MALBEC PROPERTIES PTY LIMITED

TRANSPORT REPORT FOR PROPOSED RESIDENTIAL SUBDIVISION, MANYANA

AUGUST 2006

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REF: 6259

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1. INTRODUCTION

1.1. Colston Budd Hunt & Kafes Pty Ltd has been commissioned by Malbec Properties Pty Limited to prepare a report examining the transport implications of a proposed 179 lot residential subdivision at Manyana on the New South Wales south coast. The site location is shown in Figure 1.

1.2. The findings of our assessment of the proposed residential subdivision are set down through the following chapters:

- Chapter 2 - describing the existing conditions; and
- Chapter 3 - assessing the transport implications of the proposed development.

2. EXISTING CONDITIONS

Site Location and Road Network

2.1 The site of the proposed residential subdivision is in Manyana on the New South Wales south coast. It is located on a block bounded by Berringer Road to the north, Sunset Strip to the south, The Companionway to the east and Cunjurong Point Road to the west. The site is currently undeveloped and is shown in Figure 1.

2.2 Manyana is accessed via Bendalong Road which runs east from Princes Highway. Bendalong Road provides access to the communities of Bendalong, Manyana, Berringer Lake and Cunjurong Point.

2.3 Bordering the site to the south and east there are residential properties. Further south there is open space and community facilities. North and east of the site there is undeveloped land.

2.4 The road network in the vicinity of the site includes Princes Highway, Bendalong Road, Inyadda Drive, Berringer Road, Curvers Drive, The Companionway, Sunset Strip and Cunjurong Point Road. The Princes Highway is the major transport route along the NSW south coast. In the vicinity of Bendalong Road it functions as a rural highway with a 100 kilometre per hour speed limit, one southbound traffic lane and two northbound traffic lanes. The northbound overtaking lane merges north of Bendalong Road.

2.5 The intersection of Princes Highway with Bendalong Road is an unsignalised t-intersection controlled by give way signs. Turning lanes are provided on the highway for right and left turns into Bendalong Road. A short acceleration lane is also

provided for left turns from Bendalong Road. Bendalong Road provides for one traffic lane in each direction with sealed and unsealed shoulders and a 100 kilometre per hour speed limit.

2.6 Inyadda Drive runs south from Bendalong Road and provides access to Manyana, Berringer Lake and Cunjurong Point. Bendalong Road continues east of Inyadda Drive for access to Bendalong. The intersection of Inyadda Drive with Bendalong Road is an unsignalised t-intersection controlled by give way signs, with Bendalong Road having priority. Inyadda Drive provides for one traffic lane in each direction and an 80 kilometre per hour speed limit.

2.7 Berringer Road and Curvers Drive form a t-intersection at the southern end of Inyadda Drive. Berringer Road provides access to Berringer Lake to the west. Curvers Drive provides access to residential areas in Manyana to the east.

2.8 Berringer Road, Curvers Drive, The Companionway, Sunset Strip and Cunjurong Point Road all provides for one traffic lane in each direction. Sunset Strip and The Companionway provide access to residential properties. Sunset Strip also provides access to open space and community facilities. South of the site, Cunjurong Point Road provides access to residential properties. The intersections of these roads are generally priority controlled. The intersections of Berringer Road with Cunjurong Point Road and the Companionway are controlled by stop signs.

Traffic Flows

2.9 In order to gauge traffic conditions, counts were undertaken during weekday morning and afternoon periods at the following intersections:

- Princes Highway/Bendalong Road;
- Bendalong Road/Inyadda Drive;
- Inyadda Drive/Berringer Road/Curvers Drive;
- Berringer Road/The Companionway;
- The Companionway/Sunset Strip;
- Berringer Road/Cunjurong Point Road; and
- Cunjurong Point Road/Sunset Strip.

2.10 The results of these counts are shown on Figures 2 and 3 and summarised in Table 2.1.

Table 2.1: Existing two-way (sum of both directions) peak hour traffic flows

Road	Location	AM peak hour	PM peak hour
Princes Highway	North of Bendalong Road	440	470
	South of Bendalong Road	445	470
Bendalong Road	East of Princes Highway	85	80
	West of Inyadda Drive	85	75
	East of Inyadda Drive	60	45
Inyadda Drive	South of Bendalong Road	105	90
Berringer Road	West of Cunjurong Point Road	15	10
	West of The Companionway	30	30
Curvers Drive	East of Inyadda Drive	70	70
The Companionway	South of Berringer Road	20	30
Sunset Strip	East of Cunjurong Point Road	10	25
	West of The Companionway	25	30
	East of The Companionway	5	10
Cunjurong Point Road	South of Berringer Road	20	25
	South of Sunset Strip	25	40

2.11 Table 2.1 shows that Princes Highway carried some 450 to 500 vehicles per hour two-way during the morning and afternoon peak periods. Flows on Bendalong Road, Inyadda Drive, Berringer Road, Curvers Drive, The Companionway, Sunset Strip and Cunjurong Point Road were lower at generally less than 100 vehicles per hour two-way during peak hours.

