



# DRAFT ShapingSEQ 2023 UPDATE

RACQ SUBMISSION

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## EXECUTIVE SUMMARY

The Royal Automobile Club of Queensland (RACQ) strongly argues that density and new communities in south east Queensland must be carefully managed and supported by more strategic road and public and active transport planning. Governments must also have a stronger planning and building response to growing natural hazard risk in the region, particularly flood risk.

Our members consistently tell us that more needs to be done in these areas. They believe the region has congestion problems now, let alone in two decades time, and they are unconvinced it is prepared for more catastrophic floods. They want governments to fix, finish and extend the transport infrastructure they started. They have shown that they will use public transport if it is accessible, convenient, and affordable. As Airtrain has proven, they will shy away from public transport that does not have these qualities. We are also a city and region that has embraced e-mobility. More than eight million residents and tourists have used e-scooters in Brisbane since the council commenced its hire scheme in 2018 and e-scooter and e-bike sales are also recording exponential growth in Queensland. This popularity must be matched by new, improved and connected pathways if e-mobility is to be fully harnessed as one of the keys to congestion-busting and managed growth.

SEQ is one of the best places on the planet. But all of these critical pieces to the planning puzzle must work together and complement each other if the region is to avoid being a victim of its own success and popularity. The by-products of getting it right are considerable – greater productivity and liveability, happier communities and most importantly, improved safety.

We believe that this is a critical time in the region's history as we prepare to take the world stage in 2032 and house six million people in the next two decades while preserving our famous lifestyle – the very reason why we are recording such extraordinary and persistent population growth.

RACQ agrees with the Draft ShapingSEQ 2023 Update's focus on the critical housing shortage. Having access to safe, stable and affordable housing is a fundamental right, yet an unacceptable number of Queenslanders do not. While urgent action is important, solutions must be well considered to maximise the benefits to the community, take account of current and future natural hazard risk, and avoid unintended negative outcomes. Ensuring transport connectivity between housing, jobs, education, and other activities within a growing south east Queensland should be a top priority in the regional plan.

RACQ believes there must be a stronger focus on delivering population growth and increased density with transformative transport planning and delivery. Investment must follow or any plan will be destined to fail. We support planning for increased density, however dispersed 'gentle density' or 'medium density' outside 'high amenity areas', as described in the document, will cause more traffic congestion unless supported by new targeted public transport investment. 'Gentle density' needs to be supported by a 'gentle transport' solution, mainly improved bus-based services. Improved bus services need to be 'high quality ride - low floor electric' with high frequency services on clear legible routes with fixed and improved stops/stations/platforms to attract the development of gentle density.

While the Draft ShapingSEQ Update addresses density and housing supply, it lacks much-needed transport ambition and consistent detail of how infrastructure and networks are going to be planned and delivered to shape a functional and safe capital city region capable of managing a population that will grow by 2.2 million people within 23 years.

Finally, extreme weather risk and climate change projections demand that we re-think where we build and how we build, as well as how landscapes and waterways are used to combat the region's significant flood risk.



RACQ makes the following recommendations:

### **Integrated transport planning for enabling density and growth**

1. Clearly identify the underutilised Urban Footprint as identified by the Department of State Development, Infrastructure, Local Government & Planning's (DSDILGP) Growth Areas Team.
2. Clearly articulate how quality localised public transport services will attract and support increased density outside 'high amenity areas'. The plan should also highlight the importance of clustering density in suitable locations to avoid the consequence of sprawling density.
3. Identify the planning and extension (in the next 10 years) of the Brisbane Metro network and introduction of the Metro Glider 'tram-bus' service.

### **Strategic transport infrastructure planning and delivery**

4. Commit to investigating and delivering future technology opportunities of remote supervised automated vehicle shuttle buses for local public transport operations, addressing safety, cost effectiveness and the required capabilities and accreditation.
5. Commit to developing a transparent process to investigate new major public transport corridors in SEQ.
6. Develop a secondary document, being the ShapingSEQ Infrastructure Implementation Plan, with a focus on including set timeframes by which projects should be delivered.
7. Commit to a program of removing all problematic level crossings across SEQ to address safety in rail and road networks.

### **Strategic road network planning**

8. Create action plans showing individual projects and timeframes on a scale such as 0-5 years, 6-15 years and 16-30 years for each project. These timeframes should be sequenced to a 2050 horizon (or beyond) similar to that included in the South East Queensland Infrastructure Plan and Program 2010–2031 (or previous 2008-2026) document. All levels of government need to agree on project needs, their transport benefit, and to develop and deliver on action plans within suitable timeframes.
9. Utilise strategic transport planning models to develop a long-term priority list of required transport infrastructure to properly accommodate the current and future transport needs of SEQ, including action plans and timeframes.

### **Strategic public transport planning**

10. Focus investment on the Wynnum Road corridor and Old Cleveland Road corridor, extending dedicated and separated busways and Metro infrastructure and services. Wynnum Road and radial roads adjacent to the South East Freeway/Pacific Motorway to the south of Brisbane should include transit and bus 'queue-jump' solutions to reduce trip times and provide improved feeder services to the South East Busway or rail stations.
11. Amend the ShapingSEQ Update to include a grade separated busway to Chermside in favour of an on-road transitway.
12. Include specific public transport corridor upgrades to enable increased density as per Table 2 within the Draft ShapingSEQ 2023 Update.

### **Strategic active transport planning**

13. Provide additional funding programs and simplify the process for local governments to apply for grants to deliver cycleway infrastructure. Currently, funding programs are limited to the planning and design of routes and often local governments do not have the resources to adequately deliver on these opportunities.
14. Use active transport to encourage gentle density development and include as a sub-section of transit-oriented development. RACQ terms this development opportunity active-transit oriented development (aTOD).



## Climate and natural disaster resilience

15. Make better use of our natural environment and systems as 'green defences'. This will reduce reliance on engineering solutions and physical infrastructure to respond to different urban forms and landscape types through the region for sustainable flood mitigation. A range of strategies should be developed to recognise that different catchments and topographies can store, delay, soak, and recharge water in times of record rainfall.
16. Work with all levels of government to develop and implement place-based disaster resilience plans, including mitigation commitments in high-risk communities across SEQ.
17. Require the final Plan and local government planning schemes to consider current and future extreme weather risk, including the future impacts of climate change on new developments. These models should be regularly reviewed, and schemes updated as the risk profile grows.
18. Use national projections and modelling to ensure the accuracy of extreme weather mapping to inform where development can occur at the local level, providing funding or other support to local governments that are under-resourced.
19. Use planning powers to limit new development in areas highly prone to flooding, bushfire, and coastal hazards. Climate change risk assessments to identify these vulnerable areas should be mandatory. Prioritise areas for new development with zero to low risk of extreme weather impacts.
20. Introduce a catchment-based approach for flood hazard management in land-use planning arrangements based on catchment boundaries considers current and projected risk and input from councils.
21. Test more effective public messaging to explain flood risk to communities and individual property owners.
22. Articulate how net zero emissions targets will be met through state and local planning schemes and development processes.



## INTRODUCTION

The Royal Automobile Club of Queensland (RACQ) is Queensland's largest member-owned mutual, and we exist for the benefit of our more than 1.7 million members. Our strategic vision is to be the trusted partner for our members providing solutions to live and move safely, securely and sustainably.

Throughout our 118-year history, we have actively engaged with the Queensland Government in the interests of our members, sharing our expertise and recommendations on a wide range of policy areas including road safety, transport and infrastructure, natural hazard resilience, and disaster response. Our membership makes up a significant portion of the State's population, and we have a presence in more than 60 per cent of Queensland homes.

The ShapingSEQ 2023 Update (Draft Plan) is a pivotal moment in the region's strategic planning and the document's role in guiding future strategic planning for both land use and transport is paramount. The final plan not only needs to be aspirational and ambitious, but it needs to clearly articulate how the Queensland Government, local governments and industry will play their roles in delivering a safe, sustainable, productive and liveable South East Queensland.

Our members support<sup>1</sup> RACQ becoming more active in advocating for better communities and lifestyles, which ultimately are achieved through the integration of smart land use and transport planning.

RACQ members clearly want to prioritise resolving existing infrastructure issues over new and innovative projects. More effective, more affordable, and more efficient infrastructure are rated of high importance. In addition, effective maintenance and relevant upgrades to existing infrastructure are the most important legacy outcome. Inter-regional roads are rated highly important, notably the Bruce Highway and M1 that cut through SEQ and into regional Queensland. In addition, there is a desire for the expansion and completion of the rail network, offering faster trips from the Sunshine Coast to Coolangatta as well as Brisbane to Ipswich and Toowoomba.

