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Wagga Wagga City Council

**Report for Wagga Planning Studies**  
Traffic Management - Hammond Avenue North

September 2008



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# 1. Hammond Avenue North

## 1.1 Introduction

The area under consideration is along the north side of Hammond Avenue (Sturt Highway) between Koorungal Road and Gillard Road.

## 1.2 Existing Conditions

### 1.2.1 Roads and Intersections

Gillard Road is an unsealed track north of its intersection with Tarcoola Road. It provides access to rural properties and to the river. The intersection of Gillard Road and Hammond Avenue is a T junction with priority given to Hammond Avenue.

Koorungal Road north of Hammond Avenue provides access to several commercial properties close to Hammond Road and extends towards the river as an unsealed road providing access to rural properties. A two-lane roundabout regulates traffic flow at the intersection of Koorungal Road and Hammond Avenue.

Hammond Avenue is a four lane undivided road with a posted speed limit of 60 km/hr in the vicinity of the site. On-street parking is provided on both sides of Hammond Avenue. Trucks park in the parking bay on the southern side of Hammond Avenue between Koorungal Road and Gillard Road. A common practice is for B-doubles to use this space to temporarily park a trailer while making a delivery.

### 1.2.2 Access

Some properties have direct vehicle access to Hammond Avenue and others have their accesses onto Tarcoola Road.

### 1.2.3 Traffic Flow

The traffic volume on Hammond Avenue in the vicinity of the site is 16,000 vpd. Right turning vehicles entering properties via driveways or at Gillard Road have to cross two-lanes of traffic. There are no nearby traffic signals in either direction on Hammond Avenue and therefore few acceptably large gaps for right turning traffic.

Right turning vehicles leaving driveways or at Gillard Road have to find gaps in both directions of traffic on Hammond Avenue. As the critical gap required crossing an undivided four-lane road is 8 seconds (Austroads Guide to Traffic Engineering Part 2), attempts to turn right onto the highway may be unsafe. No casualty crashes occurred during the period between 2001 and 2005.

### 1.2.4 Public Transport

The closest bus route runs along Hammond Avenue (Sturt Highway) between the CBD and Forest hill with three services in each direction per day.



### **1.2.5 Cycling/Footpath Systems**

There are no sealed footpaths on the verges of Hammond Avenue or along Tarcoola Road. On-road cyclists use the sealed shoulders.

## **1.3 Proposed Development**

It is expected that the development of the remaining area of the Hammond Avenue North site will be of a similar nature to the existing development along Tarcoola Street, i.e. a mix of businesses, predominantly light industrial, wholesaling, storage and bulky goods retailing.

To provide safe and effective access to the additional development along Tarcoola Street, it is proposed to extend Tarcoola Street to intersect with Koorungal Road. As development increases, consideration should be given to restricting turning movements at the intersection of Gillard Road and Hammond Avenue so that all right turn movements to and from Sturt Highway are made at the Koorungal Road roundabout. This could be achieved at a relatively low cost by constructing an island at the Gillard Road/Hammond Avenue intersection and erecting 'no right turn' signs on the highway.

### **1.3.1 Future Traffic Flows**

#### **Traffic Generation**

The assumptions made for traffic generation are:

- » The area of developable land is 9 hectares, with an assumed take-up of 4 hectares by 2016
- » Gross Floor Area (GFA) is 50% of developable area
- » The peak period trip rate is 1 trip per 100m<sup>2</sup> GFA

Therefore, by 2016 an additional 200 vpd will be generated by Hammond.

#### **Traffic Distribution**

With the extension of Tarcoola Road, the majority of vehicles generated by both the existing and future industrial developments will choose to travel down Koorungal Road in preference to Gillard Road.

Even with a 100% take up of the available land (9 ha), the impact on the surrounding road network would be minor (approximately 250 more vpd). However, the extension of Tarcoola Road connection is an important measure to address the safety issues associated with right urns at Gillard Road. As mentioned above, consideration should be given to restricting turning movements at this intersection to left-in, left-out only.

