
WALKWAY BETWEEN UPPER AND LOWER TATHRA OPTIONS STUDY

Acknowledgment of Country

The land on which we live and work is Aboriginal land. Aboriginal people have lived on the Australian continent for at least 65,000 years. Non-Aboriginal people have lived in Australia for just 230 years.

As a practice, we are working towards an understanding of that fact, and how it might inform our relationship to the land, its original people, and the work that we do. We acknowledge that we have a long way to go. Our studios are located on Gadigal, Ngunnawal and Whadjuk country in Sydney, Canberra and Perth respectively.



CLIENT
Bega Valley Shire Council

PROJECT TEAM

Project Lead | Civil | Traffic and Transport: WSP
Landscape Architecture: PLACE Laboratory
Quantity Surveyor: Alex Feng

DOCUMENT CONTROL

Revision	Description	Date of Issue
A	DRAFT ISSUE FOR CO-ORDINATION	27.07.2022
B	DRAFT ISSUE FOR REVIEW	29.07.2022
C	ISSUE TO COUNCIL	01.08.2022
D	PATH COLOUR	02.08.2022
E	COSTS ADDED	04.08.2022
F	FINAL	21.12.2022

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PART A
PROJECT
PURPOSE

PROJECT PURPOSE

The town of Tathra is separated by steep topography between the upper (headland) commercial area and the lower (beach) commercial area.

The purpose of this project is to investigate suitable options for a ramped path between these two areas.

Currently, there are three (3) pedestrian footpaths linking the upper and lower part of Tathra. All are in relatively poor condition and have non-compliant steps and minimal handrails. There are also two (2) roadways, Andy Poole Drive and Dilker Road, however they are too steep for pedestrian access and have insufficient space in the road reserve to accommodate a path.

This feasibility study outlines:

- Desktop research
- Identification of project opportunities and constraints (including land tenure and environmental issues);
- A high level cost plan; and
- An options assessment of the route to determine the preferred path alignment.

The options presented in this report will be used to engage with the community.

PROJECT PROCESS



OBJECTIVES

Investigate options to provide a ramped walkway that connects the upper and lower areas of Tathra.

PROJECT SCOPE

Deliver a feasibility study for a ramped walkway from the upper (headland) commercial area and the lower (beach) commercial area.

This feasibility reports seeks to:

- Assess the existing site conditions and determine path routes that align to the existing network
- Identify four (4) walkway options.
- Provide high level costings for each option.
- Assess the walkway options based on strengths, weaknesses, opportunities and threats (SWOT).

LIMITATIONS OF THE STUDY

This report presents the results of a desktop study and site observations from a site walkaround undertaken on 29 April 2022.

It has been prepared for the use of Bega Valley Shire Council (BVSC) and takes into account particular requirements and instructions. It is not intended for use by any third party and no responsibility is undertaken to any third party.

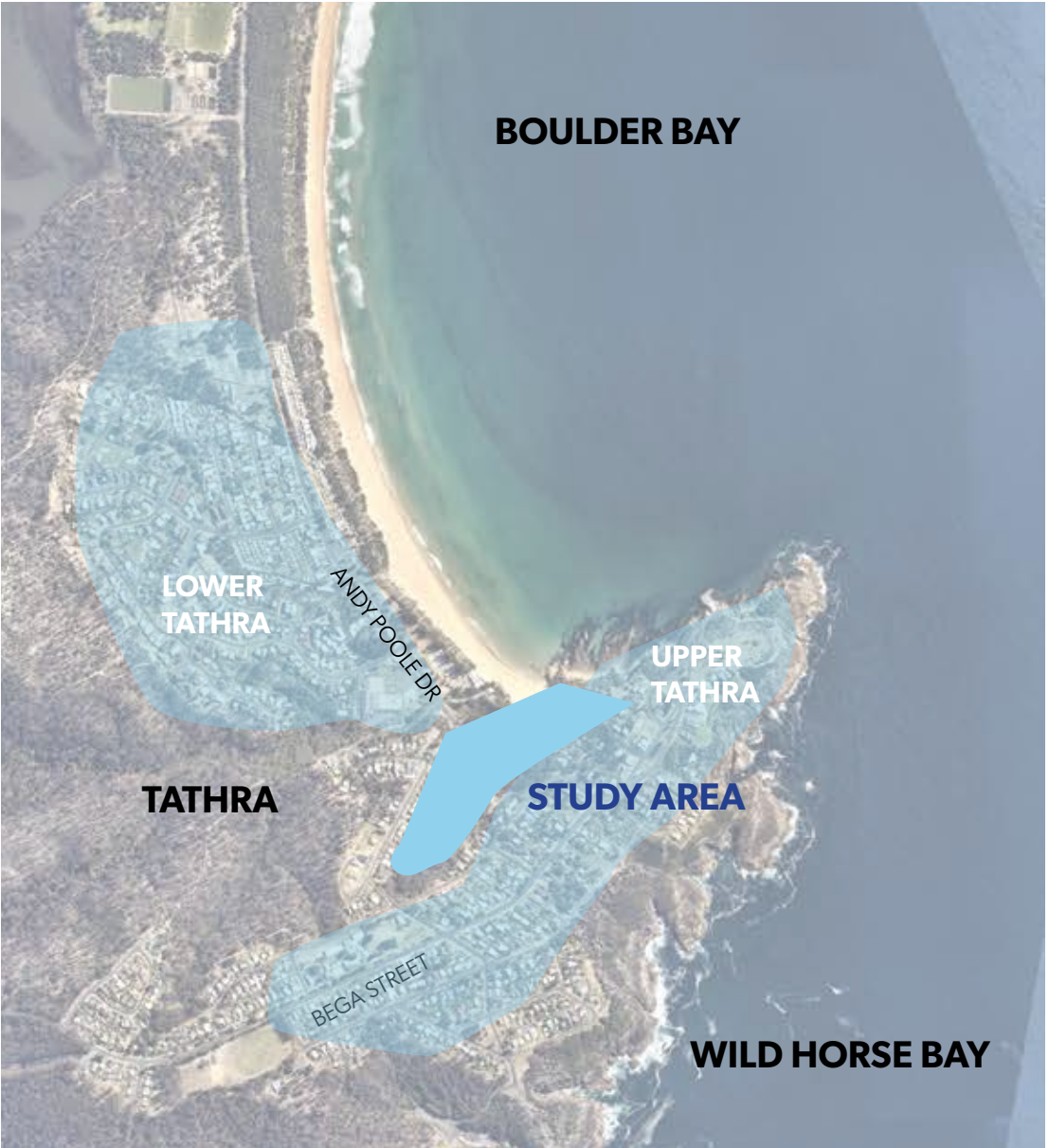
The information contained within this report shall be considered for reference only.