Intersection Operations

2.12 The capacity of the road network is largely determined by the capacity of its intersections to cater for peak period traffic flows. The surveyed intersections shown in Figures 2 and 3 have been analysed using the SIDRA program. SIDRA analyses isolated intersections controlled by signals, roundabouts or signs. The program produces a number of measures of intersection operations. The most useful measure provided is average delay per vehicle expressed in seconds per vehicle. Based on average delay per vehicle, SIDRA estimates the following levels of service (LOS):

- For traffic signals, the average delay per vehicle in seconds is calculated as delay/(all vehicles), for roundabouts the average delay per vehicle in seconds is selected for the movement with the highest average delay per vehicle, equivalent to the following level of service (LOS):

0 to 14	=	"A"	Good
15 to 28	=	"B"	Good with minimal delays and spare capacity
29 to 42	=	"C"	Satisfactory with spare capacity
43 to 56	=	"D"	Operating near capacity
57 to 70	=	"E"	At capacity and incidents will cause excessive delays. Roundabouts require other control mode.
>70	=	"F"	Unsatisfactory and requires additional capacity

- For give way and stop signs, the average delay per vehicle in seconds is based on the movement with the highest average delay per vehicle, equivalent to following LOS:

0 to 14	=	"A"	Good
15 to 28	=	"B"	Acceptable delays and spare capacity
29 to 42	=	"C"	Satisfactory but accident study required
43 to 56	=	"D"	Near capacity and accident study required
57 to 70	=	"E"	At capacity and requires other control mode
>70	=	"F"	Unsatisfactory and requires other control mode

2.13 It should be noted that for roundabouts, give way and stop signs, in some circumstances, simply examining the highest individual average delay can be misleading. The size of the movement with the highest average delay per vehicle should also be taken into account. Thus, for example, an intersection where all movements are operating at a level of service A, except one which is at level of service E, may not necessarily define the intersection level of service as E if that movement is very small. That is, longer delays to a small number of vehicles may not justify upgrading an intersection unless a safety issue was also involved.

2.14 The analysis found that the unsignalised intersection of Princes Highway with Bendalong Road is operating with average delays for the highest delayed movement of less than 15 seconds per vehicle during morning and afternoon peak periods. This represents level of service A/B, a good level of service.

2.15 The unsignalised intersections of Inyadda Drive with Bendalong Road and Berringer Road/Curvers Drive, The Companionway with Berringer Road and Sunset Strip and Cunjurong Point Road with Berringer Road and Sunset Strip are operating with average delays for the highest delayed movement of less than 15 seconds per vehicle during peak periods. This represents level of service A/B, a good level of service.

2.16 The Department of Planning has requested that holiday traffic be considered. RTA published data indicates that holiday flows can be up to double weekday flows. We have therefore doubled existing flows at the Princes Highway/Bendalong Road intersection. These flows are shown in Figures 7 and 8.

2.17 SIDRA analysis has been undertaken of the operation of the intersection of Princes Highway with Bendalong Road using the traffic flows shown in Figures 7 and 8. With these flows, the intersection operates with average delays of less than 25 seconds per vehicle during peak periods. This represents level of service B, a reasonable level of service.

Residential Amenity

2.18 In addition to the physical capacity of the road network, traffic flow can also affect the amenity of properties fronting the roads carrying the flows. The definition of the impacts on residential amenity by varying levels of traffic flows is extremely complex. Perceptions of impact vary greatly from person to person. Traffic flows that one person may find perfectly acceptable may be considered excessive by another. The level of perceived impact is affected by the nature of street and the area in which it is located, its width, building setbacks, grades, etc. as well as by the speed of traffic and the mix of cars and heavy vehicles.

2.19 The Roads and Traffic Authority has undertaken considerable research into appropriate environmental capacity performance standards on residential streets. It's "Guide to Traffic Generating Developments" defines the following environmental capacity performance standards for local residential streets and collector roads:

- Local Roads
  - Environmental goal - 200 vehicles per hour in the peak hour;
  - Maximum flow – 300 vehicles per hour in the peak hour;

- Collector Roads
  - Environmental goal - 300 vehicles per hour in the peak hour;
  - Maximum flow – 500 vehicles per hour in the peak hour;

2.20 Table 2.1 shows that Bendalong Road (east of Inyadda Drive), Curvers Drive, The Companionway, Sunset Strip and Cunjurong Point Road are carrying traffic flows less than the RTA's environmental goal for local roads.

Public Transport

2.21 Kellam's Bus Lines Pty Ltd operates school services between Ulladulla and surrounding areas including Manyana, Bendalong, Fishermans Paradise and surrounding areas. One service is provided in each direction on school days. The public can use these services.

2.22 Nowra Coaches operates services between Nowra, Lake Conjola, Fishermans Paradise, Manyana and Bendalong. The services operate along Berringer Road, Curvers Drive, Cunjurong Point Road and Sunset Strip adjacent to the site. Three services are provided each day on Tuesdays to Thursdays.

3. IMPLICATIONS OF PROPOSED DEVELOPMENT

3.1 It is proposed to develop a residential subdivision comprising 179 lots. Vehicular access is proposed to be provided from Berringer Road, Cunjurong Point Road and Sunset Strip. A concept layout of the proposed subdivision is shown in Figure 4.

3.2 Parking provision will be provided in accordance with Council's requirements and be finalised at the time of applications for individual dwellings. This chapter examines the implications of the proposed development through the following sections:

- public transport;
- access and internal layout;
- traffic generation and effects;
- agency consultation; and
- summary.

Public Transport

3.3 The proposed residential subdivision is close to bus services which link Manyana and Bendalong with Ulladulla and surrounding areas. The proposed subdivision, with its increase in residential population, will strengthen demand for public transport services in the area.

3.4 Pedestrian connections will be provided through the subdivision to areas of public open space within and external to the subdivision. A pedestrian connection will be provided through the southern part of the site to link with the existing community facilities on Sunset Strip.

Access and Internal Layout

3.5 Vehicular access to the residential subdivision is proposed to be provided via new roads running south from Berringer Road (two connections), east from Cunjurong Point Road (three connections) and north from Sunset Strip (one connection). The access intersections will provide appropriate sight distance along these roads.

3.6 Internal circulation roads within the proposed residential subdivision will be designed in accordance with the principles in Council's Subdivision Code (DCP 100). Local streets (as defined in the subdivision code) will be provided with 18 metre reserves, 4.5 metre verges and nine metre carriageways. Access streets will have 16 metre reserves with four metre verges and eight metre carriageways. Access places will have 13 metre reserves with verges on both sides. Internal roads will be designed to accommodate the swept paths of garbage trucks and furniture delivery vans. Roundabouts will be provided at the two four-way intersections internal to the site.

