



**MODIFICATION REQUEST:
Bangor Bypass Modification 3
(74-12-2008 Mod 3)**

***Removal of the connection (hook turn) from
Old Illawarra Road to the Bangor Bypass east-
west link via New Illawarra Road***



Director-General's
Environmental Assessment Report
Section 75W of the
Environmental Planning and Assessment Act 1979

September 2012

Cover Photograph – Hook turn at Old Illawarra Road (DP&I, 2012)

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EXECUTIVE SUMMARY

The Bangor Bypass project was originally approved by the then Minister for Planning on 22 November 2002. It comprised a new four lane, controlled access arterial road with at-grade intersections. It consists of 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 Alford's Point Road at Menai and New Illawarra Road at Barden Ridge.

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

The department has identified the key issue being access and travel time impacts to nearby residents. Public submissions received also identified access and travel times as the primary concern. It is recognised that these issues will affect nearby residents, however these issues are required to be balanced against the road design safety requirements of the hook turn.

The department concludes that the hook turn cannot be safely opened in the context of the surrounding road network. Therefore, it is recommended the modification request to remove the hook turn be approved.

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1. BACKGROUND

The Bangor Bypass was approved by the then Minister for Planning on 22 November 2002 under the then Division 4, Part 5 of the *Environmental Planning and Assessment Act 1979* (the EP&A Act). By virtue of savings and transitional provisions the project is a deemed Part 3A project.

The project comprises a new four lane, controlled access arterial road with at-grade intersections and is located near Menai in the Sutherland local government area. The project 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 Alford's Point Road at Menai and New Illawarra Road at Barden Ridge.

The project has been delivered in two stages. Stage 1 generally comprises the east-west link as described above and part of the north-south link between Marsden Road in the south and Alford's Point Road in the north. It was opened to traffic on 7 February 2005.

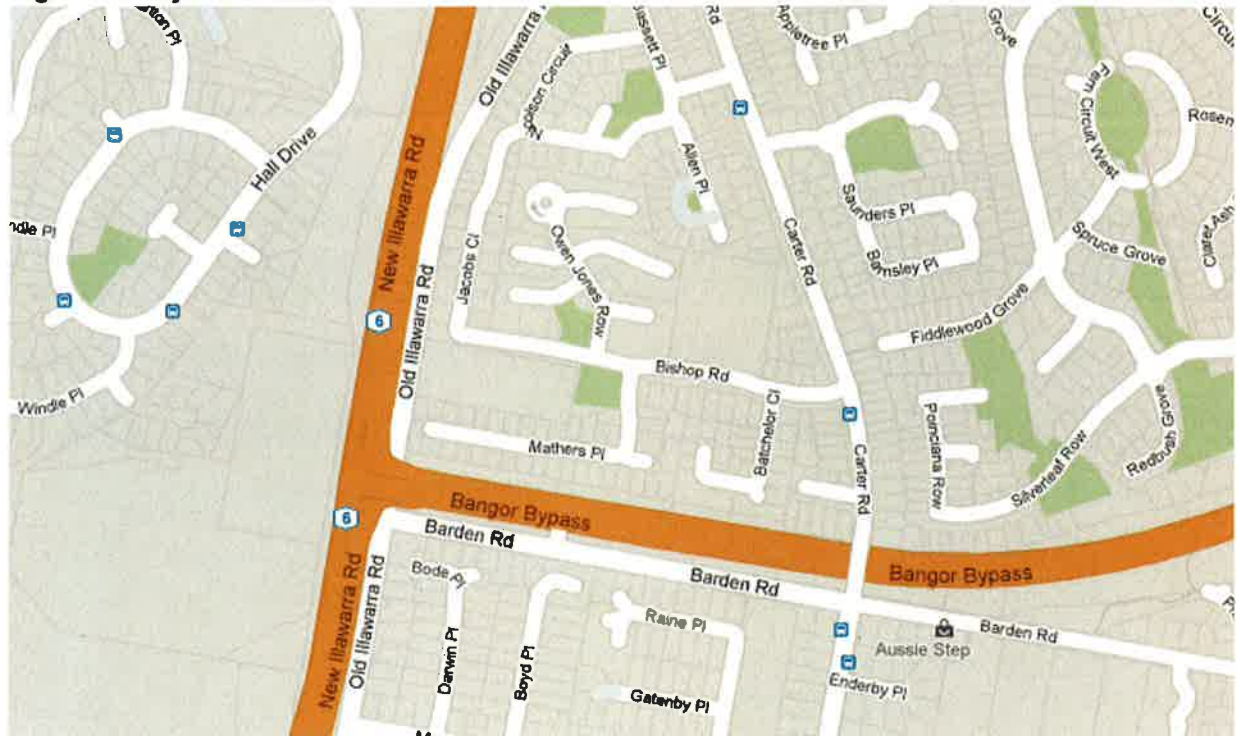
Stage 2 of the project generally comprises a 1.2km road linking New Illawarra Road in the south with the Bangor Bypass east-west link in the north. Stage 2 of the project was opened to traffic in April 2011.

