Batemans Bay Bridge replacement

Environmental assessment overview November 2017

NSW GOVERNMENT

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Environmental assessments documents on display

Roads and Maritime Services has carried out two separate environmental assessments on the proposed Batemans Bay Bridge replacement to determine the potential environmental and social impacts of the project.

Review of Environmental Factors

A review of environmental factors (REF) has been prepared to assess the potential environmental impacts of the proposed project and identify ways to manage and mitigate these impacts.

This overview outlines some of the key issues.

- Traffic and transport
- Socio-economic
- Noise
- Flooding
- Water quality
- Biodiversity.

All submissions must be received by Roads and Maritime Services by **Friday 8 December 2017**.

Please go to page 18 of this document for more information on how to have your say on the REF and EIS.

Environmental Impact Statement

An environmental impact statement (EIS) has been prepared to assess the potential environmental impacts of the project specifically on the coastal wetlands just south of the Clyde River.

Please visit **www.rms.gov.au/batemansbaybridge** to view these documents in full.

All submissions must be received by Eurobodalla Shire Council by **Friday 8 December 2017**.

Batemans Bay Bridge

Overview

The Princes Highway at Batemans Bay is the main coastal transport corridor linking Sydney and Canberra with the NSW south coast and eastern Victoria. The Princes Highway at Batemans Bay is an important freight, commuter bus and tourist route for the south coast.

Commercial, industrial and residential areas are located on the southern side of the Clyde River extending to the south-east towards the coast. Tidal wetlands and mangroves have limited development to the south-west. Areas north of the river include residential development and holiday accommodation.

The existing Batemans Bay Bridge was built in 1956 to replace a ferry and includes a lift span. The current vertical clearance for marine traffic is 3.6 metres when the lift span is not raised and can be increased to a maximum clearance of about 23 metres when the lift span is raised. The lift span is used by the local tourist ferry, commercial vessels, yachts, motor cruisers and for bridge maintenance.

Issues with the existing bridge include an annual maintenance cost of up to $1 million, no access for larger heavy vehicles due to weight and height restrictions, lack of reliable access across the river, and a lack of uninterrupted access upstream for taller boats. The lift span and nearby intersections cause long traffic queues during peak holiday periods. These issues are occasionally made worse with the lift span's operational issues.

Scope

Roads and Maritime is replacing the bridge over the Clyde River at Batemans Bay. Replacing the bridge will improve reliability and connectivity to Batemans Bay and surrounding areas, improve traffic flow and reduce delays during peak holiday and weekend periods for local and through traffic. It will also provide improved freight access along the Princes Highway by enabling larger heavy vehicles across the river.

In June 2017, Roads and Maritime brought together project team members, technical specialists, key stakeholders and community members to participate in a Value Management Workshop to assess a shortlist of three options for a new Batemans Bay Bridge. This included central, east and west options to replace the existing bridge.

The recommendation from the workshop was to proceed with a new bridge to the west of the current bridge, as this option met the long term essential requirements for a new river crossing. Access to the new bridge would be via an improved Princes and Kings Highway intersection to the north of the river and via a realigned approach between Princes Highway and North Street to the south of the river. The project would change the Princes Highway intersections with Wharf Road, just north of the bridge and Clyde Street, just south of the bridge. Access to Wharf Road would be via the Princes Highway using a left slip lane heading south. Wharf Road would also be accessible via Old Punt Road and Peninsula Drive. Access to Clyde Street would be via North Street, with an underpass provided under the new bridge.

Roads and Maritime will continue to work closely with property owners affected by the project.

Batemans Bay Bridge replacement overview

What we've done so far

Roads and Maritime asked for community feedback on the preferred option between **Friday 4 August** and **Friday 1 September 2017**.

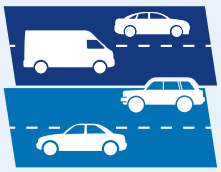
The following consultation activities were carried out:

- three drop in sessions were held between Batemans Bay Community Centre and Village Centre
- the Preferred Option Survey was placed on Roads and Maritime's website and completed by 253 community members
- stakeholder meetings were held with river users, local council, businesses and transport operators
- project information was delivered to all residential properties in the north Eurobodalla area and displayed at advertised locations, in local newspapers, on Facebook and on the Roads and Maritime website.