3.7 The principles in the subdivision code have been developed from AMCORD. Within residential precincts, the subdivision code/AMCORD distinguishes two levels of streets, local streets and collector streets.

3.8 On local streets the residential environment dominates. Traffic speeds and volumes are low and pedestrian/cycle movements encouraged. Vehicle speeds should, as far as possible, be controlled by street length, parked cars, landscaping design, built form and activity along the frontage. Bicycles are generally provided for on-street.

3.9 Collector streets collect traffic from access streets and generally carry higher traffic flows. A good level of residential amenity and safety is maintained by restricting traffic volumes and vehicle speeds. Vehicle speeds on collector streets are controlled by street alignment, parked cars, street length, intersection design and built form.

3.10 The adoption of the subdivision code/AMCORD guidelines provides an appropriate framework for the promotion of alternative travel modes to the private car, in particular, improved pedestrian and cyclist facilities.

Traffic Generation and Effects

3.11 Traffic generated by the proposed development will have its greatest effects during the morning and afternoon peak periods. Surveys undertaken by the RTA indicate that residential subdivisions generate 0.85 vehicles per hour per lot two-way during peak hours. Council's subdivision code indicates a traffic generation of 10 vehicles per day two-way which is equivalent to one vehicle per hour during peak hours and is slightly higher than the RTA's rate. We have adopted Council's rate in assessing the traffic effects of the proposed development.

3.12 The proposed subdivision will therefore generate some 180 vehicles per hour two-way during the morning and afternoon peak periods. During the morning peak hour, some 70 per cent of traffic would be outbound from the development. The reverse would apply in the afternoon.

3.13 The additional traffic has been assigned to the road network. Existing traffic flows plus the additional traffic from the proposed development are shown in Figures 2 and 3. A summary is provided in Table 3.1.

3.14 Traffic increases on Beringer Road, Inyadda Drive and Bendalong Road (between Princes Highway and Inyadda Drive) would be some 150 to 170 vehicles per hour two-way during peak hours. Increases on Princes Highway and the northern part of Cunjurong Point Road would be lower at some 60 to 75 vehicles per hour two-way. Increases on other parts of Cunjurong Point Road and Bendalong Road, as well as on Curvers Drive and Sunset Strip, would be some 10 to 15 vehicles per hour two-way.

Table 3.1: Existing two-way peak hour traffic flows plus development traffic

Road	Location	AM peak hour		PM peak hour	
		Existing	Plus development	Existing	Plus development
Princes Highway	North of Bendalong Road	440	+75	470	+75
	South of Bendalong Road	445	+75	470	+75
Bendalong Road	East of Princes Highway	85	+150	80	+150
	West of Inyadda Drive	85	+150	75	+150
	East of Inyadda Drive	60	+15	45	+15
Inyadda Drive	South of Bendalong Road	105	+165	90	+165
Berringer Road	West of Cunjurong Point Road	15	-	10	-
	West of The Companionway	30	+170	30	+170
Curvers Drive	East of Inyadda Drive	70	+15	70	+15
The Companionway	South of Berringer Road	20	+10	30	+10
Sunset Strip	East of Cunjurong Point Road	10	+10	25	+10
	West of The Companionway	25	+10	30	+10
	East of The Companionway	5	-	10	-
Cunjurong Point Road	South of Berringer Road	20	+60	25	+60
	South of Sunset Strip	25	+10	40	+10

3.15 Roads within the subdivision would generally carry traffic flows less than 100 vehicles per hour two-way. This level of traffic would not be unexpected for these roads.

3.16 The Department of Planning has requested that 10 year future traffic flows be considered. We have assessed a 10 year growth scenario for traffic flows on Princes Highway. The analysis we have undertaken is considered conservative because the proposed development would be a proportion of the growth over the next 10 years. Nevertheless, we have increased traffic on the Princes Highway by two per cent compound for 10 years and added the development traffic on top of this growth.

3.17 We have also considered holiday traffic as requested by DoP. Base peak hour traffic flows for the following two scenarios requested by DoP have been considered for the Princes Highway/Bendalong Road intersection, and are shown in Figures 5, 6, 7 and 8:

- existing flows plus 10 years growth (Figures 5 and 6); and
- existing flows doubled to reflect holiday traffic volumes (Figures 7 and 8).

3.18 Figures 5 to 8 also show additional development traffic from the proposed residential subdivision. A summary is provided in Table 3.2.

Table 3.2: Base two-way peak hour traffic flows plus development traffic

Road	Location	AM peak hour				PM peak hour			
		Base flow[1]	Plus development	Base flow[2]	Plus development	Base flow[1]	Plus development	Base flow[2]	Plus development
Princes Highway	North of Bendalong Road	540	+75	880	+75	575	+75	940	+75
	South of Bendalong Road	545	+75	890	+75	575	+75	940	+75
Bendalong Road	East of Princes Highway	105	+150	170	+150	100	+150	160	+150

[1] Existing flows plus 10 years growth

[2] Existing flows doubled to reflect holiday traffic volumes

3.19 The intersections previously analysed in Chapter 2 have been re-analysed with SIDRA for the additional traffic flows shown in Figures 2, 3, 5, 6, 7 and 8.

3.20 The analysis found that for existing flows plus the additional development traffic (Figures 2 and 3), the intersection of Princes Highway with Bendalong Road would continue to operate with average delays of less than 15 seconds per vehicle during morning and afternoon peak periods. This represents levels of service B, a reasonable level of service.

3.21 With the additional development traffic, the intersections of Inyadda Drive with Bendalong Road and Berringer Road/Curvers Drive, The Companionway with Berringer Road and Sunset Strip and Cunjurong Point Road with Berringer Road and Sunset Strip would continue to operate with average delays of less than 15 seconds per vehicle during morning and afternoon peak periods. This represents level of service A/B, a good level of service.

