



# **Maitland Bay Drive / Picnic Parade, Ettalong Beach – Intersection Upgrade**

Submissions Report

# Executive summary

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## The proposal

Transport for NSW (formerly Roads and Maritime Services) proposes to upgrade the intersection of Maitland Bay Drive and Picnic Parade, Ettalong Beach. Key features of the proposal include:

- Installing a raised concrete roundabout and raised concrete medians
- A new right and left turn into the Kitchener Park carpark from Maitland Bay Drive, but left turn out only
- Replacement of the existing guardrail on the northern side of Maitland Bay Drive
- On-road lanes for cyclists where practical
- New shared pathway to connect the Kitchener Park carpark to the existing footpath on Picnic Parade
- New shared pathway to connect to the carpark adjacent to the Scout Hall and the cycleway on the Maitland Bay Drive westbound carriageway
- New pedestrian refuge on Picnic Parade to improve pedestrian safety
- Associated line marking and signage
- Adjustments to public utilities including the relocation of affected street lighting, water and sewer mains
- Adjustments to drainage pits and pipes
- Improvements to the Kitchener Park carpark and the car park adjacent to the Scout Hall
- Relocation of existing 'Welcome to Ettalong Beach' sign and advertisement banners
- Landscape planting and urban design treatments.

## Display of the Review of Environmental Factors

Transport for NSW prepared a review of environmental factors (REF) for the Maitland Bay Drive and Picnic Parade intersection upgrade. The REF was publicly displayed between Monday 28 October 2019 to Monday 18 November at Woy Woy Library and Umina Library. The REF was also published on the Transport for NSW project website and made available for download.

The display locations and website link were advertised in the Central Coast Express Advocate local newspaper and on Facebook. During this time, Transport for NSW invited the public to provide feedback on the proposal. Transport for NSW also met with residents and businesses who would be directly affected by the proposal.

## Summary of issues and responses

Public display of the REF and the supporting consultation resulted in a total of 15 submissions, of which 14 were from the general community and one was from a community group.

Of these submissions, three submissions were in support of the proposal and one submission objected to the proposal. The remaining submissions raised issues but offered no position on whether they supported or objected to the proposal.

## **Traffic flow**

Submissions queried whether the roundabout and car park access would affect traffic flow on Maitland Bay Drive and whether there would be adequate opportunity for drivers to turn right from Picnic Parade, especially without the merge lane that is currently in place.

Traffic modelling shows that overall, the proposal (even with the new car park access) will improve not adversely impact traffic flow on Maitland Bay Drive. It will also reduce queue lengths for northbound traffic on Picnic Parade. The proposal will also serve to reduce the speed of traffic on Maitland Bay Drive on the approach to the intersection, allowing easier access for vehicles turning from Picnic Parade and improving safety.

## **Traffic lights**

Submissions queried whether traffic lights would be a better option because they would cost less and provide safer and smoother traffic flow and allow easier access for vehicles turning to and from Picnic Parade.

Traffic lights were considered but not adopted for these reasons:

- They would cause long queues and delays if the single lane approaches on Maitland Bay Drive remained
- They would require significant length of double lane approaches on Maitland Bay Drive in both directions resulting in a larger road footprint and higher costs than the roundabout option
- A roundabout option is considered more aligned as the combination of the slower approach speed and opportunity for urban landscaping are more likely to encourage turning into Picnic Parade from tourist traffic outside the peak travel times
- They require a permanent commitment of maintenance and operation costs compared to a roundabout
- A roundabout helps movements to and from the Ettalong business precinct and tourist/leisure destinations, which is one of the project objectives.

## **Speed limit**

Submissions suggest reducing the speed limit on Maitland Bay Drive) to 50 or 60 kilometres per hour.

One of the objectives of upgrading the existing intersection from a seagull arrangement to a single lane roundabout is to reduce speeds on approach to the Maitland Bay Drive / Picnic Parade intersection. The roundabout will assist in supporting speed limit compliance on Maitland Bay Drive. The presence of the roundabout and the need for vehicles to travel around it and give way will act to reduce the average speeds on Maitland Bay Drive at the intersection to less than the 70 kilometre per hour posted speed.

## **Pedestrians and cyclists**

Submissions raise safety concerns due to the shared road space arrangements included in the proposal and suggest including a separate bicycle lane with a barrier fence. Safety concerns were also raised about pedestrians and cyclists sharing the proposed shared path on the southern side of Maitland Bay Drive.

Submissions also queried the extent of shared path being provided as part of the proposal.

The approaches to the roundabout have been widened to up to 5.6 metres with the circulating lane on the roundabout up to 7 metres to allow for safe separation between vehicles and cyclists on the approaches and the roundabout. Site constraints, safety considerations and the presence of Blackwall Mountain close to the intersection have prevented a cycleway on the northern side of Maitland Bay Drive being installed behind the island. The upgrade also includes shared paths on the southern corners of the intersection that connect into the existing on road bicycle lanes and allow all levels of cyclists a safer transition between Maitland Bay Drive and Picnic Parade. They are of sufficient width to accommodate pedestrians and cyclists.

