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14<sup>th</sup> December 2022

Dear Woollahra Council,

**Re: Draft Active Transport Plan**

Thank you for the opportunity to comment on the draft version of the new Woollahra Active Transport Plan.

Bicycle NSW has been the peak bicycle advocacy group in NSW for forty-seven years, and has more than 30 affiliated local Bicycle User Groups. Our mission is to *'create a better environment for all bicycle riders'*, and we support improvements to facilities for pedestrians and cyclists. We advocate for new cycling routes that incorporate dedicated paths within both green corridors and the road environment, to provide connections to jobs, schools and services for daily transport and recreation trips. Bike riding provides a healthy, congestion-reducing, low-carbon form of travel that is quiet, efficient and attractive for all ages with the correct infrastructure design.

**Bicycle NSW fully supports the Draft Active Transport Plan and its vision to make walking and cycling the most convenient, comfortable and safe choice for short trips in Woollahra.**

The draft plan is grounded on excellent analysis of trends and benefits of active transport in Woollahra. It is clear that Council understands how safe streets are at the heart of happy communities. The plan stresses the importance of providing a range of mobility options for everyone, and consistently designing streets to prioritise people over cars, with uninterrupted protected space for walking and cycling.

The plan includes an action list of 10 priority projects that should be delivered within 5 years. It is ambitious but very necessary. The time to start is now. **Council must be very bold to turn around decades of inertia** that have left Woollahra with disjointed shared paths and no best-practice separated bicycle paths. The active transport mode share lags well behind neighbouring LGAs and even sits below the Greater Sydney average.

We are encouraged by the attention given to walking. Every trip involves a walk! Of the 5 objectives, 3 focus on walking. The plan highlights the need for:

- Better crossings
- Continuous raised footpaths across minor intersections
- 30 km/h speed limits in town centres
- Better lighting
- Pram ramps
- Raised crossings and refuges
- Longer crossing times

Bicycle NSW supports the emphasis on improving walking infrastructure near schools to enable active travel to school, and, as discussed later, we have long advocated for reducing speed limits to 30 km/h in town centres and residential streets.

We appreciate the inclusion of maps highlighting serious crashes and fatalities in the LGA. Honest data will help to frame discussions with the community about the need to reallocate road space to create safe walking and cycling infrastructure if there is any chance of meeting the draft plan's target halving serious injuries and eliminating deaths due to road trauma.

We are pleased that Woollahra recognises that shared paths are not suitable in locations with high bicycle or pedestrian activity except where needed to fill missing links and expedite delivery of an integrated network. The focus will be to provide dedicated facilities for each mode. There is clear intent to cater for e-bikes and emerging forms of micromobility. It is understood that safety, connectivity and comfort are essential to encourage more people to ride.

The street design typologies on Page 27 demonstrate that Council has embraced the new Future Transport Strategy<sup>i</sup> and its ambition to maximise existing assets by reallocating road space for walking and cycling. Reconfiguring streets to reduce the dominance of parked and moving vehicles is essential to make room for separate pedestrian and bicycle facilities. But such transformations do not only achieve transport objectives – they are significant urban design proposals that deliver quieter, calmer, leafier streets that benefit every resident and visitor to Woollahra.

Priority cycling projects have been identified for the next 5 years:

- Rushcutters Bay to Edgecliff Station Interchange
- Edgecliff Station Interchange to Double Bay
- Edgecliff Road (Edgecliff to Queen Street)
- Birriga Road
- O'Sullivan Road
- Oxford Street Junction Improvement Scheme

**We strongly support each project**, all important elements of a long-awaited regional cycle network. In addition, these routes will deliver the critical connections to Edgecliff and Bondi Junction stations and the ferry wharfs that were strongly advocated for by BIKEast and Bicycle NSW during consultation in 2020. The draft plan promises that cycleways will be constructed to current best practice in alignment with the new Cycleway Design Toolbox<sup>ii</sup> and the 2017 Cycling Aspects of Austroads Guides (AP-G88-17).

**This submission sets out a series of recommendations for the final Active Transport Plan. Importantly, we reiterate Bicycle NSW's support for the introduction of 30km/h High Pedestrian Activity Areas for the town centres and school zones of Woollahra.**

We would like to thank BIKEast, an affiliated Bicycle User Group in the Eastern Suburbs, for its contribution to our work. BIKEast members have worked hard over many years to advocate for better conditions for active travel. We align with their detailed submission to the Draft Active Transport Plan which includes in-depth responses to the priority projects.

