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28 February 2021

Director, Transport Assessment, Planning and Assessment
Department of Planning, Industry and Environment
Locked Bag 5022
PARRAMATTA NSW 2124

Dear Sir / Madam

Beaches Link Project EIS Submission 28 February 2021

Introduction

As noted by Bastien Wallace of Bicycle NSW in her submission, I am a board member of that organisation and have been a bicycle user since 2006. In that time I have travelled approximately 100,000km by bicycle, the overwhelming majority of that on Sydney's roads while commuting from home on the Northern Beaches to work and back, both in the Sydney CBD and Sydney Olympic Park.

I am a Certified Practising Accountant and have been a member of the Australian Society of CPAs for more than 35 years. My career has been focussed on senior financial reporting and analysis roles for ASX100 companies, most recently switching to managing systems to provide resource allocation and business management intelligence to senior management.

Presently I represent Bicycle NSW on Northern Beaches Council's Transport and Travel Strategic Reference Group, where I advise on bicycle infrastructure best practice. I have written extensively on enforcement of the Minimum Safe Passing Distance Law, and provided advice and assistance to riders on this matter nationally and internationally.

Thank you for the opportunity to comment on the impact of the Beaches Link project on active transport users in the Northern Beaches.

I support the submissions of Bicycle NSW, who will address the wider systemic issues, and Bike North, who will also provide detailed analysis on the impacts in the lower North Shore areas.

This submission focusses on local impacts on the Northern Beaches active transport community.

Active Travel Infrastructure and the Beaches Link Project

As seen in the chart below, Wakehurst Parkway, Burnt Bridge Creek Deviation, and Sydney Road Balgowlah represent bicycle routes of regional significance.

Each is noted as a Regional Route in Northern Beaches Council's 2020 Bike Plan. Forty percent of Northern Beaches residents used a bicycle in the past 12 months compared to the state average of twenty-five percent.

The proposed new safe cycling facilities along Wakehurst Parkway are very welcome.

Perceptions of risk while sharing roads with Sydney's notoriously aggressive drivers and safety concerns are repeatedly cited by respondents across multiple surveys as the biggest single hurdle to increased active transport uptake.

Shared use paths along this stretch have the potential to address these significant safety issues for road and commuting cyclists, as well as local recreational and short-trip transport users.

If designed and executed well, they will provide a significant boost to achieving government policy targets to shift transport mode usage from private motor vehicles to active transport in the local area and across LGA boundaries.

The following submission addresses a number of points where I have concerns about a lack of consultation with local subject matter experts, the design and execution of shared use paths associated with the project, including Wakehurst Parkway, Balgowlah, and the project's impact on the wider active travel network.

Additional feedback will be provided on current TfNSW contractor execution practices, based on local rider experience of their impacts on the shared path facilities constructed recently around the new Northern Beaches Hospital, and changes required to address issues for riders that are connected to these practices.

Balgowlah

Safe Cycling Facilities

It is pleasing to see the Burnt Bridge Creek Deviation north-south Regional Route for active transport users is being maintained in the project design. The proposal for new shared use paths through the new community park, and on either side of the new tunnel access road is also very welcome.

However, this author has concerns with the new signalised intersections where the new access road joins Burnt Bridge Creek Deviation at the north-western end, where it joins Sydney Road at the south-eastern end, and the treatment of the southern end of the Shared Use Path where Dudley St meets Sydney Road.

Burnt Bridge Creek Deviation Cycle Path

Presently, commuting cyclists enjoy an uninterrupted journey along the shared use path from one end of Burnt Bridge Creek Deviation (BBCD) to the other.

The imposition of a new signalised intersection which they must negotiate threatens significant delays if standard RMS practice is followed with regard to active transport users requesting permission to cross. This, combined with the loss of tree cover and noise barrier protection from the re-routing of the shared use path, represents a significant loss of amenity for bicycle users and pedestrians compared to the current situation.

The typical RMS practice of not granting pedestrian or bicycle users a green crossing signal until after a button is pressed to log a request with the system imposes significant additional journey time. At the intersection of Wakehurst Parkway and Warringah Road, the author has recorded the amount of time it takes to legally negotiate the crossing by pressing the buttons, and found it can be as much as 5 minutes depending on time of day and on what point in time during the cycle he arrived at the intersection. IF this practice is repeated, non-compliance by riders is guaranteed.

While this behaviour is not in any way condoned by the author, it is a fact that it will occur, and a safe systems approach dictates the behaviour must be mitigated. Enforcement measures are effective only for the duration of the enforcement campaign, and experience from the numerous episodes of Operation Pedro indicates it has a long-term suppressive impact on active transport participation. This is not recommended.

Active travel users should not be required to press a button to log a request to cross the intersection before getting a green light. The crossing light should automatically follow the status of the through road traffic lights facing BBCD motor vehicle users. BBCD road traffic users should not be permitted to turn into or out of the new access road; it should be for the exclusive use of Beaches Link users.

It would be preferable for a north-south bridge to be implemented across the intersection, as was done for the Hilmer St crossing of Warringah Road adjacent to the Northern Beaches Hospital, to maintain current journey times. Given the Regional Route status of BBCD shared use path, this author expects the business case in support of a bridge would be at least as strong as for those built at Hilmer St, if not stronger.