### **Roadside environment**

Submissions expressed concern about the loss of trees and queried whether replacement plantings will be provided. They also suggest the proposal provides an opportunity to beautify the Kitchener Park carpark area and create an attractive gateway to the locality by providing planting within the roundabout.

The urban design concept discussed in the REF commits to replacement plantings provided at a rate of two trees for every one tree removed. This will be further refined during detailed design with the development of an Urban Design Plan (including detailed urban design drawings and landscape plans).

The design will include replacement plantings of trees along the Maitland Bay Drive frontage of Ettalong Oval past the Scout Hall. Transport for NSW has also agreed with Central Coast Council to plant some additional vegetation on the eastbound approach to the roundabout and in the roundabout itself.

### **Next steps**

Transport for NSW as the determining authority will consider the information in the REF and this submissions report and make a decision whether or not to proceed with the proposal.

Transport for NSW will inform the community and stakeholders of this decision and where a decision is made to proceed will continue to consult with the community and stakeholders prior to and during the construction phase.

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# 1 Introduction and background

## 1.1 The proposal

Transport for NSW proposes to upgrade the intersection of Maitland Bay Drive and Picnic Parade, Ettalong Beach. Key features of the proposal include:

- Installing a raised concrete roundabout and raised concrete medians
- A new right and left turn into the Kitchener Park carpark from Maitland Bay Drive, but left turn out only
- Replacement of the existing guardrail on the northern side of Maitland Bay Drive
- On-road lanes for cyclists where practical
- New shared pathway to connect the Kitchener Park carpark to the existing footpath on Picnic Parade
- New shared pathway to connect to the carpark adjacent to the Scout Hall and the cycleway on the Maitland Bay Drive westbound carriageway
- New pedestrian refuge on Picnic Parade to improve pedestrian safety
- Associated line marking and signage
- Adjustments to public utilities including the relocation of affected street lighting, water and sewer mains
- Adjustments to drainage pits and pipes
- Improvements to the Kitchener Park carpark and the car park adjacent to the Scout Hall
- Relocation of existing 'Welcome to Ettalong Beach' sign and advertisement banners
- Landscape planting and urban design treatments.

A more detailed description of the proposal can be found in the Maitland Bay Drive/Picnic Parade, Ettalong Beach – Intersection Upgrade Review of Environmental Factors prepared by Transport for NSW in October 2019.

## 1.2 REF display

Transport for NSW prepared a review of environmental factors (REF) to assess the potential environmental impacts of the proposed works. The REF was publicly displayed for 22 days between Monday 28 October 2019 to Monday 18 November 2019 at two locations, as detailed in Table 1-1. The REF was placed on the Transport for NSW (formerly Roads and Maritime) project website and made available for download. The display locations and website link were advertised in the Central Coast Express Advocate local newspaper and on Facebook.

**Table 1-1: Display locations**

Location	Address
Woy Woy Library	Corner Blackwall Road and Oval Avenue, Woy Woy
Umina Library	West Street, Umina Beach

### **1.3 Purpose of the report**

This submissions report relates to the REF prepared for the Maitland Bay Drive/Picnic Parade, Ettalong Beach – Intersection Upgrade, and should be read in conjunction with that document.

The REF was placed on public display and submissions relating to the proposal and the REF were received by Transport for NSW. This submissions report summarises the issues raised and provides responses to each issue (Chapter 2) and identifies new or revised environmental management measures (Chapter 3).

## 2 Response to issues

Transport for NSW received 15 submissions, accepted up until 19 November 2019. Table 2-1 lists the respondents and each respondent's allocated submission number. The table also indicates where the issues from each submission have been addressed in Chapter 3 of this report.

**Table 2-1: Respondents**

Respondent	Submission No.	Section where issues are addressed
Individual	1	Section 2.2
Individual	2	Section 2.5
Individual	3	Sections 2.2 and 2.6
Individual	4	Sections 2.6 and 2.10
Community group	5	Sections 2.7 and 2.9
Individual	6	Sections 2.2, 2.8, 2.9 and 2.10
Individual	7	Section 2.2
Individual	8	Section 2.9
Individual	9	Section 2.8
Individual	10	Section 2.4
Individual	11	Sections 2.3 and 2.6
Individual	12	Sections 2.4 and 2.5
Individual	13	Sections 2.7 and 2.10
Individual	14	Section 2.3
Individual	15	Sections 2.4 and 2.10

### 2.1 Overview of issues raised

A total of 15 submissions were received in response to the display of the review of environmental factors. This included one submission from a community group and 14 submissions from the community.

Each submission has been examined individually to understand the issues being raised. The issues raised in each submission have been extracted and collated, and corresponding responses to the issues have been provided. Where similar issues have been raised in different submissions, only one response has been provided. The issues raised and Transport for NSW response to these issues forms the basis of this chapter.

Three submissions expressed support for the proposal, one submission objected to the proposal while the remainder of submissions raised issues but did not express either support or object to the proposal.

The main issues raised in submissions were:

- Preference for traffic lights instead of a roundabout
- Impact of the proposed roundabout on traffic flow
- Changes to parking

- Impacts on the roadside environment including loss of trees
- Proposal timing and need
- Speed limit.

No submissions from government agencies and no form letter submissions were received during the public display period.