3.22 The analysis found that with future 10 year flows and the additional development traffic (Figures 5 and 6), the intersection of Princes Highway with Bendalong Road would operate with average delays of less than 20 seconds per vehicle during morning and afternoon peak periods. This represents levels of service B, a reasonable level of service.

3.23 With holiday traffic volumes and the additional development traffic (Figures 7 and 8), the intersection of Princes Highway with Bendalong Road would operate with average delays of some 25 seconds per vehicle during morning and afternoon peak periods. This represents levels of service B, a reasonable level of service.

3.24 The additional traffic from the proposed development would not cause traffic flows on Bendalong Road (east of Inyadda Drive), Curvers Drive, The Companionway, Sunset Strip or Cunjurong Point Road to cross the environmental amenity thresholds set out in Chapter 2.

3.25 At this stage the overall construction methodology, process and staging has not been defined. However, indicative peak construction traffic flows have been estimated based on information provided by the study team.

3.26 Peak daily traffic flows during construction would be up to some 200 vehicles two-way. These flows would include peak deliveries of construction materials of some 40 to 50 deliveries per day.

3.27 Based on an eight hour working day, the peak traffic generation of 200 vehicles per day is equivalent to an average of some 25 vehicles per hour two-way. The surrounding road network will be able to cater for these relatively small traffic movements.

Agency Consultation

3.28 The RTA and Department of Planning have indicated their requirements for the development application in letters dated 10 February 2006 and 6 March 2006 respectively.

3.29 The RTA letter includes the following:

A traffic impact study (TIS) should be prepared in accordance with Table 2.1 of the RTA Guide to Traffic Generating Developments.

Intersection modeling modelling using aaSIDRA should be undertaken for the junction of Bendalong Road and the Princes Highway considering the following:

- *AM and PM peaks volumes and holiday peak volumes.*
- *Existing traffic volumes with and without development and 10 year projected volumes with and without the development.*

The applicant should identify suitable treatments required to ameliorate any traffic impacts and safety impacts associated with the development. This should include identification of pedestrian movements and appropriate treatments.

3.30 The Department of Planning letter includes the following:

Traffic Impacts (Construction and Operational) – Demonstrate compliance with relevant Council and RTA traffic and car parking codes; prepare a detailed Traffic Impact Study in accordance with Table 2.1 of the RTA Guide to Traffic Generating Developments including intersection modelling at the Bendalong Road – Princes Highway intersection. The aaSIDRA program must be used for the modelling and shall consider: AM and PM peak volumes; holiday peak volumes; existing traffic volumes with and without development; 10 year projected volumes with and without the development; and identify suitable treatments to ameliorate any traffic and safety impacts associated with the development, such as identification of pedestrian movements and appropriate treatments.

3.31 This report comprises the traffic impact study requested by the RTA and DoP. The results of intersection modelling undertaken using SIDRA for the scenarios requested by the authorities are presented in paragraphs 2.12 to 2.17 and 3.19 to 3.23. Construction traffic is addressed in paragraphs 3.25 to 3.27. Council's subdivision code is addressed in paragraphs 3.6 to 3.11.

3.32 Access points to the development will provide appropriate sight distance along the frontage roads as discussed in paragraph 3.5. Provision for pedestrians and cyclists is proposed within the development as discussed in paragraphs 3.6 to 3.10.

Summary

3.33 In summary, the main points relating to the proposed residential subdivision in Manyana are:

(i) the proposed residential subdivision comprises 179 lots;

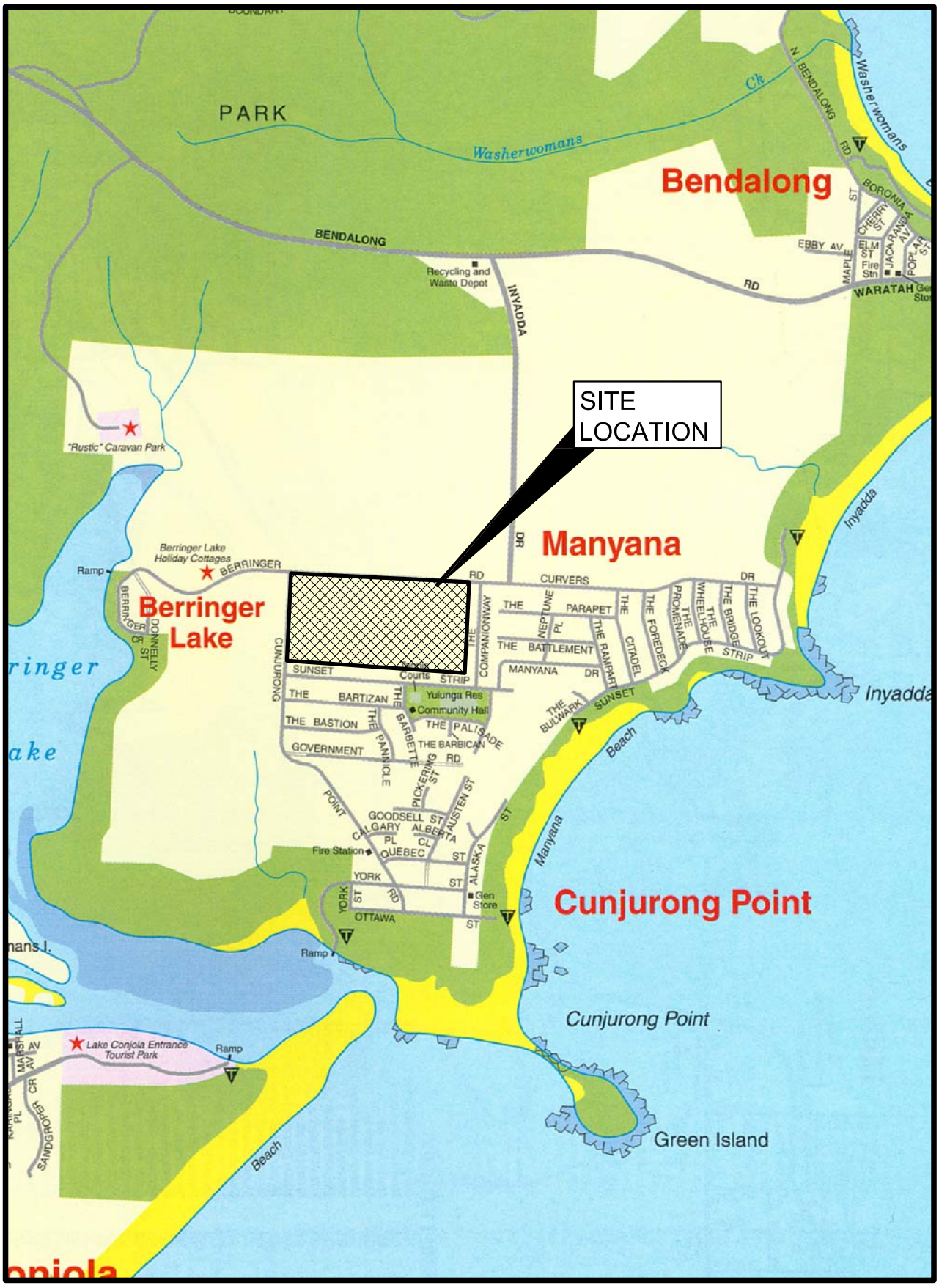
(ii) vehicular access to the proposed subdivision will be via new roads from Berringer Road, Cunjurong Point Road and Sunset Strip;

