

## **Submission to Eastern Freeway UDLP Burke Rd to Tram Rd (Peter Carter)**

### **PRELIMINARY**

I acknowledge the opportunity to provide comment on the Eastern Freeway Upgrades Urban Design and Landscape Plan: Burke Road to Tram Rd

I am also very disappointed at the limited time to provide comment; and the scale of plans that have made it extremely difficult to fully comprehend the design.

The previous Tunnels UDLP gave the impression that the Eastern Freeway/North East Link Interchange would also be integral part of this UDLP. (I suspect that I was not the only person to be misled)

Accordingly I also have provided comment and recommendations for works in the interchange area. I note that NELA has also subsequently altered aspects presented in the Tunnels UDLP. My proposed works in the interchange area can be incorporated without major impact on proposed works in the Tunnel UDLP.

### **INTRODUCTION**

In order to determine the scope and scale of the North East Link, significant transportation planning was undertaken - where people would live, work and be educated; where industries would be located and in particular determining how many trips would be made and what mode.

Yet with cycling, the planning considerations by NELA appears to be static; looking at what's in place today rather than planning for future changes in cycling numbers.

What stands out in this UDLP (Eastern Freeway Burke Rd to Tram Rd), is that the proposed works undertaken is almost entirely about replacing existing paths at various points impacted by the Eastern Freeway widening (and usually 'like with like'), or the SUP (ie Estelle Bridge and Heyington Bridge) and the replacement of Doncaster Road overpass (inclusive of SUP underpasses both north and south)

The potential for growth in cycling numbers.Key aspects:

a) Whitehorse and Boroondara Councils are developing and implementing cycling strategies that focus on developing a network of routes for the largest category of cyclists - 'the interested but concerned' (60% of the community) These networks will have routes that are 'direct, continuous and low stress' Low stress is primarily about low traffic stress - about riding in traffic which would deter the group. But it also recognises that these cyclists will be deterred when confronted with long steep grades.

This is the fundamental message of the Victorian Cycling Strategy.

North East Link Authority should also note the results of recent local research in Melbourne that identified the proportion people in Whitehorse categorised as 'interested but concerned' are 78%. Refer Refer to: <https://www.medrxiv.org/content/10.1101/2021.03.14.21253340v3> (60% is the figure based on research

from USA) Obviously this indicates a significantly higher number who will do more cycling as safe, low stress networks are developed.

b) The increase in the proportion of eBikes used for cycling.

Impacts are various:

- expand the use of bikes to those who currently do not feel fit enough to ride a bike.
- eBikes enable people to do longer trips and more often
- Cargo eBikes for doing a range of trips different to what is normally undertaken by a conventional bike. One only has to look at the numbers of Cargo bikes taking young school children to school (very confidently by both male and females) in inner Melbourne suburbs eg Capital City Trail.

c) The uptake of mobility eScooters

Most of eScooter use is considered to be for transportation - not recreational trips

Both eBikes and eScooters have higher average travel speeds than conventional bikes; this has consequence for design, and particularly for shared use of a path by cyclists and pedestrians.

d) I have recently returned from 8 weeks cycling in Germany. The uptake and use of eBikes is very significant; and those bikes are predominantly more expensive versions (with Bosch electric motors at the chainwheel - typically 3000 to 4000 euros. (A number of bike shops just sell eBikes). It is a trend that will likely occur in Australia.

These factors have implications for design of bicycles infrastructure and are discussed further below.

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What is not evident is any detailed assessment by NELA or contractors, of what can be **improved** as part the NEL works. Various members of the community prepared a detailed document on behalf of the North East Link Authority, for NELA and prospective bidders 'Report to Bidders'. This report proposed various key improvements for Strategic Cycling Corridor (Koonung Creek trail and Main Yarra Trail) and Principal Bicycle Network improvements.

But has NELA incorporated any of the proposed improvements? It is not apparent.

In some situations the NEL works preclude some proposed important cycling infrastructure works, either now or in the future. eg Bulleen Rd SUP overpass relocated to west side, and the Shared Path underpass adjacent to the Bus Expressway under Bulleen Rd - see later discussions.

## **Appropriate Shared User Paths and separate paths for cyclists and pedestrians on the Main Yarra and Koonung Creek Trails**

The most common comment by users; pedestrians, dog walkers and cyclists, is that there needs to be separate paths. Or where space doesn't allow, then the SUP should be widened.

NELA should go out and survey users if they have doubts of this sentiment.

I recommend that new bike paths should be 4m wide - up from 3m wide, with a centreline and bicycle symbol regularly painted to define the bike path

Shared User Paths should be 5m wide. They should also have a centreline and marked with bike and pedestrian symbols at regular intervals.

Both these small changes would 'future proof' the SUP.

Comment:

- i) The increase in costs for a 4m concrete path compared to 3m would increase costs by less than 10% (and NOT 33%)
- ii) The SUP widths proposed by NELA reflect Australian Standards; these Standards are not necessarily the appropriate width having regard to future demand. (Practitioners well know that it is a slow process to upgrade)

## **Bulleen Road overpass**

*Many cycling advocates read that the Bulleen Rd Tunnel UDLP related ONLY to works extending to just of south the Tunnel portal near Veneto Club. Advocates were of the impression that anything further south was indicative only and would be included Eastern Freeway UDLP. I was certainly of that opinion.*

*Consequently I am making the following comments.*

North East Link Authority established a Community Technical Discussion Group. This group developed a 'Walking and Cycling Report to Bidders May 2019' document for the benefit of the NELA and bidders, that recommended of various infrastructure improvements.

