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AN ASSESSMENT OF THE POTENTIAL TRAFFIC AND PARKING IMPACTS OF THE PROPOSED REDEVELOPMENT OF QUEANBEYAN DISTRICT HOSPITAL

Prepared for

Aurora Projects

By

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Report Documentation Control

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1. INTRODUCTION

Southern Area Health Service (SAHS) and the NSW Health Department (NSW Health) propose redevelopment of the Queanbeyan District Hospital (QDH). As part of the Procurement Feasibility Plan (PFP) for this proposal, the present report documents an assessment of the likely traffic and parking impacts of the Hospital operations after redevelopment. The work reported herein was undertaken by TEF Consulting under instruction from and commission by Aurora Projects Pty Ltd (AP). In the course of preparation of this report, discussions were held with officers of the Queanbeyan City Council and SAHS. Their assistance is greatly appreciated.

2. EXISTING CONDITIONS

2.1. Development site

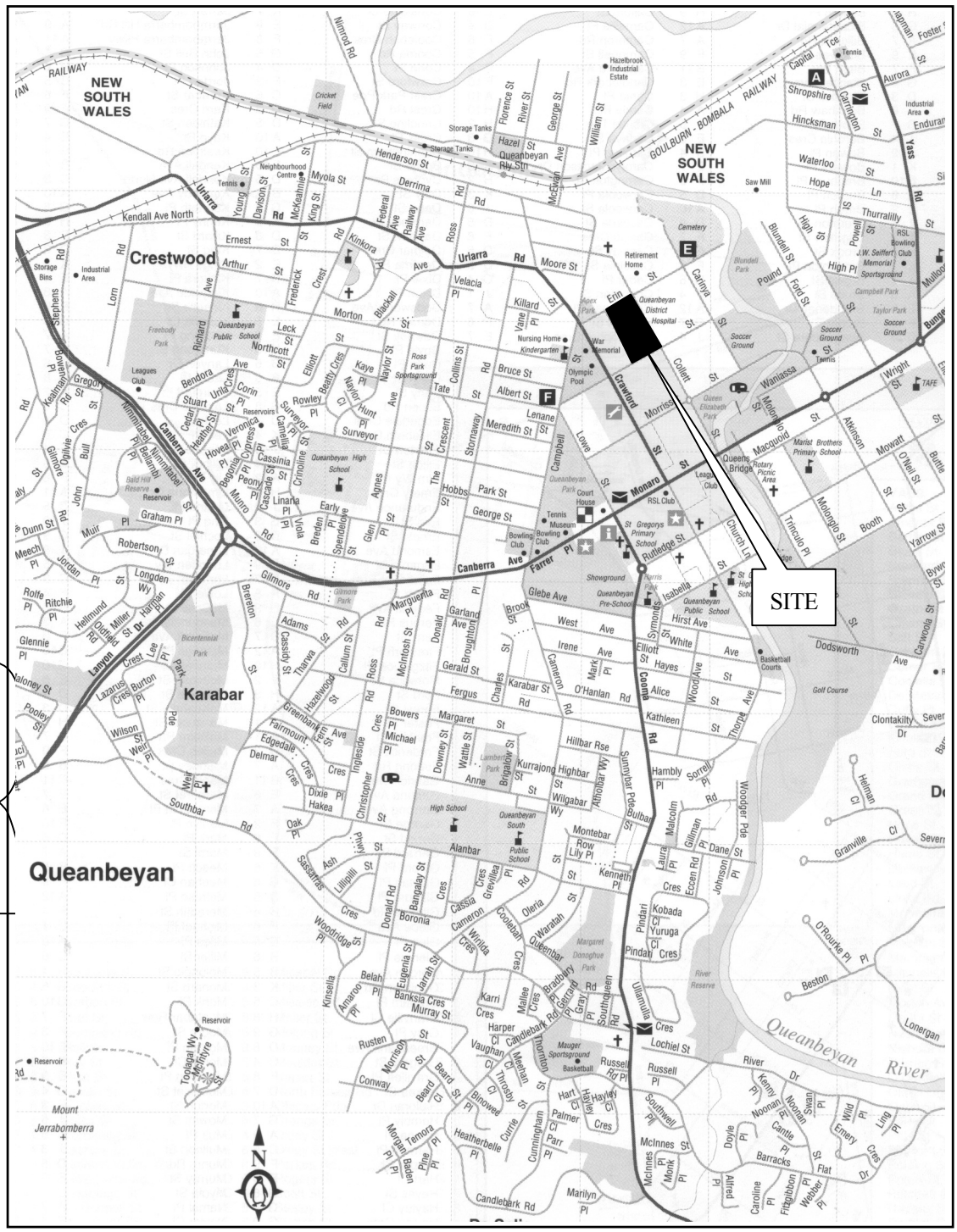
The QDH site is located on the western side of Collett Street (from the corner of Erin Street to Antill Street), Queanbeyan.

QDH provides the following services.

