INTEGRA COAL

Integra Coal Operations Pty Ltd

ABN: 96 118 030 998

Response to Public and Government Agency Submissions

Glennies Creek Open Cut Coal Mine

Compiled by:

R.W. CORKERY & CO. PTY. LIMITED

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Glennies Creek Open Cut Coal Mine

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1 INTRODUCTION

During the public exhibition of the *Environmental Assessment* for the proposed Glennies Creek Open Cut Coal Mine (the "Project"), the Department of Planning (DoP) received submissions from five government agencies, one special interest group and 25 public submissions. These were forwarded to R.W. Corkery & Co. Pty. Limited on 26 November and 3 December 2007. Each of the submissions was comprehensively reviewed and summarised.

Section 2 of this document provides a summary of each submission received and a record of where each issue raised is addressed in this document. Sections 3 and 4 provide responses to the government agency, and public and special interest group submissions respectively. Finally, Section 5 presents the Statement of Commitments for the Project, incorporating those commitments presented in the *Environmental Assessment* and additional commitments made by the Proponent in Section 3 and 4 of this document.

These responses presented in this document have been prepared by Mr Mitchell Bland (BSc (Hons), MEconGeol), Principal Environmental Consultant with R.W. Corkery & Co. Pty. Limited with the assistance of the following individuals from Integra Coal Operations Pty Ltd ("the Proponent").

- Bob Corbett, Environment Manager - NSW, VALE Australia Pty Ltd.
- Chris Smith, Project Manager, Integra Coal Operations Pty Ltd.
- Geoff MacKenzie, General Manager Sustainability - NSW, VALE Australia Pty Ltd.
- Steve Kovac, Business Development Manager - NSW, VALE Australia Pty Ltd.

In addition, the following specialist consultants provided information related to submissions of a technical nature.

- Holmes Air Sciences (air quality).
- Heggies Pty Ltd (noise and blasting).

The reports prepared by the above specialist consultants are presented as **Appendices 1** and **2** respectively and are referred to hereafter as HAS (2008) and Heggies (2008).

The Proponent would, at the outset, like to acknowledge the interest in the Project by the community surrounding the Project Site and would like to thank those who have provided a submission to the Department of Planning for taking the time to review the *Environmental Assessment* and *Specialist Consultant Studies Compendium* for the Project and prepare their submissions. The Proponent acknowledges that a proportion of the community surrounding the Project Site are concerned about the impact that the Project, together with other existing and proposed coal mining operations would have. The Proponent expresses the hope that any issues of concern or disagreement will be able to be resolved through open and honest dialogue between themselves and the community and a willingness to explore mutually beneficial outcomes.

2 SUMMARY OF SUBMISSIONS

Tables 2.1 and **2.2** present excerpts from the submissions made by government agencies and public and special interest group submissions respectively. In addition, one respondent, namely Mr and Mrs Smith, provided a lengthy submission. The excerpts from that submission are presented separately in **Table 2.3**. These tables also provide a record of where each issue raised is addressed in this document. Finally, **Figure 2.1** presents the residential location of each respondent, where it could be identified.

Table 2.1
Government Agency Submissions

Page 1 of 5

Agency		Issue Identified		Section
1.	Department of Planning (06/12/2007)	(a)	The cumulative air quality assessment does not appear to include emissions from the approved Glendell mine. The assessment should be revised to include these emissions. As you would be aware, Xstrata currently has an application on foot to modify the Glendell mine approval. The cumulative assessment should be undertaken in consideration of the proposed Glendell modification.	3.2
2.	Department of Environment and Climate Change (29/11/2007)	(a)	In Year 3, the model predicts exceedances of annual average PM_{10} at residence number 33 (Figures 38 and 39). This residence was incorrectly identified as number 32 on page 1-30 of the report.	3.3.2
		(b)	The Statement of Commitments (SoC) indicated that negotiations have commenced to reach an appropriate arrangement with the owners of residences 32 and 36 only. However, residences 33, 34 and 42 may also be significantly impacted.	3.3.2
		(c)	Consistent with the "Application Notes – NSW Industrial Noise Policy" an evening / night criteria will not be adopted that is higher than the day time criteria.	3.3.3
		(d)	The RBLs for location C will not be adopted without further justification and the RBLs for location B will be adopted.	3.3.3
		(e)	Table 11 in the NIA presents the proposed project specific noise levels (PSNLs) for the project. The DECC does not fully concur with the existing ambient noise monitoring results from which they were established (see above) and therefore does not concur fully with the PSNLs.	3.3.3
		(f)	Sleep Disturbance Criteria – A specific and quantitative assessment of the potential for sleep disturbance has not been undertaken. The DECC recommends that the screening levels sleep disturbance criteria contained in the "Application Notes – NSW Industrial Noise Policy" are applied as limits.	3.3.3

Note: A = Air Quality; N = Noise; B = Blasting; Fa = Fauna, Fl = Flora; BOS = Biodiversity Offset Strategy; Ab = Aboriginal Heritage; S = Soils; V = Visual; SW = Surface Water; GW = Groundwater; T = Traffic; EH = European Heritage; S-E = Socio-economic; G = General; H = Heritage; Rehabilitation

Figure 2.1
Respondent Property Locations
A3 / Colour

Table 2.1 (Cont'd)
Government Agency Submissions

Agency	Issue Identified	Section
2. Department of Environment and Climate Change (Cont'd) (29/11/2007)	(g) Meteorological Conditions – Temperature inversions have been included in the noise modelling. However, a 2m/s drainage wind flow had not been included in the modelling of inversion conditions on the basis that light winds are not a significant feature of the area for winter nights. This approach is not strictly in keeping with the guidelines of the INP. The recommended noise limits apply under inversion conditions with light winds up to 2m/s. This may represent a compliance risk for the Proponent.	3.3.3
	(h) Predicted Noise Levels and Impacts – The text in the NIA indicates that the operational noise modelling includes the Camberwell CHPP and the rail load out facility. However, the diagram at Appendix B5 – "Noise Emission Sources" does not show noise sources at the CHPP or the rail load out facility. The DECC has undertaken the assessment on the basis that all noise sources identified in the NIA have been considered, ie. consistent with the text.	3.3.3
	(i) Construction Noise Impacts – The noise modelling for the construction of the bund has considered receivers in A – north and B. The greatest impacts are predicted for residence 32 where a level of L_{A10} 55dB(A) is predicted. This represents a 5dB(A) exceedances of the background plus 20dB(A) goal. Construction noise impacts will need to be effectively managed and it is recommended that only construction of the Stony Creek Bund be exempted from the operational noise limits.	3.3.3
	(j) Operational Noise – The general conclusions in the NIA regarding the magnitude of noise impacts cannot be solely relied upon given that DECC has recommended changes to the PSNLs. Impacts at receiver locations 32 and 36 need to be managed via the project approval.	3.3.3
	(k) Road Transport Noise – The quantitative assessment is based on graduated distances of 25m, 50m and 75m from the respective roadways, however, the actual offset distances of residences from the roadways has not been stated. To investigate this issue further, DoP could require the Proponent to consider the actual offset distances of potentially affected residential receivers.	3.3.3

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Table 2.1 (Cont'd)
Government Agency Submissions

Agency	Issue Identified	Section
2. Department of Environment and Climate Change (Cont'd) (29/11/2007)	(l) <u>Rail Noise</u>: (i) Note 2 in "Table 27 – Existing and Proposed Freight Train Movements" in the NIA states as follows. *"The number of proposed project rains will not add to the number of existing coal trains since the Project will not add to the number of trains departing from the Camberwell CHPP".* On this basis you would expect no increase in rail noise levels on the Main Northern Line unless the configuration of the train set has changed. There appears to be no information in the EA to support this note. (ii) The NIA reports no increase in existing rail noise levels on the Main Northern Line as a result of the project, except during the night time period at an offset distance of 90m where an increase of 1dB(A) is reported. This is curious as no increase in noise is predicted at 30m and 60m respectively, as you would expect if rail movement numbers are not increasing.	3.3.3
	(m) DECC considers that additional offsets are required to conform to DECC's "offsetting principles" listed in "*Draft Guidelines for Biodiversity Certification of Environmental Planning Instruments"* (Appendix 2). DECC considers that a total of 140ha of Narrow-leaf Ironbark – Spotted Gum – Forest Red Gum community offset is necessary to adequately compensate for the area proposed to be cleared.	3.3.4
	(n) The EA identified that a number of Aboriginal groups raised concerns regarding the installation of Possum Skin Dam, without the undertaking of any archaeological surveys. The Aboriginal groups had requested clarification on this matter prior to offering their endorsement for the Glennies Creek proposal. Evidence of the views and opinions of the Aboriginal community should have been provided in the assessment and this significance should have been adequately reflected in the proposed management measures. The DECC recommend that this issue is resolved in consultation with the local Aboriginal community and the agreed strategies reflected in the conditions of consent.	3.3.5
	(o) The salvage program should be prepared in consultation with the Aboriginal community groups and provide an opportunity for their participation in the salvage process. The Keeping Place should also be decided in consultation with the Aboriginal groups who have expressed an interest in the proposal.	3.3.5

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Table 2.1 (Cont'd)
Government Agency Submissions

Agency	Issue Identified	Section
2. Department of Environment and Climate Change (Cont'd) (29/11/2007)	(p) Evidence of the views and conditions of the Aboriginal community groups for each of the sites identified should be provided in the assessment and be adequately reflected in the proposed management measures.	3.3.5
3. Department of Primary Industries – Mineral Resources (15/11/2007)	(a) Mine Safety – DPI notes that Figure B3 in the EA shows the proposed open cut area boundary as partly overlying the existing underground mine access road and portal area. The *Coal Mine Health and Safety Act 2002* section 17(4) requires that if there is more than one coal operation on a colliery holding then they must be separate and distinct. Therefore, the Proponent should provide to DPI, prior to the commencement of any open cut operations, plans that clearly define mining operation areas and which nominated a Mine Manager for each coal operation.	3.4
	(b) A Mining Operations Plan (MOP) should be submitted to DPI for acceptance prior to the commencement of any construction.	3.4
	(c) Soil Stockpiling Methods – The EA states that *"Soil would not be stripped from areas of previous disturbance because the soil profile in such areas is generally too thin and contains too many large rocks to be suitable or rehabilitation purposes"*. While the topsoil depth and quality may be inconsistent across this area, the Proponent should trial a topsoil recovery project. The project should be undertaken in consultation with DPI. The EA also states: *"Any stockpiles that are to be retained in excess of 3 months would be seeded using a non-persistent cover crop …"* DPI requires that all stockpiles should be immediately seeded using an appropriate sterile cover crop to reduce wind generated dust.	3.4
	(d) Amenity Bund Construction – The EA does not provide sufficient detail regarding the rehabilitation of the outer batter of the amenity bund. Ideally, the outer batter slope should not exceed 14 degrees for stability purposes but this may be increased provided the Proponent conducts additional rehabilitation measures to ensure the slope will revegetate quickly and effectively.	3.4
	(e) Waste Rock Emplacement – While it is noted that using waste rock to infill the Camberwell North Pit was considered, the EA argues that this alternative would block access to the Glennies Creek Underground Coal Mine. However, it is not clear from the EA why this is the case. This issue requires clarification.	3.4

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Table 2.1 (Cont'd)
Government Agency Submissions

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Agency	Issue Identified	Section
3. Department of Primary Industries – Mineral Resources (15/11/2007)	(f) <u>Waste Rock Emplacement</u> – The assessment of alternative waste rock emplacement locations also fails to evaluate two conceivable alternative scenarios. (i) Direct haulage and stockpiling for use as tailings dam capping material. (ii) Direct haulage and emplacement to the South Pit.	3.4
	(g) <u>Waste Rock Characterisation</u> – Section B7.1 of the EA regarding overburden characterisation indicates that no specific characterisation of overburden / interburden within the proposed open cut pit shell has been undertaken. While it is generally understood that the occurrence of acid forming material in this area is highly unlikely, further information on this issue may be required during the preparation of the Mining Operations Plan.	3.4
4. Department of Water & Energy (16/11/2007)	No response required.	
5. Mine Subsidence Board (13/11/2007)	No response required.	
6. Roads and Traffic Authority (05/11/2007)	No response required.	

