19th July 2013



Level 8, 16 O'Connell Street Sydney NSW 2000

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Johnstaff Projects (NSW) Pty Ltd ABN 75 137 728 959

Peter McManus – NSW Planning & Infrastructure c-/o Wayne Gersbach Macroplan Dimasi Australia Level 4, 39 Martin Place Sydney NSW 2000

Attention: Peter McManus

Dear Mr McManus,

Re: Sydney Adventist Hospital, Wahroonga (MP10_0070 MOD 5) Temporary Car Park

We write in response to your letter dated 6th June 2013 requesting additional information regarding the aforementioned project modification submission.

Please find below and attached a response to the following queries:

No.	Description of Evidence	Action
1	Submission of an intersection analysis, prepared by a traffic consultant, that assess the Fox Valley Road/ Sydney Adventist Hospital signalised intersection during the operation of both the approved Multi-deck Carpark and the Temporary Carpark.	TTW have completed an SIDRA analysis report dated 18 th July 2013, <i>refer Attachment A.</i>
2	Confirmation that the temporary carpark will only be used for parking by construction workers and provision of access control details demonstrating how the general public will be restricted from accessing the car park.	SAH have addressed access control, <i>refer Attachment B.</i>
3	Further details are requested outlining the expected parking demand generated by construction workers for development approved at the SAH Site.	SAH have addressed parking demand generated by contractors, <i>refer Attachment B.</i>
4	It is acknowledged that the modification request seeks retention of the temporary carpark throughout the redevelopment of SAH. However, the department requests further details relating to the expected duration of the carpark's retention and the consequential impacts that future developments, approved in concept under the Wahroonga Estate Concept Plan (ie. Wahroonga Adventist School), will have on the function and layout.	A programme of status – timing approvals has been provided for the Estate, <i>refer Attachment C.</i>
5	Submission of amended relevant staging plans, detailing the retention of the temporary carpark throughout the construction period of the SAH.	Amended staging plan shows the retention of the temporary carpark, <i>refer Attachment D.</i>



Should you have any further queries regarding the submission please contact Wayne Gersbach at <u>wayne@macroplan.com.au</u>.

Yours faithfully Johnstaff Projects Pty Ltd

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Ioan Morgan Associate Director



ATTACHMENT A – SIDRA Analysis Report, TTW, 18th July 2013





SIDRA Analysis Results

Sydney Adventist Hospital Main Entrance

Fox Valley Road, Wahroongah

for Johnstaff

17 July 2013

TTW Job no: 111110

Taylor Thomson Whitting (NSW) Pty Ltd Consulting EngineersACN 11357837748 Chandos Street St Leonards NSW 2065PO Box 738Crows Nest 1585T 61 2 9439 7288F 61 2 9439 3146ttwsyd@ttw.com.auwww.ttw.com.au

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Revision Register

Rev	Date	Prepared By	Approved By	Remarks
1	17/07/13	STC	SB	For Information
2	18/3/13	STC	SB	For Submission

P:\2011\1111\11110\Reports\TTW\traffic\130718_SIDRA Analysis Summary - SB rt.doc

Prepared by: TAYLOR THOMSON WHITTING (NSW) PTY LTD Authorised by: TAYLOR THOMSON WHITTING (NSW) PTY LTD

Man

SEAN CLARKE Senior Engineer

STEPHEN BRAIN Technical Director

1.0 INTRODUCTION

Taylor Thomson Whitting have been commissioned to review the current operation of the main hospital entrance into Sydney Adventist Hospital and to determine the effect of maintaining operation of the at grade temporary car park together with the new multi storey car park.

The multi-storey car park is designed as part of the hospital parking strategy to meet the parking demands of the fully developed site.