Key benefits

Improve connectivity
(providing uninterrupted access across the river)

Economic and social benefits
(by removing the lift span and increasing the load limit)



Reduce traffic delays
(especially at the Kings and Princes Highway intersection)

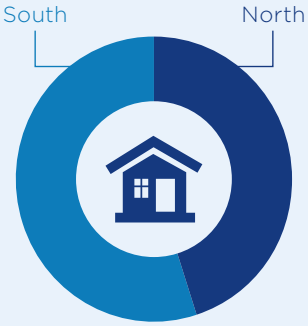
Improve freight access
(by enabling larger trucks across the bridge)

What you've told us

Roads and Maritime received feedback from 253 community members via the Preferred Option Survey.

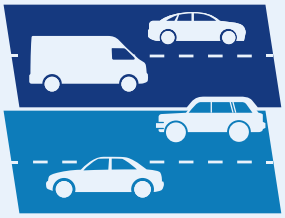
More than eight in 10 participants agreed that design quality, an improved Princes and Kings Highway intersection and an improved foreshore space are important issues.

74% believe a new four lane bridge to the west will have a good impact on their daily commute



45% live north of the bridge

90% agree that it is important for the town that the new bridge looks good and has a strong focus on design



83% agree that traffic delays caused by the Princes and Kings Highway intersection must be addressed

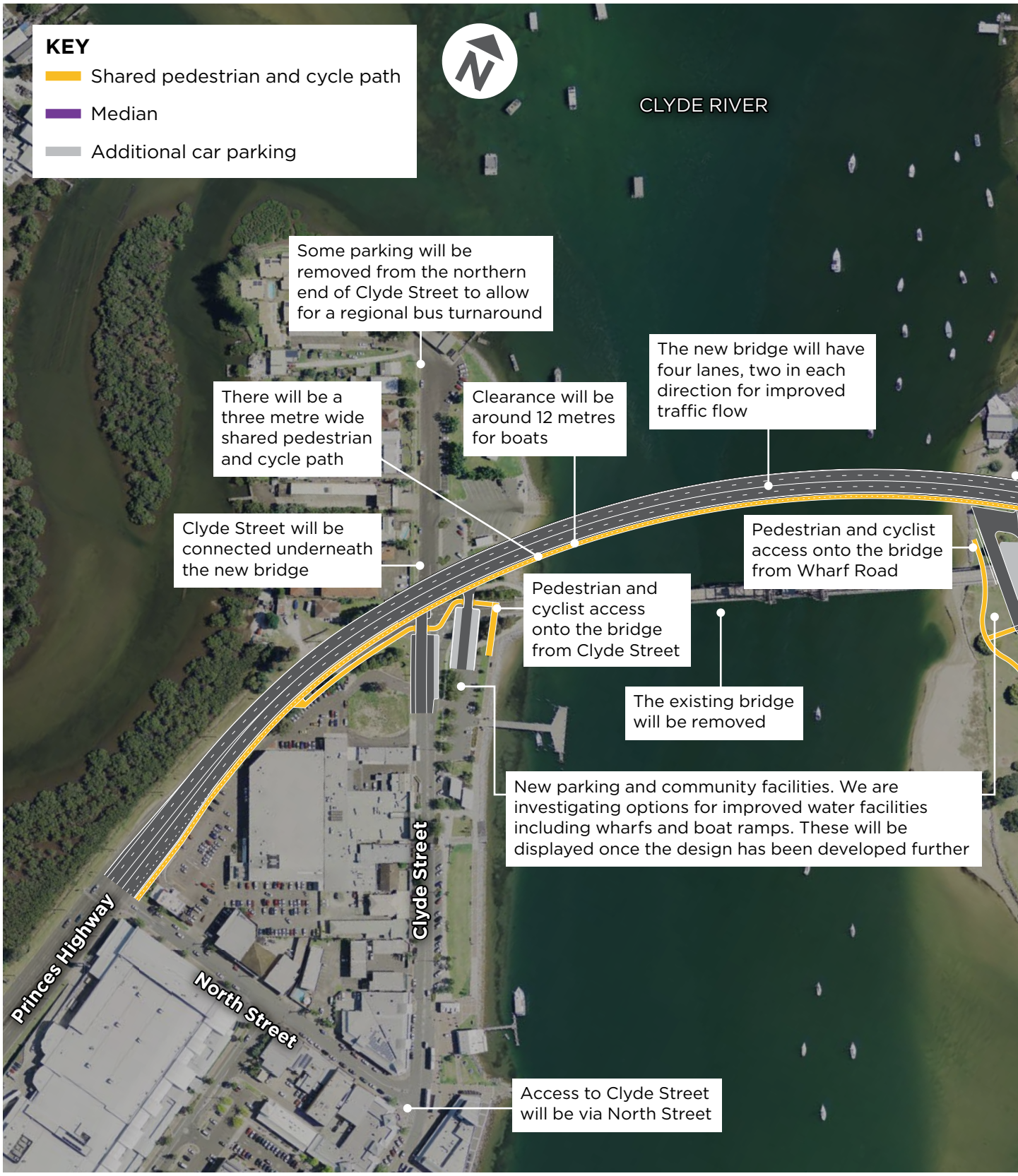
86% agree it is important that the river foreshore is improved as part of this project