It is unknown whether the either NELA or bidders took much notice of these; the recent UDLPs indicate that the various recommendations were not reviewed as part of UDLP considerations. A major concern for CTDG members was that SUP overpass of the Eastern Freeway was proposed to be located on the eastern side of Bulleen Rd, rather than the western side.

NELA proposes a Shared User Path bridge on the east side of Bulleen Rd over the Eastern Road. Yet this SUP bridge only serves Marcellin College with a student population of 1500, many who come by bus.

The recent Southern UDLP shows a very complex intersection between Bulleen Rd, Thompson Rd and the north bound entrance to the NEL. This is significantly more complex than what was shown in the earlier NELA Reference Design, but still concerned CTDG members.

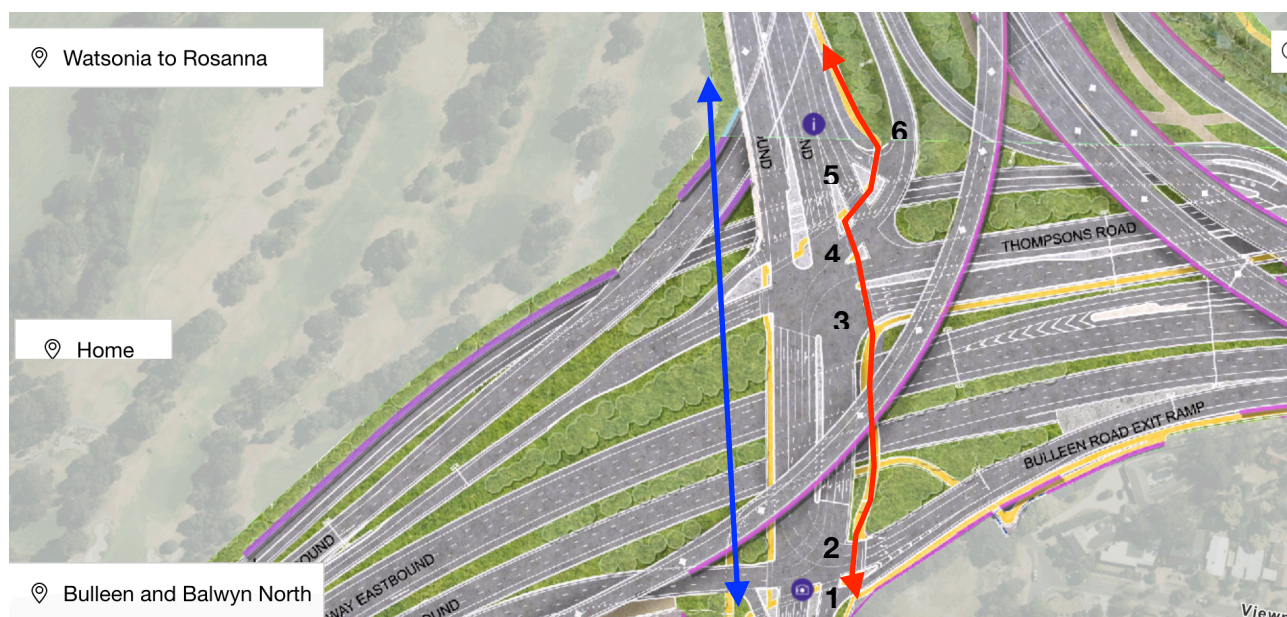
Through this complexity cyclists and pedestrians have to negotiate a dangerous intersection environment. Any independent road safety auditor would rate this intersection low in respect to being safe for pedestrians or cyclists. Users will likely experience long signal cycle delays with the most pedestrians and cyclists crossing to use the SUP overpass on the eastern side. Refer Figure 1

**It is requested that the Shared User Path overpass bridge of the Eastern Freeway be located on the western side of Bulleen Rd.** As an alternative, the western footpath is approximately 2.6m; however it is reasonably straightforward to widen the footpath on the western side (by a slight reduction in the median) Pedestrians and cyclists will be have a more direct and safer access to the Veneto Club plus access to ovals and the Bolin Bolin billabong on the western side.

**It is also requested that all the signalised crossings for any SUP be 4m minimum wide (consistent with the 4m width provided on the proposed SUP overpass bridge) rather than the existing crosswalk which is 2.4m.**

Access by the relative few people going to Marcellin College on foot or bike, is still available by using one of the signalised intersections across Bulleen Rd.

Figure 1. NELA proposed SUP overpass (red) on the eastern side of Bulleen Rd



The above figure shows NELA proposed link (in red) that connects the Koonung Trail with the main trail up to Watsonia and the Western Ring Road.

Both routes are part of the Government's **Strategic Cycling Corridor** routes. (the cycling equivalent to a freeway). It should be safe and direct, to encourage the 'interested but concerned' cyclist.

Yet this route crosses 6 roadways that all have traffic signals; the roadways 3, 4, 5 and 6 would be particularly dangerous to cross despite signals.

Overall this proposed route would likely take over 5 minutes (because there would be a minimum of two traffic signal cycles for this trip)

The perceived danger plus the time to do the crossing, would deter many cyclists; other more confident cyclists would likely directly ride on road.

*'A low stress cycling route is only as good as the highest stress on the journey' - and crossing Eastern Freeway is truly 'lousy'*

**A much safer and more appealing route for all cyclists, is to have the SUP overpass on the western side (blue) of Bulleen Road.**

This has been proposed by the CTDG in the NELA document 'Report to Bidders'

## Bulleen Rd Overpass - a more balanced approach required to transport needs

A most questionable aspect is why Bulleen Rd overpass **still needs** to have three lanes turning north from the exit ramp to Bulleen Road. This is more lanes than provided for the Eastern Freeway to North East Link ramp. Does the east to north movement really need 5 lanes (ie 3 in Bulleen Rd and 2 lanes on the fwy-fwy ramp)

Is this to imply that NEL would not work without such a high capacity for the East to North movement?