The fully developed site will not be in operation until 2020. The traffic generation of the development will be realised in incremental stages

Stage		Completion
Stage 1A	New car park structure providing 896 additional spaces including the on grade temporary car park	June 2012
Stage 1B	CSB and CCU (expansion) with an additional 12,166m ² and 124 beds	July 2014
	CSB Stage 1B additional 6,625m ² with 16 beds	June 2015
Stage 2	New Education Centre 3,500m ² replacing existing	December 2015
Stage 2	Concourse, arrival, podium and roads	May 2013
Stage 3	Shannon Wing with additional 8,762m ² , 160 beds and 206 parking spaces	December 2020

The temporary car park is proposed to remain operational to service the relocated primary school kiss and drop access, construction worker parking for the new Clinical Services Building, and construction worker parking for the Education Centre Building until 2015 to relieve parking demand in the surrounding streets.

The temporary car park does not create any additional parking demand, if left in place. Parking demand is created by the new facilities.

The data used for the intersection analysis is based on the Sydney Adventist Hospital, Proposed Staged Alterations and Additions report by Transport and Traffic Planning Associates (TTPA) dated July 2010. Any assumptions will be identified.

TTW have analysed the performance of the 2013 and 2015 traffic figures to determine and confirm the likely impact of stages 1A and 1B as assessed in the TTPA report submitted as part of the Department of Planning submission and consent for the SAN Hospital Development.

The main hospital entrance was reviewed based on AM (8am – 9am) and PM (5pm – 6pm) peak flows identified in the TTPA report.

1.1 Site Description

The intersection of Fox Valley Road and the Main Hospital Entry is signalised with pedestrian crossing facility on all three arms. Fox Valley Road is typically one lane each way with a kerb side parking lane. Within the vicinity of the main hospital entrance kerbside parking restrictions are applied to allow two lane, two way traffic movements.

The signalised intersection does not restrict any turning movements in or out of the hospital. There is a designated left and right turn lane from the hospital onto Fox Valley Road. Fox Valley Road does not have any designated turning lanes into the hospital.

Immediately south of the intersection, Fox Valley Road is within a School Zone, therefore during the AM Peak review a 40km/h speed limit was imposed, while during the PM Peak the speed limit was assessed at 50km/h. Inside the hospital grounds the speed limit is a 10km/h Shared Zone.

1.2 Information/Assumptions

- Volumes based on TTPA report. Volumes reviewed are outlined in the relevant sections within the report.
- Post development vehicles generated based on TTPA report. Volumes reviewed are outlined in the relevant sections within the report.
- The generated peak directional movements are split 40% to/from the west and 60% to/from the east as outlined in TTPA report.
- All proposed generation will enter/exit from the main hospital entrance. Although a secondary access/egress to the hospital is available approximate 170m south of the main entry an assumed "worse case" scenario was imposed by assuming all generated vehicular traffic would used the main hospital entry facility. This is also justified as the extended at grade car facility is located closer to the main entrance than the secondary access driveway.

2.0 INTERSECTION ASSESSMENT CRITERIA

The following is a summary of the criteria for the review of the SIDRA results. It compares the Average Vehicle Delay (AVD) and Degree of Saturation (DoS) with the potential Level of Service (LoS) for the intersection (Refer to **Table 1**).

The AVD should be used as a guide as in some situations (such as city conditions) longer delays are tolerated.

As the DoS approaches 1 both the queue and delay increase. It is usual to attempt to keep DoS less than 0.9, where queues may increase. Typically DoS of 0.7 generally represents satisfactory intersection operation.

LOS	Description (Traffic Signal)	AVD (secs/veh)	DoS
А	Good: Primarily free flowing operation	<14.5	<0.6
В	Good with acceptable delays and capacity: Reasonably unimpeded operation	15 to 28	0.6 to 0.7
С	Satisfactory: Stable Operation	29 to 42	0.7 to 0.8
D	Operating near Capacity: less stable condition	43 to 54	0.8 to 0.9
E	At Capacity: Unstable operation and significant delays	55 to 70	0.9 to 1.0
F	Unsatisfactory: Extreme low speeds and high congestion	>70	>1.0

 Table 1: Level of Service

3.0 RESULTS IMPACT

The following **Table 2** summarises the operational performance assessment of the Main Hospital entry exiting situation and post development.

