

M5 Motorway Westbound Traffic Upgrade team Transport for NSW PO Box 973 PARRAMATTA NSW 2124

29th September 2022

Dear Sir or Madam,

Re: M5 Motorway Westbound Traffic Upgrade

Thank you for the opportunity to comment on the proposals to upgrade the M5 Motorway between Moorebank Avenue and the Hume Highway.

Bicycle NSW has been the peak bicycle advocacy group now in NSW for forty-seven years, and has over 30 affiliated local Bicycle User Groups. Our mission is to 'make NSW better 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 the road environment, to provide connections to jobs, schools and services for daily transport and recreation trips. Cycling provides a healthy, congestion-reducing, quiet, low-carbon form of travel that is efficient and attractive for all ages with the correct infrastructure design.

We have reviewed the documentsⁱ describing the project, which will deliver a grade-separated underpass at Moorebank Avenue, a new two-lane 290m bridge over the Georges River and the railway lines, and changes to vehicle lane configuration, motorway exits and traffic signals (Figure 1). The upgrades aim to ease afternoon peak congestion and safety issues, caused by traffic entering the motorway westbound at Moorebank Avenue merging with through-traffic and vehicles exiting towards the Hume Highway, while providing additional capacity for over 6,600 heavy vehicle trips and 10,000 light vehicle trips per day generated by the Moorebank Logistics Park (MLP)ⁱⁱ, due to open in 2025. The projected road transport significance of the M5 will be heightened by its location between Sydney International Airport and the Western Sydney Airport.

It is essential that the NSW Government leverages its investment in road infrastructure to deliver new and improved active transport facilities that will meet the needs of Western Sydney, now and into the future. The construction of new and improved active transport infrastructure alongside road upgrades is now mandated. The 2021 <u>Providing for Walking and Cycling in Transport Projects Policy</u>iii requires every transport project funded by Transport for NSW to include provision for walking and cycling, which must be delivered from the outset of the project.

Bicycle NSW is delighted by the plans to add a new shared user path along the M5 Motorway. The shared path will start at the southern side of the new Hume Highway exit ramp from Moorebank Avenue and run across the Georges River on the new bridge, with connections to the Hume Highway and Lakewood Crescent. The path will provide crucial transport options within the M5 corridor, and is shown as a yellow line on the map in Figure 1.

This submission discusses the need for active transport infrastructure in the Liverpool area, before examining what is offered as part of the M5 upgrades and how it contributes to the local and regional cycle network. There are **concerns** about the impacts upon active transport during all phases of the upgrades, and whether the investment for cycling and walking is sufficient given the benefits offered to private toll companies. These concerns are set out with requests for more information, followed by a series of recommendations for the project team.

We would like to thank Bicycle South West and Liverpool City Council for their expertise and knowledge of the Liverpool bicycle network and their dedication to active transport. We acknowledge their contributions to this submission.



Figure 1: An overview of the proposals for the M5 Motorway westbound upgrades (Source: Transport for NSW)

Opportunities

There has never been a better time to build infrastructure for bike riding and active transport. As the new Minister for Infrastructure, Cities and Active Transport, Rob Stokes MP, set out in a recent speech^{iv}, projects that stitch the suburbs together and enable people of all ages and abilities to get around without a car are much more sustainable than megaprojects. He stressed that the NSW Government will now focus on completing missing links to create a regional active transport network. Such smaller projects have big benefits, and not only for reducing pollution and congestion. Active mobility improves public health, activates high streets, helps build social connections and addresses inequality.

Such ambitions are bolstered by the <u>Road User Space Allocation Policy CP21000</u>°, published by Transport for NSW in early 2021. This policy establishes a road user hierarchy that considers pedestrians first and private cars last (Figure 2), and provides local and State governments with **a powerful lever** to prioritise road space for active transport.