## 2.2 Traffic flow

### Submission numbers

1, 3, 6, 7

### Issue description

A submission queried the size of the roundabout and noted that it may slow traffic on Maitland Bay Drive.

A submission asked whether the proposed access to and from the Kitchener Park carpark via Maitland Bay Drive will affect traffic flow from Woy Woy, particularly during peak periods.

General concerns were raised about the operation of roundabouts and adherence to the rules for using roundabouts, with the suggestion that the roundabout will make it difficult for motorists to turn right from Picnic Parade and left to Picnic Parade.

Submissions suggested that the existing intersection configuration with a merge lane for right turning traffic works efficiently and that without the merge lane for right turning traffic from Picnic Parade, this traffic will be delayed by eastbound traffic on Maitland Bay Drive.

A submission commented that if the existing intersection configuration were to be maintained, a left turn lane on Maitland Bay Drive for westbound traffic would assist motorists on Picnic Parade to identify when it is safe to move into the merge lane for right-turning vehicles.

### Response

The design of the roundabout is consistent with Austroads Standards. It is expected that the roundabout will slow Maitland Bay Drive traffic on the approach to the intersection and this will help improve safety. Traffic modelling shows that overall, the proposal will not adversely impact traffic flow on Maitland Bay Drive with minimal delay due to the roundabout. It will also reduce queue lengths for northbound traffic on Picnic Parade.

Section 6.1.3 of the REF states that traffic modelling was conducted to assess the performance of the intersection with the proposed new car park access in operation. The modelling identified minimal impact on the overall performance of the roundabout and that the turning lanes for the car park can accommodate expected traffic demand.

The proposal will also serve to reduce the speed of traffic on Maitland Bay Drive on the approach to the intersection, allowing easier access for vehicles turning from Picnic Parade and improving safety.

The Road Rules 2014 will apply to the use of the proposed roundabout, specifically Part 9.

## 2.3 Traffic lights

### Submission numbers

11, 14

### Issue description

Submissions queried whether traffic lights would be a better option because they would cost less and provide safer and smoother traffic flow and allow easier access for vehicles turning to and from Picnic Parade.

### Response

Traffic lights were considered but not adopted for these reasons:

- They would cause long queues and delays if the single lane approaches on Maitland Bay Drive remained
- They would require significant length of double lane approaches on Maitland Bay Drive in both directions resulting in a larger road footprint and higher costs than the roundabout option
- A roundabout option is considered more aligned as the combination of the slower approach speed and opportunity for urban landscaping are more likely to encourage turning into Picnic Parade from tourist traffic outside the peak travel times
- They require a permanent commitment of maintenance and operation costs compared to a roundabout
- A roundabout would encourage easier, safer and more frequent vehicle movement into and out of the Ettalong business precinct and tourist leisure destinations, than the current seagull intersection on a busy road. This is one of the project objectives.

## 2.4 Speed limit

### Submission numbers

10, 12, 15

### Issue description

Submissions suggest reducing the speed limit on Maitland Bay Drive (from the eastern end of Kitchener Park) to 50 or 60 kilometres per hour to reduce tail gating behaviour.

A submission stressed the need for good traffic signs including the yellow 25 kilometre per hour advisory speed signs on the approach to the roundabout.

### Response

One of the objectives of upgrading the existing intersection from a seagull arrangement to a single lane roundabout is to reduce speeds on approach to the Maitland Bay Drive / Picnic Parade intersection. The roundabout will assist in supporting speed limit compliance on Maitland Bay Drive. The presence of the roundabout and the need for vehicles to travel around it and give way will act to

reduce the average speeds on Maitland Bay Drive at the intersection to less than the 70 kilometre per hour posted speed.

Signage would be provided in accordance with applicable road safety and design standards.

## **2.5 Pedestrians and cyclists**

### **Submission numbers**

2, 12

### **Issue description**

A submission asks about the provision of footpaths on Pacific Avenue at Ettalong, noting the road is in poor condition.

A submission suggests continuing the dedicated bicycle lane on the northern side Maitland Bay Drive through the roundabout, with only cyclists turning to Picnic Parade using the roundabout alongside traffic.

Concerns were raised in that there is a risk of injury to cyclists due to the shared road space arrangements included in the proposal and suggests a separate bicycle lane with a barrier fence.

Safety concerns were also raised about pedestrians and cyclists sharing the proposed shared path on the southern side of Maitland Bay Drive with a suggestion that one through lane and one dedicated left-turn lane on the westbound approach (which cyclists travel through the intersection) would be a solution.

A submission queried where the shared path on the southern side of Maitland Bay Drive east of Picnic Parade goes, noting that pedestrians are not encouraged to walk along Maitland Bay Drive. The same submission suggests providing a dedicated bicycle lane from Picnic Parade onto Maitland Bay Drive and a pedestrian pathway inside the treeline on the northern border of Ettalong Oval.

### **Response**

The proposal includes sections of new shared path along Maitland Bay Drive and on Picnic Parade, and a new pedestrian refuge on Picnic Parade, however improvements to pedestrian paths on the wider local road or open space network (including Pacific Avenue and Ettalong Oval) are beyond the scope of the proposal. Picnic Parade and Pacific Avenue are local roads under the Central Coast Council and the items raised will be passed on to Council for their consideration.