Note that Bicycle NSW has not provided additional feedback on the detail of each priority project. The proposals are presented in a very schematic way with small scale plans and sections and no legend. It is not possible for us to assess such complex projects with the minimal information provided in the time available. We recommend that Woollahra Council does not try to convey the different treatments in an Active Transport Plan that has a long shelf life. Major projects to transform streets will evolve substantially during the design and delivery process and the current diagrams will soon be outdated.

## Opportunities:

It is exciting that Woollahra Council can finally prioritise safe infrastructure for walking and cycling, emboldened by a raft of NSW Government policies and strategies that aim to achieve a much better balance of movement and place with vastly improved facilities for active transport. There is clear agreement from all sides of politics that walking and cycling are essential to enable a healthier, less car-dependent future as Sydney grows. NSW now has a Minister for Active Transport and new impetus to deliver projects for walking and cycling.

Bicycle NSW wishes to stress that this is **the best moment in recent years** for local and State governments to work together to create a truly transformational network for cycling, but there is no time to waste.

Woollahra has a collection of vibrant '15-minute neighbourhoods' where all daily destinations could be accessed by an easy walk or bike ride. The built form is compact and population density is very high at 5,500 people/sq.km, compared to 1,279 people/sq.km for urbanised land across Greater Sydney<sup>iii</sup>.

Despite this, far too much of road network is dedicated to the movement and storage of private vehicles, creating a hostile environment for people walking and cycling, with dangerous intersections, narrow footpaths, fast-moving noisy traffic and long distances between crossings. The two major east-west corridors are crowded with cars, buses and trucks and there is no decent cycle infrastructure following years of inaction.

Bicycle infrastructure has a low cost per km, offers better value than road projects and support Council's financial sustainability. Over 100km of bike paths can be delivered for the cost of 1km of new road<sup>iv</sup>. Cycleways relieve the intractable deadweight of traffic congestion. In 2019 congestion cost \$19 billion nationwide, estimated to grow to a staggering \$38.9 billion by 2031<sup>v</sup>. Whilst it has been known since the 1960s that motorways add to congestion through induced demand<sup>vi</sup>, bicycle infrastructure can reduce driving. As a benefit-to-cost ratio, bike infrastructure returns between 5:1 \$AUD (Queensland Government study<sup>vii</sup>) and 13:1 £ (UK Government study<sup>viii</sup>). Studies have shown that 70% of people in NSW either ride a bike now or would start to ride if they felt safer<sup>ix</sup>.

The Draft Active Transport Plan supports the following strategic documents:

Woollahra Local Strategic Planning Statement 2020, a 20-year vision and planning document. Council outlined as its **first planning priority** the delivery of a transport network that supports a healthy, sustainable and connected community and committed to support walking or cycling as the most convenient option for short, everyday trips up to 2km.

Woollahra Draft Integrated Transport Strategy 2021<sup>x</sup> contains targets to increase the uptake of active transport (walking and cycling) to 14 per cent by 2026 (8.2) and decrease the use of people driving cars to 40 per cent by 2026 (9.2) and a commitment to increase the number of people walking and cycling by investing in and building safe, accessible and attractive pedestrian paths, crossings, cycle ways, bicycle parking and supporting infrastructure (8.3) The ambition is to make walking and cycling the most convenient option for most trips.

Theme 3 of the Draft Integrated Transport Strategy is Active Transport, and this Draft Active Transport Plan delivers on the key actions identified under that theme.

Woollahra – 2030 Our community, our place, our plan<sup>xi</sup>, the community strategic plan, which details Council's targets and commitments in relation to 11 goals grouped into five key priority themes (community wellbeing, quality places and spaces, a healthy environment, local prosperity, community leadership and participation).

The transport targets include a commitment to create a 30km integrated network of bike paths by 2025 while reducing traffic noise and speeding (Goal 6), greenhouse gas emissions and ecological footprint (Goal 8).

