TRAFFIC MANAGEMENT PLAN

ON

PROPOSED SUBDIVISION

LOT 112 DP 1073781

LYONS ROAD, SAWTELL

Geoff Slattery and Partners Pty Ltd
192 Pacific Highway
COFFS HARBOUR NSW 2450

DECEMBER 2010

TRAFFIC MANAGMENT

1. INTRODUCTION

This traffic impact assessment is prepared for use in a Part 3A Project Application to NSW Department of Planning for a residential subdivision at Lot 112 DP 1073781 Lyons Road, Sawtell.

The development is covered by planning documents of Coffs Harbour City Council for residential development and use.

2. PROJECT DETAILS

The site is described as Lot 112 DP 1073781, Lyons Road, Sawtell.

A collector road access (Bambara Drive) from Lyons Road has been constructed by Coffs Harbour City Council as part of intersection works on Lyons Road. This collector road is proposed to be extended to form the main collector road in the development.

Residential development on the site is proposed as:

151 Torrens title allotments

42 Medium density / strata allotments.

Refer to layout on drawings in Appendix A.

The development is included in Council's Development Control Plan "North Bonville".

3. EXISTING TRAFFIC CONDITIONS

Refer to layout plan in Appendix A for location details.

3.1 Trunk Road

Lyons Road is the regional trunk road connecting the Sawtell Village with the Pacific Highway. Lyons Road is classified as a Main Road under the RTA and designated Main Road 540

Lyons Road provides commuter connection to other city roads:

- Pacific Highway
- Toormina Road / Hogbin Drive
- Sawtell CBD

3.2 Collector Road

Bambara Drive has been constructed by Council as a Collector Road, and an intersection with Lyons Road to cater for the anticipated traffic.

Council's constructed intersection of Lyons Road and Bambara Drive is generally in accordance with the layout requirements of a Type B intersection.

Extension of Bambara Dive is the basis of the project collector road.

3.3 Local Roads

There are existing local road connections to Bambara Drive as part of the residential area:

- Rutland Street,
- Mimiwali Close.

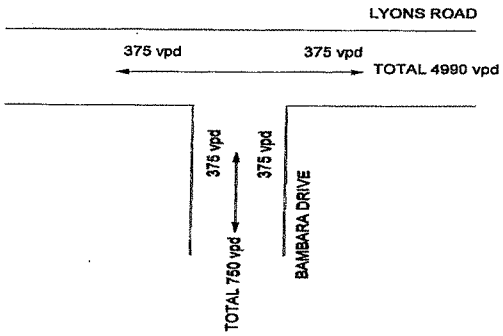
3.4 Existing Traffic Volumes

Coffs Harbour City Council has available traffic counts for Lyons Road in the vicinity of Bambara Drive:

- Actual count in 2008	4,705 vehicles per day
- Annual increase applied by Council	3%
- Estimated count in 2010	4,990 vehicles per day

Existing traffic use on the Bambara Drive includes existing constructed land and existing approved development waiting construction. There are currently 150 allotments able to exit via the intersection. Based on RTA guide to traffic generating developments this would equate to 750 vpd.

Turning movements are assessed to be equally split between west turning (Pacific Highway to Coffs City CDB) and east turning (Lyons Road to Sawtell CBD, Toormina Shopping Centre, and Coffs City CBD).



EXISTING TRAFFIC

3.5 Traffic Speeds

Lyons Road has sign posted speed of 60 km/hr and the new Bambara Drive is residential speed of 50 km/hr.

4. TRAFFIC GENERATION

4.1 Traffic Generation

The RTA's guide to traffic generating developments provides the rates for the development. Generated traffic is calculated as follows:

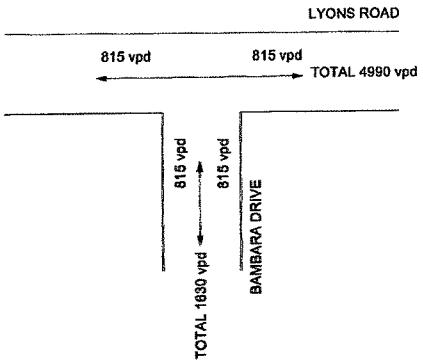
Standard residential allotments
151 lots @ 5 vpd 755 vpd

Medium density allotments
42 lots @ 3 vpd 126 vpd

4.2 Total Traffic Generated

The development is anticipated to generate a total of 881 new vehicle movements per day.