PUBLIC CONSULTATION

Public consultation was undertaken between 5 August to 18 September 2022 seeking community feedback on the revised draft precinct plan and the walkway options study. The consultation included a short survey provided on Council’s Have Your Say webpage which asked participants which walkway option they would like Council to explore further.

26 submissions were received via survey and 14 submissions were received via email.

Option 1 was the most preferred with 34.62% support. 11.54% participants didn’t want a walkway and 30.77% had other solutions including following the alignment of Andy Poole Drive more closely. This option was considered as part of the study, but not pursued due to limited space in the road reserve for a path.





PART B SITE LOCATION AND CONTEXT

STUDY AREA

STUDY AREA

The study area is located between the lower and upper sections of Tathra. Four (4) separate areas, each representing a different option, have been identified within the study area.

Each option connects upper and lower Tathra and traverses a series of different ecologies, land tenures and slopes.

COMMUNITY NEED

Access from upper Tathra to lower Tathra is currently limited due to steep topography. There are three pedestrian footpaths linking the upper and lower parts of Tathra. All paths are currently in poor condition and often have non-compliant steps and minimal or non-existing handrails. The community require safe and enjoyable access between key destinations of upper and lower Tathra.

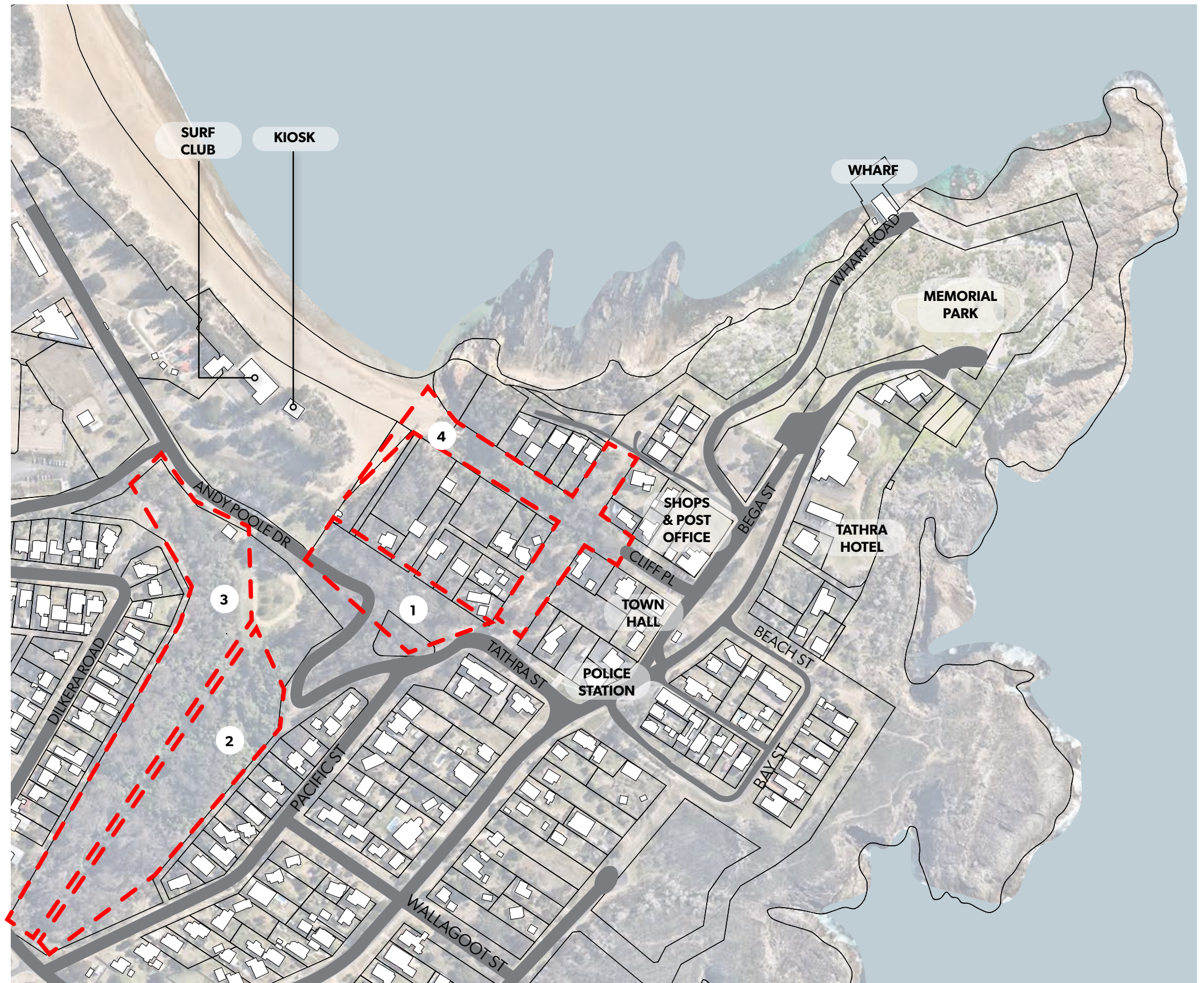
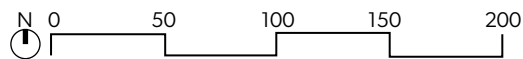
DESIGN CONSTRAINTS

The sites are constrained by:

- The steepness of the site. In some locations it is not possible to achieve a Disability Discrimination Act (DDA) complaint ramp or walkway.
- Threatened ecological communities and significant vegetation exist in most of the sites and will need to be considered.
- While some sites can achieve a compliant walkway, they do not directly connect between lower and upper Tathra.
- The existing path network is incomplete and currently in a poor condition. The ingress and egress of the future walkway(s) into the path network will need to be considered to provide a safe and connected transition between travel routes.