The latest, and most exciting, document to be published by Transport for NSW under the direction of Minister Stokes is the Eastern Harbour City Strategic Cycleway Corridors<sup>xii</sup>. 30 strategic corridors have been identified for eastern Sydney, making up approximately 250 km of cycle network (Figure 1). The corridors will connect key centres and major points of interest. Exact routes will be subject to detailed design and collaboration with councils and the community. The corridors will form the backbone of the Principal Bicycle Network.

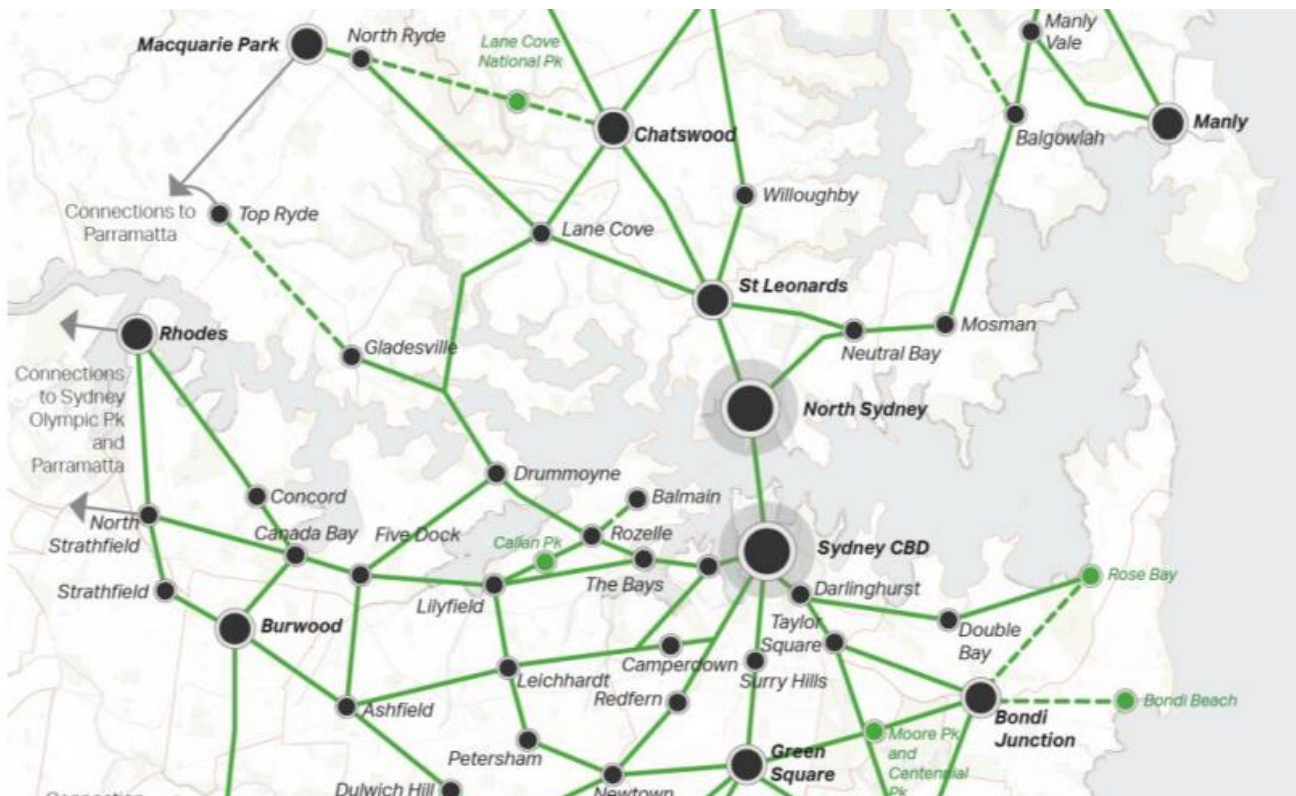


Figure 1: Extract from the new Strategic Cycleway Corridor network map. The North Sydney Connection is highlighted in red and identified as an 'immediate opportunity' (Source: TfNSW)

The Eastern Harbour City was the first of the 6 cities of the newly-defined sandstone megaregion to receive a cycleway corridors plan in April 2022; the other cities will follow in early 2023.