This will give the intersection a total of 1631 vpd of entering/exiting vehicles.



AFTER DEVELOPMENT TRAFFIC

5. ROAD CAPACITIES

5.1 Lyons Road

Coffs Harbour City Council advise that with other limiting factors outside of this development that Lyons Road has a service capacity to the order of 8,000 vehicles per day.

5.2 Bambara Drive

There are no further developments that will connect onto Bambara Drive and as such the total traffic flow is 1,630 vehicles per day.

Bambara Drive has been constructed as a local collector street/bus route. General capacity is in the order of 2,000 vehicles per day.

5.3 Lyons Road and Bambara Drive Intersection

The intersection has been constructed by Council under its Section 94 plan to cater specifically for the development area.

With the 2010 traffic volumes on Lyons Road the intersection has a utilisation factor of 0.48.

As the traffic volume will not increase on Bambara Drive the only factor for the intersection utilisation will be increasing traffic on Lyons Road. Based on Council's prediction of a growth rate of 3% per year the intersection will continue to have a utilisation factor of less than 1.0 for approximately 20 years.

By the stage of the intersection needing maximum capacity the general Lyons Road outside of this development will have also reached its capacity. By this stage it would be assumed that Lyons Road in general and this intersection will be subject to upgrading.

6. INTERNAL CIRCULATION

The development layout has been done to achieve the following traffic circulation:

- All traffic directed to enter and exit Lyons Road via the major intersection,
- Central road in the development to act as a local collector,
- External roads of the development to act as circulating roads,
- Other roads are local streets and connect to central and outer roads.

All locations in the development have multiple routes to access the central collector road.

7. PUBLIC TRANSPORT

There is currently a bus route on Lyons Road for general commuter transport.

As part of this development the bus route is to be expanded to include a loop through the development. This expansion is in accordance with Council's Development Control Plan for the locality.

8. LYONS ROAD INTERSECTION PERFORMANCE

The current intersection as recently completed is to a general layout of Type B in accordance with Austroads and RTA guidelines.

The capacity of the intersection for through and turning traffic will maintain at a level of Service A.

9. TRUCKS AND SERVICE VEHICLES

The largest service vehicle anticipated in the development is the regular garbage collection truck. Anticipated vehicles are an Austroads single unit truck/bus 12.5m in length.

The development layout of roads, intersections, and cul de sac allow for good access, manoeuvring, and effective circulating of all vehicles.

All emergency vehicles have good access to all of the allotments.

10. PARKING

All allotment dwellings as part of Council's residential DCP are required to be able to park two vehicles on the allotment. (Garage and driveway).

Visitor vehicles are also catered for by on street parking.

- Collector road has dedicated parking bays on each side of the road,
- Other roads are of a residential width that allows for parking on the roadside with continuing through traffic.

11. PEDESTRIANS

Pedestrians in the development are associated with the residential component only. There are no other outside sources of pedestrians that will use the development as a through route.

Footpaths/cycleways are provided to all streets in the development and will adequately cater for the expected movements clear of roadways.

12. CYCLISTS

Cyclist activity in the development will mostly be associated with the residential component, with the possibility of some outside cyclists using the streets to access Bongil Bongil National Park.

Footpaths/cycleways are provided to all streets in the development and will adequately cater for the expected movements clear of roadways.

13. ACCESS TO BONGIL BONGIL NATIONAL PARK

At this stage access to Bongil Bongil National Park is not available through the land. NPWS has a fire trail network around the edge of the park, which is accessed from other locations.

As part of the development it is proposed to provide access to the fire trail system for NPWS authorised vehicles, and pedestrian access via a suitable gate system.

For persons visiting the park via these access points there is adequate parking in the street adjacent.

Road connections for vehicles (NPWS only) will be provided to connect to the fire trail.

14. COFFS HARBOUR CITY COUNCIL DEVELOPMENT CONTROL PLAN

The Coffs Harbour City Council DCP "North Bonville" covers this development.

The road hierarchy, major roads, circulating traffic, and bus routes are all in accordance with the DCP requirements.

15. COFFS HARBOUR CITY COUNCIL DEVELOPER CONTRIBUTIONS PLAN

The Coffs Harbour City Council Developer Contributions Plan "North Bonville" covers this development. As part of this there are requirements for Transport and Traffic Management (refer part copy in Appendix B).

