

Submission on the Environmental Impact Statement for Newcastle Inner City Bypass Rankin Park to Jesmond Section Project.

From Grant and Jill Fraser: Residents and Business Owners of 'Home Occupation' Business, teaching and recording music studio that is 'Permitted without consent' in Zone R2 under Newcastle Local Environment Plan 2012.

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EIS SECTION 8 Traffic and transport

EIS SECTION 8.3 Assessment of potential impacts

Issue description:

The EIS states the following:

“No on-street parking would be available on Lookout Road between McCaffrey Drive and Grandview Road on both sides of Lookout Road” EIS (p281)

“Any vehicles would be required to park within the property, or in other nearby streets such as Grandview Road.” EIS (p426)

“The existing informal on-street parking arrangements in the shoulder of Lookout Road in front of the music business would no longer be available due to road widening in this area.” EIS (p426)

Response/suggested solutions:

Commercial business (music studio):

The argument that parking will be lost because of road widening is a spurious one. The shoulder during operation will be at least as wide if not wider than is at present. There will be just as much room to park on the shoulder during operation as there is now.

The removal of this on-street parking has a negative impact for our students.

There is no continuous footpath from the northern corner of Grandview and Lookout Road. Pedestrians who wish to walk in a westerly direction along Grandview Road from this corner have to physically walk on the road. They have to do this into oncoming traffic that has limited vision due to the crest of the hill. (Please also see pages 28 to 36 of this submission)

Parking in “nearby” streets is challenging for our elderly students or students with brain injuries who have walking difficulties. Students carrying musical equipment will find “nearby” is not so close. The removal of parking will have a detrimental effect on our business. Our business will be much affected by the lack of adjacent parking facilities.

Residential:

The removal of on-street parking, has a negative impact on our social amenity and family and friends. Parking in “nearby” streets is challenging for our elderly parents.

We request on site parking to be organised.

We have already incurred the expense of the construction of a horseshoe driveway in anticipation of the problem of both ingress and egress and parking and we request reimbursement for this expense.

EIS SECTION 8.4 Environmental management measures

Issue description:

Property Access Impacts and management measures.

“During detailed design, Roads and Maritime will carry out consultation with affected landowners about changes to property access.” EIS (table 8-10)

“The existing pedestrian paths on Lookout Road and McCaffrey Drive would be directly impacted during construction of the project within the limit of the work. Subject to construction staging it is possible that these paths may be closed for extended periods of time.” (Part 60 Appendix I Technical Paper 5 socio-economic part 4 p3).

In a meeting with the RMS on December 2nd 2016 we were told that that pedestrian access would be unavailable and/or restricted during the rock shelf removal.

“Pedestrian and emergency vehicle access to properties would be maintained at all times.” EIS (p263)

“Construction activities would also potentially lead to increase in risk levels associated with movements through or near the construction site. However, with the implementation of standard traffic control measures these risks are not expected to be significant.” (Part 60 Appendix I Technical Paper 5 socio-economic part 4 p3)

Response/suggested solutions:

Residential:

We need to maintain vehicular access for our elderly parents who cannot come to our residence by any other means than in a vehicle. They need our regular care and assistance.

Commercial Business (Music Studio):

The EIS contradicts itself about access arrangements. “Maintained at all times” EIS (p263) “Possible that paths may be closed for extended periods of time” (Part 60 Appendix I Technical Paper 5 socio-economic part 4 p3) .We have been told by the RMS that the path from Grandview Road to our property will be closed at times.

Some of our students use the bus stops south of our property, or live in nearby streets to our south and then walk along the existing verge of Lookout Road from Grandview to our property.

During these periods they will have either no access to our property or delays because they will have to be escorted through the construction work area.

The impacts will be loss of students for our business. Students will be frustrated by this obstruction. We program half hourly lessons and interruptions to this routine can cause ongoing negative impacts for our business.

The RMS suggested at the meeting on the December 2nd 2016 that the work on the rock shelf could be managed by being timetabled for the Christmas holiday period. We require a guaranteed assurance that this would be done in this case. If this

arrangement is implemented this would also mean our issues from the noise of this particular work would be mitigated for the business.

We need to maintain vehicular access for our students. Even temporary closures may deter them from returning. We program half hourly lessons and interruptions to this routine can cause ongoing negative impacts for our business.

EIS SECTION 9 Noise and vibration

EIS SECTION 9.2 Existing environment

Issue description:

Our business has been given an incorrect classification for our sensitive receiver type. This incorrect classification has resulted in incorrect criteria being applied to what is a clearly a noise sensitive business.

“Commercial/industrial receivers located in the study area include:
Commercial properties – ... and a music teaching and recording business located in a private residence at 136 Lookout Road” EIS (p293)

“Commercial/industrial receivers have specific noise criteria for construction noise. Commercial/industrial receivers located in the study area include:

- Commercial properties – ...various businesses ... [including] a music teaching and recording business located in a private residence at 136 Lookout Road.” EIS (Appendix G Technical paper 3 Noise and Vibration_part 1 p11).

Response/suggested solutions:

Commercial business (music studio):

In the EIS our business and residence is classified sometimes as a commercial/industrial receiver and at other times as residential receiver. This is very inconsistent and nowhere in the EIS are we ever correctly classified as a noise sensitive receiver. The correct standard is the ‘music studio’ standard, not a commercial/industrial standard. As a recording/music studio we have a requirement of 30/35dB(A) to be a viable music studio. When recording the recommended standard is 20/25 Db(A). This is confirmed in AS/NZS 2170:2016 Acoustics – Recommended design sound levels and reverberation times for building interiors. [Table 1 (item 1) pg 9 and (item 9) p14].

No provision has been made in the EIS to consider the full impacts of noise on our business. The EIS never addresses the noise requirements for a music teaching/recording business even though it describes the business as such. Our business is reliant on external noise levels not intruding and not exceeding the internal criteria for a music studio. Noise intrusions above the 35 dB(A) criteria will adversely impact on the operation of our business. Some examples are microphones that are exceptional sensitive to noise “spill” when recording; also as music teachers, we need to be able to hear subtle variation in tone, pitch and articulation.

Our business should be correctly classified as per NSW government transport for NSW construction noise strategy document number 7TP-ST-157/2.0. SECTION 6.3 of this document states:

“For highly sensitive receivers (eg, high technology facilities, recording studios and cinemas), specific assessment is required to ensure satisfactory operation of the facility and determine if any mitigation or management measures are required to minimise the potential impacts.” (p13)

AS/NZS 2170:2016 describes sound levels for music recording studios as being 20 to 25 dB(A) and music studios as being 30 to 35 dB(A).

As result of our incorrect classification the EIS has given our business a more noise tolerant criteria than it should have. It assumes our business will to be able to tolerate levels of 70 dB(A) as a commercial receiver and still function; it will not. The calculated noise exceedances are based on commercial levels. Even though the EIS has incorrectly classified us, it still expects construction management levels to be exceeded at our property, for standard hours, extended hours and out of hours as stated in the following quotes from the EIS.

The EIS APPENDIX G Technical Paper 3 Noise and Vibration Assessment-Main report p128

Table 4-13 Potential construction noise impacts, standard construction hours states that:

“Construction noise would exceed the noise management level for commercial use at one commercial/industrial receiver (a music teaching and recording business located in a private residence at 136 Lookout Road) during establishment of fencing and traffic management (S1), installation of erosion and sediment controls (S2), vegetation clearing (S4), utility relocations (S5), soil stripping (S7), bulk earthworks (S8), property adjustment work (S12), drainage work (S15), structural work (S16), pavement and median construction (S17), road tie-ins (S18), street light installation (S19), landscaping (S20) and finishing work (S21).”

The EIS APPENDIX G Technical Paper 3 Noise and Vibration Assessment-Main report

Table 4-17 Potential construction noise impacts, extended construction hours states that:

“Construction noise would exceed the noise management level for commercial use at 136 Lookout Road during establishment of fencing and traffic management (S1), installation of erosion and sediment controls (S2), vegetation clearing (S4), utility relocations (S5), soil stripping (S7), bulk earthworks (S8), property adjustment work (S12), drainage work (S15), structural work (S16), pavement and median construction (S17), road tie-ins (S18), street light installation (S19), landscaping (S20) and finishing work (S21) “

The EIS APPENDIX G Technical Paper 3 Noise and Vibration Assessment-Main report

Table 4-20 Potential Construction Noise Impacts, Residential receivers, OOHV states that:

“OOHV daytime levels are predicted to exceed the noise management levels at one commercial/industrial receiver (a music teaching and recording business located in a private residence at 136 Lookout Road) in this NCA.”