Removing one of the three north bound through lanes on the overpass would allow separated bike lanes on the western side of the Bulleen Rd overpass; or alternatively having wider footpaths on each side of the overpass. Refer Figure 2

Furthermore the separate SUP overpass Bridge proposed on the eastern side of Bulleen Rd would be redundant. And the complexity of accessing this overpass is obviously gone!

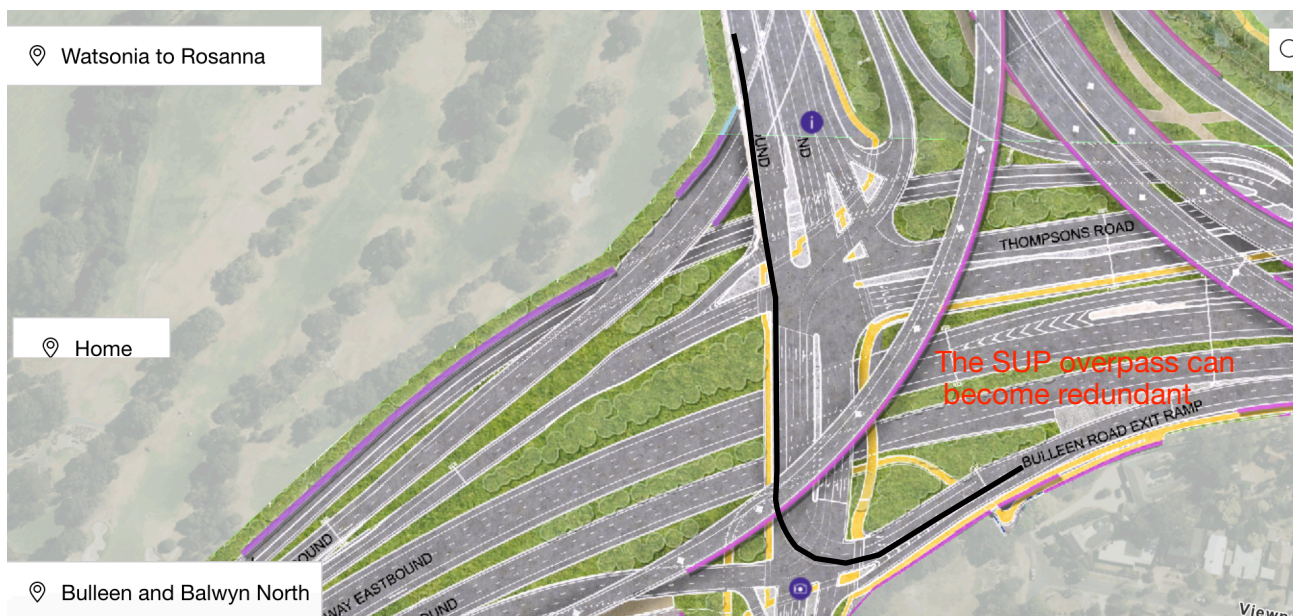


Figure 2, Above: the redundant third exit lane shown in black

The existing third lane is apparently 3.4m wide; realigning lanes on Bulleen Rd overpass would enable footpaths of approximately 4m to be provided on both sides of the bridge.

The community have not had access to more detailed plans; however I am confident that a better outcome - safer, lower traffic stress routes can be developed for all active transport users.

**The Bus Expressway under Bulleen Road; Widen the bus expressway culvert to include a pedestrian and cycling path on the north side of the bus expressway.**

Why would you NOT provide for pedestrian and cycle access?

I note that proposed underpass at Doncaster Rd for the SUP is 7 metres wide

Here is location that directly and safely links the Bulleen Bus interchange to the major destinations on the west side of Bulleen Rd; with sports ovals, the Freeway Golf Club, the Veneto club (with its multiple soccer fields and tennis courts), Boln Boln billabong and other activities.

And most of the users would be a demographic that walks or rides.

This proposal really improves a safe access for a wider range of the community.

If it's not provided, it is an **opportunity lost forever**.

It is requested that the underpass for the bus expressway also provides for pedestrians and cyclists (similar to Doncaster Rd).