Work to design and deliver the Oxford Street cycleway between Darlinghurst and Bondi Junction is well underway with the City of Sydney and Transport for NSW. Cycling Priority Project 5: Oxford Street Junction Improvement Scheme will create links into Woollahra's existing and future network.

Although the strategic corridors are agnostic about exact routes, it is assumed that the Darlinghurst-Double Bay-Rose Bay corridor will follow New South Head Road and align with Cycling Priority Project 1: Rushcutters Bay to Double Bay. This is route A2 in Woollahra Bicycle Strategy 2009<sup>xiii</sup>, and it is also highlighted by the City of Sydney as a priority route in the Regional Bike Network<sup>xiv</sup>.

## Recommendations

- **Set more ambitious mode share targets**

The Draft Active Transport Plan aspires to double the cycle-to-work mode share to 3%. However, there is no reason for Woollahra not to aspire to match or exceed Waverley's mode share. In Tamarama, 5.9% of journeys to work are by bicycle; for Bronte the figure stands at 4.8%<sup>xv</sup>. Waverley has the highest levels of bike riding in Australia accounting for nearly 5% of all trips, double the Sydney average<sup>xvi</sup>. Woollahra has a similar high-density urban form and short average trip distance which is easy to cover on a bike. Build good infrastructure and people will quickly start to cycle more.

- **Keep the pipeline of shovel-ready projects stoked**

The Woollahra Bicycle Strategy 2009<sup>xvii</sup> did not include how the proposed initiatives would be funded. This has resulted in a patchy cycling network with limited links within Woollahra and to other areas.

By the costings set out in the ATP, an investment of some \$60-70 million is required over the next five years to deliver the 10 high priority walking and cycling projects, Knox Street pedestrianisation, Paddington Greenway and Edgecliff Public Domain Strategy. This is a substantial investment but it is much easier to apply for funding and secure grants for projects if detailed design and community engagement is complete.

As discussed, projects to reconfigure streets are not just about cycling. Council must factor in health, wellbeing, reduced trauma, reduced noise and increased tree canopy when assessing business cases and applying for grants.

Note that strategic cycleway routes should get funding from TfNSW while local routes rely more on Council funding.

- **Don't use the word 'accident' in relation to road safety**

It was a choice to fill our streets with increasingly large and dangerous vehicles – the result of that choice is 'crashes'.

- **Reimagine New South Head Road as an urban boulevard with separated bicycle paths**

Not only is New South Head Road a strategic cycleway corridor that forms a natural line of desire from east to west across the LGA, it is also very dangerous. Sadly, two cyclists lost their lives between 2015 and 2019 on New South Head Road and five more were seriously injured. New South Head Road has been identified in the Draft Active Transport Plan as the top priority for making cycling safer in Woollahra.

As set out in the Bicycle NSW [submission](#) to the Draft Edgecliff Commercial Centre Urban Design Strategy, the need to separate people walking and cycling on major commuter routes cannot simply be ignored. The application of the Road User Space Allocation policy to rebalance road space and create dedicated cycle infrastructure must be a key policy position of Woollahra Council.

New South Head Road is a key Eastern Harbour City Strategic Cycleway Corridors<sup>xviii</sup> and close collaboration with Transport for NSW will be required to implement the transformation of the corridor.

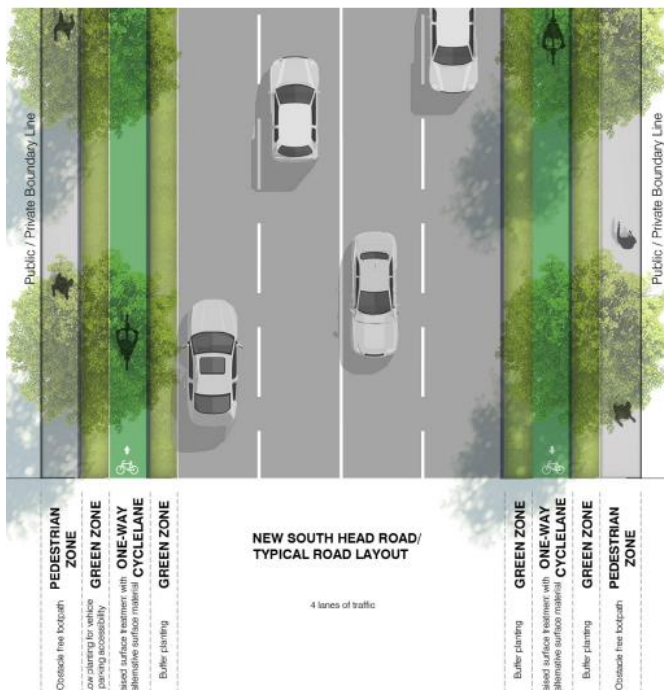
As discussed, the diagrams in Appendix B are very small and unclear. It would be better not to try and convey the details of the upgrade in the Active Transport Plan. A major project like this will evolve