- a 44-bed ward
- two operating rooms, with one of them currently in use
- an Emergency Department
- a mental health unit
- occupational therapy, physiotherapy, and dietetic services
- a methadone clinic located off site
- community nurses
- a radiology unit
- a pathology unit
- a pharmacy unit
- three staff accommodation units
- Outpatient Facilities include;
    - Orthopaedic
    - Diabetes
    - Podiatrist
    - ante-natal and pre-admission

The main vehicular access to the QDH is provided from Collett Street, however parking can also be accessed from Erin Street and from Antill Street (entry only).

The location of the site is shown in **Figure 1.**



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Queanbeyan Hospital. Southern Area Health Services and NSW Health Department

Site Location

1

0

N.T.S.

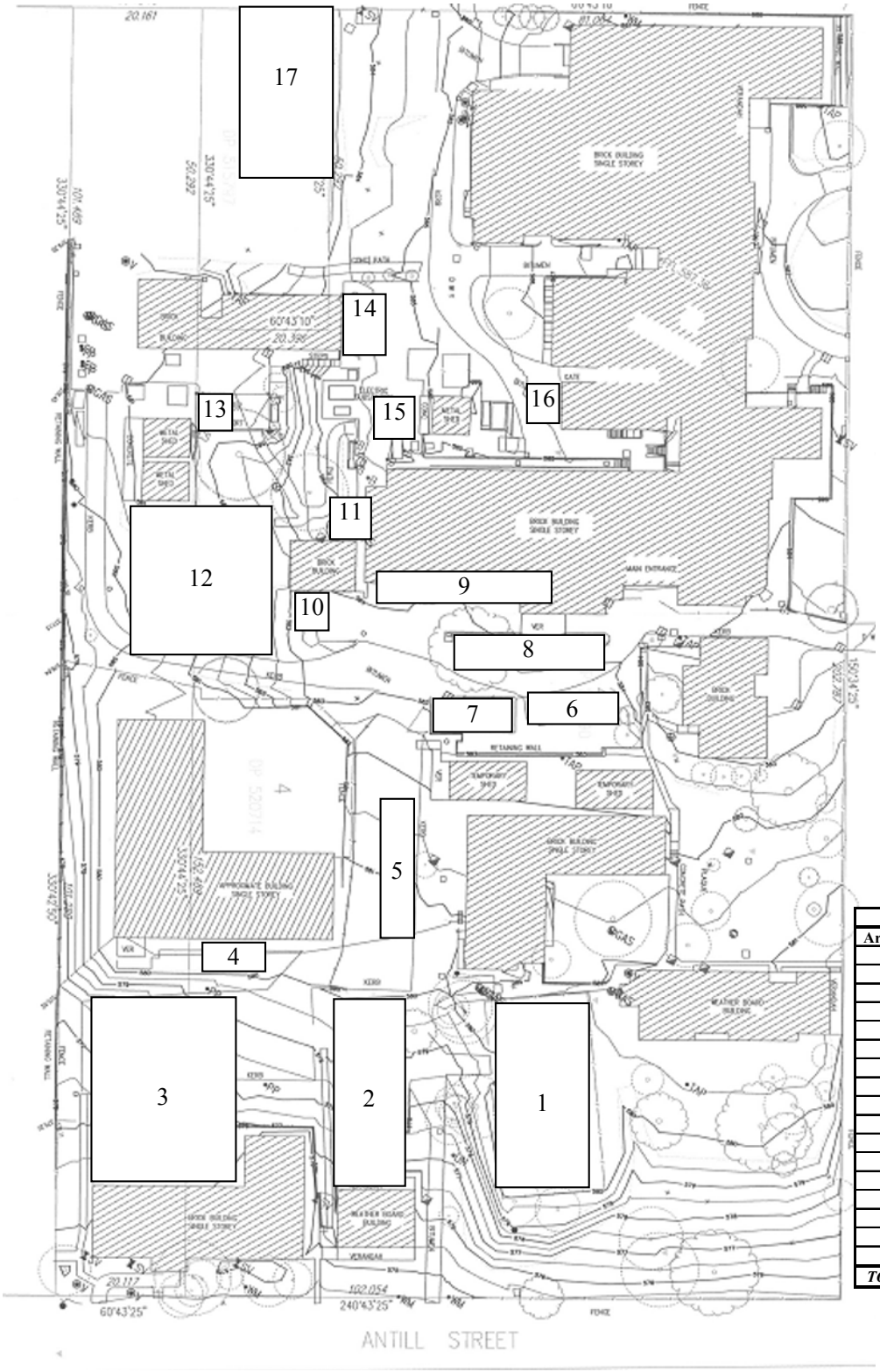
2.2. Existing parking provision

There is a number of car parking areas which are scattered on the hospital site, with the total capacity of approximately 129 parking spaces. Some of these car parking areas are signposted for the staff use only; other areas can be used by both the staff and the general public. **Figure 2** shows the current parking arrangements on the QDH site.

To ascertain the existing parking demand, a parking survey was conducted by TEF Consulting within the hospital site and in the surrounding streets on Monday 22 November 2004. The day for the survey was chosen based on the information provided by the SAHS and QDH administration as a representative busy day. The results of the survey are shown in **Table 2.1** for on-site parking and in **Table 2.2** for on-street parking. **Figure 3** illustrates the on-street parking locations included in the survey.

