Newcastle Inner City Bypass

Rankin Park to Jesmond

Response to refined strategic design

and

Environmental Impact Statement

by

Mike Cole

Owner-Occupier Unit 7 'Parkview'

230 Newcastle Road Jesmond 2299

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with modifications

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Introduction

The refined strategic design as issued in the flyer sent to all residents has a number of design flaws and does not consider the local community living near the Jesmond interchange adequately. As a scientist that was formerly in traffic engineering and planning I offer the following comments and suggestions. I have lived next to the Jesmond roundabout since just before the Jesmond to Shortland section of the bypass was opened in 1993.

In this document I address the following issues:

1) Space to Move
2) Current and Past Issues
3) EIS Imposed Design
4) Traffic Management on Newcastle Road
5) Compensation for Parkview Owners and Residents

In the EIS it appears all responses from residents have been ignored. This is extremely disappointing as we are the people affected by the decision. The total disregard by planners and designers shows disdain towards the people paying them, as they appear to regard their plan to be inevitable. If this project is not reviewed and its 'errors of judgement corrected' the Government can expect serious claims for damages.

1 Space to Move

The refined strategic design does not recognize the limitations of the space in which to build the interchange, indeed, the area with the highest impact on residents has been chosen for the signalized intersection (Figure 1).

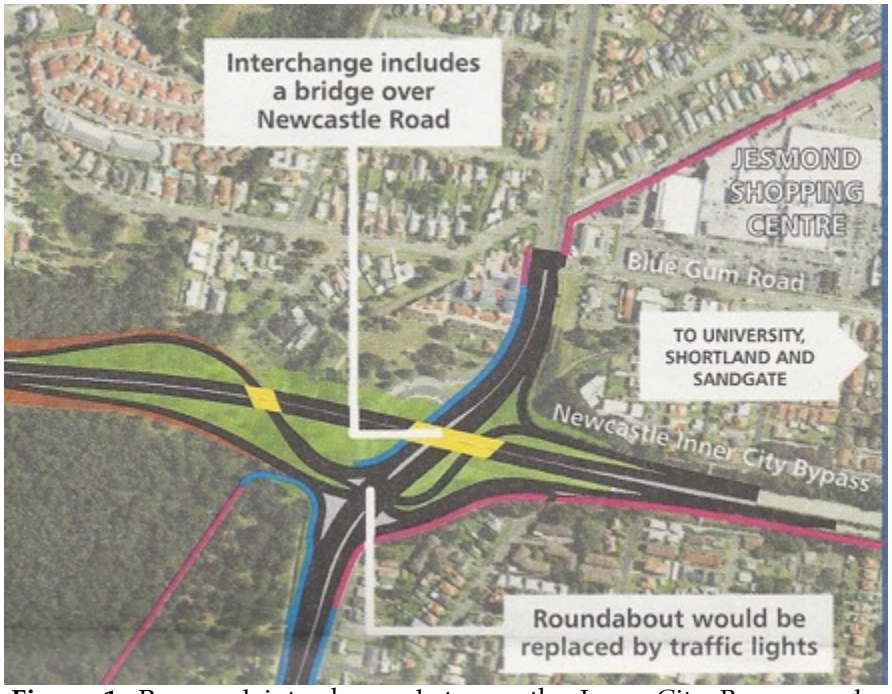

Figure 1: Proposed interchange between the Inner City Bypass and Newcastle Road. Note, here north is to the right, elsewhere to the top of the page.

What this does is to place the signalized intersection very close to Parkview at 230 Newcastle Road. Indeed, there would be four lanes of turning traffic within 14 metres of the bedrooms at the front of the western end of the building.

The design ignores the fact that on almost every corner of the current roundabout there is more room to accommodate the interchange, especially the area between Newcastle Road and the storm water drain north of Jesmond Park which is effectively a utilities corridor with no one living next to it. In Figure 2, I outline the design space that I believe ought to have been considered by the planners.

