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Attention: Angus Witherby, Director

Re: 11-19 Centenary Road, Merrylands – R4 Zoning Planning Proposal

Dear Angus,

We refer to your correspondence dated 21st November 2014 concerning the proposed rezoning of the subject site from the current R3 zoning to R4 to permit increased density to be provided. Reference should be made to the site analysis floor plan included in **Attachment 1** which provides the context for the subject site in relation to the surrounding roads.

It is understood that the change in zoning sought for the site may result in an increased residential yield of approximately 20-30 residential units. In this regard, we provide the following comments:

- ➊ The impacts of the R3 zoning across the wider Centenary Road Precinct has been the subject of the *Medium Density Zoning Proposal Local Traffic Study (MDZP LTS)*, prepared by Bitzios Consulting, dated 4th July 2014. This study identified the following:
 - Indicative dwelling yield of approximately 123 dwellings across the Precinct, based on an R3 zoning.
 - An average traffic generation rate associated with low-medium density residential developments of 0.61 veh/hr per unit, during both the AM and PM peak periods, for the Centenary Road Precinct
 - On the basis of the above, the Centenary Road is expected to generate 75 vehicles per hour. An increase of 76 veh/hr was adopted having regard for 'rounding' of individual distributions onto the surrounding road network, where all traffic associated with the Centenary Road precinct is expected to be distributed evenly onto the surrounding road network. An extract of this distribution is included in **Attachment 2** for ease of reference.
- ➋ Following on from the above, an increased total density of some 30 additional residential units above that previously envisaged for the subject site would be expected to increase traffic volumes by up 18 veh/hr during peak periods such that the overall precinct traffic volumes would increase to 93 veh/hr.
- ➌ The distribution of this traffic onto the surrounding road network is summarised in **Table 1** below for the AM peak. These volumes are reversed during the PM peak.



Table 1: Traffic Generation and Distribution (Centenary Rd Precinct) – AM Peak

Scenario	Indicative Precinct Yield	North		South		East		West		TOTAL
		IN	OUT	IN	OUT	IN	OUT	IN	OUT	
MDZP	123	4	15	4	15	4	15	4	15	76
Proposed	153	5	19	5	19	5	19	5	19	96 ¹
Relative Change	+30	+1	+4	+1	+4	+1	+4	+1	+4	+20

Note(s): 1) Figure includes 'rounding' errors and therefore overestimates overall Precinct traffic generation of 93 veh/hr calculated on the basis of the total indicative precinct yield of 153 units.

In summary, the increased residential yield inherent by the change in residential zoning now sought would result in an increased traffic generation of approximately 18 veh/hr (two-way combined). When evenly distributed onto the surrounding road network, this additional traffic would result in an increase of up to only 4 veh/hr to any one particular movement. This is a minor increase and is unlikely to significantly impact the surrounding road network or the findings of the previous MDZP traffic study prepared in support of the current R3 zoning. As such, the proposed increased density on the subject site is considered supportable.

We trust the above is of assistance and please contact the undersigned should you have any queries or require further information in relation to the above.

Yours faithfully,

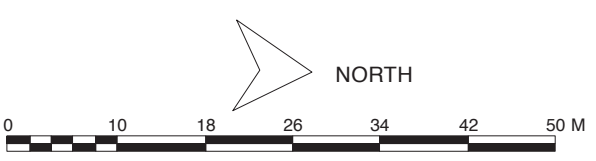
traffic

Tim Lewis
Senior Engineer

Attachment(s): 1) Site Analysis Plan
2) Extract from the MDZP



Attachment 1



PROPOSED ZONE CHANGE
APPLICATION MERRYLANDS -
11-19 CENTENARY ROAD,
MERRYLANDS

for
ST. VINCENT DE PAUL SOCIETY

SITE ANALYSIS
PROJECT NO: 1127 SCALE: 1:500 DATE: 11.07.11
DTB ARCHITECTS PTY LTD
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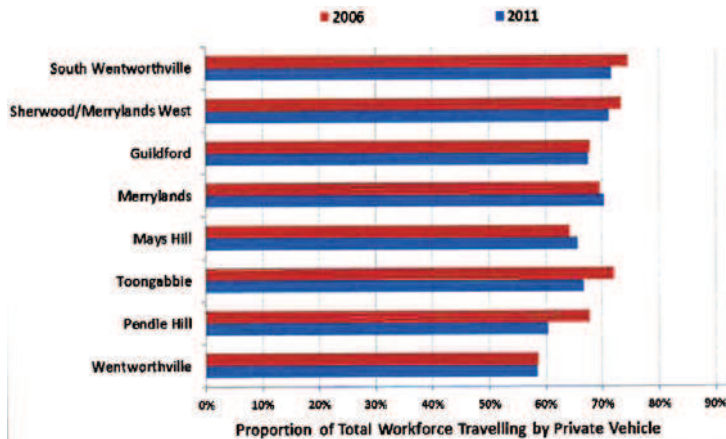


Attachment 2

MDZP TRAFFIC GENERATION

Journey to Work Car Usage

The Section 94 Plan Transport Study researched the Journey to Work (JTW) car usage for each area in Holroyd, as shown in Figure 2. This figure shows that car usage for the journey to work ranged between 58% and 72% of all work trips in 2011.