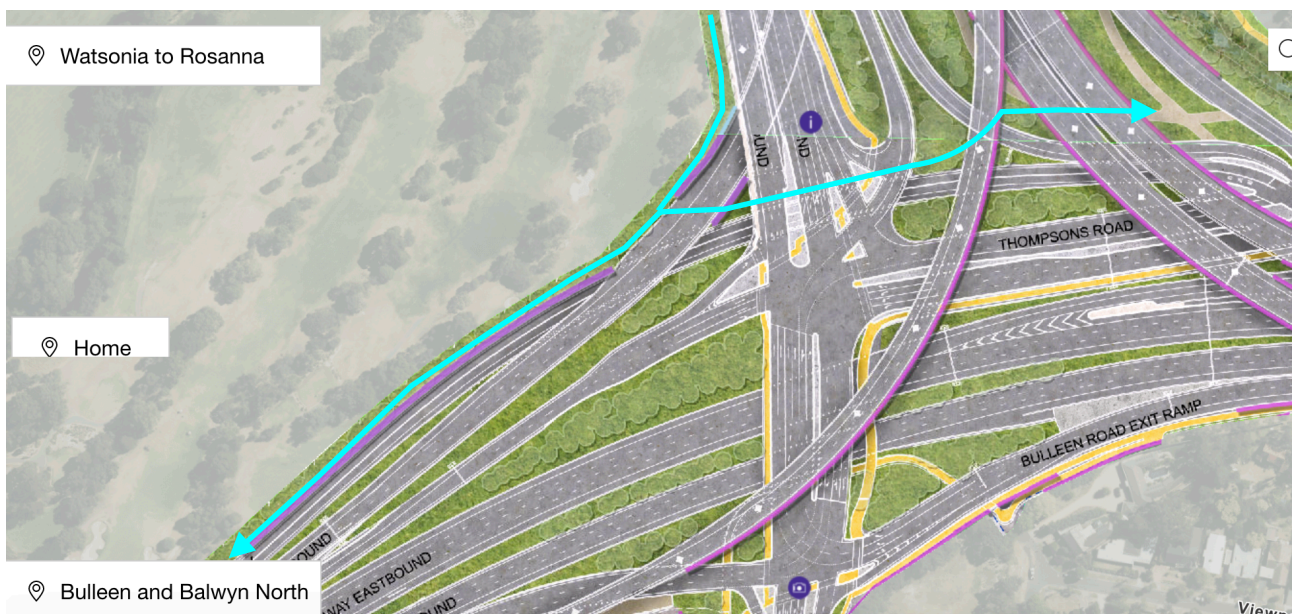


Figure 3: Blue line show the proposed SUP access (via culvert) adjacent to Bus Expressway under Bulleen Rd. To the west it can readily link to the sporting fields, Veneto Club and Bolin Bolin billabong. On the east the SUP would link to Bulleen Park and Ride, the Koonung Creek path on the northern side, and to community paths in Manningham.

The proposal above is shown as concept, but given access to more detailed plans, I am quite certain that I can demonstrate its viability. I would welcome that opportunity.

## **Bulleen Road: access to the Shared Path underpass of Bulleen Rd (south side)**

To access this underpass pedestrians and cyclists must diverge from the main KCT via a very narrow path to Highview Rd (behind Bell View Primary School)

On one side there's a private property with mature shady trees shading over this path as well as a 9m noise wall. The other side will have a 9m high noise wall. It becomes a very DARK place, unlikely to have any sun.

It then underpasses the westbound exit from Eastern freeway to Bulleen Rd, before going under Bulleen Rd overpass bridge.

Regardless of whether this noise wall is part concrete/acrylic or glass, the KCT path exit to Highview Rd and into the exit ramp SUP underpass, significantly lacks personal safety amenity.

Who is going to use this route? It will likely deter many; particularly late evenings or at night.

In addition there is a significant lack of visibility of users (pedestrians or cyclists) emerging from the SUP from Highview Road onto the main Koonung Creek Trail

This whole concept is flawed; NELA needs to have significant redesign to make it acceptable to all potential users.

Revisit this whole area and make a direct SUP underpass of Bulleen Rd.

I consider this concept is 'do-able' and would avoid safety issues and the convoluted path that goes under two ramps plus Bulleen Rd.

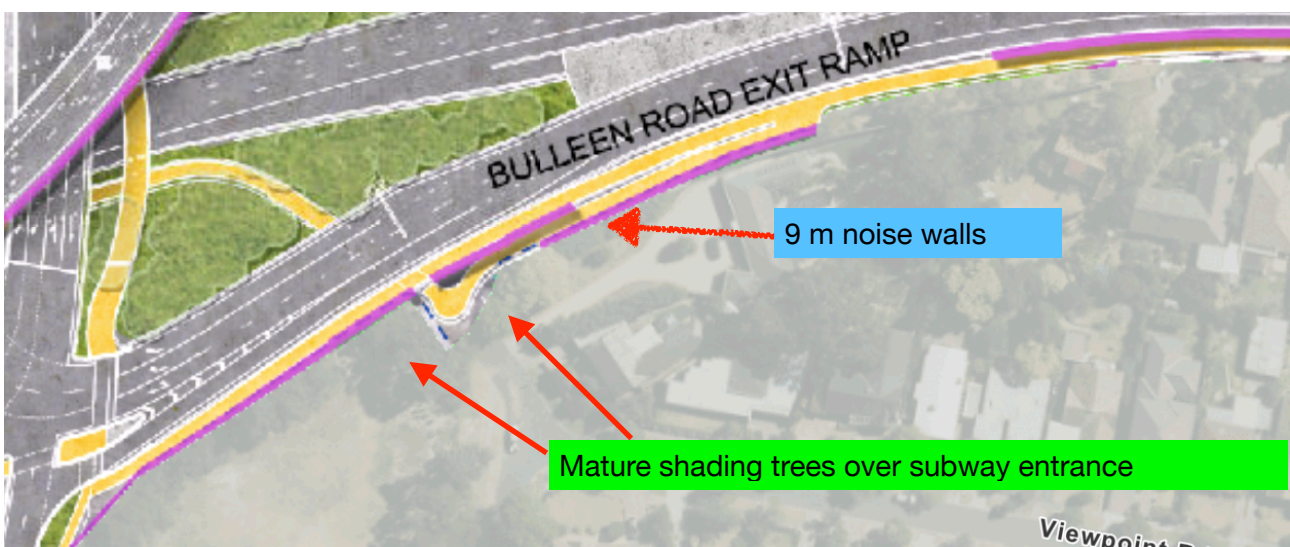


Figure 4



## **Doncaster Bridge Overpass of Eastern Freeway**

A new overpass for Doncaster Rd over Eastern Freeway is proposed. This is a major interchange on Eastern Freeway, providing connections to the key arterials of Doncaster Rd and High St.

