



Image: Photograph of Bruce Highway. Source: Stock image

# Bruce Highway Western Alternative Stage 2

November 2022

## (Moorina to Narangba)

**The Department of Transport and Main Roads (TMR) is planning for a new transport corridor to connect north Brisbane and Beerburrum. The Bruce Highway Western Alternative (BHWA) will be approximately 50 kilometres long and is being planned in four stages. This planning is identifying land that needs to be set aside and protected for the future motorway.**

Significant population growth in Brisbane and the Moreton Bay region is increasing demands on the Bruce Highway and other key arterial roads in the area.

The alignment for Stage 1 between Moodlu and Moorina was confirmed in late 2021 and TMR has since been planning for Stage 2 between Moorina and Narangba.

The Stage 2 corridor runs approximately 16 kilometres between Moorina and Narangba, west of the emerging communities of Pine Valley and Morayfield South and the existing communities of Morayfield, Burpengary and Narangba.

Early planning for Stage 2 between Moorina and Narangba is complete and a preferred alignment and corridor requirements have been identified.

TMR sought feedback from the community about the project and the most viable alignment options for Stage 2, between 29 July 2022 and 9 September 2022. This feedback helped inform the preferred alignment alongside a broad range of technical investigations.

The Australian Government and the Queensland Government are partners in a package of strategic road and rail planning initiatives known as North Brisbane Bruce Highway Western Alternative planning. Both governments have committed \$10 million each towards the initiatives. BHWA is one of these planning activities.

### The project need

South East Queensland (SEQ) is growing rapidly. Since 2001, SEQ's population has grown from 2.4 to 3.5 million people and is expected to reach 5.3 million over the next 20 years. *The South East Queensland Regional Plan 2017* (SEQ Regional Plan) identifies the Moreton Bay region will be home for more than 656,000 people by 2041. This is an increase of 217,700 people over roughly 25 years and 88,300 more dwellings will be needed to accommodate these new residents. The SEQ Regional Plan estimates by 2041 approximately 45 per cent of people living in the Moreton Bay Region and three per cent of people living in the Sunshine Coast will travel to work in the Brisbane City Council Local Government Area each day<sup>#</sup>.

The BHWA, a proposed new route to connect north Brisbane to the Moreton Bay and Sunshine Coast regions, is needed to alleviate congestion and provide for increasing transport demands on the local and state transport network. It will help preserve the Bruce Highway's important role as part of the National Land Transport Network to service long-distance travel and move freight between regional economic hubs on the east coast of Australia.

<sup>#</sup>Source: ShapingSEQ South East Queensland Regional Plan 2017.



### Project benefits



Improves transport network efficiency



Supports public and active transport



Increases transport capacity



Creates a connected transport network for residents and road users



Enables appropriate growth in the region



Supports the movement of freight



Australian Government



Queensland Government

# Bruce Highway Western Alternative

## Planning stages

### Next steps

TMR is prioritising liaising with landowners identified as being directly impacted by the preferred alignment.

Community members are invited to attend information sessions to view project displays, provide feedback on the preferred alignment and meet with the project team. Bookings are available in 45-minute sessions. Visit the project webpage or contact the project team for times and locations.

Protection of the Stage 2 corridor as a future State-controlled road is expected to be finalised by mid-2023.










**Timeframes for more detailed planning, design, and construction of the BHWA are not known at this time and will depend on future funding commitments.**