LEGEND

--- Study Areas



EXISTING PATH NETWORK

There is inconsistent coverage of footpaths and shared paths with entire sections of the precinct being unserved by accessible paths. There are no dedicated bike paths either on the road as separate lanes or as shared paths.

OPTION 01

The existing path, adjacent to Andy Poole Drive, is steep and narrow with long sections of stairs. It is an important route providing access from lower to upper Tathra.

OPTION 02

Located to the north-east of the site is the Hobbs corner rainforest walk and campground.

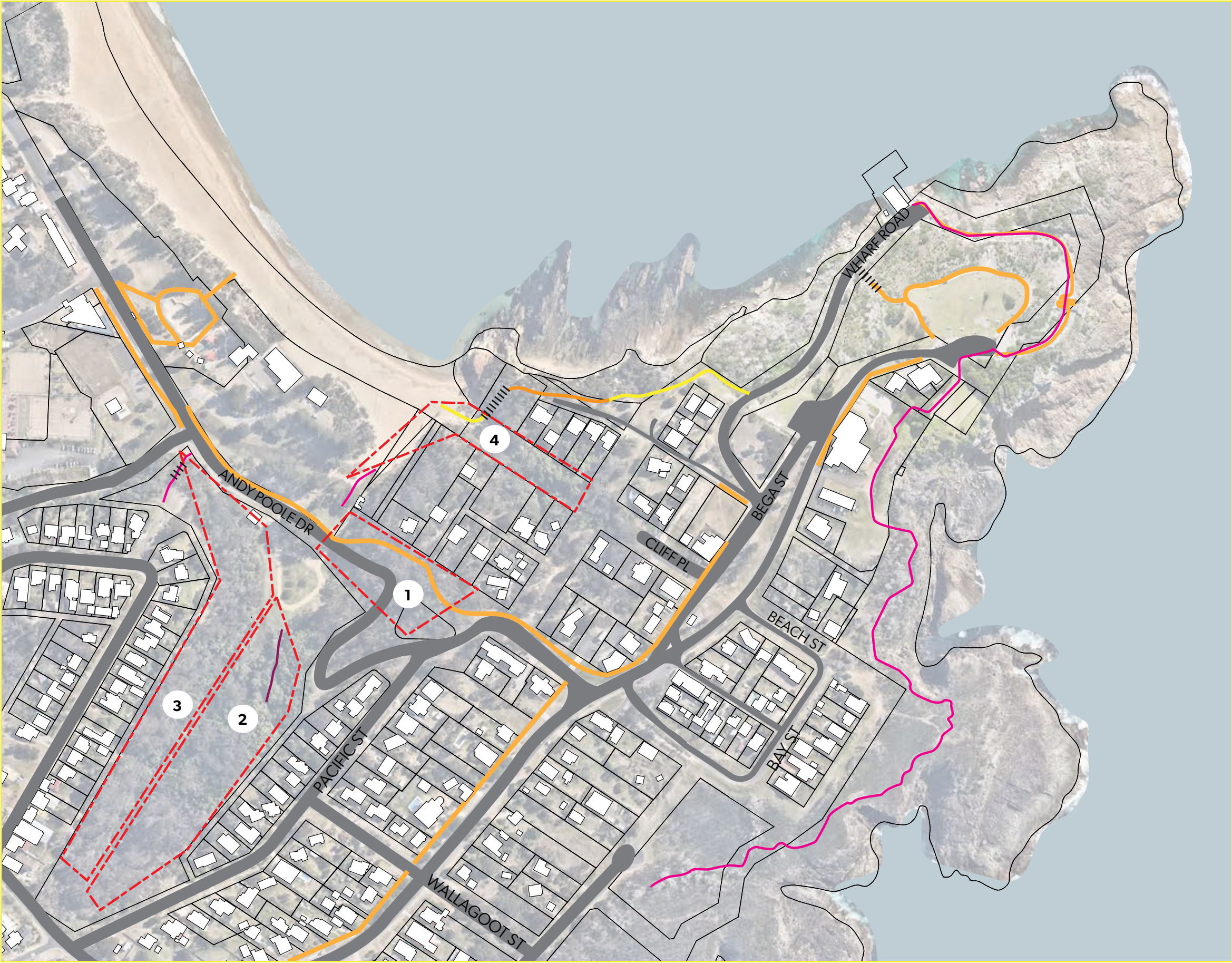
OPTION 03

There are a set of stairs and path connecting Andy Poole Drive to Dilkera Road.

OPTION 04

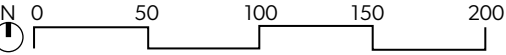
An informal track is used by local residents to access the beach.

The beach trail from Tathra Beach to Cliff Place is located nearby.



LEGEND

- Paved footpath
- Unpaved informal path
- Informal Beach Trail
- Hobbs Rainforest Walk (gravel path)
- Stairs



LANDSCAPE AND VISUAL CHARACTER

VEGETATION

The coastline and surrounding Tathra area contains a variety of vegetation as well as some important remnant vegetation. During the 2018 bush-fires, a major portion of this was lost, however, new vegetation is already quickly regrowing.

OPTION 01

Located between the urban interface of Andy Poole Drive. The existing path and road network is narrow with the verge often being washed away. A walkway situated here could marry into the existing pedestrian path networks and improve the existing character.

