



Hobart City Council

Sandy Bay Road Pedestrian Crossing Riverview Inn Road Safety Review

May 2018

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1. Introduction

1.1 Overview

GHD was engaged by the City of Hobart to undertake an assessment of two pedestrian crossing alternatives on Sandy Bay Road in the vicinity of the Riverview Inn, at 795 Sandy Bay Road. The scope included a review against relevant design standards and a road safety review.

The site location is shown in Figure 1.1.

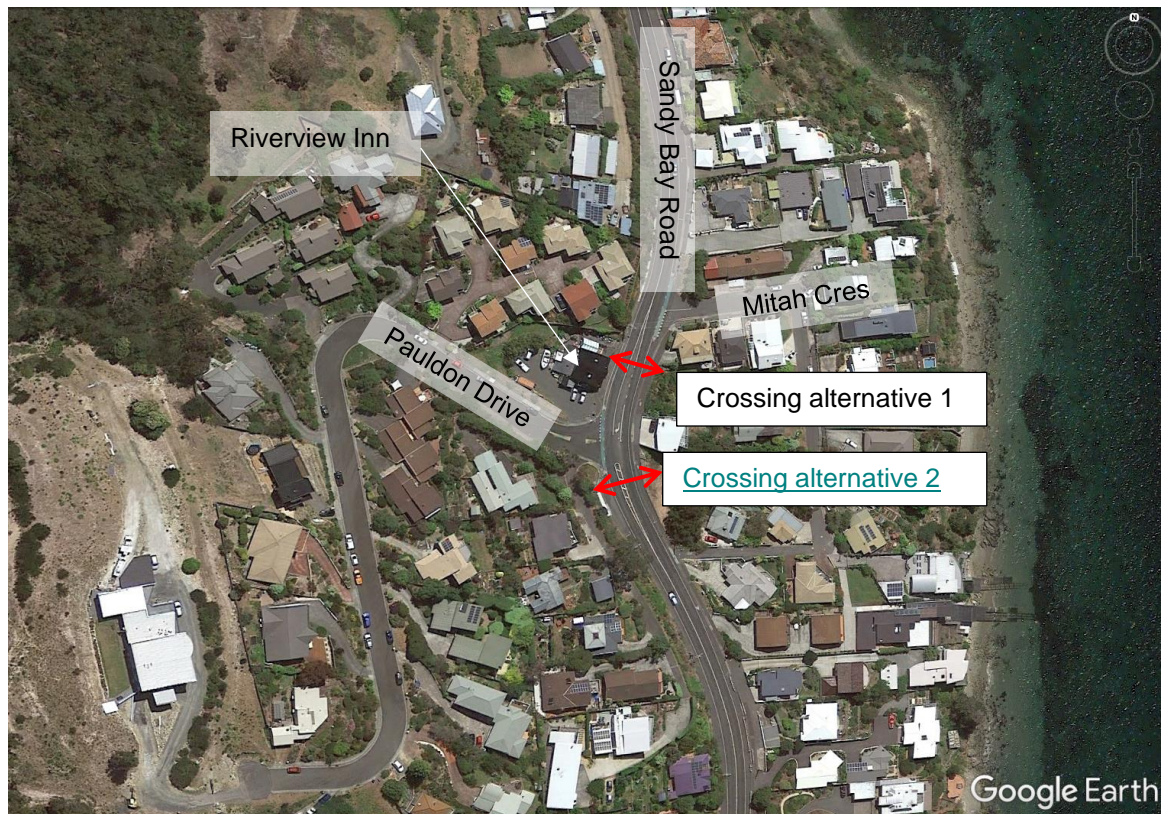


Figure 1.1 Site Location

1.2 Basis of Assessment

The following information was supplied by Council to assist in the preparation of this assessment:

- Sandy Bay Walking and Cycling Project – Stage 3: Sandy Bay Cycleway Traffic Approval Plan (06/01/2016) – supplied by Council
- Sandy Bay Walking and Cycling Project – Stage 3: Sandy Bay Cycleway Riverview Inn Crossing Preliminary Plan (27/10/2017) – supplied by Council
- Parking Survey Results 3-9 August 2017 – supplied by Council
- Pedestrian Survey Results 3 August 2017 and 5 August 2017 – supplied by Council

A site visit was undertaken on Friday 13 April 2018.