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Table 2.2
Public and Special Interest Group Submissions

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Submission Received from:	Issue Identified	Section
1. C Payne 888 Middle Falbrook Road Glennies Creek (25/11/07)	(a) I consider the close proximity of the open-cut development will substantially reduce the value of the property.	4.14.3
	(b) The EA discloses that my residence will be exposed to impacts as follows. (i) Exceedance of intrusive noise. (ii) Exceedance of dust emissions.	4.5.6
	(c) I am concerned that blasting activities may occur on the average of 5 times per week and the anticipated levels, although predicted to be within the accepted guidelines, they are never the less very high. Should the development be approved, I request an appropriate monitor be permanently established in close proximity to my residence.	4.5.5

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Table 2.2 (Cont'd)
Public and Special Interest Group Submissions

Submission Received from:	Issue Identified	Section
1. C Payne 888 Middle Falbrook Road Glennies Creek (25/11/07) (Cont'd)	(d) With regard to cumulative impact, I am disappointed that any impacts forthcoming from the Glendell Mine appear to be disregarded. Part of the Glendell operations will in fact be closer than the Ashton Mine that has been taken into account.	4.15.2
2. BH & BL Evans (15/11/07) "Alcharinga" 304 Stony Creek Road SINGLETON	(a) The operation of the project as described, will make it impossible for us to continue to live at our present address due to the environmental and personal impact factors of dust, noise, light, increased traffic flow, traffic dislocation due to blasting and of course lack of amenity which we have enjoyed for 21 years and had presumed to enjoy for the oncoming decades.	4.15.2
3. AC Noble (22/11/07) "Sydenham" 596 Glennies Creek Rd SINGLETON	(a) I strongly object to the project on the grounds that it will create dust, noise and blasting vibrations at my home and property at Glennies Creek. This may potentially make my living conditions less comfortable and cause possible damage to building structures. Likewise, I object to the accumulative effect this project may potentially have, those being dust related health issues, ongoing noise and damage to property.	4.15.2
4. Graeme & Kay Cheetham (22/11/2007) "Ventura" 936 Middle Falbrook Road GLENNIES CREEK SINGLETON	(a) In the *Environmental Assessment*: (i) Several residents' names are incorrect. (ii) Section D11, the location of building 39 appears too high on the plan and is adjacent to No. 40. (iii) Section D11, either No. 41 or No. 42 does not exist, there is only one residence on this property. (iv) On page D-137, Photo Plate D2 is not taken from residence 45 but instead from residence 43. (The mine cannot be seen from No. 45). (v) Under groundwater section D11.2.1, they show only 5 registered bores on Figure D32, omitting our bore (well). They have also omitted test results taken from our well by Daniel Barclay from AGE Consultants Pty Ltd, on Table D44.	4.2.4, 4.11.1
	(b) We currently rent out two other homes on our property, but if we experience dust and noise from the mine, renting these houses would be more difficult at their present rate. Also our three homes rely on rainwater tanks for domestic supply and we fear this will be polluted from the mine's dust.	4.3.3

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Table 2.2 (Cont'd)
Public and Special Interest Group Submissions

Submission Received from:	Issue Identified	Section
4. Graeme & Kay Cheetham (Cont'd) (22/11/2007)	(c) Property Values – We fear that with a mine so close it would severely depreciate the value of these properties and affect our hard worked for assets. In fact, property No. 139 (a residential building block we started to develop prior to Integra announcing the development of the new Glennies Creek Open Cut) is losing potential buyers due to their concern with the mine.	4.14.3
	(d) We wish to complain about the technique of the noise recording carried out by Heggies. (i) Firstly, it was done for a short time only. (ii) Secondly, it happened to occur at the same time there was an unusual number extra number of trucks transporting road ballast to Glennies Creek Underground (the monitor was in the front paddock close to the road). (iii) Thirdly, the fixed recorder was in place close to a pet dairy cow which was in season and bellowed excessively for two days. (iv) Fourthly, one afternoon I was doing some tractor work with a machine that is very noise when Mr Muller stopped his car and monitored it with a mobile microphone from the car window next to where I was working. This was not a typical noise sample.	4.5.2
	(e) We feel this will be a real problem with south and southeasterly winds bringing dust directly on our property. We are in a natural valley or amphitheatre with Glennies Creek entering at one end and exiting at the other. We experience variable wind patterns and speeds not necessarily the same as prevailing winds as stated in the EA document. The RL level of this area is a lot lower than the mine and would create dust setting due to the low valley floor, (dust and noise will be even more excessive during times of temperature and cloud inversion). It was noted that dust projections from the proposed Glendell mine were not used as this would increase the cumulative effect.	4.4.2
	(f) We like to open our house, windows and doors when a cool southerly is blowing but this will be difficult with increased dust levels from the new mine. The dust entering our drinking water is a very real health worry.	4.3.3

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Table 2.2 (Cont'd)
Public and Special Interest Group Submissions

Submission Received from:	Issue Identified	Section or Comment
4. Graeme & Kay Cheetham (Cont'd) (22/11/2007)	(g) It is also concerning that no dust monitoring was done at or close to our properties so we would have a benchmark to work from.	4.4.3
	(h) The EA illustrates dust emitted from haul roads at different years of operation but did not see any figures for dust from blasting, which will create clouds of dust and would have to impact neighbouring residences.	4.4.2
	(i) Blasting is of real concern as we experienced damage to our property from the original Camberwell North Pit, which was repaired and paid for by Camberwell Coal. We can only expect we will experience the same damage or worse than before because this new mine is closer.	4.5.3
	(j) A complete inspection of all three houses and irrigation mains should be taken out at the mine's expense prior to commencement of the mine, and a guarantee that any subsequent damage will be compensated for and repaired.	4.5.7
	(k) We have also brought to the mine's attention the presence of unstable rock cliffs on Integra owned land creek bank, opposite our property. There is no mention of this in the EA. There is a risk of major rock falls as a result of ground vibrations. People fish in this creek and our children often kayak in the creek.	4.5.7
	(l) We rely on water from Glennies Creek for irrigation of crops and fear contamination of supply if there is a dirty water dam breach in heavy storms.	4.9.3
	(m) We also rely on well (bore) water for stock and domestic supply from a licensed well on the property. A guarantee is needed that this well would not be affected in any way.	4.11.1
	(n) The EA document states rehabilitation of 10ha along the riparian zone of Glennies Creek in the northern and Supplementary biodiversity areas with its neighbours. We are those neighbours and at this stage the mine has had no contact with us for those proposals.	4.2.5
	(o) An increase in traffic on Stony Creek and Middle Falbrook Roads would require an upgrade of the intersection of these roads as at present it is very dangerous. Also, the Middle Falbrook Bridge requires a substantial upgrade.	4.12.4
	(p) It is noted that Integra presently cull kangaroos near their entrance roads but don't worry about their neighbours. What will be left for residents to deal with then the mine finishes? Who will look after the mine land and control noxious weeds and animals and bushfires?	4.6.3

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Table 2.2 (Cont'd)
Public and Special Interest Group Submissions

Submission Received from:	Issue Identified	Section
5. Wendy Bowman "Rosedale" (25/11/2007) SINGLETON	(a) Dust is in the air we breathe 24 hours a day, namely PM_1's, $PM_{2.5}$s, PM_{10}s. The effect of dust on the residents of the Camberwell area is noted in the attached results of the *"Federal Pollutant Inventory"*. Dust falls on roofs, then into water tanks. The water in our tanks is no longer drinkable. A number of residents have been ill and this has been proven to be the tank water. We request that Ashton and Integra Mines provide drinking water for ALL residents in Camberwell.	4.3.3
	(b) Village is surrounding by mines, Ashton to the west, Integra to the east and Mt Owen working to the north. ALL mines to cease working at 10:00pm immediately.	4.15.3
	(c) We request, YET AGAIN, an independent study of the affects of the coal mining in the Singleton / Muswellbrook shires on the health of the residents due to the concentration of 26 mines and 3 coal-fired power stations, concentrated in this small section of the Valley.	4.3.2
	(d) Homes in the Camberwell area are constantly rocked by blasting from Ashton and Integra Mines, resulting in cracking of walls and concrete water tanks. These mines are exceeding their conditions to our detriment.	4.5.7
	(e) Spotted Quolls now found in the village – forced out of what is left of the Ravensworth State Forest by Mt Owen Mine.	4.7.3
	(f) This open cut project brings a problem with the surface water. The EA states "two dams for dirty water". Having seen the result of the cyclonic storm in the June long weekend, these dams would not have held and the water and sediment would have washed down into the creek.	4.9.3
	(g) "The Environmental Safeguards and Residual Impacts" are laughable if they are to be compared with the rehabilitation so far. Camberwell Coal rehabilitation is a complete disgrace, possibly one of the worst of any mine site in the Valley. This needs to be looked at very closely with ongoing checks.	4.6.2
	(h) Again, we request that Camberwell and Jerry's Plains Villages be heritage listed as "whole villages".	4.13

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Table 2.2 (Cont'd)
Public and Special Interest Group Submissions

Submission Received from:	Issue Identified	Section
6. Dallas & Pauline Baker (27/11/2007) Thomas Lane Via SINGLETON	We live nearby and are very concerned about: (a) Increased dust and noise pollution.	4.3.4
	(b) Increase respiratory problems, eg. asthma.	4.3.4
	(c) Being unable to use our tank water and having to buy bottled water for drinking.	4.3.4
	(d) The recent increase in fine dust inside our house that is relatively new.	4.3.4
	(e) We are already surrounded by mines.	4.15.2
	(f) We are worried about the impact on our health, especially the likelihood of getting lung cancer.	4.3.4
	(g) The impact on the native fauna.	4.7.4
7. Bob & Kim Bell (20/11/2007) 1093 Bridgman Road SINGLETON	(a) The noise levels in the area of our residence will increase to a level well above what we have now. This will happen all year round including public holidays and weekends.	4.5.6
	(b) The dust levels will also increase.	4.4.7
	(c) It is more than likely that the value of our property will decrease due to the location of the mine and the increase of the noise and dust levels.	4.14.3
	(d) Blasting will not only increase the noise and dust levels in the area, but will also increase the vibration which may affect our residence.	4.5.7
	(e) There will also be an increase to the volume of traffic on Bridgman Road from Singleton to Stony Creek Road which is not mentioned in the Executive Summary.	4.12.2
8. JB & MF Bradford (19/11/2007) "Binalong" 812 Bridgman Road SINGLETON	(a) Being on top of a hill at approximately 72m we are sure to be adversely affected by noise, dust and night time light.	4.4.2, 4.9.3
	(b) The accumulative effect of dust with other mines will be intolerable.	4.4.2
	(c) The Autumn to October wind direction and topography places us right in line for all the above, contrary to the EIS wind rosette which I believe to be the reverse.	4.4.2
9. DR & MK Bridge (22/11/2007) "Windy Hill" GLENNIES CREEK Via SINGLETON	(a) Why were we not told of the total size of the project in the first application.	4.2.2
	(b) We have rung the magic complaint number on many occasions only to get an answering service and when we did eventually get to talk to someone it was always too late as the damage was done. Why wouldn't we all get complacent and not ring up, hence the low number of complaints as per report.	4.2.6
	(c) The mine is too noisy now. Will work stop when noise reaches 5dB(A) limit? Who polices this?	4.5.6

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Table 2.2 (Cont'd)
Public and Special Interest Group Submissions

Submission Received from:	Issue Identified	Section
9. DR & MK Bridge (22/11/2007) (Cont'd) "Windy Hill" GLENNIES CREEK Via SINGLETON	(d) We also note there seems to be no mention of the blasthole stemming trucks and dog trailers etc. who tear up and down the road.	4.12.7
10. BW & RA Cherry (17/11/2007) 893 Middle Falbrook Road GLENNIES CREEK	(a) How are they going to control the dust? Yes they will water the roads, but what happens to the dust created from digging, blasting and overburden?	4.4.5
	(b) Local rural roads not industrial roads as stated in the assessment, traffic will increase.	4.12.2
	(c) Middle Falbrook is a local rural road and with the increase in heavy trucks and trailers (nearly as big as B-Doubles) who will pay for the repair of our road from the damage caused by these large trucks?	4.12.5
	(d) We have seen an increase of rubbish on the side of Middle Falbrook and Stony Creek Roads over the last few years. Extra 130 light and 10 heavy vehicles per day) that adds up to a lot more rubbish.	4.12.7
	(e) There will be extra noise from mining, dump trucks, diggers, etc. lasting till 10:00pm.	4.5.7
	(f) Noise from blasting and possible damage caused to our house, who will pay? We have enough vibration from Integra Open Cut now, we do not need any more.	4.5.7
	(g) The removal of any trees in the valley is not acceptable. The fauna that cannot be relocated will die. Once the species has disappeared they will be lost to us forever. This could happen to the Grey Crowned Babbler and the Brush Tailed Phascogale, both threatened fauna.	4.7.2
11. G & W Cooper (undated) 900 Bridgman Road SINGLETON	(a) The data collected from the high volume sampler at the residence of AH Lambkin (11) is insufficient as it is at the bottom of a hill which makes it susceptible to inaccuracies and even though only 500m away will not indicate increases in dust at our residence.	4.4.2
	(b) Noise impacts are judged on the increase from the normal and without determining the true benchmark background noise level.	4.5.2
	(c) Although Integra or their agents made the effort to speak to residents to hear their fears and aspirations about the future in March 2005, some 2 ½ years later the Company has clearly failed to act appropriately to alleviate such concerns.	4.2.2