Southern End of Dudley Street.

The current No Right Turn sign at the southern end of Dudley Street fails to address the needs of citybound commuter cyclists confident to continue their southward journey to Spit Bridge via Manly Rd. It is clear that no desire line analysis was done before this sign was put in place a couple of years ago.

As a direct consequence, this sign is routinely ignored by almost all riders.

As with the situation outlined above with traffic light compliance, a safe systems approach must be adopted, as the sign has failed.

Two options need to be available to make the current popular usage patterns safe and legal.

1. A Bicycles Excepted sign be added to the No Right Turn from Dudley Street.
    a. If time restrictions are required, they should be based on data collection and consultation with local rider community.
    b. Road markings on the westbound side of Sydney Road saying “do not queue across intersection”
    c. Access be provided to a bicycle storage box in lane 1 of 3 on Sydney Road to provide left-turning riders with a safe area to wait for the left turn light change onto Manly Rd southbound.
2. A bicycle crossing be added to the pedestrian crossing on the left turn slip lane from Burnt Bridge Creek Deviation southbound into Sydney Rd eastbound, similar to Merlin Street Neutral Bay (see photos below), with access to a bicycle storage box in lane 1 of 3 on Burnt Bridge Creek Deviation southbound.

Burnt Bridge Creek Tunnel and Access

For riders travelling south via Seaforth, the current corkscrew ramp that riders encounter after exiting the Burnt Bridge Creek tunnel under the Deviation freeway needs to be made more cyclist friendly. The author understands this may be replaced as part of the underpass extension.

- Presently it is difficult to negotiate, with a sharp turn followed by a steep gradient that is frequently wet and strewn with leaf litter, which has led to a number of rider falls from loss of traction.
- In its current state, the degree of difficulty acts to discriminate against riders with disabilities and users of non-conventional bicycles such as cargo bikes and bicycles with child trailers.

A photographic assessment with additional notes is included in Appendix 2.

Access design for the replacement approach must follow current best practice standards, and focus on wider radius turns, reduced gradients and safe sight lines.

Northern Entrance to Burnt Bridge Creek Deviation cycle path

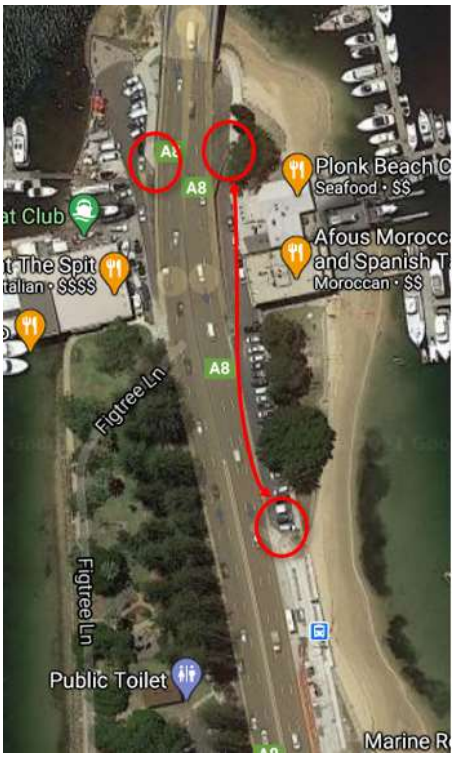
As with the southern end, a bicycle crossing should be added to the pedestrian crossing at the slip lane.

The traffic island path and footpath on the northwest side of the noise barrier should both be authorised as shared use paths, to authorise current safe practice.

Spit Bridge Shared Use Path

This essential shared use path is much too narrow and does not meet current standards. With current trends in mountain bikes dictating handlebar widths of 800mm or more, and the nearby Manly Dam mountain bike trail network being the most popular in Sydney, negotiating safe passing in opposite directions frequently requires one or both riders to dismount to manage collision risk. Passing pedestrians usually requires the pedestrians to cooperate by stopping and turning side-on to allow the rider to pass.

Recumbent or upright tricycles favoured by disabled riders cannot use this path due to these constraints, and have no other practical options for travel to or from the Northern Beaches.



The turn from the ramp providing access from the Spit Bridge shared use path underpass to travel north usually requires the climbing rider to swing wide into the path of riders descending south. Sight lines for the climbing rider to determine whether this can be done safely are challenging.

It is impossible for users of longer bikes such as cargo bikes, bikes with trailers, or disability bikes such as recumbent or upright tricycles to execute this turn.

The approach on the eastern side of The Spit from the northern end of Parriwi Road has a substantial section shown in the picture at left where riders are required to ride contraflow to the motor vehicle traffic approaching the restaurant strip slip lane, in order to enter the shared use underpass underneath Spit Bridge.

It is clearly the intention of the infrastructure designers that they should do this, as both the Spit Bridge shared use underpass and the restaurant strip slip lane are two-way for bicycle riders.

However, riders are placed at a significant physical risk of collision and their legal status is unclear. It is likely that any rider involved in a collision here would be encouraged by competent legal counsel to sue the State government for contributory negligence.

This project should be used as an opportunity to consult with the rider community and address these failings.

Sydney Road

The present design indicates no shared use paths running east-west along Sydney Road. What shared path routes are shown terminate in odd places that are difficult to understand.