The project has been the subject of two previous modifications:

- Modification 1 – excluded a connection between the north-south link road and Old Illawarra Road at Barry Road (August 2004).
- Modification 2 – changes to various conditions of approval prior to the commencement of construction of Stage 2 so that they were more specifically tailored to the requirements of the staged works (June 2009).

The project location is shown in Figure 1.

Figure 1: Project Location



2. PROPOSED MODIFICATION

2.1 Modification Description

The RMS has submitted a modification request under s75W of the EP&A Act to remove the hook turn located between Old Illawarra Road and New Illawarra Road, near the junction of New Illawarra Road and the Bangor Bypass east-west link. The RMS proposes to remove the hook turn for road safety reasons relating to sight lines and requirements for adequate deceleration.

It is noted that the hook turn has been constructed but is currently blocked with concrete barriers and has never been in operation. However, the hook turn is currently configured to allow its use by emergency vehicles and high vehicles (more than 3.3m in height). The hook turn was constructed as part of Stage 1 of the project, although it was envisaged that the hook turn would be opened as part of Stage 2.

As part of the detailed design for Stage 2, the hook turn was reviewed prior to Stage 2 opening to traffic. The RMS identified that in an 80 kph speed environment it could not be opened in its designed condition and conform to the requirements of the Road Design Guide. It is on this basis that the hook turn was never made operational and why the RMS has made the modification request to remove the hook turn.

The approved project is shown in Figure 2.

Figure 2: Approved Project Layout



3. STATUTORY CONTEXT

3.1 Continuing Operation of Part 3A

In accordance with clause 3 of Schedule 6A of the EP&A Act, s75W of the EP&A Act as in force immediately before its repeal on 1 October 2011 as modified by Schedule 6A, continues to apply to Part 3A projects.

3.2 Modification of the Minister's Approval

The modification request fulfils the requirements of s75W of the EP&A Act as it is not consistent with the project approval, but is not a radical transformation either.

4. CONSULTATION AND SUBMISSIONS

4.1 Exhibition

Under Section 75X(2)(f) of the EP&A Act, the Director-General is required to make the modification request publicly available. The Department:

- publicly exhibited it from Tuesday 17 April 2012 until Tuesday 8 May 2012:
 - on the Department's website; and
 - at the Department of Planning and Infrastructure and Sutherland Shire Council offices; and
- advertised the public exhibition of the modification request in the St George and Sutherland Shire Leader on Tuesday 17 April 2012.

The Department received 16 submissions during the exhibition of the modification request – 1 submission from a local authority and 15 submissions from the general public.

A summary of the issues raised in submissions is provided below.

4.2 Local Authority Submissions

One submission was received from Sutherland Shire Council.

Sutherland Council objected to the proposed modification due to access impingement for the local community and its belief that alternative arrangements can be made to facilitate the hook turn.

4.3 Public Submissions

15 submissions were received from the public.

Of the 15 public submissions, 13 (87%) objected to the proposed modification, 1 (6%) supported the proposed modification and 1 (6%) did not object but raised concerns. The key issues raised in public submissions are listed in Table 1.

