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Proposed Mosque and Community Facilities

Croudace Road, Elermore Vale

Peer Review - Acoustics

Report Number 630.10171

18 April 2011

NSW Department of Planning
23-33 Bridge Street
Sydney NSW 2000

Version: Draft 1

Proposed Mosque and Community Facilities

Croudace Road, Elermore Vale

Peer Review - Acoustics

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DOCUMENT CONTROL

Reference	Status	Date	Prepared	Checked	Authorised
630.10171	Draft 1	18 April 2011	Martin Davenport	John Cotterill	

EXECUTIVE SUMMARY

INTRODUCTION

SLR Consulting Australia Pty Ltd (SLR Consulting) has been commissioned by the NSW Department of Planning (DoP) to conduct a peer review of the Noise Impact Assessment (NIA) prepared for the proposed mosque and community centre and Newcastle City Council's (NCC) assessment of the development.

Broadly the objectives of this review were as follows:

- Review the methodology, techniques and results of the NIA
- Provide opinions and recommendations as the adequacy of and improvements required of the current NIA, where required.
- Review NCC's assessment of the development and approval conditions and provide opinions and recommendations as to the adequacy and effectiveness of such conditions.

ACOUSTIC REPORT

SLR Consulting considers that the Acoustic Report has been prepared using assumptions and methodologies which are satisfactory to address the impacts of noise from the proposed development. The following additional information is sought to clarify issues raised in this review:

- Clarify the method used quantify the existing level of industrial noise in the area in order to substantiate the amenity criteria derived for the site.
- Provide predictions of noise from the courtyard to receivers in Croudace Road.
- Provide predictions of cumulative noise from the proposed development, for typical operating scenarios, at surrounding residential receivers.
- Clarify the use of a peak vehicle flow of 100 vehicles for calculating the traffic noise impact on Croudace Road.

NCC ASSESSMENT

The NCC Assessment and associated Conditions of Consent are deemed adequate to protect the acoustic amenity of the surrounding residential receivers.

It is recommended that the consent condition which relates to the environmental noise performance of the site be re-drafted to refer to criteria in accordance with the INP.

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Appendix B RE: Proposed Mosque – Croudace Road Elermore Vale, dated 21 March 2011 by Spectrum Acoustics Pty Ltd
AppendiX C DA 10/1049 – Demolition of dwelling at 158a Croudace Road, Elermore Vale, subdivision of 164 Croudace Road, Elermore Vale and construction of a mosque, community centre, funeral ceremony building and carparking area, dated Monday 11 April 2011 by NCC

1 INTRODUCTION

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Broadly the objectives of this review were as follows:

- Review the methodology, techniques and results of the NIA
- Provide opinions and recommendations as to the adequacy of, and improvements for, the current NIA, where required.
- Review NCC's assessment of the development and approval conditions and provide opinions and recommendations as to the adequacy and effectiveness of such conditions.

The review has been prepared with reference to the following documents:

- Noise Assessment Proposed Place of Worship 158A Croudace Road Elermore Vale, NSW dated June 2010 by Spectrum Acoustics Pty Limited (hereafter referred to as the Acoustic Report).
- RE: Proposed Mosque – Croudace Road Elermore Vale, dated 21 March 2011 by Spectrum Acoustics Pty Ltd (hereafter referred to as the Acoustic Report Addendum)
- DA 10/1049 – Demolition of dwelling at 158a Croudace Road, Elermore Vale, subdivision of 164 Croudace Road, Elermore Vale and construction of a mosque, community centre, funeral ceremony building and carparking area, dated Monday 11 April 2011 by NCC (hereafter referred to as the NCC Assessment).

Following review of the assessment methodology, techniques, results and recommendations SLR Consulting provides the following comments.

2 ACOUSTIC REPORT

2.1 Noise Assessment Criteria

2.1.1 Assessment Policy

Operational noise from the proposed site has been assessed in the Acoustic Report using the procedures set out in the *NSW Industrial Noise Policy* (INP). Due to the nature of operations at the site and in the absence of any specific impact assessment procedures relating to a place of worship the INP is considered to provide the most appropriate procedure for the assessment development.

2.1.2 Existing Acoustic Environment

Section 3.1 of the INP outlines the methodology for determining the background noise levels at a site in order to assess the intrusive noise criteria. The INP methodology for determining background noise levels states that, during the planning and approval stage, where there is significant potential for noise impact, the length of noise monitoring should be equivalent to one weeks worth of valid data covering the days and times of operation of the development. As there is potential for impact given the close proximity of noise-sensitive receivers one weeks worth of noise monitoring would be required in this instance.

Unattended noise monitoring was conducted by Spectrum Acoustics at the subject site for a period of seven (7) days from 12 March 2010 to 18 March 2010. This noise monitoring period is considered adequate as the noise monitoring was sufficient in length and covers the proposed operating times of the proposed development. Also given the proximity of the noise logging location to the nearest potentially affected receivers from the subject site it is also considered that the noise level recorded at the noise monitoring site would be representative of the nearest potentially affected residential receivers.

The INP details methodology for exclusion of noise data during periods of rainfall and/or wind speeds in excess of 5 m/s, as ambient noise levels are elevated during these times. The Acoustic Report does not detail meteorological conditions during the noise monitoring programme nor does it make reference to weather affected data exclusion. That being said, the measured ambient noise levels detailed in the Acoustic Report are considered typical for a suburban area.

2.1.3 Operational Noise Criteria

The Acoustic Report states the following:

> *In setting noise goals for a particular project the INP considers both the amenity and intrusiveness criteria. The former is set to limit continuing increase in noise from industry, whilst the latter is set to minimise the intrusive impact of a particular noise source. Amenity criteria are dependent upon the nature of the receiver area and the existing level of industrial noise.*
>
> *The site under assessment is subject to some minor existing industrial noise from the nearby Elermore Vale Shopping Centre and Shaft Tavern. This would be most prominent during the day and evening. At night any noise from these sources would be limited to that from refrigeration plant. None of these noise sources would be significant enough to influence the long term Leq noise levels measured by the logger.*
>
> *As such the, amenity criteria for these times are the acceptable levels from the INP. The residential areas near the site are best described acoustically as suburban.*

Typically, operator attended noise surveys are conducted at the noise logging location to help define noise sources and the character of noise in the area. As such operator attended noise surveys can be used to qualify unattended noise logging results. It is unclear how the assumption is made that noise emissions from nearby industrial noise sources would not be significant at the logging location. This is of particular importance in setting the amenity criteria of the development, especially during the night-time period. Given the proximity of the nearest potentially affected receivers to the Elermore Shopping Centre and Shaft Tavern it is possible that noise from mechanical plant could be contributing to ambient noise levels at these locations.

An extract form the INP that relates to the amenity criteria is given in **Table 1** and **Table 2**.

Table 1 Amenity Criteria – Recommended L_{Aeq} Noise Levels from Industrial Noise Sources

Type of Receiver	Indicative Noise Amenity Area	Time of Day	Recommended $L_{Aeq(Period)}$ Noise Level (dBA)	
			Acceptable	Recommended Maximum
	Suburban	Day	55	60
		Evening	45	50
		Night	40	45

Note: Daytime 7.00 am - 6.00 pm; Evening 6.00 pm - 10.00 pm; Night-time 10.00 pm - 7.00 am, On Sundays and Public Holidays, Daytime 8.00 am -6.00 pm; Evening 6.00 pm - 10.00 pm; Night-time 10.00 pm - 8.00 am.
The L_{Aeq} index corresponds to the level of noise equivalent to the energy average of noise levels occurring over a measurement period.

Table 2 Modification to Acceptable Noise Level (ANL)* to Account for Existing Levels of Industrial Noise

Total Existing L_{Aeq} noise level from Industrial Noise Sources	Maximum L_{Aeq} Noise Level for Noise from New Sources Alone, dBA
≥ Acceptable noise level plus 2 dBA	If existing noise level is *likely to decrease* in future acceptable noise level minus 10 dBA If existing noise level is *unlikely to decrease* in future existing noise level minus 10 dBA
Acceptable noise level plus 1 dBA	Acceptable noise level minus 8 dBA
Acceptable noise level	Acceptable noise level minus 8 dBA
Acceptable noise level minus 1 dBA	Acceptable noise level minus 6 dBA
Acceptable noise level minus 2 dBA	Acceptable noise level minus 4 dBA
Acceptable noise level minus 3 dBA	Acceptable noise level minus 3 dBA
Acceptable noise level minus 4 dBA	Acceptable noise level minus 2 dBA
Acceptable noise level minus 5 dBA	Acceptable noise level minus 2 dBA
Acceptable noise level minus 6 dBA	Acceptable noise level minus 1 dBA
< Acceptable noise level minus 6 dBA	Acceptable noise level

* ANL = recommended acceptable L_{Aeq} noise level for the specific receiver, area and time of day from **Table 1**

It is recommended that the method used quantify the existing level of industrial noise in the area be clarified in order to substantiate the amenity criteria derived for the site.

2.1.4 Sleep Disturbance Criteria

The Office of Environment and Heritage (OEH), formerly Department of Environment, Climate Change and Water, has acknowledged that the relationship between maximum noise levels and sleep disturbance is not currently well defined. Criteria for assessing sleep disturbance has not been defined under the INP but it is assumed that conformance with the INP would protect against the likelihood of awakening reactions. Notwithstanding this, the Acoustic Report has assessed sleep disturbance using the guidelines set out in the *Environmental Noise Control Manual* (ENCM) Section 19-3.

To avoid the likelihood of sleep disturbance the ENCM recommends that the $L_{A1(1minute)}$ of the noise source under consideration should not exceed the background noise level (L_{A90}) by more than 15 dBA when measured outside the bedroom window of the receiver during the night-time hours (10.00 pm to 7.00 am).

The Acoustic Report uses the Rating Background Level (RBL) determined from ambient noise monitoring at the subject site as the background noise level (L_{A90}) to establish this criteria. This is considered appropriate for the setting of this criteria.

2.1.5 Construction Noise

The Acoustic Report uses the OEH's *Interim Construction Noise Guideline* (ICNG) to as a means of determining potential noise impacts from the construction of the development on nearby residential receivers. The Acoustic Report assumes that construction works would only occur within the recommended construction hours i.e. Monday to Friday 7 am to 6 pm, Saturday 8 am to 1 pm and no work on Sundays or public holidays and as such no assessment for construction works outside of the recommended hours has been conducted. Also as the construction works are expected to be longer in duration than three weeks a quantitative assessment of construction noise has been adopted. The noise affected management level noise criterion has been based upon the daytime RBL noise level measured at the subject site.

2.1.6 Road Traffic Noise

The Acoustic Report uses the criteria *Environmental Criteria for Road Traffic Noise* (ECRTN) to assess the potential impact of traffic generated by the proposed development. Access to the proposed development is via Croudace Road Elermore Vale. This road is classified according to the ECRTN as a collector road. Therefore, it is considered appropriate that the development be assessed against the criteria outlined in **Table 3**.

Table 3 OEH Environmental Criteria for Road Traffic Noise

Type of Development	Descriptor	Traffic Noise Goal
8. Land use developments with potential to create additional traffic on collector road	LAeq(1hour) Daytime	60 dBA*
	LAeq(1hour) Night-time	55 dBA*
		In all cases, traffic arising from the development should not lead to an increase in existing noise levels of more than 2 dB

2.2 Noise Assessment

2.2.1 Operation Noise Assessment

Section 4 of the Acoustic Report presents the methodology and results of noise predictions for the proposed development. Data used as input to the predictions has been obtained from measurements conducted at an existing mosque located in Wallsend, NSW and from a Spectrum Acoustics technical database.

Courtyard

The noise from people congregating in the courtyard area during the daytime period for brief meetings and conversations has been addressed by assuming that a total of 50 people are speaking continuously over a 15 minute period. The sound power level assumed for each person was with an L_{Aeq} of 75 dBA. This was used to predict the noise level at a theoretical receiver at the nearest residential receiver in Andretta Avenue. Attenuation from a 2.1m high acoustic barrier on the property boundary was included in the calculation.

This is considered a reasonable approach to assessing noise from the courtyard area prior to and after the Jumaa prayer as this is when the greatest potential for noise impact would occur. However, given the proximity of the courtyard to the nearest residential receiver on Croudace Road noise levels at this location should also be considered.

The Acoustic Report states the following with regard to courtyard noise during periods other than the daytime:

> *At other times the noise source, if present, would be at much lower levels due to significantly smaller numbers of people present.*

This is considered a reasonable assumption as 10 to 40 people are expected to attend prayers during these times and would result in significantly lower noise levels.

Mosque

The noise level from prayers in the mosque has been predicted using measurements of a Jumaa prayer, using sound amplification, at an existing mosque located in Wallsend. This measured noise level was used to predict noise break-out from the mosque. The resulting predicted noise levels at the nearest residential receivers in Andretta Avenue and Croudace Road were then calculated.

This is considered a reasonable approach to assessing noise from the mosque as this is when the greatest potential for noise impact would occur.

The Acoustic Report states the following with regard to noise from the mosque during periods other than the Jumaa prayer:

> *The noise levels, at the internal façade of the mosque, from such sermons would be at least 10 to 15 dB(A) lower than those for amplified speech and no further assessment of potential impacts is considered necessary.*

This is considered a reasonable assumption given that the attendance at such sermons is significantly less than that of the Jumaa, and the sermons are delivered without sound amplification.

Library and Community Hall

The proposed library and hall building will comprise of a library and study rooms on the upper level and a community hall on the lower level. The Acoustic Report Addendum states the following with regard to use of the hall:

> *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 Acoustic Report has identified that the potential noise source within the community hall building would be from indoor sports being held in the hall. For the purpose of predicting potential noise impacts the noise from a table tennis game has been predicted to the nearest receiver in Andretta Avenue.

This is considered a reasonable assessment of the worst-case noise level within the hall given that up to a maximum of 100 people are expected to use the hall with no speech amplification.

Funeral Ceremony Building

As the funeral ceremony building will be used only for funeral preparation services SLR Consulting agrees with the assumption made in the Acoustic Report that there is very little potential for noise impact.

Mechanical Plant

Mechanical plant associated with the air conditioning will be located in plant rooms for the mosque and library and community hall building. The Acoustic Report has predicted noise levels from the mechanical plant will be below the night-time noise criteria at the nearest most potentially affected residential receives.

Given the amount of shielding afforded by the plant rooms being cut into the terrain this is considered a reasonable assessment of potential impact of the proposed mechanical plant.

Car Park

The Acoustic Report and Addendum predict daytime noise levels from the carpark assuming that 75% of the cars on the lower level and upper level of the car park would be in use in a 15 minute period before and after the Jumaa prayer. Noise levels from car parks have been sourced from a Spectrum Acoustics database and includes vehicles arriving and departing and people moving to and from vehicles. Noise from the car park was then predicted to the nearest potentially affected residential receivers on Croudace Road.

This is considered a reasonable and conservative approach to assessing noise from the proposed car park and predicts compliance with the daytime noise criteria at all locations with the exception of 166 Croudace Road where an exceedance of 3 dBA is predicted at the boundary. It should be noted that compliance with the daytime criteria is predicted at the balcony of the nearest town house to the site at 166 Croudace Road and that the design of the buildings would ensure compliance with the internal noise goals set out in AS:2107:2000 *Recommended Sound Levels and Reverberation Times for Building Interiors*.

Noise resulting from the use of the car park during the evening and night-time has not been assessed against the relevant night-time noise criteria. It is therefore recommended that additional information be supplied regarding the predicted noise level form the car park under a typical evening and night-time operational scenario.

Driveway

The Acoustic Report also uses the assumption that 75% of the cars using the facility will be in use in a 15 minute period during the daytime period before and after the Jumaa prayer. This equates to 125 cars in any 15 minute period. The potential noise impact of cars using the driveway on the nearest receivers on Croudace Road was calculated using this assumption.

This is considered a worst case operational scenario for the site and would provide a conservative prediction of noise levels from the driveway.

During the night-time period the noise from the driveway is predicted using 10 vehicle movements in a 15 minute period. This is considered a reasonable approach to assessing noise levels from the driveway during the night-time period as attendance at these times is expected to be approximately 10 to 40 people.

Summary of Operational Noise Assessment

SLR Consulting consider the noise prediction methodology is generally consistent with that required by the INP with the following exceptions.

- Due to the nature of operations at the site it is highly likely that more than one noise source would be in operation during any 15 minute period. For instance, if the car park is operating it is likely that the driveway is also operating and therefore consideration should be given to the impact of both noise sources operating simultaneously. **Table 4** outlines two (2) likely operational scenarios at the site.

Table 4 Typical Operational Scenarios

Operational Scenario	Onsite Activity					
	Mosque	Mechanical Plant	Hall	Courtyard	Driveway	Carpark
Before and After Jumaa Prayer	×	✓	✓	✓	✓	✓
During Jumaa Prayer	✓	✓	×	×	×	×

  The Acoustic Report provides no assessment of the impact of noise sources occurring simultaneously under typical operational scenarios rather, individual noise sources from the proposed development are applied against the relevant criteria in isolation of other site noise sources. It is therefore, recommended that additional information be supplied regarding the cumulative noise contribution of the site under likely operational scenarios.

- It should also be noted that no analysis of meteorological conditions have been conducted in accordance with Chapter 5 of the INP which states:

In assessing noise impacts, the criteria would be expected to apply under weather conditions that would be expected to occur at a particular site for a significant period of time. This includes conditions of calm, wind and temperature inversions.

Noise levels in the Acoustic Report are predicted for calm conditions only. There is no justification in the report as to why meteorological conditions have not been considered. That being said SLR Consulting consider that due to the proximity of the proposed development to the nearest potentially affected residential receivers meteorological conditions would not significantly impact on the predicted noise levels presented.

2.2.2 Sleep Disturbance

The Acoustic Report assesses sleep disturbance by considering the maximum noise level (L_{Amax}) generated by cars in the driveway and from car doors closing within the car park. Noise levels are predicted to be within the sleep disturbance criteria at all locations. The Acoustic Report Addendum also recommends the implementation of an "exclusion zone" to prevent cars from parking in areas with the potential to cause sleep disturbance.

This is considered to be a conservative approach to assessing sleep disturbance as the L_{Amax} of an event is likely to be higher that the $L_{A1(1minute)}$ noise level resulting in further compliance with the sleep disturbance criteria.

2.2.3 Construction Noise

Noise from the construction of the site has been predicted using typical construction equipment likely to be used on site. The Acoustic Report notes that

Construction noise levels will vary throughout individual days and also throughout the length of overall works. The noise level at individual receivers will also be dependent upon the location of the various works relative to those receivers, at any time.

Construction noise levels have been predicted at Andretta Avenue with an exceedance of the Noise affected criterion of up to 13 dBA. It should be noted that construction noise levels are predicted to be within the highly noise affected criterion.

Exceedance of construction noise goals is typical for construction sites in close proximity to residential receivers and highlights the need for appropriate noise management and planning. The Acoustic Report provides general recommendations with a view to minimise construction noise impacts on the surrounding receivers.

2.2.4 Road Traffic Noise

Noise levels from increased traffic on Croudace Road resulting from the proposed development have been assessed in the Acoustic Report. The Acoustic Report assumes a peak traffic flow of 100 vehicle movements in a one (1) hour period southbound on Croudace Road in the traffic lane closest to residential receivers. The Acoustic Report also states the following

For the Jumaa prayers all 169 car parking spaces may be utilised in a one hour period, hence all cars would exit onto Croudace Road.

Given the above it is unclear as to why only 100 vehicles have been assessed to exit the site in a one (1) hour period. Notwithstanding the above, the predicted noise level arising from the consideration of an additional 69 cars is likely to still be within the ECRTN road traffic noise goals.

3 NCC ASSESSMENT

The NCC Assessment deems the project acceptable subject to approval conditions with a view to minimise the potential for noise nuisance and to protect the existing amenity of the neighbourhood. SLR Consulting has been asked to provide opinions as to the effectiveness of such approval conditions.

C29

> *Prior to the commencement of any excavation or work an acoustic fence being constructed along the perimeter of the proposed development site. The fence is be a lapped and capped timber fence or materials with similar acoustic properties, to a height of 2100mm, and maintained such that no significant gaps exist in the fence. Full details to be included in the documentation for a Construction Certificate application.*
>
> ***Reason**: To ensure that appropriate noise control measures are implemented and the amenity of the area is protected.*

The inclusion of this approval condition would serve to decrease the construction noise levels received by the nearest residential receivers throughout the construction phase of the project.

D6

> *Prior to the commencement of any excavation or work an acoustic fence being constructed along the perimeter of the proposed development site. The fence is be a lapped and capped timber fence or materials with similar acoustic properties, to a height of 2100mm, and maintained such that no significant gaps exist in the fence.*
>
> ***Reason**: To ensure that appropriate noise control measures are implemented and the amenity of the area is protected.*

As with approval condition C29, the inclusion of this control would serve to decrease the construction noise levels received by the nearest residential receivers throughout the construction phase of the project.

E2

> *Under no circumstances is impact/hammer pile driving to be carried out on site.*
>
> ***Reason**: To confirm the terms of consent and minimise the noise and vibration impacts on neighbouring premises.*

The inclusion of this approval condition ensures that potential noise and vibration impacts from impact/hammer piling will not affect neighbouring premises.

F3

> *Appropriate acoustic treatment being implemented in accordance with the recommendations set out in the report prepared by Spectrum Acoustics dated June 2010 and the Noise Assessment Addendums dated 4 February 2011 and 21 March 2011.*
>
> ***Note:** Written certification from the said consultant confirming that the recommended acoustic treatment has been implemented in accordance with the requirements is to be submitted to the Principal Certifying Authority prior to the commencement of any noise generating activity within the premises.*

Reason: *To ensure that appropriate noise control measures are implemented.*

The inclusion of this approval condition would serve to ensure that the noise control measures detailed in the Acoustic Report and related addendums are implemented in accordance with the recommendations and acoustic principles.

F4

Under no circumstances are vehicles to be parked within the car parking spaces marked 103-116 on the Lower Ground Plan prepared by Dardiry and Doroch Architectural Services dated 18 February 2011 between the hours of 10:00pm and 7:00am daily. Prior to the issue of a Occupation Certificate signage shall be installed near these car spaces to advise of parking time restrictions.

Reason*: To confirm the terms of consent and to protect the amenity of the neighbourhood.*

The restriction of parking within these car parking spaces serves to protect the nearest most potentially affected residential receiver from potential sleep arousal arising from the car park during the night-time period.

F5

Use of the second level car park by any vehicle being restricted by the installation of a suitable traffic management device between the hours of 6.00pm to 7:00am daily. Full details are to be included in documentation for a Construction Certificate application and the devices being installed prior to the release of the Occupation Certificate.

Reason: *To prevent access to the second level car park during the evening and night time periods and protect the amenity of the neighbourhood.*

The restriction of parking on the second level car park by any vehicle during the evening and night-time period will help minimise noise impacts during these periods.

H5

The use and occupation of the premises including all plant and equipment installed thereon, not giving rise to any "offensive noise", as defined under the Protection of the Environment Operations Act, 1997, as amended.

Note: *Should Council consider that offensive noise has emanated from the premises, the owner/occupier of the premises will be required to submit an acoustic consultant's report recommending appropriate acoustic measures necessary to ensure future compliance with this condition and will be required to implement such measures within a nominated period. Furthermore, written certification from the said consultant confirming that the recommended acoustic measures have been satisfactorily implemented will be required to be submitted to Council before the expiration of the nominated period.*

Reason: *To ensure that appropriate noise control measures are implemented if required.*

While the inclusion of this consent condition offers some protection of the amenity of the neighbouring residences it is recommended that the consent condition is redrafted to refer to criteria in accordance with the INP.

It is suggested that the consent condition should take the following form:

The Proponent shall ensure that the noise generated by the project does not exceed the criteria in Table 1 at any residence on privately-owned land.

Table 5 Noise Criteria

Location	Day	Evening	Night	
	LAeq(15minute)	LAeq(15minute)	LAeq(15minute)	LA1(1minute)
Nearest Affected Residential Receivers	47	42	40	50

Note Noise generated by the project is to be measured in accordance with the relevant procedures and exemptions (including prevailing meteorological conditions) of the NSW Industrial Noise Policy

H18

Under no circumstances is sound amplification equipment or speakers to be installed or operated in any outdoor area.

***Reason**: To minimise the potential for noise nuisance and to protect the existing amenity of the neighbourhood.*

The restriction of the use of amplified equipment or speakers in any outdoor area will serve to minimise the potential for noise impact from outdoor activities.

H19

Under no circumstances is sound amplification equipment or speakers to be installed or operated in the proposed hall building.

***Reason**: To minimise the potential for noise nuisance and to protect the existing amenity of the neighbourhood.*

The restriction of the use of amplified equipment or speakers in the proposed hall will serve to ensure excessive noise levels within the hall which may affect the amenity of nearby residential receivers.

H20

The hours of operation of the proposed hall and library building being restricted to between 7:00am and 9:00pm daily.

***Reason**: To confirm the terms of consent and to protect the amenity of the neighbourhood.*

This restriction ensures that noise levels within the hall cease prior to the night-time period to protect the amenity of nearby residential receivers.

4 CONCLUSION

Acoustic Report

SLR Consulting considers that the Acoustic Report has been prepared using assumptions and methodologies which are satisfactory to address the impacts of noise from the proposed development. The following additional information is sought to clarify issues raised in this review:

- Clarify the method used quantify the existing level of industrial noise in the area in order to substantiate the amenity criteria derived for the site.
- Provide predictions of noise from the courtyard to receivers in Croudace Road.
- Provide predictions of cumulative noise from typical operating scenarios for residences surrounding the proposed development.
- Clarify the use of a peak vehicle flow of 100 vehicles for calculating the traffic noise impact on Croudace Road.

NCC Assessment

The NCC Assessment and associated Conditions of Consent are deemed adequate to protect the acoustic amenity of the surrounding residential receivers.

It is recommended that the consent condition which relates to the environmental noise performance of the site be re-drafted to refer to criteria in accordance with the INP.

5 CLOSURE

This report has been prepared by SLR Consulting with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of NSW Department of Planning. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR Consulting.

SLR Consulting disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

Noise Assessment Proposed Place of Worship 158A Croudace Road Elermore Vale, NSW dated June 2010
by Spectrum Acoustics Pty Limited

Project No: 10530

Noise Assessment
Proposed Place of Worship
158A Croudace Road
Elermore Vale, NSW

Prepared for:

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June 2010

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APPENDICES

Appendix I NOISE LOGGER CHARTS

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1.0 – INTRODUCTION

This report presents the results, findings and recommendations arising from an acoustic assessment of a proposed redevelopment of the site at No. 158A Croudace Road, Elermore Vale (current Lot 2 DP 209466 and Lot 4 DP 1086854).

The proposal is to involve the construction of Muslim community and cultural complex. This is to include a mosque, multi purpose hall, library, residence, funeral ceremony building and car parking.

The assessment was requested by De Witt Consulting on behalf of the Newcastle Muslim Association to support a Development Application to Newcastle City Council (NCC) for the proposal.

2.0 - BACKGROUND TO THE PROPOSAL

The site currently contains a residence. Under the proposal Lot 4 DP 1086854 will be subdivided with the south western section to remain as residential and the remainder incorporated into a consolidated Lot which will house the mosque and associated facilities.

The current proposal is to remove the existing residence and construct the planned facilities.

The mosque will operate as a place of worship with prayers in congregation occurring five times per day with varying numbers of people to attend.

Currently the worship is held in a facility at Wallsend. In general terms the operation of the current facility will continue at the new, purpose built mosque.

Prayers will commence at 4:00 am in summer (and 5:00 am in winter) and continue at intervals throughout the day until about 10:00 pm. It is expected that there may be between 10 and 25 people at the majority of prayers.

The noon prayer on Friday, however, is expected to have the largest attendance where there may be up to 400 people at prayers. In addition to this there will be two big celebrations per year where congregations of up to 450 people are expected.

The proponent has advised that there is to be no P.A. system or other public notification to call worshippers to prayer. Current practice has people arriving for worship at various times prior to the commencement of the formal prayer period. It is expected that people arriving before

the commencement of prayers will either use the library or study rooms or congregate in small groups in the courtyard area outside of the main mosque building.

Similarly, the advice is that on leaving, not all worshippers will depart the site directly after the formal prayer. Some may stay for personal worship or may use the library or study rooms.

The proponent has indicated that, to adhere to religious principles, the hall will not be used at any times whilst there is a prayer session in the mosque. For similar reasons there will be no music played in the hall nor will there be any consumption of alcohol.

Typically the use of the hall will involve religious lectures which may be followed by a meal. Up to 300 people may attend at these times. Outside of prayer times the hall may be used by the Muslim community for informal indoor sporting activities.

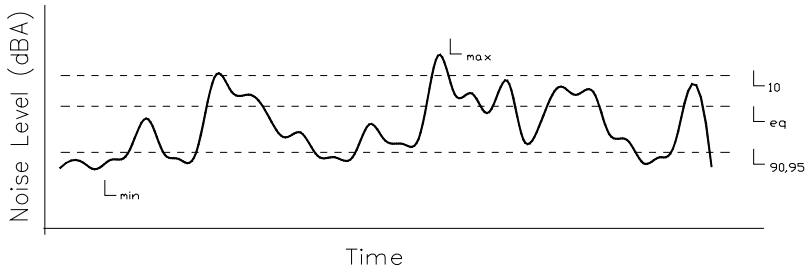
Any use of the hall must comply with the principles outlined above, and as such, that there will be no music played at any events and all would cease before 11:00 pm.

From an acoustic point of view the most significant parts of the proposal will involve;

- The noise from prayer times;
- Activities in the community hall;
- Car park and traffic noise,
- Mechanical plant noise, and
- Construction noise

3.0 - TERMS AND DEFINITIONS

Table 1 contains the definitions of commonly used acoustical terms and is presented as an aid to understanding this report.

TABLE 1 DEFINITION OF ACOUSTICAL TERMS	
Term	Definition
dB(A)	The quantitative measure of sound heard by the human ear, measured by the A-Scale Weighting Network of a sound level meter expressed in decibels (dB).
SPL	Sound Pressure Level. The incremental variation of sound pressure above and below atmospheric pressure and expressed in decibels. The human ear responds to pressure fluctuations, resulting in sound being heard.
STL	Sound Transmission Loss. The ability of a partition to attenuate sound, in dB.
Leq	Equivalent Continuous Noise Level - taking into account the fluctuations of noise over time. The time-varying level is computed to give an equivalent dB(A) level that is equal to the energy content and time period.
L1	Average Peak Noise Level - the level exceeded for 1% of the monitoring period.
L10	Average Maximum Noise Level - the level exceeded for 10% of the monitoring period.
L90	Average Minimum Noise Level - the level exceeded for 90% of the monitoring period and recognised as the Background Noise Level. In this instance, the L90 percentile level is representative of the noise level generated by the surrounds of the residential area.
	

3.0 – AMBIENT NOISE ENVIRONMENT AND CRITERIA

3.1 Operational Noise and Mechanical Plant

The Department of Environment, Climate Change and Water (DECCW) and NCC share responsibility for the approval and control of noise emissions from commercial and industrial premises within council boundaries.

There are no specific regulations or guidelines in the DECCW's Industrial Noise Policy (INP) or Environmental Noise Control Manual (ENCM) that cover the operation of a mosque. In lieu of any specific criteria the operation of the mosque is assessed here under the procedures and criteria set out in the INP.

The INP describes intrusive and amenity criteria which are dependant on the existing background noise level at potentially affected residential receiver areas.

Ambient noise levels in the residential area near the site of the proposal were measured at 15 minute statistical intervals using a Svan 949 sound and vibration analyser used as an environmental noise logger. The measurements were done in accordance with relevant DECCW guidelines and AS 1055-1997 "Acoustics – Description and Measurement of Environmental Noise". The noise logger used complies with the requirements of AS 1259.2-1990 "Acoustics – Sound Level Meters", and has current NATA calibration certification.

The logger was programmed to continuously register environmental noise levels over the 15 minute intervals, with internal software calculating and storing Ln percentile noise levels for each sampling period. Calibration of the logger was performed during the instrument's initialisation procedures, with calibration results being within the allowable $\pm$ 0.5 dB(A) range.

The logger was located in the yard of the existing residence on the site of 158A Croudace Road, Elermore Vale from March 12 to March 18, 2010. Ambient Leq and background noise levels, obtained from the logger, are summarised below in **Table 2** and shown graphically in **Appendix I**.