As may be seen from the parking survey results, the total parking demand on site never achieved the available capacity throughout the survey day. At different stages of the day some parking areas achieved their full capacity, however due to peak demands occurring at different times in specific parking areas the total on-site demand is rather steady at some 50 to 70 cars. Staff, patients and visitors are also able to park on surrounding streets, mainly on Erin Street, Collett Street and Antill Street, where there are some 138 parking spaces available within close walking distance to the Hospital. It appears from the results of the surveys that a substantial number of staff, patients and visitors prefer to park on street even when a substantial number of parking spaces is available on site. The survey results also indicate that not all on-street parking spaces in the close vicinity of the hospital are used, and that staff, visitors and patients have no difficulty finding a vacant space.

In summary, both on-site and close off-site parking areas are not fully utilised at present.



Parking Spaces				
Area No.	**General**	**Staff**	**Disabled**	**Note**
1	-	17	-	SAHS parking only
2	5	4	-	4 spaces for SAHS
3	23	-	-	-
4	-	1	-	-
5	-	16	-	-
6	approx. 5	-	-	Informal on grass
7	-	2	2	-
8	3	3	-	3 informal on grass
9	-	3	-	Reserved for doctors
10	-	3	-	Reserved for doctors
11	-	1	-	-
12	approx. 17	-	-	Informal on grass
13	-	2	-	Workshop spaces
14	-	4	-	Educ. centre/day surgery
15	-	2	-	-
16	-	4	-	Educ. centre/day surgery
17	approx. 12	-	-	Informal on grass
TOTAL	***approx. 65***	***62***	***2***	
	approx. 129			

Parking Locations – Hospital Onsite

2

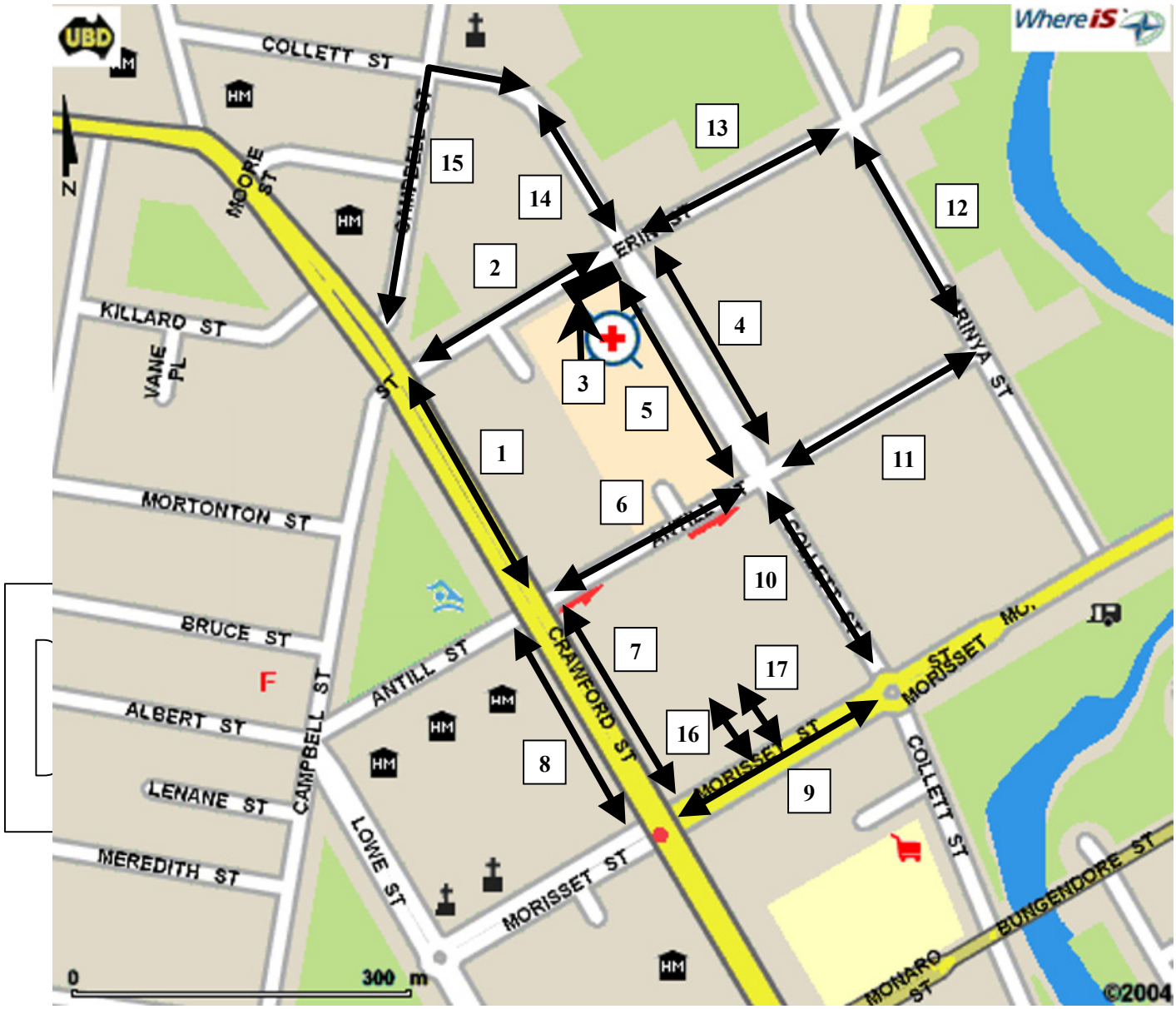
0

N.T.S.