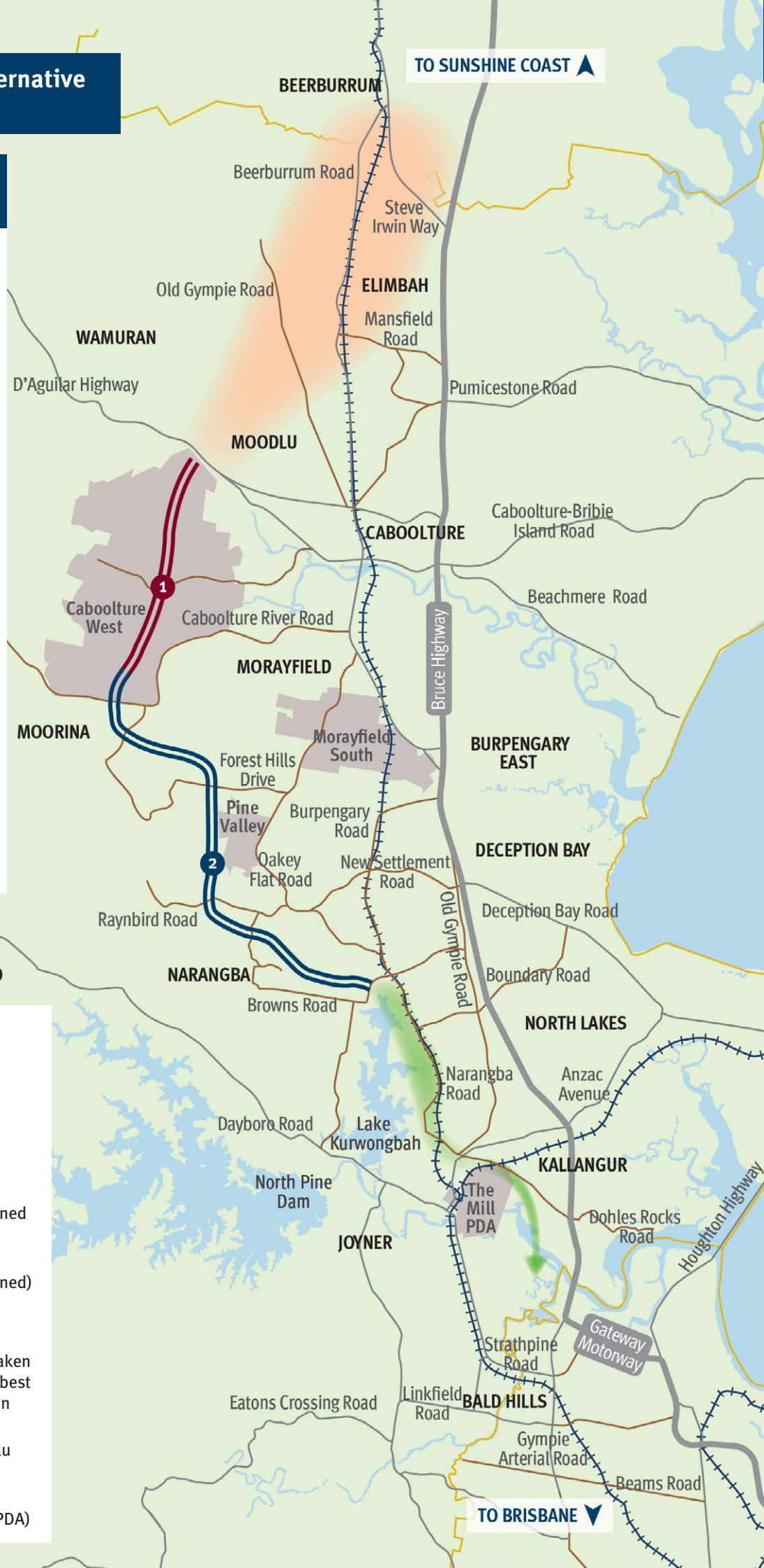
Protecting the land from development for the full length of the BHWA is a priority for the Australian and Queensland governments.

Planning for Stage 3, from Narangba to Bald Hills, will commence in early 2023, followed by Stage 4, from Moodlu to Beerburum.

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### LEGEND

-  State government roads
-  Local government boundary
-  Local government roads
-  Rail
-  Stage 1 Moodlu - Moorina (preferred alignment determined and corridor protected)
-  Stage 2 Moorina - Narangba (preferred alignment determined)
-  Stage 3 will continue south towards Bald Hills. Further investigations will be undertaken to identify how and where to best connect to the road network in the south.
-  Stage 4 Beerburum - Moodlu (indicative study area)
-  Emerging community / Priority development area (PDA)



## Identifying the Stage 2 corridor

Early planning determined two viable alignments from Moorina to Narangba, comprising of Option 1 or 2 in the northern section and Option 3 or 4 in the southern section of the study area. These options were explored and evaluated against a range of criteria, with each option offering a range of opportunities and constraints. Detailed consideration was given to potential property impacts, existing infrastructure, connecting surrounding communities, the environment, and the ease and potential cost of future construction.