OPTION 01



OPTION 02



OPTION 03



OPTION 04



OPTION 02

A walkway located here can connect into the existing Hobbs corner rainforest walk and interpretation. Planting is densely forested and provides lots of shade.



OPTION 03

Is characterised by wet sclerophyll forest along the ridge and rainforest in the lower gully. Coast Grey Box and stringy-bark grow through out the site providing shade cover and habitat. A walkway situated here would allow to transect several ecotones and transitions between the types of forest.



OPTION 04

This site follows an existing goat track leading from upper Tathra to lower Tathra. Because of the large change in gradient there is an ecotone consisting of wattle and larger shrubs to the top and lower shrubs and groundcovers towards the bottom. The site is currently degraded.

ECOLOGICAL VALUES

ENVIRONMENT

The study area contains a variety of ecologies that shape the towns character and are vital to many species. The existing habitat regions support fauna such as the: yellow bellied glider, pied oyster catcher, glossy black cockatoo, the swift parrot and the hooded plover. The neighboring Tathra wildlife reserve is located to the west of the site. Existing ecological remnants in the study areas are likely to act as habitat corridors for existing species in the area.

OPTION 01

This site is characterized by Rusty Figs. Although this species is not listed as protected they are large significant trees that provide habitat for a range of species, in particular the threatened Grey-headed Flying Fox.

OPTION 02 AND OPTION 03

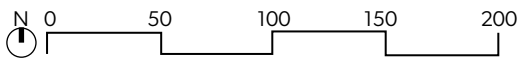
This site is mostly a wet sclerophyll forest with a rainforest dominant in the lower gully and parts of the understorey. Its most closely aligned to PCT Coast Grey Box - Mountain Grey Gum - stringybark moist shrubby open forest in coastal gullies, southern South East Corner Bioregion. The rainforest is most likely a TEC and is closely aligned to PCT Lilly Pilly - Sweet Pittosporum - Rough Tree-fern warm temperate rainforest in steep sheltered gullies, southern South East Corner Bioregion. This site is in proximity to the Tathra Wildlife Reserve and may act as a habitat corridor to adjacent areas.

OPTION 04

This site consists of degraded rainforest and woody weeds.

LEGEND

--- Site boundary



LAND TENURE

The study sites exist on Road Reserve, C2 Environmental Conservation area or on Crown Land or crown land managed by the Bega Valley Shire Council.



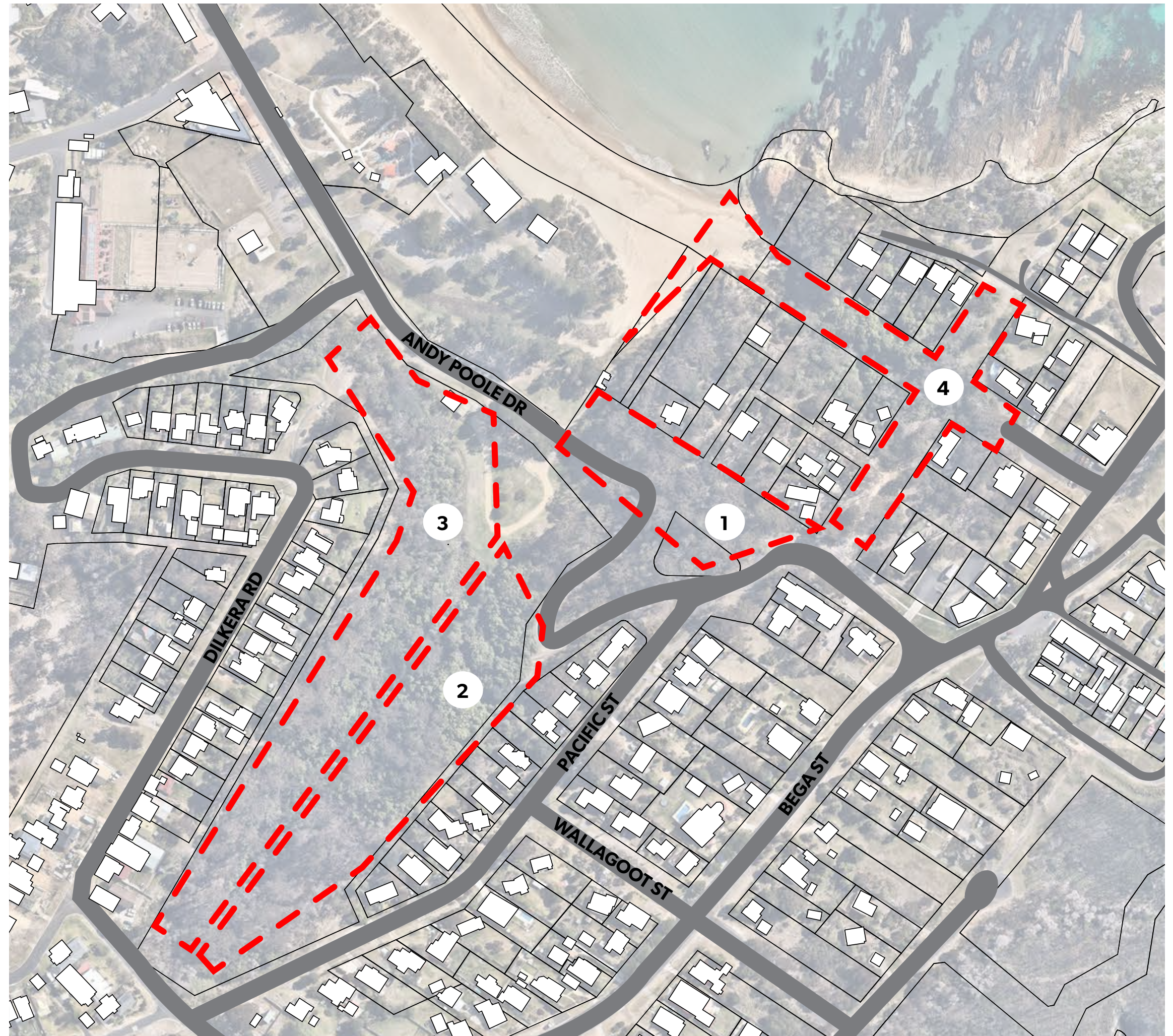


PART C
WALKWAY
OPTIONS

KEY PLAN

STUDY AREA

The study sites have been selected as each area is situated to connect upper and lower Tathra. Each site is constrained by steep topography and poor footpath linkages. Part C explores how each site can accommodate longer DDA compliant walkways and shorter direct routes.