	Existing (Condition	Proposed Condition				
	AM Peak	PM Peak	AM Peak	PM Peak			
Level of Service	В	В	В	В			
Average Vehicle Delay (sec)	21.0	16.3	22.8	16.8			
DoS	0.72	0.62	0.8	0.63			

Table 2: Hospital Main Entry Intersection Analysis Results

The summary of results indicates that there is no significant change to the delay at the intersection of Fox Valley Road and Sydney Adventist Hospital Main Entry associate with the proposed works and retention of the existing at grade car park within the hospital grounds.

The performance of the intersection will further be improved when the left turn slip lane is complete. Completion of the slip lane is pending RMS approval and the slip lane is currently closed. The slip lane's opening is pending deed of agreement finalisation between RMS and the SAN Hospital.

4.1 Aerial Image



(Source: <u>www.nearmap.com.au</u>)

4.2 SIDRA Layout



4.3 Existing Conditions: AM Peak

4.3.1 Existing Volumes



4.3.2 Lane Summary

LANE SUMMARY

Site: Fox Valley Road/Hospital Road - Existing Conditions: AM Peak

Signals - Fixed Time Cycle Time = 70 seconds (Practical Cycle Time)

Lane Use	Lane Use and Performance												
			Cap.	Deg.	Lane	Average	Level of	95% Back	of Queue	Lane			Prob.
		lows		Satn	Util.	Delay	Service			Config	Length	Adj.	Block.
	Total	HV						Veh	Dist				
	veh/h	%	veh/h	v/c	%	sec			m		m	%	%
NorthEast:	NorthEast: Fox Valley Road												
Lane 1	731	0.0	1179	0.620	86 <mark>5</mark>	9.0	LOS A	15.5	108.8	Short (P)	120	0.0	0.0
Lane 2	282	0.0	392	0.720	100	41.5	LOS C	15.5	108.8	Full	210	0.0	0.0
Approach	1013	0.0		0.720		18.1	LOS B	15.5	108.8				
NorthWest	: Hospit	tal Ro	bad										
Lane 1	48	0.0	1015	0.047	100	9.7	LOS A	1.1	7.8	Full	135	0.0	0.0
Lane 2	39	0.0	383	0.102	100	25.9	LOS B	1.1	7.8	Short	55	0.0	0.0
Approach	87	0.0		0.102		17.0	LOS B	1.1	7.8				
SouthWest	: Fox V	alley	Road										
Lane 1	273	0.0	570	0.479	66 <mark>6</mark>	28.7	LOS C	7.7	53.7	Short (P)	40	0.0	<mark>31.9</mark>
Lane 2	391	0.0	542 ¹	0.722	100	24.1	LOS B	12.3	85.8	Full	170	0.0	0.0
Approach	664	0.0		0.722		26.0	LOS B	12.3	85.8				
Intersecti on	1764	0.0		0.722		21.0	LOS B	15.5	108.8				

1 Reduced capacity due to a short lane effect

5 Lane underutilisation determined by program

6 Lane underutilisation due to downstream effects

4.3.3 Level of Service Summary



4.3.4 Delay Average



4.4 Existing Conditions: PM Peak

4.4.1 Existing Volumes



4.4.2 Lane Summary

LANE SUMMARY

Site: Fox Valley Road/Hospital Road - Existing Conditions: PM Peak

Signals - Fixed Time Cycle Time = 70 seconds (Practical Cycle Time)

Lane Use	Lane Use and Performance												
		nand	Cap.	Deg.	Lane	Average	Level of	95% Back o	of Queue	Lane	Lane		Prob.
		lows		Satn	Util.	Delay	Service			Config	Length	Adj.	Block.
	Total	HV						Veh	Dist				
	veh/h	%	veh/h	v/c	%	sec			m		m	%	%
NorthEast:	NorthEast: Fox Valley Road												
Lane 1	584	0.0	1179	0.495	88 <mark>5</mark>	8.0	LOS A	11.0	77.2	Short (P)	120	0.0	0.0
Lane 2	88	0.0	157	0.562	100	54.0	LOS D	11.0	77.2	Full	210	0.0	0.0
Approach	672	0.0		0.562		14.1	LOS A	11.0	77.2				
NorthWest	: Hospit	tal Ro	ad										
Lane 1	128	0.0	761	0.168	100	16.2	LOS B	3.1	21.5	Full	135	0.0	0.0
Lane 2	103	0.0	383	0.269	100	27.3	LOS B	3.1	21.5	Short	55	0.0	0.0
Approach	231	0.0		0.269		21.2	LOS B	3.1	21.5				
SouthWest	t: Fox V	alley	Road										
Lane 1	304	0.0	834	0.364	59 <mark>6</mark>	18.6	LOS B	6.9	48.6	Short (P)	40	0.0	<mark>22.6</mark>
Lane 2	471	0.0	756 ¹	0.623	100	15.6	LOS B	12.0	83.8	Full	170	0.0	0.0
Approach	775	0.0		0.623		16.8	LOS B	12.0	83.8				
Intersecti on	1678	0.0		0.623		16.3	LOS B	12.0	83.8				