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Table 2.2 (Cont'd)
Public and Special Interest Group Submissions

Submission Received from:	Issue Identified	Section
11. G & W Cooper (undated) 900 Bridgman Road SINGLETON	(d) The increase in traffic on already overtaxed essentially country roads in also a concern. Bridgman, Stony Creek and Middle Falbrook Roads are already overloaded and should be upgraded before any further increase in traffic flow is allowed. Children alighting from buses are a particularly concern.	4.12.2
	(e) Health effects on both adults and children living in relatively close proximity to these mines should be studied in detail. We have several mines already in the immediate area, Mt Owen, Camberwell Coal, Ashton, Rixs Creek and Hunter Valley, just to name a few.	4.3.2
	(f) The drop in property values associated with being close to a coal mine is another concern.	4.14.3
	(g) Benchmarking the status quo (noise / dust / traffic) would surely provide good faith by the Company and a guarantee to maintain the current property assets or to compensate if they can't.	4.4.3, 4.5.2, 4.12.2
12. Thelma De Jong (no address) (23/11/07)	(a) Tank water is polluted with black sludge from mining.	4.3.3
	(b) Camberwell was recently declared in drought an water supply is at an all time low and yet the government is placing the needs towards the mining industry due to cause of money. This is not fair to anyone living in this district because everybody deserves the right to have water.	4.10.3
	(c) We need to protect our heritage by placing an exclusion zone around the church and the village from mining to preserve our history for future generations.	4.13
	(d) The invasion of noise from the industry can place a strain on individuals and their families, having these increasing amounts of stress placed on the residents of Camberwell can affect their health.	4.5.5
	(e) The mining companies do not take responsibility for the damage of homes from blasting due to the ground vibrations.	4.5.7
13. Steve & Carol Ernst (26/11/07) "Reata" 5850 New England Highway CAMBERWELL	(a) We request an independent study of the composition of the dust, not just the amount falling.	4.4.7
	(b) Fresh water in home tanks too polluted to drink. Ashton and Integra Mines to provide drinking water for ALL residents of Camberwell Village and surrounding landholders until mining ceases.	4.3.3

Note: A = Air Quality; N = Noise; B = Blasting; Fa = Fauna, Fl = Flora; BOS = Biodiversity Offset Strategy; Ab = Aboriginal Heritage; S = Soils; V = Visual; SW = Surface Water; GW = Groundwater; T = Traffic; EH = European Heritage; S-E = Socio-economic; G = General; H = Heritage; Rehabilitation

Table 2.2 (Cont'd)
Public and Special Interest Group Submissions

Submission Received from:	Issue Identified	Section
13. Steve & Carol Ernst (Cont'd) (26/11/07)	(c) In the Hunter Valley we have the highest rate of Type 1 Diabetes in Australia. This corresponds with the highest concentration of open cut coal mining in Australia. Why?	4.3.2
	(d) Work at all mines to cease at 10:00pm.	4.15.3
	(e) Ashton and Integra both exceed continually. Our house has had windows cracked from blasting and after having our bathroom totally renovated this year, within a month of completion, the bathroom tiles cracked. A concrete fresh water tank on our property sustained cracks due to an excessive blast on 2/7/06 and now leaks profusely.	4.5.7
	(f) Our horses have suffered from a dry cough for many years. We have had our horses checked by our veterinarian. His prognosis was a respiratory problem due to the amount of dust they inhaled daily.	4.4.7
	(g) Camberwell has the second oldest Church in the Newcastle Diocese. It MUST be protected and we request a mine exclusion zone surrounding the village.	4.13
	(h) Any future approvals for mining in close proximity to our property may render it uninhabitable and drastically impact on the value, which will obviously affect our future upon retirement from the work place.	4.14.3
14. Barry & Susanne Finney (24/11/07) "Ullmara" 986 Middle Falbrook Road GLENNIES CREEK SINGLETON	(a) At present, our family live at residence 41, or 42, indicated by the EA document, we can assure you there is only one residence on this property.	4.2.4
	(b) Item D7 dust monitors indicated in the EA are not located in our area, in relation to prevailing winds.	4.4.3
	(c) This area locating residence 39, 40 (41, 42) experience varying wind patterns and speeds not necessarily the same as prevailing winds as stated in the EA document. This area is also of a lower RL than the designated mine area which would definitely create dust settling in the lower area noted.	4.4.2
	(d) B30 mining equipment – lighting plants have not been listed and in what position will they be facing in operations?	4.9.2
	(e) Only one water cart is not adequate for the work scope for this size and type of development, considering dust suppression is a major consideration for all concerned.	4.4.5

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Table 2.2 (Cont'd)
Public and Special Interest Group Submissions

Submission Received from:	Issue Identified	Section
14. Barry & Susanne Finney (Cont'd) (24/11/07)	(f) Road access to the mine – the EA statement is very vague in its interpretations. At present we have an increased level of light vehicles, heavy vehicles, earthmoving floats and B-Double trucks attempting to access Glennies Creek underground mine by the rout from the Camberwell district New England Highway intersection, Glennies Creek Road, to Middle Falbrook Road across Glennies Creek Bridge to Glennies Creek Mine. These traffic movements create some extreme concern and inconvenience to residents in this area for the following reasons. ….. The Glennies Creek Bridge at present is in severe state of disrepair with the approaches failing due to this heavy traffic, this issue needs to be clarified for the present and future traffic movement.	4.12.3
	(g) Table D16 – do these figures truly represent all start and finish times for all shifts worked? This table seems to only represent one day shift only.	4.15.3
	(h) Table D29 – Residences 39, 40, 41 are not listed on this graph and why?	4.5.3
	(i) Preamble – F19 – I have not found any indications relating to air quality related to blasting activities, after burn etc. It has been my experience as a contractor in the mining industry the pollution from blasting is quite high with the result of many coal mining companies regulating their blasting activities around weather conditions, to the point of being fined for any breach in policy and procedure.	4.4.4
15. Edward & Brenda Kleinman (19/10/07) 750 Bridgman Road SINGLETON	(a) We wish to advise that the residence listing is incorrect. Our Integra Coal Operations Pty Ltd allotted number is 102. This number in your recent CD-ROM states that we are non-projected vacant land.	4.2.4
	(b) We request that a dust monitor be placed at our property as we are closest to the creek that feeds the dam used by Integra.	4.4.3
16. John & Judith McInerney (20/11/07) "Somerset Hill" 76 McInerney Road CAMBERWELL	(a) Every time we have a blast the fallout of dust is smelt, and felt in our eyes. What is happening to our respiratory tracts?	4.4.4
	(b) We demand Ashton and Integra to supply the residents and surrounding landowners of Camberwell with clean drinking water until mining ceases.	4.3.3

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Table 2.2 (Cont'd)
Public and Special Interest Group Submissions

Submission Received from:	Issue Identified	Section
16. John & Judith McInerney (Cont'd) (20/11/07)	(c) We request an independent study of the fallout to determine the composition of the dust, not just the amount.	4.4.7
	(d) Noise affects our sleep nightly. ALL mining operations should cease at 10:00pm.	4.15.3
	(e) Property values are also an issue.	4.14.3
	(f) Glennies Creek water management and conservation is of utmost importance and needs careful consideration.	4.10.4
	(g) Our historic village of Camberwell needs your protection as we have the second oldest church in the Newcastle Diocese. The mine exclusion zone needs to be extended to save our heritage.	4.13
17. Stephen McInerney (20/11/07) 5 Oldknow Crescent SINGLETON	(a) Dust monitoring every minute of the day not a 24-hour period. No permittable blasts over the limit. Every blast should be monitored and within the boundary's regulations.	4.5.5
18. Marg McLean (24/11/07) PO Box 462 SINGLETON	(b) The application should be rejected as the Project Description Report (PDR) does not comply with the Director-General's requirements to assess the cumulative impact of the proposed activity on flora and fauna.	4.8
	(c) Further clearing of already extensively cleared vegetation communities cannot be considered as having minimal cumulative impact, particularly with no objective assessment.	4.8
19. JH & MR Moore (24/11/07) 893 Middle Falbrook Road GLENNIES CREEK	(a) How can they stop the dust? No matter how much watering they do, they will not stop the dust. Do they stop mining on high windy days?	4.4.5
	(b) Our road is not an industrial road, it is a local road.	4.12.2
	(c) There is an increase of rubbish on the roadside, empty cans and bottles from vehicles. This will become worse with the extra traffic.	4.12.7
	(d) The extra increase in noise from the mining activity and increased traffic we do not accept.	4.5.6
	(e) The increased lighting and extra noise at night we totally object to.	4.9.3
	(f) Vibration from the blasting could cause extra damage to our house.	4.5.7

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Table 2.2 (Cont'd)
Public and Special Interest Group Submissions

Submission Received from:	Issue Identified	Section
19. JH & MR Moore (Cont'd) (24/11/07)	(g) There are far too many blasts now, we do not want this to increase	4.5.7
	(h) We do not want to see any more trees removed.	4.8
	(i) What happens to the wildlife that lives there? No one cares.	4.7.4
	(j) We are concerned about excess water contamination from the mine spreading over our property and polluting Glennies Creek.	4.9.3
20. Keith & Yvonne Moss (26/11/07) "Lazy Eagle Farm" 5883 New England Highway CAMBERWELL	(a) We request an independent study of the composition of the dust, not just the amount falling.	4.4.7
	(b) Fresh water in our home is too polluted to drink, even though Ashton Mine has cleaned the tank out. We request Ashton and Integra Mines to provide drinking water for ALL residents of Camberwell Village and surrounding landholders until mining ceases.	4.3.3
	(c) Mrs Moss has recently been diagnosed with a cist 6cm in diameter on her liver. She does not drink alcohol or smoke and her medical practitioner believes she has picked up a bacterial infection from inhaling the amount of dust daily.	4.3.4
	(d) Work at all mines should cease at 10:00pm. We both experience sleep disruption due to the excessive amount of noise and light at night.	4.15.3
	(e) Ashton and Integra both exceed continually. Blasting from Ashton and Integra Mines constantly rocks our home resulting in severe warped flooring.	4.5.7
	(f) Our horses have suffered from a dry cough from some years. Our veterinary surgeon has consulted with us and seen our horses and cannot find anything wrong with them as such but believe the dry cough must be caused from the amount of dust they inhale and eat from pasture.	4.4.7
	(g) We have had dozens of spotted quolls on our property recently which has never occurred before and we believe it is because they have no where to live.	4.7.3
	(h) Camberwell has the second oldest Church in the Newcastle diocese. It must be protected and we request amine exclusion zone surrounding the village.	4.13
	(i) Any future approvals for mining in close proximity to our property may render it uninhabitable and drastically impact on the value, which will obviously affect our future upon retirement from the work place.	4.14.3

Note: A = Air Quality; N = Noise; B = Blasting; Fa = Fauna, Fl = Flora; BOS = Biodiversity Offset Strategy; Ab = Aboriginal Heritage; S = Soils; V = Visual; SW = Surface Water; GW = Groundwater; T = Traffic; EH = European Heritage; S-E = Socio-economic; G = General; H = Heritage; Rehabilitation

Table 2.2 (Cont'd)
Public and Special Interest Group Submissions

Submission Received from:	Issue Identified	Section
21. Dierdre Olofsson (no address) (23/11/07)	(a) The dust is that thick in our gutters, and the air is so polluted from dust emissions from the mines.	4.3.3
	(b) Tank water is polluted with black sludge from mining. I have recently had my tank cleaned and there was 3 foot of grey and black sludge found in the tank.	4.3.3
	(c) Camberwell was recently declared in drought and water supply is at an all time low and yet the government is placing the needs towards the mining industry due to cause of money.	4.10.3
	(d) Camberwell has the second oldest Church in the Hunter Valley, St Clements Church and the village of Camberwell has been dated back to 1820s. We need to protect our heritage by placing an exclusion zone around the church and the village from mining to preserve our history for future generations.	4.13
	(e) The mining companies do not take responsibility for the damage of homes from blasting due to the ground vibrations.	4.5.7
22. Sandra Turner (21/11/07) Glennie Street CAMBERWELL	(a) My home and my washing are often covered in a sheen of black dust and it has sadly become commonplace to see enormous clouds of dust billowing our way. If this new mine opens these massive clouds of dust are only going to become worse.	4.4.7
	(b) It is no longer possible to enjoy the peace and quiet of the country which I once experienced in my childhood and the possibility of this new mine opening is only going to increase the noise pollution in the area.	4.5.7
	(c) Because of the mine blasts I have had to relocate many precious ornaments in my house because the mine blasts often make the entire house shake. Over time, blasting from the mines surrounding me has caused large cracks to appear on the ceiling of my roof and also created large gaps between my kitchen cupboards. It is also sometimes extremely unsettling to my pets. I can only see the opening of a new mine leading to the continuation of these problems.	4.5.7
	(d) I am not confident in the mine's rehabilitation program.	4.6.4
	(e) The village of Camberwell has existed for 167 years. St Clements (built in 1851), the church and cemetery, much loved by local residents, are still in use today. The lovely, quiet, peaceful ambience which once existed in Camberwell has now been destroyed by the arrival of at least 4 mines and I believe the opening of a new mine in this area will only create more noise, dust and mini earthquakes in this beautiful place.	4.13