(iii) the proposed access arrangements are considered appropriate;

(iv) internal roads will be provided in accordance with the principles in Council's Subdivision Code and AMCORD;

(v) the proposed development would have a peak period traffic generation of some 180 vehicles per hour two-way during peak hours; and

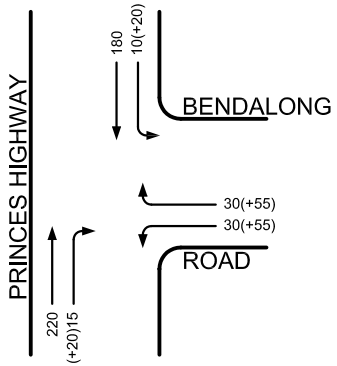
(vi) the road network will be able to cater for future traffic growth including traffic from the proposed development.

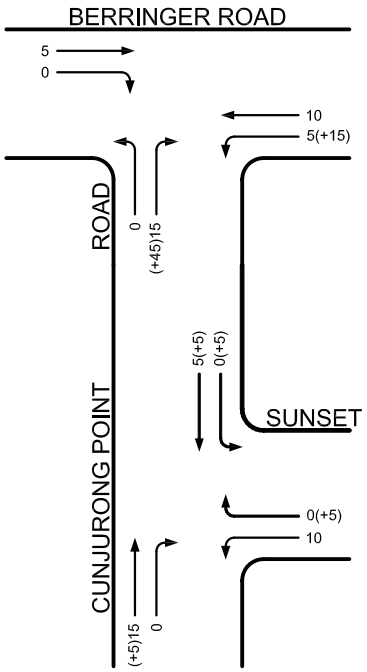


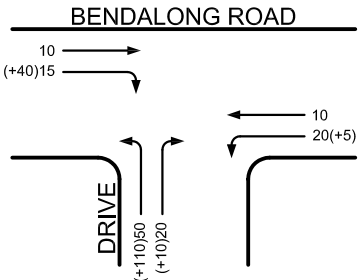
LOCATION PLAN

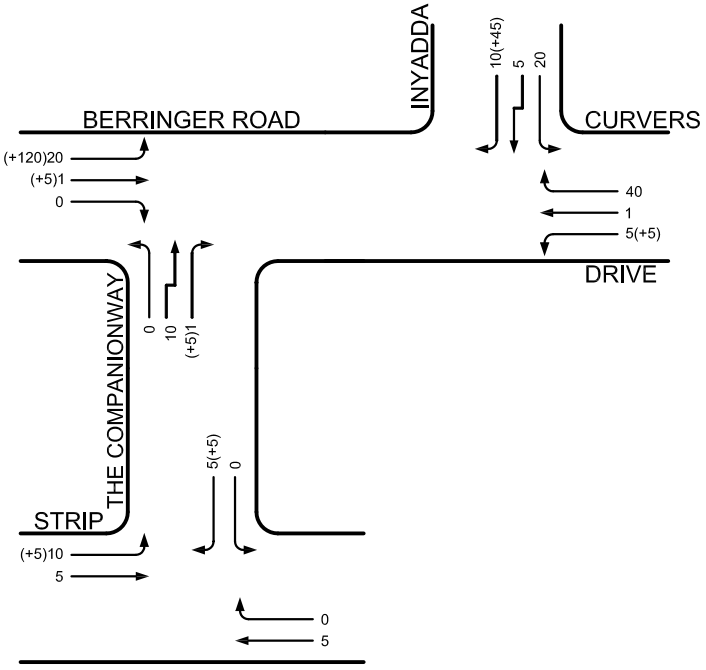
1

DRAWN BY CBHK Pty Ltd Ref: 6259 17 MAY 2006