The author has observed an increasing number of students from Balgowlah Boys High School riding to school during the pandemic period.

Failing to provide east-west shared use paths and suitable crossing access discriminates against students sixteen years or older from Seaforth or Fairlight/Manly areas wishing to maintain healthy habits by cycling to school.

Further, the intersection treatment for active travel users where the connecting road meets Sydney Road appears not to address active travel needs. If the author has overlooked where this is set out, he would appreciate being directed to where this is documented, and an opportunity to comment further.

Active travel traffic light signalling for those wishing to cross east-west is similarly problematic at this intersection. The issues and a proposed solution are discussed in Appendix 1.

Safe and Convenient Cycling Routes During the Construction Period

The assurance that existing off-road routes will be maintained is welcomed.

However, the numerous serious safety and amenity problems generated for active transport users by the WestConnex project works, over which Bicycle NSW has been engaged in vigorous advocacy with project managers and government, have given interested observers trust issues with the assurances provided that these will be resolved in a satisfactory manner.

The scant detail provided about how risks and amenity for active travel users on the road cycling network will be managed for the project's duration provides little comfort, and almost no opportunity to provide detailed constructive feedback.

Conclusion - Balgowlah

Neither the Environmental Impact Statement nor the project as a whole should be approved until a full and proper engagement with key stakeholders Bicycle NSW, Bike North, and local cycling advocacy subject matter experts has been undertaken, these issues are addressed, and the agreed solutions documented.

Wakehurst Parkway

Safe cycling facilities

It is pleasing to see a cycle path implemented in the design along this notoriously dangerous section of road. Wakehurst Parkway is marked in Northern Beaches Council's Bike Plan as a Regional Route for recreational and commuter cyclists, connecting riders from Frenchs Forest and further north and west to the Spit Bridge via Seaforth.

The narrow Parkway shoulder is frequently strewn with rocks, sticks and other debris, and close passes from heavy vehicles are a common occurrence. We are grateful this is being addressed in the plans, with the addition of both a cycle path for those seeking safe options, and with wider road shoulders for those desiring to continue using the road cycling network.

However, there are a number of concerns this author has with the plans he has seen and he seeks further clarification on the following items.

Fit for Purpose

Cycling facilities should be fit for purpose for riders of all ages "from 8 to 80". The execution of significant parts of the design around the Northern Beaches Hospital Precinct fails to meet this standard. This author is concerned the same mistakes will be repeated here.

- It is definitely not preferable to have north-travelling riders on the shared path travelling close to the kerb facing 80km/hr traffic without concrete barrier protection (for example, Jaybro Deltabloc concrete crash barriers).
- Please see Appendix 1 for an illustrated discussion of the shortcomings that must be rectified. The crash risk will be significantly worse if these implementation failures are repeated along Wakehurst Parkway. This author is assuming the shared path will continue to be almost entirely unlit for environmental reasons.

Traffic Lights, intersection of Warringah Road and Wakehurst Parkway

At the northern end of the proposed works, at the east-west crossing on the southern side of Warringah Road at the intersection with Wakehurst Parkway, there is a light-controlled dual pedestrian-cyclist crossing that was implemented as part of the Northern Beaches Hospital roads project.

These lights have been installed at all intersections where a shared use path crosses an intersection. It is pleasing to see that RMS acknowledges that cyclists should not be required to dismount to cross and resume their journey on the other side of the intersection. Unfortunately, the execution is very poor.

The challenge here is that the crossing is broken into three separate sections. Each section is controlled by an independent "beg button", which cyclists and pedestrians are required to press before the system will register a request to provide a green walk/bicycle signal to enable them to legally cross the next section.

- This imposes an entirely unreasonable time penalty that frequently exceeds 5 minutes for a travel distance of less than 50 metres.
- This will impact riders entering and leaving the northern end of the cycleway heading towards Belrose, Frenches Forest and Forestville.
- Currently, nearly all riders lose patience and ignore the lights, crossing when the main east-west through-traffic flow has the green light. As east-bound riders cannot see the lights for west-bound traffic, this sets up a serious collision risk.
- The crossing lights should not require the buttons to be pressed to activate them. They should automatically engage whenever the opposing traffic is stopped, in the same way pedestrian crossing

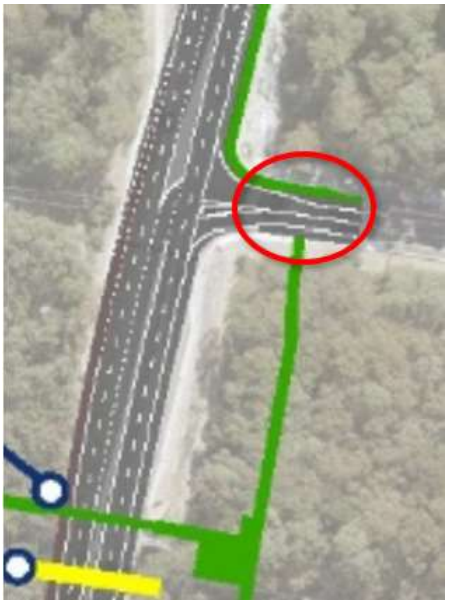
signals are now activated in the Sydney CBD. No material delay is imposed on motor traffic by doing so.