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Table 2.2 (Cont'd)
Public and Special Interest Group Submissions

Submission Received from:	Issue Identified	Section
23. Joanne Watling (25/11/07) Elbaccee Stud Glennies Creek Road SINGLETON	(a) The mine does make an effect during the day to control the dust from their sites but at night if you go outside with the car lights or a torch you can see the foggy dust in the air, it is very disturbing to think we and our animals are breathing this in constantly.	4.4.7
	(b) On our property we have a monitoring station for a major NSW university which have been doing air studies since 2004. Results from the study have not been finalised as yet but they have stated the increase in fine dust particles in the air were quite significant. "Glenville" is our property name. *(In summary, their findings state that PM_{10} and $PM_{2.5}$ dust levels are at or near the NEPM goals and would be likely to increase with a new development to the north of Glenville.)*	4.4.7
	(c) Over the past few years we have noticed the increase in eye irritation and running eyes, our horses also have had an increase in watery eyes, and this is during the winter months, so the flies have nothing to do with this problem. After the dew settled on the feed during the night it became sticky, so as the heifers fed through the grass the black sticky dust coated their faces from their noses to their eyes, worst of all is that our cattle and horses are digesting this dust everyday as they feed.	4.4.7
	(d) We had to install ducted air conditioning 2 years ago, because it became impossible for us to leave our houses open to cool off naturally with the breeze. Because of the night noise from the mines we were unable to leave windows open at night because you couldn't sleep or you would be woken by the continuous banging of truck bodies, bulldozer and the rock crusher at the underground.	4.5.5
	(e) The older house has sustained minor insignificant damage from the blasting as yet because of its solid construction. The other house on brick piers has sustained considerable damage. The mine explains as natural clay movement because of the changing weather, even though it didn't start until they started mining. The house had stood there some 100 years undamaged.	4.5.7
	(f) We have noticed the deterioration of the quality of the water in the creek over the past 5 years. Once the creek was clear and now we can see a constant murky and rusty look to the water. We use the water for household use and we used to drink it. We now, for the past 4 years, buy bottled water.	4.9.3

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Table 2.2 (Cont'd)
Public and Special Interest Group Submissions

Submission Received from:	Issue Identified	Section
24. St Clements Congregation (23/11/07) (No Address)	(a) We lodge our objection to another mine in the Camberwell area, concerning the welfare of the 2nd oldest church in the area. Our major concerns are the blasting damage from ground vibration.	4.13
25. Construction Forestry Mining & Energy Union Cessnock (26/11/07)	(a) The Proponent fails to provide any reference to greenhouse gas emissions in the EA submitted. Whilst there is no requirement by the Director-General for this criterion to be addressed, it is disappointing that as a regulatory body, the Director-General does not take a stance on this issue.	4.4.6
	(b) The Proponent is yet to determine whether mining-related activities would be undertaken by the Proponent or mining contractor. This weighs heavily against the socio-economic benefits of the project.	4.14.4
	(c) The Project, should it not have its mining activities undertaken by the Proponent and a commitment by the Proponent to continue, if possible, its existing Camberwell South Pit employees, then the Project would not secure ongoing employment for its current employees. This would significantly reduce the socio-economic benefits to the Project.	4.14.4
	(d) An assessment of the economic benefits through wage distribution and stability of labour relationships is missing from the assessment.	4.14.4
	(e) The Project is a coal mining industry project and wages and conditions that should be afforded to persons engaged to work at the Project should be consistent with those fair wages and conditions that are generally provided to others employed in the coal industry. It is further conditional upon continued employment for current Camberwell South Pit employees.	4.14.4
	(f) Additional areas of concern with respect to the socio-economic consideration contained within the *Environmental Assessment* is the paucity of any reference to the infrastructure and coal supply chain bottlenecks that mitigate any perceived socio-economic benefits from the Project.	4.14.4
	(g) The Proponent may be required to show that they have access to both rail and port capacity that will not result in reductions in other producers' access, resulting in other producers having to reduce its workforce.	4.14.4
	(h) The findings in this report challenges the acceptability of vacuum dry dust suppression and throws into question any legitimacy for using any system other than one that wets the drill cuttings as they are created at the base of the hole. This document highlights an existing health and safety issue, and if wet drilling is not intending to be employed at a site, then a term of the consent should require this type of drilling method to be adopted.	4.4.5

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Table 2.3
Submissions Received from Mark and Georgina Smith (Dated 11 November 2007)

	Issue Identified	Section
(a)	We wish to bring to your attention some anomalies in EA, Page D-37, Figure D-11. We have gone through the list of land with residences and cross matched it with the information that was supplied in the Glendell EIS. Property No. 64 – Is a mine-owned residence. Property No. 53 – Is a mine-owned residence. Property No. 54 – Is a mine-owned residence. Property No. 61 – Is a private residence with acquisition rights under existing consent. Property No. 65 – Is a private residence with acquisition rights under existing consent. Property No. 63 – Is a private residence with acquisition rights under existing consent. Three other properties on Glennies Creek Road are listed as land with residence, but are land only.	4.2.4
(b)	Table D13 show background noise levels for our location at 34dB(A) Day, 35dB(A) Evening, 35dB(A) Night. This information was conducted in March 2005. We believe these figures to be higher than otherwise stated. XMO EIS for Glendell mine shows background noise levels for our location at 30dB(A) Day, 32dB(A) Evening, 32dB(A) Night. These levels have been verified by other noise testing on our land. Since it is stated as above that the noise level from the project should not exceed 5dB(A) above background, the actual noise levels not to be exceeded on our land using an average of background noise should be 37dB(A) Day, 38dB(A) Evening, 38dB(A) Night.	4.5.2
(c)	EA, D3.4.3 - We reject the information in this section based on the following. As previously shown, the current consent conditions state Integra must not exceed 38dB(A) $L_{Aeq\ 15}$ on our property. We note that XMO current consent conditions state that 48dB(A) Evening and 43dB(A) Night is the cumulative noise level at which acquisition is implemented. Since it is predicted Integra will have similar conditions, we reject the information in this section as overestimating the maximum expectable levels.	4.5.2
(d)	It is of concern that the EA does not address acquisition criteria at any stage. We note that previous EISs we have perused have addressed this issue at length. This information has included at what noise level acquisition should take place.	4.2.3
(e)	SCSC Vol 1, Table 8 – states noise assessment at group F ambient level at 57dB(A) Day, 64dB(A) Evening, 39dB(A) Night $L_{Aeq\ 15}$. Given that it has been proven the background noise levels at our property are 30dB(A) Day, 32dB(A) Evening, 32dB(A) Night, there is a huge differentiation in these figures. Where is the excessive noise emanating from?	4.5.2

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Table 2.3 (Cont'd)
Submissions Received from Mark and Georgina Smith (Dated 11 November 2007)

	Issue Identified	Section
(f)	We have constantly maintained for over 2 years that Integra are breeching their consent regarding excessive noise on our land. Remembering that Integra's consent requires them not to exceed 38dB(A) on our property, we supply the following report (Spectrum Acoustics on behalf of Integra), as shown in Table 2 and Table 3 proves the background noise level of 32dB(A), Table 4 shows readings of 37.5 and 40 and 37dB(A). This is stated as emanating from Integra and Table 5 shows 36 and 39dB(A) emanating from Integra. It states at all of the monitoring locations mine noise was clearly audible from the direction of the Integra operations. This categorically proves Integra have breached their consent conditions on our land.	4.5.4
(g)	Presently as stated, we have complained numerous times to Integra regarding excessive noise. A large proportion of these complaints have been during the night-time frame. A proportion of complaints we make about excessive noise have previously been attributed to coal loading and preparation. Obviously if this new proposal by Integra is approved, the coal loading and preparation activity will significantly increase to accommodate the large increase in coal mining. Given the noise generated by this process is already excessive, there can be no question the increased activity 24/7 will have another detrimental affect on this noise. Also the highwall and auger mining activity will be significantly closer to our property than other current mining activities. It is obvious that will also contribute to the unacceptable cumulative 24/7 noise already affecting our land.	4.5.2
(h)	Volume 1, 2-35, Tables 14, 16 and 18 – states our property (75) the daytime, evening and night time predicted noise will be: Table 14 – 31, 32, 31dB(A). Table 16 – 35, 36, 32dB(A). Year 3 assessment and Table 18 – 35, 36, 31dB(A). Given that it has been established the background noise level is 32dB(A) at our house, is Integra seriously stating that an open cut mine operation producing 1.5 million tonnes of coal per year, that is located 1.5km from our house, that we look directly down on, is going to have no impact in the first 3 years and minimal after that, in regard to noise on our home?	4.5.2
(i)	We have no confidence in projected figures due to the significant impact of weather conditions on these figures. It seems astonishing to us the EA for Integra does not provide a provision for the same principle of buffer land. It is clear to us that because of the close proximity of some privately owned homes and land to Integra's proposed mine, also in our case the topography of the land that has our home looking directly down on the proposed site, that there is no question Integra should be instructed to provide this buffer zone in accordance with normal practice. We believe because of the reasons stated we should be included in this zone and acquired by Integra according to the conditions in their consent.	4.2.3
(j)	EA 3.7.3 – Assessment of Sleep Disturbance Noise Impacts – this section states sleep disturbance assessment criteria of rating background level plus 15dB(A). 32dB(A) being proven background noise this puts their idea of sleep disturbance at 47dB(A). We believe this figure is not correct. We have previously checked via the data from SentineX 4 what the recorded noise levels were when we have suffered sleep disturbance. The recorded figures have been considerably lower than this on these occasions.	4.5.2

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Table 2.3 (Cont'd)
Submissions Received from Mark and Georgina Smith (Dated 11 November 2007)

	Issue Identified	Section
(k)	Also, the issue of sleep disturbance is much deeper than being woken from one's sleep. By definition, sleep disturbance is a disturbance to one's sleeping pattern. This includes noise that prevents a person from falling asleep. Also the noise that prevents a person from continuing their sleep once they have awoken for whatever reason, an example being a trip to the bathroom, drink of water or whatever the person's normal sleeping pattern is. It would have to be conceded the level of noise that prevents a person falling asleep or continuing their sleep once awoken would be substantially lower than the noise level required to wake someone who is already sound asleep. This issue has not been addressed in the EA.	4.5.2
(l)	Volume 1, Page 2-89, Table D5 – Night Time Operator Attended Noise Survey Results 9 March 2005 and 30 March 2005 – we have not been included in this section. The nearest reference is location 35 which is at approximately the same distance from Integra's current mining activities to our home. Also we have attached results from noise monitoring for 19, 21, 22, 27 & 28 August 2006 and 14 September 2006.	4.5.6
(m)	Given this information was conducted over 6 nights compared to the 2 nights that have been used in all of information in this EA. Also the report we show is more than 1 year more recent than that supplied in the EA. It must be conceded the report we show is more relevant and clearly demonstrates again that Integra are constantly breaching their consent conditions regarding excessive noise on our home, since their current open cut consent requires that Integra not exceed 36dB(A) on our property. Given this noise is emanating from mine activities that are substantially further away and much more buffered than Integra's proposed mine in relation to our property. This again proves if Integra's proposal is approved it will have a negative impact regarding excessive noise on our property.	4.5.4
(n)	As can be seen our property is in the middle of all three mines shown in the map. Also our home is located on top of a ridgeline. As we have stated our home is at an elevation of approximately 115m. The highest point of our land is 120m and this is the highest point between XMO operations, Ashton, Glendell's proposal and Integra's current operations and new proposal. So our land and home is very exposed to the effects of noise and dust from all local mining activity.	4.5.6
(o)	If Integra's proposal is approved, it will have a significant effect on cumulative noise on our home and land.	4.5.6
(p)	Given we have shown the night time mine-related noise on or near our home constantly exceeded mining consent, there can be no doubt if Integra's current proposal is approved this will continue and as we have shown, it will increase.	4.5.4
(q)	It is clear that dust emissions are increasing in this area. Also, if Integra's new mine is approved and is operating the dust emissions will increase further. It is proven fine dust particles can have an adverse affect on respiratory health and since we are **far** more exposed to this dust than the Singleton township, our desire to remove our family from this exposure is paramount.	4.4.7
(r)	It is obvious to us that if the area of mining is to significantly increase, re: Integra's proposal, than the area of dust generation will increase as a direct consequence of this. Thus the dust generated must increase. The affect of this increased dust generation on our home will be exaggerated by the strong southwesterly winds which are a feature of this area.	4.4.7