While the priorities of the Queensland Government are rightly on addressing immediate needs and the legacy of historic poor planning, strong ongoing population growth projections mean we cannot take our eye off long-term strategic planning.

## SECTION 1 INTEGRATED TRANSPORT PLANNING TO ENABLE DENSITY AND GROWTH

The Draft Plan identifies Queensland's largest projected population increases to 2046 in Gold Coast, Ipswich, Brisbane, Moreton, and Logan. As with other parts of Australia, there has been sustained growth in SEQ, particularly Greater Brisbane and the coastal regions, which is increasing faster than regional Queensland.

The Draft Plan states that "*DSDILGP would like to work with state and local governments during the consultation phase to develop housing supply targets*". The process of engagement with state agencies and local government for ShapingSEQ should seek to ensure housing supply targets are fully embraced. RACQ expects the Department of Transport and Main Roads (DTMR) to be involved and that plans are developed to support new dwelling density and supply targets with high-quality public and active transport and greenfield state road networks.

Population growth in SEQ in previous decades has generally been accommodated in greenfield areas, arguably due to the low cost of land compared with developing in inner and middle-ring suburbs. However, the advantage of relatively lower land costs is too often diluted by the lack of transport infrastructure investment. The lack of existing infrastructure in outer suburban areas or greenfield developments and broader transport challenges typically lead to significantly higher transport costs for those communities. The NSW Productivity Commission's<sup>2</sup> recent report further highlights the infrastructure-related costs that come with a continued sprawling development pattern in the outer suburban areas when compared to building new homes closer to the city centre.

<sup>1</sup> This includes the 2022 Future Brisbane Survey of RACQ members on infrastructure requirements for SEQ by 2032. The survey evaluated how RACQ members rated various transport legacies, as well as a broader 2032 Games urban development legacy.

<sup>2</sup> NSW Productivity Commission, Building more homes where infrastructure costs less, Comparing the marginal costs of servicing growth in different areas of Sydney, August 2023



The different forms of transport infrastructure will require state government investment or catalyst infrastructure funding to bring forward developer and local government investment. However, the significant forecast growth in Ipswich, notably Ripley Valley with an extra 105,000 people out to 2049, does not appear to be fully addressed. RACQ is concerned the Draft Plan does not highlight the need to provide this region with high-quality public transport infrastructure. Connecting Ipswich, Springfield and Ripley Valley with a system that has high frequency, high capacity and high-speed capability is imperative to change the current travel mode share dominated by private vehicles.

It is understood that DSDILGP's Growth Areas Team (GAT) completed an assessment whereby 20,000 hectares of under-utilised urban footprint can be developed with appropriate intervention. The location of this land and the type of intervention should be identified. Ultimately, the Queensland Government should work with the local governments where this under-utilised land exists, to ensure the right outcomes are achieved.

We note the Draft Plan recognises the importance of urban consolidation. Most of Australia's capital city regional planning schemes have been seeking infill population, higher dwelling densities and housing targets for nearly two decades<sup>3</sup>. It has long been argued that the challenge of meeting 'infill' targets under current industry, government, and community processes, *'may be insurmountable unless there is a major transformation in the process by which the existing built environment can be regenerated.'* RACQ believes part of the transformation requires a significant shift in the planning and prioritisation of public transport investment. Specifically, higher density development and public transport investment decisions must be intrinsically linked.

There needs to be a strong commitment to high-quality public transport that services development as soon as it comes online to ensure the community has viable choices. To this extent, the nominated work to be completed by DSDILGP – 'Distinctly Queensland Design Series' - as well as the nomination of dwellings-per-hectare to inform amendments to planning schemes need to deliver a more concentrated urban form, particularly within the inner-urban and middle ring of Brisbane as well as the Principal Activity Centres throughout the region. Dedicated precinct planning led by the Queensland Government and the use of Priority Development Areas would also complement this work and provide certainty to industry of where investment should occur.

RACQ supports the focus on 'gentle density' but there is not enough detail in the Draft Plan on how public transport planning supports and informs where this density should be clustered. The role of density will ultimately be the responsibility of local governments to manage as part of planning schemes, however the delivery and management of public transport is the responsibility of the Queensland Government. It is not ideal that a strategic document such as the Draft Plan is missing adequate detail regarding the role of public transport services. The Draft Plan needs to be clearer on exactly how additional density is going to be encouraged. An unintended consequence of not clearly defining where higher density will occur and how it will be supported is sprawling dispersed density across the region with worsening congestion and general transport dysfunction.

Where increased mid-rise density or 'gentle density' is planned, it should be delivered as part of an overall strategy focusing on clusters of density inclusive of improved urban public transport infrastructure, and other services such as education, green spaces, roads, pathways, childcare, retail, and local jobs. Our Future Brisbane 2022 survey showed better neighbourhood connections and links resonated strongly with RACQ members to improve safety, access, health, and mobility options.

Urgent clustering of housing density with stronger investment in public transport over the short to medium term (5 to 10 years) can only be delivered at a reasonably affordable cost in terms of infrastructure (road and lane priorities) and vehicle fleet with higher quality bus/road public transport. 'Gentle density' needs a 'gentle transport' solution (such as lower cost, high quality low floor electric) with high frequency, high capacity, legible routes and clearly fixed and improved stops/stations/platforms to attract the right development.

RACQ therefore calls for the planning and extension (in the next 10 years) of the Brisbane Metro network and introduction of a Metro Glider 'tram-bus' service. An example of the tram-bus approach to rapid bus transport is the Belfast Glider (Image 1) - <https://www.route-one.net/features/how-belfast-glider-became-a-blueprint-for-brt-success/>

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<sup>3</sup> Newton, P. (2010). "Beyond greenfields and brownfields: The challenge of regenerating Australia's greyfield suburbs," Built Environment, Vol.36, No.1, pp. 81–104.



**Image 1 Belfast Glider – high quality tram bus with road priority and stops.**



Higher quality bus/road public transport should involve a combination of bus priority infrastructure as well as important decisions about vehicle design, ticketing and stops and platforms to ensure high frequency and higher speeds. We see this being implemented across SEQ (not just Brisbane) with a focus on high growth areas such as Ripley Valley and Caboolture West. This kind of planning and delivery will help ensure local governments can achieve appropriate 'gentle density'.

Further density that often creates unnecessary congestion is linear corridor development, e.g., major road corridor or strip residential density.

This type of development can have a negative effect on road congestion and amenity (noise, pollution and safety) by increasing populations living and interacting with high traffic road corridors and should be avoided. RACQ would also argue this type of development is inconsistent with the principles of 'Movement and Place'. More appropriate alternative locations for density would be clustered on rail or rapid bus/metro/Metro Glider stations.

The Draft Plan seeks to reduce the amount of parking mandated in higher density development and RACQ supports this approach given the high cost of podium parking (now estimated at \$80,000 per bay), impacts on affordable housing, and induced private car travel in denser areas. RACQ supports the removal of minimum parking requirements in higher density development areas where there are restrictions on street parking, and/or where there is high frequency public transport.

#### **RACQ recommendations:**

1. Clearly identify the underutilised Urban Footprint as identified by the Department of State Development, Infrastructure, Local Government & Planning's (DSDILGP) Growth Areas Team.
2. Clearly articulate how quality localised public transport services will attract and support increased density outside 'high amenity areas'. The plan should also highlight the importance of clustering density in suitable locations to avoid the consequence of 'sprawling density'.
3. Identify the planning and extension (in the next 10 years) of the Brisbane Metro network and introduction of the Metro Glider 'tram-bus' service.





## SECTION 2 STRATEGIC TRANSPORT INFRASTRUCTURE PLANNING

The Draft Plan refers to the benefits of connected and automated vehicles, however RACQ does not believe vehicle technology will substantively solve existing transport issues or improve congestion. The impact of autonomous and electric vehicles, particularly in a city region with increased density and population, is more likely to lead to higher levels of congestion unless there are committed strategies to deliver mode shifting to public, active, and shared transport.<sup>4</sup> The Future Brisbane survey found our members saw technology as a way of enhancing existing transport options, but not at the expense of prioritising the completion of and upgrades to existing projects.