1.3 Existing conditions

In the vicinity of the proposed crossing, Sandy Bay Road is a two-lane, two-way road. Bicycle lanes are provided on both sides of Sandy Bay Road. A channelised right turn lane is provided at the Pauldon Drive intersection. The posted speed limit is 50 km/h.

Footpaths are provided on both sides of Sandy Bay Road. An inbound bus stop is provided immediately south of Pauldon Drive, and an outbound bus stop is provided approximately 80 m north of Pauldon Drive (30 m north of Mitah Crescent).

There are no formal pedestrian crossing facilities in the area.

1.3.1 Traffic Volumes

Recent traffic volumes for Sandy Bay Road were not available from Council.

1.3.2 Crash History

The recent crash history for Sandy Bay Road in the vicinity of the proposed crossings was requested from the Department of State Growth. There were no crashes recorded in this vicinity within the past five years.

1.3.3 Pedestrian Activity

12-hour pedestrian volume surveys were undertaken in the vicinity of the proposed crossing in August 2017, on a typical Thursday and a Saturday. The results are attached in Appendix A. The greatest concentration of pedestrians occurs on the eastern side of Sandy Bay Road (crossing Mitah Crescent) with a peak of 24 pedestrians per hour (on both Thursday and Saturday). A peak of 7 pedestrians per hour crossed Sandy Bay Road south of Pauldon Drive, with smaller numbers at other locations. The presence of the inbound bus stop at this location is likely to be a significant factor in these volumes.

1.3.4 On-Street Parking Activity

Parking utilisation surveys were undertaken on Sandy Bay Road in front of the Riverview Inn for a full 7-day period in August 2017. The results are attached in Appendix B. Of the three available spaces, the maximum utilisation recorded was two spaces, usually in the afternoon and evening, corresponding with Riverview Inn opening times. Any of the three spaces were occupied for only 16 hours of the week (10% of the week).

1.4 Pedestrian crossing alternatives

Two alternative pedestrian crossing locations have been reviewed. The first alternative is located north of Pauldon Drive, in front of the Riverview Inn. This option involves the loss of all on-street parking spaces in front of the Riverview Inn. The second location is south of Pauldon Drive, in front of the inbound bus stop.

Both crossing designs include a pedestrian refuge in the centre of the road. Design plans for the proposed crossings were provided by Council and are attached in Appendix C.

2. Review against design standards

2.1 Sight distance

Austroads Guide to Road Design Part 4A provides guidance for sight distance at pedestrian crossings. There are two sight distance requirements for pedestrian crossings:

- Approach sight distance (ASD) should be provided between approaching vehicles (1.1 m eye height) and the surface of the roadway (0 m) at the crossing.
- Crossing sight distance (CSD) should be provided between approaching vehicles (1.1 m eye height) and a pedestrian waiting to cross the road (1.07 m eye height).

Based on a speed of 50 km/h and a two second reaction time, the required ASD is 55 m.

CSD is required to ensure a pedestrian can see approaching vehicles in time to select an appropriate gap in traffic to cross the road. In this situation, where the crossing distance between the footpath and the central median refuge is 5.25 m (including the traffic lane and bicycle lane) the required CSD is 64 m (based on an average walking speed of 1.2 m/s).

A site visit was undertaken to assess the available sight distance at the proposed crossing locations. Views from each of the alternative crossing locations are shown in Figure 2.1 and Figure 2.2.

Figure 2.1 Sight Distances – Crossing Alternative 1



Figure 2.2 Sight Distances – Crossing Alternative 2



A comparison of the required and available sight distances for each crossing alternative is provided in Table 2-1 and Table 2-2. Note that for Crossing Alternative 2, the presence of a bus at the northbound bus stop reduces the available sight distance from the western side of the road, but the remaining sight distance exceeds the required distance for crossing sight distance.

Table 2-1 Available sight distance, Crossing Alternative 1

	ASD (m)		CSD (m)		Compliant
	Required	Available	Required	Available	
Northern approach	55	90	64	90	✓
Southern approach		120		120	✓

Table 2-2 Available sight distance, Crossing Alternative 2

	ASD (m)		CSD (m)		Compliant
	Required	Available	Required	Available	
Northern approach	55	130	64	45	×
Southern approach		95		95	✓

It can be seen that the required sight distances are available in both directions for Crossing Alternative 1 (north of Pauldon Drive). However for Crossing Alternative 2, there are insufficient sight lines to achieve the required Crossing Sight Distance on the northern approach, due to vegetation within the adjacent property boundary.

