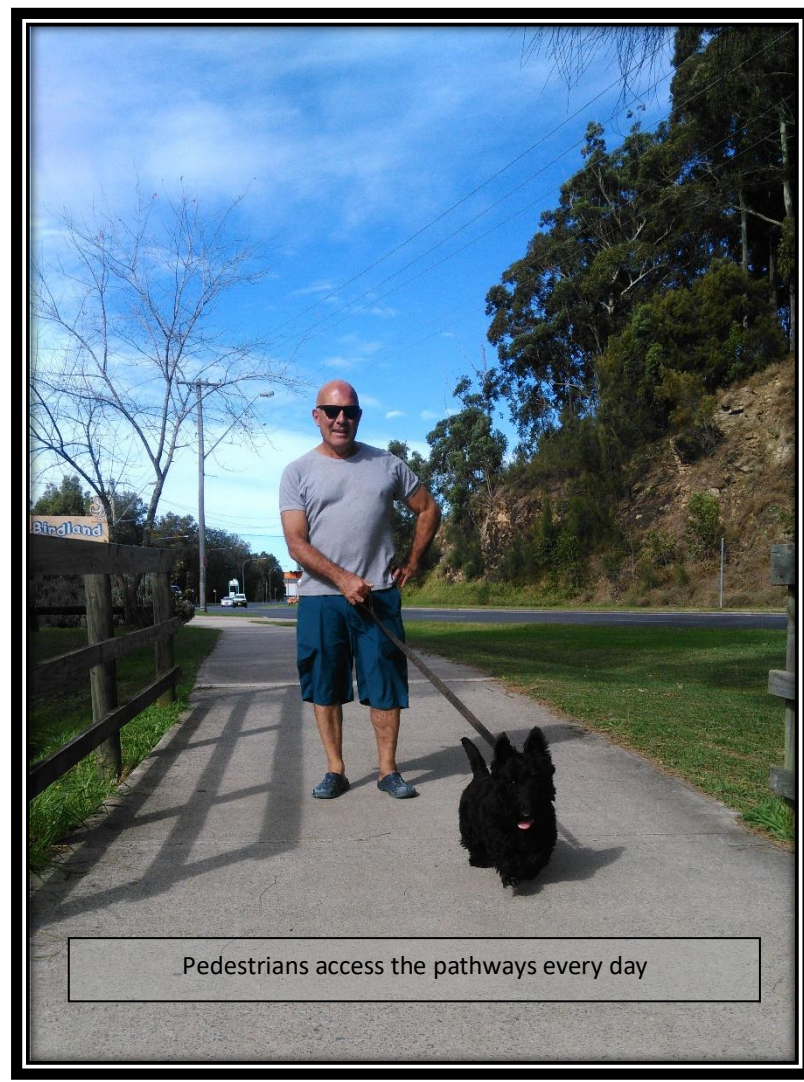


Pedestrian Access and Mobility Plan

Beach Road, Batemans Bay to Batehaven

2016



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1. Introduction

Eurobodalla Shire Council has undertaken to develop a Pedestrian Access and Mobility Plan (PAMP) for the area from the Batemans Bay CDB along Beach Road to the Batehaven Shopping Centre.

Funding for 50% of the cost for preparation of the PAMP has been obtained from the NSW Government – Active Transport Program.

The primary route for pedestrians is on concrete paths along both sides of Beach Road. The eastern path is a mostly concrete designated share path for pedestrians and cyclists, generally 2.5 metres wide. The western path is a concrete footpath, generally 1.2 metres wide.

The pathway users are a mix of pedestrians and cyclists.

A pedestrian is a person walking or running on foot and also as described within the (NSW) Road Rules includes a person:

- Driving a motorised wheelchair (including mobility scooters) that cannot travel over 10 km/h
- In a non-motorised wheelchair or in or on a wheeled recreation device or wheeled toy
- Pushing a motorised or non-motorised wheelchair

A rider of a bicycle (cyclist) must give way to any pedestrian on the footpath or shared path. See other details on legal requirements of pathway users within the report.

Feedback has been received from residents / ratepayers regarding the impediments for safe pedestrian and cycle movements along this route.

A PAMP provides a framework for use by Council to review the safety for pedestrians using these precincts as a road safety initiative. This approach is supported by the NSW Roads and Maritime Services. A PAMP is designed to identify the pedestrian facilities that are required to integrate walking with land use and transport systems. The PAMP study will result in the identification of various pedestrian facilities and actions which can influence the funding applications for a program of works for implementation in the forthcoming years. This study outlines engineering, enhancement and education options that will improve the overall safety and access for pedestrians in this area.

2. Study Area

The area nominated for this PAMP is Beach Road, starting at the Princes Highway to the north-west and ending at Corrigans Recreation Reserve to the south east.

The area selected ensures coverage of all pedestrians travelling along and across that 3.5 kilometre stretch from the Batemans Bay CBD to Batehaven Shopping Centre.

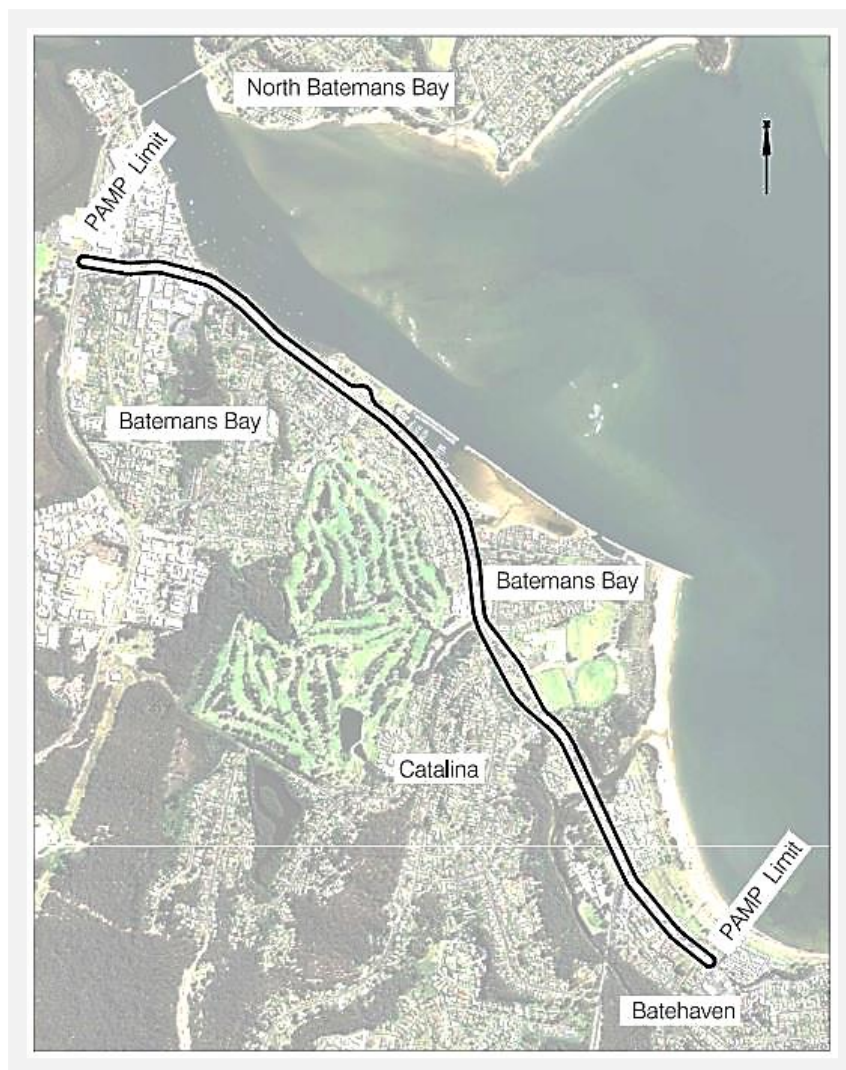


Figure 1 – Study Area

3. Study Objectives

The PAMP objectives for this study primarily follows the guide developed by the RMS “How to Prepare a Pedestrian Access and Mobility Plan”. The objectives have been slightly altered to reflect the particular circumstances of this location.

a) Overarching objective

- To identify actions required to facilitate adequate safe movements of pedestrians and cyclists along and where appropriate across Beach Road.
- Assist in the determination of Council’s future project funding applications.

b) Detailed objectives:

Refer also to the Score Sheet for PAMP Methodology listed on Page 25.

