



## Tasman Bridge improvements

In September 2024 the State Government announced that the proposed 3.5m wide pathways on both sides of the bridge were not deliverable, due to constraints in the weight bearing and wind loading capacity of the structure.

Minister Ferguson was quoted as saying "It is not for want of money that that project has had to be re-scoped. It is actually a technical need," he said. "Modelling has shown that there is only so much additional infrastructure you can build, including to protect pedestrians with the height that is required, [before] unacceptable strain [is put on] on the bridge." He said the government would have been willing to allocate more funds to the project if it was necessary.



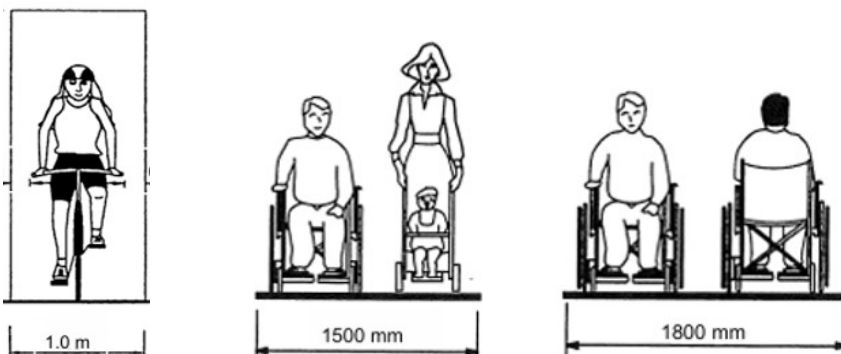
The bridge in its current state has numerous safety issues that have resulted in serious injury and hospitalisations.

### Safety issues

1. **Handlebars catching** in the vertical struts of the railings due to the narrowness of the path, causing a crash and the risk of a rider falling over the top of the low railing into traffic.
2. **Fixed objects protruding onto the path** such as gantrys, concrete abutments at entry points and service infrastructure that can cause injury when collided with;
3. **Poor sight distance** at three locations where the path bends which can result in riders colliding head on or going over the handlebars when braking heavily;
4. **Buffering from the wind** makes riding in a straight line difficult and increases the likelihood of a collision with railings or gantrys;
5. **Inability to pass** when wide bicycles (such as cargo bikes or touring cyclists with panniers) or mobility scooters users meet, requiring one to reverse back.
6. **Path surface** has a seam that can catch bicycle tyres and the surface has low skid resistance, which increases the stopping distance and can be slippery in the wet.

Most of these risks would be reduced if the current width of the bridge walkways was increased slightly.

- 1400mm incorporates the operating space for a bicycle (1000mm) plus a minimum of 200mm clearance either side of the rider from fixed objects. Additional width is required to account for the increased 'wobble' from wind buffering.
- 1500mm would still require people to stop when encountering someone coming the other way but there would be more manoeuvrability around wide, protruding handlebars.
- 1800mm provides adequate space for passing by cargo bikes or wheelchairs while giving bicycle riders more clearance from railings and fixed objects and is the preferred minimum width.



## What improvements can be done?

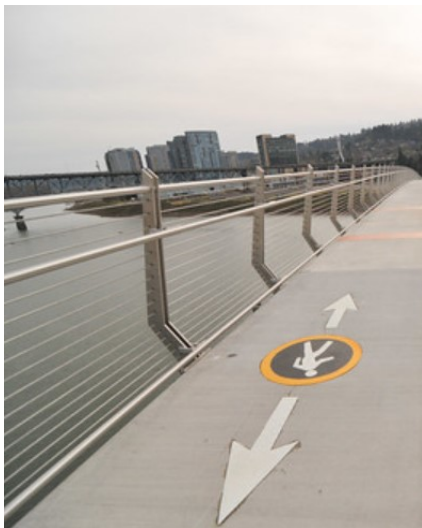
Cycling South and Bicycle Network met with the project managers on 4 October 2024 to see what improvements can be done, taking into consideration the engineering constraints of retrofitting a 60 year old structure.