LEGEND

100 - Existing Peak Hour Flows

(+10) - Additional Development Traffic

EXISTING MORNING PEAK HOUR TRAFFIC FLOWS PLUS DEVELOPMENT TRAFFIC

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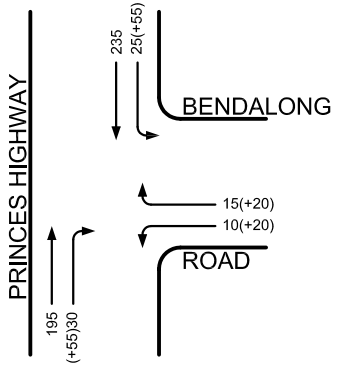
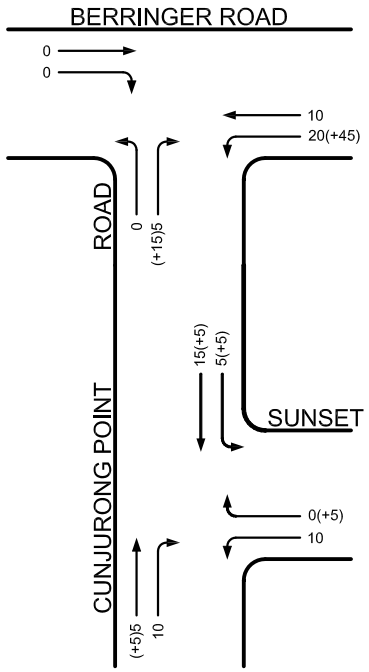
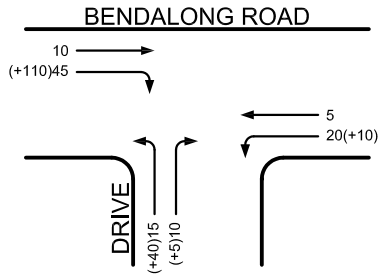
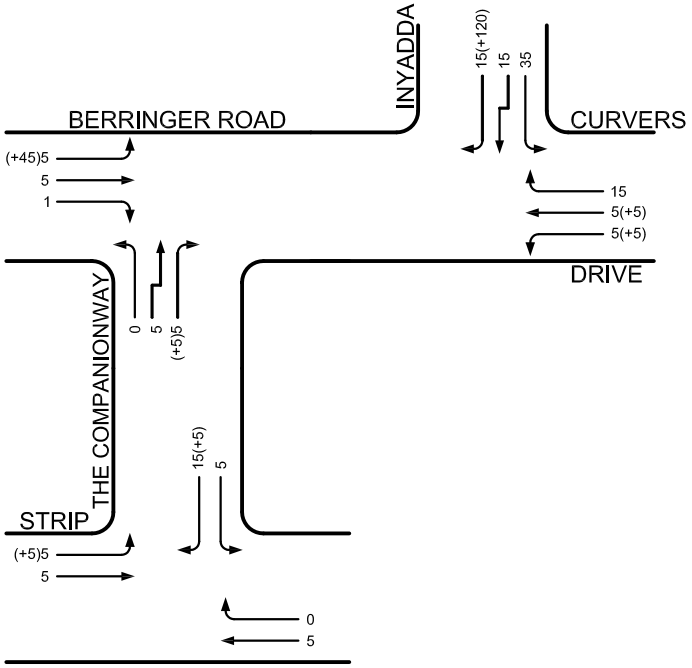
2









LEGEND

100 - Existing Peak Hour Flows

(+10) - Additional Development Traffic

EXISTING AFTERNOON PEAK HOUR TRAFFIC FLOWS PLUS DEVELOPMENT TRAFFIC

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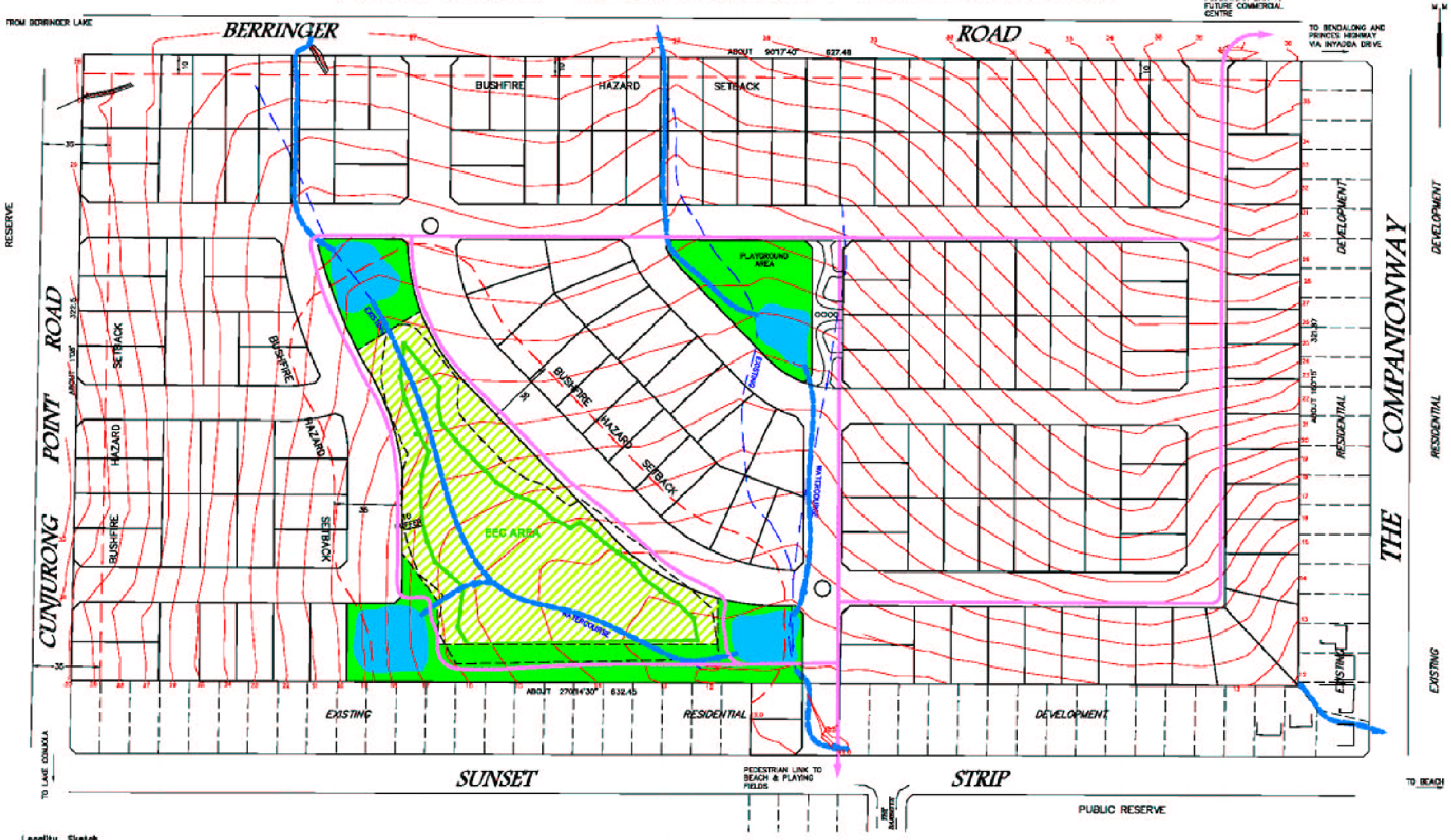
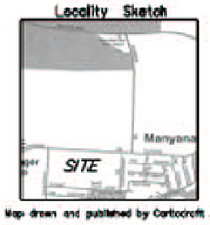
3

