



Frequently Asked Questions

Strategic options process - Moruya bypass

June 2021

This FAQ document provides an overview of the strategic options process and how the preferred strategic corridor option was selected. Visit the [Moruya bypass – general FAQ document – May 2021](#) for more information on the project.

About the Moruya bypass

The Princes Highway helps drive the state's third largest regional economy, is relied upon by over 500,000 locals and welcomes almost four million tourists each year.

It connects regional centres and essential services and is the main transport corridor for freight to the region.

Transport for NSW has developed a strategic roadmap for the Princes Highway to deliver a vision for the Princes Highway as a safe, reliable, efficient and connected network.

This roadmap has identified a Moruya bypass as a short term priority project.

A bypass would provide safer and more reliable journeys in and around Moruya. It would unlock opportunities for other modes of transport and improve the feel of Moruya town centre for locals, pedestrians and businesses. It would contribute to the liveability of the town.

What is happening on the project?

In March 2019, the Australian and NSW Governments committed \$1.9 billion towards upgrading the Princes Highway between Nowra and the Victorian border.

Planning for the Moruya bypass has been identified as a short term priority within the Princes Highway strategic roadmap. The roadmap is a 20 year plan to deliver a safe, reliable, efficient and connected transport network.

A range of bypass corridors were suggested by the community during earlier consultations in early 2020. Transport undertook an extensive planning and development process, including holding a series workshops. The purpose and outcomes of this development process can be viewed throughout this FAQ document.

How was the preferred strategic corridor selected?

We identified the preferred strategic corridor using the following process:

- **Define the objectives and need for the project -**

This included an overview of the project objectives, service need, network problems, definition of transport customer and strategic alignment for the project. This included the identification of project specific goals and objectives to measure potential options against (refer Section 2.3 of the Strategic Corridor Options Report (SCOR))

- **Identify key constraints for the project -**

This included an assessment of key constraints and design requirements considered in the development of preliminary corridor options (refer Section 3 of the SCOR)

- **Community feedback and stakeholder involvement -**

This included consultation with the wider community in March 2020 and targeted involvement with key stakeholder groups including Health Infrastructure, Eurobodalla Shire Council, local business chamber and other government agencies. The consultation aimed to get a better understanding of current and future transport use and future planning and land use, (refer Section 4 of the SCOR)

- **Assess alternative options -**

This included the development and assessment of overarching strategic alternative options (refer Section 5.2 of the SCOR)

- **Identify a long list of strategic options -**

This included the development and assessment of 11 preliminary corridor options to identify a shortlist of five strategic corridor options. This included a Preliminary Corridor Shortlisting Workshop with key stakeholders on Monday 17 August 2020 (refer Sections 5.3 and 5.4 of the SCOR)

- **Shortlist options -**

This included the development, assessment and further work undertaken on five shortlisted corridors to reach a preferred strategic corridor that, on balance, achieves the goals of the Princes Highway upgrade program roadmap and responds to community inputs.

A number of workshops were carried out to evaluate the five shortlisted strategic bypass corridors. They included:

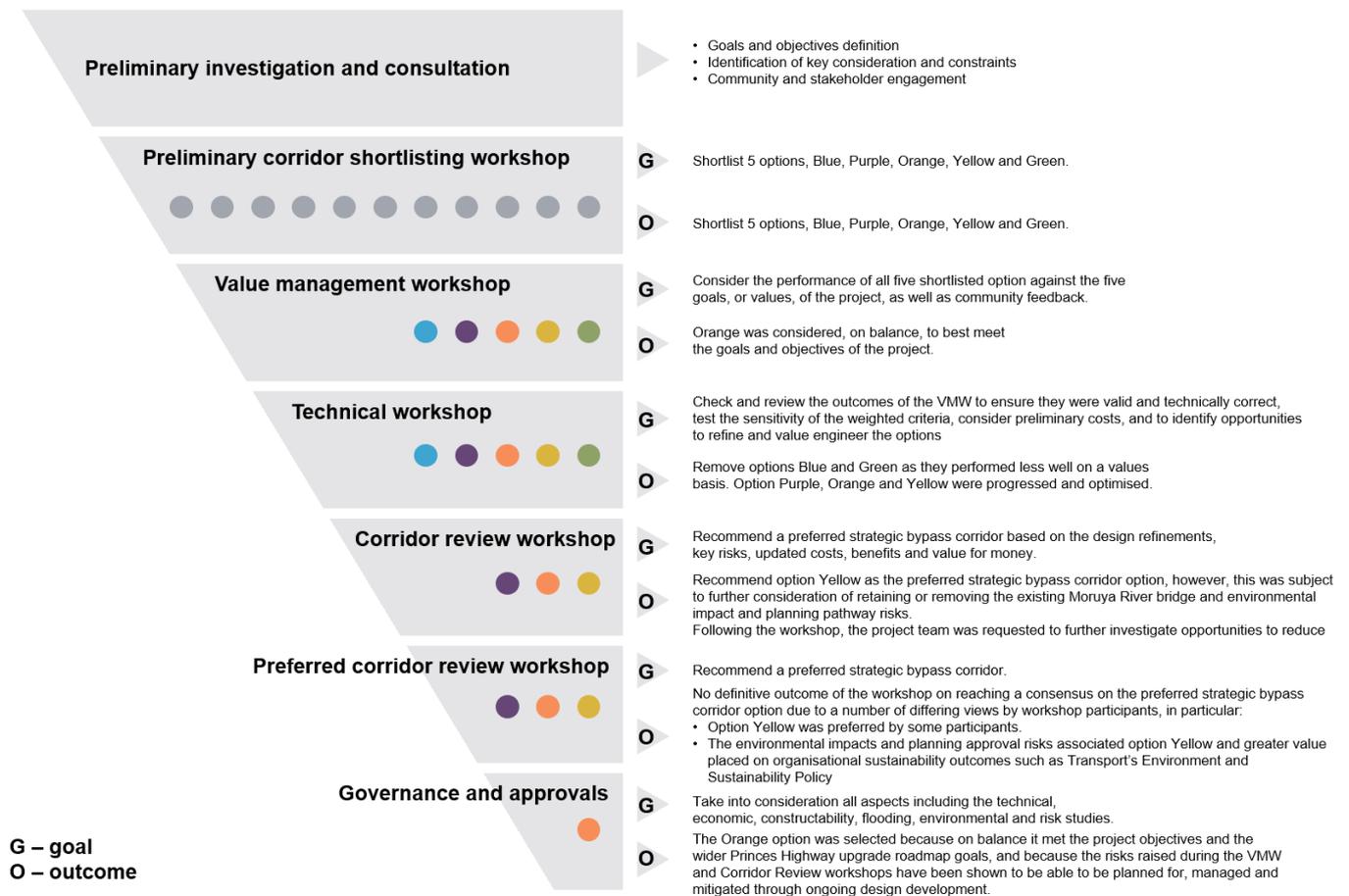
Value management workshop (VMW) – a workshop with external participants to consider the shortlisted options and assess their relative performance against agreed project criteria.

Technical workshop – a workshop involving technical specialists to review the outcomes of the VMW, to ensure they are technically valid and correct and determine options that required further investigation.

Corridor review workshop – a workshop involving technical specialists to consider additional design and value engineering work undertaken on remaining options including Purple, Yellow and Orange and to recommend a preferred strategic bypass corridor that best met the project needs, goals and objectives of the project.

Preferred corridor selection workshop – a workshop involving technical specialists to consider additional design and investigations and confirm the outcomes of the Corridor Review Workshop.

Diagram of the strategic options process



How were the community views considered in the selection process?