Yet NEL designers have totally overlooked the need for the cyclists.

How could that have happened? Were NEL planners ignorant of the Principal Bicycle Network?

The Koonung Creek Trail, Doncaster Road, and High Street are all part of the Principal Bicycle Network. The new overpass is a bicycle interchange for these PBN routes, but it's NOT with the NEL design.

The KCT, on the northern side of the overpass provides a SUP connection into Doncaster Park and Ride. But that is all.

Other footpaths are described as secondary paths - the eastern footpath over the overpass appears to be 1.5 m wide (which is not DDA compliant; totally inappropriate given the proximity to Doncaster Park and Ride) The western footpath on the overpass is slightly wider, about 2 to 2.5m (refer cross-section Plan 9145)

The Doncaster Rd Overpass is a very long term investment. It is too dangerous to expect cyclists to ride over the overpass sharing vehicle lanes, and with the complexity of various turning traffic movements.

The NEL needs to provide separated bicycle lanes on the overpass that connect to Doncaster Rd on either side, and to High St.

If NELA does not build this facility now, it is in effect, turning its back on the development of bicycle infrastructure at this interchange.

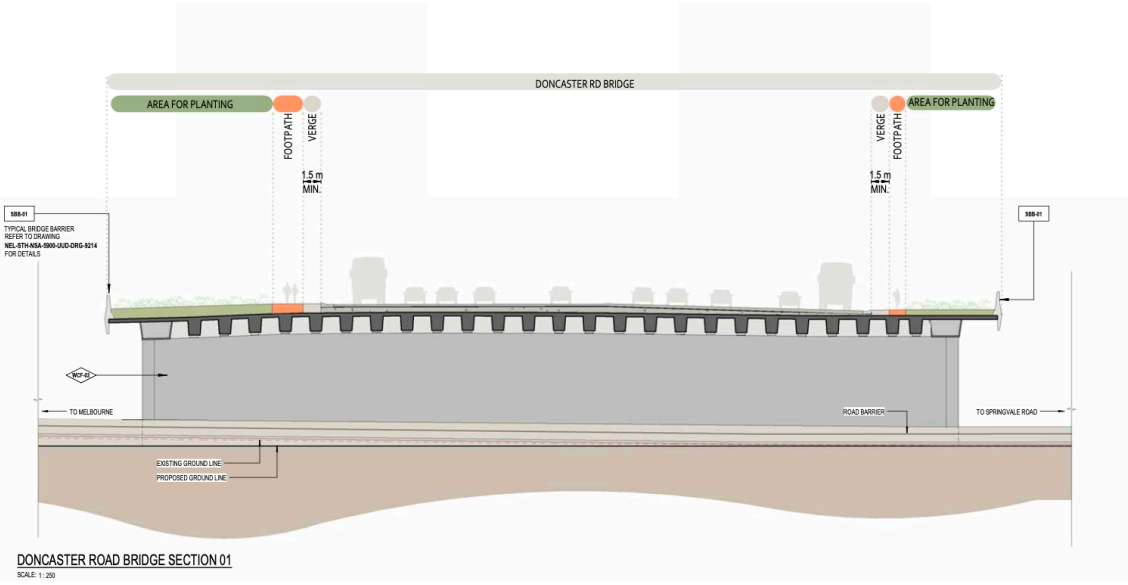
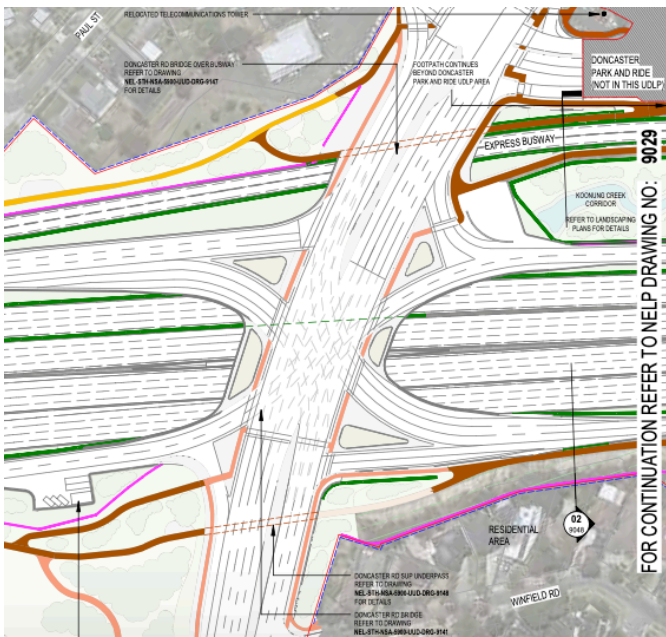
A further consideration; the proposed interchange arrangement is likely that pedestrians coming to/from the Doncaster Park and Ride will have to experience long delays (two signal cycles or around 5 minutes) crossing using the footpaths on the eastern side of the overpass. It may be even longer to cross on the western (city) side .

What are typical crossing times for pedestrians crossing the freeway on the Doncaster Rd overpass (including slip lanes)?

In summary the design of the overpass serves motorists but caters very poorly for others.

Refer to Figure 5

Figure 5: Layout and elevation plans for the proposed Doncaster Rd overpass, with no consideration for connections of the Principal Bicycle Network Routes



### **Heyington SUP Bridge: Modification of southern ramps.**

The proposed widening of the Eastern Freeway on the south side, involves the relocation of the existing Valda wetlands.

On its southern end the ramps extend over the wetlands, at a height about 6m above natural surface. This needs to have a ramp length of approximately 120 m to the KCT to be DDA compliant.