TABLE 2
MEASURED AMBIENT NOISE LEVELS 12/3/10 to 18/3/10

Location	Day	Evening	Night
Site	42 dB(A) L90	37 dB(A) L90	35 dB(A) L90
	51 dB(A) Leq 15 min	54 dB(A) Leq 15 min	49 dB(A) Leq 15 min

In setting noise goals for a particular project the INP considers both the amenity and intrusiveness criteria. The former is set to limit continuing increase in noise from industry, whilst the latter is set to minimise the intrusive impact of a particular noise source. Amenity criteria are dependant upon the nature of the receiver area and the existing level of industrial noise.

The site under assessment is subject to some minor existing industrial noise from the nearby Elermore Vale Shopping Centre and Shaft Tavern. This would be most prominent during the day and evening. At night any noise from these sources would be limited to that from refrigeration plant. None of these noise sources would be significant enough to influence the long term Leq noise levels measured by the logger.

As such, the amenity criteria for these times are the acceptable levels from the INP. The residential areas near the site are best described acoustically as suburban.

The intrusiveness criteria are based on the Rating Background Level (RBL) for the time period, plus 5 dB(A). The RBL (L90) is defined as the overall single figure background level representing each assessment period.

Table 3 below specifies the applicable base noise objectives for the site being assessed.

TABLE 3
BASE NOISE LEVEL OBJECTIVES

Period	Intrusiveness Criterion* L_{eq} (15 min) dB(A)	Amenity Criterion** L_{eq} (Period) dB(A)
Day	47	55
Evening	42	45
Night	40	40

* Rating Background Level (RBL) + 5dB. RBL is the median value of each ABL (Assessment Background Level) over the entire monitoring period. The ABL is a single figure representing the "L_{90} of the $L_{90's}$" for each separate day of the monitoring period.
** Suburban zone amenity criterion per Tables 2.1 and 2.2 of INP.

The project specific noise levels for the site are the lower of the intrusiveness or amenity criteria, as follows,

Day	**47 dB(A) L_{eq} (15 min)**
Evening	**42 dB(A) L_{eq} (15 min)**
Night	**40 dB(A) L_{eq} (15 min)**

3.2 Car Park

The assessment of noise from vehicles associated with a development is covered by the INP if those vehicles are not on a public road. An example of this is vehicles using the car park or the driveway of the development. Vehicles may be moving about in the car park at any time. An assessment of car park noise as a result of this use has been carried out against the DECCW project specific noise level for day (**47 dB(A) Leq (15 min)**) as this is the time period where the car park will have the most use and for night (**40 dB(A) Leq (15 min)**) as this is the time period with the most stringent criterion.

3.3 Sleep Disturbance

Chapter 19-3 of the DECCW's *Environmental Noise Control Manual* (ENCM) states "the L1 (1 min) level of any specific noise source should not exceed the background noise level (L90) by more than 15 dB(A) when measured outside the bedroom window". This criterion is applied

to residential situations between the hours of 10.00 p.m. and 7.00 a.m. where a receptor's sleep may be interrupted by noise.

The potential for sleep disturbance impacts from the current development relates to vehicles using the car park and car park driveway. The sleep disturbance criterion is set at **50 dB(A) L1 (1 min)**.

3.4 Road Traffic

Noise generated by road traffic associated with a development is assessed separate to site noise.

The DECCW's Environmental Criteria for Road Traffic Noise (ECRTN), as adopted by the Roads and Traffic Authority of NSW, recommends various criteria for different road developments and uses. Based on definitions in the ECRTN, Croudace Road is classified as a collector road.

An extract of the relevant section of the ECRTN relating to land use developments with the potential to create traffic on collector roads is shown in **Table 4** below. For road traffic noise day time is from 7 am to 10 pm.

TABLE 4
DECCW BASE TRAFFIC NOISE OBJECTIVE

Situation	Recommended Criteria	
	Day 7am to 10pm	Night 10 pm to 7am
8. Land use developments with potential to create additional traffic on a collector road	60 Leq (1hr)	55 Leq (1hr)

3.5 Construction Noise

The assessment of construction noise impacts has been undertaken in accordance with the DECCW's Interim Construction Noise Guideline (ICNG, 2009). The ICNG is a non-mandatory guideline that is usually referred to by local councils and the NSW Department of Planning when construction/demolition works require development approval.

Section 1.5 of the ICNG outlines the steps for management of construction noise impacts as follows:

1. **identify sensitive land uses** that may be affected.
2. **identify hours** for the proposed construction works.
3. **identify impacts** at sensitive land uses.
4. **select and apply the best work practices** to minimise noise impacts.

Each of the above four points is assessed in detail in the following sections.

3.5.1. Surrounding Land Uses

The subject site lies within a suburban residential area with no other particular sensitive receiver types in the near vicinity.

3.5.2. Operating Hours

The recommended standard hours for construction works are shown in Table 1, section 2.2 of the ICNG as reproduced below.

Table 1: Recommended standard hours for construction work

Work type	Recommended standard hours of work*
Normal construction	Monday to Friday 7 am to 6 pm Saturday 8 am to 1 pm No work on Sundays or public holidays
Blasting	Monday to Friday 9 am to 5 pm Saturday 9 am to 1 pm No blasting on Sundays or public holidays

* The relevant authority (consent, determining or regulatory) may impose more or less stringent construction hours.

Construction works outside the hours in Table 1 is normally only permissible for delivery of oversized structures, emergency works, public infrastructure works that are supported by the affected community or where the proponent demonstrates and justifies a need (other than simply convenience) to work outside the recommended standard hours (ICNG, p9). It will be assumed in this assessment that construction works would occur within the recommended standard hours.

3.5.3. Impacts at Sensitive Land Uses

The ICNG provides two assessment methodologies for construction noise impacts: a 'qualitative' assessment where works occur for less than three weeks and a 'quantitative' assessment for works of longer duration. As the construction works will take longer than three weeks, the quantitative methodology is applicable.

Table 2 of the ICNG sets out noise management levels for construction works as reproduced below.

Table 2: Noise at residences using quantitative assessment

Time of day	Management level $L_{Aeq\ (15\ min)}$ *	How to apply
Recommended standard hours: Monday to Friday 7 am to 6 pm Saturday 8 am to 1 pm No work on Sundays or public holidays	Noise affected RBL + 10 dB	The noise affected level represents the point above which there may be some community reaction to noise. • Where the predicted or measured $L_{Aeq\ (15\ min)}$ is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level. • The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.
	Highly noise affected 75 dB(A)	The highly noise affected level represents the point above which there may be strong community reaction to noise. • Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restricting the hours that the very noisy activities can occur, taking into account: 1. times identified by the community when they are less sensitive to noise (such as before and after school for works near schools, or mid-morning or mid-afternoon for works near residences 2. if the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.

* Noise levels apply at the property boundary that is most exposed to construction noise, and at a height of 1.5 m above ground level. If the property boundary is more than 30 m from the residence, the location for measuring or predicting noise levels is at the most noise-affected point within 30 m of the residence. Noise levels may be higher at upper floors of the noise affected residence.

Based on the measured noise levels from the unattended logger the daytime background (RBL) of 47 dB(A),L_{90} was established. The daytime construction noise management level is therefore **57 dB(A),$L_{eq(15\ min)}$** in accordance with Table 2 from the ICNG.

4.0 - NOISE ASSESSMENT

4.1 Mosque

Prayers in congregation will be held at the proposed mosque five times per day. The times of the prayers in congregation are detailed in **Appendix II**. Varying numbers of people are expected to attend the different prayers detailed.

Prayers will commence at 4:00 am in summer (and 5:00 am in winter) and continue at intervals throughout the day until about 10:00 pm. It is

expected that there may be between 10 and 25 people at the majority of the prayer sessions at these times.

The noon prayer on Friday, however, is expected to have the largest attendance where they may be up to 400 people at prayers. In addition to this there will be two big celebrations per year where congregations of up to 450 people are expected.

The proposed mosque will replace an existing facility in Wallsend. Advice from the proponent and observation at the existing mosque is that people arriving at the mosque do so over a period of up to an hour before the formal prayers commence. This is particularly the case with the Friday, Jumaa prayer but is not usual at other times.

The major potential for noise impacts from the prayer times comes from people arriving and departing the mosque and the amplified voice of the Imam during the sermon and the prayers.

To assess potential noise impacts attended noise measurements and observations were made at the existing mosque on Friday April 16, 2010 and Friday April 23, 2010.

People arriving at the mosque generally do so in an orderly and quiet manner. They make their way individually, or in small groups, from their cars to the mosque entrance. Under the proposal people are expected to park their car and move either into the mosque or the library prior to prayers. Some people may also congregate briefly, in small groups, in the courtyard area.

As indicated the courtyard would be a place for brief meetings and conversations. To assess potential noise impacts a noise source representing 50 people speaking at conversation level was considered to be located near the centre of the courtyard. This is to represent the worst case prior to, and at the completion of, the Jumaa prayer.

The noise assessment criterion is based on a 15 minute Leq noise level. For this assessment the noise source representing people talking was assumed to be constant for a full 15 minute period. This would add a degree of conservatism to the results. A sound power level (Lw) of 75 dB(A) Leq (15 min) was used for each individual speaker. **Table 5** shows the results of calculations of noise from the courtyard impacting on a theoretical receiver standing 5m inside the nearest residential boundary in Andretta Avenue.

The noise source was assessed against the day time noise criterion as this is the time when the largest numbers of people will attend prayers. At other times the noise source, if present, would be at much lower levels due to significantly smaller numbers of people present.

The calculation assumes a 2.1m fence acting as an acoustic barrier at the boundary.

An acoustic barrier is one which is impervious from the ground to the recommended height, and is typically a fence constructed from lapped and capped timber, bricks, concrete blocks or other material with a minimum surface density of 15 kg / m^2. No significant gaps should remain in the barrier to allow the passage of sound below the recommended height.

TABLE 5
CALCULATED SPL AT NEAREST RESIDENTIAL RECEIVER
ANDRETTA AVENUE - COURTYARD NOISE

	Octave Band Centre Frequency, Hz								
Item	dB(A)	63	125	250	500	1k	2k	4k	8k
Source Lw (50 people Leq 15 min)	92	44	61	76	86	87	87	76	62
Distance loss to receiver (35m)		39	39	39	39	39	39	39	39
Barrier Loss (2.1m)		6	7	8	10	11	14	17	20
SPL @ receiver	42	<0	15	29	37	38	34	20	3
Criterion Leq (15 min) (Day)	47								

The Friday sermon is usually delivered using amplified equipment, located inside the building, to ensure it can be heard throughout the congregation. There will be no speakers outside of the mosque building. At other times the congregation is significantly smaller and the sermon is delivered in normal, unassisted speech.

To determine the worst case for noise generation a series of noise measurements was made inside the existing mosque at Wallsend during the sermon on Friday 23 April. The measurements were made at the rear wall of the existing mosque. Due to size restrictions the main prayer hall of the mosque is generally full during the Jumaa prayer with additional people sitting and praying in the entrance vestibule.

The current setup has an individual speaker mounted at the front of the room, near the Imam. The volume of the speaker is set high enough for the sermon to be heard throughout the entire mosque building, including in the entrance vestibule. The measured noise level is, therefore, considered to be a worst case and likely higher than the level that would be expected throughout the majority of the prayer hall at the proposed mosque.

The proposed mosque will be a larger building with more area for the congregation to be spread throughout. To maintain the acoustic amenity of the entire congregation whilst ensuring that all can hear the sermon a sound system with several smaller speakers mounted within the worship space should be considered rather than one (or a set) of larger speakers mounted either centrally or near the Imam.

The sermon typically goes for approximately 30 minutes. The measured noise level over a full 15 minute period was used in calculations. The sound pressure level (SPL) measured at the wall of the existing mosque was considered to be impacting on the internal surface of the façade of the proposed mosque.

The mosque will be constructed with external facades facing towards each neighbouring residential boundary. There will be a further two facades facing into an open courtyard.

Supplied plans for the mosque show that the northern, eastern and southern (external) facades will be constructed of brickwork, whilst the western (external) facade will be partially brickwork with the remainder to be a stud wall. There will only be two relatively small windows, one in each of the northern and western facades.

Table 6 shows a sample calculation of noise from the sermon during the Jumaa prayer, as described above, propagated through the western wall of the mosque and impacting on the nearest residential receiver approximately 9m away in Croudace Street. From consideration of the known dimensions, orientation and materials of the various building elements, the SPL immediately outside these elements 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.

TABLE 6
CALCULATED SPL AT NEAREST RESIDENTIAL RECEIVER
CROUDACE STREET – 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)	40								
Criterion (day) Leq (15 min)	47								
Impact	0								

Similar calculations were carried out in relation to noise emissions from the other sections of the western facade of the mosque, that is, the brickwork and glazed sections. The calculations were based on

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

standard brick veneer wall internally lined with 10mm plasterboard. The glazed sections were considered to be 6mm laminated glass. The results of these additional calculations show that the total combined noise level will be as shown in Table 5. That is, the contribution of noise from the glazing would be 22 dB(A) and from the brickwork 8 dB(A), neither of which would add to the noise level shown in Table 6.

Calculations of the received noise as a result of emissions through the brick section of the walls show that it will be inaudible at any residential boundary.

The mosque will have operable walls and louvres facing into the courtyard. **Table 7** shows a calculation of noise from the sermon during the Jumaa prayer, as described above, propagated through the open western wall of the mosque and impacting on the nearest residential receiver approximately 25m away in Andretta Avenue.

The calculation assumes a noise source equal to the finished floor level (FFL) of the mosque plus 4.6m (to approximate the top of the two storey opening, a barrier height of 2.1m at the boundary of the site (R.L. based on supplied plans) and to a theoretical receiver 5m inside the yard (distance loss calculated to the boundary only).

TABLE 7
CALCULATED SPL AT NEAREST RESIDENTIAL RECEIVER
ANDRETTA AVENUE - COURTYARD NOISE

	Octave Band Centre Frequency, Hz								
Item	dB(A)	63	125	250	500	1k	2k	4k	8k
SPL inside mosque (Leq 15 min)	80	35	38	64	72	75	76	72	56
Distance loss to receiver (25m)		36	36	36	36	36	36	36	36
Loss through louvred facade		5	5	5	5	5	5	5	5
Area Gain of opening (15m^2)		12	12	12	12	12	12	12	12
Barrier Loss (2.1m)		5	5	6	6	7	9	11	14
SPL @ receiver	43								
Criterion Leq (15 min) (Day)	47								

The results in Table 7 show that noise emissions from the mosque, passing through the open walls will not exceed the noise criteria at any residence provided there is a minimum 2.1m fence in place on the boundary acting as an acoustic barrier.

The results shown in Tables 6 and 7 represent the worst case for noise generation from the mosque. That is, at times when the sermon is being delivered with the use of a microphone and amplification. This, typically, only occurs during the Friday Jumaa prayers. At other times there will be a much lesser number of people in attendance and the sermon is delivered in normal speech. The noise levels, at the internal façade of the mosque, from such sermons would be at least 10 to 15

dB(A) lower than those for amplified speech and no further assessment of potential impacts is considered necessary.

4.2 Library and Community Hall

The library and community hall will be located towards the western boundary of the site. The building will be two storeys. The lower level will house a community hall and common room. The upper level will house a library and study rooms.

The proponent has indicated that, to adhere to religious principles, the community hall will not be used at any times whilst there is a prayer session in the mosque. For similar reasons there will be no music played in the hall at any time nor there will there be any consumption of alcohol.

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. Outside of prayer times the hall may be used by the Muslim community for informal indoor sporting activities.

Any use of the hall must comply with the principles outlined above, and as such, that there will be no music played at any events and all activities would cease before 11:00 pm.

The only potential for noise impacts may come from the possible use of the hall for indoor sporting activities. The exact type of sports or training that may take place in the hall is not yet identified, or its use even confirmed, and will likely depend on several factors relating to hall size, and allowable times of use etc.

The most likely forms of activities will be those such as pool, table tennis or badminton etc. There will not be any organised competitions in the hall.

To assess potential impacts the Leq (15 min) noise level from a table tennis game has been sourced from the Spectrum Acoustics technical database.

Table 8 shows a calculation of impacts at the nearest residential receiver to the west in Andretta Avenue. For the calculation the noise source was considered to be near the centre of the hall. As previously described, the noise was propagated to the nearest receiver using an equation giving the sound field due to an incoherent plane radiator. The STL for the wall is based on a blockwork outer with a 10mm plasterboard lining with a mineral or glass fibre infill.

As the hall would not be used for sporting purposes at night the assessment is made against the evening criterion as this represents the more stringent of day and evening.

TABLE 8
CALCULATED SPL AT NEAREST RESIDENTIAL RECEIVER
TABLE TENNIS GAME IN COMMUNITY HALL

		Octave Band Centre Frequency, Hz							
Item	dB(A)	63	125	250	500	1k	2k	4k	8k
Source Lw as Leq (15 min)	85	45	55	65	80	82	79	69	55
Loss in Hall		12	12	12	12	12	12	12	12
STL Wall		31	32	33	38	46	50	49	48
SPL outside wall	34	2	11	20	30	32	17	8	<0
SPL at boundary 6m away Leq (15min)	24								
Criterion (evening)	42								

The results in Table 8 show that for a worst case for noise generation from the community hall there will be no adverse noise impacts at any receiver. The assessment is based on measured noise levels for a table tennis game. Should the hall be proposed for any other, regular, use that may have a greater potential for noise generation then this use should be reviewed by an acoustic consultant prior to it being allowed to proceed.

There is very little likelihood of noise emissions from the library or study hall creating adverse impacts at any receivers.

4.3 Funeral Ceremony Building

The funeral ceremony building is to be located on the upper ground floor level at the south western extent of the site. Funeral services will be held in the mosque and the funeral ceremony building will be used for preparation purposes. There is very little potential for noise generation from the funeral ceremony building.

4.4 Mechanical Plant

Air conditioning (condenser units) for the mosque will be located in a plant room on the lower ground floor level at the north eastern end of the building (adjacent to the stairs).

Air conditioning (condenser units) associated with the community centre will be located in a plant room at the northern end of the building, near the water tanks.

The type and size of air conditioning plant to be used at the site is not yet finalised.

Air conditioning condenser units which are used for this type of application typically have a sound power level in the order of 65 to 70 dB(A). Assuming an Lw of 70 dB(A) for a condenser unit, compliance with the night time noise criterion would be achieved at a distance of greater than 12m (unshielded or without the additional insertion loss from an acoustic barrier).

Both of the plant room locations are in cut at the rear of the buildings, between the building façade and the boundary. In addition to this, the plant room for the community hall will be underneath the building elements of the canteen and the associated verandah areas. The cut and the building elements will effectively shield noise from the condensers and there will be no adverse impacts at any receivers as a result of emissions from them.

The plant room for the mosque will be in cut to a depth of over 3m. Assuming there are three condenser units, all working at the maximum capacity indicated above (i.e. with a combined Lw of 75 dB(A) Leq), **Table 9** shows a theoretical calculation of noise impacts at the boundary of the nearest residence approximately 7m away.

The calculation assumes the condensers are fully exposed in the direction of the boundary (i.e. that there is no shielding from building elements etc) and that the units are mounted at a level of 3m below the level of the boundary (with a source height for the condensers of 1m above final ground level).

TABLE 9
RECEIVED NOISE (Leq (15 min)) – A/C CONDENSERS - MOSQUE

Item	dB(A)
Sound Power Level (Leq)	75
Distance Loss to Receiver (7m)	-25
Barrier Effects (3 m cut)	-16
Received Noise	34
Criterion (night)	40

The results in Table 9 show that there will be no adverse impacts as a result of noise emissions from the assessed air conditioning plant at either the mosque or community hall.

Any externally mounted refrigeration equipment associated with the funeral ceremony building should be located either at the front of the building (facing the car park) or housed in an enclosure designed to minimise noise emissions.

4.5 Car Park

Car parking is proposed to be provided in a two level car park to the south of the mosque. The lower level of the car park will have 121 spaces and the upper level will have a further 48.

The lower level of the car park will be constructed at R.L. 25m and the upper level will be 3m higher at R.L. 28m. The lower level car park will, therefore, be partially in cut and thus shielded from residences to the west in Andretta Avenue by block work retaining walls and the natural topography. Similarly, the central parts of the lower level car park will also be effectively shielded from Andretta Avenue by the building elements of the community hall and mosque and boundary fencing.

The upper level car park will also be shielded to the west by the building elements of the library and the funeral ceremony building.

Noise in car parks typically comes from people walking to and from cars, doors opening and closing etc., as well as vehicles moving at slow speeds. Each noise event is characterised by a brief peak which when averaged out over a 15 minute period has a relatively low Leq. The impact of each noise event on any single receiver is also variable depending upon the location of individual cars within a car park and as they move in and out. In addition to this, people arriving or departing a mosque would normally be expected to do so in a relatively quiet and orderly fashion.

For most of the day the car park will not be used. The majority of use will usually coincide with the period before, and after, the various prayers. For most of these prayers there will, typically, only be up to 20 to 25 people in attendance. It is expected that people attending these prayers would park on the lower level closest to the entrance to the mosque.

The peak usage of the car park would occur before and after the Jamaa prayers when most people are in attendance. Observations at the existing mosque indicated that people arrived at the mosque over an extended period prior to the sermon and whilst the sermon was underway. Upon completion of the sermon many people stay around for personal prayers.

At the proposed facility it is assumed that people will continue to arrive over a period of about one hour prior to the sermon either for social reasons or to use the library and study rooms.

The worst case for noise generation from the car park would be close to the beginning or end of the Jumaa prayer when the largest number of people is likely to be using the car park. Traffic studies for the proposal have indicated that the typical usage of the car park will result in up to

50% of the car parks being used in a single 15 minute period. To ensure consideration of the absolute worst case for this noise assessment it was assumed that 75% of the car parks would be used in a single 15 minute period. That is 90 car parks on the lower level and 36 car parks on the upper level. Based on observations at the existing mosque this is considered a worst case.

Typical noise levels from car parks have been sourced from the Spectrum Acoustics technical database. This contains noise measurements from a series of vehicles arriving and departing a car park with people moving to and from vehicles. The measurements were made over a representative period to ascertain a typical noise level from these activities. The measurements were made at varying distances from each car to approximate the situation in relation to an adjacent residence over a 15 minute interval. That is, at any time throughout each 15 minute interval various car parks, at different distances from the nearest residences, will be in use.

The measurements in the database show a noise level of 53 dB(A) Leq measured over a 5 minute period where up to 6 vehicles moved in and out of a car park. The measurements were made at an average distance of 7m.

Assuming the noise from the 6 vehicles is consistent for a full 15 minutes at a distance of 7m this equates to a sound power level of 73 dB(A) Leq (15 min) for car park noise. This value has been used to determine impacts over a 15 minute assessment period during the morning at the end of a Jumaa prayer session.

Due to the layout of the car park, individual parking spaces will be at various distances from receivers. To assess potential impacts the lower level car park has been considered to be 15 separate “banks” of 6 parking spaces and the upper level 6 banks, each with a sound power level of 73 dB(A) Leq (15 min) . Received noise levels were determined for each “bank” and the combined result calculated for the closest receiver in Croudace Street.

The noise from the car park will be at different levels when measured at various points on any individual receiver boundary. That is, depending on the distance from individual cars/noise events etc. and the varying effects of barrier insertion loss. To assess the practical impacts the noise was calculated for two separate theoretical reception points on the boundary of receivers in Croudace Street. The reception points are shown diagrammatically in **Appendix III**. Details of the barrier and distance loss calculation are also shown in Appendix III.

A summary of the results of the assessment of car park noise, as described above, is shown in **Table 10**. Car park numbers referred to in the tables are as shown diagrammatically in Appendix III.

TABLE 10 CALCULATED SPL FROM CAR PARK Leq (15 min)		
Car Park Number	Receiver 1	Receiver 2
1	37.5	18.1
2	37.5	19.3
3	27.6	17.1
4	27.6	21.4
5	23.2	18.3
6	23.2	20.0
7	17.3	37.5
8	20.4	24.3
9	18.1	25.0
10	17.6	25.0
11	16.8	24.3
12	18.1	19.6
13	16.3	20.4
14	15.8	20.4
15	15.4	20.4
16	22.6	28.1
17	19.7	30.7
18	18.2	23.0
19	17.6	19.7
20	17.3	30.7
21	16.3	19.7
Total	41	40
Criterion	47	47

The results in Table 10 show there will be no exceedance of the day time noise criterion as a result of the assessed car park noise provided there is a minimum 2.1m acoustic barrier around the car park.

4.6 Driveway

Based on the absolute worst case assumption that 75% of car parks will be utilised in a single 15 minute period either at the start or end of the Jumaa prayer this would equate to approximately 125 cars using the driveway in this time. For acoustic purposes the traffic, and therefore the noise emissions, would be considered to be constant.

Cars using the driveway would do so at low speeds, generally less than 10 kph. The Lw of a car moving at 10 kph was taken from the Spectrum Acoustics technical database. For the assessment of potential impacts it was assumed that the noise was constant for the entire 15 minute period during the day. The results of the assessment of driveway noise are shown below in **Table 11**.

The calculation has been made on the assumption of vehicles travelling in the near lane (relative to the theoretical receiver) of a 6m wide access road in the centre of the access easement. It also assumes a

receiver 3m inside the boundary (distance loss, however, is to the boundary only).

TABLE 11 RECEIVED NOISE (Leq (15 min)) – DRIVEWAY (DAY)	
Item	dB(A)
Sound Power Level (Leq)	84
Distance Loss to Receiver (7.5 m)	-26
Barrier Effects (2.1 m fence)	-14
Received Noise	44
Criterion (day)	47

The driveway may also be used at night (early morning) but during these times there will be far fewer vehicles. An assessment of potential impacts from the use of the driveway during the night was carried out using the DECCW accepted Intermittent Traffic Noise guidelines due to the non-continuous nature of the traffic flow.

Equation 1, below, outlines the mathematical formula used in calculating the Leq,T noise level for intermittent traffic noise.

$$L_{eq},T = L_b + 10\log\left[1 + \frac{ND}{T}\left(\frac{10^{(L\max - Lb)/10} - 1}{2.3} - \frac{\left(L_{\max} - L_b\right)}{10}\right)\right]$$

Equation 1

Where

L_b is background noise level, dB(A)

L_{MAX} is vehicle noise, dB(A)

T is the time for each group of vehicles (min)

N is number of vehicle trips

D is duration of noise of each vehicle (min)

A night time scenario of 10 vehicle movements in a 15 minute period has been used for this assessment with results shown in **Table 12**. The assumptions regarding the location of the noise source are as detailed above.

TABLE 12 RECEIVED NOISE (Leq (15 min)) – DRIVEWAY (NIGHT)	
Element	dB(A)
No. of Vehicle movements (per 15 minute)	10
Lw per vehicle @ 10 kph	84
Distance Loss (7.5m)	-26
Barrier loss (2.1m)	-14
Received Noise (Leq 15 min) per eqn. 1	34
Criterion – night (Leq 15 min)	40

The results shown in Table 12 indicate that there will be no exceedance of the night time noise criterion as a result of the assessed use of the driveway.

4.7 Sleep Disturbance

The potential for sleep disturbance will come from noise from cars entering or leaving the site and using the car park, with the maximum noise from cars in the driveway accelerating or revving their engines. The noise level relates to that of a single car using in the driveway and is not dependant upon the number of vehicles.

The results of the assessment of sleep disturbance impacts are shown below in **Table 13**. The calculation was made to the façade of the closest residence to the driveway in Croudace Street. Distance loss is to the façade of the house.

TABLE 13
RECEIVED NOISE (LMax) – CAR IN DRIVEWAY

Item	dB(A)
Sound Power Level (Lmax)	92
Distance Loss to Receiver (10 m)	-28
Barrier Effects (2.1 m fence)	-14
Received Noise	50
Criterion (Lmax)	50

The results in Table 13 show that there will be no adverse impacts as a result of maximum noise emissions from the assessed noise from vehicles using the driveway.

Guidance on assessing the potential for noise impacts from vehicle movements can be gained from Appendix B of the DECCW publication *"Environmental Criteria for Road Traffic Noise"* (ECRTN). This document outlines the results of research into the possible causes and effects of sleep disturbance as a result of traffic noise and concludes that

- *"Maximum internal noise levels (i.e. inside a residence) below 50 – 55 dB(A) are unlikely to cause awakening reactions, and*

- *One or two noise events per night, with maximum internal noise levels of 65 – 70 dB(A) are not likely to affect health and wellbeing significantly.*

The ECRTN does also go on to indicate that more work is required to better define the cause-effect relationship between noisy events and awakening reactions and at what levels do awakenings affect health and wellbeing.

The RTA's *"Environmental Noise Management Manual"* indicates that the façade of a typical dwelling with the windows open will attenuate approximately 10 dB(A) of traffic noise. A light framed house with the windows closed will attenuate up to 20 dB(A).

An external noise level of 50 dB(A) corresponds to 40 dB(A) internal with windows open and 30 dB(A) internal with windows closed

Based on the discussion above it is considered unlikely that, with a 2.1m high acoustic barrier in place, an external noise level of 50 dB(A) Lmax will create any adverse sleep disturbance reactions as a result of vehicle movements along the driveway.

As there will only be a small number of cars entering the site at night these would all be expected to park in the lower car park close to the mosque. There would, therefore, be no cars on the ramp to the upper level car park at night.

The other potential for sleep disturbance impacts will come from the loud closing of car doors at night. As indicated above, at night cars are expected to park close to the mosque. The Lmax noise from the closing of a door on a car parked in car park number 3 has been assessed to Receiver 1 (as per notations for car park noise assessment) and the results are shown in **Table 14**.

TABLE 14
RECEIVED NOISE (LMax) – CAR DOOR CLOSING

Item	dB(A)
Sound Power Level (Lmax)	95
Distance Loss to Receiver (28 m)	-37
Barrier Effects (2.1 m fence)	-15
Received Noise	43
Criterion (Lmax)	50

The results in Table 14 show that there will be no adverse impacts as a result of noise emissions from the car park at night.

4.7 Road Traffic Noise

The design of the car park means that all vehicles must arrive and depart via Croudace Road. For the Jumaa prayers all 169 car parking spaces may be utilised in a one hour period and, hence, all cars would exit onto Croudace Road.

To consider the worst case 100 vehicle movements were considered to be in a southern direction along Croudace Street (as this would put traffic in the lane closest to receivers). All vehicles were considered to be travelling at 60 kph.

Noise levels from such vehicles have been assessed to a point 1m from the facade of residences in Croudace Street at, at a nominal distance of 12m from the centre of the near lane. Results are shown below in **Table 15**.

TABLE 15 ROAD TRAFFIC NOISE – CROUDACE STREET	
Element	dB(A)
No. of Vehicle movements (peak hourly period)	100
Lw per vehicle @ 60 kph	92
Distance Loss (12m)	30
Received Noise (Leq 1 hour) from eqn. 1	50
Criterion – Day (Leq 1 hour)	60
Exceedance	0

The results shown in Table 15 indicate that noise from traffic generated by the proposal will not exceed the RTA criterion.

4.8 Construction Noise

The most significant noise emissions from construction activities will occur during the demolition of existing buildings, the subsequent site excavation and preparation and initial foundation works for the car park etc.

Other works will involve fitout of the various buildings. For the most part these will be undertaken internally within the buildings with resultant reduced received noise.

Typical noise levels of construction plant items are shown in **Table 16** (as adapted from the RTA's Environmental Noise Management Manual).

TABLE 16 TYPICAL NOISE LEVELS – CONSTRUCTION PLANT @ 7m	
Plant Item	dB(A) Leq (15 min)
Compressor	71
Backhoe	79
Concrete Vibrator	83
Crane	79
Excavator	76
General construction	79

The figure shown as "general construction" in the above table is an arithmetical average of several measurements of noise emissions from typical construction activity during the foundation and excavation stage of works at a multi storey development.

Construction noise levels will vary throughout individual days and also throughout the length of the overall works. The noise level at individual

receivers will also be dependant upon the location of the various works, relative to those receivers, at any time. In this instance, in the direction of some receivers, there will also be shielding from topographical effects and the effects of cuttings once excavated.

Based on the noise levels shown in Table 16, it is likely that there will be exceedances of the construction noise criterion during certain phases of the works. **Table 17** show the results of a sample calculation of potential noise impacts at receivers in Andretta Avenue as a result of general construction works taking place approximately 20m away on the site of the proposed car park.