“OOHV evening levels are predicted to exceed the noise management levels at one commercial/industrial receiver (a music teaching and recording business located in a private residence at 136 Lookout Road) in this NCA. “

“OOHW night levels are predicted to exceed the noise management levels at one commercial/industrial receiver (a music teaching and recording business located in a private residence at 136 Lookout Road) in this NCA.”

We require the classification of our business to show that is a recording/music studio with noise tolerances of 30/35dB(A).

Based on this criteria, we require recalculation of sound management levels, sound exceedance levels and the number of exceedances for our business.

We will have to be specifically re-evaluated for noise impacts to our business and be treated as per NSW government transport for NSW construction noise strategy document number 7TP-ST-157/2.0. Section 6.3 states “For highly sensitive receivers (eg, high technology facilities, recording studios and cinemas), specific assessment is required to ensure satisfactory operation of the facility.”(p12).

EIS SECTION 9.2 Existing environment

Issue description:

The noise modelling is not valid.

Response/suggested solutions:

Commercial business (music studio):

The noise monitoring was not carried out according to the Noise Criteria Guideline (NCG) (2015) as described in the summary. Section 2.3 (p33) of Appendix G (document 38) states that all loggers recorded a minimum of seven days of valid data, however it is observed from Table 2-3 that seven loggers (L14, L17, L18, L19, L20, L21, L22) were only deployed for 6 days inclusive of setup and retrieval (Friday 12/06/2015 – Wednesday 17/06/2015). It is best practice to exclude setup and retrieval days from the data as they may not be representative of a typical day. The short monitoring period was not accounted for in the report.

Ideally, it is best to get weekday noise data rather than weekend data as traffic flows are typically increased during this period. For the monitoring period above, two weekend days and only two full weekdays are included in the monitoring period and this was not acknowledged or accounted for in the report.

Appendix A in Appendix G displays noise logging charts for the noise monitoring undertaken. Some charts are not able to be identified as there is no serial number attached to them and some appear to have data after Wednesday 17/06/2015. The information is not displayed clearly, and it is not possible to identify the logging location for each chart. Some charts show more adverse affected data is removed for the period (12/06/2015 – 17/06/2015) than others. Given the close proximity of loggers in this area, it is assumed that meteorological conditions will be reasonably similar. It is not established in the report why this is not the case. Indeed, where there were less days of data recorded, it is apparent that less adversely affected data is removed for analysis. This is also not accounted for in the report.

According to RMS document Model Validation Guideline, the validation results should typically be within +/-1.5 dB of measured results when the receiver is less than 30m from the road. Nearby loggers, L17 (110 Lookout Road) and L20 (180 Lookout Road) are both within 30m of the road and both have level differences

greater than 1.5 dB. For L20, the model over predicts by 1.7 dB during the day and under predicts by 1.5 dB during the night-time. This has not been accounted for in the modelling.

Given the anomalies discussed above it is concerning that photographs of noise monitoring locations are not provided as is typical to large projects noise reports. With these anomalies it is difficult to have confidence in the noise assessment.

Finding information in the charts is difficult in the EIS as they interchange naming conventions or don't name the charts at all. The general quality of the noise monitoring is at best haphazard and at worst poor and invalid.

The business is currently operating a music teaching space and an additional recording space. It is likely that during the construction of the road the external noise levels at the façade of the building will be sufficient to exceed the internal noise criteria and adversely affect the business. There has, however, been insufficient noise measurements and therefore no valid modelling for this business.

The NSW government transport for NSW construction noise strategy document number 7TP-ST-157/2.0 states "for highly sensitive receivers (eg, high technology facilities, recording studios and cinemas), specific assessment is required to ensure satisfactory operation of the facility and determine if any mitigation or management measures are required to minimise the potential impacts." (p13).

For our situation, specific readings and subsequent modelling would have to be taken for the time period when the business operates, i.e. weekdays between 11am and 7 pm and for a long enough number of days to obtain a valid data set. We request specific noise monitoring and valid modelling.

EIS SECTION 9.3 Noise and vibration criteria

Issue description:

Exceedances of Construction Noise Management Levels.

Response/suggested solutions:

Commercial business (music studio):

As our business has been incorrectly classified as a commercial/industrial receiver, the construction noise levels that are proposed are far in excess of what our business can tolerate.

Appendix G Technical Paper 3 Noise and Vibration_Part4

Table 4-3 Construction noise management level at commercial/industrial receivers states:

"Construction noise management level at commercial/industrial receivers

Industrial premises External noise level – 75 dB(A)

Commercial premises External noise level – 70 dB(A)"

Appendix G Technical Paper 3 Noise and Vibration_Part4

Table 4-5 Summary of construction noise management levels at sensitive residential receivers, dB(A) states that NCA 13 noise management levels of residents as noise affected at 66dB(A) based on the rating background levels.

In the EIS we are listed as a commercial/industrial receiver and sometimes as a residential receiver. We are not listed correctly as a commercial recording/music studio 30/35dB(A).

The external noise levels at the façade of the building will exceed the internal noise criteria and adversely affect the business. We will lose business working in a noisy environment as a noise sensitive business.

2107:2016 describes sound levels for music recording studios as being 20 to 25 dB(A) and music studios as being 30 to 35 dB(A).

AS/NZS2107:2016 states:

“Certain teaching spaces, including those intended for students with learning difficulties ... should have reverberation times at the lower end of the range.” (p14). Please note that our business has students who have brain injuries and also students who have English as a second language.

In addition to our business being adversely affected by average sound levels, it will be adversely affected by intermittent noise as well.

AS/NZS2107:2016 notes that “measurements to assess compliance with this standard be taken at the relevant time and at an appropriate measurement period according to the area or occupancy or activity in the building. Where traffic noise fluctuates rapidly with the passage of individual vehicles, the community reaction may not correlate well with the equivalent continuous noise level measured.” Table 1 note 5 (p14)

The EIS Tables 4-12, 4-16, 4-18 (Appendix G Technical Paper 3) state that in NCA 13 there will be 2725 exceedances of noise management levels. If we are correctly classified as a music studio our business noise exceedances will be far in excess of this. However, as the EIS has not given the business the correct noise classification for us, we have no idea how many exceedances that will be.

The rock shelf to the south east of our property will be removed in the ‘early works’. This rock shelf is at present a natural sound barrier from our noise sources to the south east. Removal of this rock shelf will, therefore, expose our property to even greater noise levels.

We require specific assessment of our correct receiver status of music studio. Noise management levels need to be recalculated using a valid data set. The business requires recalculation of its ability to withstand noise and vibration, particularly noise generated by construction. We require a recalculation of the number of noise exceedances to which we will be subjected.

EIS SECTION 9.3.3 Construction noise – sleep disturbance

Issue description:

In the EIS Table 4-24 Construction scenario potential sleep disturbance per NCA in Appendix G Paper 3 shows that for NCA 13 there will be 13 different types of work that could impact sleep patterns.

With consideration to guidance provided in the *Interim Construction Noise Guideline* (DECC 2009), *Road Noise Policy* (DECCW 2011) and *Industrial Noise Policy* (EPA 2000) the background noise level plus 15 dB(A) has been applied as the screening level trigger for sleep disturbance in the noise assessment.

The *Road Noise Policy* provides further guidance as follows:

“Maximum internal noise levels below 50–55 dB(A) are unlikely to cause awakening reactions

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

“Night time construction work is likely to cause sleep disturbance at residential receivers nearest to the construction work.” (EIS pg 429)

Response/suggested solutions:

Residential:

In Appendix G Technical Paper 3 Noise and Vibration_Part 5

Table 4-19 Number of construction noise management level exceedances, out of hours, sensitive residential receivers by NCA predicts 917 exceedances above the noise management levels in NCA 13 Night OOHW

Please note that there is no data on the removal of the rock shelf directly to our south east, so these figures above are likely to be incorrect when that work is added to the total number of exceedances we will be exposed to.

Predicted noise levels could reach 92 dB(A) on our facade depending on the type of work. This is likely to cause internal levels in our bedrooms of nearly 82 dB(A). This is well above the Construction Noise Guideline (DECC 2009), Road Noise Policy (DECCW 2011).

For our health and wellbeing we require that at property work should be completed prior to start of construction.

We request triple glazing of all our windows.

We request that air conditioning should be provided for both studios as we will have to close all windows while construction work is taking place.

EIS SECTION 9.3.4 Construction vibration criteria

Issue description:

Microphones and music recording equipment that use laser technology have been left off the sensitive equipment table. See Table 9-10 Construction vibration criteria – sensitive equipment EIS p305.

Response/suggested solutions:

Commercial business (music studio):

There is no mention in the EIS of vibration sensitive musical equipment in particular recording microphones. Microphones will pick vibration up as noise. CD burners using lasers are also used.

This music recording equipment is widely acknowledged as very vibration sensitive and therefore should be treated as per EIS table 9-22 as sensitive equipment class B. It is clear that there will be adverse effects on our business from a vibration source up to one kilometre away. From the time lines this indicates almost the entire duration of the project.

We request provision for this sensitive equipment in the detailed design, by designing appropriate construction buffer distances and also potential mitigation measures be implemented by the contractor in relation to sensitive equipment. We request that instructions be given to the construction contractor to comply with required buffer distances, and to change work practices to mitigate any vibration impacts on our sensitive equipment.

Please Note: Our foundations have been keyed into the conglomerate rock shelf beneath our house and any vibration of that rock will be directly transmitted to our house and business.

EIS SECTION 9.3.4 Construction vibration criteria

Issue description :

There is no vibration modelling for the removing of the rock shelf directly to our south east. This work is classified as “Early Works” and is therefore the reason why it is out of the scope of this EIS. An analysis of the noise and vibrational impacts concerning this activity has not been done.

Response/suggested solutions:

Commercial Business (Music Studio):

This removal will be for an extended period and cause us much noise and vibration. It is negligent of the EIS to omit the analysis of this work.

There is no time frame for this work in the concept plan and no detail as to whether this work would occur in standard hours, extended hours or OOHW.

The EIS states: “The proposed construction activities for the project would typically only generate *intermittent* vibration.” The removal of this rock shelf will likely generate more than “intermittent” vibration.

We request that analysis of the impacts of this work be provided in the detailed design phase.

We request calculation of the vibration impacts and time duration of the work and put the findings on public display.

Response/suggested solutions:

Residential:

This rock shelf removal will be for an extended period of time and generate high levels of noise and vibration. It is negligent to omit the analysis of the impacts of this work in this EIS.

There is no time frame given for the removal of the rock shelf in the EIS, neither is there any detail as to whether it would occur in standard hours, extended hours or OOHW.

“The proposed construction activities for the project would typically only generate *intermittent* vibration.”

The removal of this rock shelf may generate more vibration than “intermittent”.

We request that analysis of the impacts of this work be provided in the detailed design phase.

We request calculation of the vibration impacts and time duration of the work and put the findings on public display.

EIS SECTION 9.3.4 Construction vibration criteria

Issue description:

The EIS has used incorrect guidelines for human comfort for construction vibration.

Response/suggested solution:

The standard used BS 5228.2 -2009 the current correct standard should be AS2670.1 – 2001 (incorporating Amendment No.1) Reconfirmed 2016.

Note that in SECTION C.2.3 Comfort reactions to vibration environments (p25) that the discomfort reaction to occupants of residential buildings are affected by lower levels of vibration than presented in Table 9-8 of the EIS.

The current Australian Standard is more current than the British standard; it has been reconfirmed in 2016 and must be used.

We include below a Technical Memorandum Impact of Vibration prepared by our noise and vibration consultant Dr Norm Broner:

1.1 Vibration Criteria

The ground vibration criteria presented in this section are for the assessment of ground borne vibrations measured next to a residence/building or structure under investigation where a complaint may have been lodged.

1.1.1 Vibration Due to Construction

Ground vibrations generated by heavy construction works or operations such as piling may have significant impact on occupants of nearby buildings or residences in terms of human comfort. Other potential effects are that on the building integrity itself (ie will the building structural response lead to damage?) and on operational equipment or operations within those buildings. The human comfort criteria for vibration levels are much more stringent than that for building integrity as humans are able to perceive lower amplitude vibration levels than would be required to cause damage to a structure or building. Therefore, compliance with human comfort criteria will ensure compliance with structural/building integrity criteria.

n Human Comfort

Vibration from a source is usually measured in three axial planes (longitudinal, lateral and vertical planes) and is also frequency dependent. British Standard 6472 - 1992 "Evaluation of Human Exposure to Vibration in Buildings (1Hz – 80Hz)" presents guidelines to assess the potential reaction of occupants due to the effect of ground – borne vibration disturbance. This Standard presents a range of categories of disturbance due to different amplitudes of ground borne vibration depending on whether the vibration is continuous or intermittent.

BS 6472 - 1992 nominates various building vibration multiplication factors (to adjust for the potential severity of impact of the vibration) which are dependant on building usage and type of occupancy e.g. residential, offices or workshops.

These multiplication factors relate to the curves titled 1, 1.4, 2, 4 and 8, in Figures 5 and 7 of BS 6472 – 1992. If during construction, the requirements presented in BS 6472-1992 are met, then there should not be any adverse comments, sensations or complaints.

The publication by the Department of Environment and Conservation NSW titled 'Assessing Vibration : A Technical Guideline' indeed also presents tabulated criteria for exposure to continuous and impulsive vibration based on BS 6472 - 1992 figures 5 and 7 as stated above.

Table 4 below presents the assessment criteria for continuous and impulsive vibration for human exposure depending on time of day and activity taking place in the in the occupied space.

Table 4. Preferred Maximum Weighted (rms) Values for Continuous and Impulsive Vibration

Location	Time	Vibration Level (mm/s)(rms)*	
		Preferred	Maximum
Continuous Vibration			
Critical Working Areas eg precision laboratories	Day or Night time	0.10	0.20
Residences	Day time	0.20	0.40
	Night time	0.14	0.28
Offices	Day or Night time	0.40	0.80
Workshops	Day or Night time	0.80	1.60
Impulsive Vibration			
Critical Working Areas eg precision laboratories	Day or Night time	0.10	0.20
Residences	Day time	6.0	12.0
	Night time	2.0	4.0
Offices	Day or Night time	13.0	26.0
Workshops	Day or Night time	13.0	26.0

*** Values given for the most critical frequency range > 8 Hz assuming sinusoidal motion.**

If the ground borne vibration consists of a number of intermittent events, BS 6472 -1992 allows for the calculation of a Vibration Dose Value (VDV). The VDV is calculated from the vibration amplitude and vibration duration.

Table 5 below present VDV values (m/sec^{1.75}) predicted to result in various degrees of public reaction in residential buildings due to ground borne vibration.

Table 5 Vibration Dose Values (m/sec^{1.75}) for Various Ranges of Public Comment in Relation to Ground Borne Vibration.

Building Configuration	Low Probability of Adverse Comment	Adverse Comment Possible	Adverse Comment Probable
Residential Building 16 hour - day	0.2 – 0.4	0.4 – 0.8	0.8 – 1.6
Residential Building 8 hour - night	0.13	0.26	0.51

Note that BS 6472 (in Note 9 Table 5) also cautions that:

“When short term works such as piling, demolition and construction give rise to impulsive vibrations, it should be borne in mind that undue restrictions on vibration levels can significantly prolong these operations and result in greater annoyance”.

End of Technical Memorandum Impact of Vibration by Dr Norm Broner

EIS SECTION 9.4 Assessment of potential impacts

Issue description:

Our business requires continuous vibration levels for our critical working area (music studio) as in Appendix G Technical Paper 3 Noise and Vibration-Part5 Table 4-28 Preferred and maximum weighted values for continuous and impulsive vibration (AVTG, DEC 2006).

Response/suggested solutions:

Commercial business (music studio):

Our music studio satisfies the criteria for a critical working area because of the sensitive vibration-affected equipment.

EIS SECTION 9.4 Assessment of potential impacts.

Issue description:

Damage to house.

The EIS states in Appendix G Technical Paper 3 Noise and Vibration-Part 5

5.2.2 Construction vibration (pg 198) that:

“With consideration to human comfort vibration impacts, where rolling and compacting activities occur within 140 metres of receivers including residences, schools and places of worship, there is the potential that vibration levels could be intrusive for some activities. Where reasonable and feasible, buffer distances are to be implemented as per values shown in Table 4-37 for the corresponding activities. Piling activities may cause adverse reaction from residential receivers up to 120 metres from the activity where bored piling is used. Press-in hydraulic piles or jacked-in piles may also provide alternatives with negligible vibration levels by comparison.”

Table 9-22 details equipment types and vibration impacts that will be used in close vicinity to our business. Table 9-23 states (in relation to NCA13) “The nearest receivers are located within about 10 metres from construction activities. It is possible that heavy equipment including rollers, compactors, dozers, pavement breakers and pile drivers would be used in or near this area.

Receivers in this area would experience vibration levels above the human comfort level. Subject to the type and size of equipment used during construction, predicted vibration levels would exceed the structural damage criteria at buildings closest to the work”.

Table 4-37 Vibration estimated safe working buffer distances, shows that for our property the safe working buffer distances will be breached.

The distance from our residence to the work boundary is approximately 9 metres. Table 4-37 shows that we are in danger of structural damage from the work.

Appendix G Technical Paper 3 Noise and Vibration_Part 5

4.9 Construction noise, blasting and vibration mitigation measures

Table 4-43 states that a documented review will be carried out to determine if alternative methods can be implemented, where construction activity involving vibration intensive plant occurs:

- Within 18 metres of buildings
- Within the sensitive equipment buffer distances
- Or if any monitoring indicates levels are excessive.

Response/suggested solutions:

Residential:

If we suffer damage to the house from vibration then windows, doors and walls will potentially move out of alignment opening up gaps that will let in noise. We sealed our house against outside noise when we constructed it. We did this to mitigate against the existing traffic noise. These seals will be potentially broken.

We request that any movement that takes place in our structure is repaired to the highest standards of noise insulation, using the highest quality noise insulation methods and materials to reseal any noise leaks created by the impact of vibration.

Response/suggested solutions:

Commercial Business (Music Studio):

The business cannot operate if the structure is damaged. If we suffer damage to the house from vibration then windows, doors and walls will potentially move out of alignment opening up gaps that will let in noise. We sealed our house against outside noise when we constructed it. We did this to mitigate against the existing traffic noise. These seals will be potentially broken.

We request that any movement that takes place in our structure is repaired to the highest standards of noise insulation, using the highest quality noise insulation methods and materials to reseal any noise leaks created by the impact of vibration.

Our business will be adversely affected by any damage caused by vibration.

Issue description:

The vibration impacts of 'Early Works' are not addressed in this EIS.

Response/suggested solutions:

Commercial Business (Music Studio) and Residential:

There is no mention in the EIS of vibration resulting from the excavation required to relocate the water main into our easement. This easement is less than two metres from our house. We have had conflicting statements from the Hunter Water Corporation and the RMS as to whether this water main will be relocated into our easement. We would like a definitive answer to this question because we will potentially be adversely impacted.

If the water main is relocated into our easement the vibration impacts will be extremely detrimental to our residence and our business.

In the EIS there is also no analysis of the vibration impacts from the removal of the rock shelf to the south east of our property.

We request that this situation be remedied.

The location of both of these early works so close to our house and business means that the vibration impacts may give us vibrational impacts above the criteria.

We request an answer to our question regarding the relocation of the water main, and also request predicted vibration (and noise) data regarding the removal of the rock shelf. Our opinion is that both these excavations will severely impact us.

We request assurance that:

- 1) removal of the rock shelf to our south east will not create vibrational impacts that will adversely impact our business.
- 2) investigation and assessment occur for our business in order to ensure the facilitation of teaching and recording work.
- 3) the water main not be moved into our easement.
- 4) vibration monitoring be conducted at our property when activities such as heavy equipment including rollers, compactors, dozers, pavement breakers and pile drivers are being used.
- 5) (Re SECTION 4.7.3 structural damage) a property condition survey be conducted prior to vibration generating work commencing, in order to ascertain any damage caused by that work. (see also table 4-38 part 42 pg 35 NCA 13)
- 6) there will be no blasting on the rock shelf to our south east (part 42 pg 36 chapter 4.8 Construction Blasting Assessment).

7) The EIS be re-evaluated to calculate the noise levels, noise exceedances, the vibrational impacts and time duration for these early works, and put the findings on public display.

EIS SECTION 9.4.1 Construction noise

Issue description:

The business will not tolerate the excessive noise levels that will be generated by construction activities especially because this noise will occur for such a long time.

The EIS states that “Activities such as bulk earthworks (S8), general compound operations (S10), major compound operations (S11) and bridge construction (S14) have the potential to impact nearby receivers for longer periods of time” (p311).

The EIS also states that “Sensitive residential and non-residential receivers nearest to construction activities in ... NCA13 ... would experience noise levels above the highly affected noise management level.” (p311).

Response/suggested solutions:

Commercial Business (Music Studio):

Because the construction period will be longer than 6 months, then the adverse impacts of noise (and vibration) will need to be calculated on the assumption that we, and our business and residence, will suffer long term exposure.

The time frame for noise events is extremely long. We are noise affected by early works lasting 12 months and then after that we will be noise affected for most of the construction period i.e. nearly the entire 30 month construction period. The business will not survive the predicted extreme levels of noise intrusion for this length of time.

Predicted noise levels during the construction of the road the external noise levels at the façade of the building will be sufficient to exceed the internal noise criteria for our business. A level of 92 dB(A) on the facade will likely be 82dB(A) within the structure. This is an unsatisfactory condition for conducting a music teaching/recording business. The business will not survive this level of noise.

We demand compensation for loss of business income that will result from noise intrusion.

The direction of the noise sources will change during the course of construction work. We will be exposed to noise from directions that we have not mitigated for in the noise insulation we have built into our house.

We request that the business be reclassified to the AS/NZS2107:2016 noise tolerances. We request the noise management level be recalculated for our business.

We request consultation in regards to the business to achieve a suitable solution for both the RMS and the business owners.

We request noise insulation be installed between all floor joists in the exposed underfloor of the first story of the vocal studio.

We request triple glazing of all windows and glass doors.

We request noise insulation tiles between the ceiling joists on all internal ceilings.

We request additional noise insulation external cladding on all external walls.

Even though we have requested the above at property treatments we are of the strong opinion that it will prove to be the case that no amount of at property mitigation procedures will be effective in complying with the Australian Standards noise requirements of 30 dB(A) to 35 dB(A) as a music studio/recording studio.

EIS SECTION 9.4.1 Construction noise

Issue description:

The frequency of noise exceedances will negatively impact the business.

Appendix G Technical Paper 3

Table 4-12 Number of construction noise management level exceedances, standard construction hours, sensitive residential receivers by NCA shows NCA 13 will have a total 65 exceedances above 66dB(A) during standard hours.

Appendix G Technical Paper 3

Table 4-16 Number of construction noise management level exceedances, extended construction hours, sensitive residential receivers by NCA s shows NCA 13 will have a total of 1610 exceedances above the noise management levels during extended construction hours.

Appendix G Technical Paper 3

Table 4-18 in Appendix G Paper 3 shows construction activity noise management level exceedances, out of hours, sensitive residential receivers by NCA, dB(A) shows NCA 13 will have a predicted total of 1050 out of hours work exceedances. The exceedances could be up to 59dB(A) in excess of noise management levels.

Response/suggested solutions:

Commercial business (music studio):

The EIS states that in NCA 13 there will be 2725 exceedances of noise management levels. We require a much lower dB(A) tolerance rating than the EIS is giving us.

We request to be correctly classified as a noise sensitive receiver (music studio).

We request that our noise management levels be reduced to their correct level.

We request the number of noise exceedances be recalculated to this lower level.

The number of noise exceedances stated above does not include early works such as the removal of the rock shelf on our south east and the relocation of the water main into our easement, even though this work is an essential part of the road build. This early work will be a major source of adverse noise impacts for our business, and it is glaring omission from the noise and vibration data in this EIS.

Our work will be adversely affected by intermittent noise as well as an average sound level.

AS/NZS2107:2016 pg 14 gives an example "Where traffic noise fluctuates rapidly with the passage of individual vehicles, the community reaction may not correlate well with the equivalent continuous noise level measured."

We will be subjected to peak sound levels from intermittent sources such as dumping. These peaks in noise levels will interrupt concentration, interrupt any sound recording, interrupt any music listening and transcribing. The noise will irritate student musicians and as a result the goodwill of the business will be lost. Intermittent noises will disturb concentration, disrupt the lesson, destroy the ambiance, and ultimately destroy the business.

The NSW government transport for NSW construction noise strategy document number 7TP-ST-157/2.0 page 13 states "for highly sensitive receivers (eg, high technology facilities, recording studios and cinemas), specific assessment is required to ensure satisfactory operation of the facility and determine if any mitigation or management measures are required to minimise the potential impacts."

The EIS has not looked at this specific assessment criteria and thus the EIS has not been prepared according to NSW government standards.

We request that the business be reclassified to reflect the AS/NZS2107:2016 noise tolerances that should apply. We should be classified as a commercial recording/music studio 30/35dB(A).

We request recalculation of the number of exceedances for our business. We need consultation to achieve a suitable solution for both the RMS and the business owners.

We request mitigation procedures, including erection of sound barriers and at property adjustments to the building. These mitigation measures would have to be undertaken prior to construction to reduce noise both during construction and also during operation.

We believe that the RMS will argue that erection of sound barriers is not in the RMS guidelines because of the small number of houses and the cost.

We are of the opinion that it will prove impossible to reduce the noise levels to the required levels for our music studio business with at property adjustments. Our building already has rockwool acoustic insulation fitted in all external and internal walls. Our building has double brick for the ground floor room, a double glazed window on the east and some laminated glass windows on the south and in the downstairs studio. We designed our studios to be in a position that shields them from the existing road noise. The downstairs music studio is placed underneath the house and has sound baffling to the east and south east. The upstairs music studio has been placed at the most western end of the house to insulate it from the road noise by using the rest of the house as a sound barrier.

The construction sound will come from the directions of north, north east, east and south east exposing us to sound that the house has not been designed to cope with. Insulating to attenuate 92dB(A) external to 30dB(A) to 35dB(A) internal will most likely not be possible with at property treatment. Noise barriers have been ruled out

by RMS guidelines. A practical satisfactory noise solution is unlikely (vibration levels will also not be able to be adequately mitigated to satisfy the sensitive recording equipment required by our business).

We demand compensation for any loss of business income that will be caused by excessive noise and vibration generated by the construction of the project.

EIS SECTION 10 Landscape character and visual impact

EIS SECTION 10.4 Assessment of potential impacts

Issue description:



Figure 1. Existing panoramic view to NNW from viewpoint at 136 Lookout Road



Figure 2. View of Fill area 1 to NNE from viewpoint at 136 Lookout Road. The border of Fill area 1 will come right up to the edge of our northern boundary which is only metres below the crest of the steep embankment in this photo.

Figure 1 above shows the extensive green panorama we currently see from our residence and business. Contrary to the EIS findings, this view will be highly impacted and irreversibly damaged due to the extent to which we will see the construction footprint.

Figure 2 shows the currently densely wooded valley where Fill area 1 will be. All the trees in this photo will be cleared and replaced by 122,000 cubic metres of fill.

During construction we will have extensive views of the construction of the bypass: to the north, east and south and all points in between.

During operation we will have extensive views of the bypass: to the north, east and south and all points in between.

In 1992 we worked with well known local horticulturist Helen Whalan and also the council nursery to plant a dense screen on the verge of our street frontage to the east to mitigate existing traffic noise and screen from particulate matter. Mature trees now screen our property from the road to the east and north east, including a mature and very dense *Podocarpus Falcatus* and a forest grove of mature *Casaurinas*.



Figure 3. Screen planting on verge at 136 Lookout Road

All this mature screen vegetation will be cleared and we will no longer have this visual and dust buffer between our property and the road.

Response/suggested solutions:

We request landscaping and plantings on the northern embankment to repair both the foreground and midground views. We wish to retain the distant views of the Hunter Wetlands, Hunter Valley and Barrington Tops.

We request that this landscaping includes terracing to maintain access to facilitate maintenance of this landscaping.

We request that mitigation measures be taken to replace the existing visual screen on our eastern boundary including construction of a man made visual barrier by either raising of the front boundary wall or by rebuilding a new higher front boundary wall.

We request the greening of this wall with Virginia creeper or such like and replanting of what will be left of the the verge (as we are going to lose nearly all of the wide verge we currently now have) with fast growing screening plants.

EIS SECTION 10.1 Assessment methodology

Issue description:

Residential:

Our landscape character assessment has been poorly considered

In the EIS, Appendix H Technical Paper 4 Table 6.2 Landscape character assessment table 1

Zone D Lookout Road residential clusters magnitude of impact states that “for the residences adjacent zone C, while the project would impact foreground views for some of the residences, these residences are highly exposed to the existing roadway and its associated traffic noise. This would contribute in creating a stronger presence of the urban environs, impacting the character and sense of place for these residents.”

Response: Concerning Lookout Road residential clusters D, there is no mention of our residential cluster on the west of Lookout Road.

It only mentions the residential cluster on the east of Lookout Road. We are on the west of Lookout Road and we have a breath taking panoramic view to the north of the bushland in Jesmond Park, the Hunter Wetlands, the Hunter Valley and all the way to Barrington Tops. We deliberately built our house to face this view to the north rather than face the street frontage on Lookout Road so that our visual exposure to Lookout Road would be very limited.

Our landscape character is completely different to the residential cluster on the east side of Lookout Road.

Those houses are all built facing Lookout Road to their west and have a view of Blackbutt Reserve to their east.

We deliberately built the house to face the bushland setting.

Our house does not face Lookout road.

The front of our house faces north to the view.

The east side of the house has no entrances, and no door openings.

All our entrances and doors are on the north side of the house.

The EIS is full of references to our property as already being subject to high levels of traffic noise: “these residences are highly exposed to the existing roadway and its associated traffic noise” is how the EIS words it.

This is incorrect. The author has displayed no knowledge of our unique situation as one of only two houses on the western side of Lookout Road which has been built to reduce exposure to the road and maximise the bushland vista. This is in addition to having been incorrectly classified us as a commercial/industrial receiver and the author showing no understanding of the requirements for a music studio business. At other times in this EIS we are completely invisible. Our treatment in this EIS is extremely poor.

We built our house with careful attention to reducing the internal traffic noise levels.

We have double glazed a large window on the east wall, installed rockwool in all external and internal the walls to shield the traffic noise, and sealed all cracks.

The EIS assessment of the magnitude of impact for the project is based on the assumption that we are highly exposed to Lookout Road. This is a faulty and incorrect assumption.

In actual fact many building design processes were put in place to limit our exposure to traffic noise and reduce the visual impact of Lookout Road. This has not been considered in the EIS because the EIS assumes the magnitude of impact will be low. The reasoning behind this decision has not been well considered. The landscape changes due to the construction will be of a high magnitude. All the trees to our north for a distance of nearly 200 metres will disappear (the area of Fill 1 is 190 x 140 metres). This area will be relandscaped but the trees will take decades to regrow. Where we once had a view of a densely wooded forest, we will have a view of a major road for decades to come. We are keen birdwatchers and derive much enjoyment from watching the many birds that inhabit the bush to the north. This will be lost: “It is envisaged that in the long term the proposed planting would ameliorate this impact.” This may be true but in the short and medium term of up to 15 years our property will be devalued from the “high magnitude of impact”. Any sale of the property in that period of time will be to our financial disadvantage.

Response/suggested solution:

Change the assessment of our magnitude of impact to high.

EIS 10.1.2 Visual impact assessment

Issue description:

Our visual impact assessment has been poorly considered.

In the EIS, Appendix H –Technical Paper 4 – Urban Design, Landscape and Visual Impact. Viewpoint 2 states that “Due to the strongly undulating topography and the dense bushland setting, the visual exposure of the overall project is limited. The project would predominantly be exposed to some areas of the Hospital Precinct, as well as to areas at the northern end of the project, at the interface with Newcastle Road. Hence, the visual impact assessment has focused on these areas, as most other areas would experience a negligible impact”. In the case of our property this statement is completely incorrect.

Response/suggested solutions:

In the EIS, Viewpoint 2 in Technical Paper 4 – Urban Design, Landscape and Visual Impact is nothing like the viewpoint we have at our property.

The houses in Zone D on the east of Lookout Road have a completely different viewpoint of the project to our property so it is ludicrous to put us in into the same category as them. Our existing exposure to Lookout Road is east and north east of our property. We have planned to mitigate this exposure.

We have designed our house to face the views to the north and north west. As our house faces north toward the existing bushland we have had no need for curtains to shield us from artificial light sources.

This fact is proof that we are not heavily impacted visually by Lookout Road.

The deforestation that will occur to the north of our property will expose all the visual elements we have tried to shield from in the design of our building processes.

The visual impact of the project will not be 'negligible'. The visual impact of the project will be enormous and devastating. It will severely devalue our property.

Issue description:

The author of the EIS has been negligent in its omission of our unique situation on the west side and the summary of visual impacts neglects to consider our unique situation as one of only two residences on the east side of Lookout Road.

In the EIS, Appendix H –Technical Paper 4 – Urban Design, Landscape and Visual Impact. Viewpoint 2 describes the magnitude of impact as "Negligible as there are currently open views looking up to road above the housing. New plantings on batters will provide a dense visual screen. The reduction in road width is considered an improvement" (p90).

Response/suggested suggestions:

None of the above refers directly to our situation.

We cannot be classified as part of zone D and then be absent in the mitigation measures.

The nearest viewpoints are nowhere near our property so no proper assessment has been done concerning the element visual of the project, nature of impact, visual sensitivity, magnitude of impact. The project would become a dominant element in our setting, and our foreground, midground and distant views will be impacted so the overall weighting of visual impact will be high.

For us, the nature of impact is adverse, the visual sensitivity is high because the property now enjoys panoramic views north over the bushland and beyond. These bushland views will be decimated.

The summary of viewpoint 2 is inaccurate (magnitude negligible, impact negligible) as far as our property is concerned. Viewpoint 2 does not describe us at all.

We will be highly impacted by the visual imposition of the project. The valley to the north of our property is currently densely forested and will be entirely cleared. In their place will be a quarry. The EIS states "no significant impact is expected". Not only will we have an eyesore as visual impact, our property value be significantly diminished.

We request reclassification of our level of visual impact as high.

We request mitigation measures that include dense planting of vegetative screen on the western batter of the Lookout Road exit, as well as dense plantings on the small batter adjacent our eastern verge on Lookout Road.

We request landscaping on the northern slope immediately after the earthworks in Fill 1 area are complete in order to screen the bypass from our view.
We request effective curtains on all north facing windows and glass doors to shield us from the construction lights.

EIS SECTION 10.4 Assessments of impacts

Issue description:

We will be heavily impacted by night time glare from construction works.

The EIS states that “The greatest impacts would occur near the southern and northern interchanges where there are residential areas that would have views of construction activities for extended periods of time. The magnitude of visual impacts in other parts of the construction would generally be less due to lower intensity of use, being generally recreational in parkland/bushland areas or a place of work in the John Hunter Hospital precinct.

The glare from night time construction activities and the security lighting for construction related facilities such as site offices and compounds could have potential visual impacts on neighbouring residential areas.” EIS (p393).

Response/suggested solutions:

Night time visual glare will be considerable and it will replace the normally dark bushland setting. We will lose all the trees in our view through clearing.

As our house faces north toward the existing bushland we have had no need for curtains to shield us from light sources. This fact is proof that we are currently not heavily impacted visually by Lookout Road.

We request effective curtains on all north facing windows and glass doors to shield us from the construction lights.

EIS SECTION 10.5 Environmental management measures

Issue description:

The time delay in landscaping Fill 1 area will result in instability of our filled site.

In the EIS, Table 10-7 Environmental management measures for landscape character and visual impacts states that under the “monitoring of landscaping and rehabilitation” impacts

the “Environmental management measures” will be as follows: “Landscape and rehabilitation work will be monitored and remedial measures implemented where required until vegetation has stabilised. This is listed here as the responsibility of the Roads and Maritime Services

Response/suggested solutions:

Trees and vegetation will be cleared in Fill 1 area during ‘early works’. The clearing will happen right up to the edge of our northern boundary. Our northern boundary is situated approximately half way down this 47 degree slope that was created by fill. The clearing will make this fill susceptible to erosion and other degradation.

The time length before this slope is re-vegetated could be up to three years after it has been cleared. The RMS has a responsibility to make sure this fill slope is stabilised as soon as possible after clearing.

We request that the slope be landscaped to a more stable gradient profile e.g. 4V:1H.

We request that revegetation be fast tracked on this existing fill batter and on Fill 1 area to alleviate dust and visual impacts.

EIS SECTION 11 Socio-economic, land use and property

EIS SECTION 11.3 Assessment of potential impacts

Issue description:

Section 11.3.2 states: "the existing informal on-street parking arrangements in the shoulder of Lookout Road in front of the music business would no longer be available due to road widening in this area" and that "[A]ny vehicles would be required to park within the property, or in other nearby streets such as Grandview Road".

The reason given for removing the parking because "the road widening in this area", is not logical when the shoulder will be just as wide, if not wider, during operation.

An additional problem with the removal of the on street parking is that we have so few nearby streets and the verge is impossible to traverse safely for several reasons outlined below.

Response/suggested solutions:

Commercial business (music studio):

If students park in Grandview Road students would potentially have to walk along the northern verge of Grandview Road, from west of the bus stop on this northern verge. It is currently impossible to walk from 136 Lookout Road to the corner of Grandview and then along the northern side of Grandview Road in a westerly direction without having to step off the verge in Grandview Road and walk on the road itself.

Parking in Grandview Road is proposed as an alternative to the on-street parking that is currently available; this option is fraught with problems as this would expose pedestrians to a great personal risk that they currently do not face.

Figures 4 and 5 below show the masonry wall at the bus stop that is impossible to pass without walking on the road.



Figure 4. The northern verge of Grandview Road looking east towards Lookout Road intersection.



Figure 5. *The northern verge of Grandview Road looking east towards Lookout Road intersection*

A further problem with students walking from 136 Lookout Road to the corner of Grandview and then along the northern side of Grandview Road in a westerly direction past the bus stop to park is that the verge is uneven with a sloping gradient, in poor condition and at points contains obstacles including a telecommunications pit and a large tree growing close to the kerb.



Figure 6. *The northern verge of Grandview Road looking east showing large telecommunications pit right in the middle of the verge.*



Figure 7 *The northern verge of Grandview Road looking west showing large telecommunications pit right in the middle of the verge.*



Figure 8. The northern verge of Grandview Road looking east showing the base of a very large gum tree close to the kerb.



Figure 9. The northern verge of Grandview Road looking east showing a sloping gradient right to the edge of the kerb.



Figure 10. Northern verge of Grandview Road looking east and showing the uneven surface, sloping gradient and poor condition of the verge.

A further problem with students parking on other nearby streets, such as Grandview Road, is that a good portion of our music teaching occurs in the afternoon and therefore our students will be competing for parking spaces in Grandview Road and surrounding streets along with the parents and carers of children that attend New Lambton Heights Infants School.



Figure 11. The cul de sac at the end of Lookout Road looking south towards New Lambton Heights Infants School. There is already high demand for parking in this vicinity.



Figure 12. *The southern verge of Grandview Road looking east showing there is already a high demand for parking in this vicinity.*

EIS SECTION 11.2 Existing environment

Issue description:

In the EIS our business and residence is classified as parkland on Figure 11-1 Land use (p410). This is yet another example of the author incorrectly identifying our property making our property appear invisible in this EIS.

Response/suggested solutions:

We are a home occupation business in a R2 low density residential area. We provide a valuable service for local residents.

In the Newcastle Local Environmental Plan 2012 one of the objectives of the zone R2 is "To enable other land uses that provide facilities or services to meet the day to day residents."

Our 'home occupation' music business is one of these services.

EIS SECTION 11.2 Existing environment

Issue description:

In Figure 11-4b Social Infrastructure Legend we have been categorised as a commercial receiver and assessed as such.

Response/suggested solution:

Commercial business (music studio):

Although we are a commercial business, we have special requirements, particularly noise requirements. As a consequence we should be classified as a noise sensitive receiver as defined in AS 2170:2016 and specifically re-evaluated for noise impacts to our business and be treated as in NSW government transport for NSW construction noise strategy document number 7TP-ST-157/2.0.

Section 6.3 of this document states that “For highly sensitive receivers (e.g, high technology facilities, recording studios and cinemas), specific assessment is required to ensure satisfactory operation of the facility.” (p13).

Response/suggested solutions:

We request specific assessment as a noise sensitive receiver.

EIS SECTION 11.3 Assessment of potential impacts

Issue Description:

The stated socio-economic impacts to our business are incorrect.
Each impact is listed below and then discussed in the response.

1 . In the EIS the utility disruptions are described as negligible: “Adjustment to existing utilities would be required for construction of the project. These are likely to include adjustment or relocation to electricity transmission, telecommunications, water, sewer and gas. This work may result in temporary disruptions for nearby properties.” (p423).

In Appendix I Technical Paper 5 – Socio-economic Assessment the level of impact on us for utilities is listed as ‘negligible’.

2. The EIS describes the impact of the loss of on street parking as follows: “For the music business located on Lookout Road, during construction, there would be temporary impact on access to the property and availability of on-street parking spaces for clients” and also states that “the existing informal on-street parking arrangements in the shoulder of Lookout Road in front of the music business would no longer be available due to road widening in this area. Any vehicles would be required to park within the property, or in other nearby streets such as Grandview Road.” (p426).

In Appendix I Technical Paper 5 – Socio-economic Assessment the level of impact on us for loss of parking is listed as ‘negligible’.

3. In reference to noise and air quality impacts the EIS states that “construction would result in increased noise and dust levels, potentially resulting in amenity impacts to...[our]...business. The noise assessment (Chapter 9) predicts that construction noise is likely to exceed the relevant noise criteria at this location. Roads and Maritime will continue to consult with the business owners regarding the provision of access and construction noise levels”(p426).

The EIS also states that “adverse impacts from high dust levels could include health effects such as asthma and bronchitis (from the smaller particles) and amenity impacts (due to fallout of the larger particles)” (p429).

4 . In reference to travel delays the EIS states that “Construction of the project would impact on roads in and near the work. Some changes to existing traffic conditions would be experienced on sections of Lookout Road, McCaffrey Drive and Newcastle Road. Construction speed limits (typically 40 kilometres per hour) would also apply to roads surrounding the construction site. The duration and extent of temporary construction speed limits would vary across the project and depend on the selection of the final construction methods and staging by the construction contractor. These could lead to short-term travel delays for motorists” (p426).

In Appendix I Technical Paper 5 – Socio-economic Assessment the level of impact on us of travel delays is listed as ‘minor’.

5. In reference to access issues the EIS states that “There are seven private properties that have direct access onto Lookout Road, and four that have direct access onto Newcastle Road in the limit of work for the project.

The construction of the project may result in access disruptions for these properties. Vehicular access to some properties may be restricted for short periods during the construction work. Where access to property would be disrupted for an extended period, alternative access would be provided” (p427).

In Appendix I Technical Paper 5 – Socio-economic Assessment the level of impact on us of disrupted access is listed as ‘minor’.

Given that consultation has not commenced and the premises have not been considered correctly it is premature to conclude that the impact to the business will be “minor” or “negligible.”

The EIS has incorrectly classified us in regards to the type of sensitive receiver we are and, as a consequence, has applied the incorrect the noise levels to our business and residence. The EIS shows little regard for the important aspects that our business requires in order to be successful. It has over-stressed the success of the potential mitigation measures that could be applied to our business: “Potential access and amenity impacts to these businesses will be managed through implementation of a construction environmental management plan, construction noise and vibration management plan, including an out of hours work procedure, and construction traffic management plan. Roads and Maritime will continue to consult with the property owners during detailed design and construction to minimise potential impacts. As such, there are not expected to be any significant impacts to these businesses.” (Appendix I Technical Paper 5 Socio Economic_Part 2 p39).

Response/suggested solutions

1. In reference to issue 1 above, we cannot work if we have no access to utilities. No definitive answer has been given regarding the relocation on the water main into our easement. The water main is presently situated outside the eastern boundary of our property. If the water main is relocated it will adversely impact us in many ways (Access, noise, vibration etc.).

Consistent and timely access to our property is essential for maintaining the timetabling of weekly half hour lessons. Both vehicular and pedestrian access will be disrupted and unavailable at times.

2. In reference to the removal of on street parking, the explanation that parking will be lost because of road widening is a spurious one. During operation the shoulder will be the same width, if not wider, than is at present. There will be just as much room to park on the shoulder during operation as there is now.

The on street parking will never be re-instated. It will be permanently removed. The EIS has described this impact as “minor” Table 3-6 Summary of socio-economic impacts during operation and Table 3-5 Summary of socio-economic impacts during construction. Appendix I Technical Paper 5 Socio Economic_Part s4 & 5.

Our prime teaching time is early afternoon. The “nearby parking” at this time is also used by parents picking up their children from New Lambton Heights Infants School. More hospital traffic will be parking in nearby streets. There will be much more competition for fewer parking spaces as a lot of hospital employees also currently park on Lookout Road.

“Nearby” is a subjective term. Elderly students, students with mobility issues or students carrying heavy musical equipment may disagree with this interpretation of “nearby” and the level of impact it has for them. Currently we have adequate adjacent parking, changing this to other “nearby” options will result in a less viable business.

3. In regard to noise levels, they will be far too high for us to work satisfactorily. A music teaching/recording business is reliant on very low levels of noise. This is a fact that the EIS has failed to grasp.

The EIS states that we are already exposed to high noise levels. This is incorrect.

We built our house with careful attention to reducing the internal traffic noise levels.

Through building material choice and other abatement measures, our house and teaching areas are quiet. Representatives from both the RMS and Department of Planning and Environment have visited our house and remarked how quiet the internal spaces are.

We have had noise readings conducted by experts that show our studio areas are < 35 dB(A) and our living areas < 40 dB(A).

Dust imposition will particularly affect vocalists who need to breathe deeply while singing. Some students use singing to help relieve asthma and respiratory conditions. We have a duty of care to our students. It is well documented that exposure to high levels of particulate matter can result in cardio vascular problems. The EIS is not correct in its analysis of the health effects of dust. The most adverse effect of particulate matter is of a cardio vascular nature that can cause sudden death. Particulate matter can also exacerbate pre-existing respiratory conditions. The construction dust will deter our students from attending lessons.

4. Delays in travel time could lead to students missing their lesson, consequently interrupting their musical education. A musical education relies on consistent weekly teacher input. The thought of having to endure a longer travel time in heavy, slow moving traffic could lead to students looking elsewhere for their music lessons.

5. In the EIS disruption to access is described as temporary: “When access is disrupted for an extended period alternative access will be provided.” Alternative access is not possible to our property. If access is lost for an extended period of time then that means that all access to our property will be lost.

The RMS told us in a meeting on December 2nd 2016 that there will be no pedestrian access from Grandview road corner to our property during removal of the rock shelf. Quite a few students access our property by bus and walk from Grandview Road corner. Some students live in Grandview Road or nearby streets and walk to their

music lessons. Any disruption of access to our property will result in loss of business income and also impact on the goodwill of the business. No timeframe has been given for the removal of the rock shelf.

Even temporary disruption to access will cause a loss of business. We timetable weekly half hour lessons.

Temporary disruption to this routine will result in loss of students. Logistically we cannot re-timetable our quota of students on an ad hoc basis. Realistically the construction will interfere significantly and adversely impact the business.

The “temporary impact” on our business from all these construction activities in their various forms are likely to last almost the entire length of the project. Additionally there is the impact of the unspecified early works.

Interruptions to our business during construction will have a flow on effect into the operation period and therefore have an ongoing negative impact on the goodwill of the business.

The EIS has identified the issues above, but regularly refer to “planning and consultation” as a way of reducing the adverse impacts, while predicting all these impacts will be minor. The authors of the EIS have no way of knowing whether “planning and consultation” will be an effective solution to our problems. We can, therefore, take these predicted impact levels as spurious and unsubstantiated.

The EIS has weighed a known impact against an unknown solution but given the unknown solution more weight. Also the assumption that because each individual issue has a minor impact that the cumulative impact will be minor. In reality each separate impact should be totalled together, as each impact will affect our business in the same way, i.e. loss of business.

We are of the opinion that the author of the EIS has no concept of what makes a music business successful. The noise of construction alone will make it impossible to carry on the business, but the cumulative impact spells the end to the business. However again and again the impacts on our business are dismissed in the EIS as insignificant: “As such, there are not expected to be any significant impacts to these businesses.” (Appendix 58 p10). This statement is incorrect.

We request a reinvestigation of the socio-economic impacts of construction on our business in order to obtain a realistic assessment of the impacts.

EIS SECTION 11 Socio-economic, land use and property

EIS SECTION 11.3 Assessment of potential impacts

Issue description:

During operation our business will be exposed to noise impacts that exceed the requirements for a music studio business.

The EIS states that “while the music business located in a private residence on Lookout Road would experience a minor increase in road traffic noise levels however, they already experience a high level of noise from existing traffic on these busy roads (Chapter 9).” (p 426).

The EIS states that there will be “receivers in the vicinity of the project [that] would be exposed to more frequent maximum noise events, particularly in relation [to]

engine braking by north bound heavy vehicle traffic on the bypass descending from the southern interchange. During operation, the relevant operational noise criteria would be exceeded at a number of sensitive receivers. For most sensitive receivers the predicted noise levels are considered to be low enough to allow normal activities to be pursued.” (Volume 7 Appendix I Technical Paper 5 – socio economic assessment p68).

Response/suggested solutions:

Commercial Business (Music Studio):

The statement that we “already experience a high level of noise from existing traffic” is incorrect. We have built our house to mitigate the existing traffic noise. We have had noise readings conducted by experts that show our studio areas are < 35 dB(A) and our living areas < 40 dB(A).

We have taken every measure to shield ourselves from the impact of the road. We have built a house that is quiet inside in a noisy ambient environment.

We are of the opinion that it will prove impossible to mitigate against the excessive noise that will be generated both during construction and operation. Our building has had rockwool insulation installed in all internal and external walls, double brick for the ground floor room, a double glazed window on the east and laminated glass elsewhere. Our studios have been placed in a position that shields us presently from the road noise. The downstairs music teaching and recording studio is placed underneath the house with natural sound baffling from the east and south east. The upstairs teaching music studio has been placed at the western end of the house to insulate it from the road noise by using the house as a sound barrier. We have designed and built to deal with our studio noise requirements.

The Lookout Road exit lane will be visible from the north face of our building. This will result in an enormous increase in noise impacting the north facade of our building. Our business will suffer a much greater noise intrusion and we are a noise sensitive business.

Noise from engine braking is said to exceed predicted noise levels during operation. The music business requires that the noise levels are less than 35 dB(A).

The noise levels for the music business have been incorrectly classified in this EIS so we request that the predicted noise levels be recalculated to make sure the noise from the engine braking meets the specifications for our noise sensitive business. This noise intrusion will also be compounded by the restricted access vehicles that will be allowed to use the bypass during operation.

We request reassessment of the noise guidelines for a noise sensitive business.

We request triple glazing of all the windows in the building.

Residential:

The EIS states that there will be “receivers in the vicinity of the project [that] would be exposed to more frequent maximum noise events, particularly in relation [to] engine braking by north bound heavy vehicle traffic on the bypass descending from the southern interchange. During operation, the relevant operational noise criteria would be exceeded at a number of sensitive receivers. For most sensitive receivers the predicted noise levels are considered to be low enough to allow normal activities to be pursued.” (Volume 7 Appendix I Technical Paper 5 – socio economic assessment p68).

We have built our house to mitigate against the existing traffic noise.

We have built a house that is quiet inside in a noisy ambient environment.

We are of the strong opinion that it will prove impossible to mitigate against the noise exceedances. Our building has rockwool insulation installed in all internal and external walls, double brick for the ground floor room, a double glazed window on the east and laminated glass elsewhere. We have designed and built our house to improve our residential noise amenity.

The Lookout Road exit lane will be visible from the north face of our building. This will result in an enormous increase in noise impacting the north facade of our building. Our business will suffer a much greater noise intrusion and we are a noise sensitive business.

We request reassessment of the noise guidelines for a noise sensitive business.

We request triple glazing of all the windows in the building.

EIS SECTION 13.4.1 Geology, topography and soils

Issue description:

The EIS states that “during construction, impacts on soils would be primarily associated with soil erosion during rainfall or wind events, when sediments or pollutants can flow or be blown to sensitive receiving environments. The highest risk to soil would occur during construction activities such as:

- Clearing of vegetation and topsoil” (p478).

Response/suggested solutions:

The clearing of all the vegetation from the northern boundary of our property will destabilise the northern slope, the batter of which was created by fill. This existing fill batter will be vulnerable to erosion with extreme weather events. The potential for destabilisation of this fill is great and may have calamitous results for our property.

This fill is vegetated and has been stable for 40 years. Revegetation of the area will take some time to establish. We believe that there is a possibility that our yard may slide down into the valley below before the vegetation is established.

We request earthworks be conducted to establish a preferred slope of 1H:4V.

EIS SECTION 17 Air Quality

17.3 Assessment of potential impacts

Issue description:

No detailed particulate matter dispersion modelling has been conducted.

The EIS states that “the relative exposure of sensitive receivers to air emissions from a source generally varies based on distance from the source and prevailing wind conditions” (p554).

Response/suggested solutions:

Exposure also depends on micro climate and local topography. Regional air quality is affected by how air behaves as a result of the interaction of topography and weather, and by the emission sources themselves. The northern batter of the slope heats during daytime and creates thermal air currents that rise and direct air towards our house. Our experience is that warm air moves up the slope towards our premises. We often see the morning fog rise up our northern slope towards our premises. Birds use the thermals that are created by the local topography of which our slope is a part.

There has been no modelling done of air movement in our vicinity. Air movement has been qualitatively assumed to flow in the same direction as Nobby's headland. The wind direction at Nobbys headland is not a “best fit” for air movement at the Fill 1 area.

We request a detailed survey be undertaken of the air currents in the local area.

We request particulate matter dispersion modelling be conducted including the Fill 1 area.

EIS SECTION 17 Air Quality

Issue description:

We will be negatively affected by the impacts of ambient particulate matter.

In the EIS Table 17-2 Construction air quality emissions EIS (p557) states that construction machinery use, Earthworks, Exposed areas and stockpiles “have the potential to be higher...near the southern ... interchange”

The EIS states that “the air quality assessment (Chapter 17) predicts that residential areas to the north and west of the project would have the highest potential for adverse dust impacts during construction in the spring and summer months, when there are southerly and easterly winds. This is likely to generate more dust settling on cars parked along streets and inside homes if windows are left open. Adverse impacts from high dust levels could include health effects such as asthma and bronchitis (from the smaller particles) and amenity impacts (due to fallout of the larger particles)” (p429). This quote clearly shows that the EIS is acknowledging that the project will be bad for our health.

Response/suggested solution:

The EIS does not give any information on the composition of the fill, how friable it will be, the composition of the chemicals that it may contain or how they may bond when they become mixed.

The EIS is not correct in its analysis of the health effects of dust. The most adverse effect of particulate matter is of a cardio vascular nature that can cause sudden death. Particulate matter can also exacerbate pre-existing respiratory conditions.

Dust will also cause amenity issues such as the need for extra cleaning and drying of washing.

We demand that baseline particulate matter monitoring be conducted prior to commencement of construction.

We demand that the RMS provide particle monitoring, and halt construction and increase mitigation measures when ambient particle mass $10\mu\text{g}$ (pm_{10}) concentration levels reach $50\mu\text{g}/\text{m}^3$, or when $\text{pm}_{2.5}$ exceeds $25\mu\text{g}/\text{m}^3$ during any 24-hour period during construction.

We request cleaning services to remove the dust from both inside and outside our house. We request that off premises clothes washing and drying be provided for.

We request cleaning services for our solar panels.

We request air conditioning in both music studios.

We request air purifiers for all internal spaces.

We request fresh air ventilation systems that meet building code of Australia requirements with the windows and doors shut.

We request additional monitoring for indoor air quality, and mitigation measures where necessary.

Students who attend vocal lessons to help improve poor lung function and asthma will be put at risk by attending lessons at times when particulate matter levels are high. We have a duty of care to our students. Our business is affected by ambient particulate matter because some of our students have pre-existing health conditions that are exacerbated by exposure to particulate matter. Students will not come to lessons if the atmosphere is unpleasant and the studios are dirty. The business will lose its goodwill.

The business uses equipment that is dust intolerant. Mixers, amplifiers, sound modules, computers, keyboards and effects unit are examples of equipment that have a lower life span when exposed to quantities of dust. The dust embeds into the internal components. It is hard or impossible to clean. At some point in time it will cause the unit to fail or malfunction.

We request that the RMS pay for depreciation of our sensitive business equipment and loss of business caused by ambient particulate matter.

We request quantitative assessment of ambient particulate matter (the EIS has no prediction of how high levels may be).

EIS SECTION 17.4 Environmental management measures

Issue description:

The EIS states in Table 17-9 Environmental management measures for air quality impacts, that the construction contractor is responsible for the environmental management measures.

Response/suggested solutions:

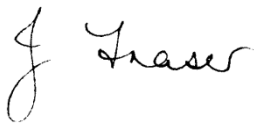
We question whether the construction contractor is the best person to oversee the environmental management measures. The construction contractor may have financial incentives to make sure the project runs to schedule. His employers will want to avoid paying penalties for late delivery of outcomes if applicable. The construction contractor may have a conflict of interest regarding the environmental management measures and imposed deadlines.

We demand that air monitoring be undertaken on a continuing basis so we have real quantitative data to assess the real time effects of air quality. We demand the provision of air monitoring equipment providing 24 hour monitoring so that there can be no dispute about air quality levels.

Signed on Friday 16th December 2016 by:

A handwritten signature in black ink, appearing to read 'Grant Fraser', with a stylized, flowing script.

Grant Fraser Dip Ed

A handwritten signature in black ink, appearing to read 'Jill Fraser', with a stylized, flowing script.

Jill Fraser BA