Note: A = Air Quality; N = Noise; B = Blasting; Fa = Fauna, Fl = Flora; BOS = Biodiversity Offset Strategy; Ab = Aboriginal Heritage; S = Soils; V = Visual; SW = Surface Water; GW = Groundwater; T = Traffic; EH = European Heritage; S-E = Socio-economic; G = General; H = Heritage; Rehabilitation

Table 2.3 (Cont'd)
Submissions Received from Mark and Georgina Smith (Dated 11 November 2007)

	Issue Identified	Section
(s)	EA, Page D18, Last paragraph – the last sentence states Glendell was not included in the cumulative modelling process in regard to estimates of particulate matter emissions.	4.4.7
(t)	Given it is only approximately 1.5km from Integra's proposed mine site to our home, there can be no doubt when the S/E wind blows our home will be significantly impacted by dust from Integra's proposed mine and overburden areas.	4.4.7
(u)	EA, Page D17, D2.2.2 – Dust Deposition – in part this states average deposited dust levels in rural NSW between 1g/m^2 and 2g/m^2/month. It then goes on to state dust gauge D7 recorded levels of 4.1g/m^2 to 4.7g/m^2/month. This was due to increased activities at Camberwell south pit. According to the map Figure D7 the relation between the position of D7 and the Camberwell south pit is very similar to the relation between Integra's proposal and our home.	4.4.2
(v)	EA, Page D18, Table D9 – as shown in Figure D7, PM_{10} monitoring station HV3 is the closest PM_{10} monitoring station to our property. In Table D9, it states minimum concentration recorded at 22µg/m^3 and maximum of 51µg/m^3, it states annual average PM_{10} concentrations are below DECC goal of 30µg/m^3. This may be so but it also shows that the PM_{10} readings at this site have been recorded at nearly double the acceptable concentrates.	4.4.3
(w)	There can be little doubt if Glendell and Integra's proposal are approved, the PM_{10} readings on Glennies Creek Road and our home will increase as we are located in the centre of these projects and in the direction of dominant winds in this area.	4.4.2
(x)	EA, Volume 1, Page 1-31, Table 12 – this table states cumulative predicted PM_{10} concentrations on our property for 24 hours as 17 and 23µg/m^3. The recorded levels of PM_{10} at HV3 (nearest monitor to our home) has recorded a mean concentrate of 22µg/m^3 and are below the 30µg/m^3 goal set by the DECC. But there were readings up to 50µg/m^3. This information was only conducted over a period of 37 days.	4.4.2
(y)	EA, Volume 1, Figures – we do not believe the predictions for TPM. PM_{10} in these projections take into account the prevailing wind in this area. The second most significant wind rose in this area is S/E. EA, Volume 1, Page 1-57 shows N/E winds are virtually non-existent. Given this information we cannot fathom how the aforementioned predictions are maintained. For example, EA, Volume 1, Page 1-69, Figure 17, how can the predicted 40µg/m^3 contour line be the same distance for prevailing S/E winds as it is for N/E winds. The logic that this prediction uses is the strong S/E winds that are predominant in this area have no effect on where dust will travel.	4.4.2

Note: A = Air Quality; N = Noise; B = Blasting; Fa = Fauna, Fl = Flora; BOS = Biodiversity Offset Strategy; Ab = Aboriginal Heritage; S = Soils; V = Visual; SW = Surface Water; GW = Groundwater; T = Traffic; EH = European Heritage; S-E = Socio-economic; G = General; H = Heritage; Rehabilitation

Table 2.3 (Cont'd)
Submissions Received from Mark and Georgina Smith (Dated 11 November 2007)

Issue Identified	Section
(z) Due to ever increasing mining activity, Glennies Creek, Middle Falbrook and the Camberwell areas have become well known no go zones for anyone contemplating buying property in the Singleton area. This can be confirmed by any local real estate agents or property valuers. This situation has a significant impact on the value of homes and land in this area. This issue of devaluation of land and homes due to Integra's activities and proposal does not seem to have been addressed in this Integra EA.	4.14.3
(aa) Volume 2, Page 9-21, Section 3.2.4 – states in part that residents of Glennies Creek rarely interact as a community group. Also there is a high transient population. In the last 3 years, since the ever increased mining activities and expansions, this has changed dramatically. Now there are only approximately 5 privately owned residences on these roads. These are residences not mine-owned or under an acquisition consent or not in a financial agreement with the mines. The number of residence acquired in recent times is approximately 30 on these roads. Due to the escalating mining activity, this will exacerbate the already unacceptable situation regarding the devastation on what once was a very sociable and friendly community.	4.14.2
(bb) Volume 2, Page 9-16, Snapshot of Glennies Creek Community and Surrounds – we believe there are positives for Singleton as a whole. However, the EA does not address the very negative socio-economic effects for the residents of Glennies Creek area due to mining. These effects include: loss of community due to acquisition, very few privately owned residences so very transient population, continuing detrimental impact on market ability and value on properties in the area, ever decreasing quality of life due to ever increasing noise, dust and visual impacts.	4.14.2
(cc) Volume 2, Page 9-28, Quantifying Noise Impacts – it is absolutely unbelievable to us that Integra have the gall to suggest as they do in this section that the significant negative impacts on our residence as shown in our submission can be wiped away by a small monetary payment.	4.14.4
(dd) Therefore, we request respectfully, if Integra's proposal is approved, their consent conditions contain the normal provisions regarding acquisition, ie. all aspects of compensation including the disturbance component. A comprehensive list stating the properties that are in the acquisition zone and have acquisition rights, also the specified period of time (ie. 3 months) Integra have to acquire a property listed in their acquisition zone.	4.2.3
(ee) As shown in Photos (Attachment 1) our home looks directly down on Integra's proposed site. Currently, we look at Possum Skin Dam and beyond, we have a clear view of what we believe is coal haul route E. At night the flashing lights of the haulage trucks are clearly visible. We can see down to the proposed open cut access road and can see the area of the proposed open cut facilities.	4.9.3
(ff) Volume 2, Page 9-33, Section 5.3, Visual Impacts – we totally disagree with the statements in this section. As seen in the abovementioned photo, there can be no denying, depending on where you stand on our verandah and around our home, we have a clear view of every part of the project site.	4.9.3

Note: A = Air Quality; N = Noise; B = Blasting; Fa = Fauna, Fl = Flora; BOS = Biodiversity Offset Strategy; Ab = Aboriginal Heritage; S = Soils; V = Visual; SW = Surface Water; GW = Groundwater; T = Traffic; EH = European Heritage; S-E = Socio-economic; G = General; H = Heritage; Rehabilitation

Table 2.3 (Cont'd)
Submissions Received from Mark and Georgina Smith (Dated 11 November 2007)

Issue Identified	Section
(gg) If Integra's proposal is approved, this rural aspect will significantly change. There can be no denying we will also be affected by light from the project at night.	4.9.3
(hh) There is no doubt the visual aspect of Stony Creek Road will resemble what the highway end of Glennies Creek Road now looks like if Integra's proposal is approved.	4.9.3
(ii) We believe this EA has endeavoured to play down the actual effects of the total cumulative effect, eg. noise, dust, visual and socio-economic effects Integra's proposal and all other mining activity that has been commenced in the past 3 years is having on this area.	4.15.2
(jj) We believe the majority of traffic using Stony Creek Road is mine-related traffic. If the Integra proposal is approved, this traffic will substantially increase. We currently have issues on Stony Creek Road with cars and trucks moving to the incorrect side of the road on corners (cutting corners). We request Integra mark centre lines on Stony Creek Road to help prevent this dangerous situation.	4.12.5
(kk) If Integra's proposal is approved we request a process put in place that takes away this ambiguity and informs residents in advance exactly when Stony Creek Road will be closed and for how long.	4.12.6
(ll) Information and predictions as contained in this EA can be distorted or interpreted to suit one's own agenda. So we wish to state the following facts on this issue as we see it. (i) Background noise levels for our residence is approximately 32dB(A). (ii) Average accumulative noise levels at our residence over a 12 month period are approximately 42dB(A). (iii) Noise levels at our residence often exceed 42dB(A). (iv) The current cumulative noise level which necessitates acquisition at our residence in current consents of local mining companies is 43dB(A) $L_{Aeq\ 15}$ night. (v) PM_{10} levels on Glennies Creek Road were recorded over a 2 year period which exceeded acceptable levels. (vi) Glendell and particularly Integra's proposal is substantially closer to our residence that any current open cut mining activity in this area. (vii) Our property is approximately 1.1km from Integra's project boundary and our residence is approximately 1.8km from the proposed pit face. (viii) From our front verandah, we look directly down on the proposed site. (ix) As we have pointed out in our submission, noise predictions for XMO expansion were exceeded 44% of the time. The disparity in the prediction and the actual recorded noise was substantial. Noise predictions can be very understated.	4.4.3, 4.5.6, 4.9.3, 4.15.2

Note: A = Air Quality; N = Noise; B = Blasting; Fa = Fauna, Fl = Flora; BOS = Biodiversity Offset Strategy; Ab = Aboriginal Heritage; S = Soils; V = Visual; SW = Surface Water; GW = Groundwater; T = Traffic; EH = European Heritage; S-E = Socio-economic; G = General; H = Heritage; Rehabilitation

3 RESPONSE TO GOVERNMENT AGENCY SUBMISSIONS

3.1 Introduction

This section presents a response to each of the government agency submissions individually. Information presented in relation to air quality and noise and blasting has been drawn from the following documents.

- Letter report dated 25 January 2008 entitled *Glennies Creek Open Cut Coal Mine – Response to Public and Government Agency Submissions with Respect to Air Quality* prepared by Holmes Air Sciences (HAS) (HAS, 2008).
- *Response to Noise and Blasting-related Public and Government Agency Submissions – Glennies Creek Open Cut Coal Mine* prepared by Heggies Pty Ltd (Heggies) (Heggies, 2008). This document is referred to hereafter as Heggies (2008).

3.2 Department of Planning

Following the Exhibition Period, one query was received from the Department of Planning regarding the cumulative air quality assessment for the Project.

Submission 1(a)

> *The cumulative air quality assessment does not appear to include emissions from the approved Glendell mine. The assessment should be revised to include these emissions. As you would be aware, Xstrata currently has an application on foot to modify the Glendell mine approval. The cumulative assessment should be undertaken in consideration of the proposed Glendell modification.*

HAS (2008) state that air quality impacts associated with the proposed coal mining operations at the Glendell Coal Mine were previously assessed by Croft and Associates in 1982. HAS, during preparation of the air quality assessment for the Glennies Creek Project, were also preparing an air quality assessment for the application to modify the existing approval for the Glendell Coal Mine ("Glendell Project"). That application had been placed on hold pending revisions to the proposed mine plan. As a result, the air quality assessment for the Glendell Project was not available at the time that the air quality assessment for the Glennies Creek Project was being prepared. It was therefore not possible to incorporate a detailed emissions inventory from the Glendell Project into the cumulative assessment for the Glennies Creek Project. It was, however, recognised that the Glendell Project would contribute to cumulative dust levels in the vicinity of the Glennies Creek Project Site. As a result, the following allowances were made during the Glennies Creek Project air quality assessment for "non-mine and distant mine" sources.

- PM_{10} concentration (annual average) – 5µg/m^3.
- Total suspended particulate concentration (TSP) (annual average) – 10µg/m^3.
- Deposited dust (annual average) – 0.5g/m^2/month.

HAS state that at the time that the Glennies Creek Project air quality assessment was completed that they believed that these allowances were sufficient to take into account any dust emissions from the Glendell Project.

Not withstanding the above, **Table 3.1** presents the results of the air quality assessments for the Glennies Creek and Glendell Projects for those residences assessed during the air quality assessment for both Projects. The scenarios presented are as follows.

- Glennies Creek Project – Year 6 cumulative results for Haul Routes C and E.
- Glendell Project – Year 6.

HAS (2008) state that these scenarios represent a worst case scenario.