1. Develop a practical network of facilities that can be used by all of its residents and visitors.
2. Encourage walking and cycling as alternative modes of transport.
3. Promote the environmental, recreational, health and economic benefits of cycling and walking.
4. Increase the safety of pedestrians and cyclists through; engineering, education and encouragement.
5. Facilitate improvements in the level of equal pedestrian access, mobility and priority, particularly in areas of pedestrian concentration.
6. Link existing vulnerable road users plans in a co-ordinated manner (e.g. Council’s Draft Pathway Strategy 2016, maintenance programs, RMS’ *Go Together* Bicycle Safety Laws, etc.)
7. Identify and attempt to resolve user concerns.
8. Improved accommodate of special events.
9. Link in with the objectives of existing walking and cycling grants

4. Outline of Study Methodology

The study methodology was generally based on the aforementioned RMS guide “How to Prepare a Pedestrian Access and Mobility Plan”. The process was adapted to suit the special circumstances of the study area.

	Step	Approach	Detail
STAGE 1	1	PAMP Team Formation	ESC - Traffic Officer ESC - Road Safety Officer RMS - Traffic Engineering Officer
	2	Define PAMP Area	Refer Figure 1
	3	Research and Review	RMS – How to Prepare a PAMP
			Previous PAMP’S
			Eurobodalla Policies, Strategies and Guidelines
			Future Intersection Treatments
			Other Standards, Strategies and Guidelines
	4	Data Collection	Accident Statistics
			Existing Pedestrian Facilities & Infrastructure
			Traffic Counts
Path user one day count			
STAGE 2	5	Consultation	On Site survey with users
			User Survey
	6	Overview of Data Collected	Identification of heavy pedestrian traffic areas Identification of issues and assessment of existing situation
	7	Audit	Overview of existing pathways and associated facilities
	8	Draft PAMP	Including PAMP Plan and Development of Works Schedule with Priorities
	9	Report to the RMS	Requirement of Active Transport grant for preparation of PAMP
STAGE 3	11	Finalise PAMP Implementation	Prepare a works program and seek funding

Table 1 – Methodology

5. Assessing Current Situation

To understand the present pedestrian access and mobility within the study area, site visits were carried out. This was done to gain experience of the local scene and observe user behaviour before collecting the necessary data for use in the PAMP. As outlined in the RMS Guide “No literature or data review can provide this actuality information”.

The information required to address the present pedestrian situation was:

- Road Hierarchy
- Pathway Use
- Transportation Corridor
- Traffic Volumes
- Adjoining Land-Use Precincts
- Accident Statistics
- Inventory of Existing Facilities
- Pedestrian Count
- Pathways Audit
- Community and Stakeholder Consultation

Consultation with the community is an important component of the PAMP and accordingly this category is covered separately in Section 7 of this report. The remaining information categories are covered in Sections 5 and 6.

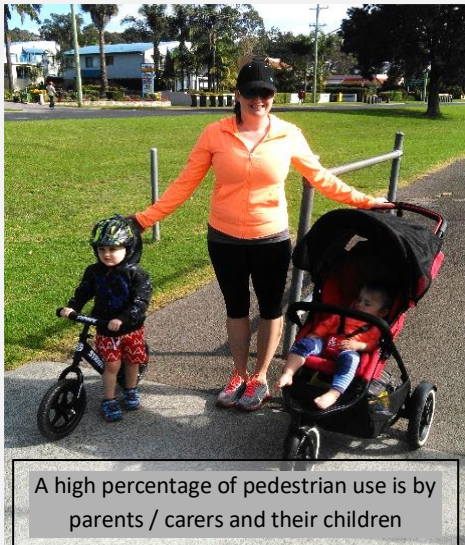
5.1 Road Hierarchy

The study contains only one road (Beach Road) which is a classified regional road. This road commences at a signalised junction with the Princes Highway on the western edge of the Batemans Bay central business district (CBD) and continues south-east to just before the intersection of Edward Road (traffic signals) at the Batehaven shops. The total length along this section of Beach Road is 3.5 kilometres.

There are 11 intersections along Beach Road, a majority of which are local roads. Orient Street (traffic signals) and Bavarde Avenue (roundabout) are Distributor Roads and Country Club Drive/Catlin Avenue (traffic signals) and George Bass Drive (traffic signals) are Collector Roads. Flora Crescent, which is within the CBD, is also controlled by traffic signals, with the other CBD intersection Perry Street currently controlled by a roundabout. All other intersections have a ‘T’ configuration (Pacific Street, Herarde Street, Miller Street, Golf Links Drive) with the ‘T’ intersection at Hanging Rock Place currently being reconstructed as a roundabout.

5.2 Pathway Use

Pathways in the study area are contained within the road reserve or reserves owned or controlled by the Eurobodalla Shire Council (ESC). See 6.1 for path audit.



All of the pathways are owned and maintained by ESC and are covered for use within the (NSW) Road Rules. See 9.1 for extracts of legislation, standards and guidelines. Shared Paths and footpaths are road-related areas by definition in the road rules.

Existing shared path signage and line marking has been deemed to comply with appropriate standards and guidelines. This includes adoption by the Local Traffic Committee.

Within the (NSW) Road Rules and as described in relevant standards and guidelines, pedestrians and bike riders on the

shared pathways are required to adhere to certain behaviour. In summary, this includes keeping to the left and cyclists ringing a bike bell when overtaking pedestrians on the shared path. On the 1.5m wide footpath, only child bike riders under 12 years old are allowed, with older riders allowed only when accompanying a child (Road Rule 250).

5.3 Transportation Corridor

Beach Road is a four-lane, two-way bitumen sealed road with two lanes in each direction.

There is no separation of opposing traffic for a majority of its length with the exception of two sections:

- a) At the northern end of the roadway a concrete centre island 0.3m wide exists between Bavarde Avenue and Miller Street.
- b) Half-way along the route a short section of concrete centre island as part of a Channelised Right Turn (CHR) intersection is in place for southbound right turns into the golf club car park. This island is 1.5m wide and is not a desirable location for pedestrians crossing Beach Road due to the narrow island width. Two hundred and fifty metres south east of this island are traffic signals at the Country Club Drive/Catlin Avenue intersection.

Council has identified the need for a centre island separation of Beach Road from the CBD through to the golf club. This is needed to address the many rear end collisions occurring when drivers stop to turn into residential driveways. Due to land constraints, this island cannot be wide enough to cater for pedestrians crossing the road as the minimum width for crossings is 2 metres.

The primary route for pedestrians is on concrete pathways along both sides of Beach Road. The south eastern pathway is designated concrete share path for pedestrians and cyclists, generally 2.5 metres wide. There is a short section of the shared path near Birdland Animal Park that has a bitumen surface.

A bridge crossing Joe's Creek on the shared path near the Birdland Animal Park is 2.45m wide between the handrails.

The north western pathway is a concrete footpath, generally 1.2 metres wide.

North of the study area there are adequate links to and through the CBD on footpaths and other hardstand verges between the roads and shop fronts (refer Map at Appendix K).

South of the study area there are three separate (1.5m wide) path systems (existing and proposed). Routes of these paths are south west along Edwards Road, south along Crag Road and east along Beach Road. Council's Draft Pathway Strategy 2016 does not propose shared paths in this area. As redevelopment occurs, the applicant will be required to construct pathways along their property frontage (refer Map at Appendix K).

5.4 Traffic volumes

Beach Road is a relatively high volume regional road. The Average Annual Daily Traffic (AADT) is within the range of 10,617 (at the Princes Highway) and 18,520 AADT (at Country Club Drive).

**Source: ESC Traffic Counts Database*

Traffic volumes along Beach Road north west of Catlin Avenue were recorded between 3pm – 6pm on 1 March 2016. A total 4477 vehicles were counted in the 3 hours period counted. The afternoon peak hour (3.00pm to 4.00pm) was 1527 vehicles.