DESIGN INTENT AND CONSTRUCTION METHODS

The walkway will be designed to respond to the attributes of the site and be comfortable for users.

This includes having regular places to stop and rest, lookouts, hand rails and interpretive information.

Due to the access constraints of these walkways and the need to minimise damage to the surrounding environment, much of the works will need to be done by hand with limited access for trucks, excavators or other machines.

The proposed walkway surface is proposed to be a fibreglass reinforced plastic (FRP) that is durable in the coastal environment at Tathra.

Elevated walkways could be built in either galvanised steel or using composite fibre structures similar to those provided by Wagners.

The advantage of the composite fibre is durability in the coastal environment.

Footings for the walkway can either be pad footings, screw piles or augured concrete piles. Choice of this footings will be dependent on the terrain and the ability to install each pile.

In many of these options the access for a excavator will be limited so many footings may need to be hand dug therefore the pad footing may be preferred

The walkway will conform with the following standards **where possible**:

AS1657 — Design for access and mobility

AS2156 — Walking tracks, infrastructure design

AS1170 — Structural design actions

The following images provide a visual guide to the intended design:



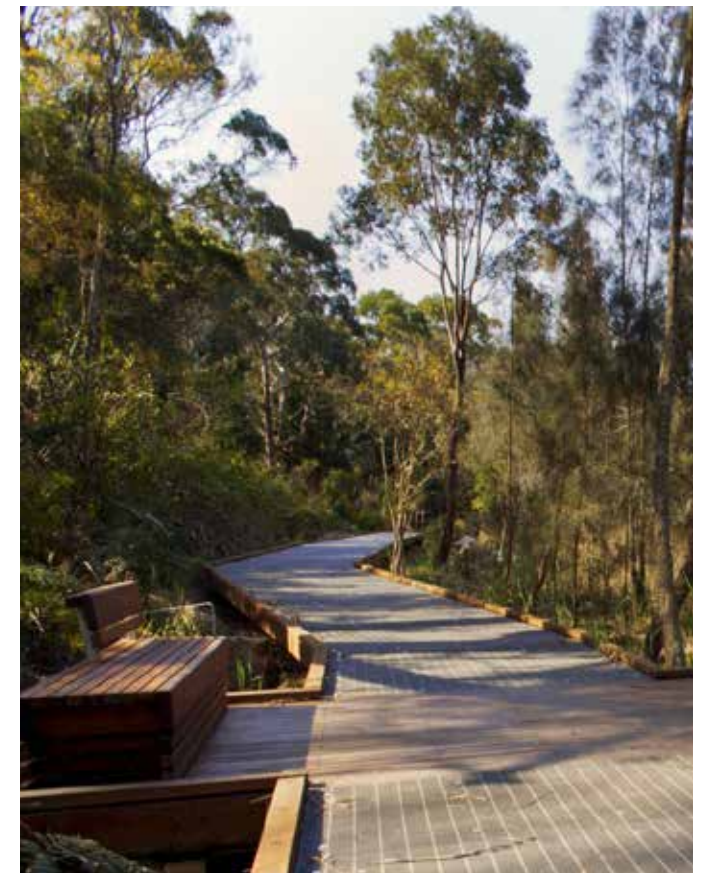
Fibreglass reinforced plastic micro mesh grating with an anti-slip surface.



Suitable path width and hand rails.