substantially during the design and delivery process and must be documented properly for consultation with the community.

We love the aspirational cross section on Page 27 (Figure 2) with 4 vehicle lanes and uni-directional bicycle paths on each side. This is not reflected in any plans published for this corridor but we urge Woollahra Council and Transport for NSW to be bold. It will be necessary to remove vehicle lanes if strategic goals to reduce driving can be achieved!



Figure 2: A diagram showing a desirable allocation of road space on New South Head Road (Source: Woollahra Council)



Similar work is being undertaken by Transport for NSW at Sydney Park Junction. The proposals will see driving lanes reduced from 6 to 4, speed limits lowered to 40km/h, new separated bicycle paths, widened pavements and new landscaping. This project provides exciting evidence that the city can move forward from decades of car domination and sets a precedent for better place outcomes throughout Sydney. Changing the dial on how we measure the success of a movement corridor will have huge implications for reimagining arterial roads.

Bicycle NSW wrote a detailed [submission](#) in October 2021 to support the upgrades at Sydney Park Junction.

We agree with BIKEast that the detour via a very steep Ocean Street (Project 1b) is not ideal for the strategic corridor route. There should be an ambition to repurpose a lane of New South Head Road to create a continuous separated cycleway along the most level direct route to Double Bay.

- **Tackle the major state road intersection at Old South Head Rd, O’Sullivan Rd and Birriga Rd**

The critical junction of O’Sullivan Road, Birriga Road, Old South Head Road, and Blair / Curlewis Street should provide seamless connections between Rose Bay ferry wharf, Bondi Beach and Bondi Junction via the existing and proposed cycleways that intersect at this point.

Unfortunately, the junction is a sprawling mess that hasn’t been upgraded since the trams were removed from Birriga and Curlewis. The conditions are extremely poor for pedestrians and cyclists, limiting the future benefit of proposed cycleways on Birriga Road and O’Sullivan Road.

This critical intersection upgrade project should be escalated from ‘Medium Priority’ (ie. to be delivered within 10 years) to ‘High Priority’ (ie. to be delivered within 5 years). We ask Woollahra Council to recognise the importance of this intersection and align with Waverley Council to lobby Transport for NSW to develop an appropriate design solution as soon as possible.

- **Prioritise O’Sullivan Road**

Design and consultation work has taken place over many years to deliver the important connection from Bondi Beach to Rose Bay Wharf via O’Sullivan Road. This is a flat, direct route that will deliver a huge return on investment – particularly in conjunction with the Curlewis Street cycleway that Waveley is about to construct. It is time to get on with it!

- **Make every street a cycle street**

In 2016 BIKEast prepared the case for *Safe-street Neighbourhoods*<sup>xxix</sup>. This strategic document has been endorsed by Bicycle NSW and outlines ideas to slow traffic on residential streets to provide a convenient network of cycling routes that complement and connect the priority separated network on key corridors. It is an urban design-based approach to tame the behavior of motorists and make local streets safe for everyone to share and enjoy. Specific design initiatives include:

- Introduce 30km/h speed limits for residential streets and local high streets
- Implement initiatives to reduce traffic volumes - such as street narrowing or closing off some streets (while retaining filtered permeability for people walking or riding bikes)
- Primarily serve residential needs while maintaining essential vehicular access
- Re-landscaping land currently covered in bitumen.

This approach aligns with the quietway or ‘bicycle boulevard’ treatments outlined in the Cycleway Design Toolbox<sup>xxx</sup> which suggests a range of traffic calming interventions applied to ensure very slow vehicle speeds and low traffic volumes.