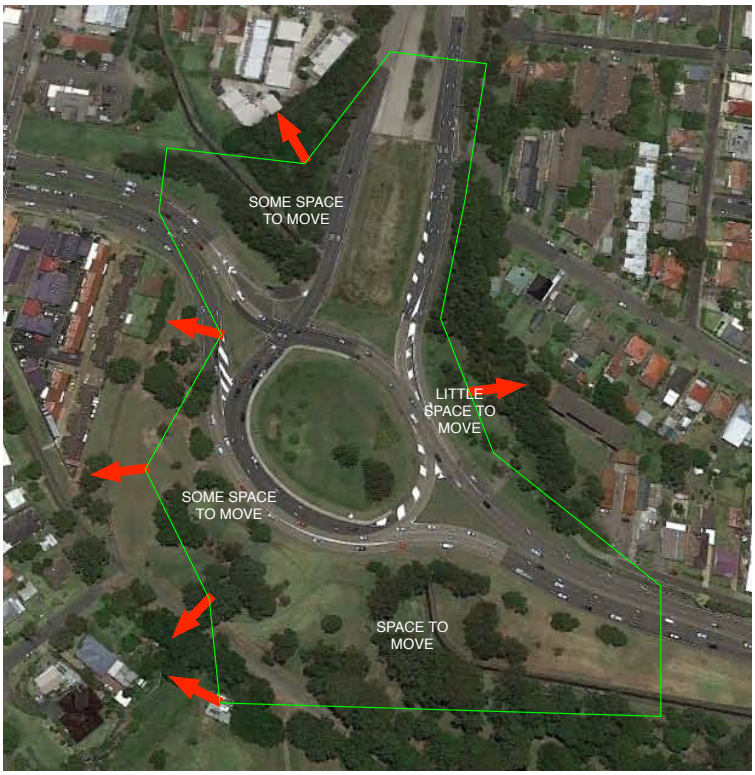

Figure 2: Design space – space to move.

2 Current and Past Issues

As someone that has lived adjacent to the Jesmond roundabout for almost a quarter of a century, I know many of the problems that we confront in this area, and due to my experience, I can read the traffic situation. A number of issues stand out, and in Figure 3, I outline some of the key issues that affect living near this intersection that are likely to be worsened during construction and operation of the interchange.

- **Noise**

Traffic noise can be a problem, especially at night when people are trying to sleep. This is at its worse when screeching of tyres or crashes occur. A basic principle of trying to maximize the distance between trafficked areas and buildings should be adopted. In addition, wherever space can be left between the buildings and roadways a reasonably dense band of vegetation should be used to buffer noise. The *Casuarina* trees outside Parkview have helped, but have had a number of problems. For us, the cutting of the lower branches by Newcastle City Council (NCC) has increased the noise passing through the vegetation to the units as much of the traffic noise is low 'side noise' and it is at that level that it is best buffered.

This is an issue for the design of the overpass because speeding traffic will further impact on local residents through the production of noise. The overpass design should ensure that traffic noise is contained within 'side structures' that buffer vehicle noise to reduce their impact on surrounding residents. This has been totally disregarded in the EIS.