- While these lights are already constructed, these flaws in their operation impact the operation of the connection of the new path with the rest of the network, and should therefore be considered to be in scope for this project. This should be capable of being rectified in the same manner as has been done in the Sydney CBD.
- See Appendix 1 for visual details.

Aquatic Drive Crossing

The Shared Use Path crossing at Aquatic Drive is positioned several metres back from the intersection to require riders to slow on approach, and give both drivers and riders time to see each other.

The problem is that the tight turns, especially the last right turn before crossing the road, cause significant issues for riders approaching from the north due to very poor sight lines.



The result is similar to the awkward and dangerous rider experience at Park Avenue, Cremorne, for riders turning right to head east into the Sutherland St protected bike path.

While balancing at slow speed, on a downslope, the rider is required to look directly behind them, to their right and directly ahead to check for approaching traffic, while simultaneously negotiating a very right tight turn.

This author has experienced and observed incidents where he and other riders have failed to observe traffic approaching from behind, startling the rider and sometimes requiring the driver to brake to avoid a collision.

The result is that experienced riders eschew the northbound protected bike path, opting instead to use the road. This has the advantage for the rider of placing the onus on drivers behind them to slow and brake, and reduces the visual scanning radius for the rider to observe approaching traffic from 270 degrees to 90 degrees, while allowing them to conserve momentum.

The Aquatic Drive crossing design should be modified to learn from these design mistakes:

- Allow riders to approach the crossing from the north on a straighter alignment, without requiring a sharp 90-degree turn.
- This will reduce the required visual scanning radius for riders to observe traffic from 270 degrees to a more manageable 180 degrees.
- The crossing should also be a raised pedestrian and cyclist priority crossing, similar to that used on Merlin Street Neutral Bay. Like Aquatic Drive, Merlin Street has a 50km/hr posted speed limit.

Merlin St Neutral Bay facing north:

Merlin St Neutral Bay facing south. Note wide radius approach from cycle path at left and direct approach from right, providing improved sight lines for riders to observe approaching traffic. A wider radius from the left would improve the approach further. Merlin St has a 50km/hr speed limit posted.

Connection to cycle paths and bike lanes on Aquatic Drive is omitted from the EIS plan diagrams.

Termination of Wakehurst Parkway Shared Use Path Sothern End at Kirkwood Street

The decision to terminate the Wakehurst Parkway Shared Use Path at Kirkwood Street at the southern end is difficult to understand.

The Wakehurst Parkway cycling Regional Route continues for roughly 900m further south, to connect with Dalwood Street via Clontarf Street for riders wishing to use the shared use path on the western side of Spit Bridge.

Ending the shared use path at Kirkwood St dumps riders heading south to Spit Bridge out into a traffic sewer.

This is perhaps negotiable by the “fast and fearless” adult male rider cohort, but it discriminates against all the other sectors of the population who ride, or would like to ride, if they felt safer.

- Road shoulders are narrow or non-existent
- The speed limit is 60km/hr
- Traffic levels are moderate to high, and induced demand will return traffic levels in this vicinity to pre-project levels within a few short years of the Beaches Link opening.

It is difficult to see how being forced to merge with motor traffic in this way will be acceptable to less fit and skilled riders, parents of youth, elderly, and females who have lower risk tolerance, with lower confidence to ride amongst fast moving motor vehicle traffic.

Access heading northbound to the southern entry will also be difficult to negotiate, as riders have just finished climbing a moderate gradient for a couple of minutes on a narrow shoulder, and unless very fit are likely to be slow and possibly suffering from reduced levels of alertness from the exertion and reduced ability to negotiate the crossing safely.

Rather than wait for breaks in traffic to cross at an unsignalized intersection (it is unclear to this author at this time whether the lights at Kirkwood Street installed during the construction period will be retained) many will simply opt to continue along the road shoulder.

Consequently, while this new shared use path helps the existing rider population to some extent, placing the termination point so far north forgoes significant opportunities to make cycling for transport safer and more attractive for others, directly leading to failure to achieve government policy objectives of reducing motor vehicles trips in favour of active transport.

To maximise the opportunity to meet government policy objective for mode shift to active transport, this author recommends the following changes:

- Extend the shared use path south to Burnt Street.
- Add a bi-directional shared use path from Dalwood Street on the western side of Clontarf Street/Wakehurst Parkway.
- Extend the western side SUP from Dalwood St as far north as required to reach an underground shared use path crossing to the eastern side SUP.
- Add a fourth underground Shared Use Path crossing underneath Wakehurst Parkway as far south as possible to connect the extended western side SUP with the eastern side SUP.
- Position the fourth underground crossing to minimise impingement of the western side SUP on mountain bike trails. A tunnel at or near the Burnt St intersection adjacent to Seaforth Oval would be advantageous
    - Improved access for mountain bikers entering the southern end of the Engravings Trail from the south and east.
    - Local hill peak reducing issues associated with the water table being close to the surface.
- If tunnel access under Wakehurst Parkway to the bi-directional shared use path cannot be provided for users connecting to and from Dalwood Street, there should be a paved and protected shared use path on both sides of Wakehurst Parkway for its entire length between Dalwood Street and Warringah Road.