Table 2.1 Off-street parking

	Parking area																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Time	Number of cars																TOTAL
7:00	14	7	3	0	8	5	0	3	2	2	1	5	2	1	2	0	8	63
7:30	14	7	3	0	9	2	1	3	1	1	1	5	2	1	2	0	8	60
8:00	14	9	3	0	7	2	1	3	1	2	1	7	2	3	2	1	8	66
8:30	13	7	4	0	7	2	1	4	2	3	0	8	2	3	2	1	9	68
9:00	12	5	5	0	11	4	1	4	2	3	0	9	1	4	2	1	12	76
9:30	11	4	7	0	12	4	1	5	3	3	0	8	2	4	1	1	12	78
10:00	10	2	7	0	12	2	1	5	2	3	0	8	2	3	1	2	12	72
10:30	8	4	7	0	12	2	1	5	2	3	0	9	2	3	1	0	11	70
11:00	8	3	6	0	11	2	2	5	2	3	0	11	2	3	2	1	11	72
11:30	8	4	6	0	11	2	1	5	2	3	0	11	2	3	2	0	12	72
12:00	9	5	7	0	11	2	1	5	2	3	0	12	2	2	2	0	11	74
12:30	7	7	6	0	12	2	1	5	2	3	0	12	2	2	2	0	10	73
13:00	8	7	7	0	12	3	1	4	3	3	0	14	1	2	2	0	9	76
13:30	7	6	6	0	12	4	2	6	3	3	0	17	1	2	2	0	9	80
14:00	7	4	7	0	13	4	2	6	3	3	0	17	2	2	2	1	9	82
14:30	7	3	7	0	12	4	2	3	2	3	0	16	2	3	2	1	11	78
15:00	9	5	6	0	11	2	2	2	1	3	0	15	2	3	2	1	11	75
15:30	11	7	5	0	11	1	2	2	1	3	0	14	1	2	2	0	5	67
16:00	10	7	6	0	11	2	1	1	1	3	0	11	1	3	2	1	6	66
16:30	11	9	6	0	10	1	1	0	1	3	0	10	2	3	2	0	5	64
17:00	11	8	6	0	8	2	1	1	1	2	0	8	1	3	2	0	4	58
17:30	11	9	4	0	8	3	1	2	1	2	0	6	1	2	2	0	2	54
18:00	11	9	4	0	9	3	1	2	1	3	1	6	1	2	2	0	2	57

	Number of spaces in each parking area																	TOTAL
	17	***9***	***23***	***1***	***16***	***5***	***4***	***6***	***3***	***3***	***1***	***17***	***2***	***4***	***2***	***4***	***12***	***129***
	Number of vacant spaces																	
7:00	3	2	20	1	8	0	4	3	1	1	0	12	0	3	0	4	4	66
7:30	3	2	20	1	7	3	3	3	2	2	0	12	0	3	0	4	4	69
8:00	3	0	20	1	9	3	3	3	2	1	0	10	0	1	0	3	4	63
8:30	4	2	19	1	9	3	3	2	1	0	1	9	0	1	0	3	3	61
9:00	5	4	18	1	5	1	3	2	1	0	1	8	1	0	0	3	0	53
9:30	6	5	16	1	4	1	3	1	0	0	1	9	0	0	1	3	0	51
10:00	7	7	16	1	4	3	3	1	1	0	1	9	0	1	1	2	0	57
10:30	9	5	16	1	4	3	3	1	1	0	1	8	0	1	1	4	1	59
11:00	9	6	17	1	5	3	2	1	1	0	1	6	0	1	0	3	1	57
11:30	9	5	17	1	5	3	3	1	1	0	1	6	0	1	0	4	0	57
12:00	8	4	16	1	5	3	3	1	1	0	1	5	0	2	0	4	1	55
12:30	10	2	17	1	4	3	3	1	1	0	1	5	0	2	0	4	2	56
13:00	9	2	16	1	4	2	3	2	0	0	1	3	1	2	0	4	3	53
13:30	10	3	17	1	4	1	2	0	0	0	1	0	1	2	0	4	3	49
14:00	10	5	16	1	3	1	2	0	0	0	1	0	0	2	0	3	3	47
14:30	10	6	16	1	4	1	2	3	1	0	1	1	0	1	0	3	1	51
15:00	8	4	17	1	5	3	2	4	2	0	1	2	0	1	0	3	1	54
15:30	6	2	18	1	5	4	2	4	2	0	1	3	1	2	0	4	7	62
16:00	7	2	17	1	5	3	3	5	2	0	1	6	1	1	0	3	6	63
16:30	6	0	17	1	6	4	3	6	2	0	1	7	0	1	0	4	7	65
17:00	6	1	17	1	8	3	3	5	2	1	1	9	1	1	0	4	8	71
17:30	6	0	19	1	8	2	3	4	2	1	1	11	1	2	0	4	10	75
18:00	6	0	19	1	7	2	3	4	2	0	0	11	1	2	0	4	10	72



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Parking Locations – Hospital Offsite

3

N.T.S.