The preferred alignment combines refined elements of the options that were presented to the community for consultation from 29 July 2022 and considers feedback received and further technical work. It more closely aligns with Option 2 in the northern section and Option 4 in the southern section.

## The Stage 2 preferred alignment

The preferred alignment continues south from the Caboolture River towards Narangba. It allows for future connections with Forest Hills Drive and Raynbird Road, providing accessibility to the existing communities of Morayfield, Burpengary, and Narangba as well as the emerging communities of Pine Valley and Morayfield South.

Another connection is planned north of Caboolture River Road which lies within the Caboolture West Structure Plan area. The exact location of this connection and how best to integrate with the surrounding local road network is yet to be finalised. TMR is working with the Department of State Development, Infrastructure, Local Government and Planning's Growth Areas Team (GAT) and Moreton Bay Regional Council (MBRC) to finalise details for this connection as part of the current structure planning of Caboolture West.

The preferred alignment:

- allows construction of dedicated fauna passage infrastructure and mitigation measures to minimise impact on environmentally sensitive areas
- provides better crossing locations of significant waterways in the area minimising the impact on fish passage and simplified bridge construction
- maintains connectivity of local roads the corridor crosses by using over and underpasses
- reinstates private property access by reconfiguring or providing new local roads where necessary
- provides connections to the local road network via future interchanges with Forest Hills Drive and Raynbird Road
- lessens the road footprint by following more suitable terrain, reducing the amount of earthworks and number of structures
- reduces traffic on the Bruce Highway, preserving its function to service long-distance travel and move freight
- reduces travel time and increases travel reliability on the surrounding road network
- reduces impact to private property by using some land that is already owned by the Queensland Government.



## Investigation into an alignment west of Lake Kurwongbah

TMR received some community feedback to move the alignment west of Lake Kurwongbah to provide a corridor to Dayboro Road. After further investigation, this was confirmed as unviable as it did not meet the needs of the growing population. In addition, a route that connects to Dayboro Road:

- increases travel time for those wanting to travel between north Brisbane and areas in Moreton Bay and further north, resulting in larger volumes of traffic retained on local roads and the Bruce Highway
- increases traffic on existing roads including Oakey Flat Road, Narangba Road, Anzac Avenue, Dohles Rocks Road, Gympie Road, Dayboro Road and Youngs Crossing Road and networks to the south. This would require more network upgrades, resulting in more extensive community impact and land acquisition
- causes more impacts for larger areas of undisturbed koala habitat and sensitive areas
- has a much larger road footprint and overall construction cost as the terrain is very challenging for construction of the future motorway.

In addition, strategic transport modelling confirmed that the BHWA corridor needs to connect into the north Brisbane network near Bald Hills to meet future transport needs of the region. This means that a connection west of Lake Kurwongbah would need to extend beyond Dayboro Road. Overall, this would result in more extensive impacts on existing communities including Joyner, Brendale, Warner and Bray Park.

## Future land requirements

The Queensland Government's responsibility to provide a better and safer transport network sometimes means that privately owned land may be acquired for transport infrastructure purposes.

Property resumptions are a sensitive but necessary part of building new infrastructure. TMR approaches each case with compassion. While resumptions for the BHWA are likely to be many years away, to provide certainty, TMR has advised directly impacted landowners of future land requirements. TMR is meeting with these landowners to explain the impacts and consider their feedback. TMR is committed to reducing impacts to surrounding properties as much as possible.

## Private property access to the local road network

The BHWA is planned to be a motorway standard road. To ensure the safety for road users on the motorway there will be no driveway access from private properties meaning in some areas existing local roads will be reconfigured. The corridor has been widened to allow this where necessary. Property access arrangements will be discussed with directly impacted landowners and key stakeholders as planning progresses.