5.5 Adjoining Land-use Precincts

Along the Beach Road pathway systems there is a mix of public and private land uses. For the purpose of this study, it has been divided into six sections (zones or areas) from A to F:

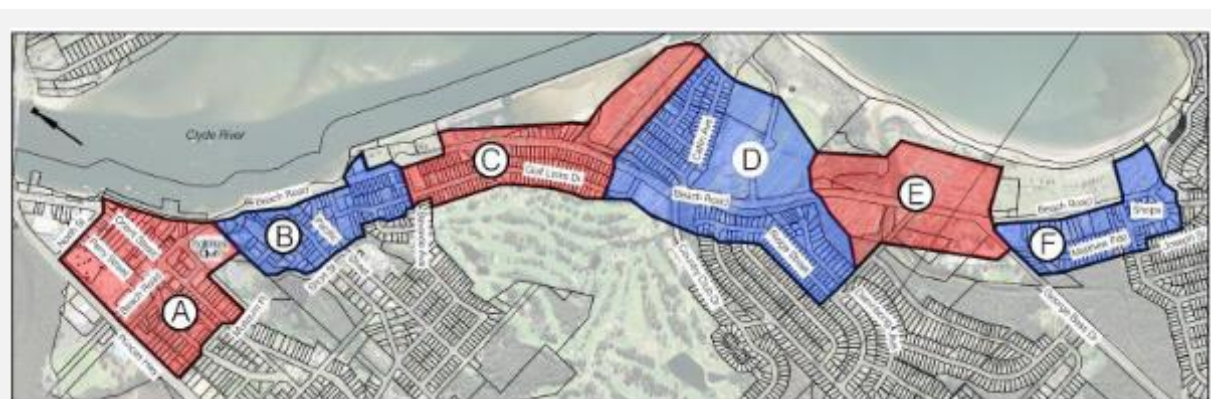


Figure 2 — Map of Survey Zones (sections A – F)

- A. **Batemans Bay CBD** – main shopping and business precinct, the target area for many pedestrians and bike riders.
- B. **CBD to Bavarde Avenue** – the foreshore on the east side and residential area on the west side. Half way along in the vicinity of Pacific Street and Herarde Street there shops, offices, a motel and restaurant. Pacific Street also along leads to the district hospital.

- C. **Bavarde Avenue to the north side of Catalina Country Club car park** – the foreshore, marina and (The Coachhouse) tourist park on the east side and residential area on the west side.
- D. **North side of Catalina Country Club (golf course) car park to Birdland Animal Park** – the residential areas on both sides of the road. Golf course/club and petrol station on the west side. Hanging Rock regional recreational and education precinct on the east side that includes playing fields, a Council library, Wollongong University and Illawarra TAFE sub-campuses, tennis courts, a regional boat ramp, a skate park and a yacht club.
- E. **Birdland Animal Park to George Bass Drive** – Birdland Animal Park and (Batemans Bay) tourist resort on the east side; a high school and retirement village on the west side.
- F. **George Bass Drive to the Batehaven shopping centre** – a shared Path contained within Corrigans Recreation Reserve that includes open space and picnic areas, regional accessible playground and a section used for a touring circus, markets and special events including marathon and triathlon races. Sections of the reserve contain formalised sealed parking areas as well as overflow parking on select grass spaces. The shopping centre is of medium size with a mix of retail and healthcare businesses.

5.6 Accident Statistics

The predominant accident type along Beach Road is between vehicles at intersections or rear end impacts.

The RMS CrashLink database shows a total of 75 crashes in the five-year period from July 2010 to June 2015.

- Crashes involving vehicle(s) requiring tow-away's but with no casualties made up 53 % of the accidents.
- Crashes involving vehicle(s) with casualties (excluding pedestrians) made up 36 % of the accidents.
- Crashes involving vehicle(s) and with pedestrian casualties made up 11 % (8 people) of the accidents.
- Of the 8 people, one death occurred on 23 September 2010. This was where a person attempted to walk across Beach Road about 100 metres to the south-east of Miller Street.

5.7 Inventory of existing facilities

A mostly concrete shared pathway generally 2.5 metres wide runs along the eastern side of Beach Road from the Batemans Bay CBD to Corrigan's Reserve opposite the Batehaven shops. The northern end of this pathway links to the Mara Mia promenade (opposite the Batemans Bay Soldiers Club), which heads along the foreshore on the eastern side of the CBD to the Batemans Bay Bridge on the Princes Highway.

The section from the Princes Highway (through to the start of the shared path on the eastern side of Beach Road) dissects the CBD and is a mix of concrete footpaths of variable widths and concrete or paver footways from the building line to the kerb.

A pathway generally 1.2 metres wide runs along the western side of Beach Road from the Princes Highway intersection through to the Batehaven shops (Edward Road).

5.8 Pathways Audit

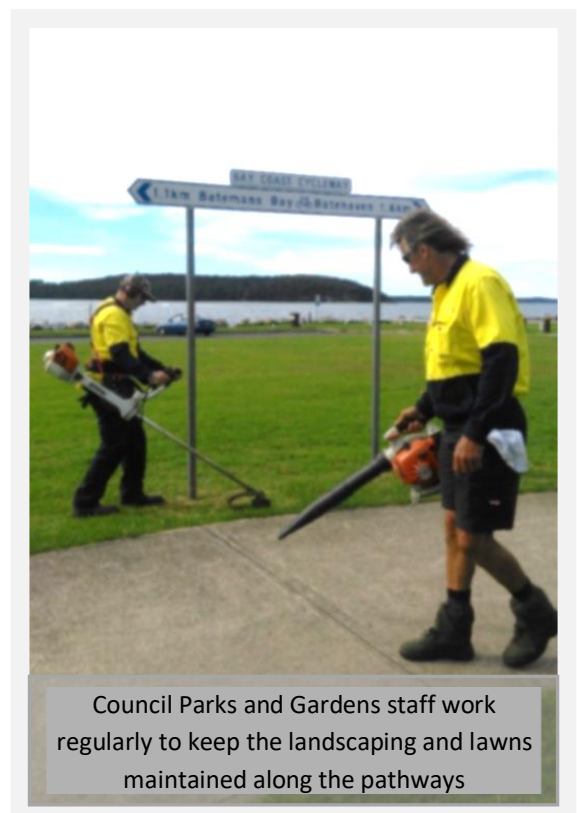
The 2.5m wide shared path on the eastern side and the 1.2m wide general use path on the western side of Beach Road are in good order and well maintained, however some sections are reaching 'end of life'.

- Council has an inspection and maintenance regime and this is reported in the annual Operational Plan & Budget. This includes mowing, hazard (including trip) inspection and rectification, signage and linemarking maintenance (refer:

<http://www.esc.nsw.gov.au/inside-council/community-and-future-planning/delivery-program-and-operational-plan>

Observations by Council's pedestrian count team and various visits by Council's PAMP team members have formed the following conclusions:

- Both paths are well used by a mix of pedestrians, cyclists and mobility scooter operators. Note *that the many cyclists on the path on the south west side of Beach Road do so in contravention of the Road Rules.*
- There are very few wheelchair users on the paths (with the exception of mobility scooters).
- An increase of traffic on the path occurs at various times of the day including early morning and late afternoon. There is an increase in mobility scooters early in the morning as they visit supermarkets in the CBD at the least crowded time of day.



Council Parks and Gardens staff work regularly to keep the landscaping and lawns maintained along the pathways

- A bridge crossing Joe's Creek (currently being replaced) on the shared path near the Birdland Animal Park is 2.45m wide between the handrails. The standards indicate that the bridge should be at least a clear width of 3m measured between the handrails. A 2.45 metre wide timber footbridge with concrete overlay crosses Joe's Creek between George Bass Drive and the Hanging Rock Precinct.



6. Pedestrian count

A pedestrian and cyclist count was undertaken on Tuesday 1 March 2016 along the Beach Road path system from 3pm to 6pm. The aim was to capture after-school students' activity as well as movements to and from the CBD after work, and recreational walkers/runners/cyclists.

Counts were recorded in 15 minute increments from 3pm to 6pm. Records were in three groups: walkers/runners, cyclists and motorised wheelchairs/mobility scooters. (Refer Appendix A).

6.1 Pedestrian and cyclist count methodology and result summary

a) Summary of counts in the zones B to F

Total individuals counted was 1116 (656 + 460).

The primary area for the counts was from the start of the shared path at the Soldiers Club / Mara Mia promenade through to just north of the Batehaven Shops (Zones B to F).

	Total	Pedestrian	Cyclist	W/chair or Scooter
Ped Count shared path	656	60%	38%	2%
Ped Count western path	460	78%	20%	2%

Table 2 - Summary of counts in the zones B to F

b) Summary of individuals crossing Beach Road in the CBD (excluding at Traffic Signals)

A secondary count was carried out in the area between the Princes Highway and Orient Street. This count was for pedestrians and cyclists only crossing Beach Road and excluding crossings at the traffic signals (Zone A). As this is part of the main CBD area, there was little benefit in doing a complete count including the transverse footpath travel and traffic signals crossing.