67% agree it is important that taller boats can travel upstream under the bridge at all times

63% agree the existing bridge should be tributed once it is removed

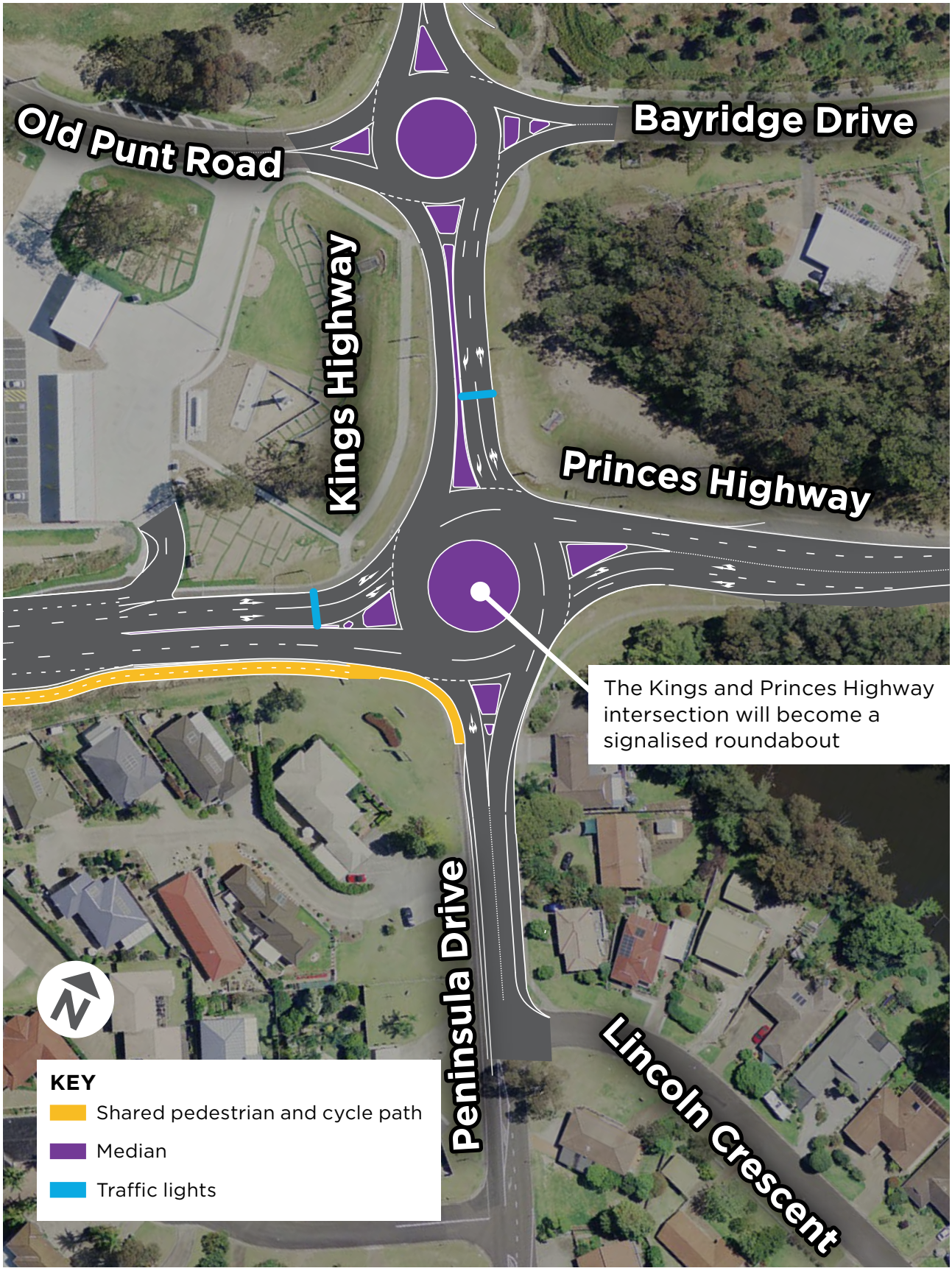
Batemans Bay Bridge replacement key features