PROPOSED RESIDENTIAL SUBDIVISION



Locality Sketch



Map drawn and published by Cartocraft Aust P/L

- DENOTES EDGE OF EEC AREA AS DETERMINED BY FIELD SURVEY JULY 2006.
- PROPOSED DRAINAGE PATH
- PROPOSED PEDESTRIAN LINKAGE
- PROPOSED WATER QUALITY FACILITY
- PROPOSED PUBLIC RESERVE/ DRAINAGE RESERVE (INNER PROTECTION AREA)
- PROPOSED PUBLIC RESERVE/ DRAINAGE RESERVE (BUSHLAND AREA INCORPORATING EEC AREA)

PUBLIC RESERVE AREA REQUIRED UNDER SCC SECTION 94 PLAN IS 8304m²

PROPOSED PUBLIC RESERVE AREA IS:
23,154m² (LARGE AREA)
3,320m² (SMALL AREA)

0 10 20 30 40 50 100
scale = 1:1000

LOT YIELD – 177 LOTS
PLUS 2 AT SUNSET STRIP

DIMENSIONS AND AREAS ARE SUBJECT TO SURVEY

RATIO: 1 : 1000 (AT A1 SIZE)	DATUM:	SURVEY	APA	AMENDMENTS	BY	DATE
	ORIGIN:	DESIGN	PWR/MJP			
		DRAWN	DS			
	DATE OF PLAN: 27 JULY 2006					

allen, price & associates
land and development consultants
75 plunkett street, nowra, nsw, 2541
phone (02) 4421 6644 fax (02) 4422 1921 DX 5310
consultants@allenprice.com.au www.allenprice.com.au

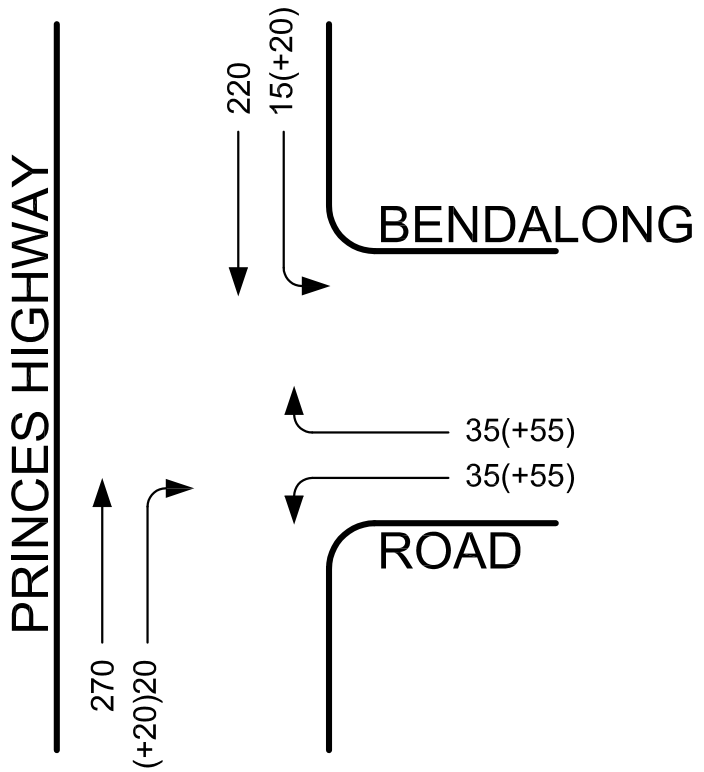
PLAN SHOWING PROPOSED SUBDIVISION OVER LOT 172 DP 755923 & LOT 823 DP 247285 AT BERRINGER ROAD & CUNJURONG POINT ROAD, MANYANA FOR MALBEC PROPERTIES PTY LIMITED

REF. No. 24256–01
LAYOUT G
REVISION

Liability limited by a scheme approved under Professional Standards Legislation.
COVER OF EXCELLENCE