Potential Confusion Between Cycling Modes, Southern End of Wakehurst Parkway

We are pleased the significant and important recreational mountain bike trails adjacent to Wakehurst Parkway have been acknowledged in the project documents, and hope that you will work with advocacy groups such as Trail Care to formally recognise and authorise their presence to ensure their long-term survival. They are a major community asset and have proven popular with young users. Usage rates have exploded during the current pandemic.

However, it appears from the map legend on slide 12 of 22 in *Pedestrian and cyclist presentation 290121.PDF* that the project may have confused them with routes that are suitable for commuting cyclists.

For the removal of confusion, these are mountain bike trails, not commuter or road bike trails.

These trails are designed to be used by tough, purpose-designed bikes with suspension travel varying from 100mm to 150mm, and wide knobby tyres of more than 55mm width. A notable aspect of these trails is the loose dirt surface, and their technical timber, rock and tree root trail features.

Riders of lightweight rigid road and commuter bikes designed for fast travel on paved surfaces will not consider these trails due to risk of damage to their equipment, and injury from slips and falls. Their equipment is not designed to survive use on these trails and will rapidly fail.

Road bike vs mountain bike

If the project is under the impression that these mountain bike trails will form an acceptable route for northbound commuter and recreational road cyclists to connect to the shared use path proposed for the eastern side of Wakehurst Parkway, they urgently need to visit the site, walk the trails, and correct this misunderstanding.

The project then needs to reassess its assumptions and rapidly address access requirements for northbound commuter and recreational road cyclists connecting with Spit Bridge.

Road Cycling Facilities

Not all bicycle riders have the same needs. For road riders who prefer not to use the shared use path (e.g., training road riders, fast commuters, bunch road riders) how wide will the new Wakehurst Parkway road shoulder be?

The present narrow shoulder is barely handlebar width for a narrow road bike for much of its length, and is frequently strewn with sticks, rocks and gravel thrown there by passing traffic, or dropped by trees that often grow or are blown over into the road shoulder.

These hazards force riders to cross out into the main traffic lane. The author has previously suffered wheel damage and punctures from them.

The road shoulder needs to be wide enough for riders to avoid these hazards and still allow passing traffic to comply with the minimum safe passing distance (1.5m for roads with speed limits above 60km/hr). Cross-sectional illustrations appear to show adequate width, approximately 2.5 to 3m, however it is unclear whether these are for illustration purposes only or define a commitment by project designers to meet this safety requirement.

A review of detailed design drawings for the project will be required before stakeholder agreement could be considered.

Construction period

With 40 heavy vehicle movements per hour, as advised in the active transport users briefing, spoil trucks will be passing riders every 90 seconds along this stretch, and possibly Forest Way depending on where spoil ends up being directed.

- The experience with the operators of these vehicles during the Warringah Road excavation for the Northern Beaches Hospital was not a happy one for bicycle riders, with intimidating close passes of riders being a frequent occurrence.
- Few of these were reported to due to a documented history of antagonistic attitude, victim-blaming and no support from the leader of the local traffic police at Dee Why, Sgt Nino Jelovic.
- Given research that shows wider vehicles such as trucks and buses tend to be less compliant with minimum safe passing distance laws, this author is gravely concerned for the safety of bicycle users along Wakehurst Parkway during the construction period. The EIS does not deal with this matter at all. In fact, it is almost entirely silent on impacts on active travel users of this corridor.

What measures will TfNSW take to ensure that subcontractors will treat bicycle riders with respect and follow the road rules specifying minimum safe passing distances? The Environmental Impact Statement is largely silent on these matters

What other measures will TfNSW take to protect bicycle users during the construction period?

The road shoulder should be widened prior to tunnelling commencing, so that spoil removal trucks will not threaten vulnerable road users.

Conclusion – Wakehurst Parkway

While acknowledging the positive intention to provide access improvements for active transport users on the Northern Beaches, in light of the number of errors highlighted in the commentary above and in the appendices, it is clear that the proposal is inadequate and incomplete.

Neither the Environmental Impact Statement nor the project as a whole should be approved until a full and proper engagement with key stakeholders Bicycle NSW, Bike North, and local cycling advocacy subject matter experts has been undertaken, these issues are addressed, and the agreed solutions documented.

Removal of Pedestrian and Cyclist Underpass Falcon St Bridge, Eastern Side

Underutilisation of this link by cyclists can be attribute to the failure to provide a usable legal link south to the Ridge St bridge.

Riders are unable to head south on Alfred St North past Rose Avenue, the block between Rose Avenue and Winter Avenue being one-way in the opposing direction. The entry to the ramp for the Ridge Street bridge is at the intersection of Alfred St North and Winter Avenue, and is therefore unable to be reached without going against opposing one-way motor traffic for a distance of 50m.

If this trivially short missing link network failure is addressed, it is likely that the underpass will receive more patronage, as it enables riders to avoid traffic lights.

Induced Demand and TfNSW Bias Towards Saleable Monopoly Road Projects

As indicated in both Bike North and Bicycle NSW's submissions, the business case for this project has not been adequately tested against alternative scenarios for improved public transport and active transport options.

In particular, options for heavy rail access appear to have been excluded from consideration. It is understood that heavy rail is a controversial subject, with the NSW Government arbitrarily insisting on certain minimum increases in population density along the rail corridor, supposedly to "pay for" the project, that are not acceptable to local communities.