## Determining the preferred alignment

The process to determine a refined preferred alignment for Stage 2 of the BHWA considered significant community feedback and technical investigations. Key technical considerations and findings are outlined below.

### Engineering considerations

The preferred alignment meets complex engineering and design standards for a motorway. Design factors considered include curves, maximum grades that can be allowed, the number and width of traffic lanes, provision for active transport and slopes for batters. While the alignment passes through sections with challenging topography it has been refined to reduce property impacts and integrate better with the landscape by following more suitable terrain. This has significantly reduced the future road footprint resulting in less earthworks and better bridge crossing locations with simplified bridge designs. Engineering planning has carefully considered issues of major concern including core koala habitat and other environmental constraints, and local geotechnical issues and risks. More detailed engineering, environmental and geotechnical investigations will be undertaken in future phases of planning.

### Flooding

The Stage 2 study area contains waterways and significant areas prone to flooding. Hydraulic assessments based on current flood modelling outputs identified key flood risks and opportunities which have informed the planning and refinement of the corridor alignment. This work highlighted key waterways (such as Burpengary Creek) that need to be crossed as straight as possible to minimise risk of scouring to reduce impacts on the environment and water quality. It has also been used to determine future bridge lengths and levels to achieve the desired 1 in 100 year flood immunity, the location of major culverts, and land required for their construction.

### Transport and traffic performance

Strategic transport modelling and analysis completed indicates that the BHWA, when connected between Steve Irwin Way and north Brisbane, could reduce traffic on the Bruce Highway by up to 20 per cent. A further benefit is that the safety and operation of other major roads nearer to the corridor, such as Caboolture River Road, Oakey Flat Road, New Settlement Road and Narangba Road will also improve.

Modelling confirms that even with upgrades already underway on the Bruce Highway and further significant planned upgrades announced by the Australian Government and Queensland Government, a new alternative transport route west of the Bruce Highway will eventually be needed to improve network resilience and improve travel time reliability. Without the BHWA, unacceptable levels of congestion will occur on the Bruce Highway and surrounding road networks impacting on the movement of goods and services.

This work also informed the preferred alignment and future interchange locations and their connections to the local road network in Stage 2. How to best meet the transport performance needs of the growing region while considering community feedback and meeting other engineering, social and environmental requirements was a key consideration.

More detailed transport and traffic modelling to further quantify the benefits to the Bruce Highway, the local road network and associated community benefits will be undertaken in future phases of planning.

### Interchange locations

A key consideration when planning the location for future interchanges on the BHWA has been to ensure there is enough distance between each interchange to meet motorway design standards that provide safe and efficient operating conditions for all road users. This has been balanced with the need to provide sufficient connections with existing or planned higher order local roads so residents and other road users can conveniently access the future motorway safely.

Interchange locations investigated included areas near Caboolture River Road, Forest Hills Drive, Jacko Place, Raynbird Road, and Oakey Flat Road near Duncombe Road and near McCullagh Crescent. Modelling confirmed that three future connections will be required to meet future longer term needs of the region. The locations selected are to the north of Caboolture River Road, Forest Hills Drive and an interchange with connections to Raynbird Road. TMR will continue to work with MBRC, directly impacted landowners and other key stakeholders to refine the local road approaches at these future interchanges in order to minimise the need for new local roads and minimise property and other related impacts.

The future interchange north of Caboolture River Road is within the Caboolture West Structure Plan area. TMR is working with GAT, MBRC, directly impacted landowners, and other key stakeholders to finalise details for this connection to ensure it integrates with the current structure planning for Caboolture West.

Investigations and consultation to determine the best way to connect the future corridor near Narangba Road, Oakey Flat Road and Boundary Road will continue as part of Stage 3 planning commencing early 2023.