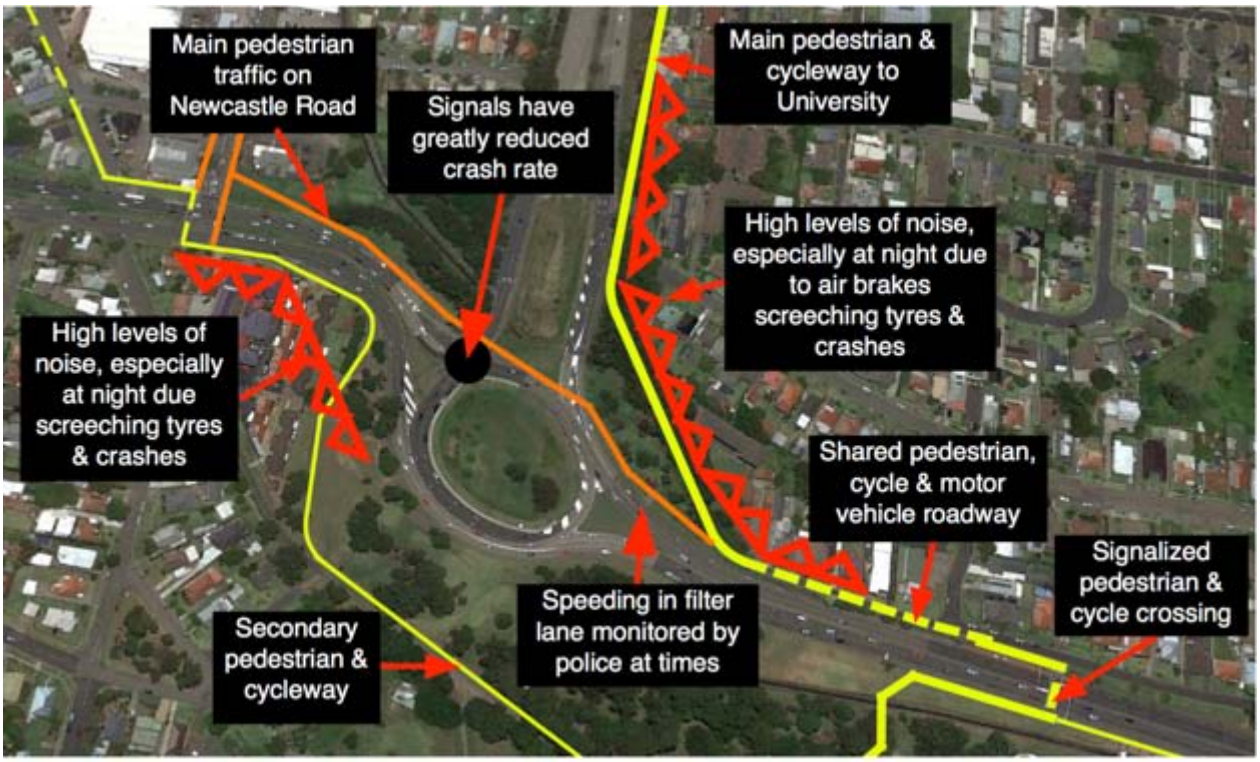

Figure 3: Current and past issues with the Jesmond roundabout.

- **Speeding and Crashes**

Speeding contributes to noise especially when traffic levels are low. A number of problems have occurred where vehicles lose control and screech or crash. The poor cambering of the southern part of the roundabout has contributed to this, but mostly speed. There were many crashes at the on-ramp to the bypass that included vehicles upside down (including a young child in a restraint) but this has been greatly improved since signalization occurred. Speeding also occurs on the filter lane from the bypass into Newcastle Road and is monitored from time to time by the police using a 'speed-gun' and I assume this has led to fines.

- **Pedestrians and Cycles**

Pedestrians mostly walk on the northern side of the roundabout when travelling to Jesmond shopping centre. Some use the pedestrian-cycle pathway and overpass (over the bypass), but quite a few stay on the ground.

There are many cycles that use the pedestrian and cycle pathway to the University and a few that use the part that connects to the Blue Gum Road traffic signals, indicated as the secondary path on Figure 3. Some safety issues relating to the primary path were raised in an earlier report to NCC (Cole, 2013, attached at the end of the June 2016 document).

- **Construction and Maintenance**

Major problems with construction and maintenance have been, and will be issues for concern. These include both noise, including vehicle reversing beepers, and safety for pedestrians and cyclists.

Where possible construction should be undertaken in daytime so as to not disturb people at night, including those recovering from injuries and ailments in John Hunter Hospital. This should also be taken into account during design stages, for instance, in the proposed design modification below much of the link and signals could be constructed within the roundabout without excessive disturbance of existing traffic patterns, it could therefore be undertaken in the daytime.

Planning of works and the methods used should also be considered. We have had nights with incessant noise of reversing trucks that stopped people from sleeping, yet, several years ago the "RTA" issued a notice saying they were going to use forward movement only (where possible) and the works were carried out with much lower levels of disturbance and annoyance. So, it can be done when good will is present.

3 EIS IMPOSED DESIGN

In total disdain for the residents of Jesmond, the planners and designers plan to impose the design shown in Figure 3 and total ignore the comments made by residents following the release of the 'refined strategic design'..