The approaches to the roundabout have been widened to up to 5.6 metres with the circulating lane on the roundabout up to 7 metres to allow for safe separation between vehicles and cyclists on the approaches and the roundabout. Site constraints, safety considerations and the presence of Blackwall Mountain close to the intersection have prevented a cycleway on the northern side of Maitland Bay Drive being installed behind the island. The upgrade also includes shared paths on the southern corners of the intersection that connect into the existing on road bicycle lanes and allow all levels of cyclists a safer transition between Maitland Bay Drive and Picnic Parade. They are of sufficient width to accommodate pedestrians and cyclists.

A key part of the intersection upgrade is to improve the pedestrian linkages between Maitland Bay Drive and Picnic Parade. The upgrade includes improved pedestrian connections through the shared paths that connect to the adjacent parks and car parks, a formal crossing point with an island refuge on Picnic Parade and a link path

to the Scout Hall as well as connections to existing footpaths in Kitchener Park and along Picnic Parade. The proposed shared paths provide an opportunity to extend the pathways along Picnic Parade in the future.

## **2.6 Parking**

### **Submission numbers**

3, 4, 11

### **Issue description**

A submission queries whether the standard of the access to and from the Kitchener Park carpark via Maitland Bay Drive is warranted based in likely traffic volumes. The same submission suggests access to and from the Kitchener Park carpark via Picnic Parade is feasible given the small amount of traffic that would use the access.

A submission says that the proposed parking bays outside the Scout Hall along Picnic Parade are inadequate for the demand during school sporting events (bus parking) and on weekends. The same submission also notes that the road verge is in poor condition and deteriorates further during wet weather, and suggests that extending the parking from the Scout Hall through to the corner of Fassifern Street should be considered while the equipment, materials and workers are on site.

A submission queries whether the formalisation of the carparks is a good use of public money.

### **Response**

The exit to and from Kitchener Park car park complies with Austroads standards and is necessary as a replacement to the existing entry from Picnic Parade (which will no longer be able to provide safe access once the upgrade is complete).

As it lies within the boundaries of the proposal and is directly affected by excavations and works, the northern portion of the current informal car parking area adjacent to the Scout Hall has been improved for three car parking spaces. The area immediately to the south that is currently used for car parking remains usable for that purpose. Picnic Parade is a local road under the care and control of Central Coast Council and further formalisation of parking in the area to the south of the Scout Hall is beyond the current project scope. The suggestion will be passed on to Central Coast Council for their consideration.

The improvements to the carparks are required to address the changes to these areas due to the proposal and to maintain current parking supply. The improvements represent an improved visual outcome will improve amenity for users of Ettalong Oval and Kitchener Park.

## **2.7 Roadside environment**

### **Submission numbers**

5, 13

### **Issue description**

A submission expressed concern about the loss of trees and queries whether replacement plantings will be provided. The same submission suggests the proposal

provides an opportunity to beautify the Kitchener Park carpark area and create an attractive gateway to the locality by providing planting within the roundabout.

A submission expressed concern about the loss of trees noting that the lack of trees in the locality has led to an urban heat island effect.

### **Response**

Transport for NSW will only remove those trees that are directly in the path of the road, shared paths, drainage and services relocated in construction. Trimming of these trees directly impacted within the proposal area has been considered but many would need to be trimmed beyond what is healthy or stable for the tree in the future and others cannot safely be left to overhang the main road.

The urban design concept discussed in Section 6.2.4 of the REF commits to replacement plantings provided at a rate of two trees for every one tree removed. This will be further refined during detailed design with the development of an Urban Design Plan (including detailed urban design drawings and landscape plans).

The design will include replacement plantings of trees along the Maitland Bay Drive frontage of Ettalong Oval past the Scout Hall. Transport for NSW has also agreed with Central Coast Council to plant some additional vegetation on the large island next to Blackwall Mountain and within the roundabout itself.

## **2.8 Proposal timing and need**

### **Submission numbers**

6, 9

### **Issue description**

One submission questioned whether the proposal represents value for money while another expressed concern about delays in delivering the proposal.

### **Response**

The NSW Government has committed \$7 million to upgrade the intersection.

The roundabout is intended to provide benefits including improved safety by reducing speed and providing pedestrian facilities and encouraging increased movement into Ettalong.

Transport for NSW has considered submissions on the concept design and environmental assessment and has decided to progress the proposal to detailed design with no substantial changes. The design will now be finalised ready for construction and construction will commence once the timing of funding is confirmed.

## **2.9 Beyond the scope of the proposal**

### **Submission numbers**

5, 6, 8

### **Issue description**

One submission asks why the roundabout on Broken Bay Road (corner Maitland Bay Drive and Bourke Road) have not been upgraded with suitable plantings, while

another raises concerns about the lack of pedestrian paths and the condition of roads in the locality.

A submission asks that the intersection of Picnic Parade and Flathead Road, Ettalong Beach, be marked with large white lines with the words “Keep Clear at All Times”.

### **Response**

The items raised are located on the local road network, are beyond the scope of the proposal and are under care and control of Central Coast Council. These items will be passed on to Central Coast Council for their consideration.