An additional tool is allowing **contraflow cycling on one-way streets** to make it easier for people riding to avoid busy roads and use quiet, low-traffic streets. In August 2022 the City of Sydney exhibited [a proposal](#) to allow two-way bike traffic on 159 one-way streets. A recent study has shown that contraflow cycling does not increase cyclist crash or casualty rates and that all one-way streets should be evaluated to allow contraflow cycling to improve cycling network connectivity<sup>xxxi</sup>.

Calming traffic, lowering speeds and putting people first is fully supported by the [Better Streets for New South Wales](#) campaign, launched in November 2022.

- **Reduce speed limits to 30km/h for all local streets and shopping areas**

The Vision Zero goal of lowering speed limits to 30 km/h on residential streets and around schools and town centres is considered international best practice and is gaining momentum in Australian and New Zealand. This approach includes pedestrian zones, physical separation between bicycle and car traffic, data-based traffic enforcement and behaviour-change education<sup>xxii</sup>. The British Medical Journal<sup>xxiii</sup> found that the use of 20mph (32kph) over a twenty-year period from 1986–2006 significantly improved road safety for users of all transport modes and ages.

The rate of children under 15 years old being killed and seriously injured dropped by 50% in areas where the speed limit is reduced to 20mph (32kph). Most Australians already support lowering speed limits in neighbourhoods<sup>xxiv</sup>. Acceptance usually increases after implementation, as has been the case in countries like the UK and Germany. Several 30km/h trials run in Melbourne and New Zealand before 2020 have been successful. Popularity increased further after people experienced the benefits<sup>xxv</sup>. The UN resolution of August 2020<sup>xxvi</sup> urged all countries to adopt 30 km/h limits in areas where people are walking and playing.

It is noted that Woollahra councillors are reluctant to adopt any move to a lower speed zone without 'trailing' a single area for a period. However, staggered trials will delay the adoption of lower speed limits in Woollahra LGA and Bicycle NSW agrees with BIKEast that phased introduction of 30 km/h zones is unnecessary. There is sufficient evidence from Sydney and overseas that low speed environments improve safety and amenity.

- **Develop well-resourced projects to encourage active transport to school**

According to the NSW School Safety Survey<sup>xxvii</sup>, 36% of parents wouldn't let their children walk or ride to school due to unsafe road crossings. 25% of Australian children aged 2-17 and 67% of adults are considered overweight or obese. Obesity linked to physical inactivity is a major contributor to type 2 diabetes with estimates showing that eliminating obesity from the population can potentially reduce the incidence of diabetes by over 40%<sup>xxviii</sup>.

Safe paths to school with 30 km/h speed limits were unanimously voted as the 'most achievable goal for active transport' at the 2022 Transport for NSW Mobility Summit. This is because (i) there is a critical need; (ii) schools are neutral territory and everybody supports children's right to health and independent mobility; (iii) daily active travel will have a profound intergenerational impact and (iv) safe paths to school can be rolled out rapidly and cheaply through relatively minor adjustments to existing infrastructure.

It is important to consider schools both in the LGA and outside, where key active transport connections traverse Woollahra, and aim for a mode share target of [75% of children walking, cycling or taking public transport to school daily](#).

- **Be strong about removing on-street parking**

Removal of street parking will be necessary in places to create safe raised crossings, wide shared paths and separated bicycle paths. Council must be strong when faced with resident opposition. On-street parking is fundamentally the storage of private property in the public domain. It makes driving easier and generates car trips. When on-street parking is prioritised over safe cycling, active transport for the whole community suffers.

It is getting easier and easier to access a car for trips that are too awkward by public or active transport. Car sharing and ride hailing are slowly chipping away at the one-person, one-car mentality that Australians are accustomed to after 60 years of car-centric planning. In 2021, 18.0% of Double Bay households had no car and this figure can be expected to increase<sup>xxix</sup>. In 2019, membership of local car share schemes grew by 20%, showing a huge appetite for new models of vehicle use<sup>xxx</sup>.

Studies show that parking spaces in commercial areas are less significant for customers than many businesses expect, with owners overestimating the proportion of customers arriving by car by a factor of 3<sup>xxxi</sup>. Visitors themselves overwhelmingly prefer widened footpaths, even if it means sacrificing some parking spaces. Cyclists and pedestrians are better customers, spending over twice as much time in the area and 40% more money per month than people driving. A report from London showed that improvements to the public realm to enable safer walking and cycling lead to a 30% increase in trade<sup>xxxii</sup>.

