risk mitigation measures should be implemented via the installation of physical barriers, including front of tee netting, side of trail netting fence, potential levelling of 17th tee to create natural ball flight barrier, new gate at logical safety hold point. See Appendix for details.

Further risk mitigation measures would be implemented for the length of the trail by way of a signage and communication strategy, with use of pre-trip channels (website channels) and in situ (trailhead signage, wayfinding, user risk signage and appropriate warnings).

Upon consideration and study, there exists no evidence that walking track intersection with and on golf courses and associated pedestrian use presents significantly increased risk to trail users caveated by implemented risk mitigation measures (signage, communication etc). This recognises the current and ongoing access and amenity already enjoyed by community and informally permitted by the Apollo Bay Golf Club, setting a precedent for continued trail use.

It is recognised that even considering instances of golf ball flight and collision, likelihood of serious injury or death is low. Whilst there have been recorded instances of death from golf ball strike, none are recorded as being users of golf course interaction walking trails (most if not all are golfers).

It is therefore assessed that the continuation of the informal Point Bunbury Walking Track for public amenity and enjoyment remain in place and that the preferred realignment be considered for development to the agreement of all parties.

12 Recommended Works

On the assumption that the new trail alignment as recommended is accepted as viable by all stakeholders, it is further recommended that the 17th hole undergo additional safety measure development to mitigate risk posed by potential golf ball flight collision with trail users approaching from the west (Trafalgar Street end).

Suggested mitigations include:

1. Tee off netting installed

Golf Course standard netting engineered and installed at approximately 100-degrees to vertical (10 degrees to level) and extended approximately 40-50cm out from the end of the retaining wall of the tee further increases barrier protection against ball flight in top spin from impacting trail user risk zone.

2. Trail gate installation

Low gate installed just prior to trail beginning eastern direction ascent towards tee, paired with safety warning signage alerting trail user of tee off in play, and directing trail user to hold, assess and proceed with caution. This mechanism forces trail users to pause and assess.

3. Secondary golf netting installed (potential)

A second golf netting fence of height to be determined installed along foliage line below tee, adjacent to and on eastern side of trail. This is added precaution against ball flight passing through thick foliage from errant tee off.

4. Installation of bollards

Bollards – potentially linked by low roping – aligned on practice fairway (west and north)side of proposed new alignment to keep trail users hard against (trimmed back) conifer plantation

5. Conifer forest trimming

Trimming of conifer forest limbs to allow alignment of trail west-east as tight against practice fairway southern fringe / conifer forest border as possible, limiting incursion onto practice fairway.

6. Safety and directional signage

Installed at trailhead (warning, use at own risk) and en route along trail where appropriate, particularly approaching 17th tee.

Figure 11. View from 17th tee showing strike risk zone





Figure 12. 17th Tee – trail realignments and mitigation measures