This development as part of any approval is required to contribute to this Developer Contributions Plan.

The intersection on Lyons Road and the start of the collector road leg identified in the Developer Contributions Plan has recently been completed by Council.

It must be noted that the construction works on the intersection were in the majority forward funded by this development. There is an agreement in place with Council in regards to the funding and its application to the development contributions.

APPENDIX A

TRAFFIC LAYOUT PLAN

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Rev	Date	Revision	Check

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PROPOSED SUBDIVISION
LOT 112 DP 1073791
LYONS ROAD
NORTH BONVILLE

DEVELOPMENT APPLICATION
TRAFFIC MANAGEMENT

Engineering Details Shown on This Drawing are Certified Correct

Geoff Slattery BE(Hons) MIEAust, Registered Professional Engineer 31136

Date

Approved on Behalf of the Council City Council

City Engineer

Date

Scale: 1:2000 AT A1, Check If Reduced	CAD Disk No: BORSATO 01
Surveyed: NKW	Datum: AMG, AHD
Drawn: GES	Design: GES
Checked: GES	Date: MAY 10

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Drawing Sheets:	
Dwg of Dwg's	
Council No:	

APPENDIX B

PART COPY COFFS HARBOUR CITY COUNCIL
DEVELOPER CONTRIBUTION PLAN
NORTH BONVILLE

TRANSPORT AND TRAFFIC MANAGEMENT

INTRODUCTION

The strategy for the movement of people within and through North Bonville recognises the dependence on the motorcar, yet provides for an efficient and convenient network of pedestrian and bicycle routes. The strategy also provides the infrastructure needed for a bus service.

EXISTING FACILITIES

Access to North Bonville is obtained from Lyons Road with the Pacific Highway being the westerly boundary of the study area.

IDENTIFIED NEEDS

The transport demands within North Bonville can be categorised in terms of the road network, public transport and pedestrian/bicycle network.

Road Network

A road hierarchy has been established classifying roads as collector or local roads in accordance with their functional characteristics. The road network will be governed by the collector road which has been established to reduce the number of access points on to Lyons Road and ensure the safe movement of vehicles and pedestrians.

This contribution plan provides for the development of the collector road and associated traffic management measures. The collector road will be constructed from Lyons road in a southerly direction for approximately 200 metres. As this section of road is the major access for all future lots, all lots will be required to contribute towards the construction of the collector road and Lyons Road intersection works.

Local roads will be at the expense of the developer.

Public Transport

The provision of a good public transport system will reduce car dependency, provide for energy efficiency and enable residents without a private vehicle to maintain reasonable mobility, particularly the elderly and those less than 17 years of age. Opportunities for public transport within North Bonville are limited to the provision of a possible bus service.

To provide for a safe, comfortable and efficient bus service, certain basic facilities are required, including bus shelters and seats. It is proposed to provide bus shelters/seats along the collector road which has the highest frequency of use. A total of three shelters will be provided.

Pedestrian and Bicycle Ways

The provision of pedestrian and bicycle facilities in residential areas can provide an important alternative transport route for both recreation and functional journeys. The proposed routes are identified in Map 3 and have been designed to relate to the need for access to the neighbourhood park, surrounding recreational facilities and shops.

Pedestrian and cycle routes are to be provided in the form of on-road footpaths/cycleways on low order local roads and off-road footpaths/cycleways on the collector road. In addition, cycle refuge lanes are also to be provided on Lyons Road and on the collector road.

PROPOSED FACILITIES

The following table summarises the traffic and transport facilities, which will be funded using Section 94 contributions on the basis of the local and district facilities.