Zone A	Sector 1		Sector 2		Sector 3		Total Count
	Count	%	Count	%	Count	%	
	46	31.3%	61	41.5%	40	27.2%	

Table 3 - Summary of individuals crossing Beach Road in the CBD

c) **Summary of the pathways user from Zones B to F, from south east of Flora Crescent to north of the Batehaven shops. (excluding the Edwards Road traffic signals).**

Eight areas were attended by Council staff at strategic locations along Beach Road (refer Map at Appendix G). The areas were then combined back to five (to reflect the on-line survey areas) - refer Figure 2; Map of Survey Zones on page 9)

Zone	East Shared Path	Area %	West Path	Area %	Total E + W	Area % E + W	Cross Road	% Cr Rd	R/About Cr Rd	Signals Cr Rd	Other Cr Rd	Comments
B	223	34%	160	35%	383	34%	122	32%	39		83	
C	85	13%	33	7%	118	11%	16	14%			16	
D	200	30%	138	30%	338	30%	99	29%		66	33	
E	71	11%	50	11%	121	11%	3	2%			3	
F	77	12%	79	17%	156	14%	54	35%		52	2	excludes cross at shops
Total	656		460		1116		294	26%	39	118	137	

Table 4 – Summary of the pathway users from Zones B to F

The percentage figures are a comparison of the individuals within an Area (B to F) compared to the total (i.e. East 656+West 460 =1116)

Note that the number of people crossing Beach Road in Zones B to F (294) compared to the total number of people using the Pathways is 26%.

d) **Summary of pathway users crossing Beach Road from Zone A to Zone F**

The counts included where the crossing of Beach Road occurred. To identify crossing locations, Sectors 1 and 2 were established within the various areas A to F. A comments column was used to record additional information such as in which part of the sector the crossings occurred or other observations such as where walkers alighted from buses and crossed the road. **See Appendix G for a detailed map of zone areas A to F including sectors.**

Analysis Crossing Beach Road						Comments
Zone A	sector 1	46	Beach Rd to Perry St **	**	Exclude Signals	
	sector 2	61	Perry St Roundabout		Formal Crossing	
	sector 3	40	Perry St to Orient St **	**	Exclude Signals	
Zone B1	sector 1	45	Flora Cres to sth Soldiers Club**	**	Exclude Signals	
	sector 2	27	sth Soldiers Club to Pacific St			
Zone B2	sector 1	11	Pacific St to Bavarde Ave **	**	Exclude Roundabout	
	sector 2	39	Bavarde Ave Roundabout		Formal Crossing	
Zone C	sector 1	16	Bavarde Ave to Resort Entry			
Zone D1	sector 1	19	Resort Entry to Catlin Ave **	**	Exclude Signals	
	sector2	66	Catlin Ave / CC Drive Signals		Formal Crossing	
Zone D2	sector 1	14	Catlin Ave to Birdland Exit **	**	Exclude Signals	12 out of 14 cross at Birdland and finish at Skate Park
Zone E	sector 1	3	Birdland Exit to G-Bass Dr **	**	Exclude Signals	
Zone F	sector 1	52	Beach Rd / G-Bass Signals		Formal Crossing	
	sector 2	2	G-Bass Dr to Corrigan's entry	**	Exclude CBD & Signals	
Total Crossing Beach Road		441				
Formal Crossing Locations		218				
% Formal Crossing Locations		49%				

Table 5 - Summary of pathway users crossing Beach Road from Zone A to Zone F

From the counts it is evident that:

- a) both the eastern shared path and western narrower path are well used. About 60% of users are on the shared path.
- b) A greater number of people use the path system closer to the Batemans Bay CBD and at the Catalina section between the golf club and the Hanging Rock recreation and education precinct.

6.2 Other observations during count period:

Personnel recorded various observations during the count period (See Appendix A). From these observations the following issues will be addressed:

- a) Bus zone on the (southbound) south eastern side of Beach Road predominantly service people who access residences or services such as the hospital or retirement village on the western side. People were observed alighting from the bus and crossing the four lanes at undesirable (mid-block) locations.
- b) Many people were observed walking down from Pacific Street and trying to cross Beach Road just north of the intersection. Several people made several attempts to cross whilst walking along the western path and eventually kept going to presumably cross at or near the Flora Crescent traffic signals.
- c) There was a spike in the number of path users at the southern end of the study area between 3pm to 4.30pm (refer Appendix A, sections D2 and E). This was predominantly high school students walking either south east to Batehaven or north west towards Hanging Rock. Many of the north-bound students crossed Beach Road at Birdland Animal Park and ended their journey at the skate park.

7. Community and Stakeholder Consultation

7.1 User Survey

The demographic of the survey area, which includes a large number of multi-occupancy holiday units and owners who only visit the area from time to time (but use the paths when they do visit) created a challenge to gathering meaningful data from pathways users. Consequently, a survey was conducted with six opportunities provided for comment:

- a) In January / February 2016, the user survey was made available on line and advertised in local print media in Council's newsletter and on its News page inviting residents to participate. (See Appendices B and C)
- b) A total of 826 property owners, householders and CBD tenants were provided with a hard copy of the survey and self-addressed envelope via mail out and via a letterbox drop inviting comment. (See letter at Appendix D). The letterbox and business tenant drops were done to ensure that both property owners and householders were given the opportunity to comment. (See survey form at Appendix E)
- c) Key stakeholder groups including facilitators of regular special events in the study area as well as key community/sporting groups and the Disability Advisory Committee were invited to comment via the survey.
- d) Staff conducted one on one surveys on the path at key times to gather data from any users visiting from outside the survey area. The responses were integrated into the survey results.
- e) Survey forms and information were on display at the Batemans Bay Library, in the centre of the survey area for four weeks in the January/February 2016 period.
- f) The responses were integrated into the survey results at Appendix F.



Children ride their bikes with their parents / carers every day on the Eastern shared pathway

The aim of this survey was to assess pedestrian activity, identify concerns, receive ideas for enhancement and identify regular crossing points (at traffic signals and roundabout crossings as well as haphazardly across four lanes).

The survey was well received with a total of 239 forms being completed either on line or returned in hard copy. (See Response to Questions Data at Appendix F)

7.2 Survey findings

Question 1: In reference to the map above, I stay/live/work in Zone or my postcode is:

Due to privacy issues, it was required that this question be optional. However 54% of the 239 respondents answered this question. Of that percentage 32.58% stayed in or worked in Zone A between the Princes Highway and the Soldiers' Club.