### **1.3.2 Traffic Analysis**

While no intersection turn volumes were available for the two lane roundabout at Koorungal Road, it is expected that it would have sufficient spare capacity to accommodate the additional traffic flows generated by the proposed developments along the extension of Tarcoola Road.

## **1.4 Construction Cost Estimate**

The proposed improvement works and associated indicative cost estimates are summarised in Table 1.



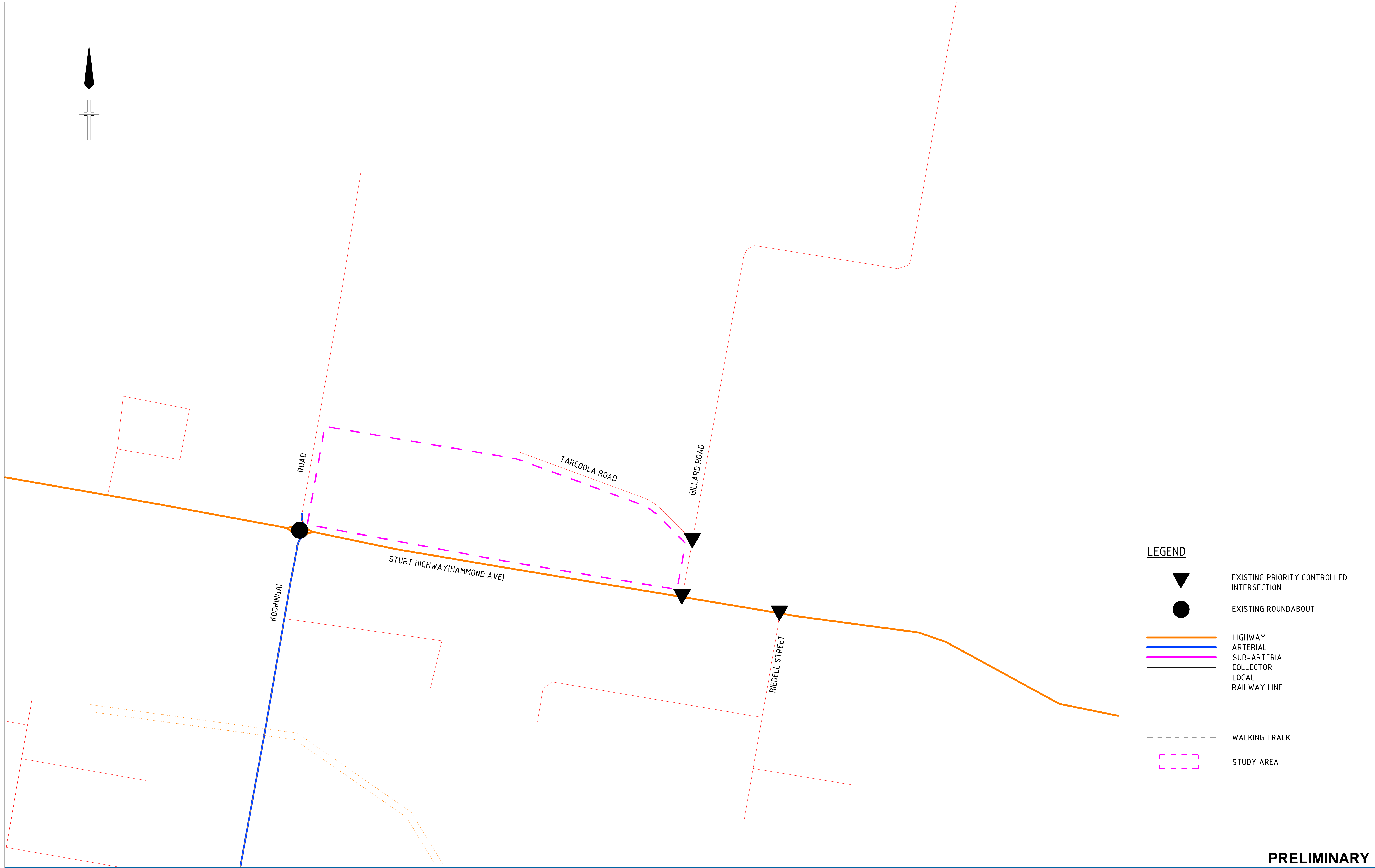
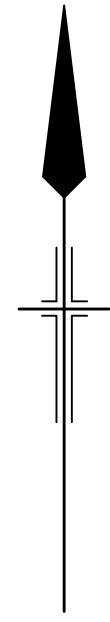
**Table 1 Proposed Improvement Works**