Table 1: Summary of Issues Raised in Public Submissions

Issue	Times mentioned	Proportion of submissions (%)
Access/travel time	12	80
Traffic congestion	3	20
Noise	2	13

5. ASSESSMENT

The department has considered the issues raised in submissions in its assessment of the proposed modification, and considers that the key assessment issue relates to access.

The department considers there would be no adverse impacts on the physical environment (including flora, fauna, hydrology etc) or upon the amenity of the surrounding community as a result of the modification.

5.1 Access

Issue

After the opening of Stage 2 of the project, access arrangements onto the Bangor Bypass for residents in the north eastern area of Barden Ridge were modified. Primarily, vehicles were no longer able to turn right onto New Illawarra Road from Marsden Road, which allowed them to turn right onto Bangor Bypass. Instead, from Marsden Road vehicles were required to turn right onto Old Illawarra Road, continuing underneath the Bangor Bypass and travel for approximately 800m to the intersection of Old Illawarra Road and New Illawarra Road and effectively undertake a U-turn movement onto New Illawarra Road to travel back and then left onto the Bangor Bypass.

If the hook turn was opened, motorists would have the ability to do a U-turn from Old Illawarra Road to New Illawarra Road and then to turn left onto the Bangor Bypass. The differences in the routes are displayed in Figure 3 below. The existing route, with the hook turn closed is shown in red. The route if the hook turn was opened is shown in blue.

Figure 3 – Route Difference



Submissions

Sutherland Shire Council objected and stated the following:

The proposed hook turn was included in the project at the request of the community to provide suitable access to the east west link from all areas of the surrounding residential catchment. Council does not accept that it should be

removed for the simple reason that the original design did not take into account the possibility of an 80km/h speed limit on the north south link. Furthermore, it would seem apparent that the existing left slip lane is also inadequate for an 80km/h speed zone. Whilst it is acknowledged that addition (sic) costs are involved, Council believes that the left slip lane should be extended to provide appropriate deceleration length and to facility (sic) the provision of the hook turn arrangement.

The majority of public submissions objected to the request, citing increased travel times and access impingement.

Consideration

The department acknowledges that by not opening the hook turn and formalising its closure, there will be an opportunity not realised for decreased travel times. The RMS has estimated the following travel times for the three route scenarios:

Route	Distance	Time
1. Prior to opening of stage 2 – Marsden Road→New Illawarra Road→east-west link	7.0km	8 minutes
2. Pre and post stage 2 – Marsden Road→ Old Illawarra Road→Menai Road→Akuna Ave→ east-west link	8.3km	10 minutes
3. Post stage 2 – Marsden Road→Old Illawarra Road→New Illawarra Road→east-west link	8.8km	11 minutes

These routes are based on travel time in non-peak periods between the corner of Marsden Road/Old Illawarra Road, Barden Ridge and Sutherland. The RMS has estimated that on an average trip the travel time has increased by three minutes and the travel distance increased by 1.6km between routes 1 and 3.

The hook turn, if operational, would result in approximately 2 kilometres less travel distance than for route three. However, it is noted that the removal of the hook turn will not alter existing conditions, due to the fact that the hook turn was never formally opened. Notwithstanding, it is recognised that the potential for lesser travel times is never realised.

Whilst the department understands that such a reduction in travel time would be advantageous for the affected residents of the north eastern area of Barden Ridge, the operational functionality of the turn, with safety of motorists considered as first priority, should be given determinative weight in the assessment of the hook turn closure.

In its modification report, the RMS noted that the hook turn was designed and constructed (as part of stage 1 works) with a speed limit of 70km/h. However, prior to

the opening of stage 1 a decision was made to open the stage 1 portion at 80km/h instead of the originally intended 70km/h.