RACQ believes autonomous technology has potential, notably lower speed 'shared' automated vehicles with remote operations/supervision providing neighbourhood public transport. RACQ has been at the forefront of this kind of deployment, research, and policy development through the purchase of a highly automated (level 4) EasyMile EZ10 Gen 2 shuttle (RACQ Smart Shuttle, Image 2). RACQ successfully deployed the shuttle in three locations, partnering with the local government, in live traffic environments of increasing complexity. Current technology applications, regulations and operating approaches limit the widespread deployment of these types of vehicles, however RACQ believes more research and development is required to continue advancing this technology, particularly coupled with remote supervision.

Image 2 RACQ Smart Shuttle



Remote supervision could involve operators managing multiple vehicles (subject to triaging) with limited interventions over automated operation within a sound risk-controlled framework. Supervised autonomous services would provide lower cost neighbourhood accessibility, freeing up trunk bus services for higher frequency, more direct and quicker public transport. RACQ believes there is value in the Queensland Government investigating the safety, cost effectiveness and the capabilities of remote supervised automated shuttle vehicles for localised public transport.

Also, as the region increases in population and its labour market increases in knowledge intensity, the labour force will also likely become more specialised. This is likely to lead to an increasing number of people

traveling further to their place of work or living closer to large job centres – this is inherent in all larger knowledge intensive cities. This will mean the government needs to plan for 45-minute regions underpinned by a highly functional motorway network or orbital and inter-regional motorways as well as a high-frequency, high-capacity, and high-speed rail network.

RACQ notes that the Draft Plan, while providing a list of strategic transport projects, does not provide a comprehensive plan or network of prioritisations. RACQ would urge that this be developed across strategic road, public and active transport. Map 10 refers to 'Public Transport Investigation Corridor' yet the Draft Plan does not provide any other reference as to how these corridors will be determined. It is essential that a transparent and consultative process be established to investigate new major corridors in SEQ.

The Draft Plan does not show a complete future road network, in particular Brisbane's orbital motorways. A historic lack of long-term strategic planning with clearly defined actions and timeframes for delivery of infrastructure has left a segmented, fragmented road and public transport network. Furthermore, there is a lack of detail regarding the actions or timeframes for each project.

<sup>4</sup> Kane, M. and Whitehead, J. (2018) How to Ride Transport Disruption—A Sustainable Framework for Future Urban Mobility. *Australian Planner*, 54, 177-185.



An example is the need for a program to remove all problematic level crossings from SEQ to address efficiency and safety in both the rail and road networks. RACQ members in our Future Brisbane survey gave a high importance score to level crossing removal, possibly reflecting a view that this should have already been fixed.

#### **RACQ recommendations:**

4. Commit to investigating the future technology opportunities of remote supervised automated vehicle shuttle buses for local public transport operations, addressing safety, cost effectiveness and the required capabilities and accreditation.
5. Commit to developing a transparent process to investigate new major public transport corridors in SEQ.
6. Develop a secondary document, being the ShapingSEQ Infrastructure Implementation Plan, focusing on developing set timeframes by which projects should be delivered.
7. Commit to a program of removing all problematic level crossings across SEQ to address safety in rail and road networks.

## **STRATEGIC ROAD NETWORK PLANNING**

There is a need to redefine the way projects are planned and delivered in Queensland. Rather than isolated project level decisions, a systematic approach to planning is required to ensure roads, public transport, and active transport systems work in unison to optimise efficiency, safety and sustainability. Strategic transport planning models should be used to develop the long-term priority list of infrastructure to competently accommodate the current and future needs of SEQ.

Recently there was significant media coverage of RACQ's [2023 Red Spot Congestion Survey results](#) (launched 2 July 2023). Many of the roads receiving the most nominations were motorways or highways in the SEQ region. More specifically four of the top five were major motorways making up Brisbane's outer orbital motorway network. A lack of motorway capacity is also impacting traffic flows and productivity along radial arterial routes leading to and from the Brisbane CBD, especially the north-west of Brisbane where the lack of a high-standard western bypass (orbital) motorway connecting Toowong to the Bruce Highway, requires urgent attention. While investment in the orbital motorway network is critical to productive and efficient movement of people and freight, radial arterial route investment is best targeted at maximising people moving efficiently through public transport improvements.

Motorists' Red Spot Congestion nominations generally match those sections experiencing significant weekday congestion and recording weekday average travel speeds well below free-flow speed during peak times based on TMR's Bluetooth travel speed data. They also align with those recorded in the recent [Future Brisbane](#) survey, with respondents supporting upgrades to the motorway network over building 'new' major roads, i.e., a 'Fix, Finish and Extend' strategy. The [Freight Congestion in Australian Cities](#), 2022 document released by the Bureau of Infrastructure and Transport Research Economics (BITRE) also details freight congestion issues within the Brisbane region as per the list below:

- Bruce Highway – Pine River Bridge to Caloundra exit
- Gateway Motorway – Nudgee to Bruce Highway interchange
- Pacific Motorway – between Coomera and Nerang, and Logan Motorway interchange to Gateway Motorway interchange
- Logan Motorway – between Paradise Road and Wacol/Gailes
- Centenary Motorway / Western Bypass – Between Ipswich Motorway interchange and Toowong
- Ipswich Motorway – Darra to Rocklea, and between Logan Motorway interchange and Warrego Highway Interchange
- Brisbane Urban Corridor (BUC) – East and west of the intersection with Logan Road<sup>5</sup>

Further details are presented in Appendix 1, Table A1.

<sup>5</sup> Note that the Brisbane Urban Corridor is an inner orbital link but is an important freight route and therefore has been included in this list



Other roads of interest yet to be constructed include the newly proposed Carseldine tunnel, North West Transport Corridor (Western Bypass), Inner Orbital tunnel - Toowong to Stafford (Western Bypass), Moggill Pocket Sub Arterial and Kenmore Bypass, Moreton Connector, Bruce Highway Western Alternative, Park Ridge Connector, Southern Infrastructure Corridor, and road and public transport options within the Caboolture West development areas.

The lack of an orbital western link and a competitive high-quality public transport network in the north-west from Toowong to Carseldine places excessive demands on the arterial road network including Route 5 /Metroad 5, South Pine Road/Enoggera Road and Lutwyche Road/Gympie Road corridors.

The Centenary Motorway will need to support an orbital north west corridor, and while the duplication of the Centenary Bridge is a first step, it requires supporting upgrades to the existing Centenary Motorway (Darra to Toowong) to provide a seamless journey from Toowong to the northern suburbs of Brisbane at the Bruce Highway/Gateway Motorway at Carseldine/Bald Hills.

The Gateway Motorway / Bruce Highway / Gympie Arterial Road and Bruce Highway Western Alternative (BHWA) projects at Bald Hills will require careful interchange planning. Network redundancy through alternative routes will minimise issues if any incidents in this area occurred. Longer term solutions to congestion in the western and north west suburbs of Brisbane areas should point to a 'western bypass'. Therefore, RACQ believes planning should be undertaken for a future connection road to the west of Gympie Arterial Road, connecting the north west transport corridor at Carseldine and the BHWA at Strathpine/Lawnton.

RACQ has not provided a complete list of all projects that should be included in the ShapingSEQ 2023 update and the SEQ Infrastructure Supplement 2023. These are examples only.

#### **RACQ recommendations:**

8. Create action plans showing individual projects and timeframes on a scale such as 0-5 years, 6-15 years and 16-30 years for each project. These timeframes should be sequenced to a 2050 horizon (or beyond) similar to that included in the South East Queensland Infrastructure Plan and Program 2010–2031 (or previous 2008-2026) document. All levels of government need to agree on project needs, their transport benefit, and to develop and deliver on action plans within suitable timeframes.
9. Utilise strategic transport planning models to develop a long-term priority list of required transport infrastructure to properly accommodate the current and future transport needs of SEQ, including action plans and timeframes.

## **STRATEGIC PUBLIC TRANSPORT PLANNING**

RACQ supports the strategies and content outlined in the “Connect” theme, however most projects in Table 13, *Priority region-shaping infrastructure – 2023 update*, are road projects (8 out of 12). To achieve a shift in mode share towards more public and active transport, there needs to be a stronger investment commitment from all levels of government.

It is also unclear from the maps provided what is existing and proposed public transport and the mixture of bus and rail. To provide certainty there should be a clear delineation of each mode as SEQ’s rail network is not as comprehensive as other major cities. With the sprawling nature of the region and the expected population growth, there needs to be a greater commitment to heavy rail and a clear definition of its role in the region. RACQ proposes this definition to be delivering high-capacity, high-frequency and high-speed services. As per recommendation 5, RACQ believes it is important to start a transparent process to investigate new major public transport corridors, including rail.