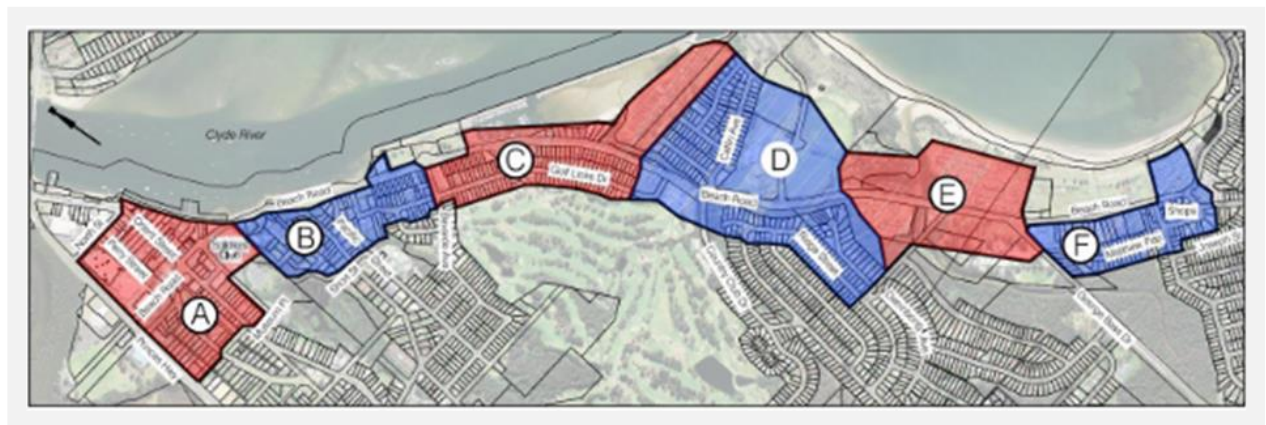


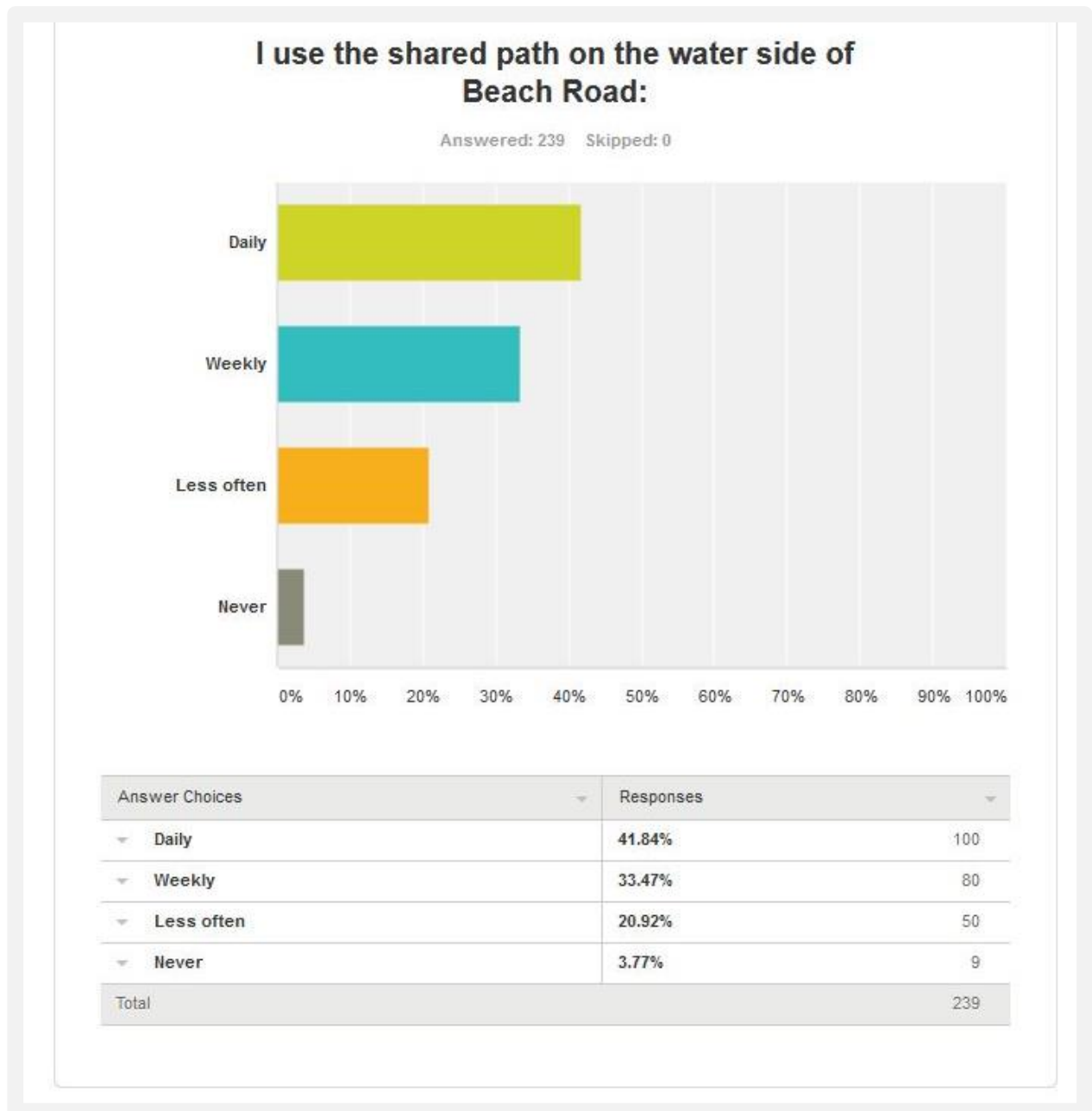
Figure 2 – Map of survey area zones

Question 2: (Optional) I stay/work/live on the following street:

An optional question, 66.10% listed which street they lived on.

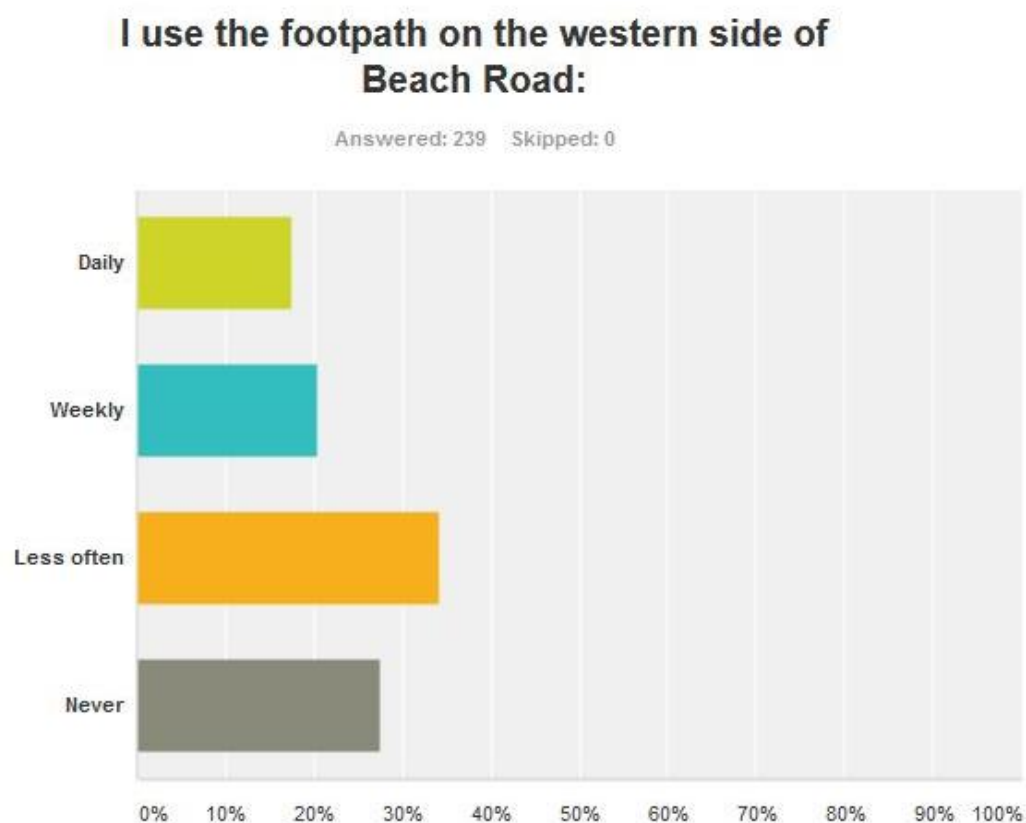
Question 3: I use the shared path on the water side of Beach Road.

All respondents answered this question. 41.84% of respondents use the shared pathway daily, with 33.47% using it weekly, 20.92% less often than weekly and 3.77% never using it.



Question 4: I use the footpath on the western side of Beach Road

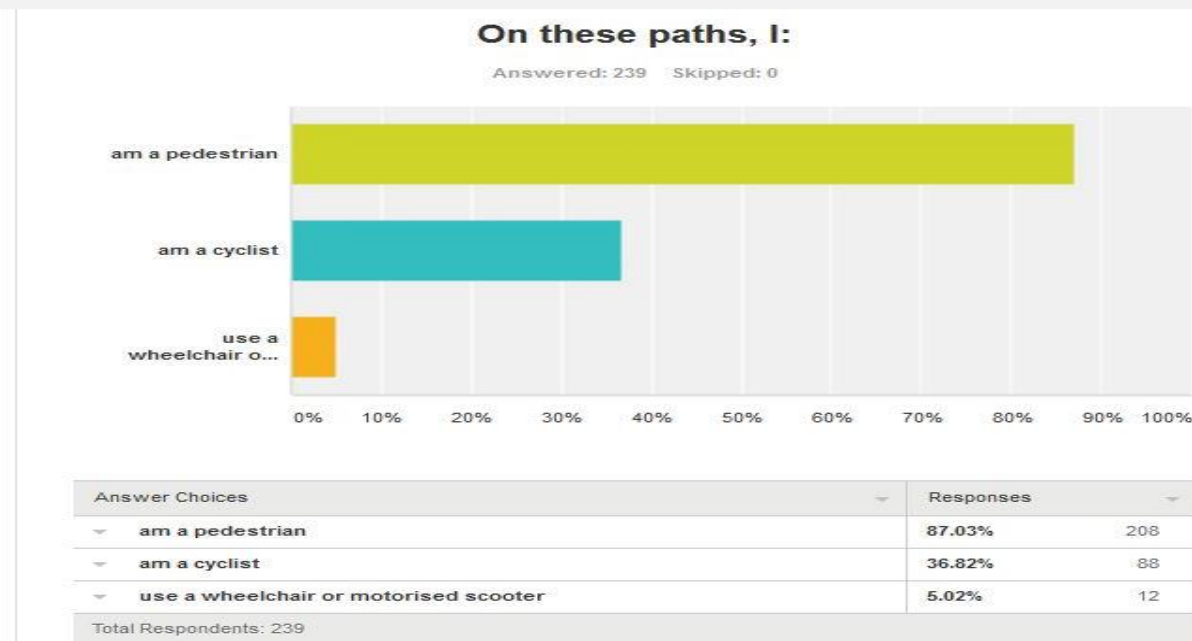
All respondents answered this question. The majority of respondents use the western path less often than weekly. 17.57% used this footpath daily, 20.50% used it weekly, 34.31% used the footpath less often than weekly and 27.62% never used it.