PROPOSED SUBDIVISION LAYOUT

DRAWN BY CBHK Pty Ltd Ref: 6259 08 AUGUST 2006



N

LEGEND

100 - Existing Peak Hour Flows Plus 10 Years Growth

(+10) - Additional Development Traffic

EXISTING MORNING PEAK HOUR
TRAFFIC FLOWS PLUS 10 YEARS
GROWTH PLUS DEVELOPMENT TRAFFIC

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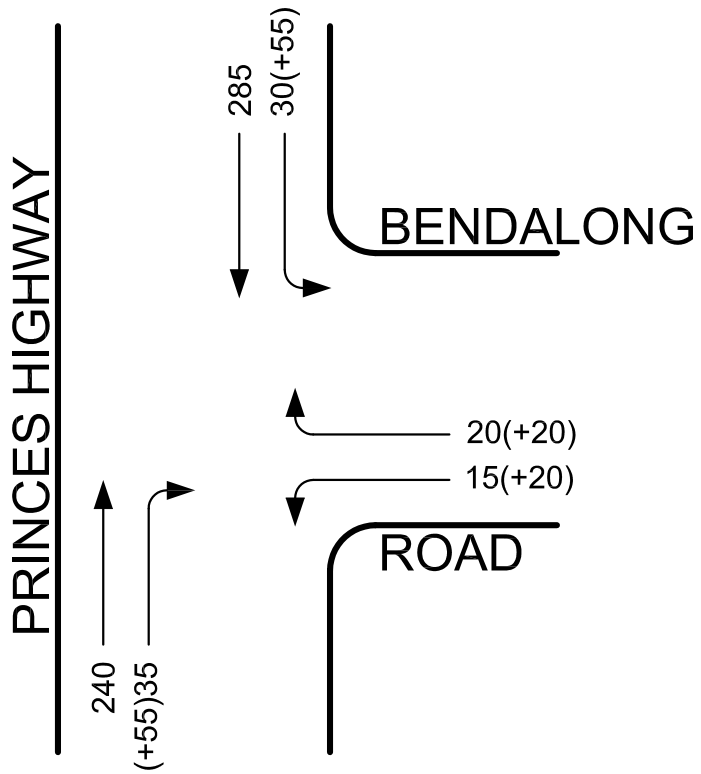

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LEGEND

100 - Existing Peak Hour Flows Plus 10 Years Growth

(+10) - Additional Development Traffic

EXISTING AFTERNOON PEAK HOUR TRAFFIC FLOWS PLUS 10 YEARS GROWTH PLUS DEVELOPMENT TRAFFIC

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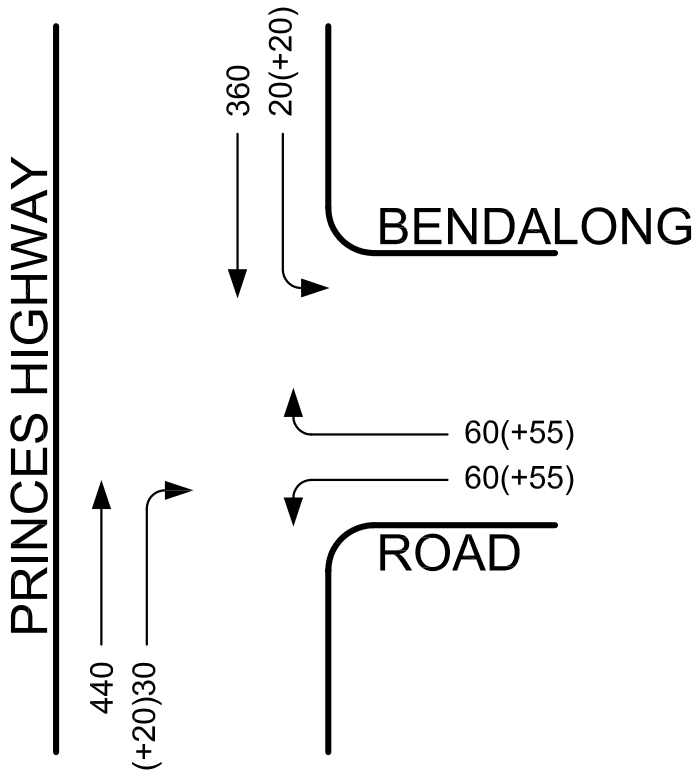
6



N

LEGEND

100 - Holiday Peak Hour Flows

(+10) - Additional Development Traffic

EXISTING HOLIDAY MORNING
PEAK HOUR TRAFFIC FLOWS
PLUS DEVELOPMENT TRAFFIC

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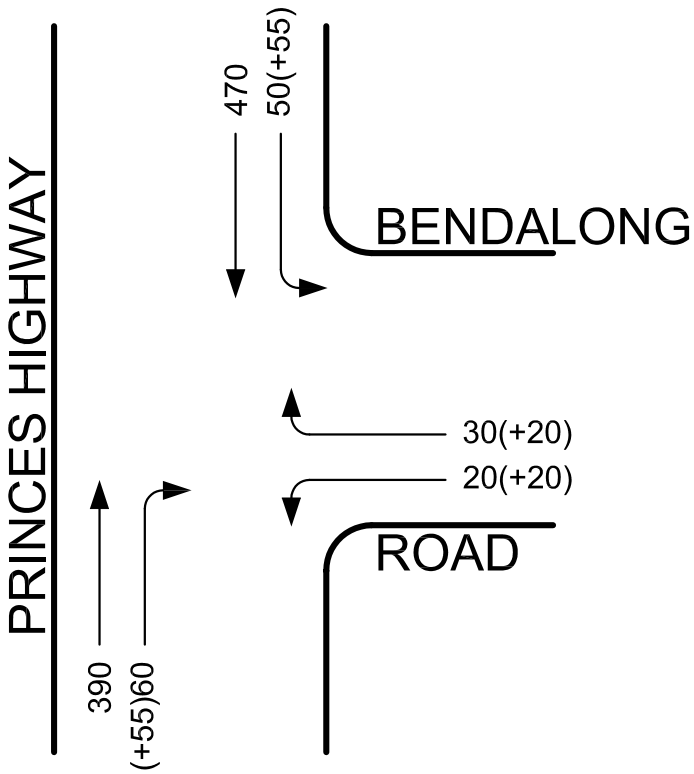

N

LEGEND

100 - Holiday Peak Hour Flows

(+10) - Additional Development Traffic

EXISTING HOLIDAY AFTERNOON
PEAK HOUR TRAFFIC FLOWS
PLUS DEVELOPMENT TRAFFIC

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