Table 2.3 On-street parking

Parking area																	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	

Time	Number of cars																TOTAL
7:00	0	0	1	1	4	0	0	0	0	0	0	0	0	2	0	0	8
7:30	0	1	4	2	12	0	1	0	2	11	0	0	0	2	0	0	35
8:00	1	4	7	6	17	2	5	0	6	9	0	0	0	2	0	0	59
8:30	3	5	6	13	17	1	4	1	8	13	0	0	0	3	1	0	75
9:00	3	10	9	14	26	4	7	2	9	15	1	0	0	2	0	0	102
9:30	3	12	9	16	23	5	10	2	11	15	1	0	0	2	1	0	116
10:00	4	12	10	17	26	3	7	4	9	17	1	0	1	2	2	0	121
10:30	6	11	10	16	25	2	7	5	9	18	1	0	0	2	2	0	120
11:00	4	13	10	15	27	3	11	5	13	17	1	0	0	2	2	0	126
11:30	4	15	13	16	26	3	6	5	9	17	1	1	1	2	3	0	125
12:00	3	15	10	18	24	4	4	7	14	16	1	1	0	0	2	0	123
12:30	3	14	8	13	17	4	11	8	13	16	1	0	0	0	2	0	114
13:00	3	12	10	14	20	5	13	10	10	16	1	0	0	0	4	0	125
13:30	3	13	10	13	26	4	4	11	8	17	1	0	0	0	2	0	112
14:00	6	11	13	17	26	4	6	4	13	17	3	0	1	0	0	0	125
14:30	5	15	11	15	21	3	11	8	14	18	2	2	2	0	0	0	131
15:00	6	15	12	15	23	4	7	6	12	18	1	0	2	1	0	0	124
15:30	3	11	7	14	20	5	10	5	12	16	1	0	2	1	0	0	110
16:00	4	11	7	12	23	5	6	7	7	15	1	0	1	1	2	0	104
16:30	6	11	6	12	25	6	8	5	13	14	2	0	1	1	0	0	111
17:00	8	9	4	9	18	4	11	6	11	5	1	0	0	0	0	0	88
17:30	5	5	3	13	25	6	5	5	11	3	0	0	0	2	0	0	86
18:00	1	2	2	10	27	4	6	4	2	3	0	0	0	0	0	1	0	62

	Number of spaces in each parking area																	Available spaces close to Hospital #	TOTAL
	36	***31***	***13***	***18***	***27***	***4***	***14***	***14***	***24***	***17***	***48***	***47***	***45***	***52***	***38***	***4***	***8***	**138**	***440***
	Number of vacant spaces																		
7:00	36	31	12	17	23	4	14	14	24	17	48	47	45	50	38	4	8	131	432
7:30	36	30	9	16	15	4	13	14	22	6	48	47	45	50	38	4	8	118	405
8:00	35	27	6	12	10	2	9	14	18	8	48	47	45	50	38	4	8	103	381
8:30	33	26	7	5	10	3	10	13	16	4	48	47	45	49	37	4	8	95	365
9:00	33	21	4	4	1	0	7	12	15	2	47	47	45	50	38	4	8	78	338
9:30	33	19	4	2	4	-1	4	12	13	2	47	47	45	50	37	4	2	77	324
10:00	32	19	3	1	1	1	7	10	15	0	47	47	44	50	36	4	2	71	319
10:30	30	20	3	2	2	2	7	9	15	-1	47	47	45	50	36	4	2	75	320
11:00	32	18	3	3	0	1	3	9	11	0	47	47	45	50	36	4	5	72	314
11:30	32	16	0	2	1	1	8	9	15	0	47	46	44	50	35	4	5	66	315
12:00	33	16	3	0	3	0	10	7	10	1	47	46	45	52	36	4	4	71	317
12:30	33	17	5	5	10	0	3	6	11	1	47	47	45	52	36	4	4	86	326
13:00	33	19	3	4	7	-1	1	4	14	1	47	47	45	52	34	4	1	82	315
13:30	33	18	3	5	1	0	10	3	16	0	47	47	45	52	36	4	8	76	328
14:00	30	20	0	1	1	0	8	10	11	0	45	47	44	52	38	4	4	70	315
14:30	31	16	2	3	6	1	3	6	10	-1	46	45	43	52	38	4	4	75	309
15:00	30	16	1	3	4	0	7	8	12	-1	47	47	43	51	38	4	6	71	316
15:30	33	20	6	4	7	-1	4	9	12	1	47	47	43	51	38	4	5	84	330
16:00	32	20	6	6	4	-1	8	7	17	2	47	47	44	51	36	4	6	84	336
16:30	30	20	7	6	2	-2	6	9	11	3	46	47	44	51	38	4	7	83	329
17:00	28	22	9	9	9	0	3	8	13	12	47	47	45	52	38	4	6	98	352
17:30	31	26	10	5	2	-2	9	9	13	14	48	47	45	50	38	4	5	91	354
18:00	35	29	11	8	0	0	8	10	22	14	48	47	45	52	38	3	8	98	378

- Available spaces close to Hospital include areas 2, 3, 4, 5, and half of 13 and 14

2.3. Traffic conditions

Traffic volumes around the Hospital site in Collett and Erin Streets are fairly low. Crawford Street is used as a main route to the West of Queanbeyan and to Canberra. Land uses in Collett Street near the Hospital are mostly residential. Erin Street is also predominantly residential except some commercial uses between Crawford Street and the Hospital site.