Answer Choices	Responses
Daily	17.57% 42
Weekly	20.50% 49
Less often	34.31% 82
Never	27.62% 66
Total	239

Question 5: On these paths I am a pedestrian, cyclist, use a wheelchair or motorised scooter.

All respondents answered this question. Some respondents indicated they use the path both as a pedestrian and as a cyclist, so the figures amalgamate to more than 100%. According to the survey 87.03% pedestrians used the paths; 36.82% cyclists used the paths and 5.02% used a wheelchair or motorised scooter. The response certainly shows that walking is the most popular use of the paths.



Question 6: My average return trip is approximately (in kilometres or minutes)

Respondents answered either in distance or time to this question. This was to assist those who may have difficulty in assessing distance. The average distance round trip was six kilometres and of those who responded in time, 46 minutes was the average round trip.

Answer Choices	Average Number	Total Number	Responses
Enter number of kilometres: Responses	6	818	134
OR enter number of minutes: Responses	46	3,983	86
Total Respondents: 215			

Question 7: I cross Beach Road in the following zone/s at the specified frequency

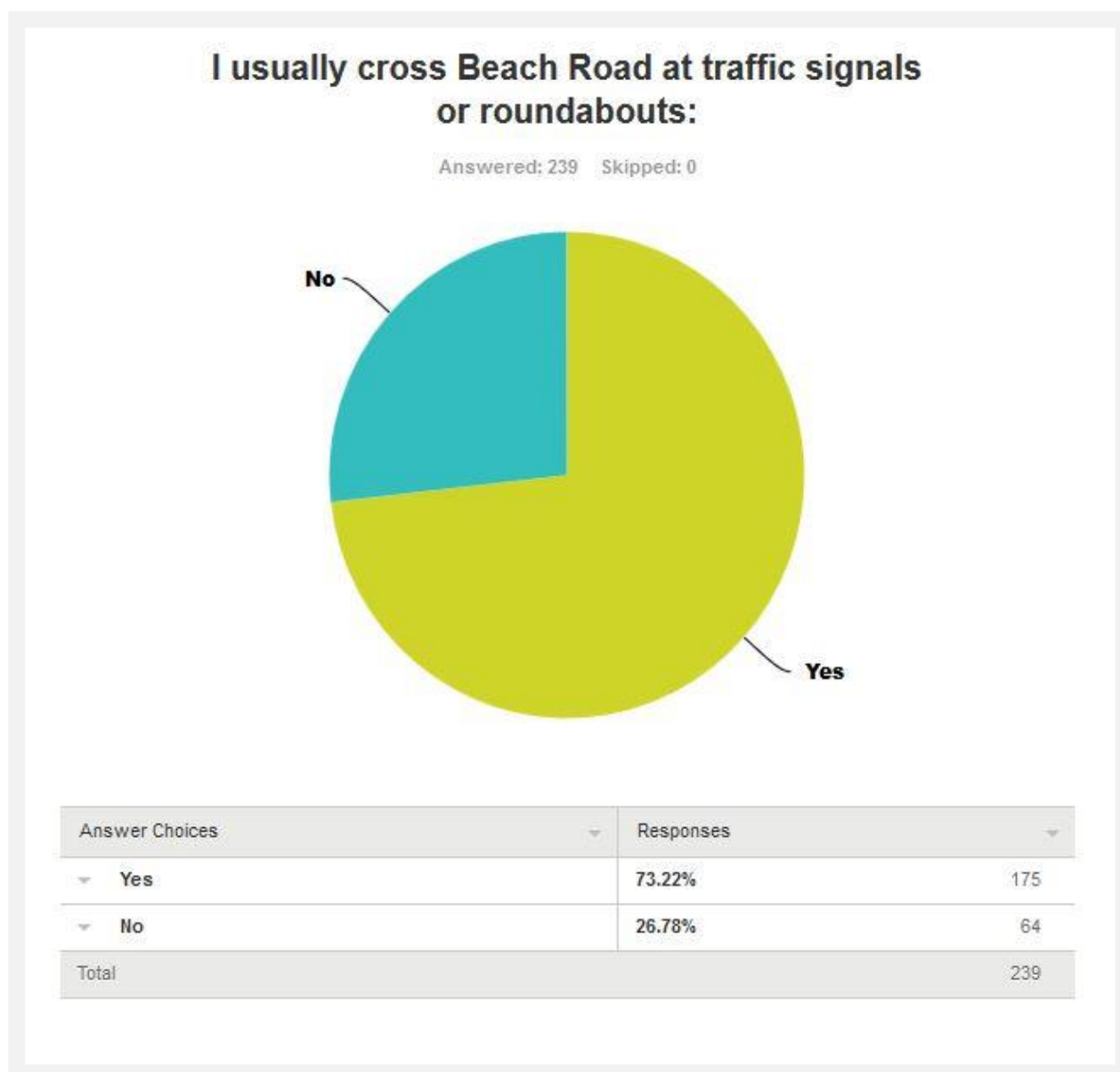
93.3% of respondents answered this question. The zone where respondents crossed most on a daily and weekly basis was Zone A (the CBD). According to the survey responses, the least used area was Zone E, from Birdland Animal Park to the traffic light intersection at George Bass Drive.

	Daily	Weekly	Less Often	Total
A - within the Batemans Bay CBD including the Soldiers Club	29.71% 52	36.00% 63	34.29% 60	175
B - from the Soldiers Club to the roundabout at Bavarde Avenue	20.95% 31	22.97% 34	56.08% 83	148
C - from the roundabout at Bavarde Avenue to the Coachhouse Marina Resort/Club Catalina	17.78% 24	20.00% 27	62.22% 84	135
D - from the Coachhouse Marina Resort/Club Catalina to Birdland Animal Park/Shell service station	15.38% 22	18.18% 26	66.43% 95	143
E - from Birdland Animal Park/Caltex service station to the traffic light intersection at George Bass Drive	10.00% 13	19.23% 25	70.77% 92	130
F - From the traffic lights at George Bass Drive to the Batehaven shopping centre	19.75% 32	32.72% 53	47.53% 77	162

Table 6 —Breakdown of zones where crossing occurs

Question 8: I usually cross Beach Road at traffic signals or roundabouts.

All respondents answered this question. 73.22% said they do usually cross at traffic signals or roundabouts and 26.78% said they don't usually cross at traffic signals and roundabouts.



Question 9: (Optional) The existing path system benefits me in these ways:

This question provided respondents with the opportunity to provide comment on how they felt the pathway benefits their lifestyle.

The benefits of the pathways included mostly exercise, healthy lifestyle, social and recreation opportunities plus access to the CBD without needing to drive.

A full listing of benefits is at Appendix I

Question 10: (Optional) The improvements I would like to see include:

The resident survey was extremely useful in gaining a clear understanding of the challenges of crossing Beach Road in the survey area. This question and Question 11 provided respondents with the opportunity to provide suggestions on preferred improvements/enhancements to the existing pathways. The responses included:

- a) More opportunities to cross Beach Road safely.
- b) Signage and an education programs.
- c) The behaviour of cyclists and motorised scooter users was raised as a concern.
- d) Traffic signals, particularly the 'turn left at any time' signal at the Catlin Ave/ Country Club Drive/Beach Road traffic signal intersection was raised as a concern. Pedestrians including mobility scooter users have had or witnessed near misses at this spot.
- e) Potential enhancements to the existing pathways were offered by respondents. Included were requests for more seating, shade, drink stations, marked centrelines and dedicated pedestrian or cycle only paths.
- f) Ensure the paths are kept smooth and in good repair.
- g) The proximity of the shared path to Beach Road was too close in some areas.
- h) Extend the shared path at both the northern and southern ends.
- i) Widen the shared path so there is more room for pedestrians, bicycles and mobility scooters.



Commencement of the shared path at the Mara Mia promenade

A detailed breakdown of the particular comments made by respondents is at Appendix J.

8. Initial Review

8.1 PAMP

A PAMP Review Group was formed consisting of:

The Eurobodalla Shire Council Traffic Officer
The Eurobodalla Shire Council Road Safety Officer
The Roads and Maritime Services Traffic Engineering Officer

An initial review was undertaken by the PAMP Review Group and suggestions amendments were incorporated into the PAMP.