Design features




Kings Highway
Old Punt Road
Bayridge Drive
Princes Highway
Lincoln Crescent
Peninsula Drive
Wharf Road
Wharf Road and Old Punt Road will be connected underneath the new bridge
There will be no changes to the service station access
There will be an additional right turn lane from the Kings Highway onto the new bridge
The Kings and Princes Highway intersection will become a signalised roundabout
A slip lane will be added to provide southbound access to Wharf Road
Vehicle access to the new bridge from Wharf Road will be via Old Punt Road or Peninsula Drive

Princes Highway/ Kings Highway intersection



Batemans Bay Bridge replacement key features

Construction

The new bridge would take around two years to build and construction is expected to start in 2019. The existing bridge would be removed once the new bridge is open to traffic. Removal of the existing bridge would take around one year to complete and would start in 2021.

The successful contractor would develop construction and traffic management plans to deliver the project with minimal impacts on residents, businesses, motorists, river users and the environment.

Construction hours

Standard construction hours in NSW are:

- 7am to 6pm Monday to Friday
- 8am to 1pm Saturday
- Sundays and public holidays: no work.

Out of hours work

Out of hours work, such as night work, would be required where construction activities would otherwise severely impact traffic flow or stakeholders. For example, work interrupting the operation of the Princes Highway.

For out of hours work, we would consult with local residents and stakeholders prior to the start of out of hours work.

Information for local residents

The majority of construction would occur in the project area. This would minimise impacts to access on the local road network.

The project would minimise impacts on residents, businesses, motorists, river users and the environment. Any potential impacts will be communicated to the community in advance.

Temporary detours and construction traffic management measures would be used to ensure the safety of motorists, pedestrians, cyclists and workers. The project would not result in any long term road closures.

During construction, the Princes Highway and local roads such as Wharf Road and Clyde Street would remain open, however lane closures may be required. When lane closures are required, the community would be notified in advance. A small section of Old Punt Road, including the car park and boat ramp located at the end of Old Punt Road would be closed during construction and would become part of the construction area for the new bridge.

Information for motorists and boat users

Motorists would experience temporary traffic changes and would be asked to pay attention to construction signage. Traffic changes will be communicated to motorists through electronic message signs and **livetraffic.com**.

Marine traffic would be maintained where possible through traffic management during construction. There would be an increase in marine traffic as additional marine vehicles will be required to carry out the construction of the new bridge and remove the existing bridge.

Site compounds

Secure site compounds would be located in the project area. Several locations have been identified as potential site compounds and we will keep local residents and stakeholders informed when the site compounds are confirmed. Site compounds would be used for:

- Offices and community display area
- Bridge construction
- Materials production, handling and storage
- Equipment maintenance.

Removal of existing the existing bridge

The existing bridge would be removed to ensure safe use of the Clyde River for marine traffic.

Large sections of the bridge would be removed and transported to a site compound near the river. This would reduce environmental and safety risks associated with working over water, take less time and would enable a greater proportion of the bridge to be effectively dismantled and removed from site.

A detailed plan for the removal of the existing bridge will be developed. Appropriate measures would be included to avoid or minimise potential impacts during removal of the bridge.