We discussed these issues with the project managers who have indicated that the railings need to be affixed to the existing bridge structure where the current bridge railings are located (no cantilever to accommodate wider paths). It was not made clear whether any investigations have been carried out on the feasibility of widening the existing pathways by an additional 600mm to 800mm without increasing the load bearing on the bridge by replacing the thick steel railings with a more lightweight structure.

Taking that into consideration, we recommended the following options to address the safety issues:

### 1. Handlebars catching

- Investigate the feasibility of replacing the heavy steel railings and base plates with more lightweight materials to allow for additional width of 600mm to 800mm without increasing the load on the bridge.
- Raise the inside railing to 1.4m to meet Australian guidelines for handrails and reduce the risk of riders falling into traffic (proposed by the state government).
- Use narrower profile railings to create a slight amount of additional space. Currently the width varies but is around 1.1m wide between railings. Widening the path, even by a small amount, is particularly important as the increased height of the roadside railing will make the usable space feel tighter.
- As part of the replacement and increase in height of the external railing, incorporate angled struts to create increased clearance for pedals and handlebars (see photo examples).
- Include a rubbing strip on the railings at handlebar height, such as a flat, perforated aluminium plate, so the handlebars deflect rather than get caught in the railings. This would not be required on the external rail if the struts are angled to provide increased clearance for pedals and handlebars.



## 2. Fixed objects protruding onto the path

- The project managers are investigating options for relocating gantrys and services off the path. Concrete abutments at the entry points also need to be addressed. This is essential to improve the safety of the pathways.



## 3. Poor sight distance

- There are three locations where sight distance is limited due to the view lines being blocked by the outside railing on a curve, which can result in head-on collisions or near misses where hard braking results in the rider going over the handlebars. These curves are located at the ends of bridge that are over land rather than water so there may be capacity to widen the pathways at these problem spots to 1.8m to allow people to avoid a collision. Careful consideration should be given to the handrails to ensure they don't block sight lines.

### Western shore



Site 1 - Widen pathway on western end of bridge on the northern side on the curve.



Site 2 - Widen pathway from passing bay to the circular ramp on the southern side.



## Eastern shore

### Site 3 – Widen pathway from overhead land use management system gantry to Topham St



#### 4. **Buffering from the wind**

It is desirable to have some form of wind protection such as solid or perforated screens to reduce wind buffering on the paths but these would increase wind loading on the bridge structure. We are informed that this is not an option and the new railings will aim to increase porosity.



#### 5. **Inability to pass**

The government has promised to install additional passing bays for wide bikes or mobility scooters that can't squeeze past each other, reducing the distance one of them has to backtrack. The bays will also provide for visitors who walk across the bridge for the views of the city and find themselves blocking the path as they attempt to take photos.

The current style of bays are acceptable provided the current width can accommodate passing by cargo bikes and mobility scooters. Additional bays may need to be made slightly wider and longer.

Locating passing bays at the apex as well as opposite services (see photo, right) would be an improvement.



#### 6. **Path surface**

The painted treatment on the metal plates has poor skid resistance and should be treated to improve grippiness. There is a joint between the inside hand rail, which is mounted on concrete, and the metal plates. This gap can catch a bicycle tyre and should be eliminated.