8.2 Opportunities for improvement

Determined by the review group, considering feedback from the public and other measures

Refer to Section 10 for Implementation

a) Opportunities to cross Beach Road safely:

The road has two lanes in either direction (Beach Road is a four-lane road) with some of the northern section divided with a narrow centre island. There are seven formalised crossing locations along this 3.5km roadway (including the Hanging Rock Place roundabout currently under construction). Crossing at these roundabouts and signalised intersections is considered a low-risk activity. Crossing in other places by pedestrians, bicycles and motorised scooters users is considered a high risk activity.

The RMS CrashLink data as outlined in 5.6 *Accident Statistics* includes eight pedestrian injuries (including one death) for the period July 2010 to June 2015. Of these accidents three were at roundabouts and the other five in areas where people were assumed to be attempting to cross Beach Road mid-block, well away from any intersections.

There are several locations where there is a high percentage of pedestrians crossing mid-block and opportunities may be practical and affordable to upgrade intersections to fill in the 'gap' between the other low risk crossing points (traffic signals and roundabouts):

- Near the roundabout intersection of Perry Street (pedestrians crossing midblock in CBD)
- Near the 'T' intersection of Pacific Street
- At and south east of the 'T' intersection of Hanging Rock Place (roundabout under construction)

b) User behaviour, signage and education programs:

Enhanced signage and/or education programs would assist path users in ensuring their experience is more pleasurable, and to particularly reduce the risk of conflict with other path users. The existing regulatory signage and line marking is adequate and has been accepted by

the Local Traffic Committee. Refreshing pavement marking is undertaken under routine maintenance.

c) Operation of traffic signals at the Catlin Ave/Country Club Drive/Beach Road traffic intersection

The 'turn left at any time' sign allows vehicles exiting from Country Club Drive to turn left onto Beach Road when the light is red. Pedestrians including mobility scooter users have reported having had or witnessed near misses.

d) Enhancements to the existing pathways

Surveys often bring responses that are varied and some that are not practical. To determine what is practical and achievable, analysis uses a mix of objective and subjective methodology. Appendix J gives a detailed summary of suggestions.

Enhancements that were suggested by three or more people include more seating and the installation of drink stations and more rubbish bins.

Comment - Installation of seating is determined by Council parks section. A drinks station has been installed at Corrigans reserve however there are no other areas proposed for installation. Many people who travel long distances on the pathways carry their own drinks or there are many shops along the way where drinks can be purchased.

Enhancements that are not achievable that were suggested by three or more people are: marked centre lines – the 2.5 metre wide shared path is too narrow and dedicated pedestrian or cycle only paths

Comment – Marked centrelines does not sit within Council's Draft Pathway Strategy 2016. The 2.5m wide shared path complies with the standards.

e) Path to be smooth and in good repair

The survey indicated existing hazards such as tree roots, trip and uneven joints.

Comment - The paths are regularly inspected and maintained, including concrete grinding where the joints separate.

f) Bus Zones on Beach Road

There are six bus zones on the north eastern side of Beach Road, with only three located near acceptable crossing locations such as traffic signals or roundabouts. Pedestrians alighting from buses and crossing the road in these areas is a safety concern.

g) Timber bridge on shared path at Joes Creek

This bridge is in poor condition and is less than the required width, particularly as there is a centre bollard at each end which means a narrow width for users. These bollards were installed because golf carts have been observed using the bridge.

Comment - This bridge is currently being replaced with a concrete structure.

h) Extending the paths both ways and widening the paths.

Councils Draft Pathway Strategy 2016 details the location of existing and proposed paths in the shire (refer Map at Appendix K). Refer also in this report to 5.3 Transportation Corridor for a description of the existing and proposed pathways.

North of the study area there are adequate links to and through the CBD. South of the study area there are three separate general pathway systems (existing and proposed). Routes are south-west along Edwards Road; south along Crag Road and east along Beach Road.

According to the ESC Draft Pathway Strategy 2016 there are no shared paths proposed south of the study area.

The existing 2.5m wide shared path complies with the standards and is the recommended width in the ESC Draft Pathway Strategy 2016. The pathway can be wider than this, determined on the users and the bitumen section at Corrigans Reserve will be replaced with a 3 metre wide concrete shared path.

i) Shared path too close to Beach Road

The separation distance between the eastern travel lane and the edge of the shared path varies along the route. For the most part the separation is greater than 1.5 metres from the bitumen edge to path edge with a grass verge in between. For the entire length, there is a 150mm high concrete kerb separating the road and paths, with the exception of short lengths where driveways and road intersections exist.

For the northern west section starting at the CBD, through to Bavarde Avenue, most of the shared path has a 0.5m separation distance between the kerb face and path edge with the verge in between consisting of a coloured concrete surface. Most of the concerns from the survey respondents related to this northern area.

Comment - The 0.5 metre separation (with kerb) between the path edge and road complies with the minimum requirements as can be seen in the RMS NSW Bicycle Guidelines; July 2005. It is not practical to move the path further away from the road in this area as there is a rock sea wall on the other side.

j) Improved accommodation of special events

Most of the other opportunities for improvements and any subsequent implementation will improve special events facilities. Existing and future annual events will benefit from the pathway enhancement programs.

9. PAMP Development

The PAMP was developed by working consistently to its guiding objectives while taking into consideration the feedback after consultation with the community.

9.1 Infrastructure Standards and Guidelines

To assist in determining suitable solutions and enhancements to the area, the following documents have been referenced:

- **Austroads:**
Cycling Aspects of Austroads Guides
Guide to Road Design Part 6A: Pedestrian and Cyclist Paths
- **Australian Standards:**
AS 1742.9 Bicycle facilities
- **NSW Government:**
NSW bicycle guidelines; July 2005
RMS Delineation Sec 12 – Pavement markings for bicycle facilities
Transport for NSW – Road Safety Strategy
- **(NSW) Road Rules** - <http://www.legislation.nsw.gov.au/#/view/regulation/2014/758>
Including:
Rule 13 What is a road related area.
Rule 17 Who is a rider.
Rule 18 Who is a pedestrian.
Rule 230 Crossing a road – general
Rule 242 Wheeled recreational device on a shared path
Rule 245 Riding a bicycle
Rule 250 Riding on a footpath or shared path
Rule 251 Riding to the left of oncoming bicycle riders on a path
- **Eurobodalla Shire Council:**
Shared Pathway Strategy July 2010 (will be superseded late 2016)
Draft Pathways Strategy 2016 (to be adopted late 2016)
Road Safety Strategic Plan 2013-2017
Draft Recreation Open Space Strategy 2016

9.2 Safety Assessment

As the PAMP identifies areas for upgrades or enhancements, a Road Safety Audit can be commissioned to assist with the assessments. These audits are based on specific guidelines and in NSW require the auditor to be registered with the NSW Centre for Road Safety. Road Safety Audits are a handy tool to identify hazards and recommend appropriate treatments.

9.3 Rating of PAMP Methodology

The RMS guide to preparing a PAMP recommends that a scoring system be devised to rate the PAMP against the original guiding objectives. A rating system was developed which involved giving each of the objectives listed in Section 3.0 a score out of 10. A score of 0 to 5 was considered a low rating, a score of 6 to 8 was medium and 9 to 10 was considered high. By scoring each of the objectives in this fashion an overall score for the PAMP was recorded.

As there were 9 objectives listed in Section 3.0, the maximum score was 90 points. A score between 0 and 53 can be considered “Poor – Improvements may be required”. A score between 54 and 80 can be considered “Acceptable – some key improvements may be required”. A score between 81 and 90 can be considered “Good – minor improvements may be required”. This PAMP was scored as shown in Table 7 below.