The Moruya bypass Community Consultation Report (August 2020) captured the community's feedback from the initial consultation period between 16 March and 13 April 2020. The consultation sought to get an understanding from the wider community and interested stakeholders on how they currently use and want to use the transport network in the future and capture concerns and suggestions relating to the Moruya bypass project.

Transport received 232 comments during this consultation period via phone, email and/or on the interactive map.

A total of 375 unique issues were identified that focussed on the following key topics:

- Location of the proposed bypass including identification of five community suggested bypass corridors, some of which aligned with the five shortlisted bypass corridors.
- Environmental and biodiversity concerns including:
 - Impacts to local flora, fauna and native habitat within the study area
 - Noise, vibration and air quality impacts
 - Impacts to the existing visual amenity and character of Moruya town centre and its surrounds
 - Changes to existing flood behaviour across the floodplain
 - Impacts to Aboriginal and non-Aboriginal heritage within the study area.
- Socio-economic issues including:
 - Both positive and negative impacts to businesses located within Moruya and surrounding towns
 - Potential impacts to community places and green space, including Malabar Creek, Riverside Park and SAGE Gardens
 - Potential impacts to properties adjacent to the bypass, including impacts on existing operations, land value, amenity and noise
 - Potential impacts to agricultural land.
- Traffic and transport issues including current network performance, safety and opportunities for active and public transport
- Integration with the Eurobodalla Health Service
- Timing of consultation activities, particularly given the recent outbreak of COVID-19 and bushfires in Eurobodalla.

The above issues were considered at each stage of the decision-making process, including at key workshops.

What is value management and what role does it play in identifying an option?

Value management is an analytical process commonly used on major infrastructure and investment projects to achieve best value and, where appropriate, value for money outcomes. It is a standardised and repeatable process used to consider and balance differing community and stakeholder needs and expectations and the perceived usefulness, benefits and importance of a product, process, service, system or organisation.

The process is based on the framework for Value Management outlined in Australian Standard AS4183: Value Management (2007).

It is not the primary decision-making tool. Instead, it forms one part of the decision-making process. It is used to consider the following issues when recommending a preferred strategic bypass corridor:

- Community and stakeholder engagement and input
- Value Management Workshop and recommendations
- Technical investigations and workshop recommendations
- Constraints, risks and opportunities
- Estimated cost, economic benefits and value for money
- Princes Highway upgrade program, Transport for NSW and Ministerial governance and assurance processes and approvals.

Who was involved in the value management workshop?

The VMW was held on Monday 21 September 2020 and brought together a range of Transport project team members, technical specialists, stakeholders, and community and business representatives.

Participants included representatives external to Transport from key stakeholders such as Eurobodalla Shire Council, Health Infrastructure NSW, Southern NSW Local Health District, Department of Planning, Industry and Environment (DPIE) and Department of Primary Industries (DPI). The Moruya Business Chamber – Moruya bypass subcommittee also had representation at the workshop. All external participants were required to sign a Confidentiality Deed Poll prior to attending the VMW and pre-workshop briefing session.

Transport team members represented a range of relevant disciplines including road safety, design, bridge engineering, environment, community engagement, Aboriginal engagement, planning, geotechnical engineering, construction, maintenance, work health and safety (WHS), property and management and governance.

In addition to this, representatives from Transport's partnering organisations provided additional technical support and advice in the areas of design and environment (Arup), constructability and HSiD (Ranbury), flooding and hydrology (Rhelm), cost estimating (North Projects) and landscape character and visual amenity (Tract Consultants).

Workshop participants were generally from State and Local Government agencies that are bound by their respective professional Code of Conduct and Ethics. This includes responsibility to report unethical, dishonest and/or corrupt behaviour. A copy of Transport Code of Conduct can be found on our website

<https://www.transport.nsw.gov.au/about-us/who-we-are/culture-and-values>

All external participants, including the Moruya Business Chamber, were required to sign a confidentiality deed prior to participating in the workshop due to the sensitive nature of the information presented.