Collector Road

First 200m of restricted access Road, plus intersection construction at Lyons Road	$750,000

Traffic Management

Cycle & pedestrian paths	$277,650
No right-turn barrier (at minor entrance) @ $10,000 $30,000	
3 Bus Shelters @ $15,000 each	$45,000
Refuge for bicycles on Lyons Road 2 unit @ $12,000/unit	$24,000
Route lighting 200m @ $35 per metre	$7,000
15% design and supervision	$170,047
15% contingencies	$195,555
TOTAL	**$1,499,252**

CALCULATION OF CONTRIBUTION RATE

The contribution rate is calculated as follows:

C = Cost of community facility

L = Less funds levied or collected to date

P = Expected population

C = $1,499,252

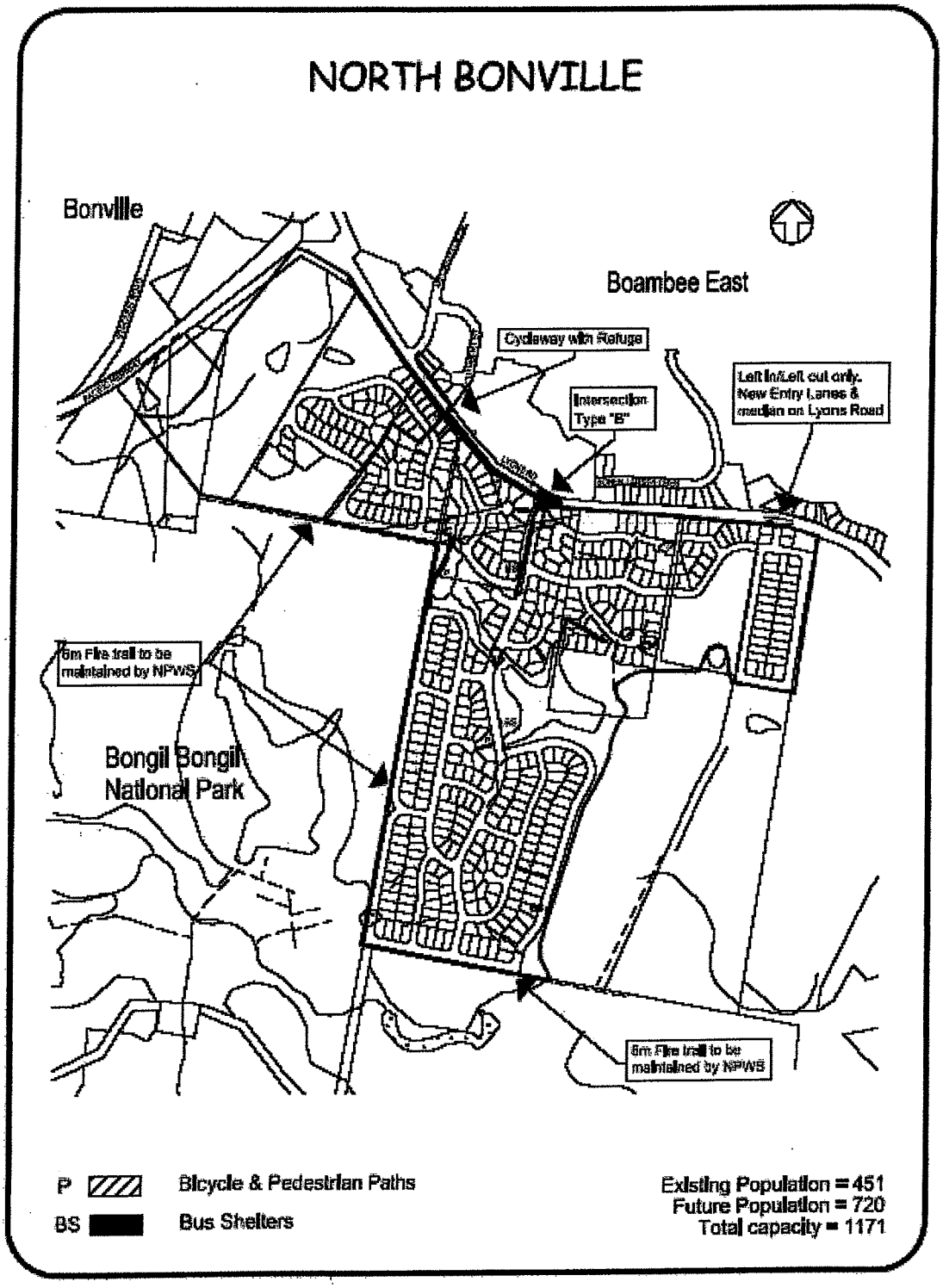
L = $388,632

P = 720

$$= \frac{(\$1,499,252 - \$388,632)}{720}$$

$$= \frac{\$1,110,620}{720}$$

= **$1,542.53 per person**



MAP 3
TRAFFIC & TRANSPORT STRATEGY