Guiding Objective – Refer Section 3.0 Above		Score		
		Low 0 to 5	Med 6 to 8	High 9 to 10
1	Develop a practical network of facilities that can be used by all of its residents and visitors.			9
2	Encourage walking and cycling as alternative modes of transport.		8	
3	Promote the environmental, recreational, health and economic benefits of cycling and walking.		7	
4	Increase the safety of pedestrians and cyclists through; engineering, education and encouragement.			9
5	Facilitate improvements in the level of equal pedestrian access, mobility and priority, particularly in areas of pedestrian concentration and for people with disabilities and the older community.		8	
6	Link existing vulnerable road users plans in a co-ordinated manner (e.g. Council’s Draft Pathway Strategy 2016, maintenance programs, RMS’ <i>Go Together</i> Bicycle Safety Laws, etc.)		8	
7	Identify and attempt to resolve user concerns.			9
8	Improved accommodate of special events.	5		
9	Link in with the objectives of existing walking and cycling grants.		8	
PAMP Total Score			71	
		Overall Rating: Acceptable		

Table 7 - Rating of PAMP Methodology

Rated by Geoff Armstrong – Eurobodalla Shire Council Design Coordinator

10. Implementation

10.1 Proposed or Possible Solutions and Enhancements

Refer to Section 8.2 for community feedback details

a) Opportunities to cross Beach Road safely:

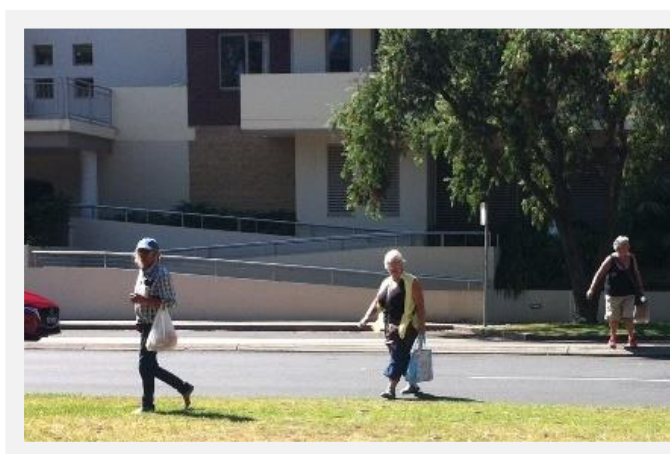
- Princes Highway to Orient Street– high percentage of pedestrians crossing mid-block.

Install traffic signals at the Perry Street (four-way) intersection (remove roundabout).

This would increase pedestrian safety even further. This concept of a signalised intersection is contained within Council's Batemans Bay Traffic and Transport Study:

<http://www.esc.nsw.gov.au/council-services/works/traffic-studies>

Additional to the traffic signals, if warranted a pedestrian fences could be installed between the sections west of Perry Street (existing island) and the second section east of Perry Street. This would force pedestrians to cross at the traffic signals at the Princes Hwy, Perry St or Orient St.



Example of people crossing Beach Road 'mid-block' between the Princes Hwy and Perry St



Aerial view of the section from the Princes Hwy to the promenade – recommend installation of traffic signals at Perry Street

- Intersection of Pacific Street – high percentage of pedestrians crossing mid-block.

Southbound, a channelised right turn (CHR) treatment with a concrete island could be installed. A gap for pedestrians to act as a pedestrian refuge could be incorporated. This treatment has previously been considered by Council. A concept design was produced together with an estimate. It was found to be relatively expensive to build due to constraints such as available land and the services that need to be relocated including overhead power and telecommunications underground optic fibre.

In association with a CHR right turn treatment, a signalised intersection could be installed. This would increase safety for pedestrians even further.



*Aerial view of the section from the promenade to the south-east of Herarde Street.
Suggested: reconstruction of the intersection (CHR)*

- Intersection of Hanging Rock Place– high percentage of pedestrians crossing mid-block.

A roundabout is currently under construction at this site, and this will incorporate a gap for pedestrians in a splitter island, to act as a pedestrian refuge. This roundabout is underfunded and there may be an opportunity to seek further funding as a contribution to the pedestrian aspect of the project



Aerial view of the section from Country Club Drive to Joes Creek – A roundabout is under construction at Hanging Rock Place and the bridge on the shared path at Joes Creek is also being replaced with a new pathway bridge

b) User behaviour, signage and education programs:

- Education on path use can be an ongoing process with Council's web-based information, newsletters and media campaigns. Current signage and linemarking on the shared pathway is adequate and complies with the regulations and Council's best practice.

c) Operation of traffic signals at the Catlin Ave/Country Club Drive/Beach Road traffic intersection:

- The Roads and Maritime Services have been asked to review the operation of these traffic signals and provide further advice.

d) Enhancements to pathways - additional seating and drink stations and rubbish bins:

- Provision of additional facilities is under review in the Draft Recreation Open Space Strategy 2016. Corrigans Reserve is proposed to have a drink station installed as part of a current upgrade including a regional accessible playground.

e) Paths to be smooth and in good repair:

- The paths are regularly inspected and maintained. Council's responsible team will be asked to carry out a high priority assessment of the pathways along Beach road

f) Remove three Bus Zones on the eastern side of Beach Road:

- Discussions have commenced with the local bus company to find a solution. Bus routes may be able to be altered or stops located closer to traffic signals or roundabouts. The sites are all on the south eastern side of Beach road:
 - I. Opposite Pacific Street (can be reinstated if intersectional is signalised)
 - II. At the marina
 - III. Opposite the Manor retirement village (near Birdland)

g) Timber bridge on shared path at Joes Creek:

- Replace with a new pathway bridge.

10.2 Detailed Cost Estimates

a) Opportunities to cross Beach Road safely:

Intersection of Perry Street

- Perry Street to be a signalised (four-way) intersection (remove roundabout) \$3,700,000

Intersection of Pacific Street

- Southbound channelised right turn treatment concrete island (CHR) = \$2,000,000
- Additional to a CHR right turn treatment, install a signalised intersection = \$300,000

Intersection of Hanging Rock Place— high percentage of pedestrians crossing mid-block

- A roundabout is currently under construction at this site which will incorporate a gap for pedestrians act as a pedestrian refuge. = \$2,400,000 total (\$100,000 for pedestrian gap)

b) User behaviour, education programs:

- Education on path; ongoing process with Council's web-based information, newsletters and media campaigns = \$5,000

c) Phasing operation of traffic signals at the Catlin Ave/Country Club Drive/Beach Road intersection:

- Remove the 'turn left at any time' sign and adjust pedestrian phase = \$500

d) Enhancements to the existing pathways; more seating and shade, plus the installation of drink stations and more rubbish bins:

- Include in the strategic review of parks and reserves infrastructure. Corrigans Reserve to have a drink station installed. If additional facilities recognised as desirable, supply and install = \$12,000

e) Ensure paths are smooth and in good repair:

- Nil additional cost as part of Council's regular maintenance program

f) Replace bridge on shared path at Joes Creek:

- Currently being undertaken = \$200,000

g) Remove three Bus Zones on the eastern side of Beach Road:

- Subject to discussions with local bus company and agreement with Transport for NSW = \$1,500

h) The pathway can be wider than this, determined on the users and:

- Replace the bitumen path section at Corrigans Reserve with a 3 metre wide concrete shared path: 350m @ \$240/m = \$84,000

i) Road Safety Audits:

- Various sites = \$21,000

10.3 Implementation Timetable / Cost

The following is a broad-brush estimate of the starting date of upgrades and enhancements of the Beach Road pathway system as an outcome of the PAMP or current works that assist access*:

1. Roundabout at Hanging Rock Place*	\$ 100,000	2016
2. Concrete bridge on Joes Creek shared path*	\$ 200,000	2016
3. Modify Phasing of traffic signals at the Country Club Drive	\$ 500	2016
4. Enhancements to the existing pathways	\$ 5,000	2017
5. User behaviour, education programs:	\$ 8,200	2017
6. Remove select bus zones on east side of Beach road	\$ 1,500	2017
7. Road Safety Audits	\$ 21,000	2017
8. Shared path at Corrigans Reserve (replace bitumen path)	\$ 84,000	2017
9. Signalise the Beach Road and Perry Street intersection	\$ 3,700,000	2019
10. Channelise the Beach Road and Pacific Street intersection	\$ 2,000,000	2020
11. Signalise the Beach Road and Pacific Street intersection	\$ 300,000	2021

10.4 Funding Opportunities

Council has ongoing funds available for routine maintenance and signage upgrades. Many of the low cost solutions and enhancements can be implemented using this annual budget.

Section 94 and 94A plans require contributions for pathways and these funds are often used to match other government grants.

As development occurs, applicants are required to contribute to pathway installation. In the case of Beach Road, which has existing facilities, this contribution is likely to be limited to the upgrade or relocation of pathways or upgrade of intersections.

The more expensive solutions will need to be funded from other government programs:

- a) **Transport for NSW – (Active Transport and Bike Week).** These annual grants programs has been successfully used by Council for many years. For Active Transport, funds are used for new complying works that are identified in the ESC Pathway Strategy. For Bike Week the funds can be used to promote the shared path by an organised event, encouraging and educating bike riders.
- b) **Road Safety Engineering Programs (Black Spots); National Road Safety Strategy 2011-2020 and NSW Road Safety Strategy 2012-2021.** These programs have limited funds available for pedestrian safety, however in the case of Beach Road with its high incidence of vehicle/injury accidents upgrading of intersections or other engineering solutions will also benefit pedestrians because safer crossing points will be available.
- c) **Other programs and grants** as available.