Order of Road User Space Considerations

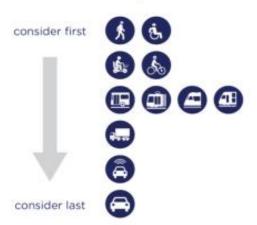


Figure 2: Diagram expressing Transport for NSW's road user priority. (Source: Transport for NSW) The latest, and most exciting, document to be published by Transport for NSW under the direction of Minister Stokes is the <u>Eastern Harbour City Strategic Cycleway Corridors</u>vi. 30 strategic corridors have been identified for eastern Sydney, making up approximately 250 km of cycle network. 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 cycleways will be safe, protected and generous, suitable for use by bike riders of all ages and abilities. The corridors will form the backbone of the Principal Bicycle Network.

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 by the middle of 2023. The Western Parkland City network will undoubtedly pick up the M5 corridor.

Liverpool 'is the growing face of multicultural Australia' with a young population, 40% from overseas, which is expected to grow 60% by 2036. As Sydney's third CBD, Liverpool LGA is projected to attract 200,000 additional jobs over the next 20 years, with a focus on health, logistics, distribution, professional services and advanced manufacturing^{vii}.

Congestion is an escalating problem. To maintain lifestyle amenity as population grows, it is essential to balance transport options and ensure that the good access is provided to important destinations for all road users. At present a high proportion of trips are made in a private vehicle in the Liverpool area, with 77% of movements by car^{viii}.

The City of Liverpool has highlighted connectivity, liveability, productivity and sustainability as key themes and planning priorities^{ix}. To achieve the desired future outcomes, an integrated transport network must be developed to provide for all mobility modes, with a focus on active transport:

- 1. **Connectivity -** providing effective active and public transport linkages that are accessible and connect suburbs will ensure liveability and walkability within Liverpool LGA.
- 2. **Liveability -** there is a strong desire for a vibrant mixed use 24-hour city centre with Georges River at its heart. Liveable cities prioritise cycling and walking over private car use.
- 3. **Productivity -** an attractive environment for jobs and business and a world-class health, research, education and innovation precinct. Active transport infrastructure is great for business and attracts international talent. It also reduces congestion which is a massive burden on productivity.
- 4. Sustainability a green, sustainable, resilient, water-sensitive city that protects its environment is a key priority for Liverpool. Providing for walking and cycling reduces carbon emissions by encouraging mode shift to zero carbon transport modes.

Further impetus to reduce car use and encourage active travel comes from research published by the Western Sydney Diabetes alliance showing that more than half of Western Sydney's population is overweight and at risk of developing type 2 diabetes. The incidence rises by 1% annually^x. Western Sydney is described as a *diabetogenic* environment where the local economy and built environment make it difficult for the residents to engage in a healthy lifestyle. There is an urgent need to change the environment in which people live, work, travel and play to address the social determinants of poor health. Safe active transport infrastructure along the M5 corridor will help reverse inactivity and improve public health.

What is offered for active transport?

Existing cycle facilities along the M5 take the form of shoulder lanes on the mainline motorway. These are suitable for very confident bike riders, and are well-used by commuting and recreational cyclists. There is a narrow and inadequate off-road path for bicycles adjacent to the existing bridge on the south side (Figure 3), but access to this requires cycling first on the motorway shoulder and crossing slip lanes – a dangerous maneuver, tackled only by the brave. Heading east, there is no off-road option to cross the river by bike and the motorway

shoulder becomes very narrow on the existing bridge. Shoulder lanes will not encourage the uptake of active transport, or drive the mode shift so desperately needed to meet health and environmental goals.



Figure 3: The entrance to the inadequate bicycle path from the motorway shoulder on the east side of the Georges River, as encountered heading west (Source: Google Maps)

There is no pedestrian access at all over the river from Moorebank Avenue, representing a missing link in the walking network^{xi}. The Liverpool Bike Plan^{xii} highlights that new east-west walking and cycling paths are a high priority for connectivity.

The **new shared user path** proposed as part of the M5 Motorway upgrades will finally provide access across the Georges River and the railway lines for pedestrians and cyclists of all ages and abilities.

The REF specifies that the **shared path will be 3.5m wide**. This complies with the minimum widths specified by Austroads (Figure 4)^{xiii}. A generous path accommodates a range of mobility options such as cargo bikes and disability scooters and ensures faster cyclists can overtake without compromising pedestrian comfort.