<b>Location</b>	<b>Proposed Upgrade Works</b>	<b>Estimated Cost</b>
Extension of Tarcoola Road (excluding the cost of land acquisition)	300 metres of new two lane road to extend Tarcoola Road to Hammond Avenue	\$300,000
Koorungal Road	Upgrade section between the roundabout and the Tarcoola Road extension	\$200,000
Hammond Avenue/ Tarcoola Road	Construct island and erect signs to prohibit right turns	\$50,000











The indicative cost estimates are based on typical rates for projects undertaken by WWCC in 2005 and are accurate to +/- 50%. As the estimates are based on indicative information only, they may change when preliminary and detailed design investigations are undertaken. The estimates exclude the costs of escalation to time of construction, design and construction contingency allowances, the costs of detailed investigations, survey, authority approvals, design, documentation, procurement, and project management of the works.



Appendix A  
Existing Conditions – Hammond Avenue  
North

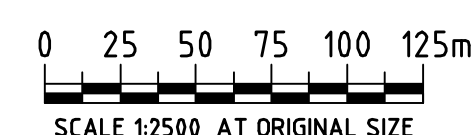


**LEGEND**

-  EXISTING PRIORITY CONTROLLED INTERSECTION
-  EXISTING ROUNDABOUT
-  HIGHWAY
-  ARTERIAL
-  SUB-ARTERIAL
-  COLLECTOR
-  LOCAL
-  RAILWAY LINE
-  WALKING TRACK
-  STUDY AREA

**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Checked	Approved	Date
B	MINOR LINEWORK CHANGES		TM	GG*	TC*	19.3.08
A	PRELIMINARY		TM			