For more information, go to Chapter 3 in the Review of Environmental Factors (REF).

Assessment of key issues

Traffic and transport

The existing Batemans Bay Bridge has over 13,000 vehicle movements daily. During peak holiday periods, there is a substantial increase in traffic volumes crossing the bridge causing congestion along the Kings Highway and the northern Princes Highway approach. Queue lengths cause increased travel times and delays for road users.

The project would result in a reduction in congestion, queue lengths and travel times. Once the new bridge is open to traffic in 2021, average travel time during holiday periods would decrease by more than eight minutes and average speed on the bridge improving from 10 km/h to more than 40km/h.

Local road changes

There would be changes to the local road network at the intersections of the Princes Highway with Wharf Road and Clyde Street.

Vehicles travelling south towards the river on the Princes Highway would still be able to access Wharf Road via a slip lane. Vehicles would no longer be able to turn out of Wharf Road onto the Princes Highway. Vehicles wanting to access the Princes Highway from Wharf Road would access via Peninsula Drive or use a new connection via Old Punt Road and the Kings Highway. These alternative routes would be able to handle increased traffic volumes and the increase in travel time would be minor.

To allow for regional buses to operate from Clyde Street, a turnaround at the northern end of Clyde Street needs to be provided. This will result in some parking being permanently removed.

The intersection of Clyde Street and the Princes Highway would be closed and once the project is completed, Clyde Street would pass under the new bridge. Motorists would access Clyde Street via North Street. Roads and Maritime would consult with Council and local businesses on Clyde Street regarding signage and other measures to ensure the area remains easily accessible.

Marine traffic

Following construction, there will be uninterrupted access upstream for marine traffic with around 12 metres clearance provided by the new bridge.

Marine traffic that would require a higher clearance than 12 metres would no longer be able to travel up the Clyde River. However, the 12 metres clearance would provide upstream access for about 90 per cent of boats in the area.

Pedestrians and cyclists

A three metre wide shared pedestrian and cycle path on the new bridge would connect to existing pedestrian and cyclist pathways. The project would present other opportunities to improve pedestrian and cyclist facilities along the foreshore. Roads and Maritime will continue to work with Council to identify these features.

Assessment of key issues

Temporary changes during construction

Potential impacts on road and river traffic during construction would include:

- temporary increases to travel times for vehicles, cyclists and pedestrians due to temporary speed limit restrictions and detours, resulting in minor impacts on overall travel times
- temporary speed limit restrictions to marine vessels, resulting in minor impacts to journey times
- temporary increase in water hazards, resulting in additional navigation marks and signs
- temporary increased traffic on local road network due to the increase in vehicles for construction. This increase was estimated at less than two per cent
- temporary changes to property access – arrangements would be made to maintain access in consultation with property owners
- temporary loss of parking – alternative parking arrangements would be determined following consultation with property owners and Council.

For more information on these changes, go to chapter 6.7 in the REF.

Socio-economic

The project would benefit the community by providing more reliable and efficient travel in and around Batemans Bay and uninterrupted connection across the river for pedestrians, commuters and freight vehicles.

The socio-economic assessment looked at:

- Batemans Bay and its demographics
- the potential impacts the project would have during construction and when open to traffic
- identifying ways to mitigate and manage these impacts.

Factors considered in the socio-economic assessment included:

- population and demography
- access and connectivity
- property impacts
- community values
- tourism, retail and commercial industry
- cultural, community and recreational facilities.

Local restaurants on the south side of the Clyde River.

Socio and economic assessment outcomes

The assessment found that the project would:

- improve how the community experiences the area around the new bridge with an improved pedestrian and cyclist network, improved foreshore and community facilities and likely increase in social interactions.
- employ up to 420 people into construction related jobs and provide development opportunities to local community members
- provide economic potential for local businesses during construction and when the bridge is open to traffic
- while improving overall community connectivity, it would have an adverse impact on access to some businesses and infrastructure
- improve freight efficiency and unlock economic opportunities for local businesses and employees.

For more information go to Chapter 6.9 in the REF.