Figure 4: Suggested shared user path widths (Source: Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling AGRD06A-17

	Suggested path width (m)		
	Local access path	Regional path ⁽³⁾	Recreational path
Desirable minimum width	2.5	3.0	3.5
Minimum width – typical maximum	2.0 ⁽¹⁾ - 3.0 ⁽²⁾	2.5 ⁽¹⁾ - 4.0 ⁽²⁾	3.0 ⁽¹⁾ - 4.0 ⁽²⁾

- 1. A lesser width should only to be adopted where cyclist volumes and operational speeds will remain low.
- 2. A greater width may be required where the numbers of cyclists and pedestrians are very high or there is a high probability of conflict between users (e.g. people walking dogs, in-line skaters etc.).
- 3. May be part of a principal bicycle network in some jurisdictions.

2.5m wide shoulders are specified throughout the new sections of the motorway so cyclists can still use the main line if desired. A 2.5m shoulder will be included in the new underpass.

A cross section of the new bridge is shown in Figure 5.

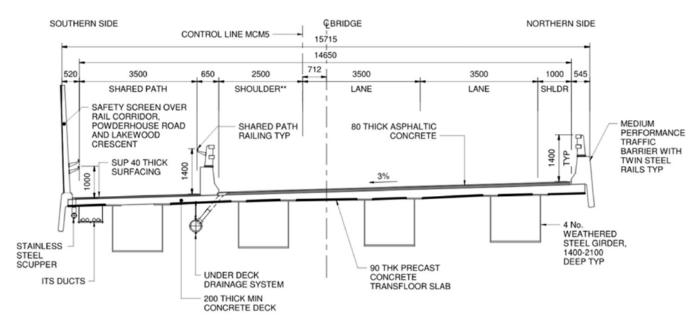


Figure 5: Cross section of the new bridge over the Georges River showing the 3.5m shared path and the 2.5m shoulder (Source: TfNSW, 2022 REF)

Heading west, cyclists will be directed to use the underpass shoulder. On the western side of the underpass there is a choice to exit the shoulder onto the shared user path to cross the river or access Moorebank Avenue, or to continue travelling west on the M5 Motorway by crossing a single lane of traffic to re-join the mainline via the existing entry ramp (Figure 6)

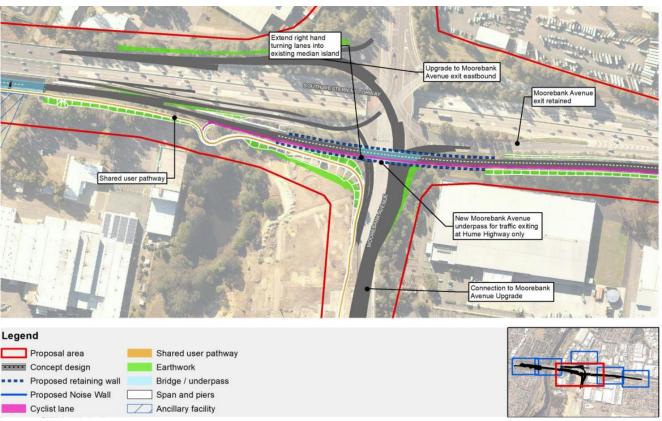


Figure 6: The proposed Moorebank Avenue intersection (Source: TfNSW, 2022 REF)

It is essential that the shared user path forms a central role in the regional network, contributing to the Principal Bicycle Network and Sydney's Green Grid. Although detailed designs for the junctions have not yet been issued, the preliminary plans for the shared path appear to take into account the need to connect to other active transport facilities:

On the eastern side of the Georges River, a 2.5m x 2.5m concrete stub will be provided to allow the future connection to a shared path along the east side of the river to Chipping Norton Lakes.

On the western side of the river (Figure 7), a connection to Lakewood Crescent in Casula will provide access to the well-established Liverpool to Parramatta Rail Trail which has recently been extended south to Glenfield Station, creating a high-quality and pleasant route beside the Georges River and Leacock Regional Reserve via the Casula Powerhouse Arts Centre.

The western end of the new shared path should seamlessly merge with the shared path along the Hume Highway.