Figure 3: Jesmond interchange design imposed by the planners in the EIS.

In Figure 4, I have used this IMPOSED, design to show how it can be modified to reduce its impact on local residents including Parkview, and better serve the needs of Jesmond.

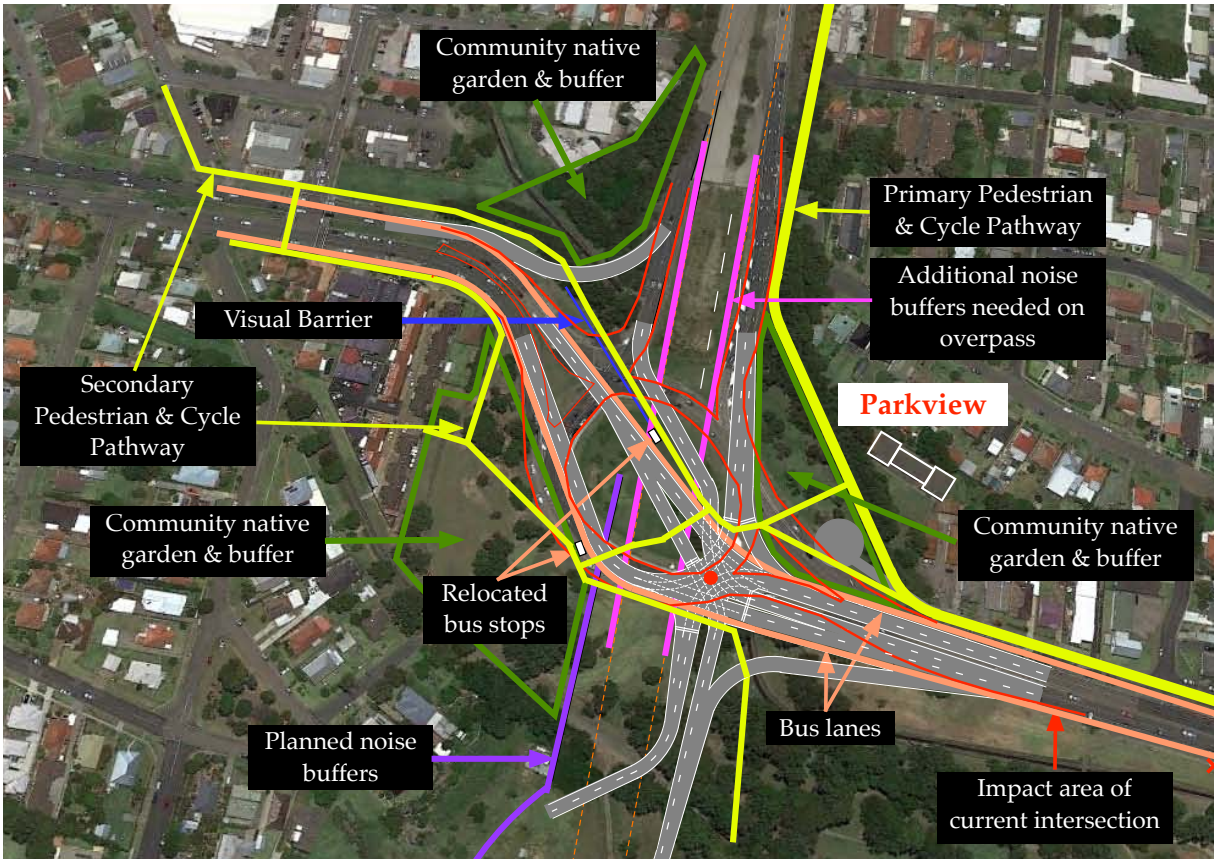

Figure 4: Modified design to reduce impact on local residents and better serve the needs of the Jesmond community. Also shown are bus lanes and relocated bus stops. Generally, traffic lanes are shown, not shoulders. The centre of the signalized area is indicated with a red dot.

3.1 Elements of the Proposed Design Modifications

- **Location of signalization**

The centre of the signalized intersection has been moved further south. This means that all of the lanes are moved away from Parkview. As it can be seen, much of the intersection can be catered for within the current disturbance area.