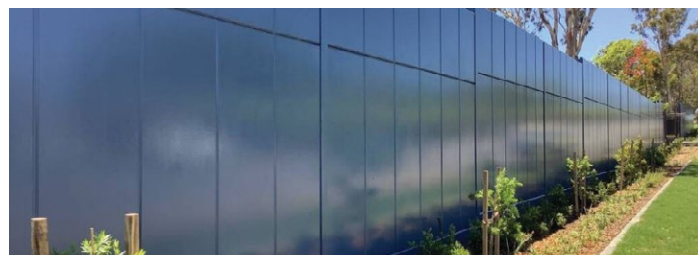


Image: Example of noise barrier treatment. Source: TMR

### Noise and visual amenity

The preferred alignment avoids existing more densely populated urban areas south of Raynbird Road. TMR will manage road traffic noise in accordance with the *Transport Noise Management: Code of Practice*. Detailed road traffic noise assessments will be undertaken as part of future planning phases. These will consider the existing acoustic environment and identify treatments which may be required to reduce road traffic noise. Treatments can include use of quieter road surfaces, noise barriers and/or earth mounds. In some instances, in-house or building treatments may be required.

In future planning and design phases, landscaping will be considered. TMR will plant native species around the project to reduce the visual impact and improve the driving experience. Investigations considered areas identified by the SEQ Regional Plan as Regionally Significant Scenic Amenity, with the preferred alignment avoiding these areas.

### Water quality

Part of the Stage 2 corridor is located in the Lake Kurwongbah catchment which is used for water storage. Allowance for treatment of road run-off including sediment and erosion control, primarily through the provision of sediment basins, has been incorporated in this early planning. These basins hold water for a period allowing sediment to settle to the bottom, so that cleaner water enters local creeks and waterways. Managing water run-off during and after construction will be considered in detail in future planning phases. TMR will continue to work with Seqwater to ensure water quality requirements are met.

### Social, environmental and cultural heritage

Investigations have resulted in less future earthworks, reducing the overall width of the corridor and impacts on areas of environmental and possible cultural heritage significance. In addition, sections of the preferred alignment use existing Queensland Government owned land to reduce the overall land impact to private properties.

Identified areas of environmental and cultural heritage value were assessed when selecting the preferred alignment and future interchange locations. These include waterways that are significant for fish passage, koala habitat, biodiversity, remnant vegetation, fauna passage and known cultural heritage sites. The preferred alignment reduces impacts to each of these and provides space in the corridor footprint to build infrastructure such as fauna fencing and fauna crossings, to reduce fragmentation of environmental areas.

As planning progresses, TMR will continue to engage with the community and Traditional Owner groups, to gather feedback and plan future mitigation measures on areas of environmental and cultural significance. The project will comply with all requirements under State Government and Federal Government legislation.



Image: Fauna underpass at Skyring Creek, Bruce Highway  
- Cooroy to Curra Section A. Source: TMR



### What will the future road look like?

The future BHWA will ultimately need to allow four lanes, two in each direction, with a wide centre median. Access to the future motorway will only be permitted at key locations where future grade-separated interchanges will be provided. Provision is made for off-road active transport and there is flexibility for public transport if needed.

A typical motorway corridor in flat to rolling terrain is about 90 to 110 metres wide, but more width is required for major cuttings and embankments and at future interchange locations. In isolated sections of the alignment where the terrain is more challenging and there is a need to maintain local road connections the width could be in the order of 160 to 200 metres.



### When will construction start?

TMR manages infrastructure projects in line with a framework that has three broad phases. The first phase is planning, followed by design and construction. Within each phase there can be multiple stages and each includes consultation with impacted landowners, key stakeholders, and the community. It can take many years to complete this process for large and complex projects like the BHWA.

The BHWA is a long-term planning project and although TMR has commenced early planning, timeframes for more detailed planning, design, and construction are not known at this time and will depend on government priorities and future funding commitments.

**Bruce Highway Western Alternative Stage 2**  
Moorina to Narangba preferred alignment

Future connection to local network south of Caboolture River to be identified as part of Caboolture West planning

Future Caboolture River Road overpass

Future Moorina Road overpass

Future Raynbird Road overpass

Future Browns Creek Road overpass

Interchange with connections to Raynbird Road



Future Forest Hills Drive underpass

Stage 3 will continue south towards Bald Hills. Further investigations will be undertaken to identify how and where to best connect to the road network in the south.