A viable rail service and broader public transport service to Brisbane Airport is required prior to 2032 given the role the airport will play in the Games and the scale of transport demand arising from the airport’s services. Rail and other public transport service fares to the airport should be based on standard Translink zones while peak service frequencies should be targeting less than 10 minutes.



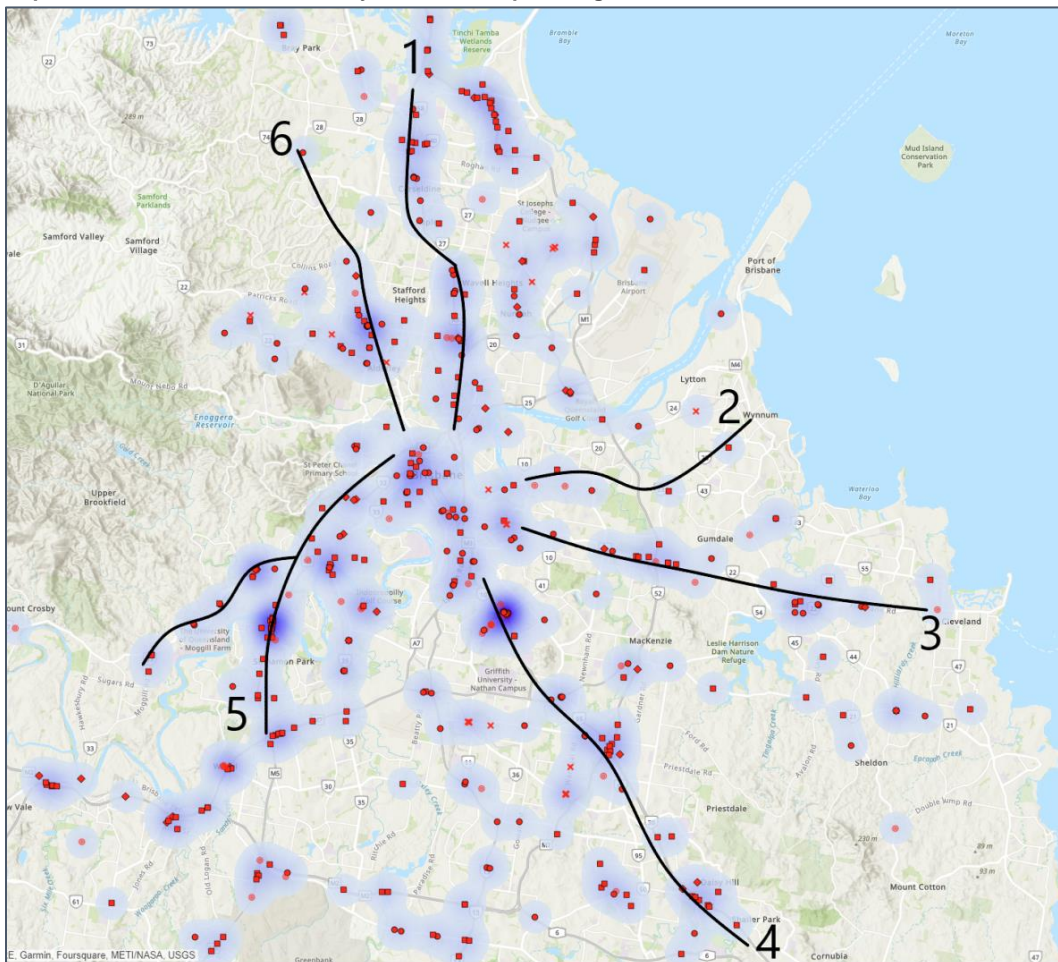
## Public transport on radial road network

Public transport upgrades and continued investment in Brisbane’s major radial corridors are needed to shift commuters towards more affordable and sustainable trips to and from the inner Brisbane area. These high-order urban roads extend radially to and from Brisbane’s high-density CBD area where land is already constrained, upgrades are expensive, and only contribute to inducing greater traffic demand which can best be served by upgraded public transport.

This will work to subdue overall congestion, cater for future population travel needs and help boost the city’s efficiency and productivity, its radial roads, and motorways.

Radial road corridors (see Map 1) include Gympie Road/Lutwyche Road (1), Wynnum Road (2), Old Cleveland Road (3), Logan/Ipswich/Fairfield Road adjacent to the South East Freeway/Pacific Motorway (4), Moggill Road/Coronation Drive (5) and South Pine Road/Enoggera Road (6). Ipswich Road, Annerley Road, Logan Road, and Stanley Street/Vulture Street are others not shown in Map 1.

Map 1 – Radial road network overlaid with Red Spot Congestion nominations



\* Numbers do not indicate priority and are ordered clockwise from top of image

The most appropriate long-term, cost-effective improvements on these roads would be to enhance the public and active transport opportunities. This includes rail line and service improvements through dedicated and separate busways (e.g., Metro service extensions and Metro Glider), transitways (Metro Glider), bus lanes (Metro Glider), bus queue jumps, separated cycling paths and improved cycleways.

RACQ recommends investment in the Wynnum Road corridor (2) and Old Cleveland Road corridor (3) should focus on the extension of dedicated and separated busway and Metro infrastructure and services. Wynnum Road and radial



roads adjacent to the South East Freeway/Pacific Motorway to the south of Brisbane (4) should include transit and bus queue jump solutions to reduce trip times and provide improved feeder services to the South East Busway or rail stations. RACQ welcomes the planned South East Busway expansion to Loganholme which should be serviced by frequent Brisbane Metro services, with support from improved east-west bus feeder routes over the busway.

As previously stated, RACQ believes the region should plan for an extended Brisbane Metro network. The extension to Chermside on the Gympie Road corridor (1) of Brisbane Metro should be a priority, however while the Northern Busway is identified as a 'priority region shaping infrastructure' (Table 12, page 34), it is nominated "as busway or other priority corridor". RACQ supports a dedicated busway corridor that is separated from other traffic and incorporated in the entire Northern Busway corridor from Herston to Carseldine (a similar length to the South East Busway). An on-road option will not be an effective long-term solution resulting in sub-standard public transport that does not encourage a mode shift away from private vehicles. This project needs to deliver a world-class grade separated public transport system to service the northern suburbs of Brisbane.

For example, there are:

- 16 sets of traffic lights from the Northern Busway from Herston to Chermside (Westfield), along Lutwyche and Gympie Roads and
- 28 sets of traffic lights from the Northern Busway at Herston to Bracken Ridge, along Lutwyche and Gympie Roads.

Operating in mixed traffic along this corridor, even with the option of bus priority movements at intersections, would not significantly improve travel time given the increasing transport demand. The Plan should clearly outline the intended infrastructure outcomes to provide surety and certainty as to how this corridor will be managed.

The proposed 'Carseldine Tunnel' is not an effective long-term solution for a western bypass road, nor does it currently offer a separated public transport solution which is the most urgent requirement for the Gympie Road corridor. Any Carseldine tunnel project should be planned and developed to incorporate a high standard busway for a Metro service.

High population growth will challenge the network in north-western Brisbane (6) and Centenary/ Moggill/ Ipswich areas (5). An absence of high-quality public transport is notable in these areas, especially South Pine Road/Enoggera Road (6) and Moggill Road (5) corridors. Longer term congestion solutions in these areas should target improvements to, and completion of, the orbital motorway network (i.e., a 'western bypass') as well as rail improvements (e.g., North West Transport Corridor) and a high standard bus rapid transit (BRT) solution along Moggill Road to Kenmore, and eventually Moggill. However shorter-term improvements should also be made to bus infrastructure and services to reduce demand on the radial roads.

On the Gold Coast, there is no reference to any public transport infrastructure for the Coomera Connector, north of Helensvale. The planning, design and construction of the Coomera Connector provides a significant opportunity to deliver world class public transport to northern Gold Coast through a separated bus corridor. To exclude a public transport corridor is short-sighted and a disservice to the current and future communities in northern Gold Coast considering a key objective of the Coomera Connector is to provide a function for local trips within this region. A BRT system would also provide higher grade connections to the rail network. A single BRT lane has the capacity to move up to 9,000 people per hour, which is up to four times more than a mixed traffic lane.