TABLE 17 CONSTRUCTION NOISE dB(A) Leq (15 min) – ANDRETTA AVENUE	
General construction noise, dB(A)Leq	104
Distance Loss to Receiver, (20 m)	34
Received Noise	70
Criterion	57
Impact	13

The results in Table 17 show, that under the assessed conditions, there will be exceedances of the construction noise criterion at residential receivers surrounding the site. These exceedances will be of a short term nature and will occur only during the day. The received noise will result in received noise in the “noise affected” category but below the “highly affected” category of the ICNG.

It must be noted that the exceedance shown is for the noise associated with the initial phase of construction involving heavy machinery undertaking excavation work and site preparation as described previously. This phase of the construction will be only short term in nature.

As construction progresses the major noise generating activities will be carried out inside buildings or will be substantially shielded by building elements. As a result, at theses times, received noise levels will be less than those shown in Table 17.

In keeping with the requirements of the ICNG the following general recommendations are made to minimise potential impacts, and maintain the amenity of, the surrounding areas.

All neighbouring residents should be notified of the proposed works. Particular emphasis should be placed on the time frame of the works. A contact name and phone number of a responsible person should be given out so that complaints can be dealt with effectively and efficiently. All complaints or communication should be answered.

During the liaison process note should be made of any particularly noise sensitive times of day and care be taken to avoid scheduling noisy works at these times.

All personnel working on the job including contractors and their employees should be made aware of their obligations and responsibilities with regard to minimising noise emissions.

Contractors should familiarise themselves with methods of controlling noisy machines and alternative construction procedures. These are explained in AS2436-1981 “Guide to Noise Control on Construction, Maintenance and Demolition Sites”.

Activities that are known or have the potential to create excessive noise should, where possible, be scheduled to occur at times to cause least annoyance to the community. Carrying out such work during early morning should be avoided. This includes start up and idling etc. of heavy machinery prior to commencement of work.

Mechanical plant should be silenced using best available control technology. Noise suppression devices should be maintained to manufacturer’s specifications. Internal combustion engines should be fitted with appropriate, well maintained, high efficiency mufflers.

Machines which are used intermittently should either be shut down in the intervening periods between work or throttled down to a minimum.

Alternatives to reverse alarms such as manually adjustable or ambient noise sensitive types (“smart” reversing alarms) should be considered. Alternative site management strategies can be developed, in accordance with a site OH&S Plan, with the concurrence of the appropriate OH&S Officer.

Any portable equipment with the potential to create high levels of noise eg compressors, generators etc should only be selected for use if it incorporates effective noise control. This equipment should be located where practical so that natural ground barriers or site sheds etc are between it and the nearest potentially affected receivers.

Where possible loading and unloading of plant and materials should be carried out away from potentially affected receivers.

5.0 – CONCLUSION

An acoustical assessment of theoretical noise emissions from the proposed redevelopment of the site at No. 158A Croudace Road,

Elermore Vale (current Lot 2 DP 209466 and Lot 4 DP 1086854) has been conducted.

The proposal is to involve the construction of a Muslim community and cultural complex. This is to include a mosque, multi purpose hall, library, residence, funeral service facility and car parking.

The noise impacts at the nearest residential boundaries have been assessed, due to the noise emissions from each of;

- The noise from prayer times;
- Activities in the community hall;
- Car park and traffic noise,
- Mechanical plant noise, and
- Construction noise

To minimise the potential for adverse impacts from noise from cars in the car park or driveway a 2.1m acoustic barrier has been recommended for the exposed boundaries of the site.

The assessment has shown that, with the 2.1m acoustic barrier in place, there will not be an exceedance of any noise criteria as a result of the proposed usage of the mosque, community hall, funeral service facility or car park.

There will be no adverse impacts as result of the assessed noise emissions from air conditioning plant associated with the mosque or community hall.

There is potential for elevated noise levels associated with construction activities to exceed the relevant noise goals and a series of recommendations have been made in relation to this to minimise adverse impacts.

With these recommendations in place, the mechanical plant located appropriately, and provided operations of the facility are in keeping with the assumptions made in this assessment, we see no acoustic reason why the development should not be approved.

6.0 - REFERENCES

Department of Environment Climate Change and Water (DECCW), 1994. Environmental Noise Control Manual, Sydney.

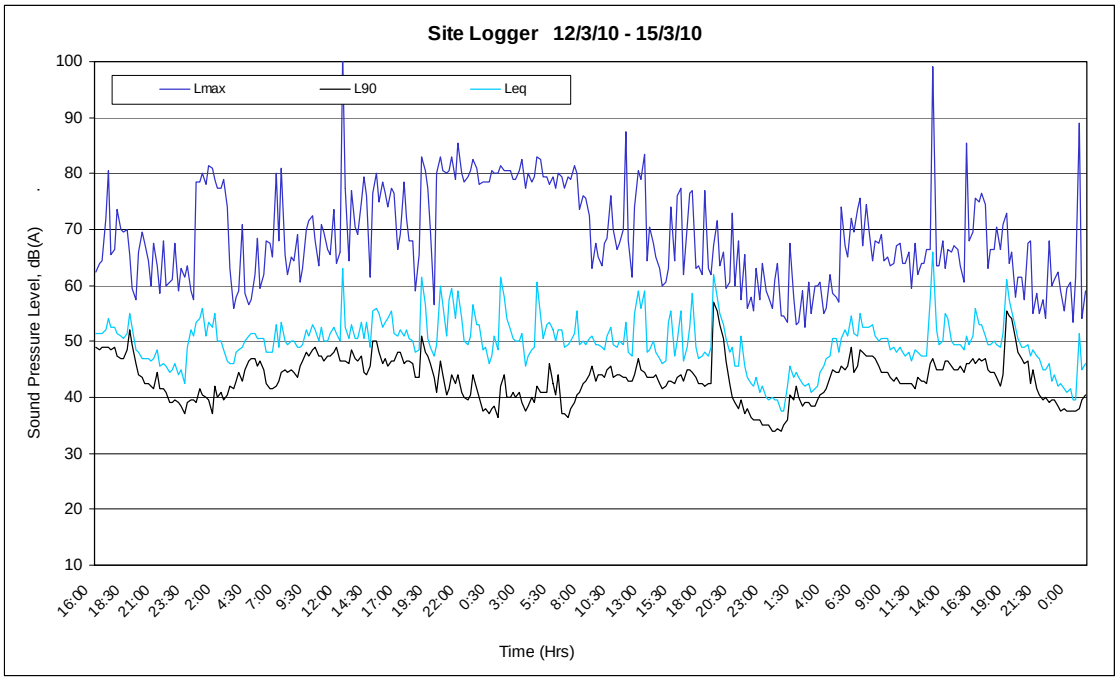
Department of Environment Climate Change and Water (DECCW), 2000. NSW Industrial Noise Policy, Sydney.

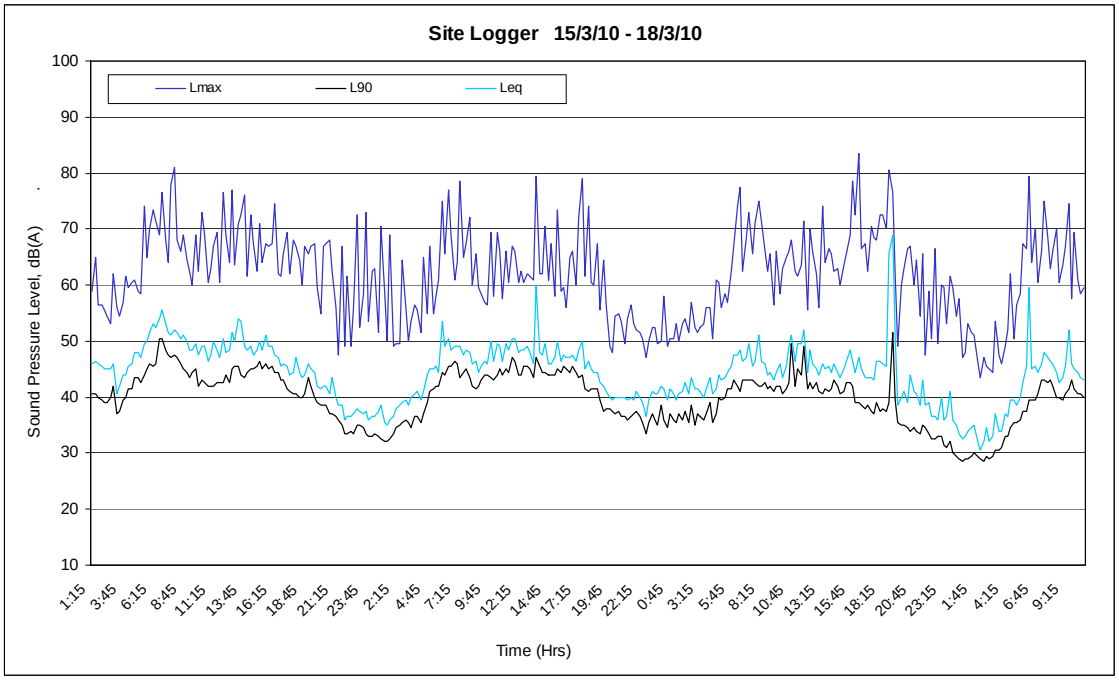
Department of Environment Climate Change and Water (DECCW), 1999. Environmental Criteria for Road Traffic Noise, Sydney.

Roads and Traffic Authority of NSW (RTA), 2001. Environmental Noise Management Manual, Sydney.

APPENDIX I

NOISE LOGGER CHARTS


Site Logger 12/3/10 - 15/3/10
Lmax
L90
Leq
Sound Pressure Level, dB(A)
Time (Hrs)


Site Logger 15/3/10 - 18/3/10
Lmax
L90
Leq
Sound Pressure Level, dB(A)
Time (Hrs)

APPENDIX II

PRAYER TIMES

NEWCASTLE MOSQUE AND COMMUNITY CENTRE

Expected usage of the facilities

Place of Worship

Muslims need to pray 5 times a day. Though they are allowed to pray anywhere, praying in congregation in a mosque is highly recommended. So there will be prayers in congregations 5 times every day with varying number of people expected to attend. Also the noon prayer on Friday is replaced by a special Friday Prayer where large numbers are expected. Besides all these, 2 days in a year, there are big celebrations where large congregations are expected. The detailed expected attendances are as follows:

Fajr prayer (every day)
Time: 4:15 to 4:30 am (summer), 5:00 to 5:15 am (winter)
Attendance: 10 – 15 people

Dhuhr prayer (every day)
Time: 1:30 to 1:45 pm (summer), 1:00 to 1:15 pm (winter)
Attendance: 10 – 20 people

Asr prayer (every day)
Time: 5:00 to 5:15 pm (summer), 4:00 to 4:15 pm (winter)
Attendance: 10 – 15 people

Maghrib prayer (every day)
Time: 7:45 to 8:00 pm (summer), 5:30 to 5:45 pm (winter)
Attendance: 15 – 25 people

Isha prayer (every day)
Time: 9:00 to 9:30 pm (summer), 8:00 to 8:30 pm (winter)
Attendance: 25 – 40 people

Jumaa prayer (every Friday replacing Dhuhr)
Time: 1:00 to 2:00 pm (same for summer and winter)
Attendance: 300 to 400 people

Eidul Fitr prayer (one off event every year, end of the month of Ramadan)
Time: 7:30 to 9:00 am
Attendance: Up to 450 people

Eidul Adha prayer (day after the pilgrimage congregation on Mecca, one off event every year)
Time: 7:30 to 9:00 am
Attendance: Up to 450 people

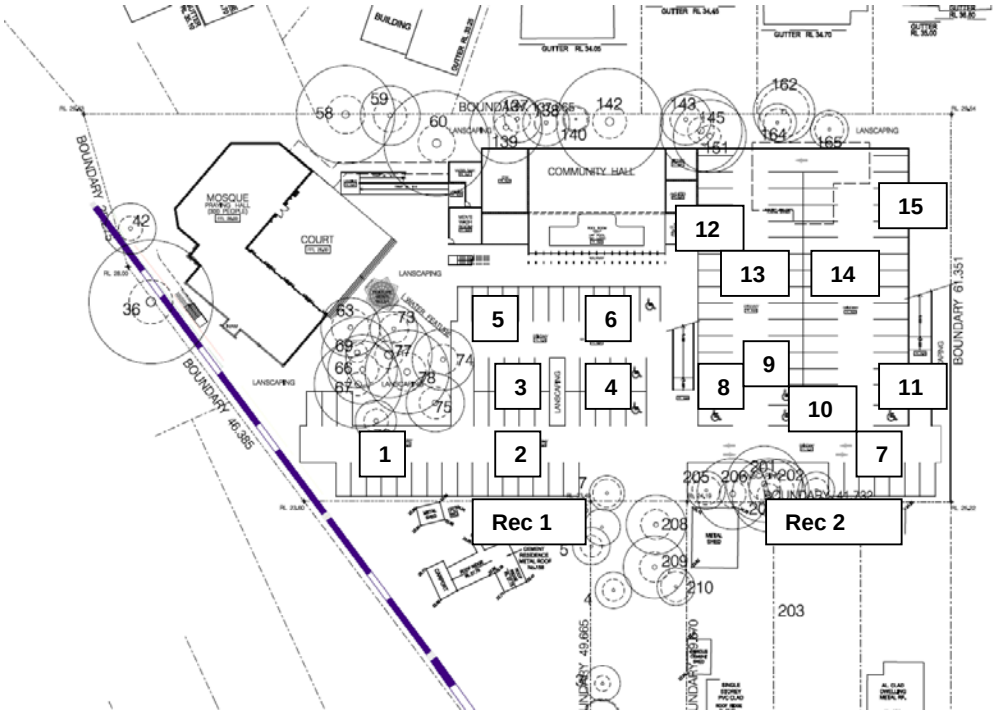
Community Centre Usage

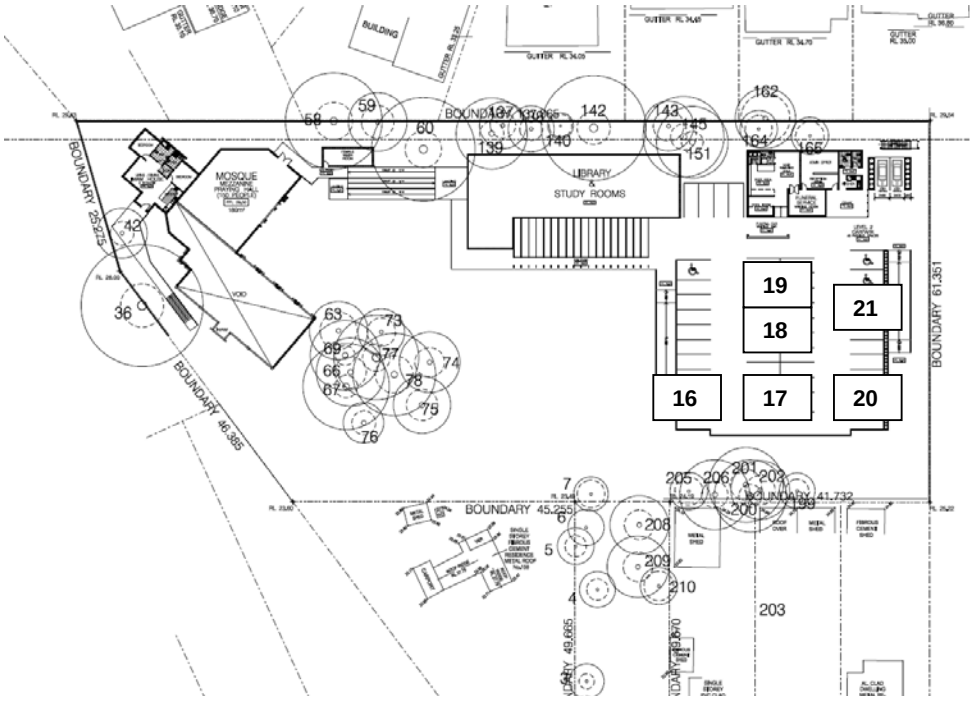
100 ~ 300 (maximum) people at any time. Same people will attend the prayers as well, so the total number coming to the centre will not increase. Total days of usage in a year is not expected to exceed 20.

Usage of other facilities are expected to be moderate with same people attending the prayers and will not increase the total number coming to the centre.

APPENDIX III

CAR PARK and RECEIVER NOTATIONS





RE: Proposed Mosque – Croudace Road Elermore Vale, dated 21 March 2011
by Spectrum Acoustics Pty Ltd

de Witt Consulting
planning surveying
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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

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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:*

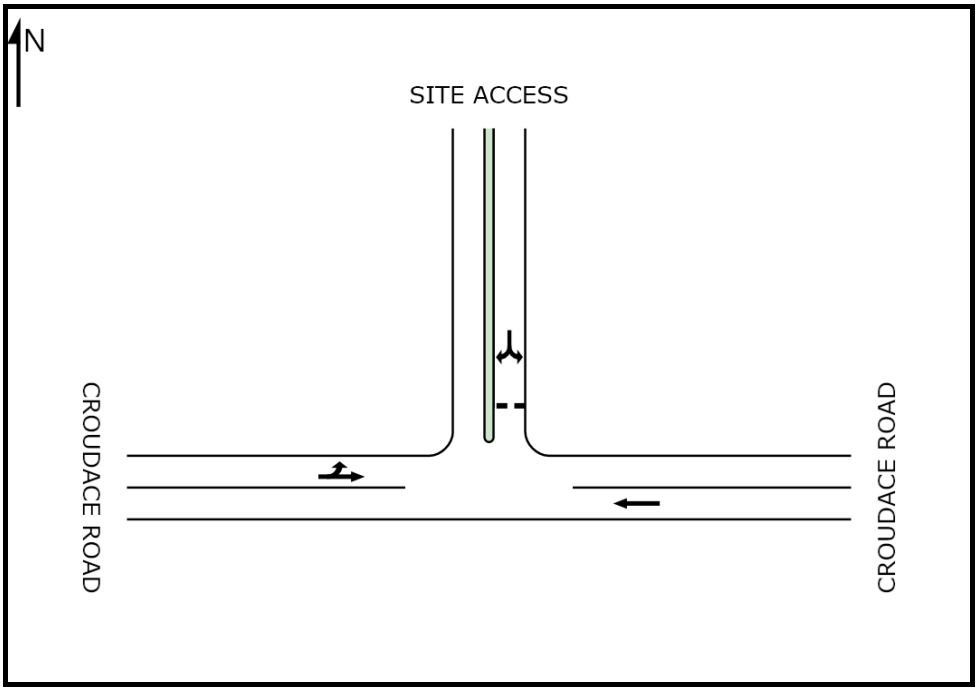
TPK's Response Report, Jan-Feb 2011 indicated that the project had adopted Council's preferred access arrangement of left in/left out as stated in their December 2010 letter.
Councils March 2011 letter now indicates that consideration should be given to the access be designed to permit the right turn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

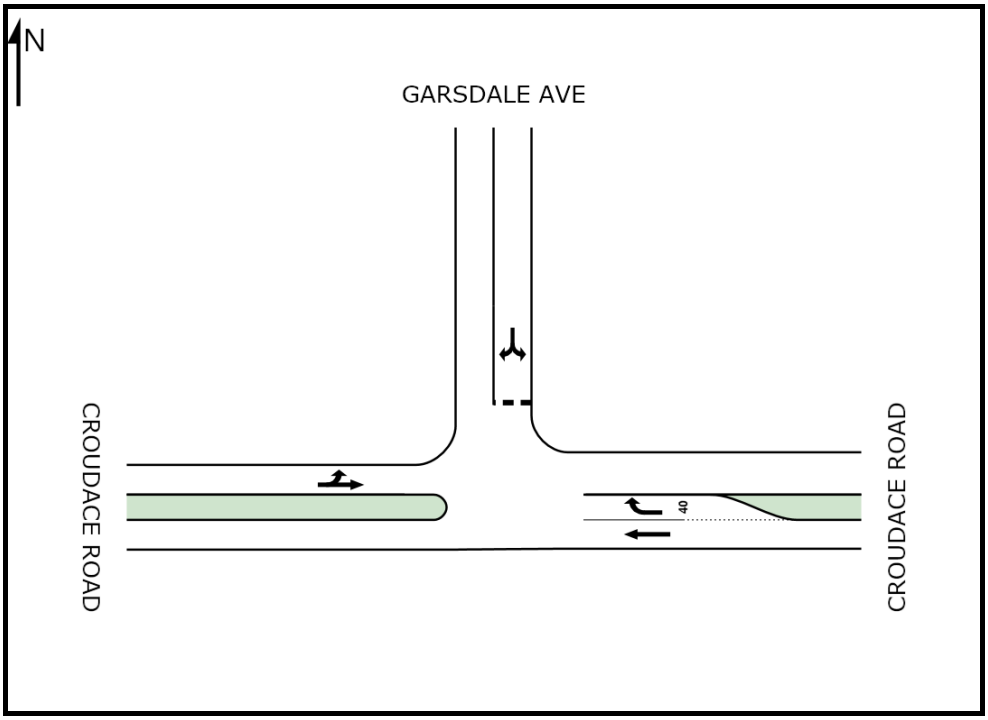
Movement Performance - Vehicles

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.

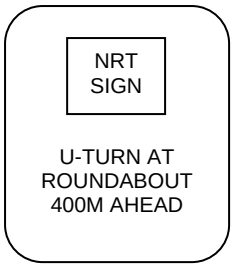
In carrying out this assessment the applicant, through the traffic consultant might consider whether catering for the right turn out of the site is a safer option than a u-turn at the next intersection to the east. Construction of the Garsdale roundabout should also not be assumed unless the applicant 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.

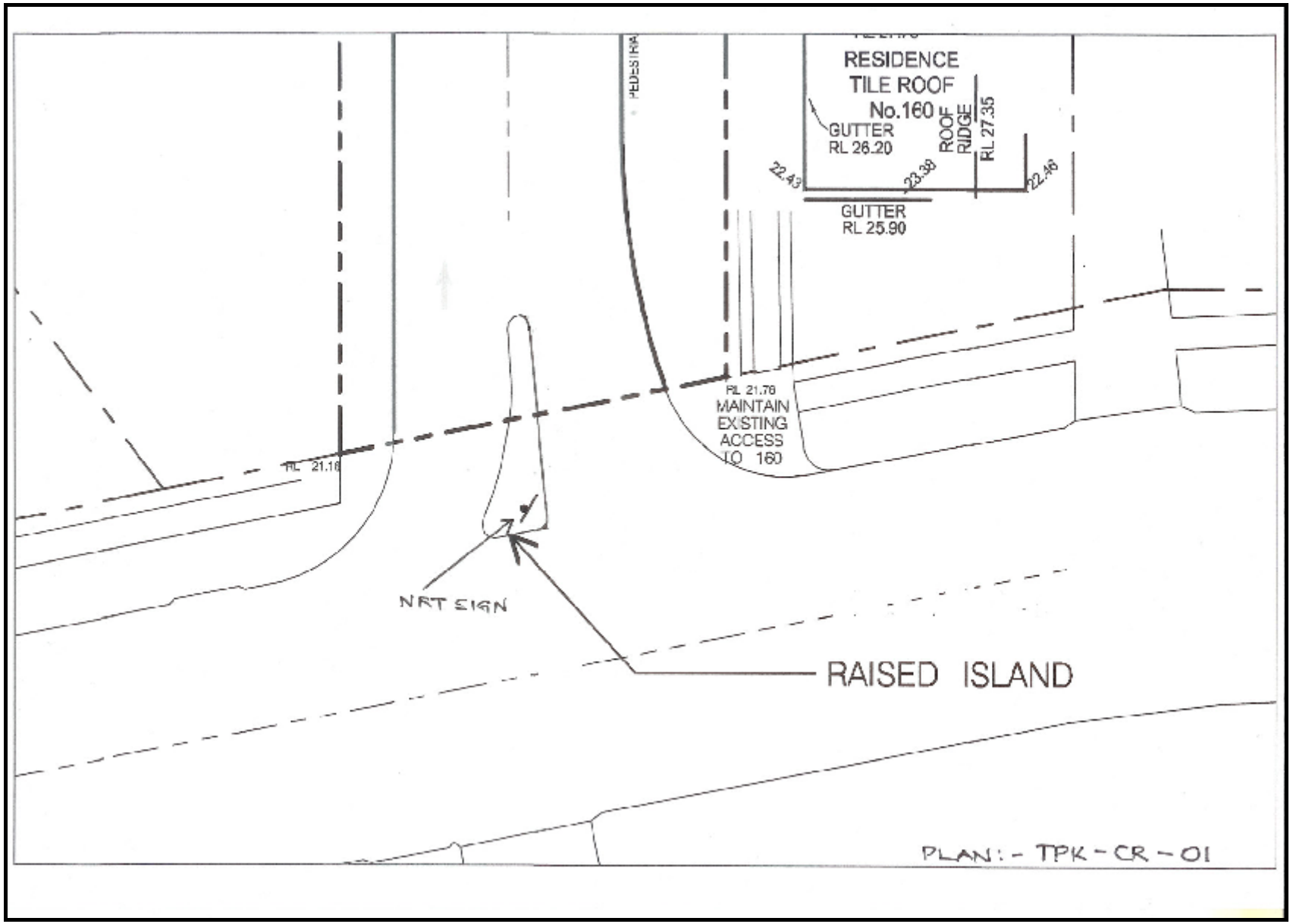
Prepared by

T Keating

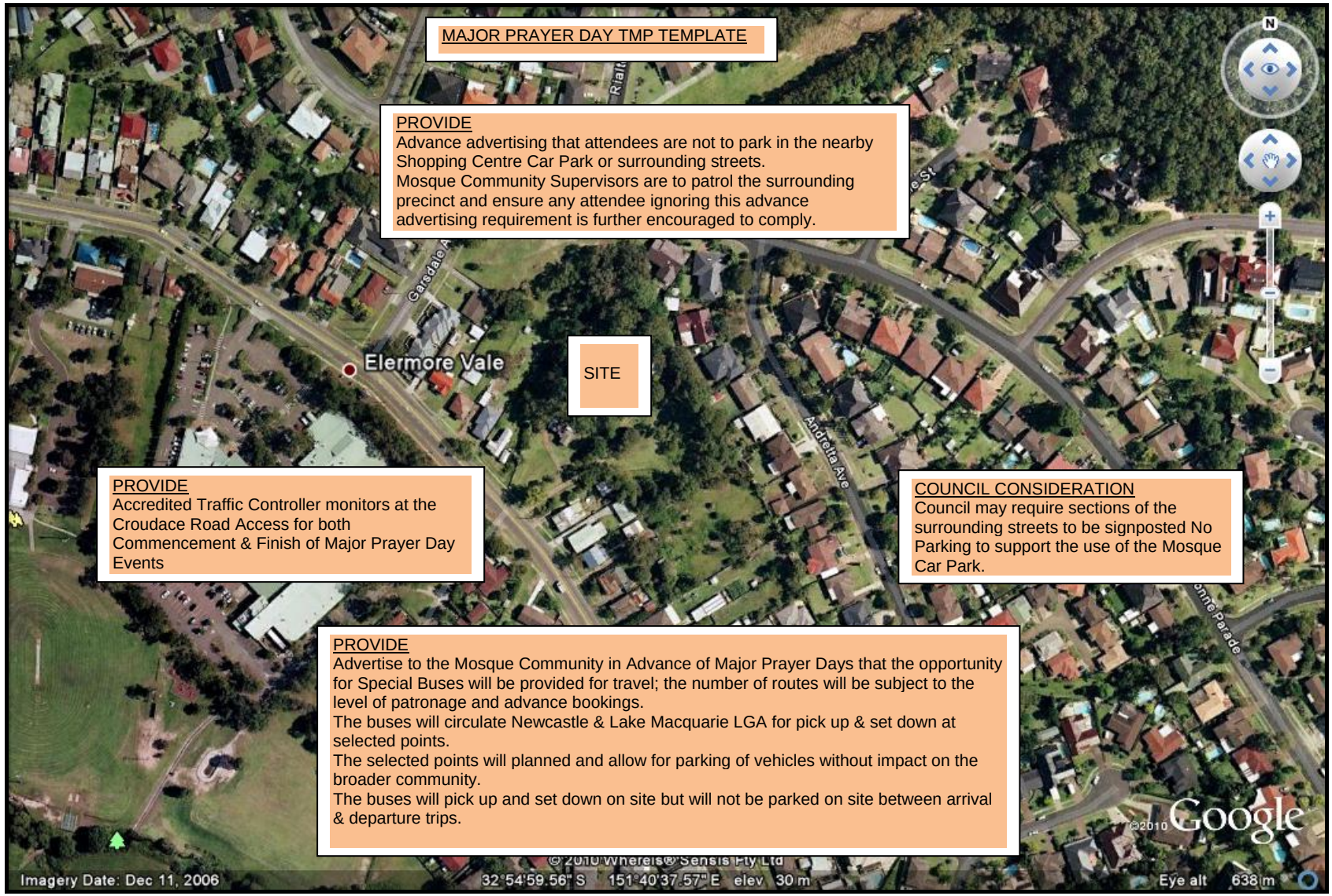
Mr. T Keating
Director, TPK & Associates

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.
Elermore Vale
SITE
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.
Andretta Ave
Imagery Date: Dec 11, 2006
32°54'59.56" S 151°40'37.57" E elev 30 m
Eye alt 638 m
©2010 Google

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

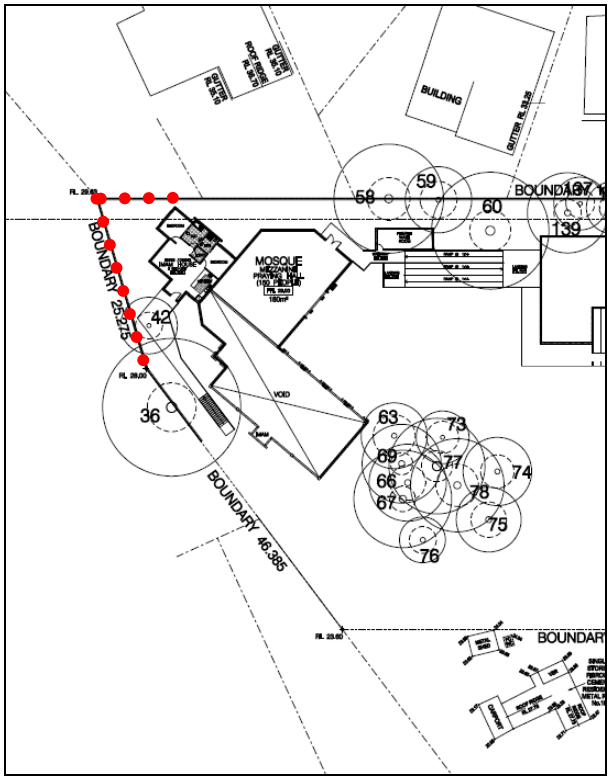


Figure 1 – Revised Acoustic Fence Location

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.

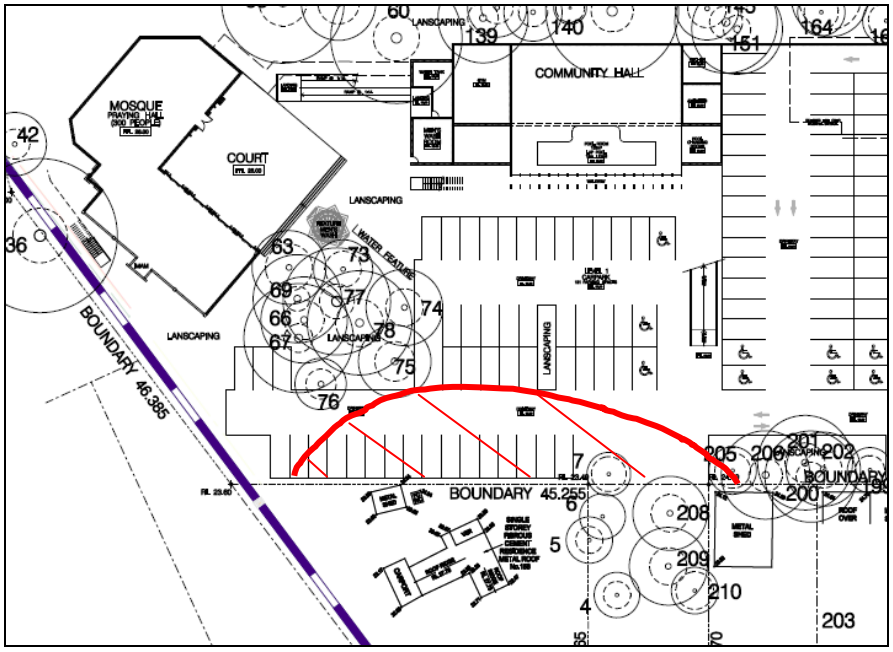
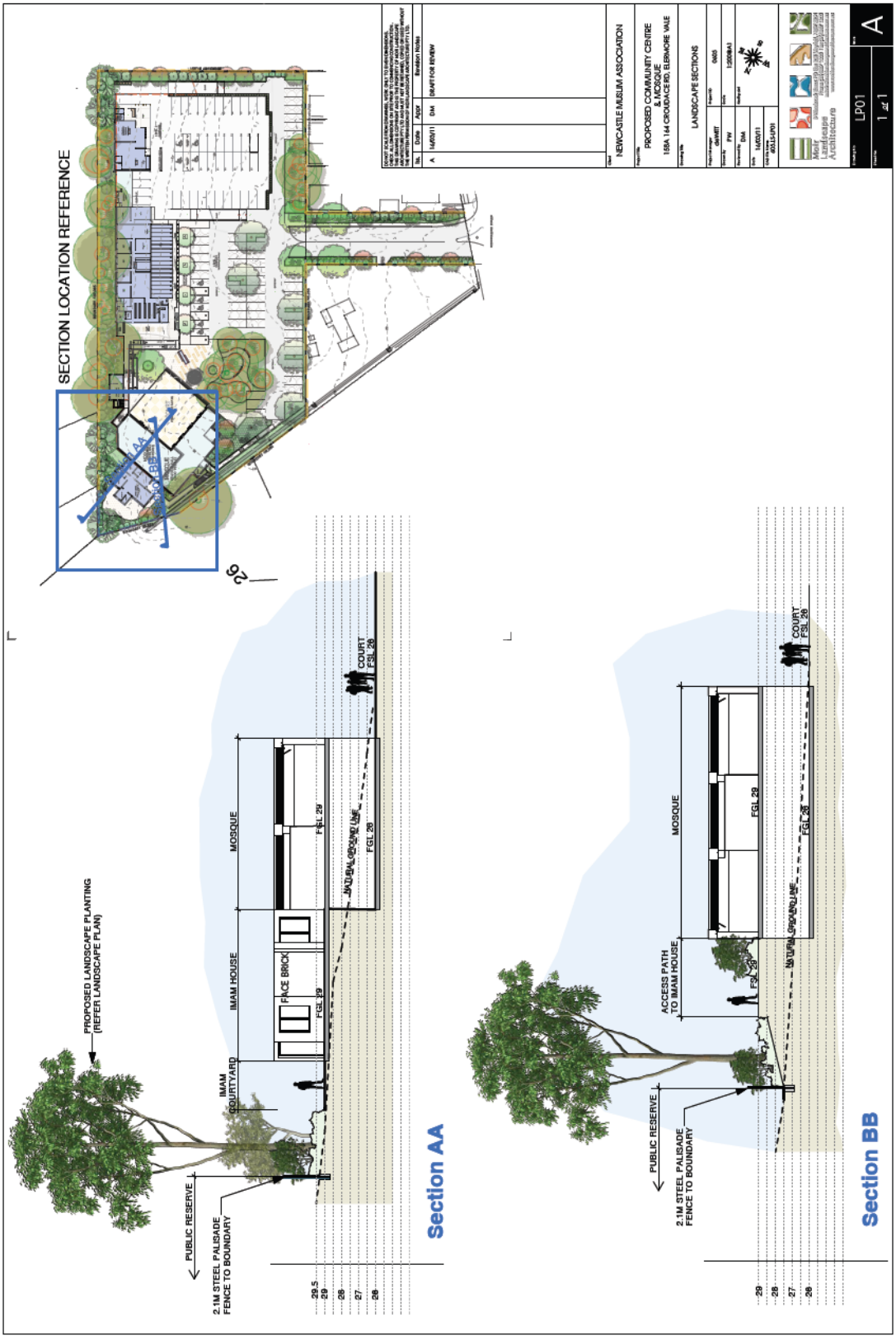


Figure 2 - Pre 7am Car Park Exclusion Zone

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-194 CROUDACE RD, ELERMORE VALE
LANDSCAPE SECTIONS
LP01
A
1 of 1
DRAFT FOR REVIEW
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

DA 10/1049 – Demolition of dwelling at 158a Croudace Road, Elermore Vale, subdivision of 164 Croudace Road, Elermore Vale and construction of a mosque, community centre, funeral ceremony building and car parking area, dated Monday 11 April 2011 by NCC

JRPP No.	2010HCC028
DA No.	DA 10/1049
Proposal	Demolition of a dwelling, construction of a place of worship (Mosque) and associated community facilities including a dwelling house and ceremonial funeral room.
Property	Lot 2 DP 209466 and Lot 4 DP 1086854 known as 158a and 164 Croudace Road, Elermore Vale
Recommendation	Approval
Applicant	DeWitt Consulting
Report By	Future City Group – Newcastle City Council

Assessment Report and Recommendation

Executive Summary

Proposed Development

An application has been received seeking consent to demolish the existing dwelling at 158a and 164 Croudace Road and erect a *place of worship* (Mosque) and associated community facilities including a dwelling house, ceremonial funeral room and boundary adjustment at 158a and 164 Croudace Road, Elermore Vale.

Referral to Joint Regional Planning Panel

The proposal is referred to the Joint Regional Planning Panel for determination as it constitutes a *place of public worship* under clause 13B(1)(b)(i) of State Environmental Planning Policy (Major Development) 2005, given it has a capital investment value of more than $5 million.

'13B General development to which Part applies

(1) This Part applies to the following development:
(a) development that has a capital investment value of more than $10 million,
(b) development for any of the following purposes if it has a capital investment value of more than $5 million:
*(i) affordable housing, air transport facilities, child care centres, community facilities, correctional centres, educational establishments, electricity generating works, electricity transmission or distribution networks, emergency services facilities, health services facilities, group homes**, places of public worship**, port facilities, public administration buildings, public ferry wharves, rail infrastructure facilities, research stations, road infrastructure facilities, roads, sewerage systems, telecommunications facilities, waste or resource management facilities, water supply systems, wharf or boating facilities'*

Permissibility

The site is zoned 2(b) Urban Core pursuant to Newcastle Local Environmental Plan 2003. The proposal is categorised as a *place of worship* and is permissible within the 2(b) Urban Core zone subject to development consent (as defined below).

***'place of worship** means a building or place used predominantly for the purpose of religious worship, whether or not the building or place is also used for ancillary administration, youth clubs, counselling, social events or religious training by a congregation or religious group.'*

All required owner(s) consent has been provided. The proposal is integrated development due to the Mine Subsidence provisions. There are no other matters which would make the application constitute integrated development. It is further confirmed that the proposal was not required to be referred to the NSW Director of Health under the provisions of the Environmental Planning and Assessment, Act 1979.

Consultation

In accordance with the relevant requirements of Element 3.1 – Public Participation of the Newcastle Development Control Plan 2005 - the application was notified from 24 August 2010 to 8 September 2010. The notification was extended from 7 September to 22 September 2010. There are no provisions within the Newcastle DCP 2005, Environmental Planning and Assessment, Act, 1979 or any other environmental planning instrument which would require the application to be advertised (ie *advertised development).*

The application was referred to the Mine Subsidence Board as integrated development as the subject site is within the Newcastle Mine Subsidence District.

The Mine Subsidence Board issued their General Terms of Approval on the 29 September 2010 subject to conditions regarding further detailed geotechnical and engineering investigation and design (a copy of the report is attached at **APPENDIX C**).

There are no other statutory referrals or concurrences required as part of the assessment of this application.

Key Issues

The main issues identified in the assessment and/or raised in the submissions were as follows:

- Whether the proposed development would have unreasonable traffic and parking impacts.
- Whether the proposed development would have unreasonable noise impacts.
- Whether the proposed development would unreasonably impact on the amenity of the occupants the neighbouring dwellings.
- Whether the proposal is appropriate having regarding to scale and zoning.

Recommendation

Grant approval to DA 10/1049, subject to conditions recommended at **APPENDIX A.**

1. Site and Locality Description

The site is Lot 2 DP 209466 and Lot 4 DP 1086854 known as 158a and 164 Croudace Road, Elermore Vale, respectively. The site consists of a large battle-ax shaped lot (ie 158a Croudace Road) and a long rectangular shaped lot (ie 164 Croudace Road) which partially adjoins the southern boundary of the battle-ax lot. The two frontages of the subject site are separated by two residential allotments (ie 160 and 162 Croudace Road) which are not part of the application.

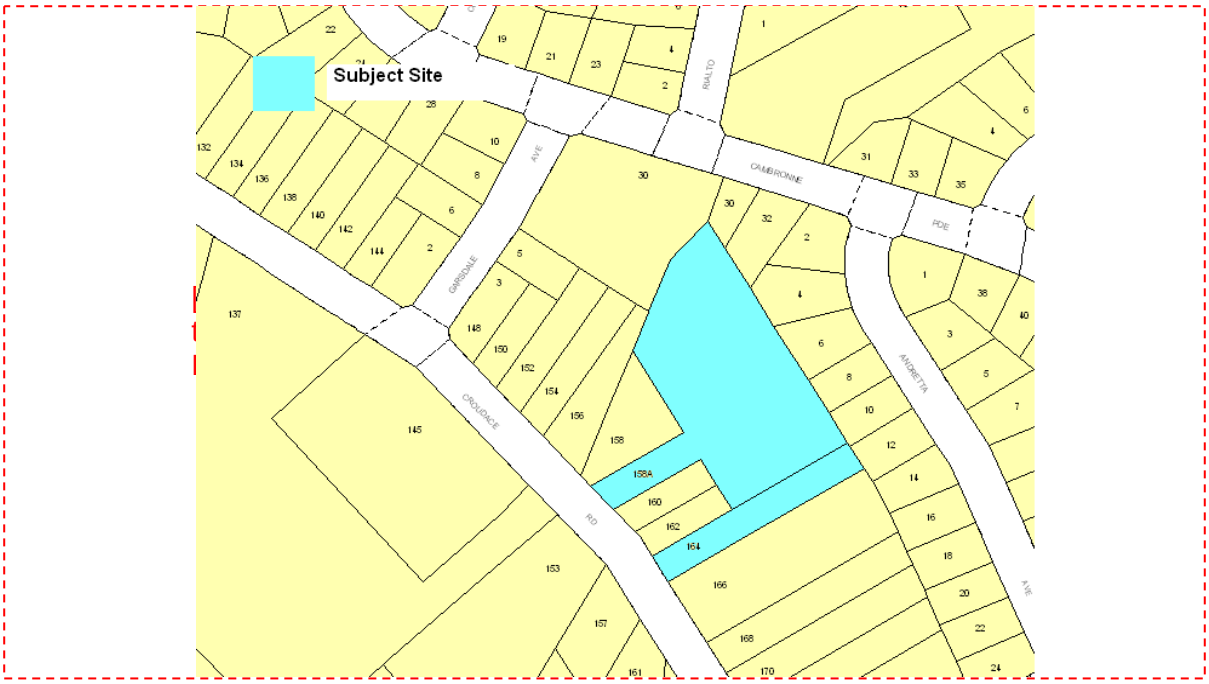
The subject site effectively has two frontages to Croudace Road of 15.535m and 14.31m, respectively (ie 158a and 164 Croudace Road). The subject site has a combined area of 8898.48m^2. The north western boundary is 71.66m, the north eastern boundary is 137.09m and the south eastern boundary is 104.612m (ie the full length of 164 Croudace Road to the street).

The site has an overall crossfall of approximately 8.9m from the south eastern corner to the north western corner at the Croudace Road frontage (ie including the battle-ax handle). The fall across the main portion of the site (ie the rear section excluding the handle) is approximately 6.18m. The crossfall is relatively even across the southern portion of the site while the northern portion includes a small pond-like depression area.

The existing vegetation covers a large portion of the site and consists of 210 trees being a combination of native and introduced species.

There is an existing dwelling located centrally on the battle-ax lot which is intended to be demolished (ie 158a Croudace Road) and an existing dwelling located towards the street front (ie 164 Croudace Road) which is proposed to be retained. Each of the two allotments contains several smaller outbuildings.

Existing development on the adjoining properties comprises single-storey and two storey detached dwellings. There are also several *urban housing* developments (ie villas and townhouses) in the locality including a development which is directly adjoining the south eastern boundary of the site. Located on the southern western side of Croudace Road is an existing shopping centre and hotel. The land to the north is a park owned by the City of Newcastle (Cambronne Parade Reserve).



2. Project Description

The applicant advises that the proposal involves the following:

- *'The subdivision (boundary adjustment) between Lot 2 DP 204966 and Lot 4 DP 1086854 to enable the rear (north eastern) portion of Lot 4 to form part of the development zone/site. The front (south-western) portion of Lot 2 will accommodate the existing residential dwelling at No. 164 Croudace Road.*
- *The demolition of the existing dwelling and associated structures on the site.*
- *Preparatory earthworks and site preparation including selected removal of trees.*
- *The erection of a place of worship (Mosque) with associated ancillary buildings including a three bedroom Imam dwelling house, community hall (including a library, study rooms and associated amenities) and funeral ceremony building.*
- *The provision of landscaped open spaces (including tree retention), internal access driveway, fencing, parking areas for 162 cars, associated utility services, drainage infrastructure, civil engineering works, etc..'*

In terms of the community hall, the applicant submits the uses will be in accordance with the *place of worship* definition and indicates that:

> *'The … definition permits ancillary administration, youth clubs, counselling, social events and religious training to take place within the proposed place of worship. This is what is proposed within the buildings on the site as detailed in the Statement of Environmental Effects (SEE). These buildings are to be used by worshippers when they are not attending prayer sessions for social events, religious counselling and religious training and therefore fall within the "place of worship" definition.*
>
> *As detailed in Section 4.6.3 of the SEE, the study rooms and library will be used by study groups including women's study groups with the Imam, youth study groups (similar to Sunday School events at Christian Churches) and religious counselling by the Imam (which may include one on one sessions or group sessions such as for women or a family). These facilities may also be used by the Imam in providing religious training in small group sessions.*
>
> *As detailed in Section 4.6.3 of the SEE, the community hall will be used for weddings, social gatherings after funerals and social gatherings after prayer events (eg. community meals after certain prayer sessions). This area will also be used by the Newcastle Muslim Association for their committee meetings.'*

The applicant has provided the following additional confirmation that the usage of the proposed community hall will be as follows:

> *'The original acoustic report's reference to 300 people using the community hall up to 11pm at night was incorrect.' ' 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).'*

Furthermore, the applicants has indicated that the uses proposed within the community hall would be limited as contained within Table 5 of the Traffic Response Report included below:

TABLE 5 – SITE USAGE SUMMATION

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

The submitted application does not propose that the community hall be 'open' for general public use. The hall will be used by the worshippers at the mosque for ancillary purposes (eg weddings, gatherings after funerals etc). The applicant further confirmed, following enquires made by Council after the Ward 4 Public Forum, that the community hall is not intended for general public use. The applicant has also confirmed the application does not include any proposed *education establishment.*

The applicant provided further details regarding the nature of the proposed funeral ceremony room, and associated funeral services, outlined below:

> *'The funeral ceremony building will be used for prayer and preparation purposes prior to funeral services occurring within the Mosque. The use of this building will be intermittent and will not be used for other purposes at other times. It is a religious ceremonial room and not a mortuary for the storage of bodies. This use of the funeral ceremony room has been clarified through amendments to the architectural drawings which have removed both the cool room and the kitchen area (refer to Drawing A012 in Appendix 2).*
>
> *By Islamic law (Shariah), the body of one who has recently passed away must be buried within 24 hours. Following release by the NSW Coroner, the body is taken to the city mortuary where it is stored while the funeral arrangements are being made. Immediately prior to the funeral service in the Mosque (which occurs immediately at the end of the designated lunchtime prayer session), the body would be brought from the mortuary to the ceremony building in a hearse to be clothed and prayed upon by the Imam, in the presence of the family members. In most cases, it is always preferred by relatives that the clothing and praying over the body and preparations are carried out at a private space within the Mosque grounds. The body is then taken in the coffin from the funeral ceremony building by*

the family and the mosque committee. The coffin is then generally placed on the shoulders of relatives and friends and walked to the mosque prayer hall from the funeral ceremonial building. The coffin is then placed at the front of the prayer hall in the Mosque at the commencement of one of the designated day time prayer sessions. Following completion of the prayers, the coffin is again placed on the shoulders of relatives and friends and walked to the awaiting hearse and driven to the cemetery for immediate burial.

The funeral ceremony building comprises a private space where the relatives of the deceased and the Imam commence the prayers and Islamic rituals 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.'

The applicant and Newcastle Muslim Association have further confirmed that the proposed funeral ceremony room, and associated funeral services, will be limited to

1. *'A body of the deceased remains at the mortuary following release from the Coroner.*
2. *The body is washed and dressed at the funeral parlour following release from the mortuary.*
3. *The body is brought to the funeral ceremony room in a coffin by the funeral parlour hearse.*
4. *Within the funeral ceremony room, the Imam and members of the family prayer on the body. The body is not removed from the coffin at any time.*
5. *Following these private prayers, the coffin is taken to the mosque towards the end of one of the designated prayer session for the formal funeral prayers. The body remains in the coffin at the mosque.*
6. *The coffin is then taken to the cemetery for burial.'*

It was further confirmed that the body and coffin would have cloth placed on it and that the placement of the cloth was purely ceremonial (ie the cloth is placed over the coffin and that the body does not leave the coffin within the subject site)

A copy of the current amended plans is attached at **APPENDIX B** – Plans and Elevations.

3. Consultation

In accordance with the Element 3.1 Public Participation - Newcastle Development Control Plan 2005 the application was notified from 24 August 2010 to 8 September 2010. The notification was extended from 7 September to 22 September 2010.

Section 4.5 *Public Notification of Development Applications by Council* (as outlined below) of the JRPP's Operational Procedures (April 2010) does not require an application to be advertised but that any application should be advertised in accordance with the provisions of the Environmental Planning and Assessment, Act, 1979 or relevant DCP (ie that Environmental Planning Instruments prevail over the JRPP procedures).

'Public notification of the application, and re-notification if required, is undertaken by the council staff in accordance with the requirements of the EP&A Act and Regulation, including the provisions of any development control plan the council has for the notification or advertising of DAs.'

There are no provisions in the Newcastle DCP 2005, Environmental Planning and Assessment, Act, 1979 or any other Environmental Planning Instrument (EPI's) which would require the application to be advertised (ie *advertised development).*

In response to the public exhibition of the application 1022 individual submissions were received objecting to the proposal including six petitions (with 311, 188, 70, 840, 44 & 10 signatures, respectively). It is also advised that 32 individual submissions were received during the public notification period supporting the proposal including two petitions (with 110 and 250 signatures, respectively).

The following summaries and extracts outline the issues raised in the objections.

i) **Traffic & Parking** – The following concerns regarding the traffic and parking aspects of the proposal have been raised:

- The development will result in unacceptable traffic and parking impacts (ie that insufficient car parking is available and that the surrounding streets and shopping centre car park will be dominated by parking for the mosque).

- The congregation will rely predominately on private car travel which will further contribute to traffic and parking impacts. That the existing traffic within Croudace Road is already congested/heavy due to the level of 'through' traffic, the existing shopping centre (with its driveway almost opposite) and existing sporting events and, as such, the proposal will exacerbate these impacts and result in further traffic impacts (eg traffic congestion/hazards and pedestrian safety – "*..there's no pedestrian crossings and schools, child care facilities and sporting facilities are nearby..*").

- The traffic report underestimated the traffic volumes on Croudace Road as it did not include counts during University, TAFE and school terms. Concern that the traffic report did not address the accumulative future traffic growth along Croudace Road correctly (ie 2.0% vs 2.8% annual growth).

- The traffic report did not address correctly the traffic volumes for the departure of the Friday midday service. That the report relies on the traffic volumes before 2pm notwithstanding that the congregation leaves after 2pm.

- The traffic report bases the parking rate on 1 space per three people which is considered inappropriate in this instance (ie that the rate should be higher – 1 space per 1.5 people).

- The proposed traffic works within Croudace Road (ie right turn bay and pedestrian refuge) will conflict with delivery vehicles associated with the shopping centre and tavern opposite and residential access to neighbouring residential developments.

- The proposal will result in increased traffic volumes in surrounding nearby streets due to the existing traffic volumes on Croudace Road and the future proposed roundabout at Croudace Rd and Garsdale Avenue.

- Traffic and parking impacts will be significant when the traffic management plan (TMP) is being relied on (ie the 'special event' days) – *"..where will the additional parking be located?'*.

- It is not appropriate that the 'special event' days be addressed by a separate development application (as outlined in the traffic report) and that the entire DA should be determined at once.

- The difference between the Friday midday service and the 'special event' days (ie 400 and 450 people) is only small in terms of parking (ie 16 spaces at approximately 1 space per three people) and, as such, every Friday would warrant a TMP. The 'special events' may fall on a weekend and coincide with weekend sports (eg soccer and cricket) exacerbating traffic impacts.

- *'Is there going to be an entry to the mosque via Cambronne Parade and an exit via McCaffrey Road?'*

- There is not sufficient public transport to support this application and it will result in further traffic impacts.

- The two storey car park does not meet the zone objectives under the Newcastle Local Environmental Plan 2003. It is suggested that the entire car park be placed underground to minimise impact on the amenity of the surrounding residents.*'*

- The traffic congestion *"..will lengthen the amount of time ambulances take to reach the hospital from many suburbs.."* and could have impact on response of other emergency services (eg police and fire brigade).

- Elermore Parade will be extended through the 'bush' to John Hunter Hospital *'..to accommodate the traffic flow problem caused by the Mosque development.'*

ii) **Acoustic/Amenity Impacts** – The following concerns have been raised regarding amenity and acoustic impacts:

- The proposal will result in unacceptable noise impacts due to a combination of factors including traffic, hours of operation, plant noise (eg air conditioning), size of facility and associated use (eg noise from large numbers of cars coming and going from events).

- The topography will contribute to the acoustic impacts. Concern regarding the impact of *'…car lights and noise of a multitude of cars leaving late at night.'*

- The car park will result in exhaust emissions/air pollution impacts on neighbouring residents. The community hall should be limited to 9pm Sundays-Thursdays and 10pm on Fridays/Saturdays. No amplified sound be allowed anywhere on site including inside the buildings/place of worship.

- The 'special events' may fall on a weekend and coincide with weekend sports (eg soccer and cricket) exacerbating acoustic impacts.

- Concern that the development will have unacceptable overshadowing impacts.

iii) **Congregation Size/Scale** – The proposal will operate at a congregation size up to five times what is nominated in the application which will exacerbate the impacts in terms of traffic, parking and amenity. That the proposed development is *'*..19 times as big as the existing proposal..' The Newcastle Muslim Association website states *"…it (*ie

Mosque) *will cater for the religious needs of thousands of Muslims living in the Hunter region for hundreds of years to come.' 'This vision for the actual intended use of this facility is not what the DA assessments are based on.'*

iv) **NLEP 2003** – The development does not meet the zone objectives under the Newcastle Local Environmental Plan 2003. That the development is of a regional scale and inappropriate within the local residential area plus the size of the congregation has been underestimated based on the size of the facility proposed.

The proposal includes sporting uses and outdoor terrace area which would be prohibited within the residential zone as *recreation areas/recreation facility and as a restaurant* respectively.

v) **Draft LEP 2011** – The submitted proposal will be prohibited under the draft zoning (ie R2 – Low Density Residential and should not be allowed under saving provisions within the Draft LEP. That the development should not be approved considering that the Draft LEP 2011 will be gazetted within three months.

vi) **Newcastle Urban Strategy** – The development does not meet the objectives of the Newcastle Urban Strategy.

vii) **Character** – Concern is raised that the nature, size and scale of the proposed place of worship is out of character with the existing residential neighbourhood and would be in a more appropriate alternative locations such as Lake Road, at the Newcastle University or the inner city area of Newcastle. A large development of this size will set a precedent for more large developments, negatively impacting on the character of the area. That the development will *"..stifle any future residential development in the immediate area ..and is totally opposite to the intent of the Newcastle Urban Strategy."*

viii) **Built Form/Visual Impacts/Density** – The overall height and size of the proposed buildings, the proposed setbacks and the extent/number of buildings proposed on site (ie overdevelopment) is too great on a battleaxe allotment and will result in unacceptable impacts in terms of visual appearance and density within the residential area. '*A formal visual impact assessment has not been undertaken for the proposed development.'* The dome on the tower element should be removed. Concern that the '*…height of the towers will affect the flight path of the rescue helicopter..".*

ix) **Funeral Ceremony Building** – The proposed funeral ceremony building is an inappropriate use within a residential area, will have unreasonable impacts in terms of hours of operation, is alleged to be of a commercial scale and is not permissible within the zone and therefore should be located in a commercial zone. It is suggested that this aspect of the proposal should be removed.

x) **Community Hall** – '*..the Community Hall will only be used for Islamic events and will not be rented out for other uses. This means that it actually should not be classified as a true Community Hall as local residents or social groups will be unable to use it..'* Concern that the Community Hall use should not be permissible within the residential zone. *'*

xi) **Counselling Services** – Concern regarding the extent and nature of counselling services proposed as part of the application.

xii) **Flooding & Stormwater** – The development will exacerbate flooding and stormwater impacts in the area (eg due to the large amount of paved areas).

xiii) **Privacy** –The development will have unreasonable privacy impacts.

xiv) **Existing Trees/Flora and Fauna** – The development will result in the removal of the majority of mature trees onsite. The loss of trees will have an impact on existing wildlife (eg 'wildlife corridor'). State Environmental Planning Policy 44 – Koala Habitat should be addressed.

xv) **Extent of Cut/Fill** – The extent of cut/fill needs to be reduced to be *'…so that it is more compatible with the existing landform…'*

xvi) **Vehicular Access (Right of Way)** – The adjoining property enjoys a right of way across the handle of the subject site and objects to their access being constrained/limited to the north-eastern end.

xvii) **Construction Impacts** – The proposal will further exacerbate traffic impacts during the construction of the development.

xviii) **Social & Economic Impacts** – The proposal will have negative economic impacts on the existing shopping centre and tavern. The location of a place of worship near a existing tavern is inappropriate. The proposal will have negative social impacts on the existing residential community.

xix) **Safety & Crime** – There could be an increase in anti-social behaviour due to the relative position of the tavern to the proposed mosque.

xx) **School Use** – Concern that the development will include a school use.

xxi) **Emergency Planning** – Concern that the development, relying on a single access, has no emergency planning proposed (ie in event of a disaster).

xxii) **Bus Stop** – Concern that the bus stop will be moved further away from the shopping centre.

xxiii) **Fencing** – The proposed 2.1 metre high fencing will have a detrimental amenity impact on neighbouring residential properties. The 2.1m fence should be replaced with a 1.8m one which is more in scale with normal fencing in the area.

xxiv) **Local Government Act 1993 (LGA)** – The development has not been assessed properly having regard to Section 89 of the LGA.

xxv) **Sewage** – The development will exacerbate existing problems with the sewer system.

xxvi) **Toilet Facilities** – *'Are sufficient toilet facilities available for the estimated 400 people of Fridays, 450 other events…'*

xxvii) **Property Values** – The development will negatively impact on property values in the area..

xxviii) **Public Consultation** – The public notification and consultation for the proposal has not been sufficient.

The objectors' concerns are addressed under the relevant matters for consideration in the following sections of the report.

4. Referrals

The application was referred to the following agencies:

- Mine Subsidence Board
- NSW Police Force
- Hunter Water Corporation

The proposal was referred to the Mine Subsidence Board as Integrated Development and they issued their General Terms of Approval on 29 September 2010. The NSW Police Force provided their advice 2 September 2010 indicating that the proposal was acceptable subject to conditions. Conditions of consent are included within the recommendations to address the certification of the proposal by the Hunter Water Corporation prior to the issue of any Construction Certificate (ie Section 50 Certificate). This certification includes confirming that sufficient infrastructure is available for water and sewerage services and/or requiring contributions towards amplification of the infrastructure.

The proposal received internal comments from the professional areas:

- Environmental Services (Compliance Services Unit)
- Engineering (Traffic & Stormwater/Flooding)
- Urban Design Consultative Group (UDCG)
- Building Assessment Team
- Strategic Planning Services

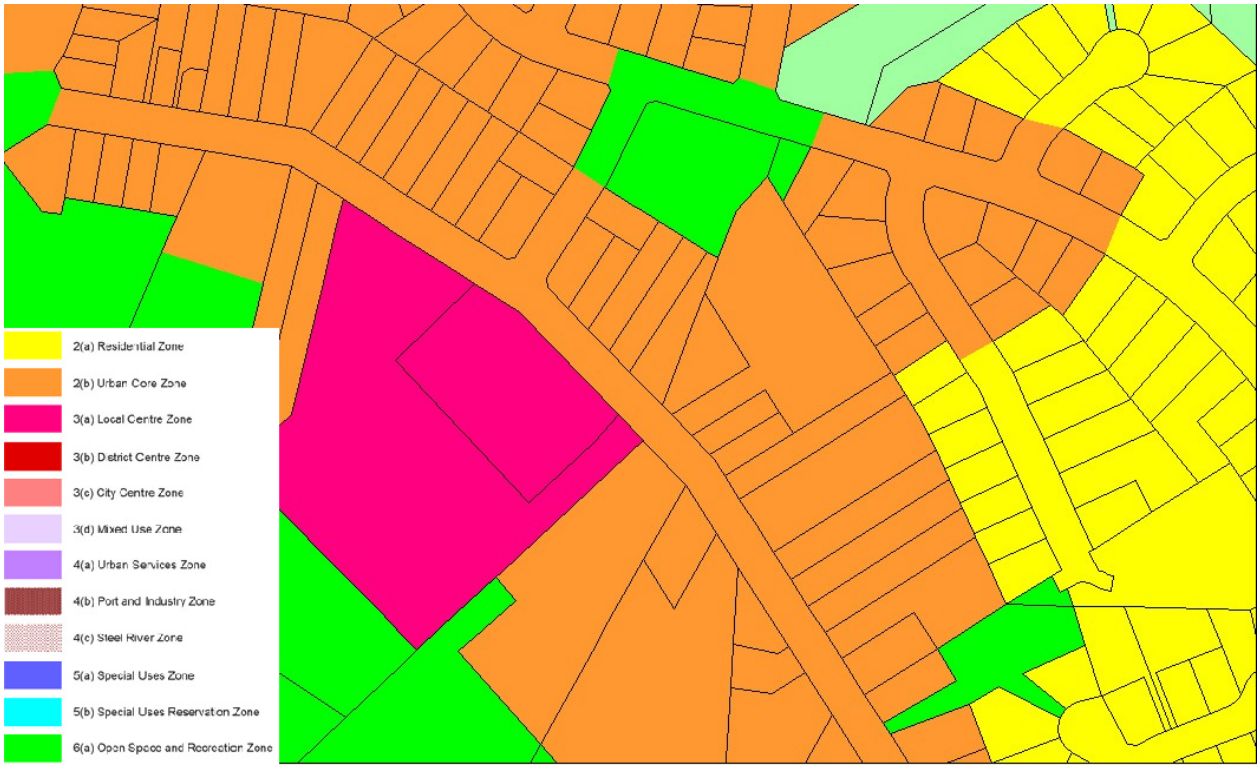
The comments received from the referrals are attached at **APPENDIX C** – Referral Comments

5. Section 79C Considerations

(a)(i) the provisions of any environmental planning instrument

Newcastle Local Environmental Plan 2003

The application has been assessed having regard to the relevant matters for consideration under the provisions of Section 79C(1) of the Environmental Planning & Assessment Act, 1979, as detailed as below.



Clause 16 – Zonings

The site is zoned 2(b) Urban Core pursuant to Newcastle Local Environmental Plan 2003. The proposal is categorised as a *place of worship* and is permissible within the 2(b) Urban Core zone subject to development consent. It is advised that the community hall and funeral ceremony room are considered to constitute uses which fall within the definition of a *place of worship* or otherwise would be reasonably ancillary to that use.

> *'**place of worship** means a building or place used predominantly for the purpose of religious worship, whether or not the building or place is also used for ancillary administration, youth clubs, counselling, social events or religious training by a congregation or religious group.'*

It is advised that the Newcastle LEP 2003 does not have any *development standards* which affect the submitted proposal.

The objectives of the zone are:

' (a) To provide for a diversity of housing types that respect the amenity, heritage and character of surrounding development and the quality of the environment.

(b) To accommodate a mix of home-based employment-generating activities that are compatible in scale and character with a predominantly residential environment.

(c) To accommodate a limited range of non-residential development of a scale and intensity compatible with a predominantly residential environment which does not unreasonably detract from the amenity or character of the neighbourhood or the quality of the environment.

(d) To require the retention of existing housing stock where appropriate, having regard to ESD principles.'

The NLEP 2003 under clause 8 requires that the assessment of an application have regard to the aims and objectives under Clause 5 (ie Cl 8(a), the specific zone objectives (ie Cl 8(b) and the other provisions of the plan (ie Cl 8(c). The zone objectives are addressed below within the report and the additional specific provisions are addressed latter within the report.

The applicant's have submitted the following response to the 2(b) Urban Core zone objectives:

'Clause 8(b) requires the consent authority to have regard to "the relevant zone objectives" (our emphasis) when determining a DA. This wording does not require development proposals to be "consistent" with zone objectives, but merely for the consent authority to "have regard" to them during the assessment. Furthermore, only relevant zone objectives are required to be considered.

Zone Objective (a) applies to housing developments, which is only one of many permissible land uses in the zone. As a result, zone objective (a) is not relevant to the proposal.

Zone Objective (b) applies to home-based employment generating activities, which is only one of many permissible land uses in the zone. As a result, zone objective (b) is not relevant to the proposal.

Zone Objective (c) is relevant to the proposed development. It is considered that the proposed development is consistent with this objective as it comprises a non-residential development which is of a scale and intensity that is compatible with the predominantly residential environment. As detailed in the SEE, it will not unreasonably detract from the amenity or character of the neighbourhood or the quality of the environment. There may be some change to the character of the site (with some impacts on properties immediately adjoining the site), but this would not detract from amenity of the entire neighbourhood. The proposed density and intensity of the development will also be consistent with the provisions of the Newcastle Urban Strategy (see Section 5.4 of the SEE). The 2(b) zone comprises a predominantly residential zone of a higher density than the 2(a) zone which has been placed around Local and District Centres within the Newcastle LGA. It appears that this is to provide a higher density and more intense development around the land zoned 3(a) Local Centre and 3(b) District Centre. The 2(b) zone is the highest density residential zone in the Newcastle LGA. Some of the non-residential uses that are permissible in the 2(b) zone include "child care centres", "community facility", "educational

establishment", "hospital", "institution" (such as a mental hospital, correctional centre or detention centre), "motel", "place of assembly", "place of worship" and "serviced apartment". The proposed place of worship is therefore one of the permissible non-residential uses that is considered appropriate for this zone.

Zone Objective (d) applies to the retention of housing stock where appropriate. In this regard, the proposal will involve the removal of one dwelling and its replacement with another (Imam House) therefore resulting in no change to the housing stock of the Newcastle local government area.'

The applicant is correct in relation to the requirements of clause 8(b) of the Newcastle Local Environmental Plan 2003 and, as such, zone objectives a), b) and c) are not required to be addressed by the proposal. In terms of zone objective c) the developments scale needs to be considered in context of the reasonableness of impacts on amenity, character and local environment.

The amenity impacts are discussed within the latter sections of the report. Generally, the majority of impacts are not unreasonable having regard to the development in context with its surrounds. The scale of the development will be of a different character to the surrounding neighbourhood but not unreasonably so and not to an extent that would warrant refusal. It is considered that the development is acceptable in terms of its impact on the amenity and character of the neighbourhood and its impact on the quality of the environment

- Clause 8 Requirements for development

The NLEP 2003 under clause 8 requires that the assessment of an application have regard to the aims and objectives under clause 5 (ie Cl 8(a), the specific zone objectives (ie Cl 8(b) and the other provisions of the plan (ie Cl 8(c). The zone objectives are addressed above and the additional specific provisions are addressed below.

The aims and general objectives under clause 5 are structured to address any form of development which may occur within the Newcastle Local Government Area and therefore are inherently broad. These aims and objectives, in context of the submitted application, have been considered and appropriately addressed by this assessment report.

Overall it is considered that the proposal is acceptable having regard to the provisions of clause 8.

- Clause 17 Subdivision

The proposal involves a boundary adjustment between two existing allotments and does not create any parcels with split zones.

- Clause 23 Access to arterial roads

Croudace Road is not categorised an arterial road and the provision does not apply.

- Clause 25 Acid sulfate soils

The submitted proposal is unlikely to impact on any acid sulfate soils.

- Clause 26 Bushfire Prone Land

The submitted site is not within land nominated on the Bushfire Prone Land Map.

- Part 4 Environmental Heritage Conservation

The subject site does not contain any Heritage Items and is not located within or near a Heritage Conservation area. It is further advised that the site is not within the vicinity of an existing Heritage Item.

State Environmental Planning Policy No 44—Koala Habitat Protection

The SEPP applies to the Newcastle Local Government Area but the site does not constitute '*potential koala habitat'.*

State Environmental Planning Policy No 55—Remediation of Land

The SEPP applies to the Newcastle Local Government Area and, in accordance with Clause 7 of the SEPP, land contamination aspects have been considered within the assessment of the application as outlined within the report below.

State Environmental Planning Policy No 71—Coastal Protection

The SEPP applies to the Newcastle Local Government Area but the site is not within the *coastal zone.*

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

The SEPP applies to the Newcastle Local Government Area and is applicable to the dwelling proposed (ie 'Iman's House'). The applicants have submitted a Basix certification demonstrating that the design of the proposed dwelling complies with energy rating requirements.

State Environmental Planning Policy (Infrastructure) 2007

The SEPP applies to the Newcastle Local Government Area but, having regard to the provisions of clause 104 – Traffic Generating development and Schedule 3, the application does not involve any elements requiring consideration under the provisions of the SEPP.

State Environmental Planning Policy (Major Development) 2005

The SEPP applies to the Newcastle Local Government Area and under clause 13B(1)(b)(i) of the SEPP, the proposal is required to be referred to the JRPP as discussed earlier within the report.

(a)(ii) the provisions of any draft environmental planning instrument

Draft Newcastle Local Environmental Plan 2011

It is advised that Section 79C(1)(a)(ii) of the *Environmental Planning and Assessment Act, 1979,* requires that any draft environmental planning instrument (EPI) which '..*is or has been the subject of public consultation..'* is a relevant matter for consideration in the assessment of a development application.

The draft Newcastle Local Environmental Plan 2011 (NLEP 2011) has been placed on exhibition between 5 October and 21 December 2010. The subject land is zoned R2 Low

Density Residential under this draft zoning and the proposed land use is prohibited as a *place of public worship* as defined under the Draft LEP 2011 (included below). It is advised that as the land use is not listed within Part 2 *Permitted without Consent* or Part 3 *Permitted with Consent,* it is therefore prohibited under Part 4 *Prohibited,* notwithstanding that it is not specifically listed as outlined below.

> ***'place of public worship** means a building or place used for the purpose of religious worship by a congregation or religious group, whether or not the building or place is also used for counselling, social events, instruction or religious training.'*
>
> *'Zone R2 Low Density Residential*
>
> ***1 Objectives of zone***
> - *To provide for the housing needs of the community within a low density residential environment.*
> - *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
> - *To accommodate a diversity of housing forms that respects the amenity, heritage and character of surrounding development and the quality of the environment.*
>
> ***2 Permitted without consent***
> *Environmental protection works; Home occupations*
>
> ***3 Permitted with consent***
> *Boarding houses; Child care centres, Community facilities, Dual occupancies, Drainage; Dwelling houses; Earthworks; Emergency services facilities, Exhibition homes, Exhibition villages, Flood mitigation works; Group homes, Home-based child care; Multi dwelling housing; Neighbourhood shops; Roads; Secondary dwellings, Semi-detached dwellings, Seniors housing, Shop top housing, Tourist and visitor accommodation*
>
> ***4 Prohibited***
> *Backpackers' accommodation; Caravan parks; Serviced apartments; Any other development not identified in item 2 or 3'*

The applicant has made the following submission on the Draft NLEP 2011:

> *'DA No. 10/1049 was lodged with Council on 9 August 2010, around 2 months prior to the exhibition of Draft LEP 2011. As a result, the DA needs to be determined in this context. With regard to the zone objectives of the proposed R2 Low Density Residential zoning of the site, Clause 2.3 of Draft LEP 2011 states the following:*
>
> *"(2) The consent authority must have regard to the objectives for development in a zone when determining a development application in respect of land within the zone."*
>
> *This wording does not require development proposals to be "consistent" with zone objectives, but merely for the consent authority (not the applicant) to "have regard" to them during the assessment. Furthermore, pursuant to case law, only relevant objectives need to be considered in the assessment process.*

The proposed zone objectives of the proposed R2 zone are currently worded as follows:

- *"To provide for the housing needs of the community within a low density residential environment.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
- *To accommodate a diversity of housing forms that respects the amenity, heritage and character of surrounding development and the quality of the environment."*

The first and last bullet points above are objectives that are only relevant to housing developments and are therefore not relevant, particularly in light of the various non-residential land uses that are permissible in the R2 zone.

With regard to the second bullet point, it is relevant to note that the proposed place of worship will provide prayer facilities to meet the day to day needs of Muslim residents. This objective does not define what is meant by residents as so far as a locality or region is concerned. Notwithstanding, Sections 3.4 and 5.5 of the Social Impact Assessment lodged with the DA clearly show the following:

- *In 2006 there were 28 residents of Elermore Vale of Islamic faith. This figure has remained stable since 2001.*
- *In the Newcastle LGA, the number of residents of Islamic faith increased by 119 between 2001 and 2006 to 641 people.*
- *The above data is an underestimate of the current situation as a number of people living in both Elermore Vale and the wider Newcastle LGA are students undertaking tertiary study at the University of Newcastle and international students are not counted by the ABS Census (unless they intend to be in Australia for a period of 12 months or longer). The increase in international student numbers which has occurred in Newcastle since 2006 would therefore not have been captured in the Census.*

Pursuant to the above, the proposed mosque is an "other land use" that will "provide facilities or services to meet the day to day needs" of Muslim residents (both within Elermore Vale and the wider Newcastle LGA). It will therefore meet the requirements of the relevant objective of the R2 zone.'

The applicant's submission regarding the draft zone objectives are generally accepted. It is agreed that the extent of the '…*day to day needs of residents'* referred to within the second objective is broad in its scope. Furthermore, it is considered that as the Draft NLEP 2011 is not as yet gazetted (or imminent and certain), it would be unreasonable to rely too heavily on the draft zone objectives in assessing the application and that greater weight should be given to the current zone objectives.

Where a draft EPI will prohibit a use proposed within a submitted application currently under assessment the general planning principles which apply are twofold.

Firstly, the degree to which the gazettal of the draft EPI is imminent and certain (eg are the final steps for gazettal within the Department of Planning about to be completed).

The Draft LEP 2011 was exhibited between the 5 October and 21 December 2010 and is anticipated that it will be reported to Council 21 June 2011. Currently, aspects of the Draft LEP are under review, including issues raised within public submissions to the Draft, which may result in amendments to the Draft and possible re-exhibition. It is considered that there is no certainty regarding the final form or timing of the Draft LEP's actual gazettal at this stage.

Secondly, the impact on the public interest if the application was approved, is the public interest unreasonably impacted into the future considering the land use would otherwise be prohibited?

It is advised that Draft LEP 2011 has received numerous public submissions (over 700) supporting the future zoning, Draft R2 Low Density Residential, which would prohibit the proposed *place of worship* on the subject site.

The types of land uses proposed with the Draft R2 Low Density Residential zone are predominately residential in nature. It is considered that the proposed *place of public worship* land use, when having regard to the public interest, would not be sufficiently outside the public interest, having regard to the current neighbourhood, to warrant refusal, notwithstanding the Draft zoning.

It has been raised within public submissions made to the development application, that the size and scale of the proposed mosque is excessive having regard to the current residential area. It is advised that issues pertaining to the size and scale of the proposal are a merit assessment issues which are addressed elsewhere within this report.

Finally, is advised that the Draft LEP 2011 includes a saving provision, as outlined below, allowing a prohibited use to be considered, if lodged before the gazettal of the Draft LEP 2011, notwithstanding the prohibition. It is noted that the terms of the saving provision requires that the assessment of applications is to be made on the basis that the prohibition has been exhibited.

> ***'1.8A Savings provision relating to pending development approvals [local]***
> *If a development application has been made before the commencement of this Plan in relation to land to which this Plan applies and the application has not been finally determined before the commencement, the application is to be determined as if this Plan had been exhibited but not commenced.'*

Having regard to the above matters, it is considered reasonable to support the proposal in terms of the Draft Local Environmental Plan 2011.

Draft Development Standards

The Draft LEP 2011 proposes development standards for height (Clause 4.3) and Floor Space Ratio (Clause 4.5).

Development Standard	Requirement	Proposal	Compliance
Clause 4.3 –	Maximum	Variable –	Yes, Yes

Height	Height limit 8.5m	6.4, 7.8 & 9.8	& No
Clause 4.5 – FSR	Maximum FSR 0.75:1	0.234:1	Yes

Draft Height Standards

The Draft LEP 2011 defines height as follows:

> ***'building height** (or **height of building**) means the vertical distance between round level (existing) at any point to the highest point of the building, including plant and lift overruns, but excluding communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like.'*

The majority of the proposed buildings on site comply with the draft height standards under clause 4.3 partly due to the extensive earthworks proposed (ie 'cutting in') for the buildings. In determining the heights of the community hall (6.4m) and the mosque buildings (7.8m) the lower existing ground floor level was used and, as such, the rearmost portions of the buildings would technically be a lower height based on the above definition.

The only part of the proposal which exceeds the draft height standard is the feature tower with dome and minaret (ie the topmost feature point above the dome) at 9.8m. The minaret itself was not included within the height based on the *building height* definition above. The tower forms a small portion of the overall proposed buildings having dimensions of approximately 3.8x3.8m. The tower is approximately 3.0 metres higher than the roofline of the proposed mosque building at its greatest difference.

It is advised that as the draft height standard has not as yet been gazetted and, as such, no objection under State Environmental Planning Policy No 1 is required to be submitted with the application.

The overshadowing impacts resulting from the proposed feature tower are considered to be reasonable, with its shadow falling predominately within the subject site on the 21 June. The shadows do extend beyond the site during the early morning (ie 9am) and falls within the shadows cast by the proposed 2.1m high boundary fence.

The overall height, bulk and scale of the proposed feature tower is not considered to unreasonably impact on neighbouring properties with the nearest dwellings being over 43.2m, 45.2m and 46.5m respectively from the proposed feature tower. Furthermore, while the proposed feature tower will be visible within the nearby area it is not considered that its impact is sufficient to warrant modification of this element.

Overall it is considered that the exceedance of the draft height standard is not unreasonable in this instance.

The remaining buildings on the site are all lower than those above and comply with the Draft Height standards.

Draft Floor Space Ratio Standard

It is advised that the Draft LEP 2011 excludes the area of the battle ax handle (Cl 4.5(4)(c)) when determining the site area of an allotment for Floor Space Ratio (FSR) calculations. Furthermore, for the purposes of the above FSR calculations the new residential allotment fronting Croudace Road, proposed via a boundary adjustment (ie 164

Croudace Road), is also excluded from the site area. The proposal complies with the draft FSR standards.

The subject site is not subject to any draft Heritage Items or Conservation Areas.

There are no other draft State Environmental Planning Policies or draft Local Environmental Plans which have provisions that would affect the subject application.

(a)(iii) any development control plans

Newcastle Development Control Plan 2005

a) Element 3.1 - Public Participation

In accordance with the Element 3.1 – Public Participation of the Newcastle Development Control Plan 2005 the application was notified from 24 August 2010 to 8 September 2010. The notification was extended from 7 September to 22 September 2010. There are no provisions in the Newcastle DCP 2005, Environmental Planning and Assessment, Act, 1979 or any other environmental planning instrument which would require the application to be advertised (eg *advertised development).*

The submissions received are discussed in the following sections of this report.

b) Element 4.1 - Parking and Access

The proposal involves the erection of a *place of worship* (Mosque) and associated community facilities including a dwelling house and ceremonial funeral room.

Table 1B (Parking Rates –Newcastle Other Than City Centre) of the Element 4.1 indicates that a parking rate of one space per 3 seats as a guide.

The development provides for a 162 parking spaces equating to 486 persons at the one per three rate.

A detailed discussion of the parking and traffic aspects are undertaken latter in this report.

c) Element 4.2 - Contaminated Land Management

The proposal has been assessed by a Senior Environmental Protection Officer of Council who has reviewed the applicant's submitted reports including a Preliminary Contamination Assessment prepared by Coffey Environments Pty Ltd.

It is considered that the site is suitable for the proposed development.

d) Element 4.3 - Flood Management and Element 4.5 Water Management

The proposal has been considered by Council's Consultant Engineer in terms of flooding and stormwater and is considered acceptable subject to conditions of consent. A detailed assessment of the flooding and stormwater is contained within a following section of this report.

e) Element 4.4 - Landscaping

The proposal is considered to constitute a Category 3 development under the provision of Element 4.4 requiring the submission of a landscape concept plan and landscape report.

The applicant's landscape architects Moir Landscape Architecture, submitted these documents with the original application. Following Council's assessment of the application an amended design and an addendum report was submitted 21 February 2011.

Generally the proposed landscape plan is considered to be acceptable. It is advised that the solution proposed by the applicant in terms of the required compensatory trees will need to be modified to be acceptable (ie see part (g) below). The required compensatory tree planting will unlikely be achieved solely within the adjoining park to the north west (ie Cambronne Parade Reserve) and the remaining trees will need to be addressed via street tree plantings.

It is further noted that the drainage design is in conflict with the landscaping along the northern side of the driveway. A condition is recommended that the drainage design be modified and the overland flow path be incorporated within the proposed driveway.

f) Element 4.6 - Waste Management

The applicant has submitted a waste management plan by Hale Development Services in accordance with Element 4.6. The plan addresses both the proposed demolition of the existing buildings and operation of the proposed *place of worship.* It is noted that the *place of worship* will generate a low level of waste and will rely on a Council collection service (an additional service being purchased in the event that it is necessary). It is generally considered that the proposal is acceptable in terms of waste management.

g) Element 4.10 - Tree Management

The applicant's arborist report prepared by Abacus Tree Services has proposed that 31 trees will be retained onsite out of the 210 existing trees. The report indicates that 52 trees are to be removed due to *'..serious defects..'* and a further 127 are to be removed *'..in order for the development to proceed.'*

The report indicates that 116 compensatory trees be planted onsite. Additionally, the report proposes that the remaining outstanding compensatory trees (ie 100 trees and shrubs) be planted with the public reserve located at corner of Garsdale Avenue and Cambronne Parade (ie Cambronne Parade Reserve). The applicant submitted a preliminary landscape design for the reserve addressing these proposed compensatory trees.

The applicant's submission discusses the planting of only 100 trees and shrubs whereas an assessment of the proposal indicates that a further 143 'standard trees' (ie 20m^2 canopies) would be required. It is further advised that it is unlikely that 143 'standard trees' would be practically accommodated within the Reserve and a design for such would not be supported by Council's Parks and Reserves Section.

It is proposed that a final design for compensatory planting within the Reserve would be subject to a condition of consent and that any remaining outstanding compensatory trees which are not accommodated with the Reserve design would need to be provided as street trees within the surrounding area.

h) Element 4.11 - Subdivision

The development includes a boundary adjustment between the two subject lots which results in a smaller lot for the existing dwelling at 164 Croudace Road. The provisions of Element 4.11 have been assessed and the development is considered to be satisfactory.

i) Element 5.1 - Single Dwellings

The application proposes to erect a three bedroom dwelling (ie Iman's house) towards the northern corner of the site (ie to the rear of the proposed mosque).

The proposed dwelling is relatively low scale being approximately 5.2 metres in height and having a flat roof design. It has side boundary setbacks of approximately 3.1 and 4.3 metres respectively. The proposal complies with the Building Height Envelope under the provisions of the Element. It is considered that the proposed dwelling, having regard to it's position at the rear of the site, and surrounding landscaping (proposed and existing), is generally acceptable in terms of its visual appearance, character, setbacks, height, bulk and scale .

The dwelling has over 35m^2 of open space on the northern side of the proposed dwelling (considerably more when all the directly nearby landscape area is included). It is considered that the proposed dwelling is provided with sufficient open space and landscaping use by the future residents.

The proposed dwelling, and associated open space areas, are generally orientated towards the north and are acceptable in terms of solar access.

The dwelling does not have a dedicated parking space but it is considered that the general car park is sufficient.

The proposed dwelling, considering its intended position relative to the proposed mosque building, proposed/existing landscaping, existing park and distance from neighbouring properties, will not have unreasonable impacts in terms of privacy.

The proposal also includes a boundary adjustment between the two existing allotments with the resultant smaller allotment containing the existing dwelling at 164 Croudace Road. This allotment will be 619m^2 in area. The existing house will retain its vehicular access and services. Furthermore, it is noted that while the existing allotment at 164 Croudace Road is over 104 metres long, approximately 45 metres of the rear portion is not used as it is partially fenced. Finally, it is considered that the existing dwelling will have sufficient open space having an existing yard area of approximately 130metres between the existing dwelling and sheds.

(a)(iiia) any planning agreement that has been entered into or any draft planning agreement that the developer has offered to enter into

The application did not involve any planning agreements under section 93F of the Environmental Planning & Assessment Act, 1979.

(a)(iv) any matters prescribed by the regulations

The proposal is considered to be satisfactory.

(b) the likely impacts of the development

a) Density, Character, Streetscape, External Appearance, Height, Bulk & Scale

The Urban Design Consultative Group is design review panel established by Council to provide independent design advice to Council on development applications for residential flat buildings and other larger developments proposal within the City of Newcastle. The members of the Group consist of professionals with architectural, planning, heritage or landscape expertise. The application was considered by the Urban Design Consultative Group (UDCG) who raised various issues with the design (Final advice is attached at **APPENDIX C**).

The Group's assessment noted that the proposed buildings will be viewed as single storey from the rear (ie Andretta Avenue) these proposed buildings being between 2.3 and 3.7 metres above the height of the ground level along the rear boundary. The proposal largely achieves the 'single storey appearance' from the rear, and overall the general height of the development is lowered, due to the extensive earthworks proposed with approximately 3.5 metres of excavation along the rear portion of the site. This proposed excavation allows the proposed mosque building, community hall and multi-level car park to be 'cut-in' to the site.

The development will appear two storey from the south-west, north west and east with the main buildings (ie mosque and community hall) being 6.4 to 7.8m in height. The feature tower of the mosque will be 9.8m in height (ie to the dome) and 10.7m to the tip of the minaret. It is noted that the height limit for residential development under the Newcastle DCP 2005 is 8.5 metres which is the same as the Draft LEP 2011 standard under Clause 4.3 as outlined in the report above. It is further noted that the proposed development generally complies with the Building Height Envelope provisions under Element 5.2-Urban Housing of the Newcastle DCP 2005. Notwithstanding that the proposed development is not required to comply with these residential standards, the design is generally acceptable in terms of setbacks, height, bulk and scale on the same basis as discussed previously under the Draft LEP 2011 section of this report.

The UDCG raised concerns regarding the level of articulation of the proposed buildings facing the neighbouring properties and the potential for air conditioning systems to be added later to the roof top of the proposed buildings. The applicant's response is included below:

> *'The comments of the UDCG relating to built form are noted. Additional articulation of the buildings has been included in the amended drawings, particularly where these buildings front adjoining sites. It is not proposed for air conditioning plant to be provided on the roof forms. These plant areas are shown on DA drawing A-011 and are located at the lower ground level to the rear of the site (adjacent to the water tank and adjacent to the rear of the mosque).'*

It is considered that the proposal is acceptable having regard to the combination of the level of articulation, proposed setbacks to neighbouring dwellings and the proposed landscaping.

The privacy screen along the southern side and western side of the upper deck of the proposed car park has been modified to incorporate a 800mm high planter box with a 1.0 metre high timber screen above (ie 1.8 metre total). In addition to the timber screen, landscaping within the planter box will consist of Lillypilly and Star Jasmine.

The UDCG raised concerns regarding the density of the proposal due to the impact of the proposed design resulting from its lack of articulation, the visual impact of the car parking and extent of landscaping.

The Newcastle LEP 2003 and Newcastle DCP 2005 do not include density standards relevant to the proposed *place of worship.* It is noted that the residential density (ie Floor Space Ratio) under Element 5.2 – Urban Housing is the same as the Draft LEP 2011 (ie 0.75:1). Notwithstanding that the development is not required to meet these residential standards, it is noted that it complies as outlined within the Draft LEP 2011 section of this report.

The UDCG considered the overall landscaping design for the proposal and raised concerns that the mature trees intended to be retained at the rear of the site would not be viable due to the level of excavation proposed. The applicant has submitted a landscape design and arborist report which, subject to supervision of the proposed excavation works by a qualified arborist, including root zone protection, indicates that the trees can be suitably retained even with the earthworks proposed.

The proposed landscape layout of the proposal, especially the car park area, has been modified to provide a greater level of tree plantings (ie *'Magnolia Grandiflora'*) to address concerns raised by the UDCG regarding the domination visually of the site by the proposed car park.

The presentation of the proposal to the streetscape is limited as the entire development relies on a battle-ax handle for access and all the proposed development is setback significantly from Croudace Road (ie over 45 metres). The proposed development involves a two way driveway with dense landscaping along each side consisting of taller growing trees. The driveway ends in an open post and rail security gate. The two way driveway being basically straight, dominates the appearance of the site from the street although this is somewhat softened by the proposed landscaping to each side. The driveway, due to the traffic and access issues associated with the proposed development, cannot be reasonably modified without potentially impacting on the functionally of the access which could contribute to further exacerbating traffic issues. Overall, it is considered that the proposal is adequate in terms of its likely impact on the existing streetscape.

Overall it is considered that the subsequent modifications the applicant has made to the design sufficiently addresses the issues raised by the UDCG to the extent that the proposal does not warrant refusal. The concerns regarding the extent of excavation proposed need to be balanced against the alternative of the entire development, as designed, being significantly higher and more visually prominent. It is noted that while the associated buildings (eg community hall) could potentially be decreased in height it is unlikely the mosque and associated car park would be decreased in scale based on the size of congregation the proposal is designed to accommodate. Ultimately, the acceptance of proposed developments height, bulk and scale depends heavily on the extent of excavation included within the design.

The objectives for Elermore Vale under the provisions of the Newcastle Urban Strategy (NUS) 2009 (see below) have been considered in relation to the proposed development.

• *Encourage a diversity of land uses in and around the commercial area.*
• *Encourage development in residential areas which is consistent with the existing streetscape.*

• *Reduce car dependency and the need to commute through improved pedestrian access throughout Elermore Vale, and encouraging home based business.*

The development is considered to meet the first dot point objective providing for a land use which is different to the majority of land uses (ie residential).

The proposal is not for residential development and it is agreed that this results in a relatively large site within the Elermore Vale area not being available for residential purposes. Notwithstanding this, the Strategy's objectives do not override the Newcastle LEP 2003 and inherently non-residential land uses are permissible within the zone. Furthermore, reference to the first dot point highlights that non-residential uses are also envisioned by the NUS objectives. It is considered that the proposal is acceptable in terms of the second dot point.

The third dot point is predominately directed at residential uses and the need to locate employment opportunities near and within residential areas (eg home based businesses). In this respect the submitted proposal does not meet this objective as it is not an employment oriented land use per se. It is further noted that the existing place of worship at Wallsend relies relatively heavily on car use and, broadly, the current proposal will be similar in this regard. It is further noted that places of worship generally are becoming more reliant on car usage as they draw congregations from wider ranges. It is considered that the proposed is sufficiently acceptable not to warrant refusal in this respect.

The development in terms of character will be different to the surrounding existing residential development, as would any non-residential land use which is currently permissible within the 2(b) Urban core zone (eg motel, educational establishment or hospital), but not sufficiently so that the proposal would warrant refusal based on its character impacts.

It is considered that the amended proposal is acceptable having regard to its character, streetscape, external appearance, height, bulk and scale.

b) Amenity Impacts (Overshadowing, Privacy, Views and Noise)

- Overshadowing

The applicant has submitted shadow diagrams illustrating the impact of the proposal on the neighbouring sites for the 21 June and 21 September at 9am, 12noon and 3pm. The shadows submitted for the 21 June are considered the most relevant in relation to the overshadowing impacts generated by the proposed development. It is advised that the shadowing generated by the majority of the proposed buildings falls within the subject site and that generally the overshadowing impacts arise from the proposed 2.1m high boundary fences.

The proposed development has shadowing impacts on four single dwelling sites (NB: which includes the Lot at 164 Croudace Road which is part of this development) and a multi-unit townhouse development which abuts the south eastern boundary of the site.

The shadowing impact on the sites 160, 162 and 164 Croudace Road are considered to be acceptable. The shadowing predominately falls onto the existing sheds at the rear of each site.

The shadowing on the dwelling at 158 Croudace Road occurs in the mornings and falls on the rear portion of the yard and rearmost corner of the dwelling. The shadows

are clear of the dwelling and majority of the yard by midday and, as such, it is considered that the overshadowing is acceptable. It is further advised that the dwelling is largely surrounded to the north and north east by large trees which would also result in significant overshadowing.

The shadowing impact on the multi-unit development at 166 Croudace Road results predominately from the proposed 2.1 metre high boundary fence. The existing fence is already 1.8 metres high. The shadowing largely impacts on the existing courtyard areas on the 21 June at 9am, 12noon and 3pm. These shadows are approximately 2.5m, 4.0m and 8.0m deep respectively at 9am, 12noon and 3pm when measured at right angles to the boundary. The 3pm shadows result in the greatest impact on these dwellings and their courtyards. It is advised that the existing 1.8m high fencing would already result in relatively significant shadowing. It is further noted that both the existing trees onsite and the proposed landscape screen of trees along the south eastern boundary will result in greater overshadowing than detailed in the shadow diagrams.

The landscaping proposed is intended to soften the overall visual impact of the proposed two level car park located near the south eastern boundary. The planting of additional trees near the south eastern boundary could normally occur with use of the subject site and in this regard many of the trees on the subject site were planted by its current owner.

Ultimately, the level of overshadowing from the proposed boundary fence is not considered to be significant enough to warrant refusal. The impact of the shadowing from the proposed trees needs to be balanced against the visual impacts of the two storey car park. It is considered that the potential overshadowing, notwithstanding the mitigation of the potential visual impact, is likely to be significant on the neighbouring urban housing development and would fall onto the majority of the courtyards and part of the dwelling windows. Furthermore, the deletion of the proposed landscaping (so to address the shadowing impact) would not be supported as the resulting visual impact would then also be unreasonable.

The Land and Environment Court has produced a planning principle related to sunlight stemming from The *Benevolent Society v Waverley Council [2010] NSWLEC 1082*. The relevant provision is included below regarding assessment of vegetation:

- *'Overshadowing by fences, roof overhangs and changes in level should be taken into consideration. Overshadowing by vegetation should be ignored, except that vegetation may be taken into account in a qualitative way, in particular dense hedges that appear like a solid fence.'*

The proposed landscape screen of trees would not be considered to be suitably dense to constitute a 'fencelike' dense hedge. While the impact from these trees will be noticeable, in light of planning principle, and the fact that the trees could reasonably be planted without the development, it is considered that the greater weight must be given to the shadowing caused by the proposed fencing. As discussed above, the shadowing impact of this fencing is considered to be not unreasonable.

- Privacy

It is considered that the rear elevation (ie north eastern boundary) does not result in any unreasonable privacy impacts. The height of the proposed buildings relative to the proposed 2.1metre high fencing means that there is little opportunity for casual overlooking in this location. It is further advised that the rear boundary will landscaped with existing and proposed trees and there is limited windows proposed facing this direction.

The proposed multi-level car park and ceremonial funeral room face towards the south eastern boundary and the existing urban housing development. The ceremonial funeral room is unlikely to have any privacy impacts due to the proposed 2.1 metre fencing. The multi-level car park is considered to be acceptable in terms of privacy due to the landscape/privacy screening (ie 1800mm high) proposed along the southern edge of the upper level of the parking area which would screen views.

The south western elevation does not pose a significant privacy impact with only the second level of the proposed car park potentially posing any privacy impacts. The inclusion of a 1800mm high landscape/privacy screen and associated landscaping combined with the separation distance to neighbouring properties and sheds to the rear of the properties will ensure there is minimal privacy impacts.

The northern – north western elevation is also considered not to pose significant privacy impacts. The proposed mosque building does not pose a privacy impact as there is no direct view lines. The proposed Iman's house has living and bedroom windows which face towards the north and north west but this is towards the existing park and neighbouring properties which are too distance to have any privacy impacts.

It is considered that the privacy impacts of the proposal are acceptable.

- Views

The proposal will not have unreasonable impacts on views or outlook. The existing well vegetated site is likely obscuring outlooks greater than the submitted proposal. It is noted that the development proposes to retain many existing trees along the rear boundary and provide additional landscaping on the site.

c) Traffic, Parking & Access

The likely traffic and parking impacts of the proposal has been assessed on behalf of Council by a Consultant Engineer and is considered satisfactory subject to the recommended conditions of consent.

The consultant's detailed assessment is as follows:

'Traffic Generation

The information submitted with the application has identified that the peak traffic generation from the site will occur during weekly prayer time on Friday with the biggest attendance expected between 1 pm and 2 pm. This means cars would be expected to arrive between 12.30 pm and 1.00 pm and leave between 2.00 pm and 2.30 pm. This peak traffic generation period does not coincide with peak traffic period for Croudace Road between 3 pm and 5 pm.

This is crucial to the assessment of the application because of the current traffic volumes on Croudace Road. Currently Croudace Road is nearing its 'mid block' capacity during peak periods and as such traffic congestion is beginning to occur. Some further traffic

growth can be accommodated on Croudace Road during peak periods before delays for motorists reach unacceptable levels; however such growth will increase traffic congestion and impact on the efficiency of intersections and accesses along the route.

There is however significant spare capacity in Croudace Road within the 12.30 pm to 2.30 pm time period to cater for the development traffic peak during this time. This has been demonstrated by the applicant's traffic consultant through SIDRA modelling which I have checked myself, including for 10 years of traffic growth at 2 % per annum. I have used a traffic departure rate equivalent to the car park capacity when checking this work. There is no doubt that within 10 years unless Council takes action to reduce traffic volumes on Croudace Road or increase its capacity, egress from the site will be difficult and long queues will form at the development access. This will be true for all current and future accesses off Croudace Road.

The applicant has also modelled the road network peak and determined the development will have no impact on Croudace Road due to low traffic generation from the site during this time.

This assessment has been based on a car occupancy rate of 3 persons per car which is the usual rate adopted by Council for Places of Worship as historical surveys of these facilities have supported this assumption. It is agreed that the operation of a Mosque will be different to a Christian church; however the traffic consultant for the applicant has advised that the occupancy rate of 3 persons per car has been confirmed following a single day survey of the operation of the Friday afternoon prayer time at the existing Mosque at Metcalfe Street, Wallsend carried out in September 2010 (for which no data has been provided). It is noted that if this is not the case then the proposed car park will also not be large enough to cater for the numbers of likely attendees identified in the development application documentation.

The DA documentation has also identified that there will be two special events during the year where attendance numbers will be higher than the peak weekday prayer time. The traffic consultant has identified that this will be catered for by a special event traffic management plan; however despite requesting more detail on this the additional advice has not been detailed enough to assess the proposal.'

It is noted that the advice from TPK, received 22 March 2011, provided the following:

> *'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.'*

The details submitted do not satisfactorily demonstrate that the TMP could satisfactorily operate and therefore the 'special event's, as indicated further by the Consultant Engineer's comments below, could be not supported:

'Additional attendees is likely to result in a car parking problem in the area as the car park capacity is reached and exceeded. If this event is to clash with the weekday or weekend peak traffic periods on Croudace Road then these events may have an adverse impact on the local road network. It is likely that strategies would need to be put in place to

encourage higher occupancy rate in vehicles accessing the site e.g. a shuttle bus operating from an off site car park to minimise the impact on the local road network. Temporary no parking signage may also be required to discourage on street parking associated with the event. I think it is important in assessing the application that the applicant demonstrate how they are going to deal with these special events from a traffic perspective and the information so far provided is no enough to satisfy me that this can and will be achieved satisfactorily.

Therefore I can not support the application from a traffic generation perspective until such time as the draft special event traffic management plan is provided for assessment or the approval is issued such that it does not include these special events.

If the approval is limited to the regular daily and weekly events then separate development applications would be required for the special events which would seem to be quite inconvenient for the operators of the mosque. The recommended conditions of consent provided below includes a condition limiting the approval to not include the special events.

Parking

Under Element 4.1 of Council's DCP 2005 the proposal as a place of worship is to provide parking on the basis of surveys carried out on similar or existing establishments with 1 space per 3 seats provided as a guide. The 1 space per 3 seats has been used as the default rate by Council as most surveys carried out to date have confirmed this as an appropriate rate. The applicant's traffic consultant has confirmed the 1 space per 3 persons is appropriate (survey September 2010) and a parking supply of 162 spaces is considered to comply with Council's DCP for an attendance of 486. It is noted the Statement accompanying the DA has indicated a peak attendance at the Friday prayer time of 400 persons therefore the car occupancy rate would have to be lower than 2.4 persons per car for the car park capacity to be exceeded.

On this basis it is considered that sufficient on site car parking has been provided.

Access

The proposal was originally to have a channelized right turn access to the site (CHR) that allowed all traffic movements to and from the site. Council's traffic section has advised that they do not support this proposal due to the lack of width in the carriageway at this location and its proximity to the shopping centre access opposite. As a result the applicant amended the access to a left in and left out option. The two problems I have with this access arrangement are;

1. *Motorists ignoring the access controls and in particular undertaking the right turn into the site. The road carriageway is too narrow to install a physical barrier in the middle of the road and Council's traffic section (traffic committee) who would need to approve any work within the road reserve under the Roads Act 1993 indicated they would not support this either.*
2. *Motorists undertaking dangerous u-turn movements in Croudace Road or at nearby intersections because they are unable to enter or depart in the direction they desire.*

I see no reason to restrict the right turn out movement from the site as delays and queuing will remain within the site. This will alleviate the concerns regarding vehicles heading west from the site. Therefore it is only the vehicles approaching from the east (Lookout Road) where the concerns lie. The regular users of the site are likely to do one of two things;

1. *Adjust their approach routes to ensure they approach from the west. While this is more likely to affect the wider road network there is some chance they will use adjoining residential streets to undertake this adjustment; or*
2. *Undertake a u-turn movement at the adjoining Garsdale Road intersection. First time visitors to the site will most likely undertake this movement.*

Whilst option 1 would be preferred from a traffic management perspective it could result in increased traffic in residential areas. Option 2 is also not considered desirable from a traffic management perspective.

To alleviate these concerns the applicant has proposed signage at the entrance to the mosque directing east approaching traffic to head further west to the Cardiff Road / Croudace Road roundabout to undertake the u-turn movement. Whilst this would be an acceptable traffic management solution actually implementing this is a little more problematic. A relatively high percentage of drivers have a history of ignoring signage particularly when, as is the case in this instance, that the alternate access option is not readily visible. I am not convinced the provision of signage only will be a complete solution to the problem.

I would recommend that if the proposal was to be supported then a site access management plan needs to be implemented of which the entrance signage is only part of the management plan. Other measures that need to be included in the plan includes;

1. *Education and communication strategy to inform the users of the mosque of the safe access routes to the site and the reasons for the site access plan.*
2. *Monitoring strategy to monitor the safe and proper use of the site access.*
3. *Enforcement strategy to ensure the use of the safe site access routes is suitably enforced.*
4. *Review mechanism to ensure the plan and its implementation is regularly reviewed by the operators of the mosque.*

This type of strategy places onus on the mosque operators to ensure their congregation are aware of and complying with the site access management plan. These have typically been used on commercial and industrial sites as well as quarries with heavy vehicle issues and enforcement has been made easier when the drivers are employees of or contractors to the companies.

It is thought that if a roundabout was constructed at the Garsdale Road / Croudace Road intersection the access issues for the site would also be alleviated. Whilst Council is considering this option as a solution to existing traffic problems during the road network peaks no funding has been committed to the project therefore no guarantees on its construction can be made. The applicant has demonstrated traffic from the operation of the mosque only has a minor impact on the operation of this intersection therefore I do not believe a nexus exists for Council to require the construction of the roundabout as part of the development approval for the Mosque.

It is noted that the construction of the proposed access will require that a kerb inlet pit on Croudace Road be altered. It is likely that the existing pit will need to be altered to a junction pit and a new kerb inlet pit connecting to the junction pit be constructed on the eastern side of the driveway.'

Recommendation

On the basis of the information supplied by the applicant over the course of this assessment the proposal can be supported from a traffic perspective with the following conditions of consent.'

Appropriate conditions of consent have been recommended within **Attachment B**.

In response to various specific issues that have been raised, the Consultant Engineer has provided the following comments:

- ***'Traffic Generation***

The assessment used an average vehicle occupancy rate of 3 persons per vehicle for Friday prayers, based on observations of the Wallsend mosque site. This is inconsistent with my inspection of mosques in Sydney, Malaysia, Indonesia and Turkey. In countries where Friday is a normal working day, the congregation is overwhelmingly male and they usually drive to the mosque on their own, not accompanied by an average of two other passengers.

The SEE provides no traffic counts, but refers to observations made at the Wallsend mosque. The latter has no parking area, so the congregation would arrive by walking, having parked elsewhere. No details are given of verifiable count data.

The twelfth speaker at the public meeting presented parking data from Wallsend. This gave the distribution of occupancy rates and concluded that the average occupancy was 1.5 people per vehicle, not 3. Whilst I cannot verify those figures, they are consistent with my own observations of Friday prayers. The implication is that the traffic generation rate used in the SEE could be a half of the true figure. This has implications for traffic impacts, parking and noise.'

Comment:

The applicant's traffic consultant has advised that his traffic generation rates were determined from a manual count carried out by himself on Friday 23rd April 2010. He positioned himself to count all traffic associated with the mosque arriving and parking both on street and within the car park. Car occupancy was only observed and not recorded. Therefore the traffic generation rate used in the assessment was based on existing use of the site. It is noted that a sensitivity analysis was carried out in the response of 22nd March 2011 whereby the traffic generation was doubled; however it is agreed the modelling did not reflect the appropriate traffic data for Croudace Road (2 pm to 2.30 pm) nor did it include future traffic growth.

I also believe doubling the traffic generation results in a total of 280 to 290 vehicles leaving the site which only has 165 on site car parking spaces so is unrealistic for the site. On the basis of the current plans a maximum total of vehicles leaving the site would be in the order of 162 cars. 162 cars at an occupancy rate of 1.5 results in an attendance of around 250 persons.

It is noted that previous surveys of places of worship, the most recent being a Salvation Army congregation, indicated a car occupancy rate of 3 is applicable and as such Council has adopted a default parking rate of 1 space per 3 seats in its DCP for on-site parking requirements.

- *'Traffic Counts*

Friday prayers occur between 1pm and 2pm. The SEE assessed exiting traffic against 1-2pm backgrounds, not the higher 2-3pm values, when most vehicles would be leaving. More significantly, cars were assumed to leave over a full one hour, not the 30 minutes stated elsewhere in the SEE. The impact of doubling the rate of leaving was modelled in one scenario in the letter of the 22nd March, but using a potentially inappropriate background and one not escalated for future traffic.'

Comment:

Agree with comments. I obtained the traffic modelling file from Mr Keating and reviewed it. I can confirm the modelling was carried out for a peak traffic period of 30 minutes and allowed a peak flow factor of 95% which assumes some peaking of traffic arrivals. I also found an error in the modelling being when Mr Keating changed the exit from a left out to a left and right out the critical gap acceptance values for the left turn was adopted by the program for both the left turn and right turn out. The right turn out movement requires a slightly longer gap than the left turn.

I fixed these errors and remodelled the exit for the 2 pm traffic flows with 165 vehicles leaving the site (car park capacity) and the minimum gap acceptance values recommended by Austroads. I found the exit does work satisfactorily. I then modelled the exit for 2021 flows on Croudace Road and found delays of up to 2.5 minutes and queue lengths of 14 to 15 vehicles. There is no doubt that the right turn out movement from the site will be difficult by 2021 and many motorists are likely to choose to switch to the left turn out movement at this time should traffic volumes continue to grow on Croudace Road. However normally, provided the driveway could accommodate queuing of 15 vehicles we would still consider the proposal acceptable.

The problem with basing any decision on this development on 2021 traffic flows is as follows;

- *The traffic growth rate is a guess.*
- *Croudace Road is at a point whereby it is likely to reach capacity within the 10 year time frame and Council is likely to have to consider route strategies to reduce traffic flows on Croudace Road. This could entail such things as additional intersection controls or channelisation to discourage non local traffic using the route or upgrades to alternate routes to divert traffic from Croudace Road to this route.*

- *Traffic Growth*

It was indicated that Council sought details of impacts in 2021 by applying a 2.8%pa growth in existing traffic levels. It is not clear if this took into account the Wallsend bypass proposal, with the resulting reassignment of traffic. However, the letter of the 22nd March used a 2%pa increase. This meant traffic volumes were increased by 21.9%, not 31.8%.'

Comment:

Traffic growth rates are very hard to predict and whilst it is usual to use historic growth rates if available they should be used with caution. In this case after reconsideration it was determined that the historical growth rate of 2.8 % on Croudace Road was not applicable for the following reasons:

a. *The growth rate of 2.8 % per annum is considered a high growth rate for essentially a fully developed area where most new development is only infill development. Growth rates of 1 to 2 % per annum are usual in these areas.*

b. *The historical growth rate of 2.8 % per annum has I believe resulted due to the increased popularity of Croudace Road as an alternate route to Newcastle Road and not as a result of background traffic growth associated with development in the area.*
c. *As Croudace Road becomes more congested the popularity of the route as an alternate route to Newcastle Road is likely to decrease therefore the historical growth rate of 2.8 % per annum is unlikely to be sustained in the near future. As a result a more appropriate growth rate for predicting future traffic flows on Croudace Road is considered to be 2 %.*

Therefore future traffic modelling with 2 % traffic growth is considered satisfactory.

I am not sure what is meant by the Wallsend by-pass. I know of no proposal for a Wallsend by-pass. RTA is currently doing a route assessment for the existing route from the F3 Freeway to Newcastle along the Link Road, Thomas Street and Newcastle Road. The last speaker at the public meeting mentioned this but I am not sure what his point was. The route assessment is to determine required improvements to intersections along this route to increase capacity along the route and reduce likely additional congestion as a result of changed travel patterns from the completion of the F3 Freeway extension to Branxton (Hunter Expressway). Personally I don't think this will have any impact on traffic flows on Croudace Road. If anything if the improvements reduce congestion on Newcastle Road then the popularity of Croudace Road as an alternate route may decrease and traffic flows on the road may be reduced. I would think any change would however be small.

The other known future road network change in the area would be the connection of SH23 at Jesmond to the existing inner city bypass at New Lambton Heights. If a grade separated intersection is provided at Newcastle Road as proposed in the concept plans then traffic congestion on Newcastle Road is again likely to decrease with a likely consequence that traffic volumes on Croudace Road would also decrease.

- *Traffic Counts in Garsdale Avenue*

  No specific counts were given in the SEE for Garsdale Avenue, though the modelling results in Tables MS8 and MS9 Page 9 of the 22nd March sum to the same values as used for the entry assessment (namely 1-2pm and no escalation for future traffic). The modelling did not include any allowance for conflicting movements from the nearby Elermore Vale shopping centre entry.'

Comment:

Council's traffic section provided the manual traffic counts they carried out at the Croudace Road / Garsdale Avenue to Terry Keating for his modelling of the impacts of the development on the operation of this intersection. This modelling clearly shows long delays and queuing already occurs at the intersection and the mosque traffic will only increase delays and queuing slightly.

It is not usual to require traffic impact assessments to model traffic from existing private accesses whether residential, commercial or industrial as generally Council's are only concerned with the impacts on traffic on the public road network for which Council has care and control. That is the reason it has not been asked for on this occasion.

- *Shopping Centre Exit*

No mention or assessment was made of the interaction of the site access with the exit of the Elermore Vale shopping centre. The traffic consultant for the shopping centre gave incomplete traffic counts of 62 right movements and 113 left movements between 1 and 2pm on a Friday. Unfortunately, no data were given between 2 and 2.30pm. However, the entry should have been modelled as an offset four or five way intersection, if the public housing facility adjacent was also included.'

Comment:

As previously mentioned it is not normally required that the operation of existing private accesses be modelled as Council's are only interested in the performance of the public road network. To require such modelling would be in excess of the normal requirements for development assessment.

- *'Sport Fields*

One speaker at the public meeting (Speaker 43) noted the use of sporting grounds at the back of the shopping centre by schools and sporting clubs. From an examination of aerial photographs, there are no separate parking areas for the grounds, suggesting that patrons would park in the shopping centre. These traffic volumes may already be included in the counts referred to above, but this is not clear.'

Comment:

This is not considered relevant to the assessment of the mosque application as the parking deficiency for the sports fields is an existing Council problem and as previously mentioned it is not normal practice for traffic impact studies to model and assess the performance of existing private accesses adjacent to the proposed development. Peak traffic periods for the sports fields are unlikely to coincide with peak traffic for the mosque except perhaps during the twice yearly special events. We are not recommending approval for these special events at this stage until more detailed traffic management plans are produced.

- *'Sensitivity Testing*

The SEE assumes that there will be an equal split between east and west bound traffic entering and leaving the mosque, and that all these movements will be confined to Croudace Road. In the absence of data about workplace location of the congregation, it would have been prudent to undertake sensitivity tests of different directional assumptions.'

Comment:

Again it is not usual to require sensitivity testing of directional split assumptions. It is normal practice for either the consultant to confer with Council officers and agree to a directional split or the consultant to assume a directional split and Council officers to either accept the assumption or request it be changed. On this occasion I accepted the directional split assumed in the traffic report as being reasonable.

- *'Existing Traffic Safety*

The SEE gives no details of the existing traffic safety record of the locality and how that could be affected by the proposal.'

Comment:

It is agreed a deficiency in the traffic report is the failure to determine if a traffic accident history existed in the area. However during the assessment process Council's traffic section advised that they had reviewed the traffic accident history in the vicinity of the site when investigating whether the Garsdale Avenue intersection was eligible for blackspot funding and determined whilst there had been some accidents in the area the accident history and trends did not suggest the existing road environment was unsafe.

- *'Performance of traffic Signals*

  The shopping centre's traffic consultant suggested that traffic signals at the mosque entry/shopping centre exit would ameliorate safety and congestion impacts. This has not been followed up or assessed by the proponent.'

Comment:

Having discussed the option of traffic signals at the mosque entry / shopping centre access with Council's traffic section the proposal would not be supported for the following reasons:

- *The implementation of traffic signals would result in unacceptable increased delays and queuing to through traffic on Croudace Road during both peak and non peak periods. It would also exacerbate existing problems in Garsdale Avenue.*
- *Whilst the signals may improve levels of service for motorists entering and exiting the private developments it will result in a deterioration of levels of service for through traffic on Croudace Road which has significantly higher traffic volumes than either access. Therefore on this basis it is not considered that traffic signals would be of a greater public benefit.*
- *Traffic signals at the entrance to private developments is generally only supported where traffic volumes entering and exiting the developments is on a par with or greater than through traffic and thus a public benefit can be argued. This limits such signals to major traffic generating developments such as very large shopping centres (Westfield Kotara).*

For these reasons Mr Keating was not asked to explore this option.

- *'Special Events*

  It is proposed that special event happening twice per year should be considered via a Traffic Management Plan. However, no details are given of what the plan would contain and how it could be demonstrated to work in practice. That information should form part of the application.'

Comment:

Concur with these comments and have recommended consent be limited to the regular daily and weekly events.'

- *'Can Council confirm whether there were two different roundabouts proposed? Is the roundabout first discussed in 2007 and planned for opposite the*

shopping centre the same roundabout as the one planned some distance further up the road. If they are different, how can the study for the first roundabout count towards the study for the new one?'

Comment:

Council has proposed only one roundabout in this area, at the intersection of Garsdale Avenue and Croudace Road. This proposed roundabout was presented for community consultation during January – February 2011. This roundabout is still at the planning stage and has not been forwarded to Council for final determination.

- *'Can Council install a pedestrian crossing as well as the roundabout. At present the elderly have to walk a distance to cross the road to catch a bus into the city?'*

Comment:

The proposed roundabout is a separate matter to DA 10/1049. Council's Liveable City Group has been investigating methods to address traffic issues at the Garsdale Avenue and Croudace Road area since 2007. The applicants to the development were asked to modify their application to have regard to the intended roundabout.

In August 2010 Council investigated the installation of a pedestrian zebra crossing in Croudace Road east of Garsdale Avenue. The investigation concluded that the provision of a new pedestrian zebra crossing would not meet the requirements for installation as set out in Australian Standard AS 1742.10 [Pedestrian Control and Protection].

- *'When the link road was finished, additional traffic was forced down McCaffrey Drive and it is now a heavy traffic link road. By building this development in a residential area and on a heavy traffic road, more traffic will be forced down McCaffrey Drive and surrounding streets.'*

Comment:

McCaffrey Drive/Croudace Road between Lookout Road and Lake Road is classified as sub-arterial road in the Road Hierarchy Plan. As a sub-arterial road, it is designed to carry a higher volume of traffic. Use of typical local area traffic management devices such as speed humps are not appropriate for this road due to the heavy traffic volume, although roundabouts or traffic signals lights are suitable. The traffic aspects of the above development are part of the assessment process and traffic concerns represent a significant issue in the public submissions.

- *'Croudace Road is an arterial road and main road to the John Hunter hospital. Will hospital emergency response vehicles be delayed? What about fire brigade response times?'*

Comment:

Similar to other roads in Newcastle, emergency response vehicles will have a strategy to deal with congested roads and how to manoeuvre in a safe manner.

- *Proposed vehicle access arrangements would present problems with the proposed refuge island constraining/blocking existing access driveways.*

Comment:

Council agrees with this point and are not supporting the pedestrian refuge proposal.

- *There will be difficulties and potential conflict between vehicles concurrently turning right out of the existing shopping centre access and the proposed Mosque access and that the provision of traffic signals would present an appropriate resolution of this conflict and delays.*

Comment:

Council does not agree with the installation of lights at a private development access is warranted however recognises the right turn out movement from the site will be difficult but no different to the shopping centre access and other accesses on the site. Normal road rules would apply.

- *The traffic assessment prepared for the Development Application should be reconsidered having regard for the traffic volume issues identified in the report.*

Comment:

The traffic modelling has been carried out for the development traffic peak i.e. between 1 and 2 pm which is OK however our assessment is that the network peak also needs to be modelled although traffic from the mosque will be significantly less. This additional modelling has been requested. I don't believe there would be any correlation between the shopping centre trip distribution and the Mosque distribution as the Mosque will have a larger and significantly different catchment. I therefore consider the 50/50 trip distribution adopted in the traffic assessment as appropriate. 2020 modelling (with background traffic growth) has also been requested as well as modelling of the Garsdale Street intersection.

- *There is a strong likelihood that Mosque attendees will choose to park in the shopping centre car park and disadvantage patrons of the centre.*

Comment:

Council has a policy for on-site parking requirements Element 4.1 of NDCP 2005 and on assessment it is considered the proposal complies with this element of the NDCP. I therefore believe lack of on site parking is not an acceptable argument to refuse the application.

- *Traffic flow problems – problems with Garsdale Road intersection movements, access to Elermore Shopping Village and other community facilities in area impossible during use of facility. Use of shopping centre car park by Mosque attendees.*

Comment:

Council also has concerns regarding the Garsdale Street intersection and requested that the traffic assessment be expanded to cover this intersection. Council has plans for a roundabout at the intersection. It is important to note that apart from one particular time during the week, traffic flows from the site are likely to be relatively low therefore the major impact period for the development is small and occurs outside the road network peak period. Thus the statement that access to the EVCC would be impossible is a little exaggerated and it is considered access to these facilities would be no worse than current

conditions during the peak hour periods. Again the development has complied with Council's DCP in regard to on-site parking requirements and provides approximately 162 car spaces on site. I therefore believe lack of on site parking is not a justifiable reason for refusal.

- *Safety concerns – level of congestion, access to shopping centre, congestion at access.*

Comment:

It is important to note the peak traffic generation period of the development does not coincide with the road network peak and this has been identified in the traffic assessment.

- *Local resident access will be impacted on.*

Comment:

Local resident access is already difficult during peak hour periods as the development traffic peak for the development is unlikely to coincide with the road network peak period it is considered local resident access will be no worse than current conditions.

- *Traffic volumes. Errors in traffic volumes entering and exiting site. Proximity to Elermore Vale shopping centre and operation of Garsdale Street intersection.*

Comment:

Council is not supporting current access proposal and requested this be reviewed such that right turn into the site is prohibited and pedestrian refuge removed. It has been demonstrated that the proposal will not have an unreasonable impact on the intersection of Garsdale Avenue / Croudace Road.

Concern was raised in a submission that the submitted proposal resulted in conflict with an existing right of way between 158 and 158a Croudace Road. The original design relocated the existing mid-block access point to the rear end of the battle-ax handle. The neighbouring house at 158 Croudace Road had its existing driveway and parking utilising the access at this mid-block location.

The applicant amended the design so to retain the existing mid-block access point available to the neighbouring property and prevent conflict with the existing right of way access. It is considered that the amended design maintains the existing access and retains the status quo in terms of the right of way and, as such, is considered to be acceptable.

Appropriate conditions of consent have been recommended within **APPENDIX A**.

d) Flooding & Stormwater

The flooding and stormwater aspects have been assessed by Council's Consultant Engineer and are considered satisfactory as detailed below.

The consultant's detailed assessment is as follows:

Flooding

The proposed site is not considered flood prone by Council and as such no flood conditions are required.

Drainage

The application was supported by a drainage design prepared by Northrop Engineers. Under Element 4.5 of NDCP 2005 the development is required to provide 93 m^3 of stormwater retention within their drainage design to ensure post development flows off the site are controlled such that they do not exceed pre development flows. The proposed development includes two rainwater tanks for stormwater harvesting and porous pavements (both acceptable retention solutions) for some of the car parking area to meet this requirement. Overall the stormwater retention measures proposed satisfy Council.

There were a number of issues with the original drainage design submitted that needed to be addressed. These were all suitably dealt within the amended design. The only outstanding issues which are to be addressed by conditions of consent are;

1. Ground levels along the overland flow path through the site in the north western corner are to be such that they do not impede stormwater flow from upstream entering the site.
2. The existing kerb inlet pit on Croudace Road located within the proposed driveway is to be altered such that the grated inlet is on the eastern side of the driveway and not within the driveway; and
3. The proposed overland flow path on the northern side of the driveway is to be relocated such that the driveway itself becomes the overland flow path. Vegetation within an overland flow path restricts its capacity and as the vegetation is required for planning purposes the overland flow path needs to be relocated.

Recommendation

On the basis of the information supplied by the applicant over the course of this assessment the proposal can be supported from a flooding and drainage perspective with the following conditions of consent.'

Appropriate conditions of consent have been recommended within **Attachment B**.

In response to various specific issues that have been raised, the Consultant Engineer has provided the following comments.

- *Stormwater – provision of retention area and removal of permeable paving.*

Comment:- Council has assessed the stormwater management plan and considers it complies with the requirements of NDCP 2005 except that the overland flow paths need to be detailed and information provided proving they can be built and cater for the 100 year overland flows. Some minor rectification work has also been requested to pipeline detailing. Permeable paving is considered an appropriate water sensitive urban stormwater design strategy within Council's DCP therefore requesting its removal from the development is not considered appropriate.

• *The development will be built across a natural easement and the development will result in an increased flow of water. Does the Hunter Water Catchment Committee still meet and exchange information on development applications?*

Comment:

The stormwater aspects of the proposal are being assessed by Council officers. Hunter Water is responsible for the provision of sewer and water services. Council is aware of a Newcastle Catchment Management Forum which is coordinated by the Hunter Central Rivers Catchment Management Authority (NCRCMA) which is a state government body. It is not the role of the NCRCMA to comment on specific development applications.

e) Environmental

The likely environmental impact of the proposal has been assessed by a Senior Environmental Protection Officer of Council and is considered satisfactory subject to the recommended conditions of consent.

The officer's detailed assessment is as follows:

'Noise

Prayer sessions

Prayer sessions at the proposed mosque will be attended by congregations of people five times a day. However, the prayer sessions are attended by a limited number of people (approximately ten to forty people), with the exception of the Jumaa prayer, held each Friday from 1:00pm to 2:00pm, that attracts an attendance of approximately three to four hundred people. Due to the expected number of people attending and participating in the Jumaa prayer this prayer session has the greatest potential to generate noise impacts for surrounding residential dwellings. The Noise Assessment prepared by Spectrum Acoustics dated June 2010 has conducted an assessment of potential noise impacts from the Jumaa prayer utilising noise levels from the same prayer session at an existing mosque at Wallsend. Noise modelling has demonstrated noise from the proposed mosque during the Jumaa prayer is compliant with the daytime project specific noise criteria at the nearest residential receivers, 158 Croudace Road and 4 Andretta Avenue, in accordance with the Department of Environment and Climate Change's (DECC) 'Industrial Noise Policy'. The noise modelling was conducted with a 2.1m high acoustic fence constructed on the boundary of the proposed development. However, a portion of the fence, to the north of the proposed Iman's house, was removed on the design plans at the request of the Urban Design Consultative Group. Council was concerned the removal of a portion of the acoustic fence would result in the mitigation qualities of the fence being affected. The Noise Assessment Addendum prepared by Spectrum Acoustics dated 21 March 2011 has undertaken further modelling with the section of acoustic fence removed. The additional noise modelling has demonstrated the noise from the proposed mosque during the Jumaa prayer remains compliant with the daytime project specific noise criteria. The number of people in attendance for the Jumaa prayer is similar to the two large 'one off' events held each year, Eidul Fitr and Eidul Adha. Therefore, these two events would result in similar noise levels to the assessed scenario and would be compliant with the daytime project specific noise criteria.

The use of the Jumaa prayer session in the noise model represents a worst-case scenario due to the number of people in attendance. Therefore, due to compliance with the project specific noise criteria by the Jumaa prayer session, the remaining prayer sessions will also comply as they involve a significantly lower number of people.

Courtyard

People congregating in the courtyard area prior to, and after, prayer sessions may be a potential source of adverse noise for surrounding residential dwellings. The Noise Assessment prepared by Spectrum Acoustics dated June 2010 has conducted an assessment of noise from people in the courtyard utilising a noise level from fifty people speaking at the same time. The noise modelling has demonstrated the noise from people in the courtyard area will be compliant will the project specific noise criteria at the nearest residential receivers located along Andretta Avenue. Compliance with the project specific noise criteria is subject to the construction of a 2.1m high acoustic fence on the property boundary.

The Noise Assessment prepared by Spectrum Acoustics dated June 2010 notes no amplified sound equipment will be used in the courtyard area to call people to prayer. A restriction on the use of amplified sound equipment in the proposed courtyard area and other outdoor areas will be addressed by an appropriate condition of consent.

Library and hall

The proposed library and hall building will be utilised for a number of activities including religious lectures, counselling services, weddings, funerals, and indoor sports. The most significant potential noise source from these activities is indoor sports. The Noise Assessment prepared by Spectrum Acoustics dated June 2010 has conducted an assessment of potential noise from indoor sporting activities and demonstrated compliance with the day and evening project specific noise criteria.

Council raised concern regarding the proposed religious lectures and weddings requiring amplified sound to address the number of people in attendance. The Noise Assessment Addendum prepared by Spectrum Acoustics dated 21 March 2011 notes no amplified sound will be required in the proposed hall. A restriction on the use of amplified sound equipment in the proposed hall will be addressed by an appropriate condition of consent.

The letter prepared by deWitt Consulting dated 22 March 2011 and the Noise Assessment Addendum prepared by Spectrum Acoustics dated 21 March 2011 confirm the proposed hall will not be operated after 9:00pm daily. The restriction of the use of the proposed hall between 7:00am and 9:00pm will be addressed by an appropriate condition of consent.

Mechanical plant

Air conditioning plant will be required for the proposed mosque and library/hall building. The air conditioning plant is located in plant rooms associated with the individual buildings. However, the Noise Assessment prepared by Spectrum Acoustics dated June 2010 has undertaken an analysis of the potential noise impacts from the air-conditioning plant on surrounding residential receivers. The Noise Assessment prepared by Spectrum Acoustics dated June 2010 has demonstrated noise from the proposed air conditioning plant will be compliant with

the project specific noise criteria in accordance with the DECC's 'Industrial Noise Policy'.

Carpark

The proposed development includes the construction of a two level carparking area. The movement of vehicles within this carparking area, especially within the second level area, has the potential to generate adverse noise impacts for surrounding residential dwellings, particularly the two-storey dwellings located at 166 Croudace Road. The Noise Assessment prepared by Spectrum Acoustics dated June 2010 and Noise Assessment Addendum prepared by Spectrum Acoustics dated 21 March 2011 has undertaken a noise modelling scenario where 75% of car parking spaces will be manoeuvred into within a fifteen minute period. The noise modelling scenario simulates potential vehicle movements prior to the Jumaa prayer session and represents a worst-case scenario for vehicle movements within the proposed carparking area. The noise modelling has demonstrated noise from vehicles in the proposed carparking area will be compliant with the daytime project specific noise criteria provided 2.1m high acoustic fences are constructed along the boundary of the property. However, a potential 3dB(A) exceedance of the daytime project specific noise criteria was noted at the property boundary of the two-storey dwellings at 166 Croudace Road. However, the walls of the dwellings at 166 Croudace Road facing the proposed development are located close to the property boundary and contain small windows. Therefore, the design of the dwellings located at 166 Croudace Road will attenuate the potential noise exceedance and internal noise levels within these dwellings will not be impacted upon by the proposed development.

The use of a worst-case scenario, using the highest number of vehicles, for modelling of potential noise impacts from vehicles within the carparking area would ensure compliance with the project specific noise criteria for all other prayers or events held at the proposed development. However, Council raised concern regarding the parking of vehicles along the fence line near the property at 158 Croudace Road during the early morning prayer session (Fajr prayer). The Noise Assessment Addendum prepared by Spectrum Acoustics dated 4 February 2011 has undertaken an analysis of noise from vehicles parking in the carparking spaces marked 103-116 on the Lower Ground Plan prepared by Dardiry and Doroch Architectural Services dated 18 February 2011. The Noise Assessment Addendum prepared by Spectrum Acoustics dated 4 February 2011 has recommended that vehicles not park in these spaces prior to 7:00am. The restriction on the usage of these carparking spaces prior to 7:00am may be addressed by an appropriate condition of consent.

Council raised concern regarding noise from the use of the second level carpark during the evening and night time hours. The Noise Assessment Addendum prepared by Spectrum Acoustics dated 21 March 2011 notes the use of the second level carpark should be restricted to the daytime period only. Council agrees with this recommendation and an appropriate traffic management device should be installed to prevent access to the second level carpark during the evening and night time hours. The requirement for installation of a device to prevent vehicle access or egress to the second level carpark during the evening and night time period may be addressed by an appropriate condition of consent.

The Noise Assessment prepared by Spectrum Acoustics dated June 2010 has utilised the same worst-case scenario as noted above in acoustic modelling of potential noise impacts of the use of the driveway on the adjoining properties at 158 and 160 Croudace Road. The noise model for the driveway scenario has

demonstrated compliance with the project specific noise criteria and sleep disturbance criteria at the nearest residential dwellings. Noise modelling was conducted with a 2.1m high acoustic fence along both sides of the proposed driveway and these acoustic mitigation measures will be required to be implemented.

Traffic

The Noise Assessment prepared by Spectrum Acoustics dated June 2010 has undertaken an analysis of potential traffic noise impacts from the proposed development on the surrounding neighbourhood. The traffic noise analysis has assessed the potential traffic noise impacts on Croudace Road only, a collector road, as all vehicles will arrive and depart via this road The noise model has demonstrated that traffic noise associated with the proposed development will not exceed the road traffic noise criteria for residential areas in accordance with the DECC's 'Environmental Criteria for Road Traffic Noise'.

Construction

Noise from construction activities has the potential to generate adverse noise impacts for surrounding residential dwellings. The Noise Assessment prepared by Spectrum Acoustics dated June 2010 has undertaken a quantitative assessment of construction noise and identified construction noise has the potential to impact upon neighbouring dwellings. Measures will be undertaken to reduce noise from construction activities in accordance with the DECC's 'Interim Construction Noise Guidelines'. These measures should be outlined in a noise management strategy within an overall construction environmental management plan (EMP). The requirement for preparation of a noise management strategy within a construction EMP may be addressed by an appropriate condition of consent.

A restriction regarding pile driving at the proposed development site is appropriate to prevent adverse noise or vibration impacts. Restriction of the use of pile driving may be addressed by an appropriate condition of consent.

Construction activities will be limited to the daytime period only, 7:00am to 6:00pm Monday to Friday and 8:00am to 1:00pm Saturdays. These hours of construction are in accordance with the DECC's 'Interim Construction Noise Guidelines'. The restriction of the hours of construction may be addressed by an appropriate condition of consent.

Community notification of the proposed demolition and construction should be undertaken prior to commencement of works to ensure surrounding properties are aware of the upcoming works. The community notification should identify forthcoming works that are likely to produce noise impacts and provide contact details for the purpose of receiving any complaints from members of the public in relation to activities conducted on-site. The community notification strategy should be documented in the construction EMP and undertaken prior to works commencing. The requirement for preparation of a community notification strategy may be addressed by an appropriate condition of consent.

It must be noted that all acoustic modelling has been conducted with a 2.1m high acoustic fence located around the perimeter of the property, with the exception of the northern corner of the site. Due to the acoustic modelling being conducted with this acoustic mitigation measure in place the fence will be required to be constructed as part of the proposed development. The Noise Assessment Addendum prepared by

Spectrum Acoustics dated 4 February 2011 recommends the acoustic fencing be constructed prior to the commencement of ground works to aid in mitigation of construction noise. Council agrees with this recommendation and will require the acoustic fencing around the perimeter of the site be constructed prior to significant construction. This requirement will be addressed by an appropriate condition of consent.'

In response to various specific issues that have been raised, the Senior Environmental Protection Officer has provided the following comments.

- *'Driveway Noise*

  The SEE considered noise impacts on the nearest residence from the driveway access, including use of a 2.1m fence along both sides of the driveway. However, it did not include the reduced effectiveness of the barriers due to reverberation between the two fences.

Comment:

The Noise Assessment prepared by Spectrum Acoustics dated June 2010 has undertaken an analysis of potential noise impacts from vehicles utilising the proposed driveway access. This analysis has included a 2.1m high acoustic fence on either side of the proposed driveway for noise mitigation purposes. The construction of the two acoustic fences may potentially result in some noise reflection, dependant on the adsorption of the proposed barriers. However, landscaping will be undertaken within the driveway corridor and will contribute to reduction in potential indirect sound. Discussion with Spectrum Acoustics revealed the sound insertion loss presented by the proposed acoustic fences did not account for potential reflection, but potential reflection would be reduced by the proposed landscaping. It must be noted that the Noise Assessment prepared by Spectrum Acoustics dated June 2010 has demonstrated noise from vehicles, during a worst-case scenario of 125 vehicles utilising the driveway during a fifteen minute period, will result in received noise levels at the nearest residential receiver 3dB(A) below the daytime project specific noise criteria. The adsorption properties of the proposed acoustic fences and landscaping would need to be significantly reduced by indirect sound to result in an exceedance of the project specific noise criteria.

- *Car Park Noise*

  Noise impacts of the car park were considered at two residences, as shown in Appendix 111 of the noise report. Both these residences front Croudace Road. However, given the elevational and spatial complexity of the scenario, why wasn't a proper 3D model such as ENM used? From the site inspection, some residences in Andretta Avenue would have line of sight exposure to the car park over the top of a 2.1m barrier fence. If the assessment assumed the acoustic efficiency of this barrier without considering the three dimensional aspect, this would under-estimate noise impacts. A 3D model would also have given the opportunity to properly model the shielding effects of buildings parallel to Andretta Avenue.

Comment:

The North-east Elevation and Sectional Elevation prepared by Dardiry and Doroch Architectural Services dated 18 February 2011 show the lower level car parking area is unlikely to have line-of-sight to the residential dwellings located along Andretta Avenue. The upper level car park area may have potential line-of-sight for some residential dwellings. This line-of-sight will be between the proposed buildings on-site. However, the upper storey of the two-storey residential dwellings located at 166 Croudace Road have direct line-of-sight and are located in closer proximity to the upper level carparking area then the dwellings in Andretta Avenue. An assessment of the potential noise impacts from the upper level carparking area on the nearest residential dwelling, 166 Croudace Road, was conducted in the Noise Assessment Addendum prepared by Spectrum Acoustics dated 21 March 2011 and concluded the noise levels would not adversely impact upon this residential receiver. The dwellings located at 166 Croudace Road, due to closer proximity and direct line-of-sight, have a higher potential to be impacted upon by noise from the carparking area then the dwellings located along Andretta Avenue. Therefore, these dwellings, as the nearest affected receiver in accordance with the DECC's 'Industrial Noise Policy', were utilised for assessment of noise impacts from the carparking area.

A three-dimensional noise model may have been utilised in the noise assessment process for the carparking area, but Council considers the analysis undertaken sufficient to assess the potential noise impacts. If three-dimensional modelling is required then the applicant's acoustic consultant may potentially undertake the modelling at the panel's request.

- *Road Traffic Noise*

  The reference to CORTN criteria for traffic noise was 60 Leq (1 hr). Could it be checked that the criteria refer to the total traffic noise level, not just from the development? The current AADT of Croudace Road is about 18,600 VPD, suggesting that existing levels would already be quite high.

Comment:

The traffic noise criteria of 60dB(A)$_{(1hr)}$ for the day period is for total traffic noise and is derived from the recommended criteria outlined in the DECC's ''Environmental Criteria for Road Traffic Noise'.

- *Intrusiveness Criteria on Sundays and Public Holidays*

  A speaker at the public meeting referred to a difference in applicable times between day and night time criteria of RBL + 5dBA, suggesting that the Sunday night time criteria should apply to some early morning activities. Could this be checked?

Comment:

The DECC's ''Industrial Noise Policy' defines a project specific noise criteria for the day (7:00am to 6:00pm), evening (6:00pm to 10:00pm) and night time period (10:00pm to 7:00pm). The project specific noise criteria do not differentiate between days of the week. The night time period project specific noise criteria has been utilised for the assessment of early morning activities.'

'Funeral ceremony room

The letter prepared by deWitt Consulting dated 22 March 2011 notes body preparation of the deceased will be conducted off-site and the transport of any deceased body to the proposed funeral ceremony room will be conducted by a funeral director. The deceased body will be transported within a coffin. The letter prepared by deWitt Consulting dated 22 March 2011 and subsequent information provided by the applicant note activities conducted within the proposed funeral ceremony room are confined to prayers and the placement of cloth over the coffin. The deceased body will not be removed from the coffin within the proposed funeral ceremony room. Therefore, the proposed funeral ceremony room is not considered a mortuary as defined by the Public Health (Disposal of Bodies) Regulation 2002 (NSW). However, an appropriate condition of consent will restrict the use of the proposed funeral ceremony room as a mortuary or body preparation room as defined by the Public Health (Disposal of Bodies) Regulation 2002 (NSW).

Contamination

The Preliminary Contamination Assessment prepared by Coffey Environments Pty Ltd dated 9 June 2010 has undertaken a search of historical uses of the proposed development site. The search revealed the proposed development site has been used for agricultural and residential purposes. The Preliminary Contamination Assessment prepared by Coffey Environments Pty Ltd conducted limited soil sampling which revealed natural soil profiles. The soil samples were tested for contaminants, including organochlorine pesticides, but no elevated levels of contaminants were found. Fragments of asbestos were observed near a shed on-site and it was noted that potential asbestos containing materials may be present on-site. The potential asbestos containing material fragment was tested and the presence of asbestos in the fragment was confirmed. However, no asbestos fibres were identified within the soil samples. The presence of asbestos containing materials does not significantly alter the contamination status of the proposed development site, but these products will require removal. The removal of hazardous materials as part of the proposed development will be addressed in the demolition section. Due to the absence of elevated levels of contaminants Council considers the land is suitable for the proposed development.

Demolition

The Preliminary Contamination Assessment prepared by Coffey Environments Pty Ltd dated 9 June 2010 identified asbestos containing materials at the proposed development site. Therefore, a comprehensive hazardous materials survey should be conducted prior to demolition. The requirement for a comprehensive hazardous materials survey, and preparation of a hazardous materials management plan, will be addressed by an appropriate condition of consent.

Ecology

The Arborist Report prepared by Abacus Tree Services notes the proposed development involves the removal of approximately one hundred and eighty trees on the proposed development site. Many of the trees are relatively mature and potentially provide habitat for local fauna. The Ecology Report prepared by Hunter Eco dated January 2011 has undertaken an assessment of the vegetation at the site and noted the vegetation is primarily not endemic to the local area. The vegetation at the site appears to have been planted by the previous landowner and does not represent a known natural vegetation community. Surveying at the site revealed the

site was utilised by common urban avifauna species such as Laughing Kookaburra (Dacelo novaeguineae) and Eastern Rosella (Platycercus eximius) an arboreal mammals such as Common Ringtail Possum (Pseudocheirus peregrinus). However, the survey effort undertaken revealed no endangered or vulnerable species of flora or fauna are present on-site.

The Ecology Report prepared by Hunter Eco has undertaken an impact assessment (Seven-Part Test) of the proposed development on endangered and vulnerable species listed under the Threatened Species Conservation Act 1995 (NSW) that are known to inhabit the surrounding area. These species include insectivorous bats such as the eastern bentwing-bat (Miniopterus schreibersii oceanensis) and the squirrel glider (Petaurus norfolcensis). While the proposed development site may potentially provide foraging resources the lack of understorey vegetation and absence of hollow-bearing tress reduces the habitat value for these species. Furthermore, the vegetation lacks adequate connectivity to surrounding vegetation due to residential development. The Ecology Report prepared by Hunter Eco has concluded the proposed development will result in no significant impact upon threatened flora and fauna.

The proposed development includes the clearing of semi-mature to mature trees on-site. These trees provide habitat for endemic avifauna and mammals. To ensure the safety and protection of these species a suitable qualified ecologist will be required to be present on-site to supervise the tree felling. The requirement for an ecologist to on-site to inspect the trees for fauna prior to felling will be addressed by an appropriate consent conditions.'

Headlight Glare

Concerns were raised in relation to headlight glare impacts within submissions.

An assessment of the proposed driveway position relative to the surrounding development was undertaken and it is considered that the likely impact is reasonable. The relative separation distance is over 25 metres to the nearest potentially affected dwelling and it is considered that the impacts would be reasonable.

Lighting impacts

The applicant has submitted Lux diagrams showing the extent of lighting impacts generated from the car park lighting. Generally, the lighting impacts are acceptable with relatively low lux levels falling within the rearmost portions of adjoining residential yards. The impacts on part of the adjoining urban housing development to the south east are considered to be unsatisfactory. Conditions of consent have been recommended ensuring that the car park lighting comply with AS4282 – 1997 Control of Obtrusive Effects of Outdoor Lighting.

Overall the proposed development is considered to be satisfactory subject to conditions of consent which address the various issues raised by the Compliance Services Unit (as recommended within **APPENDIX A**).

f) Crime Prevention Through Environmental Design

The NSW Police Force have rated the risk for the site as low and indicate that many elements of the design are conducive to good security. It is concluded that:

'..the proposed development of the Mosque has the potential to positively contribute to the area. The Crime Risk Rating is LOW, the site plan and crime data suggest that there are no major pre-existing crime problems in the area and the proposed plans for the site are likely to increase activity, promote surveillance and provide good sightlines into and through the public space.'

The application has been assessed by the NSW Police Force in relation to security and crime prevention and is considered to be acceptable subject to conditions of consent recommended within **APPENDIX A** regarding site security (ie CCTV and monitored alarm systems).

g) Social & Economic

The proposed development would not have any adverse economic impacts in the locality being a *place of worship* and it is not a commercial enterprise. Concerns regarding potential economic impacts have been raised in submissions due to possible traffic conflict issues with the development. The traffic impacts of the development are addressed elsewhere within the report.

The social impacts of the proposal were assessed by Council's Senior Strategist and their comments are attached to **APPENDIX C**. Generally the assessment indicates that the proposed development will have positive social impacts for the Muslim community and that the proposal is generally acceptable in terms of social impacts.

The proposed development would not be likely to have any unreasonable social or economic impacts in the locality.

h) Building Issues

The proposal has been assessed by Council's Senior Development Officer (Building) and their comments are attached at **APPENDIX C**. The applicant has addressed the issues raised as outlined below:

'These Building Code of Australia issues have been addressed in the amended architectural drawings in Appendix 2. In any event, these are matters that can be addressed in the design detail phase of preparing the Construction Certificate documentation and can be incorporated as conditions of any consent granted. In summary:

1. 1 x 1 metre wide fire exits have been added to the lower ground level.
2. All fire doors have been revised to comply with the BCA minimum fire exit width.
3. A fire exit has been added to the community hall and all doors to the community hall and adjacent rooms are to be 1 metre minimum width.
4. A fire exit door has been added to reduce the travel distance within the library and study rooms. A fire exit has also been added through the office administration area.
5. The door widths of required exits from the library community hall and adjoining rooms have been adjusted accordingly.
6. The distance of travel to a required exit within the car park will be addressed through further measures in accordance with BCA consultant recommendations at the Construction Certificate stage.
7. The ramps have been designed to comply with AS1428.1 regarding maximum distances to landings.'

It is considered that the proposal is generally acceptable in terms of building matters. The applicant is entitled to resolve compliance with the Building Code of Australia (BCA) at the Construction Certificate stage. It is not envisioned that compliance with the BCA will result in significant design changes.

(c) the suitability of the site for development

The site is within a Mine Subsidence District and the Board has assessed the proposal and have issued their General Terms of Approval subject to conditions of consent as attached at **APPENDIX C.**

The site is not subject to any other known risk or hazard that would render it unsuitable for the proposed development.

(d) any submissions made in accordance with this Act or the Regulations

Reference is made to the summary of issues in Section 3. Consultation of this report. This assessment report has addressed the various concerns raised in the submissions received in response to the Public Notification with the exception of:

- Concern that the nature, size and scale of the proposed place of worship is out of character with the existing residential neighbourhood and would be in a more appropriate alternative locations such as Lake Road, at the Newcastle University or the inner city area of Newcastle.

Comment: The character aspects of the development are addressed within the previous sections of this report. Additionally, Council is required to assess the proposal submitted regardless of the merits of alternative locations.

- If the development application is approved who will take responsibility for reduced land and property prices?

Comment: This is not a matter for consideration as part of the determination of the application.

- Concern that the development has not been assessed properly having regard to Section 89 of the LGA.

Comment: Section 89 of the *Local Government Act 1993* relates to approval of activities under section 68 of the *Local Government Act 1993* and does not apply in this instance. The development is required to be considered under clause 79C of the Environmental Planning and Assessment Act 1979, which includes the matters raised.

- Is there going to be an entry to the mosque via Cambronne Parade and an exit via McCaffrey Road? Concern that Elermore Parade will be extended through the 'bush' to John Hunter Hospital *'..to accommodate the traffic flow problem caused by the Mosque development.'*

Comment: The proposed access is only via Croudace Road.

- Concern that the *'…height of the towers will affect the flight path of the rescue helicopter..".*

Comment: Having regard to the maximum height of the proposed buildings it is not considered that the development will have impact on the flight path of the rescue helicopter.

- **Bus Stop –** Concern that the bus stop will be moved further away from the shopping centre.

Comment: The application as modified does not propose to relocate the bus stop.

- **Toilet Facilities –** *'Are sufficient toilet facilities available for the estimated 400 people of Fridays, 450 other events…'*

Comment: The proposal is required to comply with provisions of the Building Code of Australia in terms of the provision of toilets.

- **Emergency Planning –** Concern that the development, relying on a single access, has no emergency planning proposed (ie in event of a disaster).

Comment: The site is not subject to Bush Fire Prone Lands or flooding. The application has been assessed having regard to access for emergency services and is considered to be acceptable. The development will be required to meet the Building Code of Australia in terms of on-site fire hydrant provision at the Construction Certificate stage, if approved.

(e) the public interest

- **Sustainability**

The proposed development is considered to be satisfactory having regard to the principles of ecologically sustainable development.

The proposed development would not result in the disturbance of any endangered flora or fauna habitat or otherwise adversely impact on the natural environment.

- **General**

In relation to the imposition of Section 94A contributions, it is advised that according to Council's Section 94A Development Contributions Plan 2009 – Section 4.2 *Other Development Exempted from the Levy, 'places of worship'* are exempt from the levy.

The proposed development does not raise any significant general public interest issues beyond matters already addressed in this report.

6. Conclusion

Subject to various conditions, the proposal is acceptable against the relevant considerations under section 79C.

7. Recommendation

That the Joint Regional Planning Panel grant consent to DA 10/1049, subject to the conditions contained in **APPENDIX A**.

APPENDIX A - Conditions of Consent

A General Conditions

A1 The proposed development being carried out strictly in accordance with the following plans and documentation:

- amended plans received 21 February 2011 by Dardiry & Doroch Architectural Services (Proj No: 20090106 Dwg No: A-010 Iss A2, A-011 Iss A2, A-012 Iss A2, A-013 Iss A2, A-015 Iss A2, A-020 Iss A2, A-021 Iss A2, A-022 Iss A2, A-023 Iss A2, A-024 Iss A2, A-025 Iss A2, A-28 Iss A2, A-28 Iss A2, A-29 Iss A2, A-30 Iss A2 & A-31 Iss A2),
- the Statement of Environmental Effects,
- in accordance with the Traffic Reports by TPK submitted with the original application, 21 February 2001 and 22 March 2011,
- the acoustic reports by Spectrum Acoustics submitted with the original application, 21 February 2001 and 22 March 2011,
- the plans dated 18/02/11 prepared by Northrop Engineers Job No. NL100012 Drawing No.s C00 DA, C01 DA, C02 DA Issue C,
- the landscape report and amended plans by Moir Architecture dated 18 February 2011 (Proj No: 0605 Sheet 2 of 2 Issue F and including the landscape/privacy screen with associated planter box sectional details),
- the Waste Management Plan prepared by Hale Development Services,
- in the Applicant's written submissions dated 18 February 2011, and
- on the Application form,

except as otherwise provided by the conditions of this consent.

Note: Any proposal to modify the terms or conditions of this consent whilst still maintaining substantially the same development to that approved, will require the submission of a formal application for Council's consideration in accordance with the provisions of Section 96 of the Environmental Planning and Assessment Act, 1979.

Reason: To confirm and clarify the terms of Council's approval.

A2 This consent being limited only to the daily and weekly services proposed within Section 4.6.2 of the Statement of Environmental Effects (SEE) as prepared by deWitt Consulting dated August 2010. Any proposed use of the premises in respect of the twice yearly larger events described in the SEE or any other events for which more than 400 people will be on site will require the prior development consent of Newcastle City Council under the provisions of the Environmental Planning & Assessment, Act, 1979. In this regard, it will be necessary to submit a separate development application to Council for consideration.

Note: The abovementioned development application is to be supported by an Event Traffic Management Plan prepared by a suitably qualified and experienced traffic officer which includes details of, but not limited to, the following: -

- management strategies and practices for traffic and parking both on and off site, and
- plans of any proposed temporary measures such as signposting/delineation to be used during the event(s).

Reason: To confirm and clarify the terms of this approval, to protect the likely and future amenity of the neighbourhood and to ensure the use of the premises does not intensify with the prior consent of Council.

B Conditions which must be satisfied prior to the demolition of any building or Construction

B1 The tree protection zones (TPZ) and structural root zones (SRZ) being setout on site, under the supervision of a qualified arborist as recommended within the arborist report by Abacus Tree Service, prior to any works, demolition or activity onsite.

Reason: To ensure that adequate protection is maintained for the trees to be retained on site.

B2 Prior to the commencement of works, the developer providing written notification to the adjoining landowners of the intention to start works, advising details of the scheduling of works and nominating a contact person. A legible prominent sign stating the name of the developer and contractor and a 24 hour contact telephone number is to also be displayed on-site during the construction period.

Reason: To minimise inconvenience to neighbouring residents during construction activities.

B3 Prior to any site works commencing, the Developer preparing a Construction Management Plan (CMP) such to be designed and implemented to manage all environmental aspects associated with the construction works, including off site impacts such as transport to and from the site. Two copies of the CMP are to be provided to both the Principal Certifying Authority and the Road Authority and the CMP is to be maintained on site during all site works and be made available to Authorised Officers upon request. The CMP is to include but not be limited to:

a) A traffic and access management strategy addressing and managing all traffic impacts associated with the works and is to address the impact of the works on the safety and traffic function of Croudace Road.

b) A site management strategy, identifying and addressing issues such as environmental health and safety, site security, and traffic management.

c) A soil and water management strategy, detailing erosion and sediment control, management of soil stockpiles, control and management of surface water and groundwater. Procedures should be included to ensure that all roads adjacent to the site are kept free and clear from mud and sediment.

d) A dust management strategy, detailing procedures to minimise dust generation, with particular reference to control techniques and operational limits under adverse meteorological conditions.

e) A waste minimisation strategy that aims to avoid production of waste and maximise reuse, recycling or reprocessing of potential waste material.

f) A community relations plan that aims to inform local residents and other local stakeholders of the proposed nature and timeframes for construction activities together with contact details for site management.

g) A noise management and vibration strategy detailing measures to minimise the impact of the construction phase on the amenity of the locality in accordance with Australian Standard *AS 2436. 1981 Guide to Noise control on Construction, Maintenance and Demolition Sites*. Noise and vibration monitoring during the construction phase should be incorporated into the program.

Reason: To prevent environmental pollution and to ensure compliance with relevant provisions of the Protection of the Environment Operations Act 1997.

C Conditions which must be satisfied prior to the issue of any construction certificate

C1 All existing trees to be retained as part of the proposed development being adequately protected against damage during the building construction period in accordance with the requirements of the arborist report prepared by Abacus Tree Service. Full details of the tree protection zones (TPZ) and structural root zones (SRZ) being included in the documentation for a Construction Certificate application.

Reason: To ensure that adequate protection is maintained for the trees to be retained on site.

C2 All proposed planting and landscape elements indicated on the amended landscape concept plan by Moir Architecture dated 18 February 2011 (Proj No: 0605 Sheet 2 of 2 Issue F and including the landscape/privacy screen with associated planter box sectional details) or otherwise required under the conditions of this consent being implemented and a comprehensive landscape design plan and specification in respect thereof being prepared by a qualified landscape designer and being submitted with a Construction Certificate application.

Note: i) The required comprehensive landscape design plan and specifications is to be in accordance with the provisions of Council's adopted Newcastle Development Control Plan, 2005 and is to include cross sections through the site where appropriate, proposed contours or spot levels, botanical names, quantities and container size of all proposed trees, shrubs and ground cover, details of proposed soil preparation, mulching and staking as well as treatment of external surfaces and retaining walls where proposed, drainage, location of taps and the nominated maintenance periods. Refer to attached checklist.

ii) A Landscape Practical Completion Report is required to be submitted to the Principal Certifying Authority by the consultant responsible for the landscape design plan prior to the issue of any Occupation Certificate or occupation of the premises or any portion of the premises that is the subject of this consent. The report is to verify that all landscape works have been carried out in accordance with the approved landscape design plan to a high professional standard and that an effective maintenance program has been commenced.

Reason: To ensure that adequate and appropriate provision is made for landscaping of the site in association with the proposed development, to enhance the external appearance of the premises and to contribute to the overall landscape quality of the locality.

C3 A comprehensive landscape design plan and specification for the proposed plantings in the Cambronne Parade Reserve being prepared by a qualified landscape designer in consultation with Council's Coordinator - Landscape Architectural Services and

Recreation Projects Coordinator. Such plan is to address the planting of as many as is practical, in Council's opinion, of the required 143 compensatory trees within the Reserve. The remaining compensatory trees to be planted are to be addressed as street tree plantings as conditioned below. The comprehensive landscape plan is to be submitted and approved by Council, with written evidence that the approval has been provided by Council, prior to the issue of the required Construction Certificate.

Reason: To ensure that adequate compensatory trees are planted within the local neighbourhood.

C4 The outstanding compensatory street tree planting being undertaken within the streets of the local neighbourhood such that the total trees planted within the Cambronne Parade Reserve plus the street tree plantings equate to 143 trees being planted. A comprehensive landscape design plan and specification for these works being prepared by a qualified landscape designer in consultation with Council's Coordinator - Landscape Architectural Services. The comprehensive landscape plan is to be submitted and approved by Council, with written evidence that the approval has been provided by Council, prior to the issue of the required Construction Certificate.

Reason: To ensure that adequate compensatory trees are planted within the local neighbourhood.

C5 The Developer being responsible for maintaining the compensatory trees required by Condition C3 and C4 for a minimum of 52 weeks from written acceptance of the Practical Completion Report by Council's Landscape Architect's and the Developer shall be solely responsible for the complete replacement of any removed, diseased, damaged or vandalised tree for up to three occasions during the specified maintenance period.

In this regard a cash bond or bank guarantee in an amount equivalent to 100% of the total contract value of landscaping and associated maintenance, of the compensatory street tree planting and associated maintenance, or an alternative lesser amount as may by agreed to by Council and the amount is to be paid prior to the issue of any Construction Certificate.

Reason: To ensure the establishment and ongoing viability of all proposed landscaping works without cost to public sector resources.

C6 All street trees must be planted in accordance with the Newcastle City Council Standard Tree Planting Detail, full details to be included in the required Construction Certificate.

Reason: To ensure that Council's planting standards are met.

C7 The applicant complying with all requirements of the Hunter Water Corporation Ltd regarding the connection of water supply and sewerage services, including the payment of any required cash contribution towards necessary amplification of service mains in the locality as a result of the increased intensity of land use proposed. A copy of the Corporation's certificate of compliance is to be included in documentation for a Construction Certificate application.

Reason: To ensure that water supply and sewerage services are properly connected to the proposed development in the public interest.

C8 All areas not provided with natural ventilation in accordance with the provisions of the Building Code of Australia being provided with an adequate mechanical ventilation system

complying with Australian Standard 1668, Parts 1 and 2 "The use of mechanical ventilation and air conditioning in buildings". Full details are to be included in the documentation for a Construction Certificate application.

Reason: To ensure the provision of adequate ventilation in the interest of public health and safety.

C9 The building being provided with adequate means of access for persons with disabilities in order to comply with the Building Code of Australia and the Disability Discrimination Act 1992.

In this regard, the applicant is to submit a design detail which has been certified by a qualified Access Advisor* with the application for a Construction Certificate.

Note: i) Compliance with the Building Code of Australia only can still leave a building professional or building owner in contravention of the Disability Discrimination Act 1992.

ii) * A qualified Access Advisor is a current member of -
Association of Consultants in Access Aust Inc
326 Autumn Street, HERNE HILL, VIC. 3218.
Ph (03) 5221 2820
www.access.asn.au

iii) A qualified Access Advisor should carry current and relevant public liability and public indemnity insurances for the practice of their trade.

Reason: To ensure compliance with the provision of the Environmental Planning and Assessment Act, 1979 and the Building Code of Australia and the Disability Discrimination Act 1992 in relation to the provision of equity in access for disabled persons.

C10 A CCTV security and monitored alarm system with associated security signage being incorporated within the design which provides surveillance across the site concentrating on main points of access. Full details to be included with the required Construction Certificate application;

Reason: To minimise potential crime and security impacts.

C11 All external doors being designed to comply with Australian Standard: Lock Sets AS 4145, full details to be included with the required Construction Certificate application;

Reason: To minimise potential crime and security impacts.

C12 The design and construction of the proposed kitchen and food preparation areas being in accordance with the relevant requirements of the Australian Standard *AS 4674-2004 Design, construction and fit-out of food premises* dated 11 February 2004. Full details to be submitted with the required Construction Certificate application.

Reason: To ensure safe and suitable food for human consumption under the provisions of the Food Act 2003 and Food Regulations 2004.

C13 Commercial type vehicular crossing being constructed across the public footway at the proposed driveway entrance/exit at no cost to Council and in accordance with Council's A17 Series (Concrete Vehicular Crossings) design specifications and such crossing

being properly maintained. The access crossing is to be designed as a left turn in only with left and right turn exit movements through the use of a raised median within the crossing that prohibits the right turn in movement. Full details to be included in the documentation for a Construction Certificate application.

Note: i) A separate approval from the Road Authority (Council) must be obtained for all works within the public road reserve pursuant to Section 138 of the Roads Act 1993.

ii) The Developer is advised to confer with Council's Senior Development Officer (Engineering) on telephone number (02) 4974 2637 to ascertain Council's detailed requirements in this regard prior to a Construction Certificate being issued for any on site works.

Reason: To ensure the provision of adequate clearly defined and properly constructed means of all-weather vehicular access to the site in order to encourage the use of on-site parking facilities and in the interest of maximising vehicular and pedestrian safety and convenience.

C14 On-site parking accommodation being provided for a minimum of 162 cars inclusive of 9 disabled spaces as well as 8 bicycles and 8 motor cycles. Such being set out generally in accordance with the minimum parking layout standards indicated within Element 4.1 of Council's Newcastle 2005 DCP and Australian Standards AS2890.1-2004 "Parking Facilities – Part 1 off street car parking". Full details are to be included in documentation for a Construction Certificate application.

Reason: To ensure the provision of adequate on-site parking facilities commensurate with the demand likely to be generated by the proposed development.

C15 All proposed driveways, parking bays and vehicular turning areas being constructed with a basecourse of adequate depth to suit design traffic, being sealed with either bitumen seal, asphaltic concrete, concrete or interlocking pavers and being properly maintained. Full details are to be included in documentation for a Construction Certificate application.

Reason: To facilitate the use of vehicular access and parking facilities and to minimise any associated noise and dust nuisance.

C16 Kerbing or dwarf walls having a minimum height of 100 mm being constructed along the edge of all garden or lawn areas adjacent to driveways and parking bays sufficient to discourage the encroachment of vehicles thereon. Full details are to be included in documentation for a Construction Certificate application.

Reason: To assist in confining vehicular movement to constructed driveways and parking areas and protect site landscaping works against vehicular damage.

C17 Landscaping and any other obstructions to visibility should be kept clear of or limited in height to 1.2 m in the 2.5 metre by 2 metre splay within the property boundary each side of the driveway entrance; Full details to be included in documentation for a Construction Certificate application.

Reason: To ensure adequate sight distance to traffic on the frontage road and sight distance to pedestrians on the frontage road footway.

C18 Roof water from the proposed new work being directed to the proposed water tank and being reticulated therefrom to any new toilet cisterns and cold water laundry and washing machine taps, with a mains water top up being installed to maintain between 10% and 15% of the tank capacity. Alternatively, an electronically activated mechanical valve device is to be installed to switch any new toilet cisterns and laundry taps to mains water when the tank falls below 10% capacity. The water tank and plumbing is to be installed in accordance with AS 3500, the relevant plumbing regulations and the requirements of the Hunter Water Corporation, full details to be included in documentation for a Construction Certificate application.

***Reason*:** To help ensure minimal water consumption in the interest of water conservation and principles of sustainability.

C19 Overflows from the roof water tanks and any additional discharge controls (if required) being directed to Council's drainage system by means of an inter-allotment drainage line or underground pipe directly to the street gutter. Full details to be included in documentation for a Construction Certificate application.

Reason: To ensure stormwater overflow is appropriately controlled and does not cause public nuisance or nuisance to neighbouring properties.

C20 The water management measures as indicated on the submitted plans and Statement of Environmental Effects and/or modified under the terms of this consent being implemented and the nominated fixtures and appliances being installed and operational prior to issue of an Occupation Certificate. Full details to be included in documentation for a Construction Certificate application.

***Reason**:* To ensure Council's requirements for water management are complied with in the interest of water conservation and principles of sustainability.

C21 All new impervious surfaces, including driveways and paved areas being drained to the nominated discharge controls. Full details to be included in documentation for a Construction Certificate application.

***Reason**:* To ensure that surface water from impervious areas is appropriately managed in accordance with Council's requirements for stormwater management.

C22 Any proposed floodlighting of the premises being so positioned, directed and shielded as to not interfere with traffic safety or detract from the amenity of the adjacent premises. Full details to be included in documentation for a Construction Certificate application.

***Reason**:* To ensure that the proposal does not interfere with traffic safety and to protect the existing amenity of the neighbourhood.

C23. Appropriate arrangements being made for the on-site collection of waste (recyclable and non-recyclable) from the development and such arrangements being in place prior to the

occupation of the premises the subject of this development application. In this regard a refuse storage area is to be incorporated into the development with full details to be provided prior to issue of a Construction Certificate.

Reason: To ensure suitable garbage removal arrangements are provided in association with the proposed development in the interest of public safety.

C24. Wheel stops being provided along the front of parking spaces adjacent to pedestrian pathways in accordance with AS 2890.1 Parking. Full details are to be included in documentation for a Construction Certificate application.

Reason: To ensure safe and convenient use of on-site parking and to minimise vehicular and pedestrian conflict.

C25. A pavement design report for the construction of the internal access driveway and carpark is to be prepared and certified by a practising geotechnical engineer, and such being included in documentation for a Construction Certificate application.

Reason*:* To ensure the future integrity of the internal road network and carpark of the development.

C26. All external ramps and pathways within the site required to be accessible for persons with disabilities being designed and constructed in accordance with AS.1428 – Design for Access and Mobility. Kerb ramps are to be provided adjacent to disabled parking bays allowing access to these pathways. Full details are to be included in documentation for a Construction Certificate application.

Reason: To ensure appropriate disabled persons access is provided for this development in accordance with the appropriate standards.

C27 Prior to issue of a Construction Certificate, the Developer preparing a Site Access Management Plan (SAMP) such to be designed and implemented to safely manage all traffic movements to and from the site during the operation of the development. Two copies of the SAMP are to be provided to both the Principal Certifying Authority and the Road Authority and the SAMP is to be maintained on site during the life of the development. The SAMP is to include but not be limited to:

a) Strategies to communicate to the regular users / congregation of the development, the safe vehicular access movements to and from the site including the use of the Cardiff Road roundabout for u-turn movements for vehicles approaching the site from the east.

b) Proposed on-site signposting in regard to vehicular access particularly the discouragement of illegal right turn movements into the site from Croudace Road.

c) Strategies to monitor the effectiveness of the SAMP.

d) Strategies to enforce the requirements of the SAMP.

e) Mechanisms to review the SAMP regularly.

Reason: To clarify the terms of Council's consent and ensure that risks associated with the use of the proposed vehicular access are minimised.

C28 The stormwater plan proposed by Northrop Engineers (Job No. NL100012 Drawing No.'s C00 DA, C01 DA, C02 DA Issue C), being amended to satisfactorily address the following requirements :

i) The existing kerb inlet pit on Croudace Road located within the proposed driveway is to be altered such that the grated inlet is on the eastern side of the driveway and not within the driveway (convert existing pit to a junction pit and construct new kerb inlet pit beside the proposed driveway); and
ii) The proposed overland flow path on the western side of the driveway is to be relocated such that the driveway itself becomes the overland flow path.

Full details to be included in the documentation for a Construction Certificate application.

Reason: To confirm and clarify the terms of Council's consent and ensure that proper management of proposal's stormwater.

C29 Prior to the commencement of any excavation or work an acoustic fence being constructed along the perimeter of the proposed development site. The fence is be a lapped and capped timber fence or materials with similar acoustic properties, to a height of 2100mm, and maintained such that no significant gaps exist in the fence. Full details to be included in the documentation for a Construction Certificate application.

Reason: To ensure that appropriate noise control measures are implemented and the amenity of the area is protected.

D Conditions which must be satisfied prior to the commencement of any development work

D.1 All trees to be planted within the street and within the Cambronne Parade Reserve are to comply with the NATSPEC criteria, especially with regard to tree balance, root and stem structure, written evidence of compliance to NATSPEC to be submitted to Council prior to delivery to site. This may be in the form of a report and or checklist and should include photos.

Reason: To ensure that street trees will be planted at an appropriate standard.

D.2 Written evidence from the plant supplier confirming that the correct variety of trees to be planted within the street and within the Cambronne Parade Reserve is to be submitted to Council prior to delivery to site.

Note: Contact Landscape Architectural Services, Phone No: 49 742690

Reason: To ensure that appropriate street trees will be planted.

D.3 Council's Landscape Architect being notified a minimum 3 days prior to any above tree planting operations in the public realm, including i) proposed tree locations to be marked and ii) tree pit holes prepared for inspection, so that the positioning and tree planting can be properly supervised.

Reason: To confirm and clarify the terms of consent and ensure that proper installation and supervision of public assets is achieved.

D.4 Compliance with the requirements of the Hunter Water Corporation in respect of any building or structure proposed to be erected over any services or stormwater drain under the Corporation's control.

Reason: To protect the Corporation's infrastructure from site development works.

D5 No work within the existing or proposed public road reserve being commenced until the Road Authority's (Council) separate approval under Section 138 of the Roads Act 1993 has been obtained. A fee will be payable in this regard.

Note: The public road reserve includes both the carriageway and the footway.

Reason: To ensure that any work within the public road reserve is carried out in accordance with Council's requirements and under Council supervision.

D6 Prior to the commencement of any excavation or work an acoustic fence being constructed along the perimeter of the proposed development site. The fence is be a lapped and capped timber fence or materials with similar acoustic properties, to a height of 2100mm, and maintained such that no significant gaps exist in the fence.

Reason: To ensure that appropriate noise control measures are implemented and the amenity of the area is protected.

D7 A dilapidation survey being conducted by a suitably qualified consultant of surrounding buildings considered to be at risk of property damage from site works, as determined by said consultant, prior to and following the proposed construction works.

Reason: To confirm the terms of consent and allow assessment of vibration impacts on neighbouring properties if required.

D8 A temporary protective crossing being provided over the footway for vehicular traffic before building operations are commenced. This approval does not permit access to the property over any adjacent private or public land.

Reason: To ensure public safety and protection of public assets.

E Conditions which must be satisfied during any development work

E1 All construction and excavation works in the vicinity of the tree protection zones (TPZ) and structural root zones (SRZ) are to be undertaken with the supervision of a qualified arborist and in accordance with the recommendations of the arborist report by Abacus Tree Service.

Reason: To ensure that adequate protection is maintained for the trees to be retained on site.

E2 Under no circumstances is impact/hammer pile driving to be carried out on site.

Reason: To confirm the terms of consent and minimise the noise and vibration impacts on neighbouring premises.

E3 Any material to be removed from the site being assessed, classified, transported and disposed of in accordance with the Department of Environment and Climate Change's (DECC) '*Waste Classification Guidelines Part 1: Classifying Waste'*.

Reason: To prevent environmental pollution and to ensure observance of appropriate health standards.

E4 Any fill material imported into the site being Virgin Excavated Natural Material or material subject to a Resource Recovery Exemption that is permitted to be used as a fill material, in accordance with the provisions of the *Protection of the Environment Operations Act 1997* and the *Protection of the Environment (Waste) Regulation 2005*.

Reason: To ensure that any imported fill is of an acceptable standard for environmental protection purposes.

E5 Any fill material subject to a Resource Recovery Exemption received at the site must be accompanied by documentation demonstrating that material's compliance with the conditions of the exemption, and this documentation must be provided to Council officers or the Principal Certifying Authority on request.

Reason: To ensure that any imported fill is of an acceptable standard for environmental protection purposes.

E6 A suitably qualified ecologist to be on-site during tree clearing to manage the identification, management and protection of flora and in particular, fauna, which are located on the site.

Reason: To prevent environmental pollution and harm to flora/fauna.

E7 Continuous monitoring of peak vibration levels being conducted at properties considered to be potentially impacted by vibration due to site works as determined by a suitably qualified consultant. The results of vibration monitoring are to be provided to Authorised Council Officers upon request.

Reason: To confirm the terms of consent, allow assessment of vibration impacts on neighbouring properties and ensure compliance with the relevant assessment criteria.

E8 Appropriate erosion protection and soil stabilisation measures being designed and implemented during site works in accordance with the requirements of the *Managing Urban Stormwater: Soils and Construction 4th Edition - Vol. 1* (the "Blue Book") published by Landcom, 2004.

Reason: To control soil erosion and prevent sedimentation of surrounding lands.

E9 Any necessary alterations to public utility installations being at the Developer/Demolisher's expense and to the requirements of both Council and the appropriate authorities.

Reason: To ensure that any required alterations to public utility infrastructure are undertaken to acceptable standards and without demands on public sector resources.

E10 Any alteration to natural surface levels on the site being undertaken in such a manner as to ensure that no surface water is drained onto or impounded on adjoining properties.

Reason: To ensure that any such proposed works do not disrupt existing natural stormwater flows in the vicinity.

E11 Where the proposed development involves the destruction or disturbance of any existing survey monuments, those monuments affected being relocated at no cost to Council by a surveyor registered under the Surveyor's Act.

Reason: To ensure that existing permanent survey marks which may be affected by the development are appropriately reinstated.

F Conditions which must be satisfied prior to any occupation or use of the building

F1 A Landscape Practical Completion Report is to be submitted to the Principal Certifying Authority prior to the issue of an Occupation Certificate;

Reason: To ensure that landscape works are carried out in accordance with the approval.

F2 A CCTV security and monitored alarm system with associated security signage being installed prior to the release of any Occupation Certificate and/or occupation of any building;

Reason: To minimise potential crime and security impacts.

F3 Appropriate acoustic treatment being implemented in accordance with the recommendations set out in the report prepared by Spectrum Acoustics dated June 2010 and the Noise Assessment Addendums dated 4 February 2011 and 21 March 2011.

Note: Written certification from the said consultant confirming that the recommended acoustic treatment has been implemented in accordance with the requirements is to be submitted to the Principal Certifying Authority prior to the commencement of any noise generating activity within the premises.

Reason: To ensure that appropriate noise control measures are implemented.

F4 Under no circumstances are vehicles to be parked within the car parking spaces marked 103-116 on the Lower Ground Plan prepared by Dardiry and Doroch Architectural Services dated 18 February 2011 between the hours of 10:00pm and 7:00am daily. Prior to the issue of a Occupation Certificate signage shall be installed near these car spaces to advise of parking time restrictions.

Reason: To confirm the terms of consent and to protect the amenity of the neighbourhood.

F5 Use of the second level car park by any vehicle being restricted by the installation of a suitable traffic management device between the hours of 6.00pm to 7:00am daily. Full details are to be included in documentation for a Construction Certificate application and the devices being installed prior to the release of the Occupation Certificate.

Reason: To prevent access to the second level car park during the evening and night time periods and protect the amenity of the neighbourhood.

F6 Commercial type vehicular crossing being constructed across the public footway at the proposed driveway entrance/exit at no cost to Council and in accordance with Council's A17 Series (Concrete Vehicular Crossings) design specifications and such crossing being properly maintained. The access crossing is to be designed as a left turn in only with left and right turn exit movements through the use of a raised median within the crossing that prohibits the right turn in movement. All works to be completed prior to the issue of any Occupation Certificate and/or occupation of premises.

Reason: To ensure the provision of adequate clearly defined and properly constructed means of all-weather vehicular access to the site in order to encourage the use of on-site parking facilities and in the interest of maximising vehicular and pedestrian safety and convenience.

F7 Any redundant existing vehicular crossings being removed at no cost to Council and the public footway and kerb being restored to match the existing infrastructure prior to the issue of any Occupation Certificate and/or occupation of any premises.

Reason: To clarify site access arrangements in the interest of traffic and pedestrian safety, as well as road efficiency, to maximise kerbside parking opportunity and to ensure that reinstatement work is undertaken to an appropriate standard.

F8 The water management measures as indicated on the submitted plans and Statement of Environmental Effects and/or modified under the terms of this consent being implemented and the nominated fixtures and appliances being installed and operational prior to issue of an Occupation Certificate. Full details to be provided with the Construction Certificate application.

Reason: To ensure Councils requirements for water management are complied with in the interest of water conservation and principles of sustainability.

F9 The proposed parking bays being clearly indicated by means of signs and/or pavement markings prior to the issue of any Occupation Certificate and/or occupation of any premises.

Reason: To encourage the use of the proposed on-site car parking facilities and thereby minimise kerbside parking in the adjacent public road as a result of the proposed development.

F10 The vehicular entrance and exit driveways and the direction of traffic movement within the site being clearly indicated by means of reflectorised signs and pavement markings prior to the issue of any Occupation Certificate and/or occupation of any premises.

Reason: To ensure that clear direction is provided to the drivers of vehicles entering and leaving the premises in order to facilitate the orderly and efficient use of

on-site parking spaces / facilities and driveway access and in the interest of traffic safety and convenience.

F11 All public footways, footpaving, kerbs, gutters and road pavement damaged during the works being immediately repaired following the damage, to a satisfactory state that provides for safe use by pedestrians and vehicles. Full restoration of the damage is to be carried out to Council's satisfaction prior to the issue of any occupation certificate in respect of the development.

Reason: To ensure that safe conditions are maintained on the site during construction and that the required restoration is undertaken to acceptable standards, without demand on public sector resources.

F12 Construction of the required site discharge control devices being supervised and certified upon completion by a Consultant Engineer or Registered Surveyor with respect to its compliance with the approved design plans. The certification is to be supported by a Works-as-Executed (WAE) plan of the property drainage and detention system, which is to be submitted to Council by the Principal Certifying Authority/Applicant prior to the issue of an Occupation Certificate or occupation of the premises.

Reason: To ensure that proposed drainage infrastructure is satisfactorily constructed.

F13. Appropriate arrangements being made for the on-site collection of waste (recyclable and non-recyclable) from the development and such arrangements being in place prior to the issue of any Occupation Certificate and/or occupation of the premises the subject of this development application.

Reason: To ensure suitable garbage removal arrangements are provided in association with the proposed development in the interest of public safety.

F14 Written certification from a Practicing Geotechnical Engineer that the internal access driveway and carpark has been constructed in accordance with the geotechnical requirements is to be submitted to the Principal Certifying Authority prior to the occupation of the premise.

Reason: To ensure the future integrity of the internal access driveway and carpark of the development.

F15 Appropriate lighting being provided for the car park and pedestrian pathways in accordance with AS 1158 - Lighting and AS 4282 - Control of the Obtrusive Effects of Outdoor Lighting, such being installed prior to the occupation of the portion of the premise the subject of this application.

Reason: To ensure that adequate and appropriate lighting facilities are provided for the proposed development.

F16. The developer being responsible for the provision of additional regulatory signage and all adjustments to and/or relocation of existing regulatory signage necessary as part of this development in accordance with the Newcastle City Traffic Committee requirements,

such works to be completed prior to the occupation of the buildings the subject of this development application.

(Note: Alterations to regulatory signage and kerbside parking will need to be referred to the Newcastle City Traffic Committee for approval).

Reason: To ensure that public road facilities are upgraded to an appropriate standard having regard to the additional traffic movement and pedestrian activity likely to be generated by the proposed development.

F17 Plans of any proposed traffic management devices, linemarking and signposting works on existing or proposed public roads being submitted to Council and approved by the Newcastle City Traffic Committee prior to the issue of any Occupation Certificate and/or occupation of the premises.

Reason*:* To ensure all regulatory traffic control measures are undertaken to the requirements of the Road Authority.

Reason: To ensure compliance with the requirements of the Environmental Planning and Assessment Act 1979.

G Conditions which must be satisfied prior to the issue of any Subdivision Certificate

G1 Submission to the Principal Certifying Authority of a Subdivision Certificate Application accompanied by the appropriate fees as required by the Principal Certifying Authority. The application is to be supported by a survey plan of subdivision, seven copies thereof and a Section 50 Certificate from the Hunter Water Corporation.

G2 Written evidence of arrangements being made with the Hunter Water Corporation for the provision of water supply and sewerage and with Energy Australia for the provision of overhead or underground electricity supply being submitted to the Principal Certifying Authority prior to the issue of the Subdivision Certificate.

Reason: To ensure that adequate facilities are available in respect of servicing of the land in compliance with the requirements of the above mentioned authorities in a manner which does not detract from the appearance of the proposed development.

H Conditions which must be satisfied during the ongoing use of the development

H1 All compensatory trees to be planted within the Cambronne Parade Reserve or the street must meet NATSPEC criteria - Refer to *Specifying Trees, a guide to assessment of tree quality*, by Ross Clark. All trees and surrounds must be installed by a qualified Landscape Contractor/ horticulturalist. All trees must be maintained for a minimum of 52 weeks from written acceptance of the Practical Completion Report by Council's Landscape Architect's. All costs for these works are to be borne by the applicant. These works are to be completed prior to the issue of any Occupation Certificate and/or occupation of any buildings.

Note: All landscape works are to be implemented by a member of the Landscape Contractors Association of NSW and /or similar qualified contractors as per

councils DCP 2005 Element 4.4 Landscaping. The following documentation will be required prior to the commencement of works in the public realm:
- Certification of Trees to Natspec specification
- OH&S requirements
- Risk Assessment
- Public Liability
- Public Utilities locations

Reason: To ensure that the landscape character of the area is re-established via the planting of compensatory trees.

H2 Where any compensatory tree is found to be faulty, damaged, dying or dead before the completion of the 52 week maintenance period, they shall be replaced with the same species and at the same size specified above and all replacement costs for these works are to be borne by the applicant.

Reason: To ensure that the compensatory trees are appropriately established.

H3 The Developer being responsible for maintaining the compensatory trees required by Condition C3 and C4 for a minimum of 52 weeks from written acceptance of the Practical Completion Report by Council's Landscape Architect's and the Developer shall be solely responsible for the complete replacement of any removed, diseased, damaged or vandalised tree for up to three occasions during the specified maintenance period.

(Note: i) A further two inspections of the landscaping will be undertaken by Council officers in accordance with the terms of this consent.

ii) Any defects or maintenance requirements identified by Council officers are to be rectified by the developer prior to Council's acceptance of maintenance responsibility and the release of the bond.

iii) In the event that the developer fails to rectify defects notified by Council within one month of notification, or undertake adequate maintenance, Council may elect to call on all or part of the bond to effect the required rectification works or maintenance.)

Reason: To ensure the establishment and ongoing viability of all proposed landscaping works without cost to public sector resources.

H4 A Landscape Establishment Report is to be submitted to the Principal Certifying Authority following completion of a 52 week maintenance period, verifying that satisfactory maintenance of the landscape works has been undertaken and any necessary rectification measures have been carried out to a high professional standard.

Reason: To ensure that the landscape works are conserved and properly maintained in accordance with approved plans so as to improve the appearance of the premises and the visual quality of the locality.

H5 The use and occupation of the premises including all plant and equipment installed thereon, not giving rise to any "offensive noise", as defined under the Protection of the Environment Operations Act, 1997, as amended.

Note: Should Council consider that offensive noise has emanated from the premises, the owner/occupier of the premises will be required to submit an acoustic consultant's report recommending appropriate acoustic measures necessary to ensure future compliance with this condition and will be required to implement such measures within a nominated period. Furthermore, written certification from the said consultant confirming that the recommended acoustic measures have been satisfactorily implemented will be required to be submitted to Council before the expiration of the nominated period.

Reason: To ensure that appropriate noise control measures are implemented if required.

H6 Any liquid wastes from the premises, other than stormwater being discharged to the sewers of the Hunter Water Corporation in accordance with that authority's requirements.

Reason: To prevent environmental pollution and to ensure observance of appropriate public health standards.

H7 Adequate facilities being provided in an appropriately screened location within the premises for the separate storage of recyclable and non-recyclable material, and arrangements being made for regular removal and disposal of same.

Reason: To prevent environmental pollution and reduce the amount of waste being disposed to landfill.

H8 Construction/demolition work that generates noise that is audible at residential premises being restricted to the following times:

- Monday to Friday, 7:00 am to 6:00 pm;
- Saturday, 8:00 am to 1:00 pm;

With no noise from construction/demolition work to be generated on Sundays or Public Holidays.

Reason: To prevent 'offensive noise' from construction/demolition sites in order to safeguard the amenity of the neighbourhood

H9 Council's "PREVENT POLLUTION" sign being erected and maintained in a conspicuous location on or adjacent to the property boundary so that it is clearly visible to the public or at other locations on the site as otherwise directed by Council for the duration of construction work.

Note: Council's PREVENT POLLUTION sign can be obtained by presenting your development application receipt at Council's Customer Enquiry Counter at 282 King Street Newcastle or at the Master Builders Association office.

Reason: To increase industry and community awareness of developer's obligations to prevent pollution and to assist in ensuring compliance with the statutory provisions of the Protection of the Environment Operations Act 1997.

H10 A Hazardous Substances Audit being carried out on the building/s or parts of the building proposed to be demolished, in accordance with Australian Standard AS2601: 2001 - The Demolition of Structures, and a copy of the Audit Report and any associated Hazardous Substances Management Plan being provided to Council and the licensed demolition contractor and/or principal contractor prior to commencement of work. The nature and location of each hazard identified and the proposed measures for controlling and/or removing the hazards are to be indicated in the Plan and such measures are to be implemented in accordance with the provisions of the Plan. The required Plan is to be kept on site and made available to authorised Council officers upon request.

Reason: To ensure that no work takes place involving the removal or handling of hazardous substances including asbestos material, other than in accordance with appropriate public health guidelines.

H11 The licensed demolition contractor and/or principal contractor complying with the following specific requirements in respect of the proposed demolition works:

a) Demolition work is not to be undertaken until:

i) Council has been provided with a copy of any required Hazardous Substances Management Plan;

ii) The licensed demolition contractor and/or principal contractor has inspected the site and is satisfied that all measures are in place to comply with the provisions of such Plan;

b) The removal, handling and disposal of any asbestos material is to be undertaken only by an asbestos removal contractor who holds the appropriate class of Asbestos Licence, issued by WorkCover NSW, and in accordance with the requirements of WorkCover NSW and the National Occupational Health and Safety Commission's Code of Practice for the Safe Removal of Asbestos, 2nd Edition [NOHSC: 2002 (2005)] and Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC: 2018 (2005)];

c) All asbestos and other hazardous materials are to be appropriately contained and disposed of at a facility holding the appropriate license issued by the NSW Department of Environment and Conservation;

d) Seven working days notice in writing is to be given to Council prior to the commencement of any demolition works. Such written notice is to include the date demolition will commence and details of the name, address, contact telephone number and licence details (type of licences held and licence numbers) of any asbestos removal contractor and demolition contractor;

e) Seven working days notice in writing is to be given to owners and occupiers of all neighbouring premises prior to demolition, such notice to include the date demolition will commence and details of the name, address, contact telephone number and licence details (type of licences held and licence numbers) of any asbestos removal contractor and demolition contractor, Newcastle City Council's contact telephone number (49742000) and WorkCover NSW telephone number (49212900); and

f) On sites where buildings to be demolished contain asbestos materials, a standard commercially manufactured sign containing the words "DANGER ASBESTOS

REMOVAL IN PROGRESS" measuring not less than 400mm x 300mm is to be erected in a prominent position to the satisfaction of Council prior to demolition work commencing and is to remain in place until such time as all asbestos material has been removed from the site to an approved waste facility.

Note: Demolition, in relation to a building, work, archaeological site, relic or place means the damaging, defacing, destruction, pulling down or removal of that building, work, archaeological site, relic or place in whole or in part.)

Reason: To ensure in the public interest that:

i) No work takes place involving the removal or handling of hazardous substances including asbestos material, other than in accordance with appropriate public health guidelines;

ii) Council has all necessary information to effectively monitor demolition works and is aware of the contact details of the contractor should it need to follow up on complaints;

iii) Neighbouring residents are provided with adequate prior notice of proposed demolition work, as well as a convenient avenue for liaising with the demolition contractor and the appropriate regulatory authorities in the event of an incident occurring on site; and

iv) Appropriate warning signs are in place regarding the conduct of a hazardous operation on site.

H12 Building demolition being planned and carried out in accordance with Australian Standard AS 2601 - 2001 The Demolition of Structures.

Reason: To minimise the risk of injury or damage to property as a result of the proposed demolition.

H13 Any building waste containers used in association with the proposed demolition being located on the site where possible.

Note: Where this is not feasible, application must be made for Council's approval to position the container on the adjacent public road in accordance with Council's adopted Building Waste Container Policy.

Reason: To ensure that such containers are so positioned as to not endanger pedestrian or vehicular traffic movement.

H14 All demolition material incapable of being reused in restoration works being removed from the site and the site being cleared and levelled.

Note: Where reusable building materials are to be stored on site for use in future building works, such materials are to be neatly stacked at least 150 mm above the ground.

Reason: To safeguard the amenity of the neighbourhood and ensure compliance with appropriate public health and hygiene standards.

H16 The owner/demolisher ensuring that all demolition material is kept clear of the public footway and carriageway as well as adjoining premises.

Reason: To ensure that the proposed demolition is undertaken in a manner that does not intrude upon adjacent public or private property.

H17 Any demolition/waste building materials being disposed of at Council's Summerhill Waste Management Facility or other approved site.

Reason: To prevent indiscriminate dumping or use of demolition/waste building material for purposes of unauthorised land fill.

H18 Under no circumstances is sound amplification equipment or speakers to be installed or operated in any outdoor area.

Reason: To minimise the potential for noise nuisance and to protect the existing amenity of the neighbourhood.

H19 Under no circumstances is sound amplification equipment or speakers to be installed or operated in the proposed hall building.

Reason: To minimise the potential for noise nuisance and to protect the existing amenity of the neighbourhood.

H20 The hours of operation of the proposed hall and library building being restricted to between 7:00am and 9:00pm daily.

Reason: To confirm the terms of consent and to protect the amenity of the neighbourhood.

H21 Under no circumstances is the proposed funeral ceremony room to be used or operated as a mortuary or body preparation room as defined by the *Public Health (Disposal of Bodies) Regulation 2002*.

Reason: To confirm the terms of consent and to protect public health.

H22 All vehicular movement to and from the site being in a forward direction.

Reason: To ensure that the proposed development does not give rise to vehicle reversing movements on or off the public road with consequent traffic accident potential and reduction in road efficiency.

H23 Any proposed floodlighting of the premises being so positioned, directed, shielded and maintained as to not interfere with traffic safety or detract from the amenity of the adjacent premises.

***Reason**:* To ensure that the proposal does not interfere with traffic safety and to protect the existing amenity of the neighbourhood.

H24. Proposed parking areas, driveways, vehicular ramps and turning areas being maintained clear of obstruction and being used exclusively for purposes of car parking and vehicle access, respectively. Under no circumstances are such areas to be used for the storage of goods or waste materials.

***Reason**:* To ensure the proposed/required parking, facilities and associated driveways are able to function efficiently for their intended purpose and are not otherwise used in a manner which detracts from the overall appearance of the development.

I Other Agency Conditions

I1 Working drawings and specifications of the proposed building being submitted to the NSW Mine Subsidence Board for approval in accordance with the General Terms of Approval issued by the Board on 29 September 2010 prior to an application for a Construction Certificate and compliance with any requirements of the Board.

Reason: To ensure that structural stability of the proposed development having regard to underground mine workings.

J Advisory Notes

J1 Prior to commencing any construction works, the following provisions of the Environmental Planning and Assessment Act 1979 (the 'Act') are to be complied with:

a) A Construction Certificate is to be obtained in accordance with Section 81A(2)(a) of the Act.

b) A Principal Certifying Authority is to be appointed and Council is to be notified of the appointment in accordance with Section 81A(2)(b) of the Act and form 7 of schedule 1 to the Regulations.

c) Council is to be given at least two days notice of the date intended for commencement of building works, in accordance with Section 81A(2)(c) of the Act and Form 7 of Schedule 1 to the Regulations.

Reason: To advise of matters to be resolved prior to the commencement of work.

J2 A Construction Certificate application for this project is to include a list of fire safety measures proposed to be installed in the building and/or on the land and include a separate list of any fire safety measures that already exist at the premises. The lists must describe the extent, capability and basis of design of each of the measures.

Reason: To advise of information that must accompany an application for a Construction Certificate for the project.

J3 Prior to the occupation of a new building, or, occupation or use of an altered portion of, or an extension to an existing building, an Occupation Certificate is to be obtained from the Principal Certifying Authority appointed for the proposed development. An application for an Occupation Certificate must contain the information set out in Clause 155 of the Environmental Planning and Assessment Regulations.

Reason: To ensure compliance with Section 109M of the Environmental Planning and Assessment Act 1979, as amended.

J4 A copy of the final Fire Safety Certificate (together with a copy of the current fire safety schedule) is to be given to the Commissioner of NSW Fire Brigades and a further copy of the Certificate (together with a copy of the current fire safety schedule) is to be prominently displayed in the building.

Reason: To ensure compliance with Clause 172 of the Environmental Planning and Assessment Regulation 2000.

APPENDIX B – Plans and Elevations

APPENDIX C – Referral Comments

Comments from External Agencies

Agency	Comments
Mine Subsidence Board	

Comments from Internal Departments

Department	Comments
Council Environmental Protection Officer	
Council Engineering Officer	
Council's Urban Design Consultative Group	
Council Building Officer	
Council Senior Strategist	