

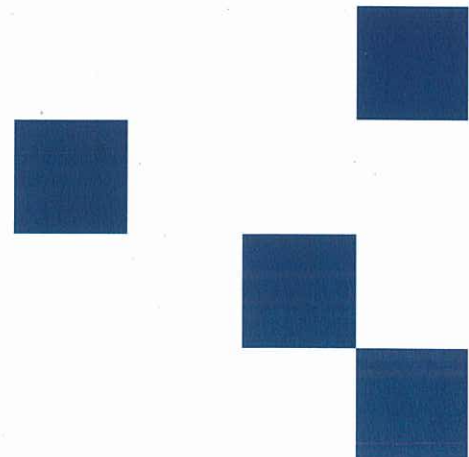


**Transport**  
Roads & Maritime  
Services

# **BANGOR BYPASS STAGE 2**

## **Modification Report**

**March 2012**



# **1. Introduction**

## **1.1 Background**

The Bangor Bypass Project (the Project) was approved by the then Minister for Planning on the 22 November 2002 (the Approval) subject to 113 conditions (Approval Conditions). It had previously received the concurrence of the then Director-General of the National Parks and Wildlife Service subject to a number of conditions (Concurrence Conditions).

The Project comprises a new four lane, controlled access arterial road with at-grade intersections and is located near Menai in the Sutherland Shire. The Project as approved has two main elements.

- An east-west link of approximately 3.5 kilometres in length between the western approaches of the Woronora Bridge and Old Illawarra Road at Menai.
- A north-south link of approximately 2.6 kilometres in length between Alfords Point Road at Menai and New Illawarra Road at Barden Ridge.

The Approval was subsequently modified as follows:

- to exclude a connection between the north-south link and Old Illawarra Road at Barry Road (August 2004);
- changes to various Approval Conditions prior to the commencement of construction of Stage 2 of the project so that they are more specifically tailored to the requirements of the stage works (June 2009).

The Project is being delivered in stages. Stage 1 generally comprises the east-west link as described above and that part of the north-south link between Marsden Road in the south and Alfords Point Road in the north. It was opened to traffic on 7 February 2005.

Stage 2 of the project generally comprises a 1.2 km road linking New Illawarra Road in the south with the Bangor Bypass east-west link in the north. Stage 2 of the project was opened to traffic in its full configuration in April 2011.

## **1.2 Purpose of this report:**

This report has been prepared in support of Roads and Maritime Services (RMS's) proposed modification of the Approval and is intended to assist the Planning Minister in forming a view as to the merits of that modification. In this context it has three main objectives:

1. To describe the proposed change to the Approval (the Proposed Modification)
2. To assess the environmental and community impacts of the Proposed Modification.
3. To present a justification of the Proposed Modification.

RMS will provide a copy of this report with its formal request to modify the Approval.

### **1.3 Modification Process:**

Section 75W (within Part 3A) of the *Environmental Planning and Assessment Act, 1979* (the EP&A Act) provides that a proponent may request the Planning Minister modify an approval for a project.

A modification is defined as changing the terms of the Minister's approval, including revoking or varying a condition of the approval or imposing an additional condition of approval.

After considering a modification request, the Planning Minister may modify the approval (with or without conditions) or disapprove of that modification.

### **1.4 The approved project:**

The approved project is as described in Condition 1 of the Approval as subsequently modified on the 22 August 2004 and 22 June 2009.

Whilst the Project was approved under the now repealed Part 5 Division 4 of the EP&A Act, that approval is now taken to be a Part 3A approval pursuant to section 75ZA(3) of the EP&A Act.

### **1.5 The Proposed modification:**

The Proposed Modification is as described in Section 2.1 of this report.

RMS is making a modification application after having formed the view that the proposed changes cannot be considered consistent Approval.

## **2. Modification description and justification**

### **2.1 Proposed changes to the project as approved:**

The EIS proposal did not propose a direct connection between Old Illawarra Rd and the east-west link and also proposed to delete existing access from Menai to Barden Ridge via Old Illawarra Road (Appendix A).

Following exhibition of the EIS various submissions were received and adjustments were made to the proposal to address many of the issues/concerns raised. The provision of a direct connection between Old Illawarra Rd and the Bangor Bypass east-west link including maintaining the connection between Menai and Barden Ridge via Old Illawarra Road was proposed in the Representations report. Access was via on/off ramps from the east-west link to Old Illawarra Rd.

A revised design for the connection of Old Illawarra Rd to the east-west link was identified in the Bangor Bypass Director's General Report Section 115C of the *Environmental Planning and Assessment Act 1979* dated November 2002. The revised layout included the deletion of the on ramp from Old Illawarra Rd to the east-west link

and inclusion of a 'hook turn' between Old Illawarra Rd and New Illawarra Rd just north of the Old Illawarra Rd/east-west link underpass (Appendix B).