Table 3.1
Predicted Annual Average PM_{10} and TSP Concentrations and Deposited Dust Levels

Residence	PM_{10} ($\mu g/m^3$)			TSP ($\mu g/m^3$)			Dust deposition (g/m^2/month)		
	Impact Assessment Criteria								
	30 $\mu g/m^3$			*90 $\mu g/m^3$*			*4 g/m^2/month*		
	GCP	GP	GCP + GP	GCP	GP	GCP + GP	GCP	GP	GCP + GP
32	15	1.2	17	21	1.3	23	1.1	0.2	1.3
33	27	1.6	29	37	1.8	39	2.9	0.2	3.1
34	26	1.6	27	35	1.8	37	2.8	0.2	3.1
35	17	1.2	18	23	1.3	25	1.4	0.2	1.6
36	16	1.2	17	22	1.3	23	1.2	0.2	1.3
37	16	1.2	17	22	1.3	23	1.2	0.2	1.4
38	16	1.2	17	22	1.3	24	1.3	0.2	1.5
39	15	0.9	16	21	1.0	22	1.2	0.1	1.3
40	15	1.1	16	21	1.2	22	1.2	0.2	1.3
41	14	0.9	15	20	1.0	21	1.1	0.1	1.2
42	15	0.9	15	20	1.0	21	1.1	0.1	1.2
43	15	0.9	16	21	1.0	22	1.2	0.1	1.3
44	15	0.9	15	21	1.0	22	1.2	0.1	1.3
45	15	0.9	16	21	1.0	22	1.2	0.1	1.4
46	13	0.0	13	19	0.0	19	1.0	0.0	1.0
47	15	1.1	16	21	1.2	23	1.3	0.2	1.5
48	16	1.1	17	22	1.3	24	1.4	0.2	1.6
49	16	1.1	18	23	1.3	24	1.4	0.2	1.6
50	16	1.1	17	22	1.3	23	1.4	0.2	1.6
51	17	1.1	18	23	1.3	24	1.5	0.2	1.7
52	17	1.1	18	23	1.3	25	1.5	0.2	1.7
53	17	1.1	18	24	1.3	25	1.5	0.2	1.7
54	18	1.1	19	24	1.3	26	1.6	0.2	1.8
55	20	1.2	21	27	1.3	29	2.0	0.1	2.2
56	18	1.1	19	24	1.3	25	1.5	0.2	1.7
57	17	1.1	18	24	1.3	25	1.5	0.2	1.6
58	16	1.1	17	22	1.3	23	1.3	0.2	1.5
59	18	1.7	19	24	2.0	26	1.5	0.3	1.8
60	18	1.9	20	24	2.2	26	1.5	0.3	1.9
61	18	1.9	20	25	2.2	27	1.6	0.3	1.9
62	19	1.9	21	26	2.2	28	1.7	0.3	2.0
63	19	1.8	21	26	2.1	29	1.9	0.3	2.2
64	20	1.9	21	27	2.3	29	1.9	0.4	2.2
65	20	3.6	23	26	4.5	31	1.9	0.9	2.7
66	19	2.1	21	26	2.5	29	1.9	0.4	2.3
67	19	3.0	22	26	3.8	30	1.8	0.7	2.5
68	19	2.4	21	26	3.0	29	1.8	0.5	2.3
69	18	3.8	21	24	4.8	29	1.6	0.9	2.5
70	17	3.3	21	24	4.0	28	1.6	0.7	2.2
71	18	2.8	21	25	3.4	28	1.7	0.6	2.3
72	25	1.5	26	38	1.7	40	3.5	0.2	3.7
73	23	1.6	25	37	1.8	38	3.6	0.3	3.8
74	18	1.9	20	24	2.2	27	1.6	0.3	1.9
75	18	1.9	19	24	2.2	26	1.5	0.3	1.8
76	17	1.9	19	24	2.2	26	1.5	0.3	1.8

Source: HAS (2008) – Table 1
Note: GCP = Glennies Creek Project GP = Glendell Project

Table 3.1 indicates that with the exception of deposited dust contributions at Residences 67, 69, 70 and 71, the anticipated contribution of dust from the Glendell Project are less than the allowances made for "non-mine and distant mine" sources within the *Environmental Assessment*. At Residences 67, 69, 70 and 71, the cumulative dust deposition levels, including both the allowance for "non-mine and distant mine" sources and the calculated contribution from the Glendell Project, are less than the Glennies Creek impact assessment criteria.

3.3 Department of Environment and Climate Change

3.3.1 Introduction

The Department of Environment and Climate Change raised a number of issues related to the following environmental aspects.

- Air quality (see Section 3.3.2).
- Noise (see Section 3.3.3).
- Biodiversity Offset Strategy (see Section 3.3.4).
- Aboriginal Heritage (see Section 3.3.5).

3.3.2 Air Quality

Two issues were raised by the Department of Environment and Climate Change (DECC) in relation to the Project's air quality assessment.

Submission 2(a)

> *In Year 3, the model predicts exceedances of annual average PM_{10} at residence number 33 (Figures 38 and 39). This residence was incorrectly identified as number 32 on page 1-30 of the report.*

The Proponent acknowledges that Residence 33 is expected to receive annual average cumulative PM_{10} dust concentrations in excess of the impacts assessment criteria of 30µg/m^3 during Year 3 of the Project. The Proponent also acknowledges that this residence was incorrectly identified as Residence 32 on page 1-30 of HAS (2007). However, the Proponent also notes that the Residence was correctly identified in Part D2.7.1 of the *Environmental Assessment*.

Submission 2(b)

> *The Statement of Commitments (SoC) indicated that negotiations have commenced to reach an appropriate arrangement with the owners of residences 32 and 36 only. However, residences 33, 34 and 42 may also be significantly impacted.*

The Proponent acknowledges that Residences 33, 34 and 42 may also be significantly impacted by cumulative dust impacts as a result of the Project. However, the Proponent notes that Residence 34 is a Project-related residence.

In addition, Table D11 of the *Environmental Assessment* indicates that the contribution of the Project to the cumulative dust levels at Residence 33 is relatively minor. The Proponent notes that Residence 33 is located approximately 800m to the west of the Camberwell South Pit and that this residence has been previously highlighted as being adversely impacted by dust from that operation has been negotiated between Camberwell Coal and the owners of Residence 33 and is currently being implemented. As a result, an agreement to manage dust impacts at this Residence is already in place. The Proponent intends to continue with this agreement, and amend it, if required.

Finally, as noted in Part D2.7.1, the anticipated exceedances of the dust assessment criteria at Residence 42 are anticipated to be uncommon and relatively minor. Notwithstanding this, however, the Proponent would, if approached by the owners of this residence, enter into negotiations to identify an appropriate strategy to manage this issue with the owners of this residence. Finally, the Proponent anticipates that the project approval, should it be granted, would include a condition requiring acquisition of properties on request where certain environmental impact criteria are exceeded.

3.3.3 Noise

Ten issues were raised by the DECC in relation to the Project's noise assessment.

Submission 2(c)

> *Consistent with the "Application Notes – NSW Industrial Noise Policy" an evening / night criteria will not be adopted that is higher than the day time criteria.*

The application notes - *NSW Industrial Noise Policy* (dated 10 October 2006) not the NSW Department of Environment and Climate Change (DECC) state that:

> It is generally recommended that the intrusive noise level for evening be set no greater than the intrusive noise level for daytime. The intrusive noise level for night-time should be no greater than the intrusive noise level for day or evening. Alternative approaches to these recommendations may be adopted if appropriately justified.

Heggies (2008) state that previous experience conducting environmental noise monitoring in the Hunter Region, together with a review of published data of noise monitoring conducted in the vicinity of the Project, reveals that daytime $L_{A90(15minute)}$ noise levels are typically lower than the evening and night-time levels. Typically, insect activity and unstable atmospheric conditions prevail during the evening in spring, summer and autumn, thereby increasing the background noise levels. In addition, during the night-time period, prevailing stable atmospheric conditions tend to increase the noise level contribution from distant traffic and mining operations. The background noise monitoring results presented in the *Environmental Assessment* are consistent with these observations.

The intrusive noise criteria presented in the *Environmental Assessment* have been reviewed and Heggies (2008) confirm that they are appropriate for the Project as higher evening and night-time noise levels are a feature of the area surrounding the Project Site. Therefore, Heggies (2008) state that the intrusive noise criterion identified in Table D7 of the *Environmental Assessment* are appropriate for assessing the $L_{Aeq(15minute)}$ intrusive noise emissions from the Project.

Heggies (2008) also note that in order to cater for the observed increase in evening and night time background noise levels due to enhanced noise propagation from surrounding mining activity, it is appropriate to assess the Project's noise emission contributions via the amenity criterion.

Submission 2(d)

> *The RBLs for location C will not be adopted without further justification and the RBLs for location B will be adopted.*

Figure D11 of the *Environmental Assessment* presents the location of the noise assessment groups used to determine the Project-specific noise assessment criteria. Noise Assessment Group C (Group C), representing Residences 35 and 38, was identified by Heggies (2008) as an acoustically differentiated group of residences. Noise Assessment Group C is located in a relatively large, open area which receives reduced topographic acoustic attenuation from the surrounding mining operations and therefore is exposed to higher ambient noise levels in comparison to residences within Noise Assessment Group B. As a result, Heggies (2008) state that the Rating Background Levels (RBL) for Group C presented in Table D13 of the *Environmental Assessment* are appropriate and justifiable.

It should be noted that as a result of access and safety restrictions, the operator-attended noise surveys for Group C were conducted on Middle Falbrook Road, while the unattended noise assessment survey was undertaken at Residence 35. As a result, discrepancies between the operator-attended noise levels and the unattended noise survey results could be attributed to the different survey localities.

Submission 2(e)

> *Table 11 in the NIA presents the proposed project specific noise levels (PSNLs) for the project. The DECC does not fully concur with the existing ambient noise monitoring results from which they were established (see above) and therefore does not concur fully with the PSNLs.*

Table 11 of the noise impact assessment (Heggies, 2007) provides the Project-specific Noise Assessment Criteria which were reproduced in Table D17 of the *Environmental Assessment*. As noted previously, Heggies (2008) state that the RBL and the resulting Project-specific Noise Assessment Criteria for Group C presented in the Environmental Assessment are appropriate and justifiable. In addition, Heggies (2008) note that the Project-specific Noise Assessment Criteria were determined in accordance with the procedures specified in the INP

Submission 2(f)

> *<u>Sleep Disturbance Criteria</u> – A specific and quantitative assessment of the potential for sleep disturbance has not been undertaken. The DECC recommends that the screening levels sleep disturbance criteria contained in the "Application Notes – NSW Industrial Noise Policy" are applied as limits.*

Part D3.4.2 of the *Environmental Assessment* and Section 5.1 of Heggies (2007) identify that the sleep disturbance criteria for the Project, namely the $L_{A1(1\ minute)}$ noise level, should be less than 15dB(A) above the RBL. Heggies (2008) note that these criteria are consistent with the Industrial Noise Policy (INP) Application Notes.

Part D3.7.3 of the *Environmental Assessment* states:

> Numerical modelling of $L_{A1(1\ minute)}$ noise levels was not undertaken because of the unpredictable nature of these emissions. However, a review of noise events from comparable coal mining operations indicates that the maximum $L_{A1(1\ minute)}$ levels from mobile equipment are generally no greater than 10dB(A) greater than the $L_{Aeq\ (15\ minute)}$ intrusive noise levels produced by the operation.

Part D3.7.1 of the *Environmental Assessment* indicates that night-time $L_{Aeq\ (15\ minute)}$ noise levels would, with the exception of Residences 4, 5, 6, 7, 8, 9 and 11 (and Residence 102), be less than the Project-specific noise criteria, that is the noise levels would be less than 5dB(A) above the relevant RBL. As a result, the $L_{A1(1\ minute)}$ noise levels would be likely to be less than 15dB(A) above the RBL and consequently would be less than the sleep disturbance criteria.

The Proponent acknowledges that the sleep disturbance criteria may be exceeded at the residences previously identified. However, as stated in Part D3.7.1 of the *Environmental Assessment*, as the night-time noise emissions at these residences are the result of activities that have previously been approved, namely the Camberwell Coal Handling Processing Plant (CHPP) and that the Project would not result in any change to these activities, the anticipated impacts would be the same as the impacts currently experienced at these residences. In addition, the Proponent notes that the Camberwell CHPP has operated without any noise-related complaint since 2001.

Submission 2(g)

> *Meteorological Conditions – Temperature inversions have been included in the noise modelling. However, a 2m/s drainage wind flow had not been included in the modelling of inversion conditions on the basis that light winds are not a significant feature of the area for winter nights. This approach is not strictly in keeping with the guidelines of the INP. The recommended noise limits apply under inversion conditions with light winds up to 2m/s. This may represent a compliance risk for the Proponent.*

Heggies (2008) state that Project source to receiver drainage-flow winds would generally not develop in the vicinity of the Project Site because sensitive receivers are at higher elevations than the operating plant and equipment or intervening topography would prevent propagation of such air movements.