Noise

Vehicle engines, exhausts, tyres and brakes can create traffic noise for people working and living near roads. The impact of long term traffic noise and short term construction noise has been assessed to inform how we can:

1	**Reduce factors that can contribute to traffic noise levels**
2	**Mitigate the extent of unavoidable noise**
3	**Schedule unavoidable construction noise at the best possible time**
4	**Resolve any unreasonable long term change in noise levels**

Construction of the new bridge would create noise from construction equipment and vehicles used on site. Noise impacts would change when the bridge opens to traffic. Some locations would have a reduced impact while some locations closer to the new bridge would have increased impact.

How we assessed noise

A noise and vibration assessment was carried out to predict the potential impact of the project during construction and when open to traffic. Noise studies were carried out to measure background noise levels within the project area and traffic noise on the Princes Highway. The study area for the noise and vibration assessment was within 600 metres of the project.

Noise and potential impacts were assessed to predict the existing level of road traffic noise and predict noise based on several scenarios of when the new bridge would be open to traffic.

Assessment of key issues

Managing noise during construction

The following steps would be used to minimise noise during construction:

- switching engines off when not in use
- keeping machinery well maintained
- construction scheduling would consider peak periods including school holidays, public holidays and weekday options
- work that must be done at night to avoid heavier traffic conditions would be carefully managed and residents would be advised
- simultaneous use of loud machines or construction methods would be avoided where possible.

A Noise and Vibration Management Plan would be prepared for the construction period. This would include:

- noise and vibration monitoring and reporting
- specific measures to be implemented during construction to manage noise and vibration impacts
- construction scheduling to minimise noise impacts
- procedures for informing residents and business owners likely to be affected by noise and vibration
- contingency measures to be put in place in the event of non-compliance and/or noise complaints.

Managing noise when the bridge is open to traffic

Ongoing measures to reduce traffic noise once the new bridge opens would include:

- work on properties where appropriate.

For more information, go to chapter 6.6 in the REF.

Flooding

Flood modelling has been completed to determine the existing flood behaviour of the Clyde River and whether any flood impacts would be caused by the design of the new bridge.

The modelling looked at a 1 in 100 year rainfall event, which is defined to have a 1 per cent chance of being exceeded in any given year, and the Probable Maximum Flood event that would be predicted for the area. This approach allows Roads and Maritime to assess the worst case flooding scenarios for the community.

The assessment found that:

- the new bridge would not cause any negative flood impacts on properties, the oyster leases or Mcleods Creek, upstream of the new bridge
- immediately downstream of the new bridge, flooding would reduce across Batemans Bay CBD in the 1 in 100 year rainfall event. This improvement is due to the new embankment at the southern bridge approach, which is at a higher elevation and prevents floodwater overflowing into the CBD
- the new bridge would be higher than the Probable Maximum flood level, and would be protected from any predicted flooding
- the new bridge would have minimal impacts on coastal processes such as coastal erosion and tidal currents in the area.

During construction, a Flood Management Plan would be developed to ensure appropriate measures are in place to minimise impacts in the event of a flood. This would include consideration of public safety, the management of loose construction materials and equipment and evacuation procedures.

For more information on flooding and mitigation measures, go to chapter 6.3 of the REF.

Water quality

An Operational Water Quality Assessment Specialist Study was carried out to determine the impact the proposed project could have on water quality.

During construction, appropriate measures and safeguards will be implemented to manage risks to water quality caused by erosion, sedimentation, spills or leaks.

A Soil and Water Management Plan would be developed to reduce risks to water quality during construction.

Measures to maintain the water quality on the Clyde River would include:

- an Erosion and Sediment Control Plan to identify where and how to install erosion and sediment controls
- the use of silt curtains to minimise movement of sediment and other materials
- ongoing consultation with stakeholders concerned about water quality
- use of the best approach for preventing material from falling directly into the river when removing the existing bridge.

When built, the project would provide an improved road drainage system.

For more information on water quality impacts and mitigation measures, go to chapter 6.4 of the REF.

The Burrill Lake Bridge project, 50 kilometres north of Batemans Bay, developed environmental controls to ensure high water quality was maintained

Assessment of key issues

Biodiversity

Surveys were carried out to understand the existing environment and evaluate the potential impact of the project.

The assessment included:

- field surveys
- research and analysis of relevant databases and reports
- identification of impacts to threatened species, communities, wetland areas and ecosystems
- identification of management measures.