The UDLP design shows a switchback then a very acute intersection of the ramp with the KCT. Just how a designer could contemplate that any cyclist be able safely negotiate that intersection if going to /or coming from the city side.

The use of switchbacks should be avoided; generally only the very experienced cyclists can retain balance to make the turn; others will lose their balance, particularly families with young children riding. (tandem cyclists, or cyclists with trailers, or tag-along child carriers inevitably have to stop and haul their bikes around)

Two alternatives are suggested:

- a) provide long straight ramps from both directions
- b) a spiral ramp (approximately 30 m diameter)

Refer Figure 6

In addition at the north end of the SUP bridge, the bike path should be 'belled out' to provide for bikes from /onto the bridge

#### Bridge Surface.

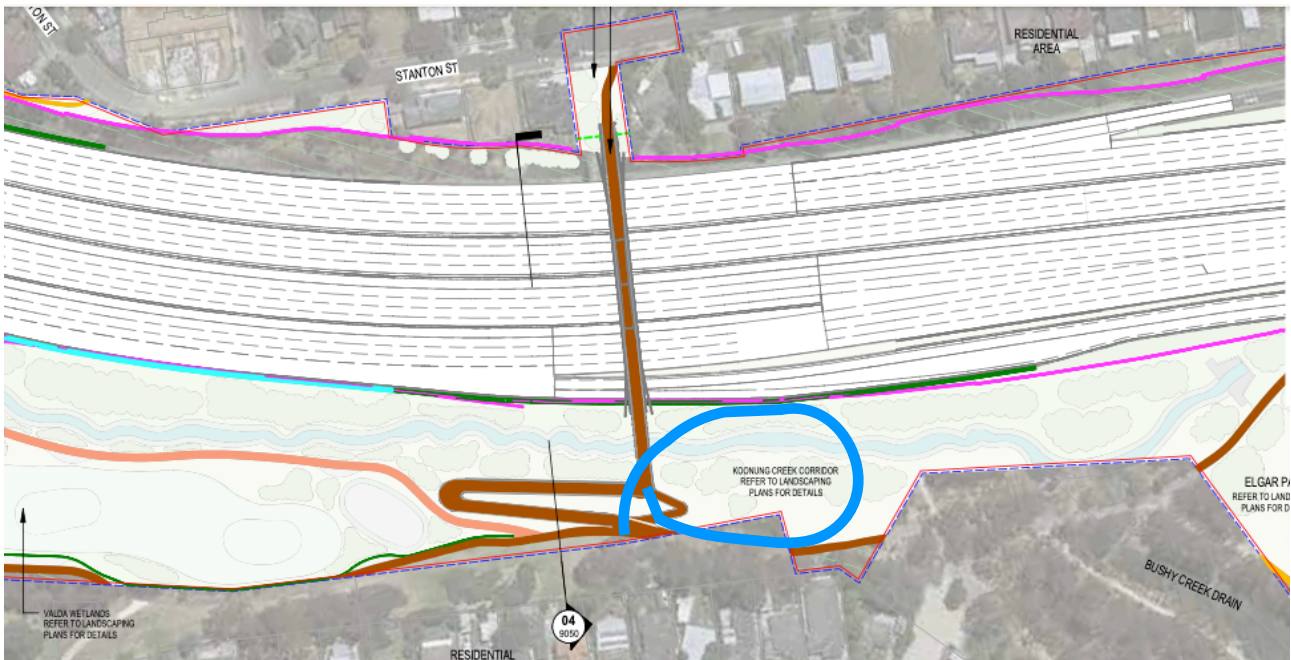
The deck of the bridge is proposed to be precast concrete blocks about 2m wide, which will have a 'nominated finish'. See Plan 9185. That means about 110 concrete blocks that make up the length of the bridge. Is the nominated finish just 'exposed /washed aggregate' or a thick rubber film, or asphalt?

A concrete surface would be a totally unacceptable surface to ride along, (or for a pedestrian with a pusher, or wheel chair) as there would be numerous clunks to endure(ie 110!) Likewise, the same comment would apply to some form of a rubber 'mat' or like surface, (which would in time reflect the concrete joints).

Why not an asphalt surface (80mm thick) like conventional concrete road bridges (or bonded asphalt surfaces as applied to steel box girder or similar steel deck bridges)

Again this is an aspect of creating an **enduring comfortable riding surface.**

Figure 6: Heyington Bridge. Two options that avoid the swithback and the disastrous intersection with the KCT



The required length of ramp to be DDA compliant is about 120 metres.

The top suggestion - the 'green V' allows approach from both directions (each having a safe intersection with the KCT path. Both ramps final orientation would need more detail design to locate piers in respect to waterways

The bottom suggestion - blue spiral, is similar to that NELA has proposed at Lwr Plenty Rd. Again positioning of the spiral - left, right or middle requires further detail design.

## **Estelle Bridge**

Estelle bridge is a similar construction to Heyington SUP bridge and the same comments apply to surface treatment of the precast concrete deck.

At either end of the bridge, the shared path needs to be 'belled out' for turning cyclists onto the bridge.

## **Jocelyn avenue: riding through a canyon?**

At present this is challenging for many.

Coming from the Box Hill direction, riders and pedestrians face a bend; there is minimal sight distance to either oncoming cyclists or pedestrians coming down a steep path.

It is also common for those coming from Box Hill to confront cyclists walking slowly up the hill (because of the steep grade) or pedestrians (some family groups with prams) or dog walkers.

A problem today, which many in the community recognise. But tomorrow - will it improve?

The proposed NEL works involve significant widening of the freeway and installing a 10 m Noise Wall at the pinch point - the top of the crest, extending to the above-mentioned corner.