## Access and amenity

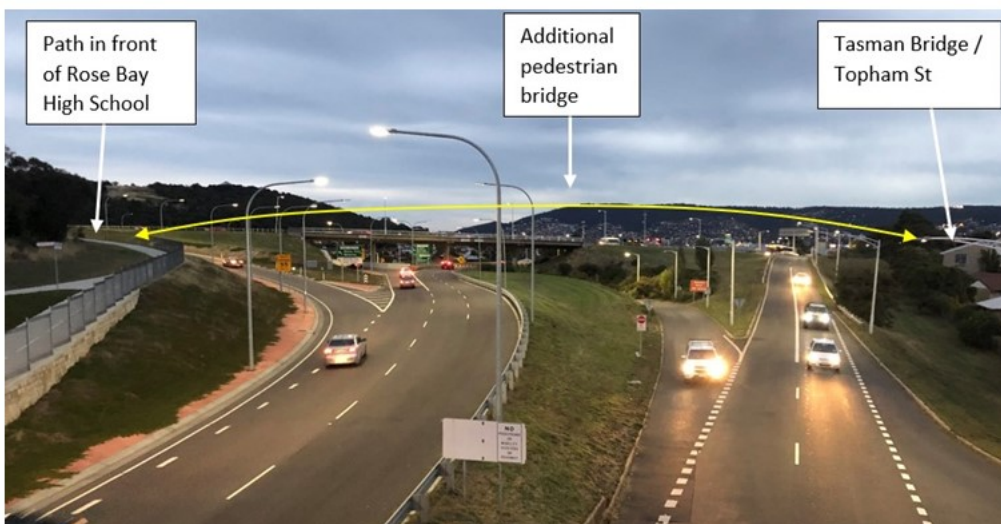
The amenity and ease of access to the bridge also need to be improved. The government has promised improvements to the pathway connections on the eastern and western shores but have not announced what those improvements might be.

### Improving eastern shore access



The upstream (northern) side of the bridge provides the only off-road connection to Rosny Park but the only way to cross the East Derwent Hwy is to use the Yolla Street overpass. This 56 year old structure has 36 steps on it and is a 500m detour off the desire line.

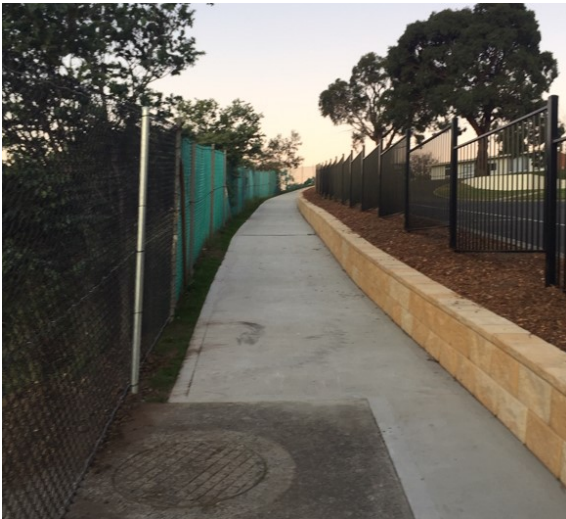
The northern side of the Tasman Highway at Rose Bay will become the main arterial cycling route once a suitable crossing is provided over the East Derwent Hwy. We would like to see this bridge constructed as part of the Tasman Bridge project now that the Tasman Bridge widening has been significantly scaled back, even if additional funding needs to be secured. Federal Active Transport grants are available.



*View from Yolla St overpass on the East Derwent Hwy looking towards the Tasman Hwy interchange*

The downstream (southern side) of the Tasman Bridge connects to a shared path alongside the Tasman Hwy which joins up with an overpass to Rose Bay High. The overpass is steep and has two 180 degree turns on it. The topography on the southern side of the Tasman Hwy is not conducive to providing adequate cycling infrastructure to meet with Austroads guidelines for an off-road pathway. However it is useful for local access.

Riawena Road provides another connection to the Tasman Bridge but is only suitable for confident riders due to the awkward camber and narrowness of the road, the risk posed by turning vehicles from the Clarence pool and sports centre for downhill riders and the delay caused to buses caught behind uphill riders where there is inadequate space to overtake due to on-street car parking.