The project would potentially impact:

- clearing of native vegetation
- disturbance to aquatic habitats and potential impacts to aquatic species
- disturbance to coastal wetlands to the south of the bridge.

The project would not impact any:

- endangered populations of fauna species
- threatened flora species.

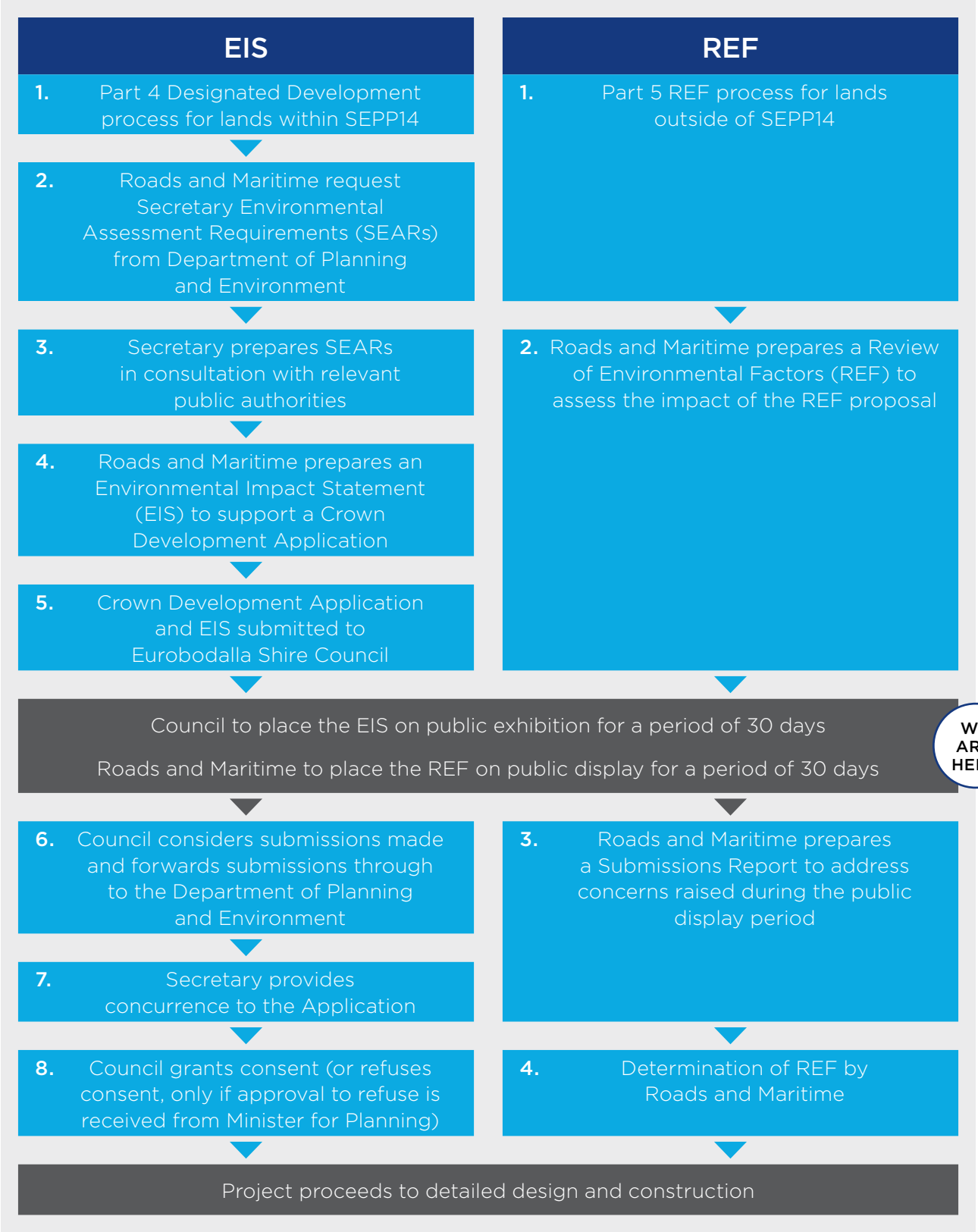
A Biodiversity Management Plan would be developed to manage potential environment impacts in pre-construction, during construction and when the new bridge is opened to traffic.