**Legend**

- Stage 1 Moodlu - Moorina (preferred alignment determined and corridor protected)
- Stage 2 Moorina - Narangba (preferred alignment determined)
- Stage 3 Narangba - Bald Hills (indicative study area)
- State government roads
- Local government roads
- Government owned land
- Emerging community
- Rail
- Power easements
- 1 in 100 year flood area
- BHWA movements
- Local road movements

Scan here for interactive map

## Community feedback

TMR thanks the community for their interest and feedback on the project. All feedback has been considered and has helped to inform the preferred alignment for Stage 2.

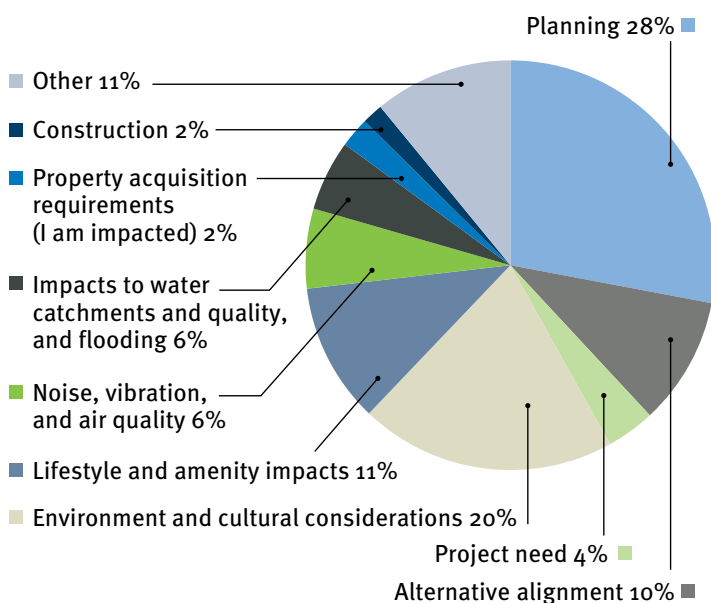
During the six-week consultation period from 29 July 2022 to 9 September 2022, more than 1000 pieces of feedback were received. The online consultation page attracted over 18,500 unique visitors, with almost 300 visitors completing an online survey and over 550 leaving comment on the interactive map. Almost 500 people attended community information sessions at Upper Caboolture, Burpengary, and Narangba, which aimed to raise awareness of the project and gather community comments.

Themes raised during community consultation included:

- the future corridor location and need
- the future location for connections to the existing local road network
- land, property, lifestyle, and amenity impacts
- environmental and cultural considerations
- planning considerations including population growth, existing and future land-use, traffic congestion, public and active transport.

A high level overview of feedback themes raised online is presented below.

### Themes raised during online consultation.



## Stakeholder engagement

TMR will continue to engage with the community as the project progresses through future planning stages. Other key stakeholders will also remain engaged throughout this project, these include:

- state, federal and local elected representatives
- Moreton Bay Regional Council (Mayor, councillors and technical officers)
- Traditional Owners
- directly impacted landowners
- Department of State Development, Infrastructure, Local Government and Planning's Growth Areas Team and other relevant state government agencies including the Department of Education, and the Department of Environment and Science
- electricity transmission asset owners (Powerlink and Energex)
- Unitywater
- Seqwater.

### Find out more

Provide feedback and register to stay up to date on planning and future community engagement activities on TMR's online consultation page.



Scan to find out more

### Contact us

The project team is available to answer questions and record your feedback.

-  **Call:** 1800 955 799\* (8.30am – 5.00pm, Monday to Friday)
-  **Email:** [NCR\\_Planning\\_Comms@tmr.qld.gov.au](mailto:NCR_Planning_Comms@tmr.qld.gov.au)
-  **Post:** North Brisbane Bruce Highway  
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