#### **RACQ recommendations:**

10. Focus investment on the Wynnum Road corridor (2) and Old Cleveland Road corridor (3) on the extension of dedicated and separated busway and Metro infrastructure and services. Wynnum Road (2) and radial roads adjacent to the South East Freeway/Pacific Motorway to the south of Brisbane (4) should include transit and bus 'queue-jump' solutions to reduce trip times and provide improved feeder services to the South East Busway or rail stations.



11. Amend the ShapingSEQ to include a grade separated busway to Chermside in favour of an on-road transitway.
12. Include specific public transport corridor upgrades to enable increased density as per Table B1 (Appendix B) within the Draft ShapingSEQ.

## STRATEGIC ACTIVE TRANSPORT PLANNING

RACQ is concerned about the lack of actions to deliver a strategic active transport network or any project prioritisation, particularly for congested areas of central Brisbane and the Gold Coast. There is a need for additional funding programs for cycleway and e-scooter infrastructure and a simpler process for local governments to apply for grants. Funding programs are currently limited to the planning and design of routes and local governments often do not have the resources to adequately manage these opportunities.

RACQ supports the inclusion of active transport in the Draft Plan and the importance of creating safe, connected, and active networks. However, while incorporating elements from the Queensland Cycle Strategy 2017–2027 and the Queensland Walking Strategy 2019–2029, the Draft Plan has an opportunity to identify strategic active transport networks across the region so they are integrated into the broader transport system.

The opportunity of using active transport to encourage gentle density development can be considered a sub-section of transit-oriented development. RACQ terms this development opportunity active-transit oriented development (aTOD). An example of this type of project is the “Atlanta Beltline” in the United States which is a comprehensive land use plan with transit-oriented design, making it a framework for long-term sustainability (Atlanta Beltline, 2013). This type of strategic planning, incorporating large scale redevelopment and urban regeneration with sustainable transport modes, is an excellent example of what is possible for SEQ in accommodating future growth.

The 2023 National Walking and Cycling Survey results for Queensland have reported a decline in cycling participation from 2022, 42.4% to 34.3% during the past year<sup>6</sup>. The results show a considerable drop from a COVID-induced increase which may be explained by the result of less traffic on the road network, meaning people felt safer and more confident to cycle. The drop in cycling participation highlights the importance of more investment in the active transport network to provide safe, low-stress and high-quality pathways.

### **RACQ recommendations:**

13. Provide additional funding programs and simplify the process for local governments to apply for grants to deliver cycleway infrastructure. Currently, funding programs are limited to the planning and design of routes and often local governments do not have the internal resources to adequately deliver on these opportunities.
14. Use active transport to encourage gentle density development and include as a sub-section of transit-oriented development. RACQ terms this development opportunity active-transit oriented development (aTOD).

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<sup>6</sup> Cycling and Walking Australia and New Zealand (2023), *National Cycling and Walking Participation Survey 2023*



## SECTION 3 CLIMATE AND NATURAL DISASTER RESILIENCE

South east Queensland has become synonymous with extreme weather, whether it be damaging storms or catastrophic floods. Climate science is telling us that tropical cyclones are likely to trek south to impact the SEQ over time.

RACQ is greatly concerned about SEQ's vulnerability to flood, and we experienced Australia's most costly extreme weather event in history in 2022 in SEQ and northern NSW. A sizeable proportion of SEQ's population lives in close proximity to a river or major waterway and so are subject to significant impacts when these areas flood. Retrofitting and relocating (through buy-back) have recently emerged as policy responses to the problem which have been supported by RACQ. However, these solutions cannot be applied in every high-risk location across the region.

There is both a human and economic toll that continues to grow with SEQ's flood risk as we pay for a legacy of poor planning and poor construction on what is a floodplain in many parts of the region.

Last year's SEQ and NSW floods incurred \$6 billion in insurance losses and if it occurred today the 2011 Brisbane floods would have incurred \$1.83 billion.<sup>7</sup>

SEQ will be on the world stage in 2032 and there will be no greater regret than witnessing the region hit again by a 2011 or 2022 repeat during this time because we did not do all that we could to mitigate the risk and lessen the impact.

Careful consideration must be given to the impact of natural hazards on any new housing supply while strategies must be implemented to enhance landscape, river and catchment resilience while strengthening the existing housing stock that has been left in harm's way.

There is no cheap and easy way to build the region's climate resilience but doing nothing will come at a much greater cost.

## RACQ MEMBER PERSPECTIVES ON NATURAL DISASTERS

Following the 2022 floods, RACQ surveyed 474 of our members who reside in South East Queensland, to seek insights about their experiences before, during and after the disaster. We asked an overarching question on a scale (0 poor-10 excellent) *"How would you rate the planning and preparation by the Queensland Government and relevant Local Government Agencies for this event specifically?"* In short, 58 per cent of respondents said the planning and preparation was average (5) to excellent (10) and 33 per cent reported less-than-average to poor, while the remaining 9% did not know.

Of the respondents who rated planning and preparation as less than-average to poor, 17 per cent pointed to the number of houses and other infrastructure built in flood-risk areas. One respondent stated: *"The Queensland Government and local authorities are allowing development of flood prone land and not taking sufficient precautions to mitigate the surface drainage of the flood waters."* Another shared: *"The suburb was landlocked by flooding and help was minimal not to mention no preventive measures (have) been undertaken after the 2011 flooding."*

A specific sub-question asked: *"How would you rate the response of the Queensland Government and LGA to the weather event, on taking measures to protect private and public property?"* Just 32 per cent gave a rating above average and 32 per cent gave a below average to poor rating. RACQ believes these results can be attributed to a growing community sentiment that greater effort needs to be made in disaster resilience or natural hazard risk reduction.

<sup>7</sup> Insurance Council of Australia (2023) Insurance Catastrophe Resilience Report 2022-23, p9.



Figure 1: Rating of the overall planning and preparation for this event by state and local Governments (percentage of respondents)

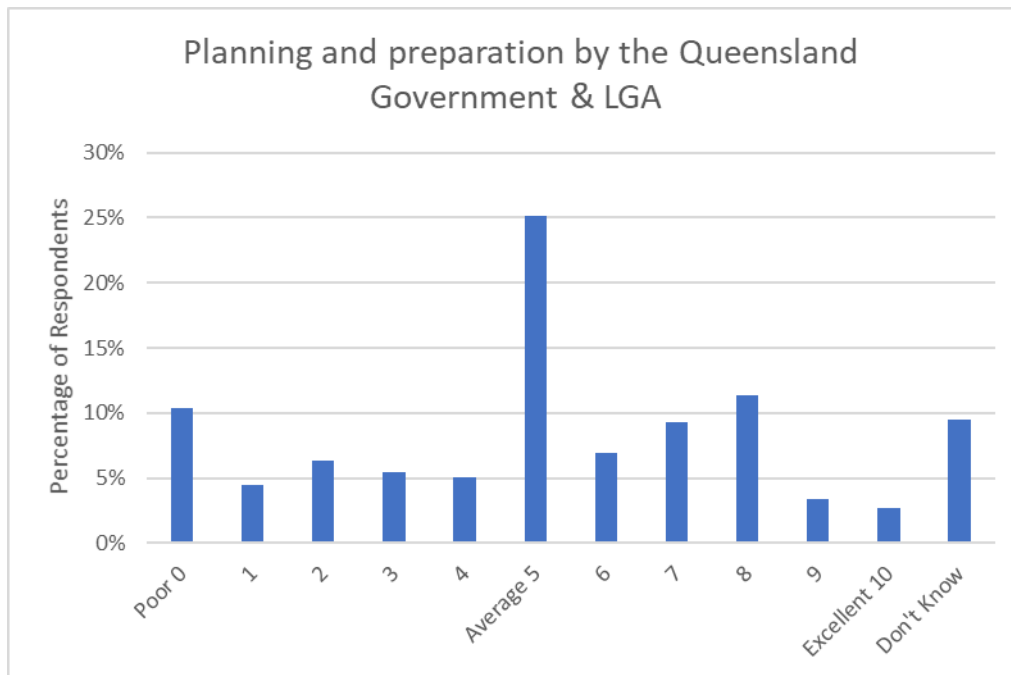
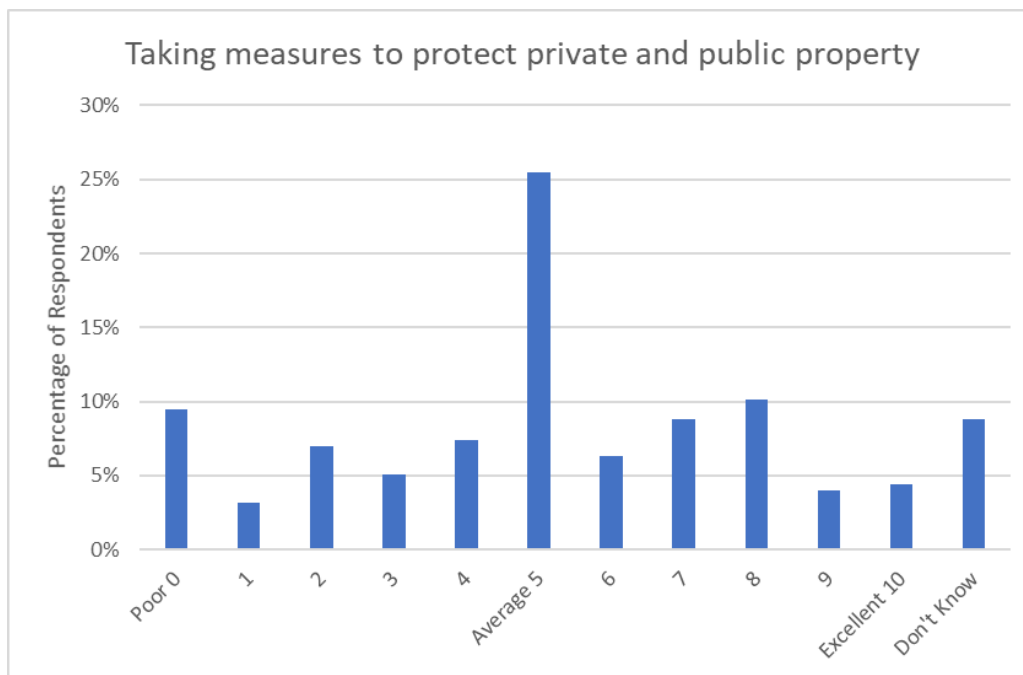