- **Lane Capacity**

Generally, in the imposed design two lanes have been used approaching the signalization point which makes sense. It allows faster clearing of queues and a higher level of service for the intersection. However, the imposed design also shows doubling the left turn capacities which has no justification. If we need to double the capacity for vehicles turning left from the north into Newcastle Road heading towards Croudace Street, then there is no need for this stage of the bypass. The bypass is intended to largely eliminate this traffic and a significant level of that arriving along Newcastle Road from the Wallsend area.

When designing for capacity it is important to remember that the capacity of a 'bridge' (in traffic engineering a 'link') is dependent upon the 'bridgeheads'. Trying to convert Newcastle Road into a freeway is pointless as it will be limited by the capacity at each end, especially the junction with Blue Gum Road.

- **Pedestrian and Cycle Network - Respecting the Rights of Pedestrians and Cyclists**

Historically pedestrians and cyclists have been poorly catered for in Newcastle, however this has been improving over recent times. Policies have been developing in the State to try to increase the pedestrian and cyclist components of the modal split for work and other trips. Pedestrian and cyclist movements should be properly planned into road works and not simply added on.

In the 'refined strategic design' pedestrians and cycles are largely added on to the edges of roads. The pedestrian and cyclist traffic signals on Newcastle Road are to be removed and an overpass constructed.

At the planned interchange people are expected to cross to the Jesmond Park side of the road where few pedestrians travel and then cross back at the Blue Gum Road intersection. This is poor planning and local people will ignore it and continue to walk where they do now.

If we can afford the bypass, we can afford to further develop the pedestrian and cycle pathway network. In Figure 4, a more extensive pedestrian and cyclist network is shown to cater for the needs of the community and linked to the proposed bus stops. These are phased into the signalization as shown below (Figure 5). Crossing of Newcastle Road has been eliminated other than at one location (except the Blue Gum Road junction which needs review). The crossing has been located in the position of the current roundabout. This cross link between the two proposed bus stops fits more easily in the signal phasing plan proposed.

- **Noise buffers**

In the interchange design the planners have incorporated noise buffers to the south-west but totally disregarded all other residents. The whole of the overpass must have noise buffers either side. In addition, if the IMPOSED design is used, the northeast part must be heavily buffered and the owners of Parkview compensated for loss of view.

- **Visual Barrier**

I have also indicated a visual barrier as raised in my original response. This is to prevent tired drivers at night seeing headlights on their left and thinking they are on the wrong side of the road.

- **Bus Lanes and Bus Stops**

In Figure 4 I have indicated bus lanes and changed locations for the bus stops along side Jesmond Park.

We should not be spending large sums of money on vehicle users without also investing appropriately in pedestrians and cyclists (noted above), and public transport. The lanes would give busses exclusive right of way through to the Blue Gum Road intersection where there is already a Bus phase in the signals.

The relocation of bus stops is important because with the loss of the signalized pedestrian and cyclist crossing people will still try to cross the road to get to the existing bus stop, this will be very dangerous. In the phasing diagrams below (Figure 5) there will potentially be a continuous flow of traffic without platooning. Because of this the section from the interchange to Steel Street ought to have barriers preventing pedestrian crossing.

- **Phasing**

In Figure 5, I have indicated how the phasing of the intersection linked to the interchange and the Blue Gum Road junction could be phased to maximize the opportunity for 'green wave flow' both for vehicles and cycles. The precise timing for signal phases will need to be worked out by the engineers.