How was the value management workshop (VMW) undertaken?

The overall purpose of the VMW was to consider the performance of all five shortlisted corridors (Blue, Purple, Orange, Yellow and Green) against the five goals – or 'values' - of the project, as well as community and stakeholder feedback. As part of this, participants reviewed, assessed and evaluated the corridor options against agreed criteria derived from the project's goals and objectives.

Prior to the workshop, the following tasks were undertaken following the Preliminary Corridor Shortlisting Workshop:

- Review of all background data and studies

- Identification of draft assessment criteria based on the agreed goals and objectives of the project
- Inclusion of the shortlisted options and design considerations, including key community, engineering, social and environmental constraints, into an online Geographic Information System (GIS) portal in both 2D and 3D format for information collaboration between Transport and partner organisations
- Optimisation of the strategic design for shortlisted options
- Production of traffic models for the study area, assessment of customer types and needs, documentation of the findings associated with each shortlisted option.
- Production of a TUFLOW flood model for the study area and Moruya River catchment and documentation of the finding associated with each shortlisted option
- Assessment of potential impacts associated with aquatic and terrestrial ecology, Aboriginal and non-Aboriginal heritage, noise, landscape character and visual amenity for each shortlisted option
- Assessment of current and future land use within the study area
- Assessment of potential economic and financial impacts to adjacent properties and their land use, businesses, agricultural land and proximity of the bypass to the town centre
- Assessment and documentation of potential utility conflicts for each strategic option
- Completion of a Health and Safety in Design Workshop and Constructability Workshop to identify key constraints and issues with the shortlisted options
- Safety studies and audits of shortlisted options including a Road Safety Audit and Safe Systems Assessment

Prior to the workshop, participants were:

- Introduced to all participants and understand their area informed of each participants of focus and expertise
- Provided an overview of the Value Management Workshop process.

The VMW was a facilitated forum where participants reviewed, assessed and evaluated the corridor options against agreed criteria derived from the proposal's goals and objectives. At the workshop, participants:

- Learned about the project, the community and service needs, and the roadmap vision and objectives through presentations
- Nominated 'What's important' from their perspectives

- Identified and agreed the assessment criteria to meet the five goals of safety, resilience, liveability, sustainability and accessibility and connectivity
- Agreed on weightings of the assessment criteria within each goal
- Agreed on scoring for each corridor option against the assessment criteria
- Discussed the rankings of each corridor option for each goal
- Discussed the overall ranking of the options from a values perspective.

The VMW workshop provided participants a structured process to consider value, perceived usefulness and benefits of the shortlisted options, and the opportunity for discussion when differing views were encountered. While the values and criteria are scored and ranked, the scores are not amalgamated into an amalgamated score, but provide the basis for discussion about which option(s), on balance, best meet the criteria. Further information on the evaluation is provided in Section 5 of the Strategic Corridor Options Report.

How was the value management workshop criteria selected and prioritised?

Prior to the VMW, the project team developed draft assessment criteria for each of the five goals. At the VMW, there was a much broader range of interests and expertise represented, so the group was asked to review the draft criteria, and as necessary, amend to reflect to consensus of the group.

Following confirmation of the agreed criteria, they were prioritised in terms of relative importance to each other, meaning that some of the criteria were considered to more important than others, and were given a higher weighting to reflect this.

The prioritisations were determined by asking participants to indicate which criterion is the most important. This criteria was given a nominal ranking of '100'. The participants were then asked to rank the other criteria in terms of their relative importance to the most important criteria that scored 100. A criterion that is has high relative importance would be ranked closer to 100, while a criterion that is less important would be ranked further away from 100. Weightings for each criteria are then determined by dividing their respective ranking by the sum of all rankings, expressed as a percentage.

What were the outcomes of the value management workshop?

The workshop participants concluded that:

- On balance, option Orange best met the goals and objectives of the project
- Options Blue and Green not be progressed any further due to their poor performance against the goals and objectives
- While option Orange performed well against the values, it was recognised that all options included significant bridge structures, engineering and environmental risks that should be investigated further prior to making a decision
- Options Purple, Orange and Yellow be recommended to be taken forward for further investigation.

How was the technical workshop undertaken?

An internal technical workshop was held on Thursday 1 October 2020 and brought together a range of Transport subject matter experts and technical specialists from a range of disciplines similar to the VMW.

The purpose of the technical workshop was to check and review the outcomes of the VMW to ensure they were valid and technically correct, test the sensitivity of the weighted criteria, consider preliminary estimated costs, and to identify opportunities to refine and value engineer the options.

The technical workshop reviewed the VMW outcomes and this resulted in the following changes to the scoring undertaken at the VMW:

- Safety Criterion 2 – Health and Safety in Design
 - All options had their score increased while maintaining the relative rankings due to it being agreed that all options could be built safely.
- Option Purple
 - Sustainability Criterion 5 – was originally considered to have negative impacts due to its proximity to Riverside Park and to town. The score was improved because of the economic benefits of having a bypass closer to town, both during construction and operation.
- Option Orange
 - Liveability Criterion 1 – score reduced by 0.5 due to its potential impacts to existing river users.

- Option Yellow
 - Liveability Criterion 1 – was originally considered by the VMW participants to be too remote from the town and industrial area to provide good amenity. Score was improved as it would significantly reduce traffic, would not divide the town and would provide opportunities for place making similar to option Orange.
 - Liveability Criterion 2 – score improved as it was seen to provide flexibility in modal shift opportunity and would remove more traffic from the town, improving active transport opportunities within the town.
 - Sustainability Criterion 5 – was originally considered to have impacts due to distance from town but its score was improved due to having less impact on existing river users.

The adjusted scores were considered when determining the rankings of each option against each of the project's goals.

A range of sensitivity tests were undertaken and led to the following results:

- Options Blue and Green performed less well on a values basis and were unable to outperform other options
- If the performance of Purple and Yellow could be optimised they would potentially score closer to option Orange in terms of values
- The sensitivity testing did not identify a corridor option that was clearly best performing in terms of values.

Based on the results of the shortlisting, the workshop participants agreed by consensus to shortlist options Purple, Orange and Yellow for further development and to not progress options Blue and Green any further.

The workshop participants then undertook a value management session to identify opportunities to improve the options performance against the criteria used at the VMW. Risks and opportunities that required further review prior to a decision being made were also identified by the participants.

How was the corridor review workshop undertaken?

An internal technical workshop brought together a range of Transport subject matter experts and technical specialists from a range of disciplines similar to the VMW.

The purpose of the corridor review workshop was to recommend a preferred strategic bypass corridor. At the workshop, participants:

- Shared their perspectives as subject matter experts
- Reviewed the outcomes of the VMW and technical workshops including design refinements to achieve the value engineering opportunities identified in the technical workshop
- Learned about the work undertaken after the VMW and technical workshops and reviewed options Purple, Orange and Yellow for construction, flooding, design, environmental and approval risks and opportunities
- Considered updated costs, benefits and value for money
- Made a recommendation on the preferred strategic bypass corridor.

A risk review was conducted using the swing weighting method to assess which option ranked best in terms of having the lowest residual risk for each risk category. The review concluded the following for each risk category:

- Construction and Flooding:
 - Option Yellow was considered to have the lowest residual risk due to its shorter floodplain crossing and distance from town, which reduced the risk of flooding impacts to the town
 - Option Purple and Orange were considered to have the highest residual risk due to their proximity to town, longer floodplain crossing and potential pier configurations.
- Design risk:
 - Option Yellow was considered have to the lowest residual design risk, with Orange and Purple following in that order.
- Environmental approvals:
 - Options Purple and Orange were considered to have the lowest residual risk as require the same planning approval.
 - Option Yellow had the highest risk due to the likelihood of requiring an Environmental Impact Statement rather than a Review of Environmental Impacts for its planning approval.