In addition, Heggies (2008) note that the noise assessment was prepared in accordance with the procedures specified in the INP. Accordingly, the Heggies (2008) anticipate that the relevant consent and other licence conditions would reflect the recommended operating noise limits presented in Table 21 of Heggies (2007), together with the corresponding atmospheric conditions under which the noise limits apply.

Submission 2(h)

> *Predicted Noise Levels and Impacts – The text in the NIA indicates that the operational noise modelling includes the Camberwell CHPP and the rail load out facility. However, the diagram at Appendix B5 – "Noise Emission Sources" does not show noise sources at the CHPP or the rail load out facility. The DECC has undertaken the assessment on the basis that all noise sources identified in the NIA have been considered, ie. consistent with the text.*

The noise assessment undertaken for the *Environmental Assessment* includes the operation of the Camberwell Coal Handling and Preparation Plant and rail load-out facility. Heggies (2008) and the Proponent acknowledge that these activities do not appear on the figure in Appendix B5 in Heggies (2007) or on Figure D12 of the *Environmental Assessment.* **Figure 3.1** presents an amended version of this figure.

Submission 2(i)

> *Construction Noise Impacts – The noise modelling for the construction of the bund has been considered receivers in A – north and B. The greatest impacts are predicted for residence 32 where a level of L_{A10} 55dB(A) is predicted. This represents a 5dB(A) exceedances of the background plus 20dB(A) goal. Construction noise impacts will need to be effectively managed and it is recommended that only construction of the Stony Creek Bund be exempted from the operational noise limits.*

The Proponent acknowledges that construction of the Stony Creek Road Amenity Bund would be the only activity that would be classified as a construction-related activity for the purposes of the noise assessment, and that all other activities would be assessed against the Project-specific operational noise limits.

In addition, the Proponent notes that, as stated in Part D2.5.1 of the *Environmental Assessment,* the Proponent has approached the owners of Residence 32 and 36 with a view to negotiating an appropriate arrangement regarding the anticipated project-related impacts on the properties. The owners of the residences have elected not to proceed with such negotiations and have requested to be kept informed of the Proponent's intentions. The Proponent has agreed to this request.

Finally, the Proponent also notes that potential construction noise impacts on the neighbouring residences would be managed in accordance with the Project's Noise Management and Monitoring Program.

Submission 2(j)

> *Operational Noise – The general conclusions in the NIA regarding the magnitude of noise impacts cannot be solely relied upon given that DECC has recommended changes to the PSNLs. Impacts at receiver locations 32 and 36 need to be managed via the project approval.*

As stated previously, Heggies (2008) state that, in their opinion, the RBL and Project-specific noise assessment criteria presented in Heggies (2007) and the *Environmental Assessment* are appropriate and justified.

The Proponent acknowledges that, a number of residences, including Residences 32 and 36, have been identified in Table D25 of the *Environmental Assessment* and being in either the Noise Management or the Noise Affectation Zones and the noise impacts on these residences would be managed in accordance with the Project's Noise Management and Monitoring Program. In addition, as discussed in Section 4.2.4 of this document, the Proponent acknowledges that Property 102 was erroneously identified as vacant land in the *Environmental Assessment.* As a result, the residence on this property should have been included in the Residential Noise Management Zone rather than the Vacant Land Noise Management Zone.

Submission 2(k)

> *Road Transport Noise – The quantitative assessment is based on graduated distances of 25m, 50m and 75m from the respective roadways, however, the actual offset distances of residences from the roadways has not been stated. To investigate this issue further, DoP could require the Proponent to consider the actual offset distances of potentially affected residential receivers.*

The Proponent would undertake an investigation to identify the actual offset distances of residences from relevant roadways. This commitment has been incorporated as Commitment 5.29 in the Statement of Commitments provided in Section 5.

Submission 2(l)
Rail Noise:

> *Note 2 in "Table 27 – Existing and Proposed Freight Train Movements" in the NIA states as follows. "The number of proposed project trains will not add to the number of existing coal trains since the Project will not add to the number of trains departing from the Camberwell CHPP". On this basis you would expect no increase in rail noise levels on the Main Northern Line unless the configuration of the train set has changed. There appears to be no information in the EA to support this note.*
>
> *The NIA reports no increase in existing rail noise levels on the Main Northern Line as a result of the project, except during the night time period at an offset distance of 90m where an increase of 1dB(A) is reported. This is curious as no increase in noise is predicted at 30m and 60m respectively, as you would expect if rail movement numbers are not increasing.*

Part B9.5 of the *Environmental Assessment* states that "washed coal from the Camberwell CHPP would continue to be loaded into 7 600t capacity Pacific National trains." The configuration and number of trains loaded per day would not vary from that currently approved. The Proponent acknowledges that this was not explicitly stated in the *Environmental Assessment.*

Table 28 in Heggies (2007) and Table D28 in the *Environmental Assessment* presented the predicted existing and cumulative train noise emissions. These tables contained a typographical error. A corrected version of these tables is presented a **Table 3.2**.

Table 3.2
Predicted Train Noise Emissions (dB(A) re 20 µPa)

Distance to Receiver	Daytime Existing Trains[1]			Daytime Cumulative Trains[2]		
	Average LAeq(15hour)	Peak LAeq(15hour)	Passby LAmax	Average LAeq(15hour)	Peak LAeq(15hour)	Passby LAmax
30 m	66	66	86	66	66	86
60 m	63	63	83	63	63	83
90 m	61	61	81	61	61	81
Distance to Receiver	**Night-time Existing Trains[1]**			**Night-time Cumulative Trains[2]**		
	Average LAeq(9hour)	Peak LAeq(9hour)	Passby LAmax	Average LAeq(9hour)	Peak LAeq(9hour)	Passby LAmax
30 m	67	67	86	67	67	86
60 m	64	64	83	64	64	83
90 m	63*	63*	81	63*	63	81

Note 1: Train noise emissions from existing freight trains and pre-Project consented rail traffic.
Note 2: Train noise emissions from cumulative rail traffic, including Project-related traffic.
* Corrected trains noise emission levels.

Figure 3.1
Noise Emission Sources – Amended

A3/colour

3.3.4 Biodiversity Offset Strategy

Submission 2(m)

> *DECC considers that additional offsets are required to conform to DECC's "offsetting principles" listed in "Draft Guidelines for Biodiversity Certification of Environmental Planning Instruments" (Appendix 2).*
>
> *DECC considers that a total of 140ha of Narrow-leaf Ironbark – Spotted Gum – Forest Red Gum community offset is necessary to adequately compensate for the area proposed to be cleared.*

The Proponent does not agree with the assessment methodology employed by the DECC to determine the area of Narrow-leaf Ironbark – Spotted Gum – Forest Red Gum community required to adequately offset the proposed disturbance of:

- approximately 68.3ha of Narrow-leaf Ironbark – Spotted Gum – Forest Red Gum community; and
- approximately 0.7ha of Regenerating Native Woodland / Shrubland community.

The Proponent notes that the Biodiversity Offset Strategy as proposed would preserve a total of 287.9ha of native vegetation in perpetuity, comprising the following.

- Tussock Grassland community – 44.4ha.
- Regenerating Native Woodland / Shrubland community – 74.6ha.
- Narrow-leaf Ironbark – Spotted Gum – Forest Red Gum community – 113.1ha.
- Bull Oak community – 20.9ha.
- Swamp Oak community – 33.4ha.
- River Oak community – 1.5ha.

In addition, as stated in Part D6.4 of the *Environmental Assessment*, each of the principles outlined in *Principles for the use of Biodiversity Offsets in NSW* presented as Appendix II in *Guidelines for Biodiversity Certification of Environmental Planning Instruments - Working Draft*, published, by the Department of Environment and Climate Change in April 2007 have, in the Proponent's opinion, been adequately addressed by the Biodiversity Offset Strategy as proposed.

Notwithstanding the above, however, the Proponent is willing to accept the DECC's recommendation that approximately 140ha of Narrow-leaf Ironbark – Spotted Gum – Forest Red Gum Community would be required to offset the proposed disturbance. The Proponent notes that it has included all suitable Project-related land, together with land that the Proponent anticipates that it would be required to acquire, within the proposed biodiversity offset areas. Given the need to identify suitable areas and the time required to assess them; obtain DECC concurrence with their acceptability as an offset; negotiate and implement the purchase or some alternative arrangement with the current landowner and provide security for the longer term, the Proponent considers it reasonable that the proposed Biodiversity Offset Strategy be implemented within 2 years from the date of receipt of project approval. This commitment has been incorporated into the Statement of Commitments as Commitment 8.3 presented in Section 5.

3.3.5 Aboriginal Heritage

Submission 2(n)

> *The EA identified that a number of Aboriginal groups raised concerns regarding the installation of Possum Skin Dam, without the undertaking of any archaeological surveys. The Aboriginal groups had requested clarification on this matter prior to offering their endorsement for the Glennies Creek proposal. Evidence of the views and opinions of the Aboriginal community should have been provided in the assessment and this significance should have been adequately reflected in the proposed management measures. The DECC recommend that this issue is resolved in consultation with the local Aboriginal community and the agreed strategies reflected in the conditions of consent.*

Section 2 of HLA (2007) identifies that the site of Possum Skin Dam was surveyed for items of Aboriginal heritage significance in the late 1980s and that the results of that survey were endorsed by the predecessor of the DECC. HLA (2007) state that construction of the dam was in accordance with the requirements of the *National Parks and Wildlife Act 1974*. As a result, the Proponent disagrees with the DECC and contends that the construction of Possum Skin Dam is not a relevant consideration for the Project. Furthermore, each of the Aboriginal groups identified in HLA (2007) was provided with a copy of the draft Aboriginal heritage assessment and were requested to respond. Responses were received from three groups, each of whom expressed satisfaction with the contents of the report, including the assertion that construction of Possum Skin Dam is not a relevant consideration.

Submission 2(o)

> *The salvage program should be prepared in consultation with the Aboriginal community groups and provide an opportunity for their participation in the salvage process. The Keeping Place should also be decided in consultation with the Aboriginal groups who have expressed an interest in the proposal.*

Part D7.4 of the *Environmental Assessment* states that:

> "an Aboriginal Heritage Management Protocol for sites GC1 to GC19 would be developed in consultation with the Aboriginal groups listed in Part D7.1.2 [of the *Environmental Assessment*]. This would include salvage of the identified Aboriginal objects and identification of an appropriate 'keeping place' for the salvaged artefacts."

Submission 2(p)

> *Evidence of the views and conditions of the Aboriginal community groups for each of the sites identified should be provided in the assessment and be adequately reflected in the proposed management measures.*

The results of consultation with the Aboriginal groups who registered an interest in the Project and were involved in the Aboriginal heritage survey are presented in Part D7.1.2 of the EA. In addition, each of the Aboriginal groups identified in HLA (2007) was provided with a copy of the draft Aboriginal heritage assessment and were requested to respond. Responses were received from three groups, each of whom expressed satisfaction with the contents of the report.

3.4 Department of Primary Industries – Mineral Resources

The submission from the Department of Primary Industries – Mineral Resources (DPI – MR) requested clarification of six issues. Representatives of the Proponent and the Department met on 20 December 2007 to discuss the Department's submission.

Submission 3(a)

> *Mine Safety – DPI notes that Figure B3 in the EA shows the proposed open cut area boundary as partly overlying the existing underground mine access road and portal area. The Coal Mine Health and Safety Act 2002 section 17(4) requires that if there is more than one coal operation on a colliery holding then they must be separate and distinct. Therefore, the Proponent should provide to DPI, prior to the commencement of any open cut operations, plans that clearly define mining operation areas and which nominated a Mine Manager for each coal operation.*

The Proponent notes that Figure B3 of the *Environmental Assessment* indicates that the Project Site, not the extraction area, partly overlies the existing underground mine access road. No activities are proposed within the section of the Project Site overlying the underground access. Notwithstanding the above, however, the Proponent would provide the DPI-MR with a plan clearly defining the operation areas and would nominate an Operator and Manager for Mining Engineering for each area. This commitment has been incorporated as Commitment 2.2 to the Statement of Commitments presented in Section 5.

Submission 3(b)

> *A Mining Operations Plan (MOP) should be submitted to DPI for acceptance prior to the commencement of any construction.*

Part A6 of the *Environmental Assessment* records that a Mining Operations Plan would be prepared and submitted to the DPI – MR prior to the commencement of open cut mining operations.