However, given the multi-billion-dollar investment required for this tunnel network is apparently justifiable, why is the equivalent in a rail network excluded from consideration? Why is this road tunnel not subject to the same demands being placed on the local community to "pay for" it?

If the scenario of building the tunnel and then selling the asset off at a profit as a tollway monopoly to political donors is so attractive because it gets the commitment off government books, why has the equivalent scenario for a rail operator not been explored?

When did the government come to the view that creating monopolies for private enterprise was in the community interest?

We have known since the 1930s about the phenomenon of Induced Demand. When you make a good available for free (in this case time savings for local road users), demand rises until the good is no longer available. This is the "Invisible Hand" of self-interest from Adam Smith's "The Wealth of Nations" published in 1776 - Political Economy 101. Every business and economics graduate is taught these fundamentals.

As a result, no-one in the history of transport planning has successfully built their way out of traffic congestion long term by building more roads. The unavoidable lesson of the last 90 years is that traffic congestion expands to fill available space, independent of population increase. Local traffic expands to take the place of the redirected through traffic, resulting in an overall increase in road traffic.

The only exception to this evidence is where road projects incorporate demand management.

Successful recent examples of demand management include the Northern Beaches B1 bus service prior to the pandemic. This project provided an effective substitute to the private car and an effective road diet.

By replacing T3 Transit Lanes with Bus Lanes, and providing a frequent, low-cost, convenient, fast and reliable public transport service, with the ability to charge mobile devices, read, and browse the internet while travelling, it has created an attractive, space-efficient alternative to private motor vehicle use. Conversion of T3 lanes to Bus Lanes discouraged private motor traffic. Public transport and private transport travel times have both improved, and the B1 is so popular it reached the point where the service is fully subscribed within months.

Other successful examples include the Kent St Cycleway, where the cycleway moves almost as many people in peak hour as the other two motor traffic lanes combined.

As referenced in the Bicycle NSW and Bike North submissions, the Beaches Link project business case has failed to adequately address demand management requirements. Analysis of induced demand effects is essentially non-existent.Alternatives such as implementing a road diet on the Falcon Street/Military Road/Spit Road corridor, to further entrench public transport, and utilise some of that space for a dedicated active transport corridor on the flattest route available have not been adequately explored.

Modelling of induced demand impacts on the wider Northern Beaches road network has been so limited as to be regarded as non-existent. Dedication of Beaches Link Tunnel lanes to public transport has not been adequately considered.

Until all alternatives are explored fearlessly by an independent arbiter, free from lobbying and political interference by media and big business lobbying, government policy objectives to reduce reliance on private motor vehicles, and associated societal costs of traffic congestion and transport poverty will never be successfully realised.

No approval should be granted until the business case is independently evaluated against a full suite of fully fleshed-out alternative public transport and active transport options, potentially in a competitive setting. Induced demand effects on local traffic flows must be fully explored and costed in, and demand management proposals incorporated for the Northern Beaches and Spit Rd/Military Rd/Falcon St corridor.

Detailed design

Bicycle NSW should be formally engaged as consultants to provide subject matter expert review on the detailed design for all active travel components of the project.

Concluding remarks

As can be seen by the numerous issues identified above, it is apparent that community stakeholder engagement has been limited to non-existent.

No approval should be made for the EIS nor the project a whole until full consultation has been conducted with key stakeholders Bike North, Bicycle New South Wales, and other local cycling advocates, to identify, analyse and address all the cycling issues, including those raised in the above submission.

I am happy to discuss these matters with you further. I can be reached by email at johnhawkins12@optusnet.com.au and on 0402 956 959.

Best regards,

John R Hawkins

John Hawkins CPA

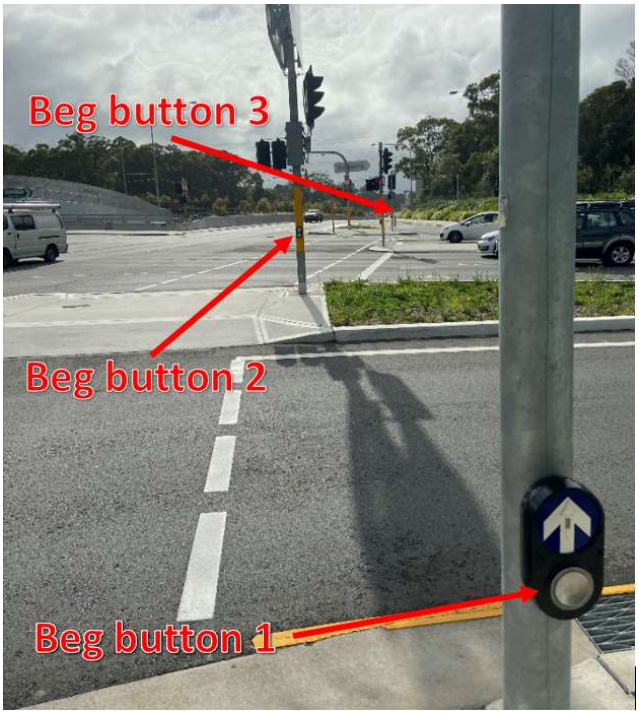
Appendix 1.