The current proposal does include sections of shared path within the proposal limits as well as plantings around the roundabout, and on the islands approaching the roundabout.

The proposal is also expected to reduce queue lengths on Picnic Parade and is unlikely to impact on a keep clear area at Flathead Road under regular traffic conditions.

## **2.10 Support for the proposal**

### **Submission numbers**

1, 4, 13, 15

### **Issue description**

Three submissions expressed clear support for the proposal.

### **Response**

Submissions expressing support for the proposal are noted and the reasons for the objection to the proposal have been considered in the sections above

## **3 Environmental management**

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The REF for the Maitland Bay Drive/Picnic Parade, Ettalong Beach – Intersection Upgrade identified the framework for environmental management, including safeguards and management measures that would be adopted to avoid or reduce environmental impacts (section 7.2 of the review of environmental factors).

After consideration of the issues raised in the public submissions no changes to proposed safeguards and management measures were considered necessary.

Should the proposal proceed, environmental management will be guided by the framework and measures outlined below.

### **3.1 Environmental management plans**

A number of safeguards and management measures have been identified in the REF in order to minimise adverse environmental impacts, including social impacts, which could potentially arise as a result of the proposal. Should the proposal proceed, these safeguards and management measures would be incorporated into the detailed design and applied during the construction and operation of the proposal.

A Construction Environmental Management Plan (CEMP) will be prepared to describe the safeguards and management measures identified. The CEMP will provide a framework for establishing how these measures will be implemented and who would be responsible for their implementation.

The CEMP will be prepared prior to construction of the proposal and must be reviewed and certified by the Transport for NSW Environment Officer, Greater Sydney Project Office, prior to the commencement of any on-site works. The CEMP will be a working document, subject to ongoing change and updated as necessary to respond to specific requirements. The CEMP would be developed in accordance with the specifications set out in QA Specification G36 – Environmental Protection (Management System), QA Specification G38 – Soil and Water Management (Soil and Water Plan), QA Specification G40 – Clearing and Grubbing, QA Specification G10 – Traffic Management.

### **3.2 Summary of safeguards and management measures**

The REF for the proposal title identified a range of environmental outcomes and management measures that would be required to avoid or reduce the environmental impacts.

After consideration of the issues raised in the public submissions, the environmental management measures for the proposal (refer to Chapter 7 of the REF) have been retained without changes. Should the proposal proceed, the environmental management measures in Table 3-1 will guide the subsequent phases of the proposal.

**Table 3-1: Summary of safeguards and management measures**

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
GEN1	General - minimise environmental impacts during construction	<p>A CEMP will be prepared and submitted for review and endorsement of the Roads and Maritime Environment Manager prior to commencement of the activity.</p> <p>As a minimum, the CEMP will address the following:</p> <ul style="list-style-type: none"> <li>• any requirements associated with statutory approvals</li> <li>• details of how the project will implement the identified safeguards outlined in the REF</li> <li>• issue-specific environmental management plans</li> <li>• roles and responsibilities</li> <li>• communication requirements</li> <li>• induction and training requirements</li> <li>• procedures for monitoring and evaluating environmental performance, and for corrective action</li> <li>• reporting requirements and record-keeping</li> <li>• procedures for emergency and incident management</li> <li>• procedures for audit and review.</li> <li>• The endorsed CEMP will be implemented during the undertaking of the activity.</li> </ul>	Contractor	Pre-construction	
GEN2	General - notification	All businesses, residential properties and other key stakeholders (e.g. schools, local councils) affected by the activity will be notified at least five business days prior to commencement of the activity.	Contractor / Roads and Maritime project manager	Pre-construction	
GEN3	General – environmental awareness	All personnel working on site will receive training to ensure awareness of environment protection requirements to be implemented	Contractor / Roads and Maritime project manager	Pre-construction / detailed design	

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
		<p>during the project. This will include up-front site induction and regular "toolbox" style briefings. Site-specific training will be provided to personnel engaged in activities or areas of higher risk. These include adjoining residential areas requiring particular noise management measures.</p>			
TT1	Traffic and transport	<p>A Traffic Management Plan (TMP) will be prepared and implemented as part of the CEMP. The TMP will be prepared in accordance with the Roads and Maritime Traffic Control at Work Sites Manual (RTA, 2010) and QA Specification G10 Control of Traffic (Roads and Maritime, 2008). The TMP will include:</p> <ul style="list-style-type: none"> <li>• confirmation of haulage routes</li> <li>• measures to maintain access to local roads and properties</li> <li>• site-specific traffic control measures (including signage) to manage and regulate traffic movement</li> <li>• measures to maintain pedestrian and cyclist access</li> <li>• requirements and methods to consult and inform the local community of impacts on the local road network</li> <li>• access to construction sites including entry and exit locations and measures to prevent construction vehicles queuing on public roads</li> <li>• a response plan for any construction traffic incident consideration of other developments that may be under construction to minimise traffic conflict and congestion that may occur due to the</li> </ul>	Contractor	Detailed design / Pre-construction	Section 4.8 of QA G36 Environment Protection