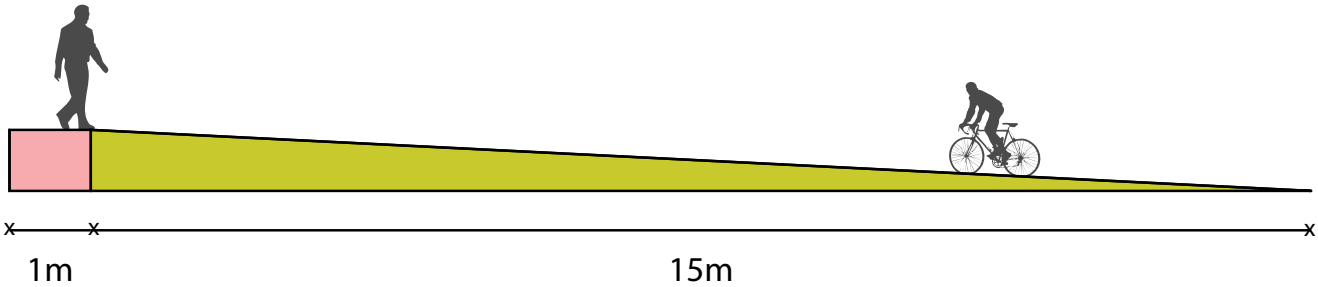
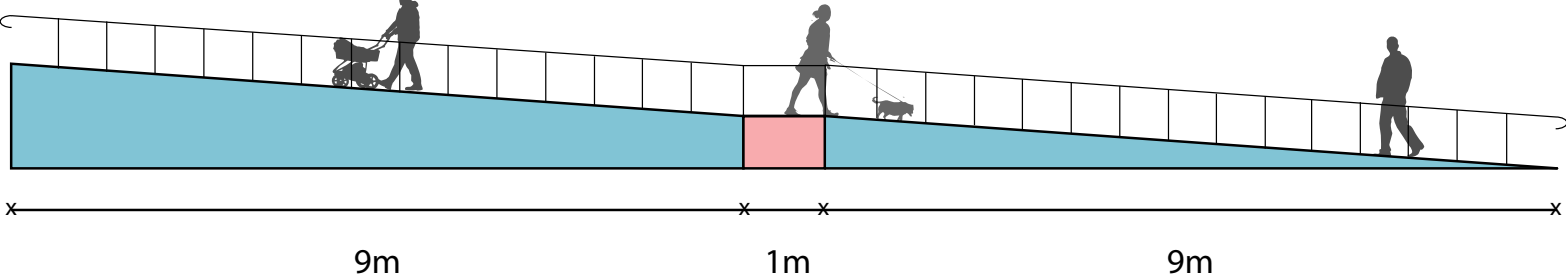
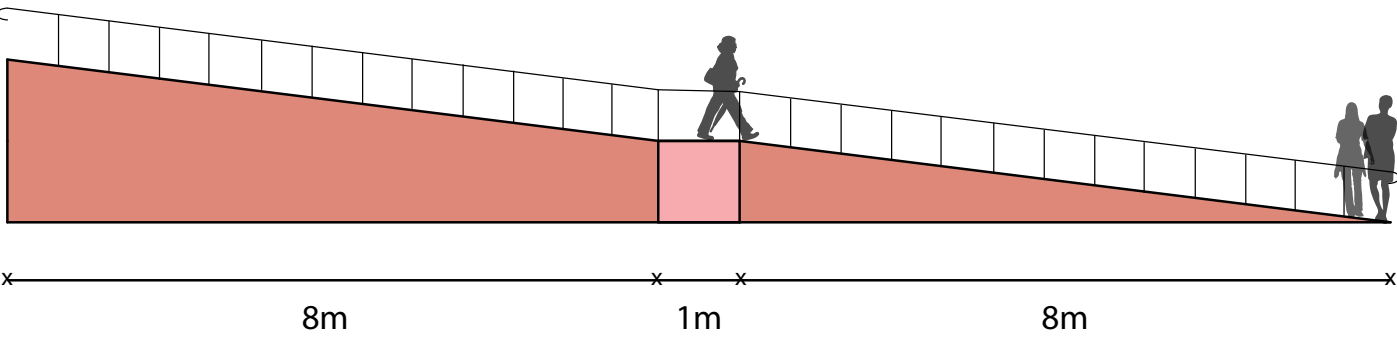


Responsive to trees and other site features

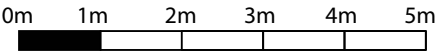


Regular stopping and seating spaces.

GRADIENTS

TYPE	GRADE	COMFORT LEVEL	DIMENSIONS
WALKWAY Landing required every 15m (DDA compliant)	1:20 (5%)	EASY	
RAMP Landing required every 9m (DDA compliant)	1:14 (7%)	MODERATE	
STEEP RAMP Landing required every 8m or less	1:8 (12.5%)	CHALLENGING	

NOTE: A mid size mobility scooter with an average payload (approximately 75kg) will be able to climb a 1:5 slope.



PREFERRED OPTION

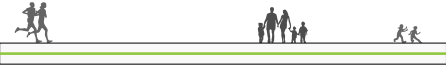
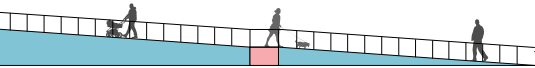
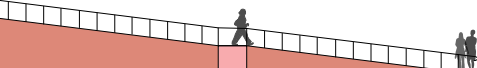
Pros

- Utilises and improves an existing route which will minimize impacts to the vegetation.
- Existing service easement.
- Most direct route between lower and upper Tathra with good connection to upper Tathra destinations.
- Site already heavily disturbed and will have less ecological impact.
- Long sections of ongrade path that are relatively flat.
- Potential connection to a future cycle route along Pacific Street.
- Potential connection to Cliff Place and Wharf Road via Seagrass Lane.
- Signage along the walkway could improve educational and tourism focus.

Cons

- Unable to be fully DDA compliant due to the limited space.
- Possible impact to Rusty Figs.
- Cultural heritage impacts unknown.
- Minor impact to the driveway of the property located on Andy Poole Drive.