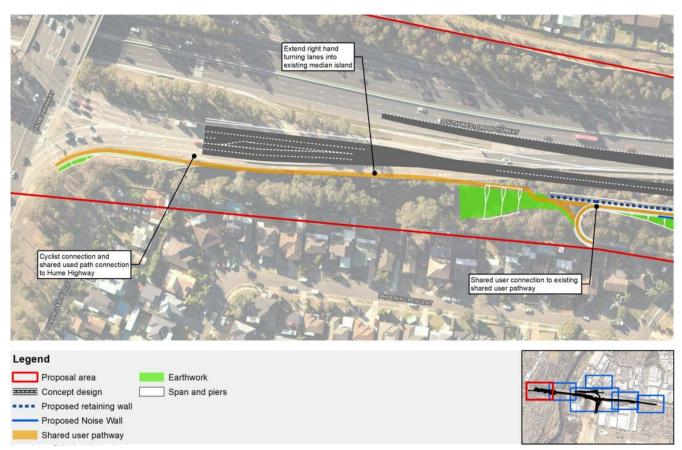


Figure 7: The western end of the new shared path showing proposed connections to the Hume Highway and Lakewood Crescent (Source: TfNSW, 2022 REF)

These existing and future north-south routes are shown on the Liverpool Bike Plan network map (Figure 8)

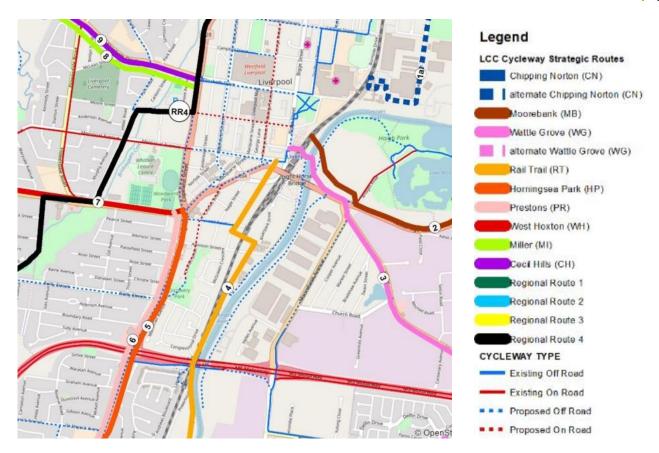


Figure 8: Liverpool City Council's future bike network (Source: Liverpool City Council)

Concerns:

Bicycle NSW is very concerned about closures and detours for bike riders and pedestrians during the
project period. Suppressing active transport over the years of construction will have a long-term impact on
the ability of Western Sydney residents to develop sustainable, healthy travel habits.

The need for detours is discussed briefly in Section 3.3.7 of the REF:

'Construction of the proposal would require temporary changes to private property accesses and existing traffic movements. This includes changes in access to the active transport pathways within the construction areas in Casula and on the M5 Motorway. The existing cycle lane and shared user pathway on the M5 Motorway would remain open for as long as practicable. During traffic switching periods required for construction, particularly during the construction of the new underpass beneath Moorebank Avenue, temporary short-term closures of the cyclist lane are expected' xiv

However, there is no mention of time frame and no maps to show the proposed routes. What is acceptable to people driving may not be suitable for cyclists who need direct, comfortable and level routes.

- Another concern is the movement of construction trucks and site vehicles across pedestrian and cycling
 paths in the area to access the contractor's compounds. Without the detailed Traffic Management Plan
 (TMP) it is difficult to assess the impact of construction on active transport.
- It is not clear how cyclists would rejoin the motorway mainline shoulder from the western end of the new shared path. Although confident cyclists travelling west can remain on the M5, those approaching from the

riverside shared path may also want to access the shoulder to head towards Campbelltown. This is currently possible by crossing the slip lane (Figure 9).