Source: Section 94 Contributions Plan: Transport Study (3 April 2014)

Figure 2: Car Usage Mode Shares (JTW)

Applicable Traffic Generation Rates

The Section 94 Plan Transport Study determined average traffic generation rates to adopt for Holroyd, as shown in Figure 3.

Land Use	Specific Use	Peak Hour Traffic Generation Rate		
		AM	PM	Saturday
Residential (vehicles/dwelling)	High Density Housing	0.290	0.290	0.290
	Low-Medium Density Housing	0.570	0.570	0.570
Commercial (vehicles/m ² GFA)	Office	0.020	0.020	0.005
Retail* (vehicles/m ² GFA)	Shops / Retail Outlets	0.017	0.068	0.076

Source: Section 94 Contributions Plan: Transport Study (3 April 2014)

Figure 3: Holroyd City Traffic Generation Rates

The applicable rates for this study are represented by the “Low-Medium Density Housing” residential rates in Figure 3. The RMS through their Technical Direction 2013/4 has recently released updated rates for high density and low density residential. However, since the Section 94 rates represent a mix of low/medium density residential and the benefits of remaining consistent with the current plan, the rates in Figure 3 have been used here.

Based on Figure 2 the average car mode share for the JTW was 66.6% in 2011. Using the relativity between this average and the car usage for each precinct/area, allows the precinct-specific traffic generation rates in Table 2 to be identified.

Table 2: Generation Rates by Precinct (Peak Hour)

Precinct	Car Usage Factor (Precinct v Average)	Applicable Traffic Generation Rate
Cotswold Street	0.98	0.56
Franklin Street	0.99	0.57
Brewer Crescent	1.08	0.62
Hilltop Road ¹	1.06	0.60
Kenyons Road	1.07	0.61
Centenary Road	1.07	0.61
Fowler Road	1.07	0.61
Amherst and O'Neill Streets	1.01	0.57
Vulcan Street	1.01	0.57
Clement Street	1.01	0.57
Queen Street	1.01	0.57
Wisdom Street	1.01	0.57

¹ Included for investigation but not subject to the MDZP (just LEP 2013)

It is recognised that JTW trips are not the only trips in peak periods however there are a significant component of trip making at these times and no detailed mode split data is available for other trip purposes in any event

Overall Traffic Distribution

Figure 4 presents the overall traffic distribution determined in the Section 94 Plan Transport Study. This research revealed that most of the employment associated with residents of Holroyd is in relatively local areas, with nearly 40% of employed persons working in Parramatta or Holroyd and only 4.2% of residents commuting to Sydney.

Direction of Travel	Proportion of Total Vehicle Trips
North	40%
South	28%
East	18%
West	13%

Source: Section 94 Contributions Plan: Transport Study (3 April 2014)

Figure 4: Overall JTW Traffic Distribution

The traffic distribution for each precinct has considered the above overall directionality of peak hour travel. Then, to localise the traffic distribution assumptions for each precinct, the location of major north-south and east-west roads for access to/from each area have been considered. These assumptions are presented in Table 3.

The traffic generation rates used are for “two-way” trips and the commonly used assumption of 80% of trips “out” from home in the AM peak (20% “in”) has been used; with the reverse split in the PM peak.

Table 3: Traffic Distribution by Precinct

Precinct	North	South	East	West
Cotswold Street	40%	55%	2.5%	2.5%
Franklin Street	42.5%	50%	5.0%	2.5%
Brewer Crescent	60%	38%	1.0%	1.0%
Hilltop Road ¹	55%	41%	2%	2%
Kenyons Road	15%	15%	35%	35%
Centenary Road	25%	25%	25%	25%
Fowler Road	30%	5%	40%	25%
Amherst and O'Neill Streets	10%	10%	70%	10%
Vulcan Street	40%	20%	25%	15%
Clement Street	25%	25%	25%	25%
Queen Street	20%	10%	20%	50%
Wisdom Street	50%	15%	10%	25%

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