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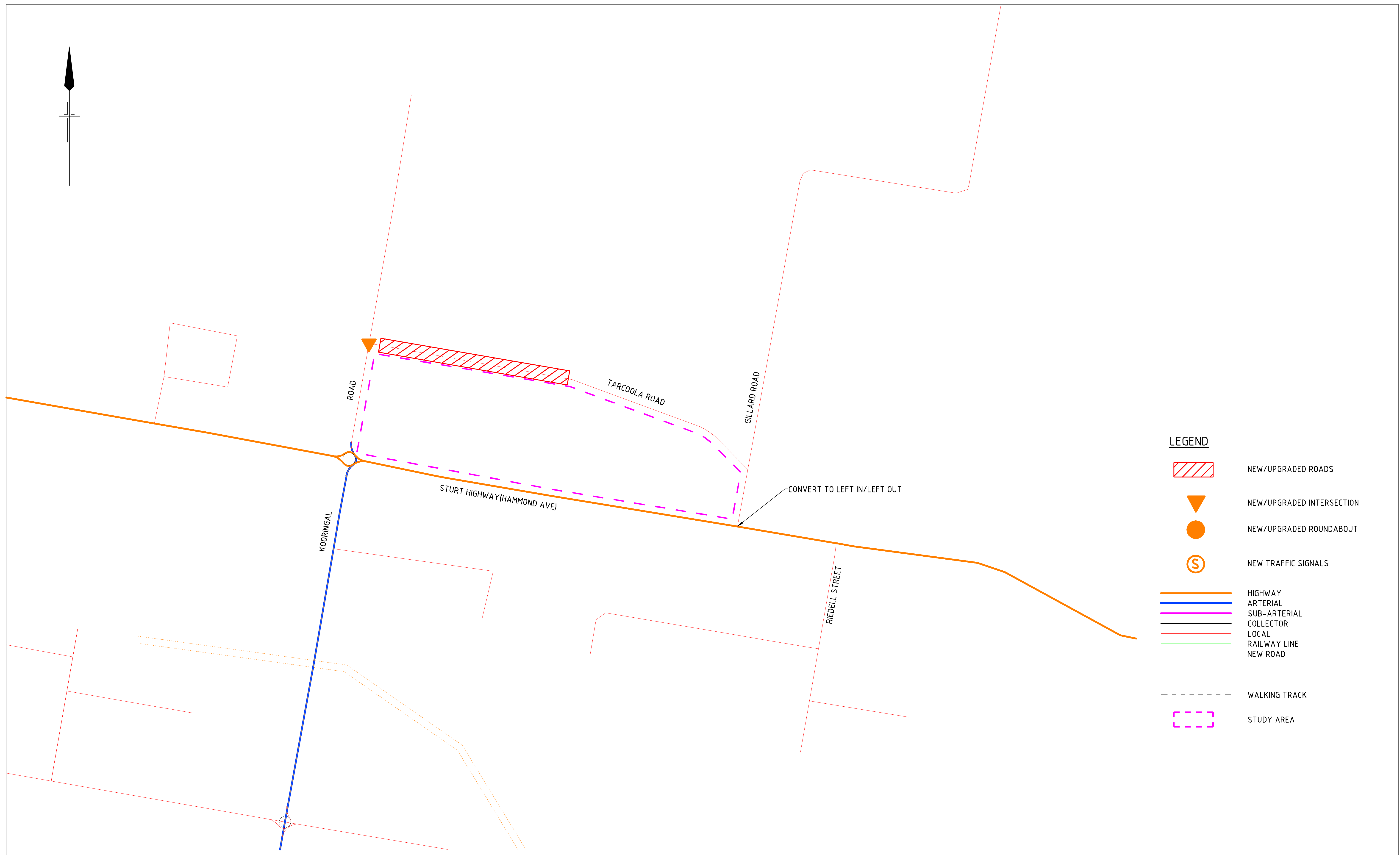
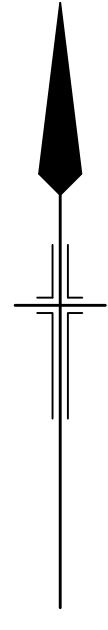
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Drafting Check	Design Check	Approved	
Date	This Drawing must not be used for Construction unless signed as Approved		
Scale AS SHOWN	Original Size <b>A1</b>		

Client	<b>WAGGA CITY COUNCIL</b>	Project	<b>WAGGA WAGGA DRAFT LEP STUDY 2007</b>	Title	<b>HAMMOND EXISTING CONDITIONS</b>
Client					
Drawing No:	<b>23-12229-SK103</b>	Rev:	<b>B</b>		



Appendix B  
Post Development Arrangement –  
Hammond Avenue North



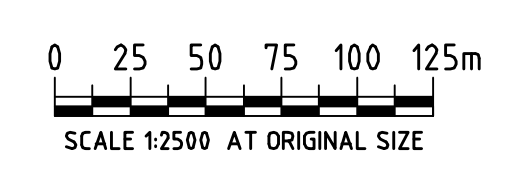


**LEGEND**

- NEW/UPGRADED ROADS
- NEW/UPGRADED INTERSECTION
- NEW/UPGRADED ROUNDABOUT
- NEW TRAFFIC SIGNALS
- HIGHWAY
- ARTERIAL
- SUB-ARTERIAL
- COLLECTOR
- LOCAL
- RAILWAY LINE
- NEW ROAD
- WALKING TRACK
- STUDY AREA

**PRELIMINARY**

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Project	<b>WAGGA WAGGA DRAFT LEP STUDY 2007</b>
Title	<b>HAMMOND POST DEVELOPMENT</b>
Original Size	<b>A1</b>
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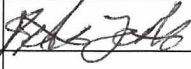

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		Name	Signature	Name	Signature	Date
0	M Lyons	G Gardner	GG	T Chapman	TC	27/9/07
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2	M Lyons	T Yeats		T Chapman		08/09/08