So at this location there will be the rock retaining wall at the top and south side of the path, and then the 10m noise wall. The residual gap is around 3.5m.

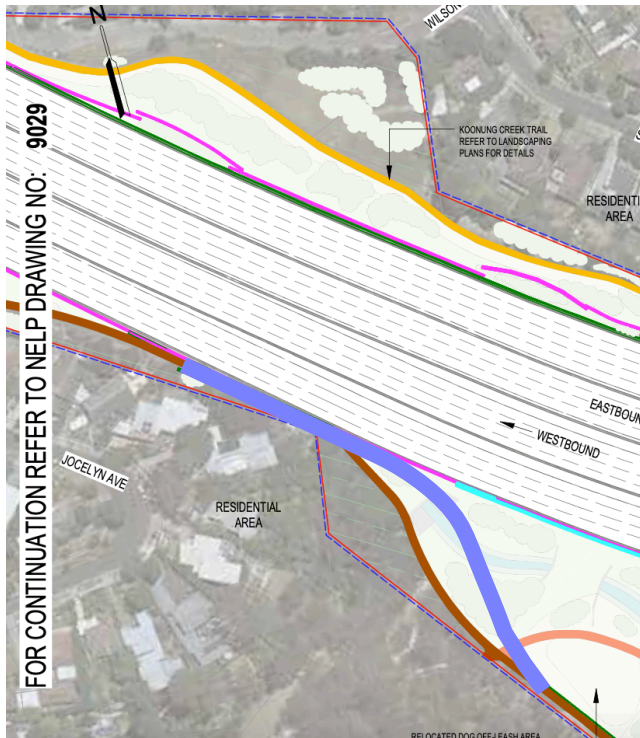
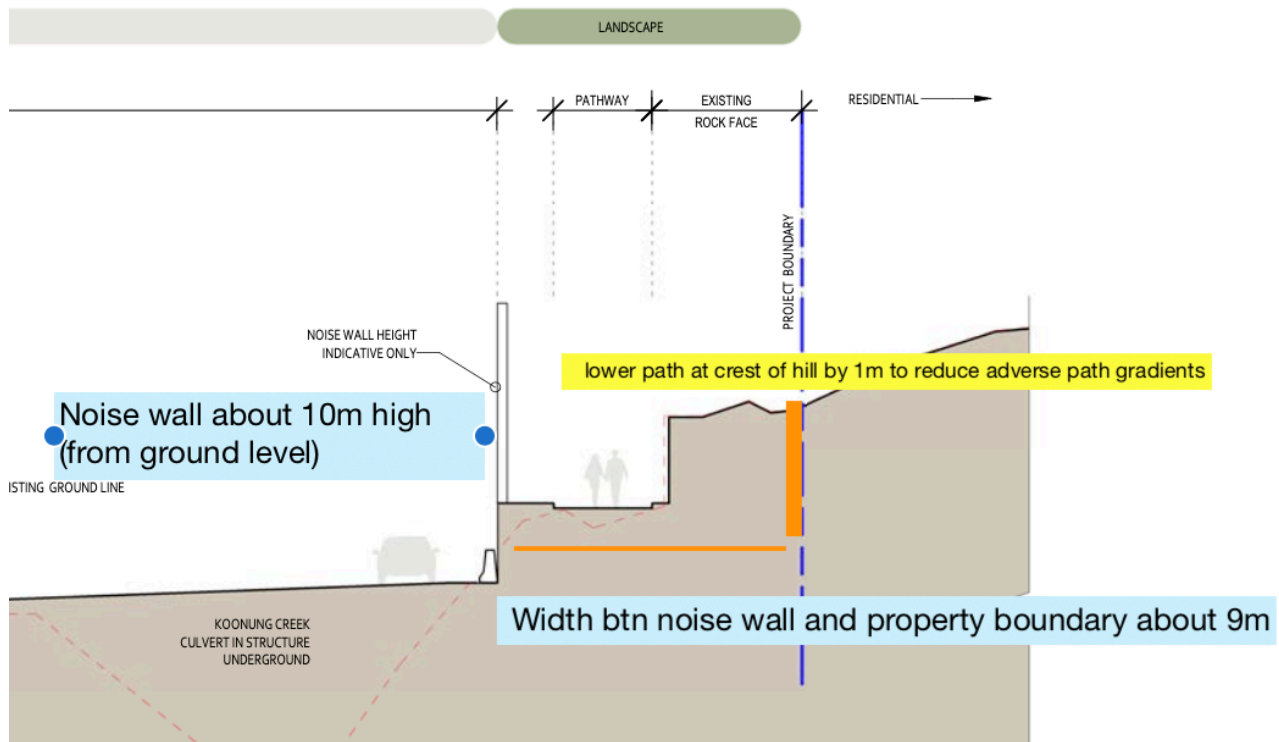
Personal safety amenity? It simply will NOT exist.

But it can be readily addressed. The path can be widened, with relocation of the retaining wall on the south side of the path to the property boundary, plus reducing the gradient by lowering the crest in the KCT. The KCT requires a realignment on the eastern end to improve sight distance. Refer Figure 7



Cyclist disappearing around a blind corner heading eastwards

Figure 7. Widen footprint for path to improve amenity and sight distance; reduce adverse gradient



Re-align SUP to avoid blind spot at corner

## Elgar Rd: narrow width between noise wall and property boundary

To the east of Elgar Rd, the UDLP shows the widened Eastern Freeway significantly constraining the existing space. The widening has required the existing Koonung Ck culvert to be extended further upstream.

A 10m noise wall is proposed immediately to the north side of the KCT; on the south side of the path is the property boundary fence of the adjacent Presbyterian Theological College. (It is considered likely that with further development, that this property will have a high fence constructed on its northern boundary.)

The sight distance on the path is currently limited, and will diminish further.

All up this area will have significantly diminished safety amenity.

It requested that the KCT is realigned to improve sight distance, within this constrained environment. Refer Figure 8

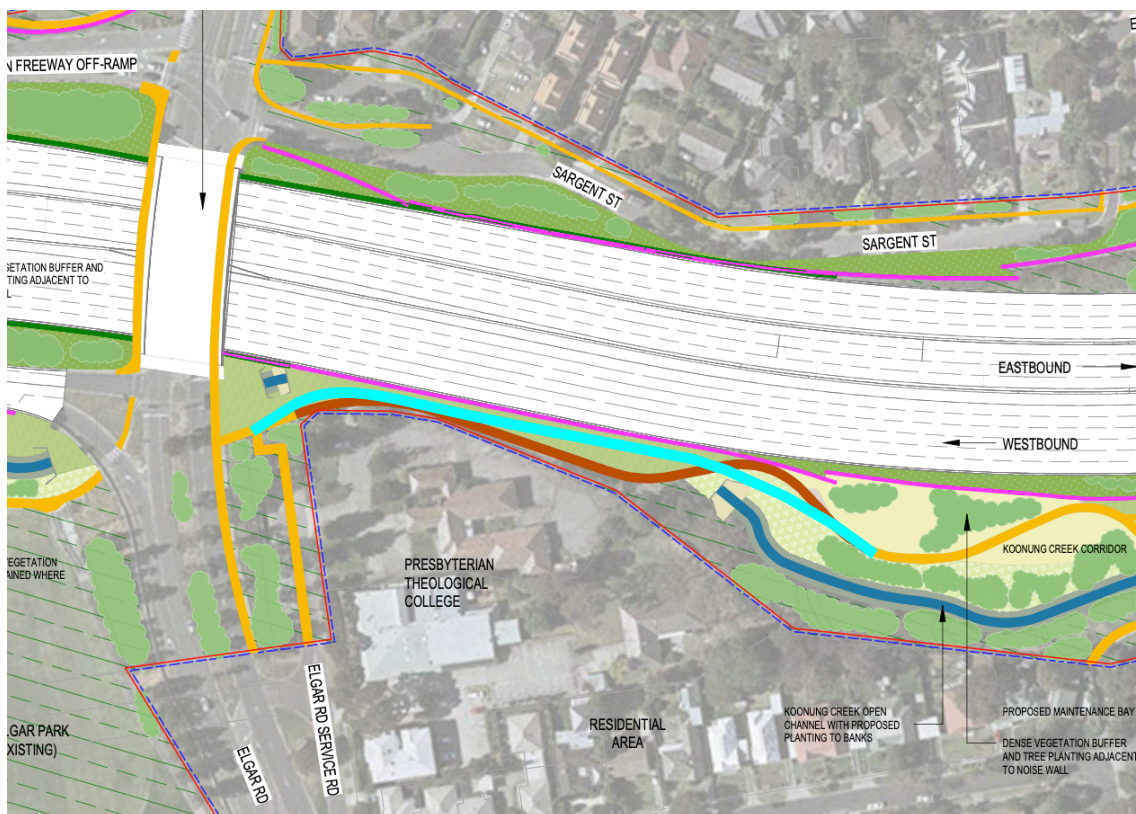


Figure 8

## **Lighting**

The KCT **requires** lighting to be provided with along its length to provide a high quality and continuous illumination of the path.

In many places the KCT will be located close to noise walls, the majority are 8 to 10m tall; much taller than the present noise walls and creating a 'canyon' effect. There are suggestions that 'spill through' lighting, or the use of glass or acrylic noise panels would provide adequate illumination.

I am extremely sceptical.

Many times in the football season I ride home along the Koonung Trail about 11pm. Even with good quality lights on my bike, it is a challenging ride and to see possible hazards. I have at times suddenly come across someone walking in dark clothing.

Occasionally, there are sections of the path where there's a low fog.

Lighting at night would extend the use of the park to many more in the community.

Lighting along the path should not be second guessed; a quantitative assessment of the level of lighting is considered essential to enable an appropriate lighting design for a SUP to be developed prior to approval of the UDLP.

## **Koonung Reserve.**

The UDLP indicates that a water treatment plant for run-off from the freeway is proposed in Koonung Reserve.

It will comprise of 'dry water bed/sedges' leading into a permanent small wetland. The proposal consumes a lot of space, but there are other ways to treat run - off water.

Given that much of current open space has been lost to the freeway widening, I consider that the community/Council deserves to be keep this area and develop it in way that suits the community needs.

## **Koonung Creek Trail - North side of Eastern Freeway**

The path has local steep gradients, and is narrow in places.

Is this a path that is part of the 35 km being 'implemented' as part of NEL cycle and walking paths?

In its current form it is not fit for purpose and needs upgrading where path is less than 2.5m m wide and gradient greater than 5%.



**Toilets**

Along the length of the Main Yarra /Koonung Creek Trail beside the Eastern Freeway, I believe that there is only one Public toilet facility between Chandler Highway and Park St, Mitcham.

This is at the Koonung Creek Reserve, north of Doncaster Rd. This is quite inadequate given the range of users and that there are no immediate shopping/retail facilities along the KCT.

That situation is quite inadequate.

It is requested that additional toilets be installed along the route; this should be a 24hr facility as part of the compensation package for the use of Elgar Park (for NEL construction activities); or at Frank Sedgman Reserve (Playground)

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