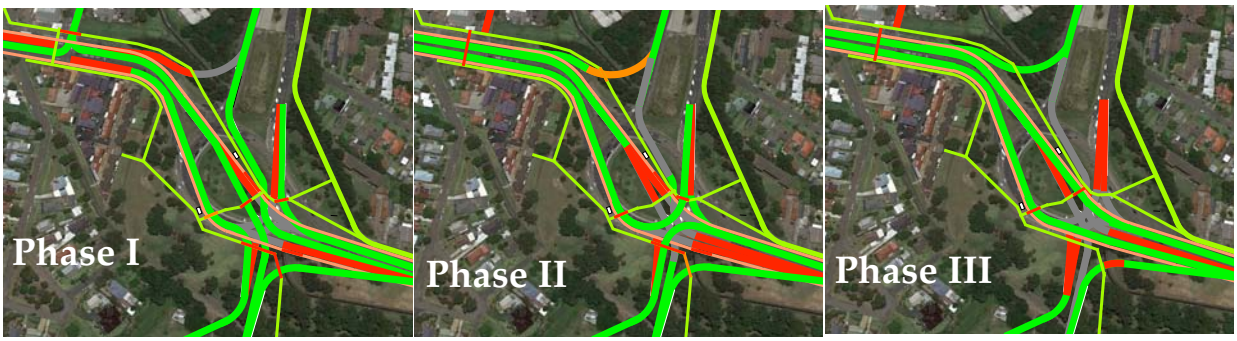

Figure 5: Phasing plan for the proposed modified intersection linked to the bypass interchange. Where the vehicle or pedestrian/cycle movement is in red it is stop, in orange movement allowed if no conflict present, if green then go.

- **Community Native Gardens and Buffer**

Each of the high impact areas under the above design would have the potential for a native garden and vegetation buffer of noise which would also improve the amenity of the area and cater for the needs of native birds.

4 Traffic management of Newcastle Road

In Figure 6 I have indicated an extension of the primary pedestrian and cycle network to include the overpass and have connected it to the existing network via Jesmond Park. The pedestrian and cycle pathway should be properly constructed in addition to current vehicle access which it shares, even if it means moving Newcastle Road a little to the south at the interchange.

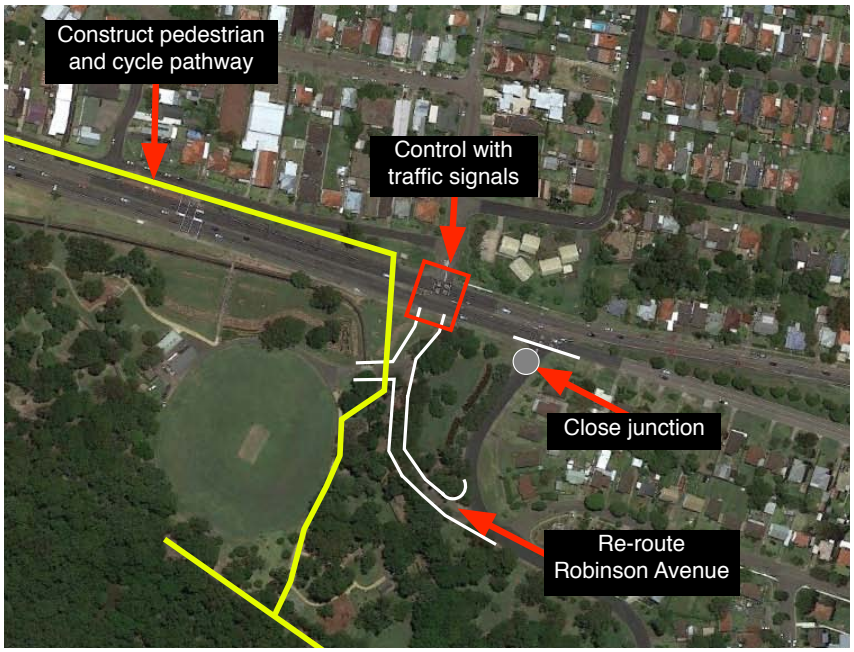

Figure 6: Extension of the pedestrian and cycle pathway to Jesmond Park. Also shown is the rerouting of Robinson Avenue and the signalization of the, then, Steel Street-Robinson Avenue cross-intersection with Newcastle Road.

In Figure 6 I am suggesting that the road linkage rerouting Robinson Avenue utilize, and upgrade and existing access to the sports oval and continue it on to Steel Street. This will minimize impact on the park. In addition, I have suggested that existing paths connecting to the primary cycle network be upgraded for this 'duel' purpose.