A parking survey can be useful to determine precise usage patterns for on-street parking. With accurate data to reflect on, the community may find it easier to accept the loss of parking to allow the installation of a best-practice bicycle path which benefits the wider community.



- **Use temporary materials to demonstrate best-practice infrastructure**

Bicycle NSW suggests that Woollahra Council uses pop-up methods to trial separated cycle paths. Moveable lane barriers can be installed quickly to create stretches of protected path (Figure 3) to show how unfamiliar cycle infrastructure can fit into the street. Ridership can be observed over several months using electronic counters to monitor use, and issues with parking and buses can be resolved before permanent infrastructure is constructed. Once Council has demonstrated demand for safe cycling, permanent changes to kerbs, parking and landscaping can be made when funding allows.



Figure 3: Pop-up infrastructure in Sydney (Source: Bicycle NSW / Randwick Today)

- **Establish a regular programme of proactive community initiatives**

Bicycle NSW encourages Woollahra Council to mobilise its artistic capital to create inclusive, fun street activations that connect people and places whilst leaving out the cars. Not only does this stimulate street business and assist with post-COVID recovery through concentration of human-paced traffic; it also warms the community to the significant social and retail benefits of walkable, liveable streets (Figure 4).



Figure 4: Liveability returns to O'Connell St, Auckland. (Photo courtesy of [Stuff](#))

Some final recommendations to inform every project:

- Communicate proposed changes to residents in terms of road safety, children's independence, traffic calming, noise reduction, business improvement, environmental amenity improvements. Avoid focusing on what bike riders or pedestrians gain, or highlighting the number of car parking spaces lost
- Provide additional bike parking and end-of-trip facilities, alongside an updated development control plan that sets minimum standards for cycle storage in new residential, community and commercial projects. Transport for NSW provides extensive guidelines regarding for bike parking provision and the benefits it provides to businesses, improvements to the transport network, reduced reliance on commercial car parking and opportunities for placemaking.
- Ensure that cycleways integrate with bus stops and train and metro stations, delivering a multi-modal transport network that unlocks car-free mobility across the entire city.
- Follow City of Sydney's lead and extend bus stops into the kerbside lane to enable 'in-lane' bus stopping. This design solution creates more space in the verge for landscaping, accommodates continuous bicycle paths, space for bike parking, reduces conflict and prioritises bus passengers.
- Develop a range of educational initiatives to help residents build cycling skills and confidence, understand the network as it is delivered, and share the road more safely, whether walking, rolling or driving.
- Support Council staff, local businesses, school children, women and families to ride and walk with e-bike and cargo bike trials, bike buses and community events that celebrate cycling.
- Install much-improved signage and wayfinding to clarify routes through the LGA with graphics that celebrate the diverse community of people who wheel and walk in Woollahra.
- Deliver upgraded urban realm as part of all projects. New trees and landscaping will support traffic calming, reduce urban heat and provide increased habitat. Artwork, quality paving, benches, bike racks and water fountains will add delight and amenity to daily trips.

## Conclusion

It is fantastic to see new ambition in Woollahra to invest in safer streets for walking and cycling.

Bicycle NSW understands that the historic urban fabric, severed by major road and rail lines that bring heavy through traffic, complicates the delivery of cycling infrastructure. Although faced with similar constraints, the City of Sydney has rolled out some fantastic new separated bicycle paths in recent years. The residents of the Woollahra now see and use best practice infrastructure as part of their daily trips and the call for improved facilities in the LGA gets louder.

It is hoped that the final Active Transport Plan, supported by a new generation of Councillors and Council staff who understand how active travel can decarbonise transport, improve public health and ensure future liveability, will supercharge the roll-out of safe, protected cycling infrastructure. The time to start is NOW.

We look forward to working with Woollahra Council to progress the delivery of its integrated cycle network. Please reach out with any questions or help needed. If requested, we would be delighted to assist with

advocating for new bicycle infrastructure through our connections with politicians, Transport for NSW and neighbouring metropolitan councils.