2.2 Other Standards

In terms of other design elements, such as median island dimensions, the two crossing alternatives are generally similar, and in compliance with design standards.

3. Other Issues

3.1 Pedestrian Demand

The surveys of pedestrian demand indicate that the greatest pedestrian demand in this area is along the eastern side of Sandy Bay Road. The volume of pedestrians walking along this side of the road is several orders of magnitude larger than any other of the surveyed movements.

In terms of crossing Sandy Bay Road, the most activity is south of Pauldon Drive, most likely associated with the inbound bus stop. There was also a small number crossing north of Mitah Crescent, also expected to be associated with the outbound bus stop.

Given that under Crossing Alternative 1 there would be no change to the existing arrangement south of Pauldon Drive, with a painted median retained, it is expected that a proportion of the current pedestrian crossing demand would remain in its current position. Therefore the pedestrian demand at Crossing Alternative 1 (between Pauldon Drive and Mitah Crescent) would be relatively small, with a peak of up to 9 pedestrians per hour.

3.2 Road Safety

There is no recent crash history in this vicinity that indicates a particular road safety deficiency that would be exacerbated by either of the proposed crossing alternatives.

A review of the site has identified a potential safety issue associated with conflict between pedestrians walking from the inbound bus stop and crossing the road, and a bus leaving the bus stop. A bus driver pulling out from the stop may be focussed on identifying a gap in northbound traffic, and may not see a person stepping in front of the bus to cross the road. As this hazard is most likely to relate to a passenger alighting from a northbound bus (with such activity not expected to be very frequent) the risk is considered to be low. However the consequence is high, increasing the overall risk level.

Whilst this is likely to be an issue associated with the existing conditions, formalisation of a pedestrian crossing at this location (Crossing Alternative 2) may increase the likelihood of this hazard.

The other identified road safety issue associated with the proposed crossing alternatives relate to the available sight distances. In particular, a pedestrian at Crossing Alternative 2, standing on the eastern side of Sandy Bay Road, will have restricted visibility to southbound traffic approaching the crossing (see Section 2.1). They may accept a smaller gap than is sufficient to allow them to reach the median island before an approaching vehicle reaches the crossing point.

3.3 Parking

Crossing Alternative 1 will result in the loss of all three parking spaces outside the Riverview Inn. As outlined in Section 1.3.4, a survey of parking activity in this location indicates that for most of the week all these spaces are unoccupied, and at no point during the survey period were all of these spaces occupied. Given the general availability of on-street parking in this area, and an off-street parking area adjacent to the Riverview Inn, the loss of parking in this location is unlikely to have a significant impact on overall parking availability (although the relative inconvenience of some alternative parking locations for visitors to the Riverview Inn is acknowledged).

Crossing Alternative 2 does not result in any changes to on-street parking supply.

4. Conclusion

This report outlines a review of two potential pedestrian crossing alternatives on Sandy Bay Road in the vicinity of Pauldon Drive.

Crossing Alternative 1, located between Pauldon Drive and Mitah Crescent, would require the removal of three on-street parking spaces adjacent to the Riverview Inn. A 7-day survey of parking activity in this location indicates that for most of the week all these spaces are unoccupied, and at no point during the survey period were all three of the parking spaces adjacent to the Riverview Inn occupied. With alternative on and off-street parking available nearby, the loss of parking in this location is unlikely to have a significant impact on overall parking availability in the local area (although the relative inconvenience of some alternative parking locations for visitors to the Riverview Inn is acknowledged).

Crossing Alternative 1 has been assessed as satisfying the necessary sight distance requirements in all directions.

Crossing Alternative 2, while having no impact on on-street parking supply, and being proposed at the location with the highest existing pedestrian crossing demand (associated with the northbound bus stop immediately south of the proposed crossing location) does not satisfy all the required sight distance requirements. This results in safety issues, affecting pedestrians crossing from east to west.

While surveys of pedestrian activity indicate that this location currently experiences the highest volume of pedestrians crossing, formalisation of this location as a pedestrian crossing point would be expected to exacerbate the safety risk at this location. On this basis, formalisation of Crossing Alternative 2 is not recommended.

Crossing Alternative 1 does not directly satisfy pedestrian demand, but does not have any significant safety issues associated with it. However as the existing arrangement, with no formalised pedestrian crossing, appears to be working satisfactorily, the need for Crossing Alternative 1 should be further established.

Appendices

Appendix A – Pedestrian Survey

Appendix B – Parking Survey

Appendix C – Crossing Plans

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