The 'hook turn' was designed and constructed (as part of stage 1 works) based on a 70km/h sign posted speed limit. Although constructed as part of stage 1 of the project the 'hook turn' was scheduled to be opened when stage 2 of the project removed access from Marsden Rd and Australia Road onto the North-South Link (New Illawarra Road). Prior to the opening of the Bangor Bypass stage 1 a decision was made to open the stage 1 north-south link at 80km/h instead of the originally intended 70km/h.

RMS seeks approval to modify the approved Bangor Bypass by omitting the connection (hook turn) from Old Illawarra Road to the Bangor Bypass East-West Link via New Illawarra Road.

## **2.2 Proposed Changes to the conditions of approval:**

Approval is sought to modify Condition of Approval number 1(c) of the Minister's approval for the Bangor Bypass project. The condition requires that the project be carried out in accordance with the Director-General's Report.

## **2.3 Justification for the Modification:**

As part of detailed design for stage 2, the hook turn was reviewed prior to opening it to traffic. It was identified that in an 80 kph speed environment it could not be opened in it's designed condition and still conform to the requirements of the Road Design Guide.

Sinclair Knight Merz were commissioned to carry out an independent safety audit which recommended that the hook turn remain closed.

The following options were considered for the hook turn:

Option	Pros	Cons
Reduce the current posted speed limit on new Illawarra Road to 70km/h	Would allow the hook turn to operate safely and as such could be opened.	Reducing the speed limit to 70km/h is not consistent with current guidelines for minimising speed zone changes along a corridor.
Opening of Carter Road Bridge for motorists.	Would provide a shorter route for residents in the north eastern corner of Barden Ridge to Sutherland, via Carter Rd, Menai Rd and Akuna Ave to the east-west link.	The Carter Rd bridge is currently only open to buses. The road is under the care and control of Sutherland Shire Council. RMS has approached Council with this suggestion however Carter Road remains closed to motorists.

Construction of a separate left-out lane from Old Illawarra Rd into east-west link at the current location of the hook turn.	Provision of direct access to the east-west link.	The existing configuration has a connection from Old Illawarra Rd into the left turn lane in New Illawarra Rd which turns onto the east-west link. This option would involve the relocation of existing noisewalls, retaining walls and some changes to the bridge over Old Illawarra Road resulting in a substantial impact on the environment.
Extension of the start of the left turn lane in New Illawarra Rd north of the preceding crest vertical curve and current hook turn location and provision of a physical barrier (back to back SF kerbs) between the left turn lane and straight through lanes.	This option would prevent weaving by restricting vehicles to the left turn lane and resolve some of the safety concerns relating to opening of the hook turn.	This option would involve pavement adjustments, earthworks including the provision of a retaining wall in the central median resulting in a substantial impact on the environment.
Permanent closure of the hook turn to traffic.	Does not require any additional construction work. Community in general has accepted the closure of the hook turn and use of the detour via Old Illawarra Rd and New Illawarra Rd to the east-west link.	Longer journey for residents in the north eastern corner of Barden Ridge.

A number of alternative non construction options such as various re-linemaking schemes for the approach and departure side of New Illawarra Rd and the hook turn were also considered but they also could not meet the necessary Road Design Guide criteria.

The option of maintaining closure of the hook turn and diverting local traffic was proposed for implementation.

### 3. Environmental Assessment

#### 3.1 Community outcomes:

As identified in section 2.1 of this report, the original design for the project (as presented in the EIS) did not include a direct connection between Old Illawarra Rd and

the east-west link. The objectives and predictions in the EIS were based on the assumption that there was no direct connection between Old Illawarra Rd and the east-west link. In this regard the removal of the hook-turn would be consistent with the objectives and assumptions identified in the EIS.

The 'hook turn' was identified as a connection between Old and New Illawarra Roads in the Director Generals Report. The 'hook turn' was constructed as part of the 'stage 1' works but remained closed until the connection between Old and New Illawarra Rd via Marsden Rd was closed as part of the stage 2 project.

Prior to the opening of Stage 2, the route to Sutherland for residents of Barden Ridge was primarily along Australia Road or Marsden Road, New Illawarra Road then onto the Bangor Bypass. Residents now have a longer journey via the Old Illawarra Road / New Illawarra Road signalised intersection to access New Illawarra Road. The intended hook turn from Old Illawarra Road to New Illawarra Road would provide a more direct route to the Bangor Bypass, thus reducing travel times.

Since the opening of Stage 2, RMS has received a complaint from one resident (with 7 people included on their email) regarding the increased travel time to access New Illawarra Road and the Bangor Bypass. RMS has investigated the impacts on the local community and through traffic as a result of the removal of the hook turn connection.