For more information on biodiversity, go to chapter 6.2 of the REF and for more information on the impacts on the coastal wetlands, please refer to the EIS.

Coastal wetlands

The community

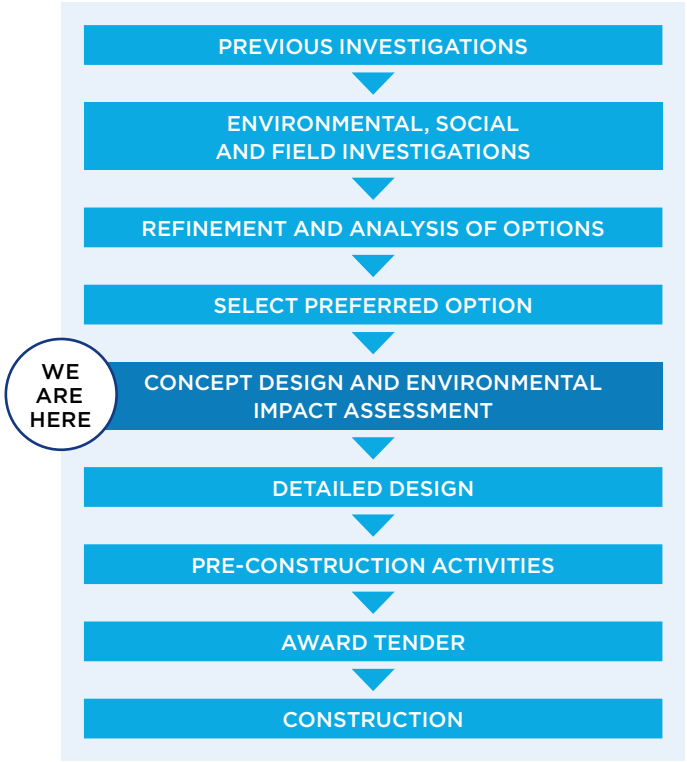
Environmental assessment and approval process



The community

Next steps

We will continue to keep the community updated as the project progresses.



Have your say

We are seeking feedback on the environmental assessment documents until **Friday 8 December 2017**. All submissions made during the display period will be addressed and responded to in a submissions report and will be used to further develop the project.

Review of Environmental Factors

The review of environmental factors assesses the potential environmental impacts of the project and identifies ways to manage them.

Written submissions should be sent to Roads and Maritime and can be emailed or mailed to:

Email: batemansbaybridge@rms.nsw.gov.au

Mail: Batemans Bay Bridge replacement
Roads and Maritime Services
PO Box 477
Wollongong NSW 2500

Environmental Impact Statement

The environmental impact statement assesses the potential environmental impacts of the proposal specifically on the coastal wetlands on the southern side of the bridge.

Written submissions should be sent to Eurobodalla Shire Council and can be emailed or mailed to:

Email: council@esc.nsw.gov.au

Mail: The General Manager
Eurobodalla Shire Council
PO Box 99
Moruya NSW 2537

Meet the project team

The project team will be at the following locations during the environmental assessment and concept design display period:

Batemans Bay Community Centre

Wednesday 15 November, 3pm to 6pm

2 Museum Place, Batemans Bay

Batemans Bay Sunday Market

Sunday 19 November, 8am to 1pm

Corrigans Beach Reserve

Village Plaza

Thursday 23 November, 3pm to 5pm

1 Perry Street, Batemans Bay

Batemans Bay Community Centre

Saturday 25 November 10am to 12pm

2 Museum Place, Batemans Bay

Display locations

Hard copies of the environmental assessment documents will be available for viewing at unstaffed displays between **Wednesday 8 November** and **Friday 8 December 2017** at the following locations:

- Batemans Bay Library, Batemans Bay
- Eurobodalla Council Building, Moruya
- Moruya Library, Moruya
- Service NSW, Batemans Bay
- Department of Planning and Environment, Wollongong Regional Office
- Department of Planning and Environment Information Centre, Sydney

Visit **rms.nsw.gov.au/batemansbaybridge** for more information on these locations.

Copies of the assessment documents are also available at **rms.nsw.gov.au/batemansbaybridge**.

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