Figure 2: Rating of the measures taken to protect private and public property (percentage of respondents)



Importantly, this shows that Queenslanders are concerned about the impact of natural hazards on their homes and communities, and they expect governments to make sensible land use planning decisions as standard practice.

## BUILDING CLIMATE RESILIENCE

At a high level, RACQ believes the Queensland Government must do four things to build flood resilience in SEQ:

1. Invest in risk-reducing public infrastructure.
2. Invest in and encourage risk-reducing private mitigation (such as floodsmart design and retrofitting).
3. Improve land-use planning including smarter use of landscapes, catchments, and green space.





#### 4. Improve home design and construction.

For the purposes of this submission, we will focus on 3 and 4.

RACQ calls on the Queensland Government to lead an initiative targeted at developing and delivering a plan to improve the flood resilience of SEQ's rivers, waterways, and vulnerable populated areas.

About 50 per cent of the Brisbane River catchment is below Somerset and Wivenhoe Dams so heavy infrastructure will likely only form part of the solution when building resilience in and around the river. We must recognise the broader region as a large system of rivers and creeks. What we build upstream has impacts in the city. Besides engineering solutions in our dams and building a network of smaller dams for storage and irrigation, the Government must look to green defences to play a greater role.

Above Wivenhoe and Somerset, ridgelines can be revegetated to resist flash flooding as well as build green 'speed bumps' like contours can be introduced to slow water or perhaps redirect it. We can implement measures that let the broad floodplain in the Lockyer catchment flood more slowly and naturally.

Ipswich is key, given its strategic location where the Brisbane and Bremer Rivers meet. There are a range of local solutions in Ipswich and Brisbane to help these two cities work more like sponges in extreme rainfall events. Solutions that slow, detain, store, and then discharge to defend against flooding using creeks, wetlands, landscapes, and valleys must be explored.

We cannot undo the legacy of bad decisions that have been made over generations that have put too many homes in the direct line of flood, but we can prevent the same mistakes happening again. Queensland must embrace and live by a greater natural hazard risk culture.

As our population expands, the pressure for new houses to be built in higher risk areas will grow. Both state and local governments must resist this pressure and reconsider the threshold of acceptable risk, or 'tolerable risk' as referred to in the draft Plan. We note the Draft Plan offers no clear definition of 'tolerable risk'.

Land at risk of flooding, bushfire, or actions of the sea are usually seen as more affordable at face value, but new developments within these areas put more Queenslanders in harm's way. Higher insurance premiums and other costs borne by homeowners in these areas cannot continue as an afterthought. These issues must be embedded into pre-development thinking. The consequence of extreme weather, not just the probability, must be considered at the forefront of planning decisions.

RACQ welcomes a recent National Cabinet commitment to develop a national standard that considers disaster and climate risk as part of land-use planning and building reform processes. We urge the Queensland Government to closely engage in this process to ensure any standard is appropriate for SEQ's risk profile.

Land-use planning is made more difficult given divided responsibilities between state and local government. At times, a large gap can exist in resources and capabilities between local governments. Understanding the risk at a regional and local level will significantly enhance the ability of planning instruments to future-proof and build resilience. Planning for extreme weather events should be state-led, catchment-based and locally informed, incorporating flood risk and utilising water catchment boundaries rather than local government boundaries.

The capacity to safely accommodate new dwellings in any areas should be understood before setting housing targets for local governments. Councils should provide input into planning at the catchment level and receive direction from the Queensland Government on where housing should not be planned as part of the development of regional plans.

How the community perceives flood risk will also influence the success of the Plan. RACQ urges the Queensland Government to lead a community engagement process that improves understanding of the likelihood and consequences of flood risk in SEQ. The term 'one in one-hundred-year flood' risk has been mistakenly understood to mean a property should flood once in every one hundred years. Alternatives to explaining flood risk to communities should be tested and complemented with improved availability of data.

SEQ's increased flood risk requires more resilient buildings to better protect those living in the region. The Plan's success also rests with how the National Construction Code (NCC) performs over the coming decades. RACQ believes the Queensland Government must work with the Australian Government on amendments to the NCC and Australian standards that embed the principle of climate resilience for buildings and consider current and future climate projections.



In recent years, a growing volume of useful resources have been developed to help inform our view of flood smart design (notably the Queensland Reconstruction Authority Homeowner Guide) and there is a growing industry of smart, contemporary design and building products. Queensland should have moved past the point of using cost as an excuse to keep the status quo of outdated construction and not incorporating these principles means we pay much more later.

In addition to the built environment, nature-based resilience plays a vital role in urban and regional settings. While offering a home to wildlife and spaces for human recreation, they provide mitigation against flooding, manage carbon emissions, control water flow and air quality, regulate temperature and energy usage, create jobs and provide multiple health benefits.

### **Climate change commitments**

The Queensland Government has set ambitious goals in its Climate Action Plan including 80 per cent renewable energy by 2035, a carbon positive 2032 Games along with climate change management response targets of net zero greenhouse gas emissions by 2050, supported by an interim target of reducing emissions by at least 30 per cent below 2005 levels by 2030.

To contribute to meeting net zero commitments, the embodied carbon footprint of new developments needs to be considered and reduced moving forward. Embodied carbon is the amount of carbon emitted during the construction of homes, buildings, and infrastructure. The extraction of raw materials, the manufacturing and refinement of materials, transportation, installation, and disposal of old supplies can all produce embodied carbon emissions.

Around the world local authorities (including the City of London, Brighton, Oxford) are starting to include carbon evaluation in their planning process for new developments. One of the main methods to reduce embodied carbon is by using more sustainable and resilient materials that will last longer and are often produced via a more efficient construction process. Adopting these changes will reduce capital expenditure as well as maintenance, repair and replacement costs.

### **RACQ recommendations:**

15. Make better use of our natural environment and systems as 'green defences'. This will reduce reliance on engineering solutions and physical infrastructure to respond to different urban forms and landscape types through the region for sustainable flood mitigation. A range of strategies should be developed to recognise that different catchments and topographies can store, delay, soak, and recharge water in times of record rainfall.
16. Work with all levels of government to develop and implement place-based disaster resilience plans, including mitigation commitments in high-risk communities across SEQ.
17. Require the final Plan and local government planning schemes to consider current and future extreme weather risk, including the future impacts of climate change on new developments. These models should be regularly reviewed, and schemes updated as the risk profile grows.
18. Use national projections and modelling to ensure the accuracy of extreme weather mapping to inform where development can occur at the local level, providing funding or other support to local governments that are under-resourced.
19. Use planning powers to limit new development in areas highly prone to flooding, bushfire, and coastal hazards. Climate change risk assessments to identify these vulnerable areas should be mandatory. Prioritise areas for new development with zero to low risk of extreme weather impacts.
20. Introduce a catchment-based approach for flood hazard management in land-use planning arrangements based on catchment boundaries which considers current and projected risk and input from councils.
21. Test more effective public messaging to explain flood risk to communities and individual property owners.
22. Articulate how net zero emissions targets will be met through state and local planning schemes and development processes.