The average travel time in non peak periods between the cnr of Marsden Rd/Old Illawarra Rd, Barden Ridge and Sutherland via the following three routes is presented below:

1. Previously available route prior to opening of stage 2 via Marsden Rd, New Illawarra Rd and the east-west link: 7.2 km, 8 minutes.
2. Route via Marsden Rd, old Illawarra Rd, Menai Rd, Akuna Ave and the east-west link (this route was available pre and post stage 2 works): 8.3km, 10 minutes.
3. Route via Marsden Rd, Old Illawarra Rd, New Illawarra Rd and the east-west link (this route was available following the closure of direct access between Marsden Rd and Australia Rd to Old Illawarra Rd as a result of the stage 2 works): 8.8 km, 11 minutes.

It is estimated that on an average trip the travel time has had a minimal increase of 3 minutes (including waiting time at the Old/New Illawarra Road intersections) and the travel distance increased by 1.6 km between routes 1 and 3. The increase in travel time and distance are only experienced on the trip from Barden Ridge to Sutherland as the Barden Rd off ramp from the east-west link to Barden Rd has been opened as part of the stage 2 works. No increase in distance or time is experienced on the return trip from Sutherland to Barden Ridge.

The EIS travel time survey indicated that Menai Rd (prior to the construction of the Bangor Bypass project) had a poor level of service as indicated by the low travel speeds. The traffic implications identified in the EIS for Menai Road predicted the following decreases in traffic if the east-west and north-south links were constructed (without any direct connection between Old Illawarra Rd and the east-west link):

	NB/EB traffic	SW/WB traffic
Menai Rd east of Old Illawarra Rd	34% reduction	35% reduction
Menai Rd east of Yala Rd	50% reduction	60% reduction

The lower reduction in traffic volumes indicated in the results above for Menai Rd east of Old Illawarra are as a result of a higher local traffic volume in this section of Menai Road due to the location of Menai Market Place.

The percentage of through traffic and local traffic using Menai Rd was identified in the EIS as being approximately 40% local/60% through traffic in the am eastbound peak, and 60% local/40% through traffic in the pm peak westbound. The increase in local traffic in the pm was attributed to trips associated with the Menai Market Place.

The removal of the potential hook turn would not increase through traffic on Menai Rd and through traffic would continue to use the east-west/north-south links as they are now. As a result there is only a minimal impact on the local traffic use of Menai Rd.

### **3.2 Environmental Aspects and Impacts:**

#### ***Geology, topography and soils***

The proposed change to the Approval Condition is not expected to result in different impacts on geology, topography and soils to those discussed in the original Assessment Documentation.

#### ***Water quality and drainage***

The proposed change to the Approval Condition is not expected to result in different impacts on water quality and drainage to those discussed in the original Assessment Documentation.

#### ***Flora and fauna***

The proposed change to the Approval Condition is not expected to result in different impacts on flora and fauna to those discussed in the original Assessment Documentation.

#### ***Air quality***

The proposed change to the Approval Condition is not expected to result in different impacts on air quality to those discussed in the original Assessment Documentation.

**Noise and vibration**

The proposed change to the Approval Condition is not expected to result in different impacts on air quality to those discussed in the original Assessment Documentation.

**Traffic and transport**

The proposed change to the Approval Condition is not expected to result in different impacts on traffic and transport to those discussed in the original Assessment Documentation. The potential impacts have been discussed in section 3.1 of this report.

**Aboriginal heritage**

The proposed change to the Approval Conditions is not expected to result in different Aboriginal heritage outcomes to those discussed in the original Assessment Documentation.

**Non-Aboriginal heritage**

The proposed change to the Approval Condition is not expected to result in different non-Aboriginal heritage outcomes to those discussed in the original Assessment Documentation.

**Social and land use impacts**

The proposed change to the Approval Condition is not expected to result in different social and land use outcomes to those discussed in the original Assessment Documentation. The potential impacts have been discussed in section 3.1 of this report.

**Hazard and risk**

The proposed change to the Approval Condition is not expected to result in different hazard and risk outcomes to those discussed in the original Assessment Documentation.

## **4. Conclusion**

RMS has investigated various options and their impacts regarding the 'hook turn' between Old Illawarra and New Illawarra Roads. The EIS proposal that did not have a connection between Old Illawarra Rd and the east-west link. As a result the removal of the hook turn will not adversely impact on the objectives and assumptions of the EIS. A connection between Old Illawarra Rd and the east-west link was identified in the Representations report and the hook turn configuration was adopted for the connection in the Director Generals Report. The removal of the hook turn will have no impact on through traffic and a minor impact on a small portion of the Barden Ridge community. As a result the proposal of the removal of the hook turn is proposed for implementation.



## Appendix A: EIS north-south/east-west/Old Illawarra Rd intersection proposal





**Appendix B: Hook Turn and westbound exit to Barden Road as constructed during stage 1 of the works**