In addition to the improvements in the interchange with the bypass, Newcastle Road needs assistance for safe movement of people, cycles and vehicles. The Steel Street junction is very dangerous and at least (to my knowledge) one person has been killed there. At the moment movements into and out of Steel Street are assisted by the pedestrian and cycle traffic signals. The vehicle platooning that occurs at traffic signals allows the formation of gaps that assist the movement of turning traffic. The removal of the pedestrian and cycle traffic signals as proposed will greatly increase the danger of this junction. Strong consideration should be given to signalizing this junction. Indeed movements at Robinson Avenue are also difficult and consideration could be given to re-routing Robinson Avenue so it forms a signalized cross-intersection with Steel Street and Newcastle Road (Figure 6). The improved safety of signalization would provide a major exit from the residential area to the north, other than travelling to Janet Street. It would mean that the exit from Robert Street into the bypass could be closed. This exit is used by a number of vehicle operators as if they have right-of-way, which they do not. Local hooligans, to suggest vehicles do have right-of-way, have repositioned signs. I have witnessed a number of near misses where vehicles have almost hit pedestrians and cycles at this intersection with the pedestrian and cycle pathway. It should be closed as indicated in the earlier submission.

An alternative to the provision of a pedestrian and cycle overpass would be to link this network to the Steel Street – Robinson Avenue signalized intersection.

5 Compensation for Parkview Owners and Residents

If the 'design' contained in the EIS were to proceed as planned, then considerable compensation should be available to residents and owners of Parkview. This would relate to loss of property value, noise levels from closer traffic and the impact of the overpass, and for those that rent their property, loss of rental value.

Conclusion:

The failure of planners and designers to properly regard the owners and residents of the area, particularly Parkview, is extremely disappointing.

I call on the Premier and the Minister to instruct these people to properly respond to the criticisms and to reduce the impact on Parkview.

Who is?

Mike Cole

My Journey

My research journey started in 1965 when emergency vehicles had difficulty attending a fire at the University of Essex, UK because of poor access design. I was given the task of solving the problem and that led to improved methods in slow speed road geometric design. My research has changed path along the way through transport planning and regional land use planning, using scientific data, to finally a focus on ecosystem function through my eyes as a plant physiologist following my return to academic study in 1981 at The University of Sydney.

Along the way I have had a productive interaction with my research staff, research candidates and students. My five PhD and thirteen honours student completions, have provided a satisfying way to contribute to science, and science education, together with the many undergraduates I have taught in subject areas including plant physiology, experimental design and analysis, botany, genetics, and wetland ecology. Throughout my academic career I have focused on the structure, function and ecology of Australian native plants from many communities including mangroves, forest and heath.

Our research has grown in recognition through our interactions with industry, government and the general community. Publication has been slow but that is a product of ensuring high quality student Degree outcomes and ecological impact in the field. The Model Site that I developed with my students and staff, the 'Ravensworth State Forest Vegetation Complex' has more than forty experiments and investigations completed or underway. This site is now listed as a 'highly commended' site on the Global Restoration Network of the Society for Ecosystem Restoration, International. People from around the planet can link to this research.

Synopsis of Professional Appointments

2013 onwards	Founder & Principal, *CSER RESEARCH* - reconstructing ecosystem function.
2006-2013	Founder & Director, Centre for Sustainable Ecosystem Restoration, University of Newcastle
2001	Lecturer, University of Newcastle, experimental design and analysis, Australian flora, and wetland ecology
2000-2006	Conjoint Lecturer in Physiological Ecology, University of Newcastle
1999-2001	Botany teacher, Hunter Institute of Technology
1993-1997	Associate Lecturer, University of Newcastle
1987-1989	Laboratory teacher, Biology, University of Western Sydney – Nepean
1984-1992	Part-time teaching and research appointments, The University of Sydney
1984-1992	Post-graduate research into mangrove physiology, The University of Sydney
1981-1984	Bachelor of Science graduate, The University of Sydney
1972-1980	Founding partner, The Planning and Design Team, urban and regional planning, traffic planning, land use research and architecture consultancy
1970-1972	Project traffic engineer, Rankin and Hill
1965-1970	Associate, Arthur Henderson Consultants, London, traffic engineering and planning consultancy

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