LEGEND

On Grade	
Ramp 1:14 7%	
Ramp 1:8 12.5%	



OPTION 02

Pros

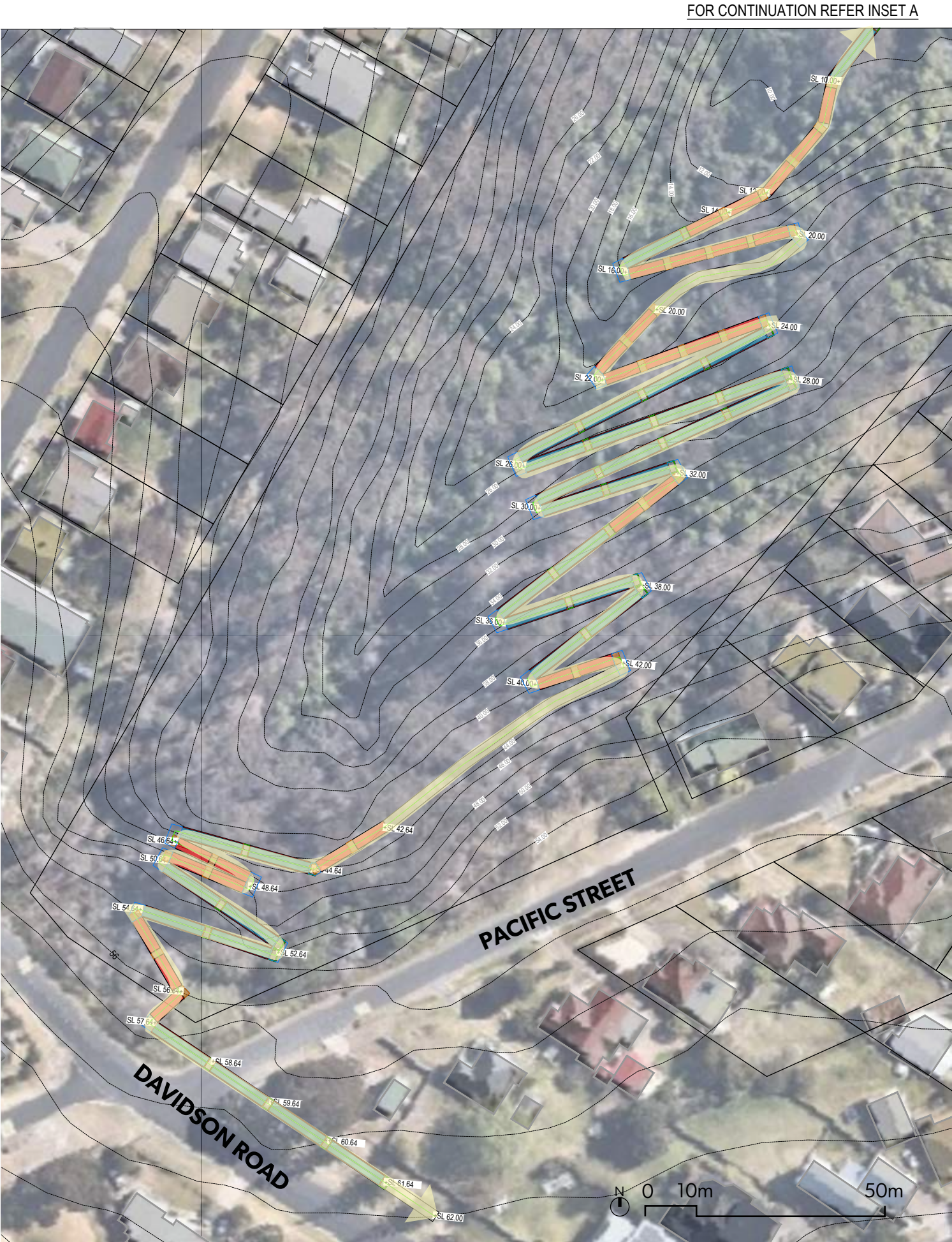
- Due to available space it is possible to design the walkway with DDA compliant gradients.
- Good connection between lower Tathra and the primary school.
- A small part of the walkway is an existing rain forest walk.
- Signage along the walkway could provide educational and tourism focus.
- Degraded vegetation in the area could be rehabilitated.

Cons

- Due to the topography the walkway will require many switchbacks.
- Likely to have a high impact on the existing environment particularly in the TEC rainforest in the lower gully.
- Route misses key tourist destinations by not connecting lower Tathra with the Beach Street shops, wharf or hotel.
- Could be vulnerable to flooding.
- Due to the density of trees the walkway will need to be designed either around significant trees or require tree removal.
- Cultural heritage impacts unknown.

LEGEND

On Grade	
Ramp 1:14 7%	
Ramp 1:8 12.5%	



INSET A

- As part of the option development, a DDA compliant path was investigated to fully understand possible impacts as shown in this plan.

LEGEND

*All walkways shown within this option area are between 1:14 and 1:20 (refer to page 14 for detail)



OPTION 03

Pros

- Utilises an existing service easement.
- Supplements an existing route.
- A new footpath on Dilkeria Street to connect into existing path network.

Cons

- Compliant walkway terminates at hairpin corner on Dilkeria Road.
- Unable to achieve a compliant path along Dilkeria Road due to existing steep gradients.
- Route misses key tourist destinations by not connecting lower Tathra with the Beach Street shops, wharf or hotel.
- Impact on adjacent residents.
- Likely to have a high impact on the existing environment particularly in the TEC rainforest in the lower gully.
- Could be vulnerable to flooding.
- Cultural heritage impacts unknown.

LEGEND

On Grade	
Ramp 1:14 7%	
Ramp 1:8 12.5%	



- *All walkways shown within this option area are between 1:14 and 1:20 (refer to page 14 for detail)

*All walkways shown within this option area are between 1:14 and 1:20 (refer to page 14 for detail)

*All walkways shown within this option area are between 1:14 and 1:20 (refer to page 14 for detail)



OPTION 04

- Pros**
- Good connection between Tathra beach and Seagrass Lane which then connects to Andy Poole Drive, and Cliff Place and Beach Street via stairs.
 - Site already heavily disturbed.
 - Degraded vegetation in the area could be rehabilitated.
- Cons**
- Instability of the creekline and beach area will make the walkway highly prone to coastal hazards.
 - Duplicates the nearby beach trail.
 - Impact on adjacent residents.
 - Cultural heritage impacts unknown.