1 Reduced capacity due to a short lane effect

5 Lane underutilisation determined by program

6 Lane underutilisation due to downstream effects

4.4.3 Level of Service Summary



4.4.4 Delay Average



4.5 Post Development Conditions: AM Peak

4.5.1 Post Development Volumes



LANE SUMMARY

Site: Fox Valley Road/Hospital Road - Proposed Conditions: AM Peak

Signals - Fixed Time Cycle Time = 70 seconds (Practical Cycle Time)

Lane Use	Lane Use and Performance												
		nand	Cap.	Deg.	Lane	Average	Level of	95% Back	of Queue	Lane	Lane		Prob.
		lows		Satn	Util.	Delay	Service			Config	Length	Adj.	Block.
	Total	HV						Veh	Dist				
	veh/h	%	veh/h	v/c	%	sec			m		m	%	%
NorthEast:	Fox Va	lley F	Road										
Lane 1	731	0.0	1179	0.620	81 ⁵	9.0	LOS A	15.5	108.8	Short (P)	120	0.0	0.0
Lane 2	321	0.0	418	0.768	100	42.3	LOS C	15.5	108.8	Full	210	0.0	0.0
Approach	1052	0.0		0.768		19.2	LOS B	15.5	108.8				
NorthWest	: Hospit	al Ro	bad										
Lane 1	54	0.0	1043	0.052	100	9.2	LOS A	1.2	8.4	Full	135	0.0	0.0
Lane 2	42	0.0	383	0.110	100	26.0	LOS B	1.2	8.4	Short	55	0.0	0.0
Approach	96	0.0		0.110		16.6	LOS B	1.2	8.4				
SouthWest	: Fox V	alley	Road										
Lane 1	291	0.0	541	0.538	68 <mark>6</mark>	30.5	LOS C	8.5	59.5	Short (P)	40	0.0	<mark>41.3</mark>
Lane 2	398	0.0	500 ¹	0.797	100	28.0	LOS B	13.6	95.3	Full	170	0.0	0.0
Approach	689	0.0		0.797		29.1	LOS C	13.6	95.3				
Intersecti on	1837	0.0		0.797		22.8	LOS B	15.5	108.8				

1 Reduced capacity due to a short lane effect

5 Lane underutilisation determined by program

6 Lane underutilisation due to downstream effects

4.5.3 Level of Service Summary



4.5.4 Delay Average



4.6 Post Development Conditions: PM Peak

4.6.1 Post Development Volumes



LANE SUMMARY

Site: Fox Valley Road/Hospital Road - Proposed Conditions: PM Peak

Signals - Fixed Time Cycle Time = 70 seconds (Practical Cycle Time)