Examples of high-risk execution, Northern Beaches Hospital shared use paths

Traffic signals at intersection of Wakehurst Parkway and Warringah Road unfairly and unnecessarily discriminate against active transport users.

The photograph below shows the crossing on the southern side of Warringah Road across Wakehurst Parkway. The crossing is broken up into 3 segments. Those wishing to continue along Warringah Road must press each button when they reach it in order to be request permission to cross the next segment.

Depending on the time of day and the point at which the user arrives in the lights cycle, it can take up to five minutes or more to negotiate a legal crossing at this intersection. Most users ignore the lights for part or all of the cycle, and use their own judgement to cross. This is easily addressed by a coding change.



The sections of crossing controlled by buttons 1 and 2 in the image below should automatically default to a green pedestrian and cyclist crossing light while through traffic on Warringah Road has a green traffic light, and should not require users to press the beg button to qualify for a green signal. The end of the red flashing crossing light sequence should coincide with the start of the amber light traffic light for parallel traffic.

The slip lane providing a left turn from Warringah Road to head south along Wakehurst Parkway should also have the beg button removed and the signal default to green while the lights controlling traffic heading south are green.

This treatment should be adopted on all sides of the intersection. Automatic green lights for active transport users are in use in the Sydney CBD and works well. I note its recent implementation at Hilmer St.

Forest Way intersection with Warringah Road, western side. Photograph shows view looking north.

The original proposal was for the bike path to continue north to the next cross street (Russell Ave). During the course of the project, it was decided to end it abruptly here.

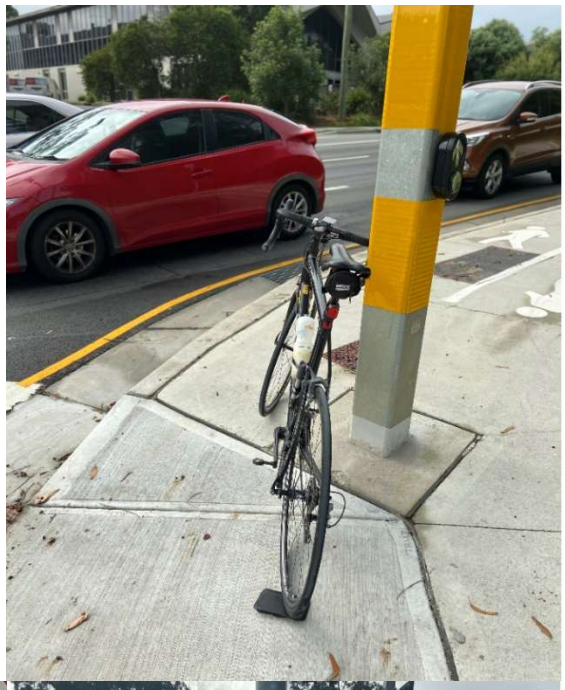
The result is children over sixteen and other riders lacking confidence are unable to connect to the residential streets to the immediate north, except by travelling through a busy, congested car park and sharing space with distracted drivers looking parking space.

There is no legal option for the return journey. Entering the shared path from the north requires riders to ride contra-flow to the carpark entry,

which is one-way inbound. Users attempting to circulate southbound via the carpark ground floor are faced with a No Left Turn at the exit between the white pillars. Riding on the footpath southbound is illegal for adult riders over 16.

Corner treatments with traffic lights are poor and set up conflict between pedestrian and bicycle users.

Typically, traffic light corner treatments around the Northern Beaches Hospital Precinct consist of an unbroken centre line on the approach to the corner apex and a traffic signal pole (sometimes two) on the alignment with this unbroken centre line.



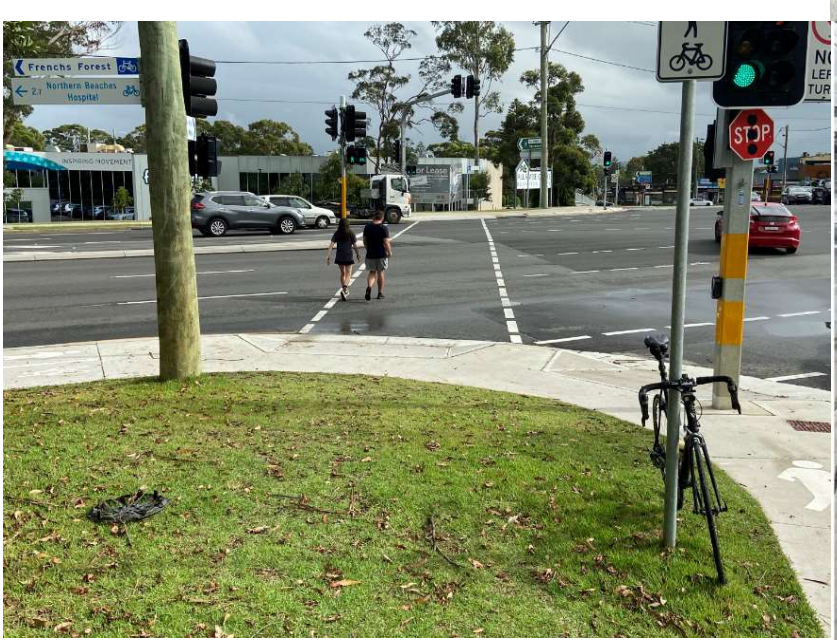
For bicycle riders turning right at these corners, they provide very tight dimensions and an uneven, off-camber surface to negotiate, creating a high risk of a collision between the bicycle's handlebars and the pole, or a fall as the bicycle has its momentum interrupted by the uneven surface due to the slow speed required to avoid leaning too far into the corner.