## CONCLUSION

RACQ appreciates the opportunity to provide advice on the Draft ShapingSEQ 2023 Update. Please contact Dr Michael Kane ([Michael.kane@racq.com.au](mailto:Michael.kane@racq.com.au)) for further information or advice.

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## APPENDIX A - STRATEGIC ROAD NETWORK PRIORITIES AND FUTURE NEEDS

Table A1 – Strategic road network priorities and future needs

	Problem section (Data from TMR Bluetooth Speed & RACQ Red Spot survey)	Justifi- cation	Current planning / delivery	Priorities and Needs
<b>Bruce Highway</b>	Delays from Pine River Bridge to Caloundra, particularly from Narangba to Pine River Bridge, including Anzac Avenue entry ramp.	Refer to Map A1 and A3	There is funding and planning underway for a number of upgrades between Caboolture and Pine River Bridge, with works to upgrade north of Caboolture currently underway.	Deliver upgrades Dohles Rocks Road to Anzac Avenue (including Pine River Bridge duplication and connection to Gateway Mwy). Complete Anzac Avenue to Uhlmann Road project. Develop appropriate complementary projects and connections for Bruce Hwy Western Alternative, Caboolture West Development.
<b>Gateway Motorway</b>	Northbound congestion from Nudgee to the Bruce Highway, especially in the four-lane section from Deagon Deviation to Bruce Highway. Also northbound delays when exiting the Pacific Motorway and entering the Gateway Motorway / Gateway Motorway extension at Eight Mile Plains.	Refer to Map A1, A2 and A3	There is funding and planning underway for an upgrade to the Gateway Motorway from Deagon to Pine River Bridge. Other upgrades are also being planned north of the Pine River Bridge on the Bruce Highway and on the Gympie Arterial Road to the south of the Pine River bridge to resolve congestion in the north Brisbane area and ensure an effective and productive ring road system. A viable public transport solution to Brisbane Airport prior to 2032 is also required to relieve the Gateway Motorway.	Deliver Deagon to Bald Hills upgrade cooperatively with Bruce Highway and Gympie Arterial Road upgrades. Requires eight lane for northern (GUN) and southern (GUS) sections across long-term with particular focus on Old Cleveland Road to Pacific Motorway, in both directions. A Tilley Road extension may assist / relieve the Gateway Motorway.
<b>Pacific Motorway</b>	Significant congestion between Coomera and Nerang, and Logan Motorway to Gateway Motorway interchange (Eight Mile Plains). Delays also identified at Yatala (Exit 38) interchange roundabout with Stapylton Jacobs Well Road / Christensen Road (see No.6 below).	Refer to Map A1, A2 and A3	Significant upgrades have been recently completed or are underway, including Eight Mile Plains to Daisy Hill, Mudgeeraba to Varsity Lakes, Varsity Lakes to Tugun and various Interchange/Exits projects, however congestion has shifted to other constrained areas. Continued investment in interchanges and smart motorways projects are required as is the South East Busway extension to Loganholme as part of the Daisy Hill to Logan Motorway Project. The delivery of the Coomera Connector project will provide some relief to Pacific Motorway congestion problems on the Gold Coast.	Deliver all existing Pacific Motorway commitments and complete Daisy Hill to Logan Motorway including South-East Busway extension. Deliver full Coomera Connector project (Nerang to Logan Motorway).
<b>Logan Motorway</b>	Eastbound congestion in the PM peak extending back from Paradise Road entry ramp, Parkinson/Larapinta to Wacol/Gailes. Some congestion in the AM peak at drop from 3 to 2 lanes at Mt Lindesay	Refer to Map A1, A2 and A3	None currently known.	Upgrades required from Gailes (Ipswich Motorway) to Browns Plains.