A value for money assessment was then undertaken in order to recommend a preferred strategic bypass corridor and considered the outcomes of previous workshops, updated project cost estimates, preliminary economic benefits and outcomes of the earlier risk review.

The value for money assessment identified:

- On balance, the Yellow option would provide value for money subject to:
 - Further consideration of retaining or removing the existing Moruya River bridge
 - Consideration of environmental and planning pathway risks
 - The governance and approval process.

Following the corridor review workshop, the project team was requested by the Princes Highway upgrade program Steering Committee to further investigate:

- Opportunities to reduce cost
- Additional design options including lower immunity, do minimum and low cost bypass options.
- Flooding, traffic performance and economic benefits to provide more certainty around high residual risks.

How was the preferred corridor review workshop undertaken?

A workshop was held on Friday 5 February 2021 and brought together a range of Transport subject matter experts and technical specialists from a range of disciplines similar to the VMW.

The purpose of the corridor review workshop was again to recommend a preferred strategic bypass corridor. At the workshop, participants:

- Reviewed the work completed to date including the outcomes of all previous workshops
- Learned about the work undertaken after the corridor review workshop including the development of lower cost options and technical investigations.
- Reviewed and assessed the performance of the shortlisted and low cost bypass options against

In general, the lower cost options consisted of reducing the flood immunity of options Purple and Orange, noting there was limited opportunity to lower the flood immunity of option Yellow due to the height of the bridge north of the river.

Other low cost options included:

- Option Pink: a shorter version of option Purple, leaving the existing Princes Highway south of Larrys Mountain Road
- Option Grey- a short bypass option which left the Princes Highway south of Larrys Mountain Road, crossing the river in line with the John Street road corridor before connecting with the Princes Highway north of South Head Road
- Do minimum 0 – minor intersection treatment to address efficiency issues at North Head Drive and Princes Highway intersection
- Do minimum 1 – minor intersection upgrades along the Princes Highway to improve traffic efficiency within Moruya town centre
- Do minimum 2 – an internal town bypass to connecting Shore Street, Church Street and John Street from the existing bridge to the Princes Highway north of South Head Road.

The workshop was not definitive on reaching a consensus on the preferred strategic bypass corridor option it due to a number of differing views by workshop participants, in particular:

- Option Yellow was preferred by some participants due to its cost.
- The environmental impacts and planning approval risks associated option Yellow and greater value placed on organisational sustainability outcomes such as Transport' s Environment and Sustainability Policy
- Some participants preferred option Orange because of its performance against the project's resilience, liveability and sustainability values at the VMW and previous workshops
- The potential opportunities to stage a hybrid of options Pink and Purple meant it was preferred by some participants.

Following the preferred corridor review workshop, the outcomes of all workshops and technical investigation were presented to the relevant Princes Highway upgrade program and Transport for NSW governance committees.

What is the governance and approval process?

A number of inputs were considered in the decision-making process for the preferred strategic bypass corridor, including a number of value management and technical workshops.

No one part of the process is the primary decision-making tool. All stages of the process are considered in determining which option, on balance, provides the best outcome in terms of value and value for money. The role of the Princes Highway upgrade program and Transport for NSW approval process is to consider:

- Community and stakeholder engagement input
- Value Management Workshop and recommendations
- Technical investigations and workshop recommendations
- Constraints, risks and opportunities
- Estimated costs, economic benefits and value for money.

Transport's approvals carefully took into consideration all aspects including the technical, economic, constructability, flooding, environmental and risk studies.

The Orange option was selected because on balance it met the project objectives and the wider Princes Highway upgrade roadmap goals, and because the risks raised during the VMW and Corridor Review workshops have been shown to be able to be planned for, managed and mitigated through ongoing design development.