

SUBMISSION Barton Highway Duplication Planning and Safety Works
15 June 2010



Contents

1	Summary	2
2	Recommendations	2
3	Introduction	2
4	Australian Trucking Association	3
5	Justification	3

1 Summary

Road transport is a national industry that is critical to the economic wellbeing of Australia; moving in excess of 75 per cent of the national freight task. The efficient regulation of road transport is in the nation's interest. Duplication of freight networks, like the Barton Highway, is important to future efficiency needed to meet escalating community demand for freight safely. The safety benefits of duplication are well known and proven in NSW rural highway situations many times over. The Barton Highway is of growing importance as a regional and inter-regional freight route. There are several heavy vehicle related issues on the Barton Highway that demand special design and planning for safer future. Dealing safely with significant entry and egress by heavy vehicles at Kaveney's Road, improving rest opportunities and accommodation "now generation" freight vehicles.

2 Recommendations

Recommendation 1

Planning for the Barton Highway Duplication includes ensuring all existing rest areas are maintained, with improved capability, capacity, services and ideally additional rest opportunities. It is particularly important that shade is available at the completion of the revised rest areas, not some years later as replacement trees grow. At least one rest area in each direction should be provided with water and toilet facilities.

Recommendation 2

Planning for the Barton Highway Duplication includes ensuring the road is modular B-triple capable (35 metre combination length with a 10.6 metre maximum swept path). This will, of course, also ensure the Barton Highway freight link is Performance Based Standards Level 2B capable. In developing this design outcome, emergency contra-flow capability for these vehicles should also be included by utilising the opportunities to re-direct traffic that regular centre island, or fly over, junctions provide. Suitable rest area capability for these vehicles should be included in this design outcome.

Recommendation 3

Planning for the Barton Highway Duplication must safely address risks associated with high levels of truck entry and egress at the Kaveney's Road Junction. The ideal safety solution is a B-double capable overpass junction with extended acceleration lanes into the Barton Highway carriageways. The minimum acceptable solution is B-triple capable protected centre island storage with right-hand-side (centre median) extended acceleration and de-acceleration lanes of the southbound carriageway (a 'seagull' treatment) to allow for the terrain, line of sight issues and weather related foggy gully effects. The northbound carriageway would require acceleration and de-acceleration lanes on the left hand side of the carriage way, which need to be long but not as long as those on the southbound carriageways.

3 Introduction

Over the coming decades Australia is facing growth in freight demand. Interstate and inter-regional freight demand will continue to grow at a even higher rate. The Barton Highway traffic demand will continue to grow as the Canberra grows, the region grows and inter-regional freight grows. The Barton Highway truck traffic has escalated with the Tumut timber industry developments as

additional timber and waste paper feedstock are sourced from the region and regions beyond, such as the south coast.

Meeting road safety objectives in growing traffic streams demands better roads and better road designs able to allow efficient vehicle freight vehicles to be utilised.

4 Australian Trucking Association

The ATA was originally established in 1989 as the Road Transport Forum and is the peak national body uniting and representing the interests of the Australian trucking industry.

Membership of the ATA's General Council comprises the peak state and sector based trucking associations, the Transport Workers' Union, some of the nation's largest transport enterprises and representatives of small fleet owners and owner drivers.

5 Justification

Recommendation 1

Planning for the Barton Highway Duplication includes ensuring all existing rest areas are maintained, with improved capability, capacity, services and ideally additional rest opportunities. It is particularly important that shade is available at the completion of the revised rest areas, not some years later as replacement trees grow. At least one rest area in each direction should be provided with water and toilet facilities.

Justification:

The **AP-T95/08** AUSTRROADS TECHNICAL REPORT, *Audit of Rest Areas against National Guidelines*, clearly states "The following routes showed particular deficiencies in provision of Rest Areas: ... Barton Hwy (NSW) – excessive spacing of Truck Parking Bays" See Below.



Austrroads Audit of Rest Areas against N:

This is a Government sponsored report that clearly identifies problems. The RTA planning processes should be seeking to rectify the problem on the Barton Highway and provide enhanced services to at least the standards in the National Guidelines for Rest Areas. See below.



NatGlinesRestAreasF acNov2005[1]NTC.pd

Recommendation 2

Planning for the Barton Highway Duplication includes ensuring the road is modular B-triple capable (35 metre combination length with a 10.6 metre maximum swept path). This will, of course, also ensure the Barton Highway freight link is Performance Based Standards Level 2B capable. In developing this design outcome, emergency contra-flow capability for these vehicles should also be included by utilising the opportunities to re-direct traffic that regular centre island, or fly over, junctions provide. Suitable rest area capability for these vehicles should be included in this design outcome.

Justification:

Developing roads to this capacity will ensure the road will be adequate for future use of high productivity vehicles that will be necessary to safely satisfy the growing freight task. The ATA has identified the need for the inter-capital inland freight network to be B-triple capable. (See ATA submission below.) B-triples are common modular combination vehicles in many states that have proven to be safe and efficient. The impending completion of the duplication of the Hume will increase the pressure on this outcome. B-triples should be thought of as the next B-double, as they have similar potential to enhance safety and efficiency.

The effects of B-double use over the last 25 years are:

- Australia's freight task is now being undertaken by 15,000 to 20,000 fewer large trucks;
- At least 350 lives have been saved as B-doubles are much safer than the vehicles they replaced and there are less trucks for cars to run into;
- Greenhouse gas emissions have been reduced by about 11 million tonnes; and
- At least \$12 billion have been saved in transport costs.