Figure 9: Access to the motorway heading west from the shared path from Lakewood Crescent is currently possible by crossing the slip lane at the point marked by an orange circle. It appears that this connection will no longer be possible. (Source: Google Maps / TfNSW, 2022 REF)

- If access to the motorway from the new shared path is provided for bikes, what measures will be in place to ensure that pedestrians will be prevented from walking onto the M5?
- The plans indicate **limited and insufficient new trees** for shade, visual amenity, urban cooling and air filtering. Western Sydney is particularly susceptible to extreme heat events which affect residents' ability to work, study, sleep and exercise^{xv}. A tree canopy over the shared path will help ensure that the facility is comfortable to use in the warmer months, allowing opportunities for exercise and mitigating the health impacts of inactivity, such as diabetes and heart disease. Residents will not choose active travel if it is not safe, attractive and comfortable.
- We worry that the NSW Government is not extracting as much benefit as possible for active transport from
 the M5 upgrades. Projects such as Sydney Gateway commit to delivering new cycleways within 1.5km of
 the project footprint^{xvi} The upheaval of construction in the area provides an once-in-a-generation chance to
 improve shared paths within a wider area. There is a huge risk of missed opportunities.

For example, the shared path spur to Lakewood Crescent should lead to a cycle and pedestrian bridge over the rail line to create much better access to the rail trail shared path and Powerhouse Road (Figure 10).

Another much needed project is a bridge across the weir at Liverpool. This shows up as a cycle route on Google Maps (Figure 11) but is often under water or too slippery with algae to cross safely. A shared use bridge at this point, linking Liverpool to Chipping Norton Lakes, would be immensely useful in meeting the transport needs of a rapidly growing population who might otherwise resign themselves to private car use.

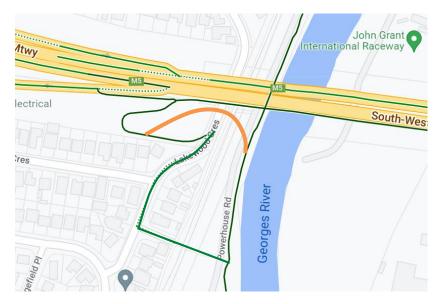


Figure 10: The current connection to the rail trail regional cycleway is indirect, using Woodbrook Road to pass under the rail line. An elegant bridge could be delivered where shown with an orange line. (Source: Google Maps)

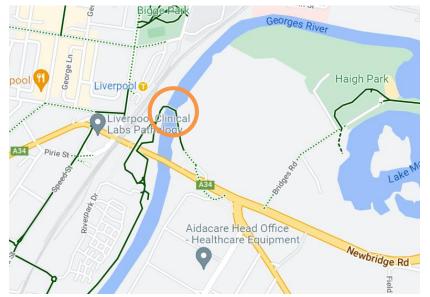


Figure 11: Locating the weir that needs a new pedestrian and cycle bridge. (Source: Google Maps)

• Finally, there is a **lack of consideration for induced demand** - the dynamic in behavioural economics proven repeatedly and universally since the 1960s^{xvii} that increased road capacity increases traffic congestion, begging the question: For how long will the westbound upgrades manage congestion? This issue has not been addressed in the planning documents.

Transport for NSW Future Transport 2056 strategy^{xviii} clearly acknowledges that 'building our way out of congestion is not a sustainable solution. Planning for a dynamic network that improves customer choices and options is key to the sustainability and resilience to our future network'^{xix}. NSW Government investment should be focused on public and active transport.

Recommendations:

- Align the active transport elements of the M5 Motorway upgrade project to current Transport for NSW
 Movement and Place frameworks and policies. People walking and cycling must not be inconvenienced in
 favour of driving, either during construction or once the upgraded motorway is operating. Remember that
 improved safety, directness and comfort in the cycling network is a net gain for the road network through
 decongestion.
- It is essential to maintain the M5 Motorway's viability as an active transport corridor throughout the upgrade project. Mitigate construction impacts and maintain access to safe active travel. Please refer to Austroads Guide to Temporary Traffic Management^{xx} and adhere to the principles of coherence, equivalence, directness and safety during construction.
- Section 6.2.4 of the REF commits to consultation with Liverpool City Council and the community during the
 development of the Traffic Management Plan. It is important that Bicycle User Groups are included in
 discussions at all stages of the construction process so inconvenience to cyclists can be minimised and
 temporary changes communicated to the wider cycling community.
- Temporary detours to the existing cycle routes must be carefully planned. The project team needs to
 consult with Bicycle NSW and BUGs about how to avoid or at least minimise detours. This will require
 bicycle-based site tours to ensure a best-practice outcome. Please take advantage of our local knowledge,
 engineering and planning expertise to develop solutions for the detours.
- New shared paths or separated bicycle facilities should be constructed on the relevant local or State roads before a detour begins. Such new infrastructure would have a long-term benefit, improving and adding linkages into the local area. Funding is warranted by <u>Providing for Walking and Cycling in Transport</u> <u>Projects Policy</u>^{xxi}
- The project team must construct its access routes to work sites at minimal inconvenience to *all* road users.
- Extend the project footprint to include improvements to cycling infrastructure over a wider area. For example, the bridges discussed above could become part of the Conditions of Consent. The project offers a once-in-a-generation opportunity for significant mode shift and behaviour change, and its influence must reach far into the Western Parkland City.
- Bicycle NSW requests the opportunity to provide further feedback once detailed designs for the junctions, landscaping, signage and ancillary facilities such as bubblers and benches are available. We will be able to make a more meaningful contribution with more thorough information. In particular, we look forward to receiving the Place, Design and Landscape Plan.
- Ensure that cycle infrastructure is inclusive and accommodates all types of bikes, including cargo bikes and tricycles. The width of the paths is critical but it is important to consider turning radii, dropped kerbs, ramps and the design of modal filters to ensure that non-standard bikes not excluded from the shared paths. Non-standard bikes such as hand-cycles, recumbents and wheelchair bikes offer disabled people independent mobility but are a rare sight due to barriers caused by poor urban design. Any measures enabling cycling by disabled people will support a growth in cycling by novice cyclists, children and older people, and improve conditions for those using mobility scooters^{xxii}.
- The project team must refer to the new Cycleway Design Toolboxxxiii and the 2017 Austroads
 Cycling Aspects of Austroads Guides (AP-G88-17) to ensure that the paths are constructed to current best
 practice.

- Maximise the tree canopy cover over the shared path. It is essential to select the correct trees for the
 climate, soil and topography. Excellent research into heat resilient trees is underway at Western Sydney
 University through the Which Plant Where? project. We suggest that Transport for NSW keeps a close eye
 on this research and incorporates the recommendations into the Place, Design and Landscape Plan.
- Prioritise pedestrians and bicycle riders at intersections. Traffic light phasing and sensors must favour
 active modes to encourage more people to walk and cycle. In line with the Road User Space Allocation
 Policy and other State and local strategies, small delays to vehicle traffic should never prevent the delivery
 of safer, more efficient and more attractive active transport infrastructure. Bicycle paths must continue
 across the crossings so people riding bikes are not required to dismount. Raised crossings at unsignalised
 intersections will slow cars and improve safety.
- Wayfinding should support people walking and cycling along the M5 corridor by clearly articulating and communicating the safest and most efficient route. Signage style for wayfinding should be consistent throughout the LGA and reflect the diversity of the community.
- Finally, education, information and events to promote walking and bike riding as a form of transport are an
 important part of any plan to increase participation in active travel and reduce dependence on private
 vehicles.

Conclusion

We thank Transport for NSW for showing real intent to create new cycling corridors as a foundation for future development of the Western Parkland City. High-quality active transport infrastructure will provide enormous benefit to the residents and workers attracted to Liverpool over the coming decades, allowing access to school, homes and workplaces using a healthy, sustainable mode of transport. There is a huge appetite for active mobility and if the correct infrastructure is provided, many people will happily drive less. This will reduce pressure on roads, parking and public transport infrastructure and leave capacity on the networks for those needing to travel from further afield.

The changes to the M5 must enhance its role as a key active transport corridor for Greater Sydney and deliver improvements to walking and cycling infrastructure across a wider area than currently proposed. A concerted effort from local and State governments is required to achieve far-reaching outcomes for the regional and local cycling network. Bicycle NSW will support this work, and expects regular stakeholder engagement.

We look forward to working closely with Transport for NSW to develop active travel infrastructure that connects every corner of the Western Parkland City.

Yours faithfully,

Souch Tichbord.

Sarah Bickford

Bike Planner Bicycle NSW Cr. Peter McLean

Chief Executive Officer Bicycle NSW

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