Yours faithfully,



Sarah Bickford

Active Transport Planner  
Bicycle NSW



Peter McLean

Chief Executive Officer  
Bicycle NSW

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<sup>i</sup> Bicycle NSW. 2022, November. Future Transport Strategy 2061 is out! <https://bicyclensw.org.au/future-transport-strategy-2061-is-out/>

<sup>ii</sup> Cycleway Design Toolbox: designing for cycling and micromobility. Transport for NSW.

<https://www.transport.nsw.gov.au/system/files/media/documents/2021/Cycleway-Design-Toolbox-Web.pdf>

<sup>iii</sup> City of Sydney. 2020, April 9. The city at a glance. <https://www.cityofsydney.nsw.gov.au/guides/city-at-a-glance>

<sup>iv</sup> PIA. 2013, Sept 3. <https://www.planning.org.au/documents/item/5578>

<sup>v</sup> <https://www.infrastructureaustralia.gov.au/publications/urban-transport-crowding-and-congestion>

<sup>vi</sup> Mann, A. 2014, Jun 17. Wired. What's Up With That: Building Bigger Roads Actually Makes Traffic Worse <https://www.wired.com/2014/06/wuw-t-traffic-induced-demand/>

<sup>vii</sup> <https://www.tmr.qld.gov.au/Travel-and-transport/Cycling/Cycling-investment-in-Queensland>

<sup>viii</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/509587/value-of-cycling.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/509587/value-of-cycling.pdf)

<sup>ix</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/509587/value-of-cycling.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/509587/value-of-cycling.pdf)

<sup>x</sup> Draft Integrated Transport Strategy. Woollahra Council, 2021.

<https://yoursay.woollahra.nsw.gov.au/49010/widgets/259007/documents/199125>

<sup>iv</sup> Woollahra – 2030 Our community, our place, our plan. Community Strategic Plan.

[https://www.woollahra.nsw.gov.au/\\_data/assets/pdf\\_file/0018/190404/WC\\_CPS\\_290618\\_final.pdf](https://www.woollahra.nsw.gov.au/_data/assets/pdf_file/0018/190404/WC_CPS_290618_final.pdf)

<sup>xii</sup> Transport for NSW. 2022, April. Eastern Harbour City Strategic Cycleway Corridors.

<https://www.transport.nsw.gov.au/system/files/media/documents/2022/strategic-cycleway-corridor-eastern-harbour-city-program-update.pdf>

<sup>xiii</sup> Woollahra Bicycle Strategy 2009. [https://www.woollahra.nsw.gov.au/\\_data/assets/pdf\\_file/0003/48144/090831rep-GS11920\\_Woollahra\\_Bike\\_Strategy\\_exhibition\\_draft.pdf](https://www.woollahra.nsw.gov.au/_data/assets/pdf_file/0003/48144/090831rep-GS11920_Woollahra_Bike_Strategy_exhibition_draft.pdf)

<sup>xiv</sup> City of Sydney, Cycling Strategy and Action Plan 2018-2030 [Online as at 16/7/2021]

<https://www.cityofsydney.nsw.gov.au/strategies-action-plans/cycling-strategy-and-action-plan>

<sup>xv</sup> Waverley's People, Movement and Places, 2017.

[https://www.waverley.nsw.gov.au/\\_data/assets/pdf\\_file/0006/160584/People,\\_Movement\\_and\\_Places.pdf](https://www.waverley.nsw.gov.au/_data/assets/pdf_file/0006/160584/People,_Movement_and_Places.pdf)

<sup>xvi</sup> Waverley's People, Movement and Places, 2017.

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<sup>xvii</sup> Woollahra Bicycle Strategy 2009. [https://www.woollahra.nsw.gov.au/\\_data/assets/pdf\\_file/0003/48144/090831rep-GS11920\\_Woollahra\\_Bike\\_Strategy\\_exhibition\\_draft.pdf](https://www.woollahra.nsw.gov.au/_data/assets/pdf_file/0003/48144/090831rep-GS11920_Woollahra_Bike_Strategy_exhibition_draft.pdf)

<sup>xviii</sup> Transport for NSW. 2022, April. Eastern Harbour City Strategic Cycleway Corridors.

<https://www.transport.nsw.gov.au/system/files/media/documents/2022/strategic-cycleway-corridor-eastern-harbour-city-program-update.pdf>

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