Woolworth, Aldi and a number of other commercial uses have access from Erin and Antill Street, however traffic generated by these developments mostly travels to and from Crawford Street.

Based on discussions held with the Queanbeyan City Council's Traffic Engineer, it was decided that intersection traffic volume counts were not necessary due to the low traffic flows and satisfactory operation of the intersections near the Hospital.

2.4. Staff surveys

To establish the number of staff car users and the times of peak staff parking demand, a number of surveys were conducted. Staff questionnaire forms were distributed by the SAHS and completed between Friday 19 November 2004 and Wednesday 24 November 2004. In addition to the staff survey, a facility questionnaire survey was carried out. This survey was designed to determine the number of staff by shift and by facility as well as the number and the nature of deliveries made to each facility. Examples of the survey forms are included in **Appendix A**.

Travel modes for each staff category were calculated from the staff questionnaire survey. These are shown in **Table 2.4.**

Table 2.4 Staff Travel Modes

	Car driver	Car passenger	Dropped off	Other	Walk	Bus	Bicycle
GP VMO	100%	0%	0%	0%	0%	0%	0%
Administrative Staff	80%	0%	0%	0%	20%	0%	0%
Catering	71%	0%	14%	0%	14%	0%	0%
Other Staff	0%	0%	0%	0%	0%	0%	0%
Specialist VMO	0%	0%	0%	0%	0%	0%	0%
Nursing	100%	0%	0%	0%	0%	0%	8%
Cleaning	71%	14%	14%	0%	0%	0%	0%
Allied Health	93%	0%	0%	0%	0%	0%	7%
SAHS	100%	0%	0%	0%	0%	0%	0%
Other DP	92%	0%	8%	0%	0%	0%	0%

2.5. Visitor and Patient surveys

Visitor and patient accumulation and questionnaire surveys were conducted concurrently with parking accumulation surveys on Monday 22 November 2004. The results of the questionnaire survey were used for determining travel modes, length of stay and the location of parking. An example of the questionnaire form is included in **Appendix B**.

A head count of visitors and patients was conducted at half-hourly intervals in all Hospital facilities. The results of this survey are shown in **Table 2.5**. The number of people in the Emergency department was calculated from the times of arrival and length of stay recorded in the questionnaire survey forms.

Table 2.5 Visitor and Patient Accumulation

	Number of people									
	Commun. Health 8:30-17:00	Mental Health 8:30-17:00	Occup. Therapy	Emergency	Pathology (+ inside)	XRAY (+ inside)	Maternity	General	Physio	**TOTAL**
7:30	-	-	-	-	-	-	-	-	-	**-**
8:00	-	1	-	2	-	-	-	-	-	**-**
8:15	-	0	0	2	7	0	5	0	0	**14**
9:00	1	3	0	2	4	0	8	0	0	**17**
9:30	4	2	0	2	5	0	2	1	4	**16**
10:00	6	8	1	2	5	3	7	2	3	**31**
10:30	2	4	0	3	6	0	2	1	1	**17**
11:00	10	3	1	3	4	4	6	5	5	**31**
11:30	7	7	1	6	7	0	16	21	3	**61**
12:00	1	6	4	5	9	2	6	22	1	**55**
12:30	1	3	0	4	3	3	4	4	0	**21**
13:00	1	2	0	3	3	2	0	1	0	**11**
13:30	5	6	3	2	6	2	4	1	2	**26**
14:00	5	5	1	2	6	1	6	2	1	**24**
14:30	4	3	2	6	6	2	3	5	2	**29**
15:00	2	5	1	4	6	1	4	4	1	**26**
15:30	-	1	0	7	7	0	6	14	0	**35**
16:00	-	2	0	9	9	1	12	16	-	**49**
16:30	-	0	0	7	4	1	25	11	-	**48**
17:00	-	0	-	11	6	-	23	14	-	**54**
17:30	-	-	-	8	5	-	14	32	-	**59**
18:00	-	-	-	6	7	-	22	36	-	**71**

2.6. Servicing and deliveries

Access to the loading dock is provided from Erin Street. All service vehicles use this area to deliver and pick up goods and waste. The current loading dock allows for Heavy Rigid Vehicles (as per the Australian Standard definition) to manoeuvre within the hospital site. A large articulated vehicle is used to deliver the liquefied oxygen. This vehicle reverses into the hospital site from Erin Street, however due to the frequency of the deliveries, it only has a small impact on traffic. **Table 2.3** shows the size, frequency, and the day and time that the trucks deliver to each service. Typically, no more than three delivery vehicles can be expected to be on site at any one time.

Table 2.3 Service and delivery movements

Service	Size	Frequency	Days	Times
Mail	SRV	1 per day	weekdays	1:00 PM - 3:00 pm
Linen Truck	HRV	2 per week	Tue/ Fri	12:00 AM
Stores Truck	HRV	1 per week	Wed	8:30 AM
Food Truck	HRV	2 per week	Wed/ Fri	10:00 AM - 11:30 AM
	HRV	1 per week	Thurs	8:30 AM - 12:00 AM
Bulk Oxygen	SEMI	2 per month	when ordered	-
Bottled Gas	MRV	3 per week	when ordered	-
Garbage	MRV	1 per week	Mon/ Wed/ Fri	6:00 AM
Cardboard	MRV	1 per week	Mon	12:00 AM
Stationery	SRV	2 per week	-	-
Bio Medicals	MRV	1 per week	-	-
Glass Recycle	MRV	1 per month	-	-
Paper Recycle	MRV	2 per month	-	-
Dangerous Goods	HRV	3 per year	-	-
Couriers	SRV	Anytime	-	-

3. THE CURRENT PROPOSAL

The QDH provides essential health services for Queanbeyan and the surrounding rural area. SAHS identified the need for co-locate and integrate medical services that are in the area into one site at QDH and to reverse the flow in the identified services from the Canberra Hospitals to QDH. Details of the existing and proposed services are provided in **Section 4** further in this report.

It is proposed that some of the existing buildings be demolished and a new building be constructed which would contain some of the existing and proposed services. The proposed options for the redevelopment will retain some 83 existing parking spaces on the hospital site. A new car parking area is proposed to be constructed. This area, depending on the development option, would contain between 70 and 90 spaces. For the purposes of the present assessment the larger car parking area of 90 spaces has been adopted. Parking on the surrounding streets will not be affected by the redevelopment. It is proposed that the main entry into the hospital will be at the same location from Collett Street. The emergency ~~entry into~~ the hospital will also be on Collett Street, however it will have a different entry location.

The new access to the proposed loading dock will be near or at the same location as the existing access. Loading docks will be consolidated into a single area which would allow manoeuvring of heavy vehicles on site.

The details of the current proposal are depicted on the drawings prepared by Aurora Projects Pty Ltd.

4. TRAFFIC AND PARKING IMPACTS

4.1. Basis for Forecasting

Queanbeyan City Council DCP No. 1 for Car Parking Policy recommends using comparisons with similar developments to determine the required number of parking spaces. The existing activities of the QHD are deemed to provide the best basis for determining the future parking demand.

The results of the surveys described in Section 2 of the present report complemented by the information about the proposed activities have been used as a basis for the future car parking estimates. Existing and future staff attendances for the Hospital throughout a typical busy weekday have been made available by the Hospital administration and have been analysed in detail. The weekend staff accumulation is very low due Community Health not operating on weekends. People accumulation and parking demand on weekends are much lower than those on weekdays and weekend conditions were, therefore, excluded form further analysis. On weekdays, the busiest time at the Hospital is in the morning and early afternoon. This time period has been adopted for the analysis of the traffic and parking impacts of the proposal.

The results are summarised in **Table 4.1** overleaf.

What must be taken into account when considering the information contained in **Table 4.1** is that the times of peak people accumulation and car parking demand for different facilities do not coincide and therefore the total car parking demand is lower than that calculated by simply adding up the respective demands for each facility. It is also important that some Community Health services, like physiotherapy and dental surgery, do not operate daily. Other facilities like community nurses and needle exchange also provide outreach services which means that some

Table 4.1 Estimated existing and future typical staff accumulation and parking demand at Queanbeyan District Hospital

Area	Max number of staff (*11:30 am - 12:00 noon*)		Car usage, cars per person	Current Parking Demand	Future Parking Demand
	Existing	Future			
CH Centre					
Nursing	27	38	1.00	27	38
Administration	3	3	0.80	2	2
Allied Health Manager	1	1	0.93	1	1
Nurse Manager - Community Nursing	1	1	0.93	1	1
Community Health Service Manager	1	1	0.93	1	1
Dental	5	5	0.93	5	5
Rehab	5	7	0.93	5	7
Paediatric OT	1	2	0.93	1	2
Speech Pathology	1	2	0.93	1	2
Physio	6	8	0.93	6	7
Paediatric Physio	1	2	0.93	1	2
Health Promotion Officer	10	15	0.93	9	14
Dietician	1	2	0.93	1	2
SUBTOTAL	***63***	***87***		***60***	***83***
Nursing Admin	4	6	0.80	3	5
Pathology	5	5	0.92	5	5
Quality/ Nursing Admin	1	1	0.80	1	1
X-Ray	2	2	0.92	2	2
B Ward					
Nursing	6	6	1.00	6	6
Administration	1	2	0.80	1	2
Physio	2	2	0.92	2	2
Medical	14	14	0.92	13	13
Wardsperson	7	8	0.71	5	6
Emergency depart					
medical	1	1	1.00	1	1
nursing	2	2	1.00	2	2
Hotel Service					
General Administration	1	1	0.80	1	1
Hospital Assistant	4	4	0.92	4	4
Maternity Unit	3	3	0.92	3	3
Administration - *ED Clerk*	1	1	0.92	1	1
Admin/HR/DSON/PA	10	5	0.80	8	4
SUBTOTAL	***64***	***63***		***56***	***55***
Health Service Manager*	1	1	1.00	1	1
Maintenance Manager	1	1	1.00	1	1
Hospital Assistant	1	1	1.00	1	1
Gardener	1	2	1.00	1	2
Pharmacist	1	2	0.92	1	2
Mental Health Services	34	42	0.92	31	39
Drug & Alcohol Services	0	0	0.92	0.0	0
SUBTOTAL	***39***	***49***		***36***	***46***
VMOs	10	10	1.00	10	10
TOTAL	**176**	**209**		**163**	**194**

of the staff members arrive to the Hospital only for a short period of time in the morning and then leave. Most specialists maintain appointment schedules which minimise the number of patients present on the Hospital site at any one time.

As may be seen from **Table 4.1**, the staff numbers will increase by 33. The additional parking demand due to this increase will be some 31 cars.

In addition to the above staff increase, SAHS are relocating 65 of its staff to the QDH site. The car usage rate of these staff members, determined based on the consultations with SAHS, will be similar to that of the Administration Staff of the QDH, that is 80% (8 out of 10 people drive to work). Therefore 52 additional parking spaces have to be provided for the SAHS staff.

Increases in the number of patients and visitors were estimated from the information about the changes in the number of visitations provided by SAHS. The car usage rates calculated from the results of the quiestionnaire surveys were used to determine the likely increases in the number of parked cars for each facility separately. Currently 22 spaces are required for visitors. This number will increase to 26 after redevelopment.

The current and future peak parking demand and parking provision are summarised in **Table 4.2**. This includes on street parking provision within the short walking distance from the Hospital.

Table 4.2 Parking Requirements

		Current	Future	Difference
Carparking Demand	**Staff**	163	194	31
	Visitors and Patients	22	26	4
	SAHS	0	52	52
	TOTAL	**185**	**272**	**87**
On site Parking	**Existing**	129	83	-46
	Proposed	0	90	90
	TOTAL	**129**	**173**	**44**
	Available Street Parking	138	138	0
	On Street Demand	**56**	**99**	**43**

As may be seen from the results of the analysis presented in **Table 4.2**, the proposed redevelopment with a new 90-space car parking area would result in an increase in the on-street parking demand by some 43 cars.

These can be easily accommodated on street within the short walking distance from the Hospital. It is worthy of note that the existing informal grass parking areas on site can be regraded and formalised, which would result in an addition of some 20 parking spaces.

The designs of the proposed new car parking area shall satisfy the requirements of the Australian Standard. At the detailed design stage, checks will be required of the gradients for the car parking area and sight distances at entry and exit points to ensure their compliance with the Standard.

The design of the loading dock's entry/exit driveway and of the internal manoeuvring area will require further checks to ensure that it complies with the Australian Standard. The number of movements of delivery and servicing vehicles is likely to remain the same as at present. Turning diagrams have been attached to **Appendix C** of this report. These diagrams illustrate the required size of the loading dock for Heavy Rigid Vehicles to turn around. A diagram is also attached showing the size that the entry and exit to allow for a semi trailer reversing into the loading dock from Erin Street.

5. CONCLUSIONS AND RECOMMENDATIONS

1. The existing parking at the Queanbeyan District Hospital is approximately 129 parking spaces, with an additional some 138 spaces on street within close proximity to the Hospital.
2. The proposed redevelopment will have little impact on the current traffic volumes.
3. The total parking demand after redevelopment would increase by some 87 parking spaces.
4. The total on-site parking provision is proposed to be increased by 44 spaces (Option with a new 90-space car park).
5. On-street parking demand is likely to increase by some 43 cars which can be readily accommodated within the existing spare capacity within the short walking distance from the Hospital.

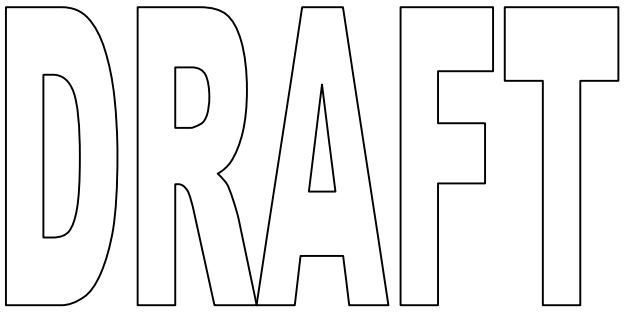
6. REFERENCES

References

STANDARDS AUSTRALIA (1993). Australian Standard 2890.1 – Parking facilities: Part 1 – Off street parking. Australian Standards Association, Sydney, NSW.

APPENDIX A

Staff Questionnaire Forms



APPENDIX B

Patient and Visitor Questionnaire Form