Submission - Redfern Station Upgrade – New Southern Concourse

Introduction- I live at 141 Little Eveleigh Street, opposite the park. I've lived here with my family since 1984. And since that time, we've also been involved in the local community. Our children attended Redfern Public School. My family has campaigned for decades for improvements to Redfern Station which means better facilities in the station , lifts etc. We don't have a car , so we're pedestrians and heavy users of public transport. So, we're all in favour of a more pedestrian friendly environment and improve accessibility to Redfern Station. Our station needs to be more accessible for disabled and older people. I'm 68 and my partner is 72 . It's extremely difficult for us to carry shopping trolleys up and down most platforms. When we had smaller children , it was dangerous carrying them up and down the stairs at the station . And now we have a grandchild , we face the same problem (unless of course we're on platforms 6/7, 11/12)

The choices you give when asking to make a submission reflect the absolute cynicism of Transport NSW in the way this Major project has been handled. Three options- I support the project - I'm providing comments - I object to the project. I've ticked 'I'm providing comments' because I don't object to development of Redfern Station or around it - I've been campaigning for it for over 30 years. This multiple choice reminds me of the comments in the latest EIS on page 382 –*"Consultation fatigue refers to a decline in community engagement overtime due to people being overwhelmed with request to consult or discuss individual or multiple projects. This disengagement may lead to people missing relevant details of a proposed project or missing the opportunity to have their say on an important aspect of the development."*

I can't speak for other residents of Little Eveleigh street, but it's my feeling that none of us are suffering any "consultation fatigue" because there's been little consultation. We were provided with a fait accompli , and when the various community groups provided detailed counter proposals , they were rejected. Now you're asking for submissions on the project , but work has already begun. And if there are any "relevant details" or " important aspects of the development" that residents or the Transport department have missed as the EIS states on page 11-"Upon opening of the project, TFNSW would undertake a review of the operation of the shared zones, in consultation with residents and relevant stakeholders to consider any additional mitigation that may be required." My view is , in relation to the Shared zone in Little Eveleigh street, additional mitigation will be expensive.

1- My comments on formalisation of a shared zone on Little Eveleigh Street, including:

- safety improvements to vehicle, cyclist and pedestrian interactions

- improvements to streetscape such as landscaping, lighting, drainage and pavements

- relocation of approximately 20 parking spaces (including 18 resident/restricted parking spaces, one accessible parking space and one car share scheme parking space) and bus zone

- utility adjustments

In this submission , I'll provide commentary specifically on the Little Eveleigh street shared zone . Unlike the recent Transport for NSW EIS , I'll provide research references for any comments I make.

2- Who will be using the Little Eveleigh street shared zone at peak AM and PM travel hours?

The EIS states on page 13 – *"The investigations undertaken to inform the design of the Project estimated that approximately 3,300 and 6,770 people would be walking down Little Eveleigh Street and Marian Street respectively during a typical AM peak hour."*

What will those people experience as they make their way into and out of the shared zone?

As the EIS states *"The shared zone would include cars, cyclists and pedestrians sharing the new pavement on Little Eveleigh Street."* Who are the cyclists and pedestrians *? The Western Australian Department of Transport in their report Shared Path Design Technical guidelines* provides a comprehensive list of the types of cyclists that pedestrians (locals, rail passengers etc) will face when the new station exit/entrance is built:

"Shared Path Users and Individual Needs -A significant issue associated with shared use paths is the variety of users who display various characteristics that can lead to conflict between them. These characteristics include differences in

speed, space requirements, age, user expectations and predictability" Then the report provides a list of users and their needs from page 9 of the report –

Pedestrians

Walking is regarded as having significant benefits to the community. The key attributes of an environment required to encourage walking, referred to as the 5 Cs (DETR Encouraging walking: advice to local authorities, 2000) are that it should be:

- Connected: are there walking networks to give good access to key destinations?
- Comfortable: do local facilities meet design standards for footpath width,
- walking surfaces and planning for people with impairments?
- Convenient: can streets be crossed easily, safely and without delay?
- Convivial: are routes interesting, clean and free from threat?
- Conspicuous: are walking routes clearly signposted and are they published in local maps?

The key point that is relevant for Little Eveleigh street Shared zone is "can streets be crossed easily, safely and without delay?" There is no information in the EIS about how rail passengers will be able to safely exit and enter to and from Little Street into vehicle, cyclist traffic .

Cyclists

There are many categories and sub-categories of cyclists. The following list is from the WA government report on Shared Path design pp 9-11:

- Commuter cyclists- "Most commuter trips are performed by students and adults commuting to either their education institution or place of work. The average trip length for this user group is 5km or more." This user is very evident in the Redfern/Darlington/Chippendale area. And also remember this is dedicated two-way bike lane coming from Wilson street into Little Eveleigh which is very popular with all types of users.

- Utility cyclists- “Neighbourhood cycling involves trips to local schools, shops, train stations and children playing on their bicycles. Most of these trips involve distances of less than 5km. (my emphasis)
- Recreational cyclists.
- Sports Cyclists – This category is a particular problem now for Little Eveleigh street. Our street is on a favoured route for sports cyclists early morning and on weekends. They are heavy users of the Wilson street bike lanes. And for cyclists coming from the east, there is added benefit, Little Eveleigh street has a downhill gradient that enables the cyclists to pick up speed. The WA government report makes some interesting points re sports cyclists that are relevant to the Little Eveleigh street shared zone:
  “Sports cyclists often travel at speeds greater than 30km/h…… They often seek challenging terrain and frequently travel in
  groups of more than two. Cycling preferences include:
  • High quality road surface;
  • Minimal delays; and
  • Generous path widths.
  While sports cyclists will travel mostly on roads, there may be specific instances where shared path use is required, for example to link discontinuous
  local streets. Even, where a high-quality shared path is available, many sports
  cyclists will tend to favour traveling within the roadway.”

- Mobility impaired/Wheelchair users and Visually impaired /hearing impaired /Elderly. This category is relevant in several ways. There are elderly and visually impaired people in the street. But this category also relates to the single, main reason that this major project has been approved with minimal consultation- improving disability access to Redfern station. However, it leaves the disabled to fend for themselves once they exit the station into a crowded shared zone.
- In Appendix H Bicycle user categories from the Cycle Strategy and Action Plan 2007 – 2017 by the City of Sydney, they provide another user category – Bicycle couriers. At that time, these couriers were often a problem in the CBD, but not in Little Eveleigh street. But since 2017, a new user has moved into the courier space, the food delivery courier. These couriers generally move at high speed and are constant users of the Little Eveleigh street route. Many of these couriers also are part of an increasing sub-category of vehicle, the electric bike and electric

scooter. This emerging user category and the dangers they posed for the shared zone concept was noted as far back as 2012 in research for the German government(Cyclists and Pedestrians on Promenades and Pedestrian Zones German institute of Urban affairs 2012)- "A growing cause for concern is the presence of faster electric bikes and Segways.")

Why I don't think the shared zone, as currently designed, will fail to provide an "an amenable public domain" and be "better working, functional efficient and fit for purpose" (p112 of EIS)

The final section of my submission on the Little Eveleigh street shared zone comprises comments from recent Australian and international research on Shared zones. The extracts illustrate what I see as key conceptual failures with the current plans for the shared zone. A clear example of this conceptual failure occurs on pp132-133 of the EIS. Two photomontages of Little Eveleigh street provided by Novo Rail are artist impressions of the new shared zone. Viewpoint 1 facing east shows a rather serene scene that conveys a flat road and perspective, a few pedestrians, and two to three cyclists who appear to be recreational riders. There's the station entrance but no indication of the curve in the road before the station. And in the foreground of the picture (which incidentally is close to my house at 141 Little Eveleigh Street, there's no indication of the beginning of a downhill section to the street.) Viewpoint 2 facing west adds at least 3 cyclists (commuter and recreational cyclists clearly going 10 km or much less) and two disabled passengers in wheelchairs. Again, the view is deceptive, the street is flat into the distance with no indication of a downhill gradient. And the view is actually taken from the curve in the road without showing the curve! For these reasons, the commentary on the photomontage Viewpoint 2 is to say the least, quite surreal:

"The high quality of the streetscape design, coupled with additional landscaping would be a positive visual influence to views along the streetscape, however the addition of substantially more pedestrians within the road corridor could be viewed as positive or negative depending on the visual receptor"

I think most "visual receptors" would be able to detect the curve in the road and the downhill gradient in Little Eveleigh street.

Two questions need to be answered in relation to the above analysis of the artist impressions of the shared zone - Will road works eliminate hill in little Eveleigh Street? And as research below shows traffic humps aren't a good idea for calming in shared zones, why does the EIS suggest their use to "calm" traffic in Little Eveleigh street?

Recent Research on Shared zones which are relevant to proposed Little Eveleigh Street shared zone

Cyclists and Pedestrians on Promenades and Pedestrian Zones- German institute of Urban affairs 2012

"An important rule for shared-use designs is to minimise situations where sudden evasive action or stopping are necessary. On shared pedestrian and cycle paths, as well as pedestrian areas opened up to cyclists and footways – especially in cases of high densities of use – the principle of mutual respect and consideration among users must also be reflected in the design……. Downhill gradients increase cycling speed and can be a justification for separating pedestrian and cycle traffic." (my emphasis)

The impact of environmental factors on cycling speed on shared paths
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(Research published in 2017 based on observation of shared paths/zones in Sydney)

"In various countries, shared paths are frequently used to meet demand for cycling facilities that are separate from motorised traffic when space or resources are deemed inadequate for a bicycle-only path. However, there are increasing concerns about the safety offered by shared paths (Poulos et al., 2015; De Rome et al., 2015). About half of crashes experienced by bicycle riders on shared paths are due to falls off the bicycle mainly as result of loss of control or collision with an object, while a smaller proportion (1 in 6) are collisions with pedestrians (Chong et al., 2010; Poulos et al., 2015; De Rome et al., 2015). A considerable proportion of crashes associated with shared paths are bicycle–bicycle collisions or collisions with motor vehicles [MV] at intersections (Chong

et al., 2010; Poulos et al., 2015; De Rome et al.,2015). It is important to note that falls may be due to cyclist swerving to avoid pedestrians or other cyclists."

"Although a speed limit of 10 km/h for cyclists using shared paths has been suggested based on injury biomechanics survivability assessment for bicycle-pedestrian collisions (Short et al., 2007), ***the present results suggest there are difficulties of adopting such a limit. Firstly, very few riders travelled at 10 km/h or less****(my emphasis). Secondly, while the stability of a bicycle depends on various factors including the skill of the rider, bicycle type and the characteristics of the path (i.e. surface and slope), it is recognised that a bicycle can become unstable at speeds of 11 km/h (Wilson and Papadopoulos, 2004; de Waard et al., 2010).* ***Travelling at less than 10 km/h for any substantial distance undermines the value of cycling as an efficient mode of transport. Thus, a 10 km/h limit is likely to be ignored by bicycle riders, or if it were enforced (which would be difficult) may divert riders onto less safe adjacent roads or deter them from cycling." (my emphasis)***

*Physical separation of pedestrians and cyclists is recommended on busy shared paths and/or paths used by cyclists travelling at relatively high speed. On the other hand, advisory speed signing and warning signs on paths with high pedestrian traffic are recommended and used on some shared paths in Australia (Austroads, 2006****). It is argued that the actual advisory speed is less important than the fact that the sign indicates a need for cyclists and other faster users to slow down to speeds compatible with those of other users. However, there is no evidence to support the effectiveness or otherwise of advisory speed signing in reducing cycling speed and improving safety and comfort of all users on shared paths."(my emphasis)***

"While there is little evidence in the available police crash or hospital data of high risk of injury to pedestrians on shared paths, perceptions of increased risk of injury on shared paths due to cyclists, particularly among older people, are common. Walkers, particularly older people, are equally encouraged to be active and are entitled to do so without fear of conflict with cyclists riding at high speed. It is therefore important to consider separating users on paths where cyclists are travelling at higher speed and on paths with high volumes of pedestrians and/or cyclists. ***"(my emphasis)****This is also relevant to many cyclists who prefer more direct travel and may find having to negotiate pedestrians to be a disincentive to cycling to work or for recreation (Hummer et al., 2006).*

Relevance of above research for Little Eveleigh street- The research does conclude that ," *The findings also suggest that riders generally adjust their speeds to accommodate pedestrians and according to path conditions."* The authors point out that average speeds in Sydney on shared paths are 18 km way above the 10 km recommended for Little Eveleigh. But they believe with *"Appropriate width and other path characteristics that support separation from pedestrians, such as visual segregation, may allow relatively higher speeds,"* without compromising safety. I believe if the paper's researchers had observed the cycling traffic on Little Eveleigh street since the completion of the Wilson street bike lanes, they would have concluded that a major redesign of the shared zone would be needed. Personal observation on the 16th June between 8.15 am -8.45 am revealed some pertinent characteristics of cycling type and behaviour. Note, that traffic numbers have decreased in recent months because of Covid 19 and the morning observation also means less food delivery traffic which of course is increased at evening peak hour. Here are my observations –

8.17-8.19 5 sports bikes downhill fast
One electric bike uphill fast
8.23 two rec bikes downhill speeding
up
8.24 two sports downhill fast
8.27 -8.28 3 sports bikes 1 fast 2 slowing downhill
8.30 1 sports bike fast downhill
8.31 two bikes commuter speeding up downhill
832 3 bikes speeding downhill
8.38 2 sports bikes downhill and uphill fast
8.39 electric scooter uphill fast

Pedestrian-Cyclist Collisions: Issues and Risk.
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*"**The potential for conflict on shared paths is exacerbated by the differences in type, abilities and movements of users**.(My emphasis) Shared use pathways are frequented by pedestrians, cyclists, joggers, in-line skaters, skate-boarders, dogs, babies in prams, riders of powered recreational devices and many others. Particularly vulnerable users are identified as disabled (including visual, hearing*

and cognitively impaired persons), elderly and children [10]. Users have differing degrees of ability and experience, health and fitness, reaction and perception time, age and purpose. Their reasons for path usage include recreation, social, sporting and commuting. Generally, walkers will travel for recreation purposes at significantly less speed than commuter cyclists who can travel at over 50km/hr down hills [11]. ***Users mingle readily at low speeds but where higher density flows are experienced, the risk of collisions rises [1211]. In addition, pedestrians are often distracted especially by conversation, their surroundings or music listening devices []. Consequently, users' capacity to manoeuvre, avoid incidents and anticipate the movements of others differs greatly and the risk of conflict and injury is real."*** *.(My emphasis)*

Franklin [18] reported from Milton Keynes in the UK that more cycle deaths and injuries occurred on the shared "Redway" paths than on roads. In addition, pedestrians, dogs and poor path design were found to be a major cause of collisions. Despite this, cycling and walking is increasing in urban towns and cities. A paper entitled Research, Development, and Implementation of Pedestrian Safety Facilities in the United Kingdom by Davies [19] ***raises concerns about the safety of shared pathways in particular where footways have been converted into shared facilities. It provides research which suggests that clear linear separation or grade separated paths between walking and cycling tracks would reduce the conflict and make the paths safer for vulnerable users such as the visually impaired."(my emphasis)***

Shared paths

Discussion of research findings and key safety issues

NSW TRANSPORT FOR NSW CENTRE FOR ROAD SAFETY , AUGUST 2015

(All added emphasis by me)

4.1.2 Commuter versus recreational use

- "In instances of high traffic volumes, **segregation or separation** of different user groups is proposed as the most effective way to increase

their capacity to use the shared path (Department of Transport and Main Roads, 2012).

- There may be a need **to <u>design multi-purpose facilities for the 'higher' types of usage where there are multiple types of users, either together or at different times</u>**. A path may be recreational (relatively slow cycling and possibly high levels of walking) at weekends but commuter-based during the week.
- Findings indicate that in the **<u>determination of shared path design, risk assessment models should include comparison of risk, amenity, and their determinants, by different path uses (commuter and recreational</u>**)…"

<u>Advisory speed signag</u>e

<u>The speed signage trial found that neither the 10km/h advisory speed markings nor the slow markings resulted in significant reductions in cyclist speed. Only one in four cyclists reported noticing the markings and of those who did notice, one in three indicated that the markings would cause them to ride slower.</u> This suggested limited receptiveness from cyclists towards adjusting their speeds. Cyclists preferred the slow marking over the speed limit; however, this may have been due to the 10km/h limit. That some cyclists reported they would reduce their speed if there was a speed limit, suggests that speed limit signage could be further investigated using a higher threshold. In addition, greater lateral separation between cyclists and other path users was observed across all sites after the signage was installed. **<u>More research is needed on the impact of speed signage due to the lack of comparable studies.</u>**

<u>Speeding</u>

Shared path research has not provided conclusive evidence on the effectiveness of speed limits.

- □ Cyclists typically travel above the speeds that would be recommended based on safety considerations for bicycle-pedestrian collisions – 10km/h. Below about 12km/h bicycle instability increases, possibly increasing the risk of falls. Pedestrians usually walk at around 5km/h.
- □ In the observational study, around two in three riders cycled at an average speed of 11-20 km/h. Just 3% cycled at 10km/h or less. The

overall average speed was 18.4km/h (range 4.2 – 43.2). Riders were more likely to cycle above the average speed on wider paths and paths with a centreline and were less likely to cycle above the average speed on paths with higher pedestrian volumes.

- When observational study participants (n=58) were asked about the minimum speed a cyclist should be able to travel on a shared path for commuting by bicycle to be attractive, the greatest rider-pedestrian concurrence was observed for speeds between 15 and 20 km/h.
- In the speed signage study, two in three cyclists surveyed in the speed advisory trial sites believed a safe travel speed was between 10 and 20km/h. However, pedestrians at the same sites most commonly selected up to 10km/h as the safest travel speed.
- Slowing down - the overall evidence regarding whether cyclists slow for pedestrians is equivocal. In the observational study, only 10% were observed to slow down when passing pedestrians and three per cent of riders were observed to warn pedestrians before passing.

  (note on above speeding research- the authors conclude from the above that speeding isn't an issue , but that conclusion doesn't really seem to fit with the points made, e.g. , only 10% of cyclists slowed down when passing pedestrians , and only 3 % warn pedestrians. Yet the authors conclude that "both cyclists and pedestrians understand that a practical cycling speed is appropriate for the environment")

Concluding remarks from Transport for NSW shared paths study

*"Based on **current best practice**, in the design of new paths (particularly in terms of width) **a range of risk factors should also be considered, including estimates of path use (commuter versus recreational), traffic volume, mode split, gradient and sight lines. NSW should review and where appropriate align current standards with best practice.** In some **high volume, high-risk settings, greater consideration should be given to path segregation (physical separation) to safeguard path users and their amenity**. Practical considerations such as appropriateness of construction location, lighting and maintenance are additional factors that have been found to mediate the safety and appeal of shared paths."*

Concluding remarks from Stan Correy

For this submission I consulted a comprehensive collection of international and Australian research on shared zones and their use by pedestrians ,cyclists , motor vehicles and new forms of transport like electric bikes and scooters . I've concluded that Transport for NSW hasn't followed its own best practice guidelines and that the Little Eveleigh street shared zone isn't fit for purpose. Since Transport for NSW failed to consult properly with residents or prominent stakeholders , my belief is that the promised mitigation for any future problems will be more costly than the limited budget allocated for this Redfern station upgrade.

Stan Correy

141 Little Eveleigh Street Redfern 2016