ATA HVSP
submissionSept09.pdf

A chart that may assist your consideration on relative truck impacts is attached. Please feel free to contact us for further information on this chart and it uses.



Truck Impact
Summary June 2010.



ATA-Barkwood ESA
Chart notes.pdf

PBS level 2B vehicles can be built to provide for the carriage of two 40' shipping containers. They can also be configured to provide for two 22 length pallet dry freight loads. PBS and other high productivity vehicles are important tools to managing the growing freight task, with less growth in trucks. This is very important for safety, as it mitigates the risk associated with increased exposure from responding to demand with just more trucks.

Currently, if there is an incident on the Barton Highway local diversion opportunities are limited. For B-doubles the only diversion opportunity is a very much longer route using the Federal and Hume Highways. Emergency contra-flow opportunities should be designed into all dual carriageways. However, as alternative routes are very limited for the Barton Highway the need for emergency contra-flow capabilities is escalated.

Recommendation 3

Planning for the Barton Highway Duplication must safely address risks associated with high levels of truck entry and egress at the Kaveney's Road Junction. The ideal safety solution is a B-double capable overpass junction with extended acceleration lanes into the Barton Highway carriageways. The minimum acceptable solution is B-triple capable protected centre island storage with right-hand-side (centre median) extended acceleration and de-acceleration lanes of the southbound carriageway (a 'seagull' treatment) to allow for the terrain, line of sight issues and weather related foggy gully effects. The northbound carriageway would require acceleration and de-acceleration lanes on the left hand side of the carriage way, which need to be long but not as long as those on the southbound carriageways.

Justification:

Currently truck traffic leaving Kaveney's Road and turning onto the Barton Highway to travel south must attempt to enter the 100 kilometre per hour traffic stream from a (usually) stationary start. The laden trucks need to try to accelerate to highway speeds on up hill section. This is difficult and risky in almost any condition, but the risk is escalated with peak traffic streams. This causes truck drivers to use the road shoulder/verge to allow impatient through traffic past to avoid the dangerous overtaking manoeuvres that may otherwise occur.

At peak times the only chance drivers have to leave Kaveney's Road occurs when slow traffic, L or P plate drivers have created a gap between vehicles in the oncoming traffic stream. Even with a large centre island, duplication of the highway for two lanes of through traffic in each direction and the associated increase to a 110 kilometre hour speed limit, would present a very significant increase in crash risk. This is an unacceptable risk for the community and trucks to bare.

Local truck traffic is generated from businesses in the area. Demand is growing for extraction products such as hard rock gravel, concrete and sand from this area. There are also commercial farming activities in the area, such as the piggery, which generate additional truck movements. The Kaveney's Road extraction operations have long predicted lives. For example, the Boral Hard Rock Quarry has a predicted life of over 40 years, with development application approved for extracting 500,000 tonnes per annum. Seven axle truck and dog combination require 30 trips to move 1000 tonnes. Allowing 300 working days per year this equates to 50 truck return trips per day or 100 movements onto and off the Barton Highway per day. However, this estimate makes no allowance for sand truck movements. We suggest these trucks add an estimated 20 truck trips per day, or 40 truck movements per day at the junction. Allowing for a nine hour working window per day this equals a potential, 15 truck turning movements per hour occurring at the junction.

From the Barton Highway Safety Review, an estimated reasonable representative traffic flow on Barton Highway near the junction could be 400 plus vehicles per hour, with around 10 per cent being trucks.

It is therefore fair to say that potential for conflicts between the 400 through movements and 15 turning movements per hour are high.

The best engineering solution to avoid any potential high-speed direct traffic flow conflicts is to provide grade separation.

Any flyover junction solution should as an absolute minimum be B-double capable. The truck and dog combinations preferred by extraction industry are currently under strong competition from stinger style B-doubles. The Stinger style B-doubles offer safety gains, capacity gains and little if any loss of site access, while retaining many of the benefits of truck and dog combinations such as ability to split loads. However, it should ideally allow for emergency contra-flow of B-triple vehicles (see recommendation 2).

Making a centre island approach safe for the Kaveney's Road junction with Barton Highway requires consideration of the following:

- There must be a 'Seagull' treatment to provide for southbound acceleration lane well past the top of hill and an adequate deceleration lane on the same carriageway. Otherwise, turning laden trucks will be in direct conflict with high speed through traffic, creating a very dangerous circumstance;
- Similarly, the potential risk of conflicts will increase on the northbound carriageway as there are line of sight issues associated with the speed increase and an intersection clearance distance increase with two lanes. In our view, it is most doubtful that current terrain and junction location will be safe for trucks leaving Kaveney's Road to enter the centre island when the through traffic is passing at 110 kilometre per hour; and
- The junction should be B-triple capable to allow for emergency contra-flow (see recommendation 2)

The junction suffers from fog hollow effects in winter. This offers further support to a grade separated solution, but it also assists in justifying seagull acceleration lane treatments if grade separation is not delivered.

Consideration should be given to aligning Anchow Hill Road with the Kaveney's Road to make the cross junction overpass option more viable. However, this would relocate Kaveney's Road junction to the north which would also increase line of sight for exit movements from Kaveney's Road and give a longer part of the acceleration lane at lesser gradient if a grade separation junction is not provided. It would not, and should not, preclude seagull acceleration lane treatments.