Lane Use	Lane Use and Performance												
		nand	Cap.	Deg.	Lane	Average	Level of	95% Back o	of Queue	Lane	Lane		Prob.
		lows		Satn	Util.	Delay	Service			Config	Length	Adj.	Block.
	Total	HV						Veh	Dist				
	veh/h	%	veh/h	v/c	%	sec			m		m	%	%
NorthEast:	NorthEast: Fox Valley Road												
Lane 1	584	0.0	1179	0.495	79 <mark>5</mark>	8.0	LOS A	11.0	77.2	Short (P)	120	0.0	0.0
Lane 2	98	0.0	157	0.625	100	54.6	LOS D	11.0	77.2	Full	210	0.0	0.0
Approach	682	0.0		0.625		14.7	LOS B	11.0	77.2				
NorthWest	: Hospit	tal Ro	ad										
Lane 1	158	0.0	761	0.208	100	16.5	LOS B	3.7	26.0	Full	135	0.0	0.0
Lane 2	123	0.0	383	0.321	100	27.7	LOS B	3.7	26.0	Short	55	0.0	0.0
Approach	281	0.0		0.321		21.4	LOS B	3.7	26.0				
SouthWest	t: Fox V	alley	Road										
Lane 1	308	0.0	833	0.370	59 <mark>6</mark>	18.9	LOS B	7.1	49.4	Short (P)	40	0.0	<mark>24.1</mark>
Lane 2	473	0.0	752 ¹	0.629	100	15.6	LOS B	12.0	84.3	Full	170	0.0	0.0
Approach	781	0.0		0.629		16.9	LOS B	12.0	84.3				
Intersecti on	1744	0.0		0.629		16.8	LOS B	12.0	84.3				

1 Reduced capacity due to a short lane effect

5 Lane underutilisation determined by program

6 Lane underutilisation due to downstream effects

4.6.3 Level of Service Summary



4.6.4 Delay Average





ATTACHMENT B – SAH Letter addressing Access Control & Contractor Parking Demand

Adventist HealthCare

19th July, 2013.

Mr. Peter McManus, NSW Planning Infrastructure, C/- Wayne Gersbach, Macroplan Dimasi Australia, Level 4, 39 Martin Place, Sydney N.S.W. 2000.

Dear Mr. McManus,

The following requests for additional information regarding the MP10_0070 Mod 5 are responded to within this letter.

'Confirmation that the temporary car park will only be used for parking by construction workers and provision of access control details demonstrating how the general public will be restricted from accessing the car park.'

Sydney Adventist Hospital can confirm that the temporary car park is and will be used for all day parking by Contractors only for the duration of the SAH works.

Currently the Wahroonga School kiss and drop is accessed through the temporary construction car park and parents are given 15 minutes free parking for this purpose only. Due to safety and other restrictions, accessing the School off Fox Valley Road directly is not possible, therefore this kiss and drop arrangement is likely to remain in place for the duration of the Hospital works.

To ensure parents and public are discouraged from parking or spending longer than 15 minutes within the car park, 'Contractor Only' signage is in place. In addition SAH have imposed a \$50 per hour parking rate for non-contractors.

Buildcorp have implemented tool box talks and induction packages for contractors to promote the free off-street parking within the temporary car park, now known as the Contractor Car Park. Below is a sample of the map provided to contractors during induction.



185 Fox Valley Road Wahroonga NSW 2076 Australia ▲ Phone +61 2 9487 9111 ▲ Fax +61 2 9487 9266 ▲ www.adventisthealthcare.org.au Adventist HealthCare Limited ABN 76 096 452 925

'Further details are requested outlining the expected parking demand generated by construction workers for development approved at the SAH Site.'

SAH can confirm the following average numbers of contractors working within the Estate boundary over the next 12 months:

- Education Centre Stage 2 50 workers per month
- Clinical Services Building 150 workers per month
- Entry Building & Hub 25 workers per month
- Residential & Commercial (subject to Council/ DoP approval) 50 workers per month

Further to the parking demand generated by contractors as per the above figures, the Contractor Car Park is an essential element to reducing congestion and residential concern.

As per the Estate development programme, works will continue once the Stage 1 Redevelopment is complete and the ability to provide off street car parking for Contractors is an important community service.

Should you have any queries please do not hesitate to contact me.

Yours sincerely,

ly Bau

Gray Hall, General Manager, Group Commercial Services/ Commercial Services Executive Officer.



ATTACHMENT C – Estate Works Programme Approvals Status and Estimated Delivery





ATTACHMENT D – SAH Stage 1 Redevelopment Staging Plan, MBMO, 18th July 2013



NOTES:

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ALL WORK TO COMPLY WITH CURRENT REGULATIONS AND S.A.A. STANDARDS,

LEGEND:



