de Witt Consulting
planning surveying
project management

ABN 23 104 067 405

7 Canberra Street
PO Box 850 Charlestown NSW 2290
P 02 4942 5441
F 02 4942 5301
E admin@dewittconsulting.com.au

www.dewittconsulting.com.au

22 March 2011

OUR REF: DH:51-2

The General Manager
Newcastle City Council
P O Box 489
Newcastle NSW 2300

ATTENTION: MR DAMIAN JAEGER – SENIOR DEVELOPMENT OFFICER (PLANNING)

Dear Sir,

RE: DA/10/1049 – PROPOSED MOSQUE
NO'S 158A & 164 CROUDACE ROAD, ELERMORE VALE

We refer to our letter dated 18 February 2011 and your letter dated 9 March 2011 in relation to the above development application ("DA").

Provided below is our response to the various additional matters raised by Council. We have addressed these matters in the order presented in the Council letter dated 9 March 2011 for ease of reference.

1. Traffic Assessment

These additional matters have been addressed in the Traffic Response Report – Number 2 prepared by TPK & Associates (see Appendix 1).

2. Environmental Assessment

The additional acoustic matters have been addressed in the attached letter from Spectrum Acoustics dated 21 March 2011 (see Appendix 2).

With regard to the final paragraph of Section 2 of the Council letter regarding the funeral ceremony room, we make the following comments:

- The de Witt Consulting letter dated 18 February 2011 does not refer to any washing of the body. There is no washing of the body in the funeral ceremony room and this is an incorrect assertion by Council.
- As detailed in Section 2.5 of our letter dated 18 February 2011, the funeral ceremony room is not a mortuary. The body is brought from the City mortuary to the funeral ceremony room. The building comprises a private space where the relatives of the deceased and the Imam

commence the prayers associated with the funeral service that is completed within the Mosque. It is therefore a building that is used for "religious worship" and falls within the definition of a "place of worship" pursuant to LEP 2003.

3. Proposed Uses

The original acoustic report's reference to 300 people using the community hall up to 11pm at night was incorrect. This matter has been dealt with in the attached letter from Spectrum Acoustics dated 21 March 2011 (see Appendix 2). A table of the proposed uses, numbers of people involved, the hours of operation and frequency of use was provided in Table 5 of the Traffic Response Report lodged previously with Council (see Appendix 6 of our letter dated 18 February 2011). All usage of the hall will cease between 8.30pm and 9.00pm at night. The maximum number of people using the hall will be after the two special prayer events that are held twice a year (Eidul Fitr and Eidul Adha Prayers). These are held in the early morning (7.30am to 9.00am). Up to 450 may attend these prayers in the mosque and some worshippers may stay behind for a breakfast held in the hall (which will cease before midday).

4. Arborist Report/Trees

This comment by Council is noted.

5. Right of Way

As previously stated, there is no change to the existing vehicular access arrangements or point of access to the adjoining dwelling on Lot 1 DP 209466. This dwelling will enjoy the same rights as those which currently exist. Schedule 8 of the Conveyancing Act 1919 deals with the construction of the expression "Right of Carriage Way" and states the following:

> *".....the right shall be capable of enjoyment, and every person authorised by that person, to go, pass and repass at all times and for all purposes with or without animals or vehicles or both to and from the said dominant tenement or any such part thereof."*

The right of way is therefore in relation "*to go, pass and repass*", rather than creating new access points along the right of way. The existing access point is being protected and should there be a future need to amend the access point to Lot 1 DP 209466 then this could be negotiated accordingly.

6. Lux Diagram/Lighting Impacts

Three x A1 copies of the Lux Diagram showing lighting impacts of the proposed development have already been forwarded to Council under our letter dated 14 March 2011.

We trust that this additional information comprehensively addresses the matters raised by Council. Should you have any queries in relation to the DA please do not hesitate to contact the undersigned on (02) 4942 5441.

Yours sincerely
de WITT CONSULTING

David Humphris
DIRECTOR

APPENDICES

APPENDIX 1

Traffic Response Report – Number 2 prepared by TPK & Associates Pty Ltd

TPK & Associates Pty. Ltd.

TRAFFIC MANAGEMENT & SAFETY CONSULTANTS

10 Haig Street Belmont NSW 2280
PH. (02) 4945 5688
Fax (02) 4945 5686
Mob. 0418 419 190
E-mail: tp.keating@hunterlink.net.au

TRAFFIC RESPONSE REPORT – NUMBER 2

PROPOSED MOSQUE & COMMUNITY FACILITIES

158A CROUDACE ROAD

ELERMORE VALE

March 2011

de Witt Consulting Pty Ltd
(For The Applicant)

Newcastle City Council Local Government Area

Prepared by
Terry Keating
Director
TPK & Associates Pty Ltd

P R O P O S E D C O M M U N I T Y C E N T R E

TRAFFIC RESPONSE

SECTION 1 - INTRODUCTION

TPK & Associates Pty Ltd (TPK) was invited by de Witt Consulting Pty Ltd (For The Applicant) to join their project team to provide traffic assessment services for the subject project; the project is a proposed Mosque & Community Facilities at:

158A Croudace Road, Elermore Vale

The general site location is highlighted on the Location Plan below.

The development is to replace the current facilities utilised at Metcalf Street, Wallsend.

Council has responded to The Application seeking additional information in a Council letter dated 21 December 2010; Their Ref 10/1049 to which TPK provided a Response Report. This second TPK report responds to the additional traffic items raised in Council's letter dated 9th March 2011.

FIGURE 1 – LOCATION PLAN

Mr. Terry Keating, Director TPK, undertook the evaluation and preparation of the report. He has over 40 years experience in the road safety and traffic management profession, including the assessment of traffic generating developments.

ADDITIONAL ASSESSMENT & RESPONSE

TPK has inserted the relevant text from Councils 9th March letter; the text is shown in blue. TPK's assessment and response is provided under each item and supplemented by a Summation at the end of the report.

FROM COUNCILS LETTER

1. Traffic Assessment – The traffic aspects have been assessed by Council's Senior Development Officer (Engineering). His detailed assessment is as follows:

> *'The additional information supplied has been reviewed and I believe this information has still failed to address a number of areas of deficiency within the traffic report. Given the level of scrutiny this application will receive from a traffic perspective the traffic consultant should be ensuring a thorough traffic report is completed.*
>
> *In this regard I believe to provide the required evidence to show the proposal does no impact on the road network's efficiency the following additional modelling and comment still needs to be carried out:*

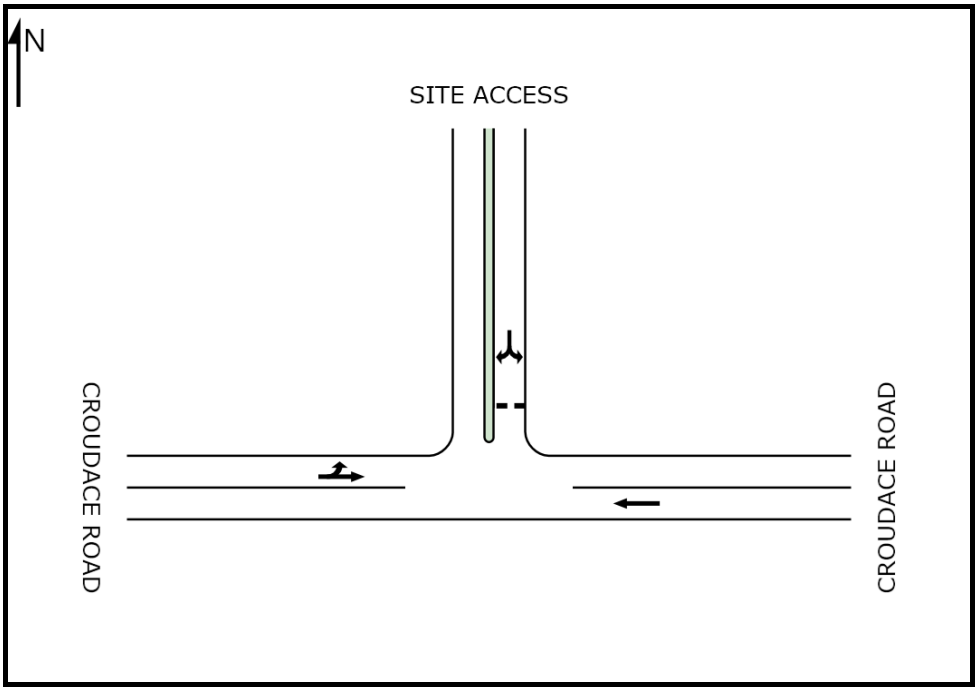
TPK's Response Report, Jan-Feb 2011 indicated that the project had adopted Council's preferred access arrangement of left in/left out as stated in their December 2010 letter.
Councils March 2011 letter now indicates that consideration should be given to the access be designed to permit the right turn out of the site and leaves the accountability to validate that arrangement to The Applicant.

TPK will undertake analysis of the access arrangements now recommended by Council and respond to the access arrangements throughout this report and in Summation.
The SIDRA modelling will adopt the potential traffic generations as set out in the original TPK Traffic Report and the existing traffic volumes data collected for the original assessment plus additional traffic volume data subsequently provided by Council.

1. Sidra modelling of the access during road network peaks;

There is no prayer period identified for the Weekday am peak hence there is no need to model this period; for the Weekday pm peak Maghrib Prayer is scheduled and is stated to generate up to 25 worshippers; 25 trips exiting the site will be modelled.
TPK has also modelled the Friday Prayer period 1pm to 2pm for exiting traffic under the latest access design to confirm the intersection capacity; the arrival traffic is left turn in only and unopposed so modelling is not required.
The Movement Summaries provided below confirm acceptable operation conditions under the scenarios identified.

Figure 1 is the SIDRA geometric model base adopted. FIGURE 1



Movement Summary MS1 is for the scenario:

- Croudace Road and Site Access – Weekday PM Peak – Maghrib Prayer

Acceptable intersection performance is indicated.

MS1 – MOVEMENT SUMMARY

Site: SITE ACCESS GW NRT IN

CROUDACE ROAD & SITE ACCESS, ELERMORE VALE
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	95% Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: CROUDACE ROAD											
5	T	799	1.1	0.413	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		799	1.1	0.413	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
North: SITE ACCESS											
7	L	14	1.1	0.144	27.3	LOS D	0.5	3.8	0.88	0.96	34.2
9	R	13	1.1	0.144	27.5	LOS D	0.5	3.8	0.88	0.96	34.2
Approach		26	1.1	0.144	27.4	LOS D	0.5	3.8	0.88	0.96	34.2
West: CROUDACE ROAD											
10	L	1	1.1	0.526	8.2	LOS A	0.0	0.0	0.00	1.09	49.0
11	T	915	1.1	0.473	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		916	1.1	0.473	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
All Vehicles		1741	1.1	0.473	0.4	NA	0.5	3.8	0.01	0.02	59.3

Movement Summary MS2 is for the scenario:

- Croudace Road and Site Access – 1pm – 2pm – Friday Jumaa Prayer

Acceptable intersection performance is indicated.

MS2 – MOVEMENT SUMMARY

Site: SITE ACCESS GW NRT IN

CROUDACE ROAD & SITE ACCESS, ELERMORE VALE
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	95% Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: CROUDACE ROAD											
5	T	515	1.1	0.266	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		515	1.1	0.266	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
North: SITE ACCESS											
7	L	74	1.1	0.275	14.8	LOS B	1.4	10.0	0.66	0.91	42.6
9	R	74	1.1	0.275	15.0	LOS B	1.4	10.0	0.66	0.93	42.5
Approach		147	1.1	0.275	14.9	LOS B	1.4	10.0	0.66	0.92	42.5
West: CROUDACE ROAD											
10	L	1	1.1	0.263	8.2	LOS A	0.0	0.0	0.00	1.09	49.0
11	T	538	1.1	0.278	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		539	1.1	0.278	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
All Vehicles		1201	1.1	0.278	1.8	NA	1.4	10.0	0.08	0.11	57.1

To further test the intersection performance for the Friday Prayer departure TPK doubled the access traffic volumes to reflect the more condensed period of departure; see MS3 Movement Summary.

The intersection maintained acceptable levels of performance.

MS3 – MOVEMENT SUMMARY

Site: SITE ACCESS GW NRT IN

CROUDACE ROAD & SITE ACCESS, ELERMORE VALE
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	95% Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: CROUDACE ROAD											
5	T	515	1.1	0.266	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		515	1.1	0.266	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
North: SITE ACCESS											
7	L	147	1.1	0.550	18.1	LOS C	4.0	28.2	0.75	1.09	40.0
9	R	147	1.1	0.550	18.3	LOS C	4.0	28.2	0.75	1.06	40.0
Approach		295	1.1	0.549	18.2	LOS C	4.0	28.2	0.75	1.08	40.0
West: CROUDACE ROAD											
10	L	1	1.1	0.263	8.2	LOS A	0.0	0.0	0.00	1.09	49.0
11	T	538	1.1	0.278	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		539	1.1	0.278	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
All Vehicles		1348	1.1	0.549	4.0	NA	4.0	28.2	0.16	0.24	54.1

2. *Sidra modelling of the access for 2021 traffic volumes as Council currently has no plans to upgrade Croudace Road.*

2% per annum growth has been applied to Croudace Road traffic flow and the Friday 1pm to 2pm Prayer exit traffic modelled; MS4 provides the Movement Summary for that scenario.

Acceptable intersection performance is indicated.

MS4 – MOVEMENT SUMMARY

Site: SITE ACCESS GW NRT IN

CROUDACE ROAD & SITE ACCESS, ELERMORE VALE
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
							Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: CROUDACE ROAD											
5	T	621	1.1	0.321	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		621	1.1	0.321	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
North: SITE ACCESS											
7	L	74	1.1	0.370	19.1	LOS C	2.0	13.8	0.78	1.00	39.3
9	R	74	1.1	0.370	19.3	LOS C	2.0	13.8	0.78	0.99	39.3
Approach		147	1.1	0.370	19.2	LOS C	2.0	13.8	0.78	0.99	39.3
West: CROUDACE ROAD											
10	L	1	1.1	0.351	8.2	LOS A	0.0	0.0	0.00	1.09	49.0
11	T	648	1.1	0.335	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		649	1.1	0.335	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
All Vehicles		1418	1.1	0.370	2.0	NA	2.0	13.8	0.08	0.10	56.9

To further test the intersection performance for the Friday Prayer departure TPK doubled the access traffic volumes to reflect the more condensed period of departure; see MS5 Movement Summary.

The intersection maintained acceptable levels of performance.

MS5 – MOVEMENT SUMMARY

Site: SITE ACCESS GW NRT IN

CROUDACE ROAD & SITE ACCESS, ELERMORE VALE
Giveway / Yield (Two-Way)

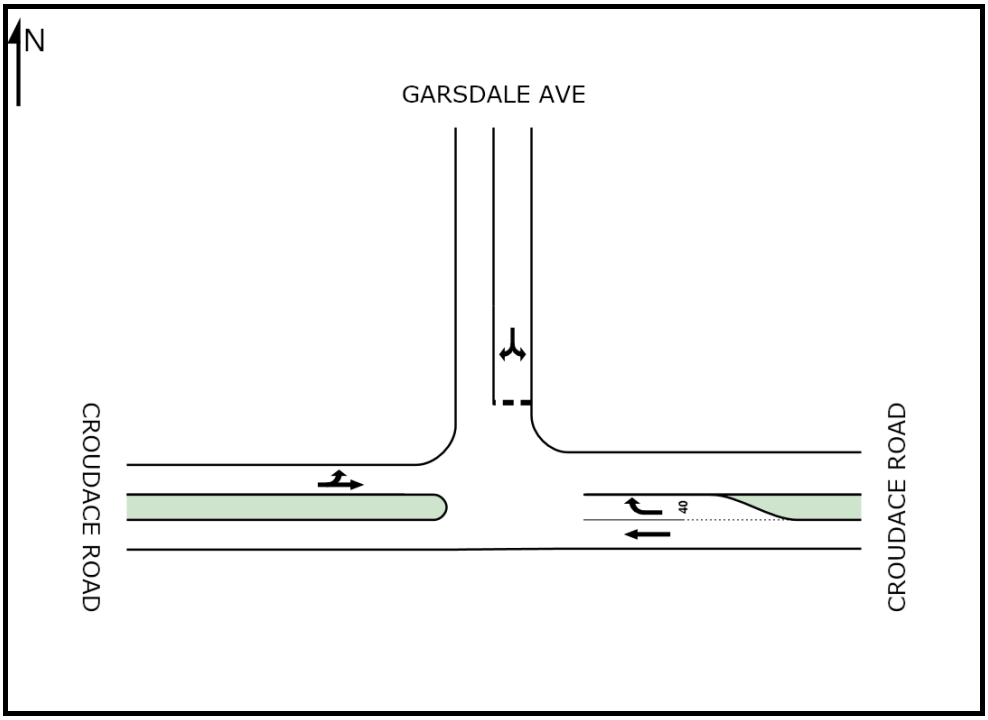
Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
							Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: CROUDACE ROAD											
5	T	621	1.1	0.321	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		621	1.1	0.321	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
North: SITE ACCESS											
7	L	147	1.1	0.741	27.7	LOS D	6.2	43.6	0.88	1.31	34.0
9	R	147	1.1	0.741	27.9	LOS D	6.2	43.6	0.88	1.25	34.0
Approach		295	1.1	0.741	27.8	LOS D	6.2	43.6	0.88	1.28	34.0
West: CROUDACE ROAD											
10	L	1	1.1	0.351	8.2	LOS A	0.0	0.0	0.00	1.09	49.0
11	T	648	1.1	0.335	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		649	1.1	0.335	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
All Vehicles		1565	1.1	0.741	5.2	NA	6.2	43.6	0.16	0.24	52.5

3. Sidra modelling of the Garsdale Road / Croudace Road intersection pre and post development to determine if the development has an adverse impact on the operation of the intersection.

SIDRA modelling has been undertaken for the pm peak with Existing Traffic and then with additional Arrival Traffic plus Friday Prayer (1pm to 2pm) Arrival Traffic added to Existing Traffic as the arrival scenarios have all potential traffic generations from the development travelling through the intersection due to the no right turn restriction into the site.

Figure 2 is the SIDRA geometric base adopted. FIGURE 2



Movement Summary MS6 (see next page) is for the scenario:

- Croudace Road and Garsdale Avenue – PM Peak Existing Traffic

The model indicates that the side street potentially experiences unacceptable delay; the model does not take into account the platooning of Croudace Road traffic by downstream controls.

The outcome reinforces the fact that Croudace Road is approaching traffic volumes where all side street or driveway traffic will be subjected to delay to a level that alternatives will be required. It may be that a route strategy is developed by the road authority and/or it becomes accepted that side street traffic along the route will revert to left out and U-Turn manoeuvres to proceed on their trip, in the peak periods.

Movement Summary MS7 (see next page) is for the scenario:

- Croudace Road and Garsdale Avenue – PM Peak Existing Traffic plus potential traffic (25 trips) of the development.

The model indicates that any increase in traffic on Croudace Road influences the degree of delay to the side streets or driveways along the route.

MS6 – MOVEMENT SUMMARY

Site: CROUD & GARS GW

CROUDACE RD & GARSDALE AVE, ELERMORE VALE
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
							Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: CROUDACE ROAD											
5	T	778	0.0	0.399	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
6	R	229	0.0	0.289	11.8	LOS B	1.6	11.3	0.58	0.87	45.3
Approach		1007	0.0	0.399	2.7	LOS B	1.6	11.3	0.13	0.20	55.9
North: GARSDALE AVE											
7	L	246	0.0	1.110	177.6	LOS F	32.9	230.5	1.00	3.33	10.2
9	R	40	0.0	1.111	177.7	LOS F	32.9	230.5	1.00	2.56	10.1
Approach		286	0.0	1.109	177.6	LOS F	32.9	230.5	1.00	3.22	10.2
West: CROUDACE ROAD											
10	L	74	0.0	0.271	8.2	LOS A	0.0	0.0	0.00	1.00	49.0
11	T	451	0.0	0.271	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		524	0.0	0.271	1.2	LOS A	0.0	0.0	0.00	0.14	58.2
All Vehicles		1818	0.0	1.109	29.8	NA	32.9	230.5	0.23	0.66	33.0

MS7 – MOVEMENT SUMMARY

Site: CROUD & GARS GW

CROUDACE RD & GARSDALE AVE, ELERMORE VALE
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
							Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: CROUDACE ROAD											
5	T	778	0.0	0.399	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
6	R	229	0.0	0.300	12.1	LOS B	1.7	11.9	0.59	0.89	44.9
Approach		1007	0.0	0.399	2.8	LOS B	1.7	11.9	0.13	0.20	55.8
North: GARSDALE AVE											
7	L	246	0.0	1.173	227.5	LOS F	39.5	276.8	1.00	3.75	8.2
9	R	40	0.0	1.176	227.6	LOS F	39.5	276.8	1.00	2.88	8.2
Approach		286	0.0	1.173	227.5	LOS F	39.5	276.8	1.00	3.63	8.2
West: CROUDACE ROAD											
10	L	74	0.0	0.284	8.2	LOS A	0.0	0.0	0.00	1.00	49.0
11	T	477	0.0	0.284	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		551	0.0	0.284	1.1	LOS A	0.0	0.0	0.00	0.13	58.2
All Vehicles		1844	0.0	1.173	37.2	NA	39.5	276.8	0.23	0.72	29.7

Movement Summary MS8 (see below) is for the scenario:

- Croudace Road and Garsdale Avenue – Existing Traffic Friday Prayer 1-2pm

The model indicates that the intersection operates at acceptable levels for this Friday period.

Movement Summary MS9 (see next page) is for the scenario:

- Croudace Road and Garsdale Avenue –Existing Traffic Friday Prayer 1-2pm plus potential traffic (70 trips west, 140 trips east) of the development.

The model indicates that acceptable levels of service are maintained at the intersection.

MS8 – MOVEMENT SUMMARY

Site: CROUD & GARS GW

CROUDACE RD & GARSDALE AVE, ELERMORE VALE
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
							Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: CROUDACE ROAD											
5	T	393	0.0	0.201	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
6	R	122	0.0	0.139	10.6	LOS B	0.7	4.8	0.50	0.77	46.4
Approach		515	0.0	0.201	2.5	LOS B	0.7	4.8	0.12	0.18	56.1
North: GARSDALE AVE											
7	L	128	0.0	0.304	14.8	LOS B	1.6	11.2	0.60	0.89	42.6
9	R	23	0.0	0.305	14.9	LOS B	1.6	11.2	0.60	0.91	42.5
Approach		152	0.0	0.305	14.8	LOS B	1.6	11.2	0.60	0.89	42.6
West: CROUDACE ROAD											
10	L	41	0.0	0.232	8.2	LOS A	0.0	0.0	0.00	1.03	49.0
11	T	409	0.0	0.232	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		451	0.0	0.232	0.7	LOS A	0.0	0.0	0.00	0.09	58.8
All Vehicles		1117	0.0	0.305	3.5	NA	1.6	11.2	0.14	0.24	54.8

MS9 – MOVEMENT SUMMARY

Site: CROUD & GARS GW

CROUDACE RD & GARSDALE AVE, ELERMORE VALE
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
							Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: CROUDACE ROAD											
5	T	466	0.0	0.239	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
6	R	122	0.0	0.171	12.0	LOS B	0.8	5.7	0.57	0.85	45.1
Approach		588	0.0	0.239	2.5	LOS B	0.8	5.7	0.12	0.18	56.2
North: GARSDALE AVE											
7	L	128	0.0	0.424	20.5	LOS C	2.4	16.6	0.74	1.01	38.3
9	R	23	0.0	0.421	20.6	LOS C	2.4	16.6	0.74	0.99	38.3
Approach		152	0.0	0.424	20.5	LOS C	2.4	16.6	0.74	1.01	38.3
West: CROUDACE ROAD											
10	L	41	0.0	0.309	8.2	LOS A	0.0	0.0	0.00	1.04	49.0
11	T	557	0.0	0.308	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		598	0.0	0.308	0.6	LOS A	0.0	0.0	0.00	0.07	59.1
All Vehicles		1338	0.0	0.424	3.7	NA	2.4	16.6	0.14	0.22	54.5

4. *The traffic consultant has stated that there is no realistic opportunities to have public transport accommodate the requirement for arrival and departure to the site. I believe this underestimates the availability of public transport to the site. Bus stops are located in close proximity to the site and Croudace Road is a major route for Newcastle buses. The report should identify what frequency of bus service there is to the site and rather than say there is no opportunity for public transport should have stated the site is already well serviced by public transport services and identify if there is opportunity to improve facilities for potential users of public transport to encourage its use i.e. bus shelters etc.*

The reason TPK submitted that public transport was not a realistic option was primarily:

- The spread of the Congregation who journey on to the main prayer on Fridays; their journeys are to/from Home, Workplace, University or other spread locations.

TPK agrees with Council that bus stops are located in close proximity; the Newcastle Buses services on Croudace Road are:

- Route 222 Wallsend-Newcastle via Broadmeadow
- Route 224 Wallsend-Newcastle via Adamstown

No other routes are within realistic distance of the site.

Both routes are generally hourly services at this time of day on Friday and the current timetable Check Point B (Garsdale Avenue) indicates that services do not align perfectly with the 1-2pm prayer period. What must be appreciated is that many of the congregation “slip away” on Friday from work or lectures for Prayer and that the period of absent time is a critical point in planning their trips hence TPK submits that public transport is not a realistic consideration as the number of congregation members who would potentially demand public transport are not of a number that would influence the bus operator to cater for their needs.

I also believe the applicant still needs to address issues relating to the access to the site and the staging of special events at the centre before full support for the proposal can be provided.

In terms of access to the site the first concern I have with the proposed left turn in and left turn out proposal is that experience at other developments has shown that despite the provision of channelization within the access and signposting there is still a significant number of drivers who will still opt for the easy access option when travelling from the east to the site of ignoring the signage and turn right into the site. Experience has shown the only way to suitable enforce the no right turn is to physically restrict it with a central raised concrete median or barrier. A concrete median in this location is not considered feasible due to the narrowness of Croudace Road and the major impact it would have on existing adjacent property accesses. The applicant should address how the development can deal with drivers ignoring the signposting at the access.

The other concern I have with the left in and left out only access that needs to be considered is how drivers forced to head in the opposite direction when either entering or exiting the site turn around to head in the direction they need to. Whilst it is acknowledged some regular users will adjust their travel routes to suit there will still be significant numbers of first time visitors who will be faced with a decision as to how to enter or exit the site from opposite directions. Driver behaviour unfortunately is to take the easiest and quickest option rather than the safest. Therefore apart from ignoring the signposting at the access, as discussed above, they will generally look to the nearest location, usually an intersection to undertake a u-turn movement. The traffic report should identify where these manoeuvres are likely to happen and comment on whether these are safe movements or not.

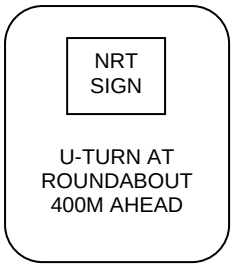
In carrying out this assessment the applicant, through the traffic consultant might consider whether catering for the right turn out of the site is a safer option than a u-turn at the next intersection to the east. Construction of the Garsdale roundabout should also not be assumed unless the applicant proposes to construct it to mitigate the safety concerns regarding visitors to the mosque doing a u-turn manoeuvre at the intersection to access the site due to the left in only restriction at the entrance. Council at this stage can provide no guarantee's as to the date of construction of the roundabout and it is considered that there is not sufficient nexus for Council to require the applicant to construct the roundabout as a result of the impacts of the traffic generated by the development.

The Applicant has adopted Council's recommended layout for site access as indicated in their March 2011 letter where the only movement restricted is the right turn into the site; SIDRA modelling earlier in this report has been based on that geometric layout.

The applicant adopting that access arrangement does not alter the submitted plans. The only change is to the shape of the island and signposting at the intersection of Croudace Road and The Site Access; TPK has provided Plan TPK-CR-01 in Appendix A of this report to confirm the minor change. The key factor at this time is to obtain approval to the concept for the access layout; the detail design prepared after DA approval will need to be approved by Council.

The result is that of the concerns expressed by Council in this section of their letter, with respect to effective control of restrictions that the only restriction remaining is No Right Turn into the site. TPK recommend two initiatives that can be DA conditioned and would support the right turn restriction:

- No Right Turn sign to include schematic indication of the Cardiff Road roundabout 400m Ahead to do a U-Turn.



- Site Access exit lane to be closed by church management (Traffic Cones at 0.5m centres) between 12noon and 1.30pm for Friday Prayer.

For other periods aside from infrequent significant traffic generations demand on the right turn is minimal and could be left to driver obedience.

> *Finally, the concern I have with the reference to the regular large special events is that even a frequency of 2 per year is considered frequent enough to warrant assessment of the impacts of these events on the local road network. Because Croudace Road is reaching its capacity should these special events generate significant traffic numbers and these coincide with weekday and weekend peaks then they could have major impacts on the road network. Whilst a special event Traffic Management Plan (TMP) is accepted as a way of mitigating the impacts of the traffic at the DA stage it needs to be demonstrated that if such a strategy would work given the additional traffic volumes associated with the special event. As such the application needs to be more specific about the likely numbers who would attend the event, the likely transport characteristics of attendees, when the likely traffic peaks will occur with the special events and whether they will clash with road network peaks. If this cannot be provided then the application should be restricted to the normal daily / weekly operations of the development and a separate development application submitted for Council's consideration for each special event.*

TPK previously provided the Appendix B overview for a TMP setting out a sample of initiatives that need to be considered by the church management for the two yearly major prayer events.

TPK understands that church calendars influence the actual dates of these events each year and that they do not occur on a regular date or day of the week; as such TPK agree with Council that these events should be conditioned at DA approval time to be required to submit an Event TMP yearly. This will ensure:

- The most current traffic conditions relative to the day of the week are addressed.
- Specific initiatives proposed can be confirmed as recent agreements where other authorities or organisations may be involved (e.g. satellite parking venues & bus transport companies).
- Council can require adjustment to correct previous concerns that may have been identified.

The numbers attending will still be controlled by the approved congregation capacity of the site.

SUMMATION

TPK & Associates submits:

1. The site access option preferred by Newcastle City Council has been adopted by The Applicant and this report has provided analysis to confirm suitability of the intersection.

2. The analysis of the intersection of Croudace Road & Garsdale Avenue confirms the potential for peak hour delay, under existing peak hour traffic demands for side streets and driveways in this section of Croudace Road. The modelling indicates the need to consider a route strategy to provide options to all side streets and driveways to avoid unacceptable delay noting that the business peaks do not coincide with the peak Friday Prayer period of the subject development.

3. The site has the capacity to manage day to day parking demands.

4. The Applicant's development approval can be conditioned to submit individual TMP's for any special events due to the rotating day of the week the one0two yearly events can occur.

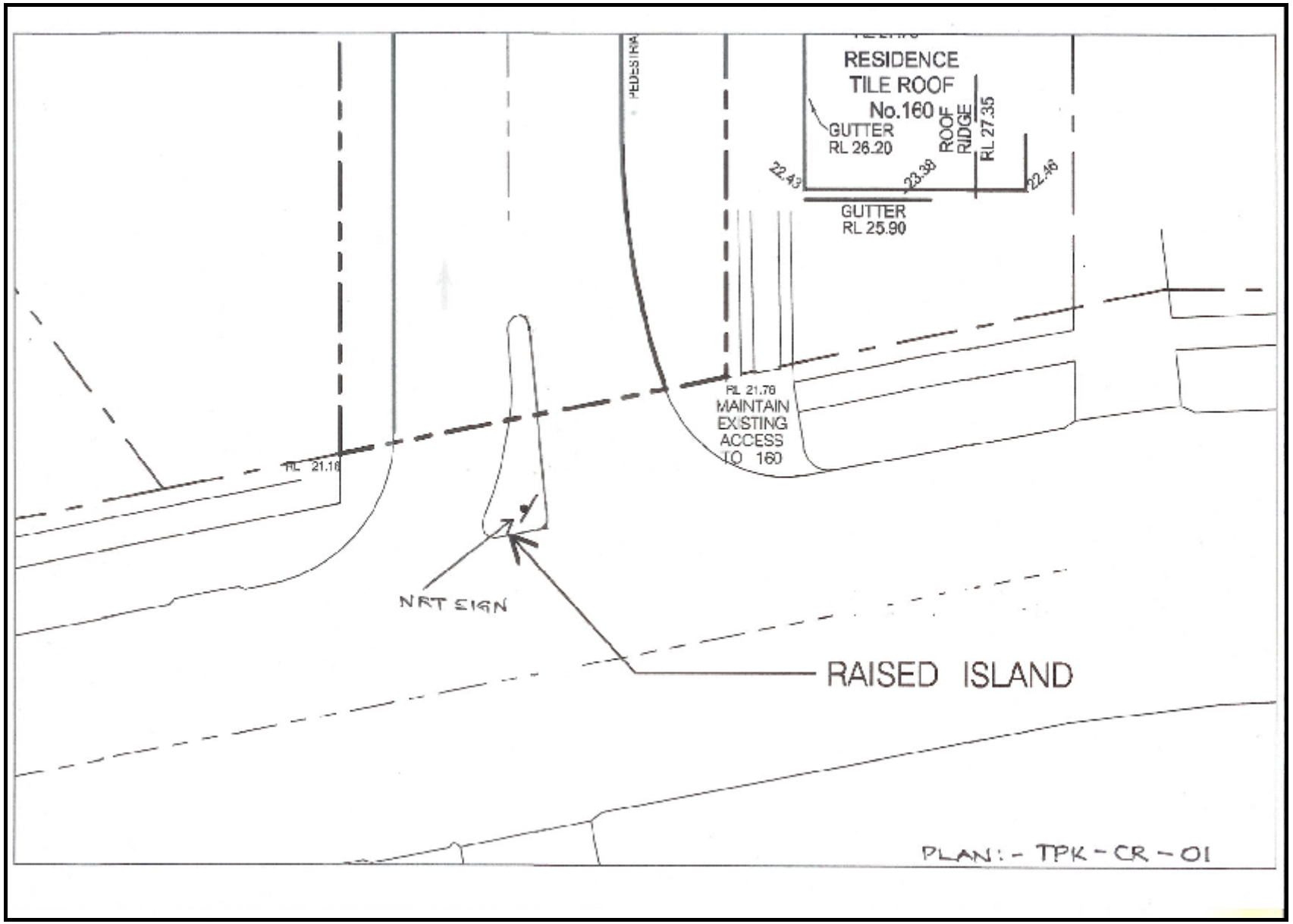
Prepared by

T Keating

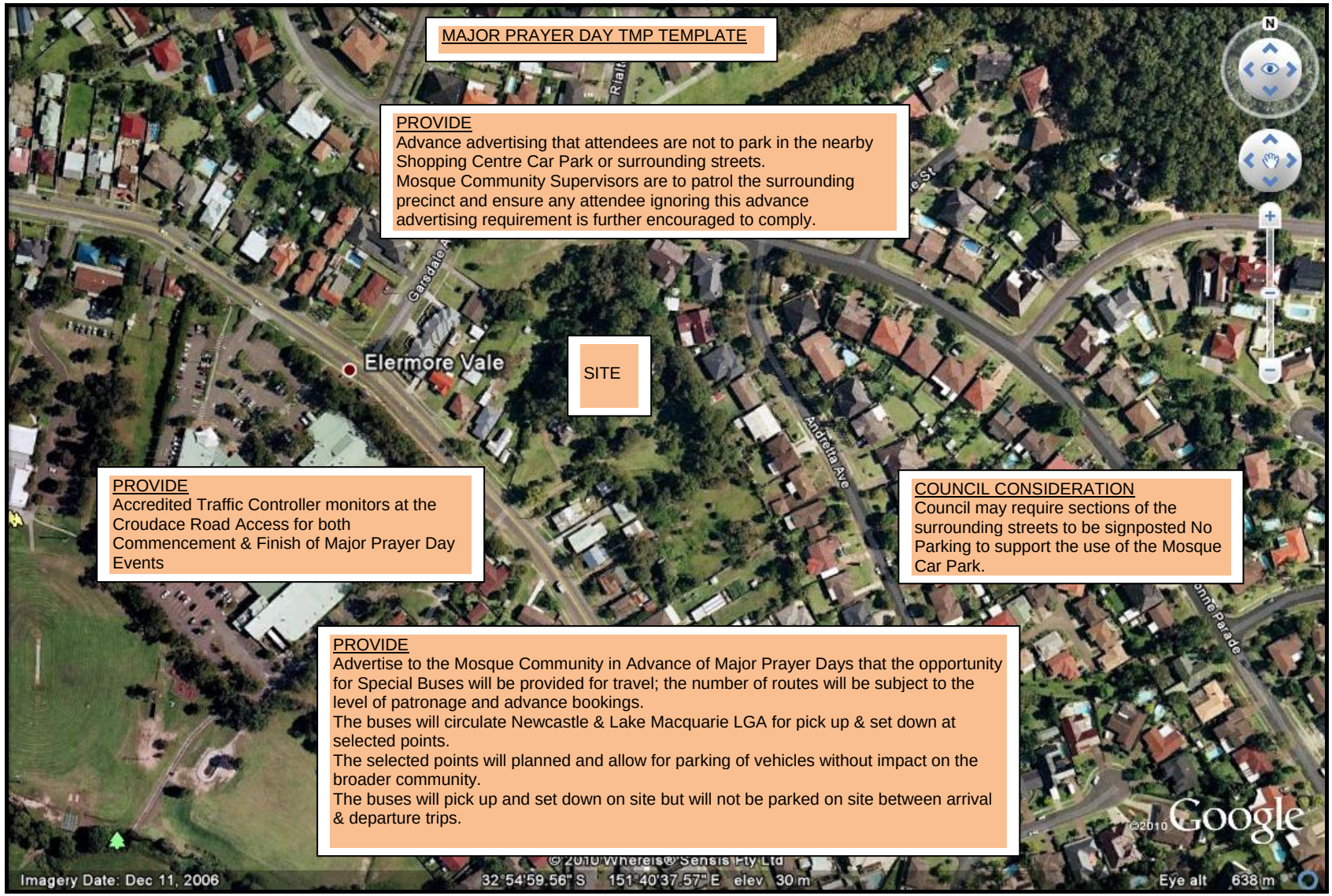
Mr. T Keating
Director, TPK & Associates

APPENDIX A

SITE ACCESS


RESIDENCE
TILE ROOF
No.160
GUTTER
RL 26.20
ROOF
RIDGE
RL 27.35
22.43
23.38
22.46
GUTTER
RL 25.90
RL 21.76
MAINTAIN
EXISTING
ACCESS
TO 160
RL 21.16
NRT SIGN
RAISED ISLAND
PLAN:- TPK-CR-01

APPENDIX B


MAJOR PRAYER DAY TMP TEMPLATE
PROVIDE
Advance advertising that attendees are not to park in the nearby Shopping Centre Car Park or surrounding streets.
Mosque Community Supervisors are to patrol the surrounding precinct and ensure any attendee ignoring this advance advertising requirement is further encouraged to comply.
Garsdale A
Elermore Vale
SITE
Andretta Ave
PROVIDE
Accredited Traffic Controller monitors at the Croudace Road Access for both Commencement & Finish of Major Prayer Day Events
COUNCIL CONSIDERATION
Council may require sections of the surrounding streets to be signposted No Parking to support the use of the Mosque Car Park.
PROVIDE
Advertise to the Mosque Community in Advance of Major Prayer Days that the opportunity for Special Buses will be provided for travel; the number of routes will be subject to the level of patronage and advance bookings.
The buses will circulate Newcastle & Lake Macquarie LGA for pick up & set down at selected points.
The selected points will planned and allow for parking of vehicles without impact on the broader community.
The buses will pick up and set down on site but will not be parked on site between arrival & departure trips.
©2010 Google
© 2010 Wherels® Sensis Pty Ltd
Imagery Date: Dec 11, 2006
32°54'59.56" S 151°40'37.57" E elev 30 m
Eye alt 638 m

APPENDIX 2

Letter from Spectrum Acoustics dated 21 March 2011

21 March 2011

Ref: 10530/3893

De Witt Consulting
P.O. Box 850
Charlestown NSW 2290

Attn: David Humhpris

RE: PROPOSED MOSQUE – CROUDACE ROAD ELERMORE VALE

This letter addresses queries raised by NCC in their letter to De Witt Consulting, dated 9/03/11 (ref. no. 10/1049), in reference to the noise assessment and the initial response to queries for the proposed mosque at 158A and 164 Croudace Road, Elermore Vale.

For ease of understanding, the points raised in the NCC letter in relation to acoustic issues are addressed here in the same order as that letter. Parts of the initial response to queries (Spectrum Acoustics letter no. 10530/3858) have been reproduced here for ease of understanding.

Section 2 Environmental Assessment

Paragraph 1 relates to noise emissions to the north west of the site

As described in the previous letter response to council, a review of the layout and the proposed activities on the site has shown that, due to acoustic screening effects of the structure of the mosque and, more significantly, the Imam house it would be possible to replace that part of the proposed fence as shown (dotted in red) below in **Figure 1**. Sections through the mosque are attached as Appendix I to this letter.

The sections show that noise emissions from the mosque are effectively screened to the north west by the structure of the Imam house. Noise emissions in this direction will be virtually inaudible.

Table 1 shows a calculation of noise from the sermon during the Jumaa prayer propagated through the western wall of the mosque (shown in section BB) and impacting on the nearest residential receiver approximately 65m away in Crambronne Parade. From consideration of the known dimensions, orientation and materials of the various building elements, the SPL immediately outside these elements

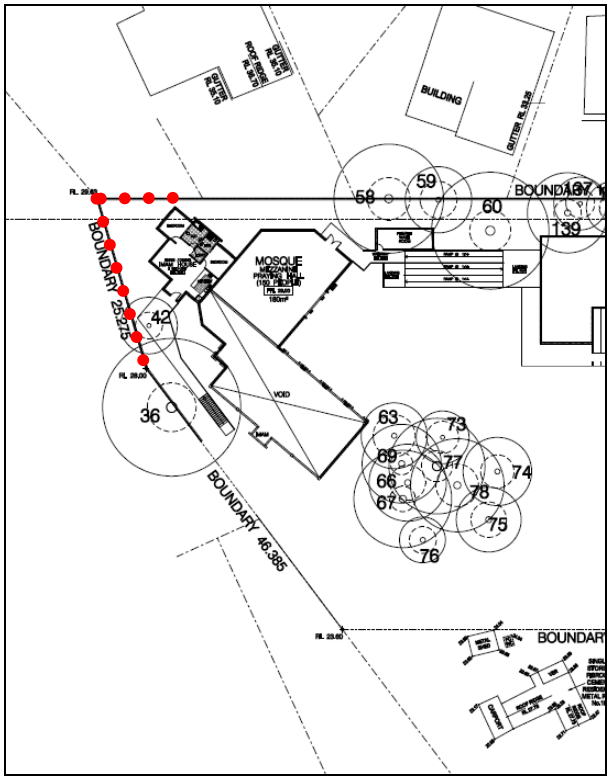


Figure 1 – Revised Acoustic Fence Location

was propagated to the nearest receiver using an equation[1] giving the sound field due to an incoherent plane radiator.

The sound transmission loss (STL) of the wall is based on a steel framed wall system with lightweight exterior wall cladding, lined with 10mm taped and set plasterboard and with mineral or glass fibre infill.

The calculation assumes there is no acoustic barrier in this direction.

TABLE 1
CALCULATED SPL AT NEAREST RESIDENTIAL RECEIVER
CRAMBRONNE PARADE – SERMON IN MOSQUE

		Octave Band Centre Frequency, Hz							
Item	dB(A)	63	125	250	500	1k	2k	4k	8k
SPL at inside of wall (Leq 15 min)	80	35	38	64	72	75	76	72	56
STL Stud Wall		20	22	25	29	33	31	38	36
Exterior SPL		15	16	39	43	42	45	34	20
SPL @ receiver Leq (15 min)	24								
Criterion (day) Leq (15 min)	47								
Impact	0								

The results in Table 1 show that there will be no adverse impacts at any receivers in Crambronne Parade as a result of noise emissions from the mosque.

[1] Equation (5.104), DA Bies and CH Hansen, *Engineering Noise Control*, E & FN Spon, 1996.

The conclusion is that there will be no adverse impacts in any directions a result of noise emissions from the mosque.

Paragraphs 2 and 4 relate to noise from the community hall and associated car park noise

Some clarification of the proposed use of the hall, and timing of same, is required. The original acoustic report stated that "*Typically the use of the hall will involve religious lectures which are followed by a meal. Up to 300 people may attend at these times"*. I have been advised that this will not occur. The hall usage will be for social, cultural or religious gatherings on irregular occasions which may involve up to a maximum of 100 people.

Further to this the hall will not be used for any event after 9.00 pm and there will be no amplified speech in the hall.

The following is an extract from the traffic report for the project which gives an accurate depiction of hall usage.

ACTIVITY	TIME, DAY OF WEEK & DURATION	ATTENDANCE
Prayer Services (Originally Provided see Table 4)	See Table 4	See Table 4
Religious Study Groups	Once a week, in the weekend, 6 - 8 pm	Max 20
Weddings	2- 4 times in a year, In the weekend, afternoon or evening, max 2 hours	Max 100
Funerals	Monday to Saturday after Dhuhr (noon prayer) rituals may take up to 45 minutes before prayer and 5 minutes service after prayer. May be not a single time in a year or may be 2 - 3 times. Considering the size of the community on average once/twice a year	Max 50, if after Friday prayer whoever attended the Friday prayer, some may still not attend as they rush to get back to work
Social	Max 6 times a year, weekend, afternoon or well after sunset, 2 - 3 hours	Max 50
Cultural or Religious Gatherings	Max 10 times a year, any day, evening (after sunset), max 2 hours	50 - 100
Youth Club	Max 4 times a year, weekend, afternoon or evening, max 2 hours	Max 30
Religious Counselling Services	Twice a year, weekend, afternoon or evening, max 2 hours	Max 20

As can be seen in the table above, from an acoustic point of view, the expected worst case use of the hall will be for between 50 and 100 people between 6 and 10 times per year. In addition to the usage shown in the extracted table the hall will also be used twice per year after the special Friday prayers that may attract up to 450 worshippers (Eidul Fitr and Eidul Adha Prayers). These prayers take place between 7.30 and 9.00 am and thus the use of the hall after the sessions will be a daytime occurrence only.

The upper level car park will be used during these special Friday prayers but the use will be day time only. Outside of these times the upper level car park will only be used for people attending the usual Friday (Jumaa) prayers. These prayers are at lunchtime and the car park will, therefore, only be used during the day time period.

Outside of these times it is recommended that the driveways to the upper level car park be blocked so that no access is available.

Paragraph 3 relates to noise from the upper level car park

Below is the discussion from our previous letter response to council with additional information in the tables relating to distance loss.

Since the commencement of the original assessment there have been new double storey town houses constructed at no. 166 Croudace Street. NCC has requested an assessment of noise emissions from the upper level of the proposed car park to potentially impact on the first floor of the nearest town house at 166 Croudace Street. The lower level of the car park will be in cut relative to this receiver and noise from this level will, therefore, be shielded by the intervening retaining walls.

Table 2 shows a calculation of noise emissions from the upper level car park and impacting at the boundary of the town house development at 166 Croudace Street. Car park notations are as shown in Appendix III of the original acoustic report. The basis of the sound power levels used in the calculations is as per detail in the original report. The upper level of the car park will only be used during the day and, therefore, the received noise is here assessed against the day time criterion only.

TABLE 2
CALCULATED SPL FROM CAR PARK to 166 CROUDACE STREET
Leq (15 min)

Car Park Number	Noise Level	Distance to Receiver	Distance Loss	Received Noise
16	73	28m	37	36
17	73	17m	33	40
18	73	15m	32	41
19	73	17m	33	40
20	73	10m	28	45
21	73	10m	28	45
Total				50
Criterion				47

The results in Table 1 show that, under the assessed scenario, there is a potential 3 dB(A) Leq (15 min) exceedance at the boundary of number 166 Croudace Street.

The noise criteria in the INP are external ones. That is, they are applicable in outdoor areas of a residence. The new town houses at 166 Croudace Street have been constructed with blank walls facing toward the proposed car park site. There are only narrow windows (most likely) to service areas facing the car park. The rear town house, which is closest to the proposed car park, has a

small balcony on its western façade which may potentially be impacted by the car park noise. The centre of this balcony is approximately 5m from the boundary.

Table 3 shows a revision of Table 2 allowing for an additional 5m distance loss to the centre of the balcony.

TABLE 3
CALCULATED SPL FROM CAR PARK to 166 CROUDACE STREET
REAR BALCONY
Leq (15 min)

Car Park Number	Noise Level	Distance to Receiver	Distance Loss	Received Noise
16	73	32m	38	35
17	73	22m	35	38
18	73	20m	34	39
19	73	22m	35	38
20	73	15m	32	41
21	73	15m	32	41
Total				47
Criterion				47

The results in Table 2 show that the assessed noise from the car park will comply with the day time criterion at a theoretical reception point on the balcony of the nearest town house to the site.

In addition to the external noise criteria, to maintain the amenity of residents, it is also recommended that future internal noise levels comply with Australian Standard AS/NZS 2107-2000 “Recommended Sound Levels and Reverberation Times for Building Interiors”. The Standard specifies acceptable interior sound levels for areas of occupancy, applicable to steady state or quasi steady state sounds such as building services and traffic noise. This standard is considered useful in gauging any potential adverse impacts as a result of the noise emissions from the car park.

Table 1 of AS/NZS 2107 specifies the following recommended satisfactory and maximum noise levels for residential buildings in inner suburban areas (measurements are to be made in the absence of transient acoustic events, but in the presence of normally operating building services):

Sleeping Areas	**30 dB(A) to 40 dB(A) L_{eq}**
Living Areas	**35 dB(A) to 45 dB(A) L_{eq}**
Work Areas	**35 dB(A) to 45 dB(A) L_{eq}**

Living areas referred to in the Standard are the normal living areas within a house or unit, for example lounge and living rooms etc. The mid point of each range is, typically, used for such assessment. For a living area (as would be impacted by day time noise) this is 40 dB(A) Leq.

For a broad spectrum noise source it is generally accepted that there is a 10 dB(A) sound transmission loss from the outside of a residence, through an open window to the inside at the centre of a room. Assuming a received noise of 47 dB(A) Leq (15 min) on the balcony of the nearest town house this equates to an internal noise level of less than 37 dB(A) Leq (15 min), which is well within the acceptable range from the Standard.

Paragraph 5 relates to early morning car park usage

It is recommended that permanent posts (or a similarly effective method) will be erected at the location of the car parks in the "exclusion zone" as indicated previously (and shown below in **Figure 2**). A chain, or similar method, linking the posts must be in place to ensure no parking is available in the zone before 7.00 am.

In addition to this it is recommended that a suitable sign be erected informing the congregation of the requirements to avoid those car parks in the exclusion zone during the early morning and of the need to respect the acoustic amenity of neighbours and move quietly towards the mosque. This message must regularly be verbally reinforced by the Imam.

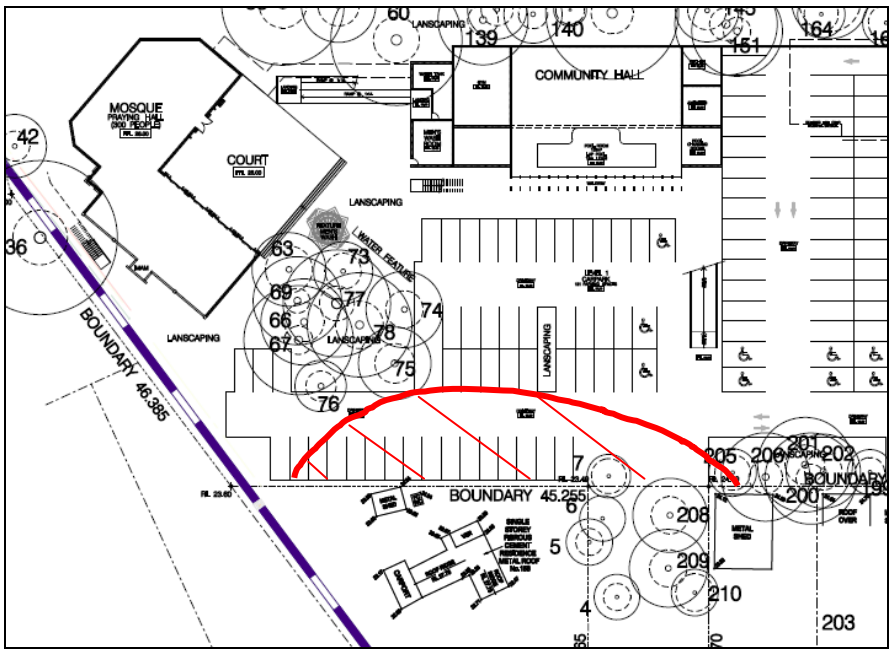
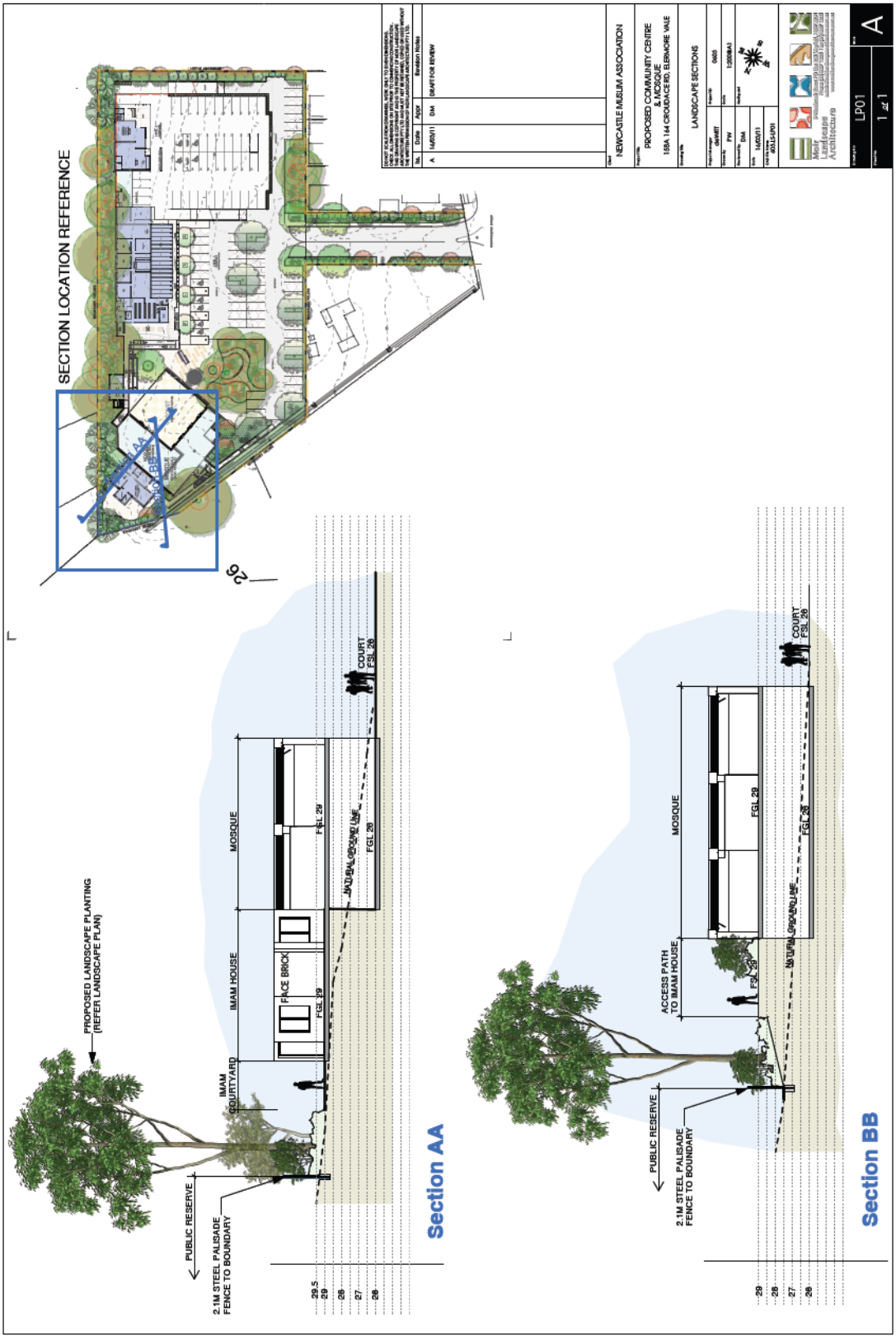


Figure 2 - Pre 7am Car Park Exclusion Zone

We trust this report fulfils your requirements at this time, however, should you require additional information or assistance please do not hesitate to contact the undersigned.

Yours faithfully,
SPECTRUM ACOUSTICS PTY LIMITED

Ross Hodge
Acoustical Consultant


SECTION LOCATION REFERENCE
NEWCASTLE MUSLIM ASSOCIATION
PROPOSED COMMUNITY CENTRE & MOSQUE
185A-184 CROUDACE RD, ELERMORE VALE
LANDSCAPE SECTIONS
LP01
A
1 of 1
Section AA
Section BB
PROPOSED LANDSCAPE PLANTING (REFER LANDSCAPE PLAN)
PUBLIC RESERVE
2.1M STEEL PALISADE FENCE TO BOUNDARY
IMAM COURTYARD
IMAM HOUSE
FACE BRICK
MOSQUE
FGL 29
FGL 28
COURT
NATURAL GROUND LINE
ACCESS PATH TO IMAM HOUSE