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
		<p>cumulative increase in construction vehicle traffic monitoring, review and amendment mechanisms</p> <ul style="list-style-type: none"> <li>detour routes for any short-term closures of Picnic Parade.</li> </ul>			
TT2	Emergency services vehicles and buses	Traffic management measures will be implemented to ensure larger emergency services vehicles and buses can negotiate the intersection during construction.	Contractor	Construction	Additional measure
TT3	Emergency services vehicles	Brisbane Water Ambulance and Umina Fire and Rescue will be kept informed of construction activities and any relevant changes to traffic management arrangements.	Contractor	Construction	Additional measure
TT4	Temporary loss of parking	Alternative parking arrangements, particularly during events at Ettalong Oval / Kitchener Park, will be communicated to affected people in consultation with Central Coast Council.	Roads and Maritime project manager	Construction	Additional measure
LV1	Landscape character and visual impact	<p>An Urban Design Plan (including detailed urban design drawings and landscape plans) will be prepared to support the final detailed project design.</p> <p>The Urban Design Plan will present an integrated urban design for the project, providing further practical detail on the application of design principles and objectives identified in this REF. The Plan will build on the urban design concept described in this REF and confirm design treatments for:</p> <ul style="list-style-type: none"> <li>location and identification of existing vegetation and proposed landscaped areas, including species to be used</li> <li>pedestrian and cyclist elements including footpath location, paving types and pedestrian crossings</li> </ul>	Contacto	Detailed design / pre-construction	Standard measure

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
		<ul style="list-style-type: none"> <li>fixtures such as seating, lighting, fencing and signs</li> <li>details of the staging of landscape works taking account of related environmental controls such as erosion and sedimentation controls and drainage</li> <li>procedures for monitoring and maintaining landscaped or rehabilitated areas.</li> </ul> <p>The Urban Design Plan will be prepared in accordance with relevant guidelines, including:</p> <ul style="list-style-type: none"> <li>Beyond the Pavement urban design policy, process and principles (Roads and Maritime, 2014)</li> <li>Landscape Guideline (Roads and Maritime Services, 2019).</li> </ul>			
LV2	Visual impact during construction	An Ancillary Facilities Plan will be prepared and will include a layout of compound/storage areas to maximise screening and minimise visual impact. Routine inspections will be conducted to ensure sites are maintained in a clean state.	Contractor	Construction	Additional measure
LV3	Visual impact during construction	Following the completion of construction works, plant/equipment will be removed, and disturbed areas will be revegetated, turfed or otherwise restored as appropriate.	Contractor	Construction	Additional measure
LV4	Visual impact during construction	Replacement plantings will be provided at a 2:1 ratio and opportunities for early plantings outside the road corridor would be reviewed in consultation with Central Coast Council.	Contractor Roads and Maritime	Construction	Additional measure
LV5	Impact from lighting	Temporary site lighting will be installed and operated in accordance with AS4282:1997 Control of the Obtrusive Effect of Outdoor Lighting, and an approved Traffic Management Plan.	Contractor	Construction	Additional measure

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
NV1	Noise and vibration	A Noise and Vibration Management Plan (NVMP) will be prepared and implemented as part of the CEMP.	Contractor	Detailed design / pre-construction	Section 4.6 of QA G36 <i>Environment Protection</i>
LV2	Visual impact during construction	An Ancillary Facilities Plan will be prepared and will include a layout of compound/storage areas to maximise screening and minimise visual impact. Routine inspections will be conducted to ensure sites are maintained in a clean state.	Contractor	Construction	Additional measure
NV2	Noise and vibration	<p>The NVMP will generally follow the approach in the Interim Construction Noise Guideline (ICNG) (DECC, 2009) and the Construction Noise and Vibration Guideline (Roads and Maritime Services, 2016) and identify:</p> <ul style="list-style-type: none"> <li>• all potential significant noise and vibration generating activities associated with the activity</li> <li>• feasible and reasonable mitigation measures to be implemented</li> <li>• a monitoring program to assess performance against relevant noise and vibration criteria</li> <li>• a review process scheduling and assessing out-of-hours activities including consideration of alternatives to out-of-hours work, plant selection, work locations and screening to minimise impacts</li> <li>• a working schedule which records respite periods for extended out-of-hours works</li> <li>• arrangements for consultation with affected neighbours and sensitive receivers, including notification and complaint handling procedures</li> </ul>	Contractor	Pre-construction	Section 4.6 of QA G36 <i>Environment Protection</i>

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
		<ul style="list-style-type: none"> <li>contingency measures to be implemented in the event of non-compliance with noise and vibration criteria.</li> </ul>			
NV3	Construction vibration	<p>Where vibration intensive plant such as vibratory rollers are used, vibration must be managed to minimise disturbance to building occupants and to avoid damage to buildings and other structures. This includes adhering to the recommended minimum working distances for vibration intensive plant identified in Section 7.1 of the Construction Noise and Vibration Guideline (Roads and Maritime Services, 2016).</p> <p>If recommended minimum working distances cannot be met by selecting smaller plant vibration monitoring will occur to quantify and help manage vibration emissions. If necessary, trial vibration measurements will be conducted before activities to further assess any possible impacts and buffer distances that may be required.</p>	Contractor	Construction	Additional measure
NV4	Noise and vibration	<p>All sensitive receivers likely to be affected will be notified at least five working days prior to commencement of any works associated with the activity that may have an adverse noise or vibration impact. The notification will provide details of:</p> <ul style="list-style-type: none"> <li>the project</li> <li>the construction period and construction hours</li> <li>contact information for project management staff</li> <li>complaint and incident reporting</li> <li>how to obtain further information.</li> </ul>	Contractor	Detailed design / pre-construction	Standard measure