LEGEND	
On Grade	
Ramp 1:14 7%	

SWOT ANALYSIS

OPTION	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
Option 01	<ul style="list-style-type: none"> Utilises and improves an existing route. Existing service easement. Most direct route between lower and upper Tathra. Good connection to upper Tathra destinations. Less ecological disturbance. Site already heavily disturbed. Long sections of ongrade path that are relatively flat. 	<ul style="list-style-type: none"> Due to the total length of the site it is not possible to design for DDA compliant gradients. 	<ul style="list-style-type: none"> Potential connection to a future cycle route along Pacific Street. Potential connection to Cliff Place and Wharf Road via Seagrass Lane. Signage along the walkway could improve educational and tourism focus. Maximises reuse of the existing path route to minimize impacts to the vegetation. 	<ul style="list-style-type: none"> Possible impact to Rusty Figs. Cultural heritage impacts unknown.
Option 02	<ul style="list-style-type: none"> Due to available space it is possible to design the walkway with DDA compliant gradients. Good connection between lower Tathra and the primary school. A small part of the walkway is an existing rain forest walk. 	<ul style="list-style-type: none"> Due to the topography the walkway will require many switchbacks. Likely to have a high impact on the existing environment particularly in the lower gully. Route misses key tourist destinations by not connecting lower Tathra with the Beach Street shops, wharf or hotel. Could be vulnerable to flooding. 	<ul style="list-style-type: none"> Signage along the walkway could provide educational and tourism focus. Degraded vegetation in the area could be rehabilitated. 	<ul style="list-style-type: none"> The rainforest in the lower gully is most likely a Threatened Ecological Community. Due to the density of trees the walkway will need to be designed either around significant trees or require tree removal. Surveying this site in detail will be timely and costly. Cultural heritage impacts unknown.
Option 03	<ul style="list-style-type: none"> Utilises an existing service easement. Supplements an existing route. A new footpath on Dilkeria Street to connect into existing path network. 	<ul style="list-style-type: none"> Walkway terminates at Dilkeria Road which has a steep gradient which prevents the walkway from achieving DDA compliance. Unable to achieve a compliant path along Dilkeria Road due to existing 1:6 gradient. Does not connect to any key destinations. Impact on adjacent residents 		<ul style="list-style-type: none"> The rainforest in the lower gully is most likely a Threatened Ecological Community. Due to the density of trees the walkway will need to be designed either around significant trees or require tree removal. Surveying this site in detail will be timely and costly. Cultural heritage impacts unknown.
Option 04	<ul style="list-style-type: none"> Good connection between Tathra beach and Seagrass Lane which then connects to Andy Poole Drive, and Cliff Place and Beach Street via stairs. Site already heavily disturbed. 	<ul style="list-style-type: none"> Instability of the creekline and beach area will make the walkway highly prone to coastal hazards. Duplicates the nearby beach trail. Impact on adjacent residents. 	<ul style="list-style-type: none"> Degraded vegetation in the area could be rehabilitated. 	<ul style="list-style-type: none"> Coastal vulnerability and flooding by the creek. Surveying this site in detail will be timely and costly. Cultural heritage impacts unknown.

OPTIONS OPINION OF PROBABLE OF COSTS

- A high level Opinion of Probable Costs was prepared to understand the magnitude of each option.
- The costs are subject to change.
- Exclusions include: escalation, regional loading and any unknown site conditions



Tathra Walkways High Level Concept Cost Plan Summary 3 August 2022									
Item	Description	Option 1 Quantity	Option 1 Total	Option 2 Quantity	Option 2 Total	Option 3 Quantity	Option 3 Total	Option 4 Quantity	Option 4 Total
1	Walkway Ramp (2.5m wide)	245.00	\$ 673,750	675.00	\$ 1,856,250	161.00	\$ 442,750	585.00	\$ 1,608,750
2	Walkway Ongrade (2.5m wide)	137.00	\$ 68,500	450.00	\$ 225,000	140.00	\$ 70,000	230.00	\$ 115,000
3	Connecting Paths (2.5m wide)	145.00	\$ 50,750	60.00	\$ 21,000	450.00	\$ 157,500	70.00	\$ 24,500
4	Gravel Paths (2.5m wide)	-	\$ -	-	\$ -	431.00	\$ 80,813	-	\$ -
5	Landscaping (2m either side of the path)	527.00	\$ 98,813	1,185.00	\$ 222,188	751.00	\$ 140,813	885.00	\$ 165,938
6	Lighting (1 every 20 m)	26.35	\$ 79,050	59.25	\$ 177,750	37.55	\$ 112,650	44.25	\$ 132,750
7	Furniture (1 every 100m)	5.27	\$ 36,890	11.85	\$ 82,950	7.51	\$ 52,570	8.85	\$ 61,950
8	Stairs		\$ -		\$ -		\$ -	30.00	\$ 90,000
9	Site preparation	1,317.50	\$ 79,050	2,962.50	\$ 177,750	2,955.00	\$ 177,300	2,212.50	\$ 132,750
10	Signage, tactile and line marking	1,317.50	\$ 39,525	2,962.50	\$ 88,875	2,955.00	\$ 88,650	2,212.50	\$ 66,375
11	Consolidation	527.00	\$ 7,905	1,185.00	\$ 17,775	751.00	\$ 11,265	885.00	\$ 13,275
12	NET TRADE BUILD COST ONLY EXCL PRELIMS MARGIN		\$ 1,134,233		\$ 2,869,538		\$ 1,334,310		\$ 2,411,288
13	Preliminaries & Supervision	18.00%	\$ 204,162	18.00%	\$ 516,517	18.00%	\$ 240,176	18.00%	\$ 434,032
14	Margin	7.50%	\$ 100,380	7.50%	\$ 253,954	7.50%	\$ 118,086	7.50%	\$ 213,399
15	TOTAL CONSTRUCTION COST EXCL GST		\$ 1,438,774		\$ 3,640,008		\$ 1,692,572		\$ 3,058,718
16	Design Contingency	20.00%	\$ 287,755	20.00%	\$ 728,002	20.00%	\$ 338,514	20.00%	\$ 611,744
17	Construction Contingency	20.00%	\$ 345,306	20.00%	\$ 873,602	20.00%	\$ 406,217	20.00%	\$ 734,092
18	TOTAL CONSTRUCTION COST		\$ 2,071,834		\$ 5,241,612		\$ 2,437,304		\$ 4,404,554
19	Consultant Fees	9.00%	\$ 186,465	9.00%	\$ 471,745	9.00%	\$ 219,357	9.00%	\$ 396,410
20	Authority Fees	2.00%	\$ 41,437	2.00%	\$ 104,832	2.00%	\$ 48,746	2.00%	\$ 88,091
21	Insurances (1.5%)	1.50%	\$ 31,078	1.50%	\$ 78,624	1.50%	\$ 36,560	1.50%	\$ 66,068
22	PM Fees (4%)	4.00%	\$ 82,873	4.00%	\$ 209,664	4.00%	\$ 97,492	4.00%	\$ 176,182
23	TOTAL PROJECT COSTS EXCLUDING GST AND ESCALATION		\$ 2,413,687		\$ 6,106,478		\$ 2,839,459		\$ 5,131,306