Where the rider is on a mountain bike, the handlebar dimensions of which routinely reach or exceed 800mm on current bike designs, a clash with the pole becomes a near certainty.

The result is that riders ignore the unbroken centre line and cut the apex. The corner treatment should not encourage riders to disregard path markings in order to prioritise their safety.

Where pedestrians are waiting to cross, the lack of space brings riders and pedestrians into conflict.

The situation is readily resolved by redirecting the cycleway closer



to the corner's centre point. This would eliminate the risks to riders and provide pedestrians and riders waiting to cross with safe staging space to adjacent to the traffic signals. Cost to mitigate is in the region of $5,000 per intersection corner.

Plenty of room is available on the inside of the corner at most of these intersections.

Poor sign placement creates a collision risk after dark

Numerous instances of placing sign and traffic signal posts in the centre of the contra-flow side of the cycle path communicate a poor regard for cyclist safety.

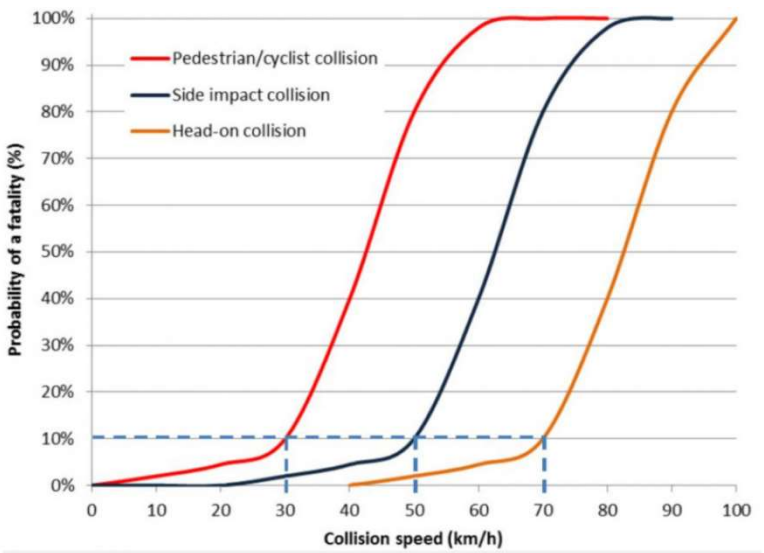
While these are visible and avoidable during daylight hours, I draw to your attention the fact that bicycle lights are not required to meet forward night vision requirements for riders, they are only required for the purpose of being visible to other vheicle operators for a distance of 200m under NSW Road Rule 259. While some riders do have high quality forward vision lights, they are typically quite expensive and their price confines their use to the small minority of riders using high-value bikes.

The placement of these signs fails to consider risks of collision with path furniture at night or in conditions of poor visibility such as wet weather.

It is essential these mistakes are corrected along Warringah Road and are not repeated on Wakehurst Parkway when the cycleway is built.

Contra flow side of bike lane lacks barrier protection for bicycle riders

Given the elevated traffic speed (70km/hr) along Warringah Road, the lack of a road shoulder for much of the section away between Allambie Road and Hilmer St, and the lack of buffer space between the path edge and the road, it is a source of concern that barrier protection was not provided for bicycle riders along Warringah Road. **See photos above.**



Graph from Research Report AP-R560-18 published in March 2018 by Austroads – the Association of Australian and New Zealand Road Transport and Traffic Authorities.

We note that Epping Road cycleway does have collision barriers where the contra-flow side of the bike path similarly lacks buffer space. Only where buffer space is provided is the protective barrier omitted. The same situation is present on the Warringah Road shared use path adjacent to Roseville Bridge.

Bicycle infrastructure should be suitable for riders of all ages. The parts of Warringah Road that lack separation or protective barriers for contra-flow riders do not meet this standard for either the very young or senior riders.

With Wakehurst Parkway expected to have an 80km/hr speed limit, clarity is urgently sought regarding whether barrier protection will be implemented for the cycleway along this corridor. Some artist impressions show fencing in place. Others do not.

Appendix 2 Poor Execution Burnt Bridge Creek Shared Use Path

Where the BBCD shared use path traverses under the Burnt Bridge Creek Deviation freeway heading westbound, there are a number of issues.

The exit of the tunnel is frequently wet, and the right turn hairpin at the end is quite sharp. This results in riders cutting the corner in an attempt to maintain momentum to climb up the steep ramp

While not evident on the day these photos were taken, the ramp is quite often covered in leaf litter. The combination can lead to a loss of traction, which has led to rider falls.

For riders travelling in the opposite direction intending to enter the tunnel heading east, it is difficult to avoid swinging wide on the hairpin exit into the path of oncoming riders.

A result of this is that it is difficult for handicapped and mobility impaired bike users to negotiate this part of the shared use path.

It is particularly problematic for users of tricycles, and any who may wish to avail them themselves of recent innovations such as cargo bikes to visit local shopping centres or drop kids off at schools and leave their car at home.