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
HF1	Flooding and hydrology	Staging for the construction of the proposal will consider adequate stormwater flow paths (including diversions and temporary connections as required) to be implemented and maintained during construction to minimise the potential on-site or upstream flooding.	Contractor	Construction	Additional measure
HF2	Flooding and hydrology	A flood management procedure will be prepared to detail procedures to be implemented where extreme weather is predicted and where there is a risk of flooding affecting the work site and compound, including removal and storage of plant and equipment and securing of site.	Contractor	Construction	Additional measure
HF3	Flooding and hydrology	Locations where dewatering may be needed and requirements for the temporary storage of extracted water will be identified during pre-construction planning. Dewatering of construction excavations will occur in accordance with the Technical Guideline - Environmental Management of Construction Site Dewatering (Roads and Traffic Authority, 2011).	Contractor	Construction / pre-construction	Additional measure
BIO1	Biodiversity	<p>A Flora and Fauna Management Plan will be prepared in accordance with Roads and Maritime's Biodiversity Guidelines: Protecting and Managing Biodiversity on RTA Projects (RTA, 2011) and implemented as part of the CEMP.</p> <p>The Flora and Fauna Management Plan will include, but not be limited to:</p> <ul style="list-style-type: none"> <li>plans showing areas to be cleared and areas to be protected, including exclusion zones, protected habitat features and revegetation areas</li> </ul>	Contractor	Pre-construction	Contractor

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
		<ul style="list-style-type: none"> <li>• pre-clearing survey requirements</li> <li>• procedures for unexpected threatened species finds and fauna handling.</li> <li>• protocols to manage weeds and pathogens.</li> </ul>			
BIO2	Biodiversity	Measures to further avoid and minimise the construction footprint and native vegetation or habitat removal will be investigated during detailed design and implemented where practicable and feasible.	Roads and Maritime	Detailed design	Additional measure
BIO3	Biodiversity	An exclusion zone surrounding the area containing the five known specimens of <i>Syzygium paniculatum</i> will be established prior to commencement of work on replacing the guardrail on the north side of Maitland Bay Drive using hi-vis fencing or similar and signage.	Contractor	Construction	Additional measure
BIO5	Biodiversity	The narrow swale on the north side of Maitland Bay Drive will be protected by maintaining a ground cover on the embankment or other appropriate controls or temporary cover to minimise erosion and sedimentation.	Contractor	Construction	Additional measure
BIO6	Biodiversity	Mature trees to be retained adjacent to Maitland Bay Drive will be protected in accordance with AS 4970-2009 Protection of trees on development sites. This will include establishment of tree protection zones.	Contractor	Construction	Additional measure
SW1	Soils	A Soil and Water Management Plan (SWMP) will be prepared and implemented as part of the CEMP. The SWMP will identify all reasonably foreseeable risks relating to soil erosion and water pollution and describe how these risks will be addressed during construction.	Contractor	Pre-construction	Section 2.1 of QA G38 Soil and Water Management

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
SW2	Soils	A site-specific Erosion and Sediment Control Plan/s will be prepared and implemented as part of the Soil and Water Management Plan. The ESCP will follow the requirements of RMS specification G38.	Contractor	Pre-construction	Section 2.2 of QA G38 Soil and Water Management
SW3	Soils	The Erosion and Sediment Control Plan/s will include arrangements for managing wet weather events, including monitoring of potential high-risk events (such as storms) and specific controls and follow-up measures to be applied in the event of wet weather. The Plan/s will also include measures to minimise the impact of discharging site water to the swale on the northern side of Maitland Bay Drive.	Contractor	Pre-construction	Additional measure
SW4	Potential acid sulfate soils	An Acid Sulfate Soil Management plan will be prepared for the proposal in accordance with the Guidelines for the Management of Acid Sulfate Materials: Acid Sulfate Soils, Acid Sulfate Rock and Monosulfidic Black Ooze (Roads and Traffic Authority, 2005). The plan will include specific measures to prevent any water quality impacts or effects on aquatic and terrestrial ecology.	Contractor	Pre-construction	Additional measure
SW5	Contaminated land– potential onsite and off-site sources	An unexpected finds procedure will be developed in the proposal CEMP for contamination. The procedure will ensure that if contaminated areas are encountered during construction, appropriate control measures will be implemented to manage the immediate risks of contamination. All other works that may impact on the contaminated area will cease until the nature and extent of the contamination has been confirmed and any necessary site-	Contractor	Detailed design / Pre-construction	Section 4.2 of QA G36 Environment Protection