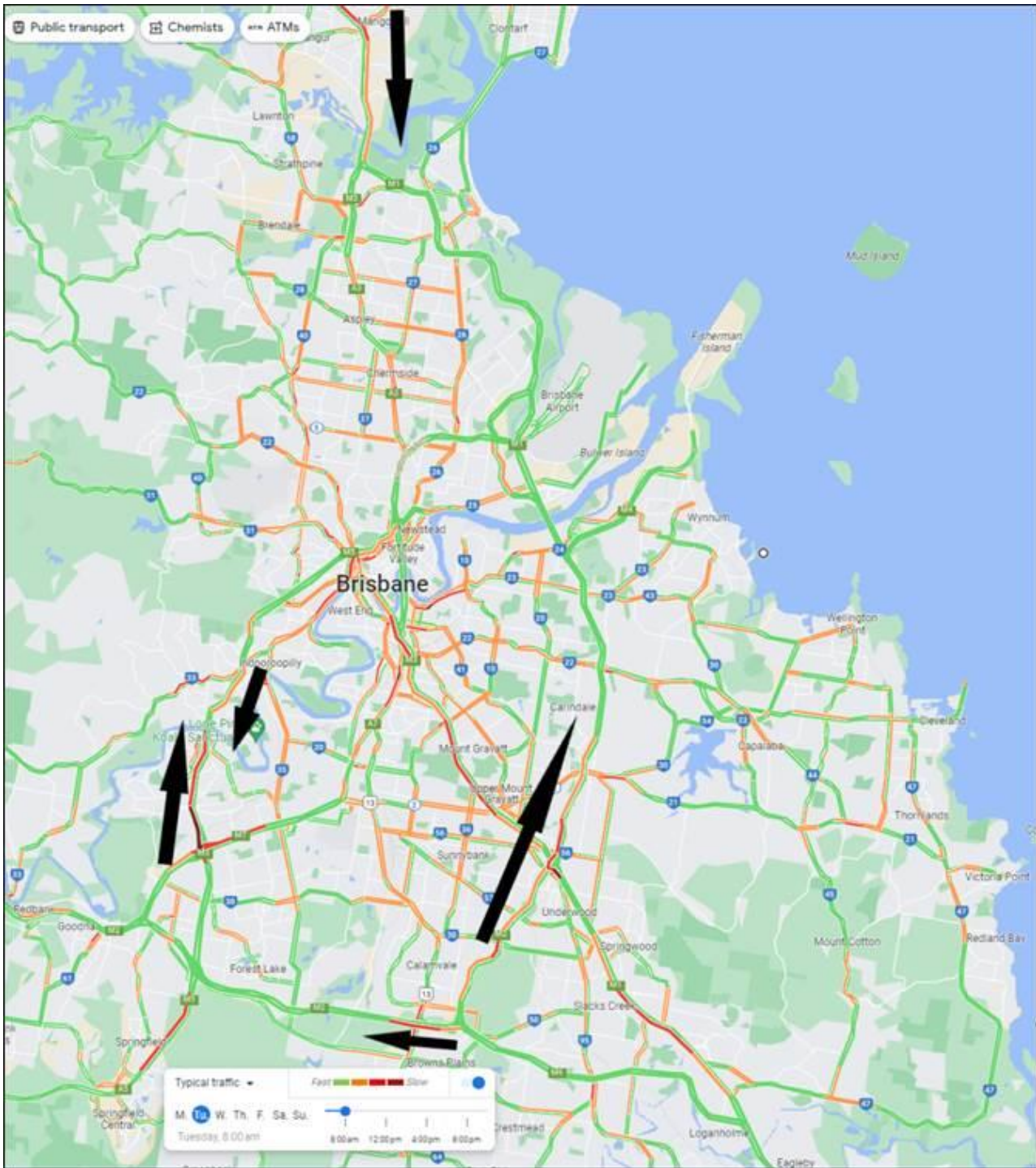


	westbound entry ramp, Parkinson.			
<b>Centenary Motorway / Western Bypass</b>	Primarily congestion between the Ipswich Motorway and Toowong. Delays were also nominated at the Logan Motorway interchange and from Carole Park to Springfield/Springfield Lakes.	Refer to Map A1, A2 and A3	The Centenary Bridge upgrade is underway, as is the Logan Motorway interchange upgrade. However additional capacity upgrades are required from Ipswich Motorway to Toowong. Longer term consideration needs to be given to establishing a high standard 'western bypass' and completing a Brisbane orbital ring road network.	Upgrade required from Darra to Legacy Way portal. At-grade solution Darra to Centenary Bridge with potential tunnel upgrade option north of Brisbane River to Legacy Way. Explore 'Western Bypass' option to Stafford Road and North-West Transport Corridor to Carseldine.
<b>Ipswich Motorway</b>	Congestion in both directions on the yet to be upgraded four-lane section between Darra and Oxley (i.e., Stage 2 of Darra to Rocklea project). Also from the Logan Motorway (Gailles) to Warrego Highway interchange (Riverview). The remaining section between Darra and Oxley (Stage 2) is now the constraint.	Refer to Map A2 and A3	Funding has been allocated from State and Federal Governments to plan for an upgrade of the remaining section (Stage 2) and develop a business case to upgrade the Oxley Interchange.	Deliver remaining (Stage 2) Darra to Rocklea upgrade. Future upgrade option of existing Dinmore to Gailles section, or alternative alignment.
<b>Brisbane Urban Corridor (BUC)</b>	Congestion eastbound and westbound extending from Logan Road intersection (MacGregor / Upper Mt Gravatt).	Refer to Map A3	None currently known.	Tunnel option for Kessels Road / Logan Road / Mt Gravatt Capalaba Road intersection.

Sections experiencing delays during weekday peaks are shown in Maps A1 and A2 (below) respectively. Upgrading and extending the existing orbital road network is not only needed to ensure SEQ can continue to grow and be productive but also for a successful 2032 Olympic and Paralympic Games and beyond.



Maps A1– Example of current orbital motorway network congestion and direction - Typical Tuesday 8am peak



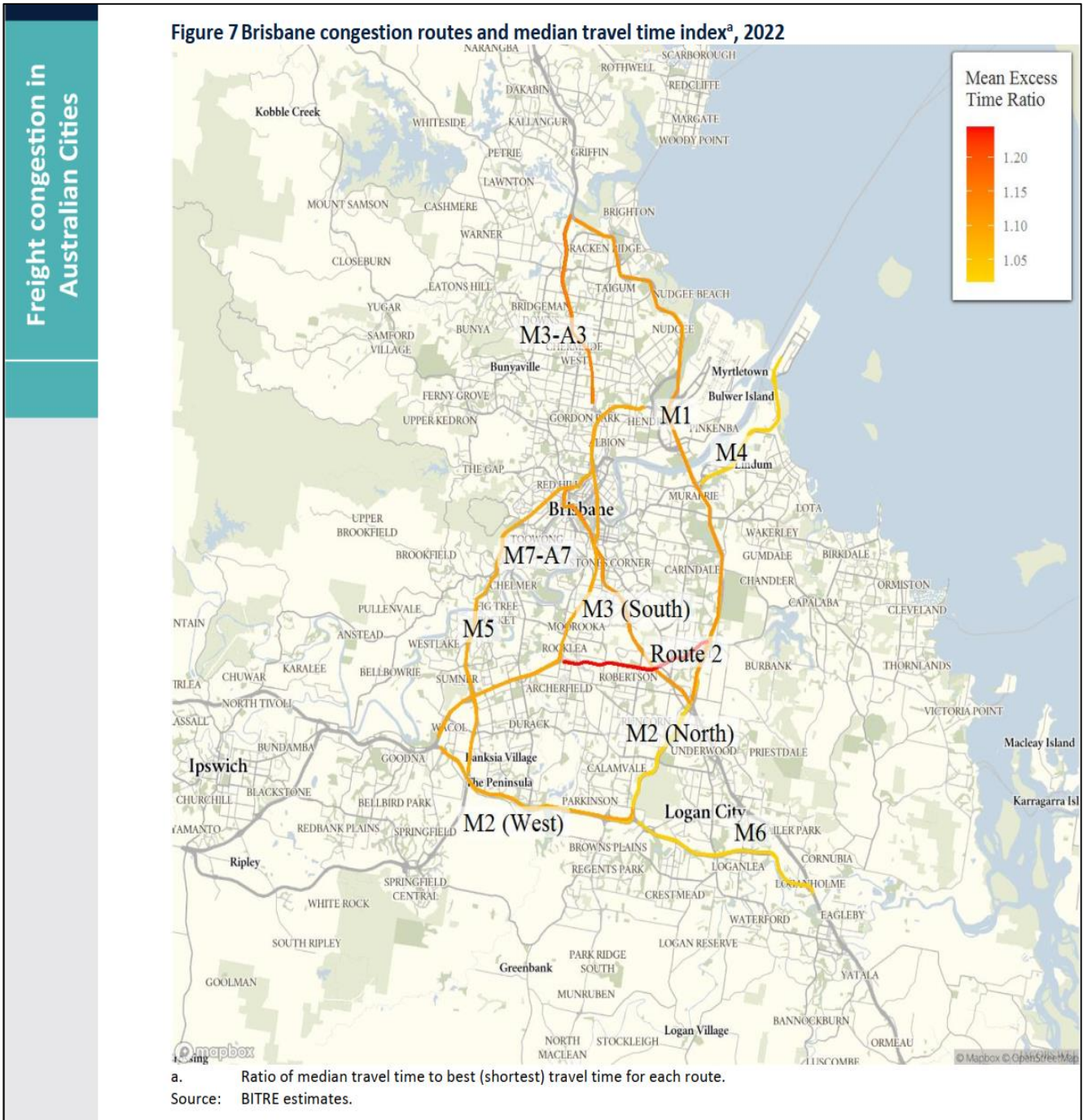


Map A2 - Example of current orbital motorway network congestion and direction - Typical Tuesday 4:45pm peak





**Map A3 – Brisbane congestion routes and median travel time index, BITRE Freight Congestion in Australian Cities, 2022 (if required)**







## APPENDIX B – STRATEGIC PUBLIC TRANSPORT CORRIDORS

**Table B1 – Specific Public Transport Corridors**

Mode	Corridor/Project
Dedicated Busway/Bus Rapid Transit/Light Rail	<ul style="list-style-type: none"> <li>- Northern Busway (grade separated busway to Chermshire from RBWH)</li> <li>- Eastern Busway via Chandler to Redlands</li> <li>- BRT or light rail on Coomera Connector (additional two lanes) north of Helensvale should be investigated and the appropriate mode should be planned and specified into regional plan</li> </ul>
Improved bus priority for Metro Glider services investigations	<ul style="list-style-type: none"> <li>- BUZ routes across Brisbane</li> <li>- Ripley Valley to Ipswich CBD</li> <li>- ANZAC Avenue Kippa Ring to Margate/Marine Parade</li> <li>- Gold Coast east west major routes</li> </ul>
Rail	<ul style="list-style-type: none"> <li>- Faster Rail – Gold Coast to Brisbane</li> <li>- Faster Rail – North Coast to Brisbane, including completing Beerburrum to Nambour (all Stages), Direct Sunshine Coast Line (Beerwah to Maroochydore) and North West Transport Corridor to Brisbane CBD projects</li> <li>- Cleveland Rail Line duplication</li> <li>- Springfield to Ripley (and Ipswich)</li> <li>- Salisbury to Flagstone</li> <li>- Complete Heavy Rail to Coolangatta/Gold Coast Airport/Northern NSW</li> <li>- Complete Gold Coast Light Rail to Coolangatta</li> <li>- Investigate east-west rapid transit options from Broadbeach to Nerang and Broadbeach to Robina,</li> <li>- Investigation of heavy rail passenger services into Southport (from Brisbane, Gold Coast Airport) following Smith Street Motorway</li> <li>- Brisbane Airport Solution</li> </ul>
Priority Level Crossing Upgrades	<ul style="list-style-type: none"> <li>- Boundary Road, Coopers Plains (in progress)</li> <li>- Beams Road, Carseldine (in progress)</li> <li>- Kianawah Road, Lindum (safety upgrades underway – investigate grade separation need)</li> <li>- Cavendish Road, Coorparoo</li> </ul>



	<ul style="list-style-type: none"><li>- Warrigal Road, Nathan Road and Bonemill Road solution (three crossings), Runcorn</li><li>- South Pine Road, Alderley and Strathpine</li><li>- St Vincents Road, Banyo</li><li>- Others on North Coast line if alternative line from Brisbane to Strathpine is not constructed</li></ul>
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