The department understands that there are two primary reasons why a 70km/h speed limit is undesirable in this location. Firstly, a reduction to 70km/h in the area of the hook turn, whilst the remainder of the route maintains a speed limit of 80km/h, is contrary to *NSW Speed Zoning Guidelines* (Roads and Traffic Authority, 2011). Specifically, one of the aims of this document is to “ensure an appropriate balance of speed zones which are sensitive in changes to conditions along the length of a road without excessive numbers of change”. A principle of the guidelines is to keep speed zone changes to a minimum as frequent changes in speed limits may result in possible confusion to motorists.

The department considers that changing the speed zone in the vicinity of the hook turn from 80km/h to 70km/h may introduce confusion and compromise driving safely.

The second reason the department considers it inappropriate to reduce the speed limit in the vicinity of the hook turn to 70km/h is the overarching government policy decision to restrict the use of 70km/h speed zones. The department understands that this policy decision was implemented with the aim of reducing confusion and therefore increasing road safety of motorists. This policy is officially encapsulated within the document *NSW Speed Zoning Guidelines* (Roads and Traffic Authority, 2011) and includes the following objectives when formulating speed zones:

- Ensure that speed limits and speed zones are set to balance road safety with mobility needs. The department accepts that the existing 80km/h speed limit is in effect for a substantial distance of road and lowering it to 70km/h in the vicinity of the hook turn could result in road safety impacts.
- Ensure an appropriate balance of speed zones which are sensitive to changes in conditions along the length of a road without excessive numbers of changes. The department considers that reducing the speed limit to 70km/h would result in an unnecessary speed zone change, which may impact upon the safety of motorists.

The department notes that Sutherland Council considered that the left slip lane leading to the hook turn should be extended to allow adequate deceleration length. In its response to submissions, the RMS clarified that the extension of the slip lane alone does not adequately address the issues identified in the road safety report in regards to motorists travelling south on New Illawarra Road approaching the hook turn and New Illawarra Road/Bangor Bypass east-west link intersection for the following reasons:

- There is insufficient stopping sight distance for drivers travelling at 80km/h southbound on New Illawarra Road to react and stop before reaching a vehicle exiting from the hook turn; and
- Potential impact to other drivers on New Illawarra Road resulting from unexpected emergency braking movements.

The RMS also identified that the reason they did not pursue the option of extending the slip lane is due to the extensive works that would need to be undertaken. This option would have included pavement adjustments, and earthworks including the provision of a retaining wall in the central median. Whilst detailed costing has not been undertaken by the RMS, it is estimated based on the strategic design that the works would be in the range of \$1.1m to \$1.5m.

In view of the above, the department notes that the RMS has strongly considered the overall safety benefits of removing 70km/h zones where possible, and considers it would be inappropriate to require the implementation of a specific speed zone which contradicts the RMS' own guidelines. Therefore, the department recommends the modification request be approved.

5.2 Other Issues

Some of the submissions raised concerns about the gap in the noise wall where the hook turn is located, and increased traffic related noise. The enclosure of the gap with noise walls would remove its existing use for high vehicles and emergency vehicles. The Old Illawarra Road underpass of the Bangor Bypass (to the south of the hook turn) has restricted height clearances, consequently the RMS has retained the gap as an emergency detour for high vehicles.

In relation to increased noise from road traffic, the department notes that the hook turn was considered in the noise assessment of the project and appropriate noise mitigation measures were subsequently applied. Additionally, the department does not envisage the closure of the hook turn will result in any significant noise impacts on nearby residences.

6. CONCLUSION AND RECOMMENDATIONS

The Bangor Bypass project was originally approved by the then Minister for Planning on 22 November 2002. It comprised a new four lane, controlled access arterial road with at-grade intersections. It consists of 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 Alford's Point Road at Menai and New Illawarra Road at Barden Ridge.

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

The key issue in relation to the modification request are access/travel time issues to residents living in the area. In its assessment, the department recognises that the hook turn was never opened due to safety reasons. Public submissions identified access and travel times as the primary concern. The department notes these concerns, however the road design safety requirements carry determinative weight in the assessment of the modification request.

The department concludes that the hook turn cannot be safely opened in the context of the surrounding road network. Therefore, it is recommended the modification request be approved.

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