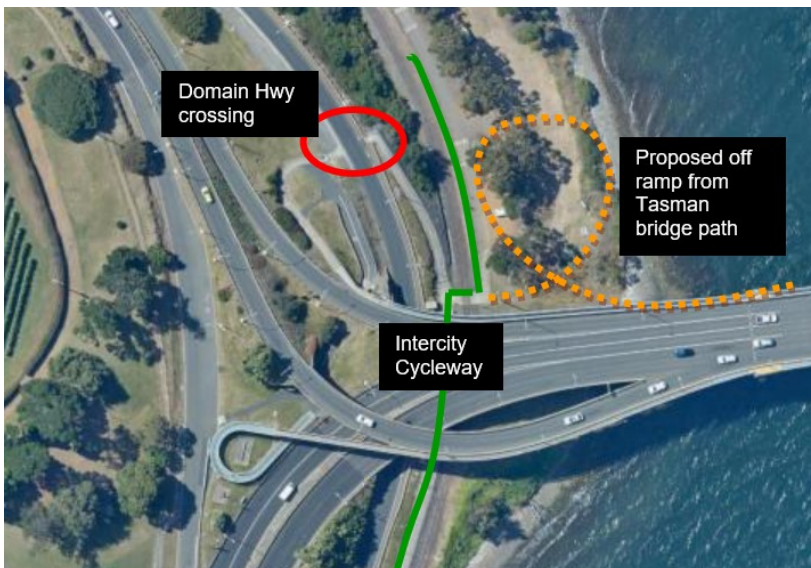


1.8m wide path alongside the Tasman Hwy connecting to Montagu Bay Road.



Riawana Road – a narrow road with awkward camber and high degree of on-street car parking. Also a bus route.

### Western shore access



The crossing of the Domain Highway slip lane is of concern to some riders (shown as red circle). An off ramp was shown in the original bridge design on the southern side to connect to the Intercity Cycleway in the Hobart direction. It is preferable for the ramp to be on the northern side which would eliminate the road crossing. Riders on the southern side of the bridge can avoid the road crossing if they prefer by riding a short way along the northern path to access the ramp.

This is considered a lower priority than other proposed improvements as the crossing is only a single lane with traffic coming from one direction. A reduction in speed limit on the Domain Hwy, which has multiple uncontrolled intersections, to 60km p/h would be an acceptable solution.

## One-way pathways

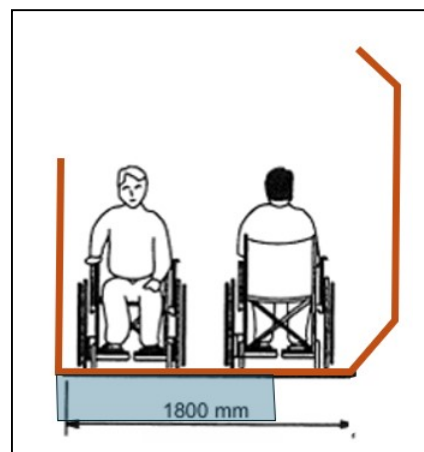
Making each side of the bridge pathways has been mooted to address the narrowness and interactions between riders travelling in opposite directions on the bridge. However the traffic using the pathways is tidal, with the majority travelling east to west in the mornings and west to east in the evenings on weekdays. The movement is more even during the day and on weekends.

The concept of making the pathways one-way is to reduce the inconvenience of having to stop and squeeze past a rider or walker coming in the opposite direction. It does not address getting caught behind slower riders and walkers.

Consideration needs to be given to the inconvenience of riders on the eastern shore having to go under the bridge and ride up a steep hill to get to the opposite side pathway onto the bridge. The additional time and effort added to the journey exceeds the effort of passing someone on the bridge and is not supported by Cycling South. The likelihood of meeting someone on the bridge coming the other way during peak times is minimal, particularly for those riding in the dominant direction.

## In summary

- Investigate widening the pathways by up to 800mm for the entire length of the bridge. If not technically feasible, widen the pathways on the curved sections over land and incorporate multiple passing spots on the main bridge structure where it is over the water.
- Angle the outside rail to increase clearance for bicycle pedals and handlebars and include a rub-rail on the inside rail.
- Modify or relocate gantrys and other protrusions onto the pathway.
- Improve access to the Tasman Bridge by constructing a walking/cycling bridge over the East Derwent Highway, to off-set the scaled back pathways on the bridge.
- Improve the surface by eliminating the seam and increasing the skid-resistance.
- Maintain bi-directional travel on pathways on both sides of the bridge.



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**11 November 2024**