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
		specific controls or further actions identified in consultation with the Roads and Maritime Environment Manager and/or EPA.			
SW6	Water quality	Discharge of highly chlorinated water is to be consistent with Central Coast Council requirements. There is to be no direct discharge to drainage lines or inlets.	Contractor	Construction	Additional measure
SW7	Accidental spill	A site-specific emergency spill plan will be developed and include spill management measures in accordance with the Roads and Maritime Code of Practice for Water Management (RTA, 1999) and relevant EPA guidelines.	Contractor	Detailed design / Pre-construction	Section 4.3 of QA G36 Environment Protection
SW8	Accidental spills	The emergency spill plan will address measures to be implemented in the event of a spill, including: <ul style="list-style-type: none"> <li>Initial response and containment (e.g. shutting valves, crimping of hoses, use of booms, pads and absorbent material)</li> <li>Notification of emergency services and relevant authorities (including Roads and Maritime and EPA officers).</li> </ul>	Contractor	Pre-construction	Section 4.3 of QA G36 Environment Protection
AH1	Aboriginal heritage	The Standard Management Procedure - Unexpected Heritage Items (Roads and Maritime, 2015) will be followed in the event that an unknown or potential Aboriginal object/s, including skeletal remains, is found during construction. This applies where Roads and Maritime does not have approval to disturb the object/s or where a specific safeguard for managing the disturbance (apart from the Procedure) is not in place. Work will only re-commence once the requirements of that Procedure have been satisfied.	Contractor	Detailed design / pre-construction	Section 4.9 of QA G36 Environment Protection

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
AH2	Aboriginal heritage	Aboriginal cultural heritage awareness will be covered in site inductions and pre-work 'tool box' talks.	Contactor	Pre-construction	Additional measure
AH3	Aboriginal heritage	Opportunities for incorporation of Aboriginal cultural interpretative material as part of the proposal will be explored in consultation with Aboriginal stakeholders	Roads and Maritime	Detailed design	Additional measure
AQ1	Air quality	<p>An Air Quality Management Plan (AQMP) will be prepared and implemented as part of the CEMP. The AQMP will include, but not be limited to:</p> <ul style="list-style-type: none"> <li>• potential sources of air pollution (including compound operation)</li> <li>• air quality management objectives consistent with any relevant published EPA and/or OEH guidelines</li> <li>• mitigation and suppression measures to be implemented</li> <li>• methods to manage work during strong winds or other adverse weather conditions</li> <li>• a progressive rehabilitation strategy for exposed surfaces.</li> </ul>	Contactor	Pre-construction	Section 4.4 of QA G36 Environment Protection
SE1	Socio-economic	<p>A Communication Plan will be prepared and implemented as part of the CEMP to help provide timely and accurate information to the community during construction. The Communication Plan will include (as a minimum):</p> <ul style="list-style-type: none"> <li>• Mechanisms to provide details and timing of proposed activities to affected residents, including changed traffic and access conditions, and changes to available open space at Ettalong Oval</li> <li>• Contact name and number for complaints</li> </ul>	Roads and Maritime Project Manager	Pre-construction	Standard safeguard

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
		<ul style="list-style-type: none"> <li>Notification requirements for noise generating activities</li> <li>Procedures for communicating with other projects to determine the potential for concurrent activities and associated cumulative impacts.</li> </ul>			
HH1	Non-Aboriginal heritage	The Standard Management Procedure - Unexpected Heritage Items (Roads and Maritime, 2015) will be followed in the event any unexpected heritage items, archaeological remains or potential relics of Non-Aboriginal origin are encountered.	Contractor	Detailed design / pre-construction	Section 4.10 of QA G36 Environment Protection
UT1	Utilities	<p>Prior to the commencement of works:</p> <ul style="list-style-type: none"> <li>the location of existing utilities and relocation details will be confirmed following consultation with the affected utility owners</li> <li>If the scope or location of proposed utility relocation works falls outside of the assessed proposal scope and footprint, further assessment will be undertaken.</li> </ul>			
HZ1	Hazards and risk management	<p>A Hazard and Risk Management Plan (HRMP) will be prepared and implemented as part of the CEMP. The HRMP will include, but not be limited to:</p> <ul style="list-style-type: none"> <li>details of hazards and risks associated with the activity (including consideration of bushfire)</li> <li>measures to be implemented during construction to minimise these risks</li> <li>record keeping arrangements, including information on the materials present on the site, material safety data sheets, and personnel trained and authorised to use such materials</li> </ul>	Contacto	Detailed design / pre-construction	

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
		<ul style="list-style-type: none"> <li>• a monitoring program to assess performance in managing the identified risks</li> <li>• contingency measures to be implemented in the event of unexpected hazards or risks arising, including emergency situations.</li> <li>• The HRMP will be prepared in accordance with relevant guidelines and standards, including relevant Safe Work Australia Codes of Practice, and EPA or Office of Environment and Heritage publications.</li> </ul>			

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### 3.3 Licencing and approvals

Table 3-2 provides a summary of the licencing and approval requirements relevant to the proposal.

**Table 3-2: Summary of licencing and approvals required**

<b>Instrument</b>	<b>Requirement</b>	<b>Timing</b>
Water Management Act 2000 (Section 92)	Water supply work approval (for dewatering of excavations)	Prior to dewatering activity
Roads Act 1993 (Section 138)	Road occupancy licence for lane closures on Maitland Bay Drive / Picnic Parade.	Prior to road occupancy

## References

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