Submission 3(c)

> *Soil Stockpiling Methods – The EA states that "Soil would not be stripped from areas of previous disturbance because the soil profile in such areas is generally too thin and contains too many large rocks to be suitable or rehabilitation purposes". While the topsoil depth and quality may be inconsistent across this area, the Proponent should trial a topsoil recovery project. The project should be undertaken in consultation with DPI.*
>
> *The EA also states: "Any stockpiles that are to be retained in excess of 3 months would be seeded using a non-persistent cover crop …" DPI requires that all stockpiles should be immediately seeded using an appropriate sterile cover crop to reduce wind generated dust.*

The Proponent notes that GCNRC (2007) states the following in Section 1.2.1 of that report.

> Soils on the areas associated with the rehabilitated Camberwell waste rock emplacement were not sampled because of the general shallowness of the replaced topsoil and the occurrence of rock and large stones on, or close to, the surface.
>
> It would be difficult to strip such material and the final stripped product would be of a very mixed composition. It was considered that the rehabilitated areas on the Camberwell Lease are best left in place as they would maintain the stability of the post-mining landform until it is covered by material extracted from the proposed Glennies Creek Open Cut Coal Mine.

Notwithstanding the above however, the Proponent would undertake a trial soil stripping program during land preparation operations in areas of previous disturbance to determine if soil resources may usefully be recovered from areas of previous rehabilitation. The results of this program and any resulting amendments to the proposed soil stripping procedures would be presented in the relevant Annual Environmental Management Plan(s) for the Project. This commitment has been incorporated as Commitment 10.12 in the Statement of Commitments presented in Section 5.

Part D3.2.6 of the *Environmental Assessment* states that "any soil stockpiles to be retained in excess of 3 months, would be seeded". The Proponent's intention was that the proposed seeding would be undertaken immediately following creation of the stockpile. In light of discussions held between the Proponent and the Department, the Proponent would seed all stockpiles with a non-persistent cover crop immediately following creation. This commitment has been incorporated as Commitment 10.9 in the Statement of Commitments presented in Section 5.

Submission 3(d)

> *<u>Amenity Bund Construction</u> – The EA does not provide sufficient detail regarding the rehabilitation of the outer batter of the amenity bund. Ideally, the outer batter slope should not exceed 14 degrees for stability purposes but this may be increased provided the Proponent conducts additional rehabilitation measures to ensure the slope will revegetate quickly and effectively.*

Part B3.2.7 of the *Environmental Assessment* states that the amenity bund " would be constructed with a 1m crest width, an outer batter slope of approximately 15^{o} …be approximately 4m high …approximately 550m long and the outer face vegetated with pasture grass and some local species." It also states that "…this amenity bund would become the toe of a portion of the in-pit waste rock emplacement as it is blended with the waste rock placed over the backfilled open cut void." That is, it was the intention that the outer face of the bund would form the lowermost batter component of the waste rock emplacement. Following construction, the outer face would be roughened to provide to provide a key for topsoil sourced and directly replaced from adjacent areas and seeded/planted with a cover crop and species consistent with the native woodland/ nature conservation land use for the emplacement. In view of the visibility of the bund from Stony Creek Road, use of specialized techniques to assist the rapid establishment of a stable vegetation cover will be assessed and, if warranted, will be used. This will be identified the amenity bund rehabilitation plan within the Mining Operations Plan (MOP).

Given that the final landform presented in Figure B13 of the *Environmental Assessment* inadvertently did not reflect the text regarding the bund, the Proponent would reduce the outer slope of the amenity bund to between 14^o to the 10^o (the maximum slope for the remainder of the emplacement).

Submission 3(e)

> *Waste Rock Emplacement – While it is noted that using waste rock to infill the Camberwell North Pit was considered, the EA argues that this alternative would block access to the Glennies Creek Underground Coal Mine. However, it is not clear from the EA why this is the case. This issue requires clarification.*

In Part F1.6 of the *Environmental Assessment*, the use of the former Camberwell North Pit void for disposal of waste rock from the proposed open cut was discounted as a feasible alternative as it would block access to the existing approved Glennies Creek underground, a mine which will be in operation well beyond the life of the proposed open cut . The void, which is already severely constrained in terms of floor area, not only provides access to the underground workings but also incorporates infrastructure which support those workings including a pre-treatment plant, coal stockpile areas and coal haulage routes, all of which will be required for the life of the mine. All areas which are or have been available for disposal of waste rock have either already been used for that purpose or are required to provide storage for reject stone from the pre-treatment plant over the life of the underground workings.

Submission 3(f)

> *Waste Rock Emplacement – The assessment of alternative waste rock emplacement locations also fails to evaluate two conceivable alternative scenarios.*
>
> - *Direct haulage and stockpiling for use as tailings dam capping material.*
> - *Direct haulage and emplacement to the South Pit.*

Part B7.3.2 of the *Environmental Assessment* states the following.

> If required, some waste rock would be transported to the Camberwell tailings dams for use as a capping material. However, due to the limited area available to store waste rock adjacent to the tailings dams and the high cost of double handling this material, this would only occur if the timing of capping coincided with open cut mining and waste rock could be hauled directly to the appropriate tailings dam.

Transportation and disposal of waste rock from the proposed open cut to the tailings dam(s) for use as a as a capping material would be more cost efficient than hauling material from the Camberwell South Pit, the other alternative source, as long as the material can be directly emplaced. Consequently, Integra would take advantage of any such opportunity that arises. Conversely, the cost associated with stockpiling and double handling such material, even if the space for stockpiling was available, would eliminate any cost efficiencies that would otherwise have arisen as a result of the reduced haulage distance. A review of the most recent aerial photograph of the area around TD-1 and TD-2 by the DPI-MR has confirmed the lack of available stockpiling space.

Based on current scheduling, it is likely that open cut overburden removal activities will coincide with the capping of TD-1, thereby enabling the direct disposal of some material to that site. In addition, the opportunity may exist to utilise some waste rock material for additional works in the vicinity of the tailings dams. However, as the rate at which waste rock materials would be required would be substantially less than the rate of overburden removal from the open cut, coincident disposal of waste rock to the out-of pit or in-pit emplacements areas will still be required.

Disposal of overburden from the proposed open cut to the South Pit was considered in the early planning stages of the proposed open cut but rejected as a feasible option at that time on the basis of cost and its impact on project viability. To dispose of overburden to the South Pit (a one way haulage distance of some 4.5km to 5km) and maintain the scheduled production rate would necessitate the use of an additional 4-5 CAT 789 haultrucks and result in a 40% to 50% increase in the production cost per tonne of ROM coal. As such, the proposed open cut would not be viable and the resource would be sterilized. Additional noise and air quality impacts would also result.

In addition, coal mining operations are ongoing within the Camberwell South Pit and an application for project approval to extend this operation beyond its current approval is being prepared. Placement of waste rock material from the Project would adversely impact on the operation of the Camberwell South Pit and would sterilise coal resources.

Submission 3(g)

> *<u>Waste Rock Characterisation</u> – Section B7.1 of the EA regarding overburden characterisation indicates that no specific characterisation of overburden / interburden within the proposed open cut pit shell has been undertaken. While it is generally understood that the occurrence of acid forming material in this area is highly unlikely, further information on this issue may be required during the preparation of the Mining Operations Plan.*

The statements regarding the potential for Acid Mine Drainage (AMD) presented in Section B7.1 of the EA were based on:

- the results of the geochemical assessment undertaken as part of the EIS for the Camberwell Coal Project which showed the overburden and interburden units tested to be Non-Acid Forming; and
- the results of subsequent analyses of water contained in the North Pit void which have shown that water, ie. water which primarily constitutes rainfall which has percolated through the emplaced waste rock, to be neutral to alkaline and the lack of any observed evidence of AMD.

As a result, the potential for AMD issues arising is considered minimal and no further work is considered warranted at this time. Notwithstanding, Integra would monitor the open cut for evidence of materials which exhibit a potential for AMD and initiate sampling of any suspect materials such that their management can be undertaken in an appropriate manner.

4 RESPONSE TO PUBLIC AND SPECIAL INTEREST GROUP SUBMISSIONS

4.1 Introduction

This section presents a response to each of the public and specialist interest groups submissions. Due to the large number of submissions received and issues raised, individual issues have been classified according to the environmental aspect addressed. Where practicable, where submissions raised similar issues, these have been addressed together.

4.2 Community

4.2.1 Introduction

The following sub-sections provide additional information on issues related to the community surrounding the Project Site and consider issues related to:

(i) community consultation (see Section 2.2);

(ii) property acquisition (see Section 4.2.3);

(iii) identification of property owners and residences (see Section 4.2.4);

(iv) remediation(see Section 4.2.5); and

(v) complaints procedure (see Section 4.2.6).

4.2.2 Community Consultation

Several of the submissions complained of inadequate public consultation or incomplete information.

Submission 11(c)

> *Although Integra or their agents made the effort to speak to residents to hear their fears and aspirations about the future in March 2005, some 2 ½ years later the Company has clearly failed to act appropriately to alleviate such concerns.*
>
> G & W Cooper

Section C2.1 of the *Environmental Assessment* indicates that the following community consultation was undertaken during preparation of the *Environmental Assessment.*

- A community newsletter was distributed by mail in February 2005.
- A community forum was held at the Mt Olive Community Hall on 22 March 2005.
- A community information session was held in the foyer of the Singleton Council offices on 2 May 2006.

In addition, during the final stages of preparation of the *Environmental Assessment*, a second community newsletter was distributed by mail in June 2007.

In addition, the existing Glennies Creek Community Consultative Committee meets each six months and the Committee was kept informed of developments in relation to the Project and sought and received feedback from the Committee in relation to the proposed development.

Finally, The Allen Consulting Group undertook targeted interviews as part of the socio-economic assessment with representatives of selected organisations in the vicinity of the Project Site and the Proponent undertook informal discussions with those residents immediately surrounding the Project Site and those most likely to be impacted by the proposed development.

The purpose of the community consultation program was to provide the community with information regarding the Project, as it was understood at the time, and to receive feedback regarding the issues of concern for the community. Where issues were raised about existing operations, these were passed to the relevant personnel within Integra Coal Operations Pty Ltd or its predecessors. Project-related issues identified by the community were, to the extent practicable, addressed in the *Environmental Assessment.*

Submission 9(a)

Why were we not told of the total size of the project in the first application.

DR & MK Bridge

The Proponent is unsure what Mr and Mrs Bridge mean by the words "first application". This term may apply to any of the following.

- Project application for Longwalls 10 to 17 at the Glennies Creek Open Cut Coal Mine.
- Project application for the surface facilities to support the Glennies Creek Open Cut Coal Mine.
- Initial project descriptions provided by the Proponent during initial community consultation.

Assuming Mr and Mrs Bridge object to the changes in the size of the coal resource following the initial consultation phase, the Proponent notes that, as indicated previously during the community consultation, information current at the time of the consultation was provided to the community. As a result of additional work to address the concerns of the community and other identified environmental issues, including changes to the Project coal reserve, aspects of the Project such as its size changed during preparation of the *Environmental Assessment*.

4.2.3 Property Acquisition

Mr and Mrs Smith raise a number of issues related to acquisition of their property by the Proponent.

Submission (d), (i) and (dd) (from Table 2.3)

> *It is of concern that the EA does not address acquisition criteria at any stage. We note that previous EISs we have perused have addressed this issue at length. This information has included at what noise level acquisition should take place.*
>
> *We have no confidence in projected figures due to the significant impact of weather conditions on these figures. It seems astonishing to us the EA for Integra does not provide a provision for the same principle of buffer land. It is clear to us that because of the close proximity of some privately owned homes and land to Integra's proposed mine, also in our case the topography of the land that has our home looking directly down on the proposed site, that there is no question Integra should be instructed to provide this buffer zone in accordance with normal practice. We believe because of the reasons stated we should be included in this zone and acquired by Integra according to the conditions in their consent.*
>
> *Therefore, we request respectfully, if Integra's proposal is approved, their consent conditions contain the normal provisions regarding acquisition, ie. all aspects of compensation including the disturbance component. A comprehensive list stating the properties that are in the acquisition zone and have acquisition rights, also the specified period of time (ie. 3 months) Integra have to acquire a property listed in their acquisition zone.*
>
> Mark & Georgina Smith

The Proponent has previously entered into discussions with Mr and Mrs Smith regarding acquisition of their property. During negotiations, the Proponent proposed that an independent valuation of their property be obtained and used to determine the purchase price to be paid.

Mr and Mrs Smith indicated that a significant premium to the market value of the property would need to be paid. No agreement on this issue could be achieved and, as a result, negotiations were not successful.

Previous approvals for coal mining projects in the vicinity of the Project Site have identified the following procedure for identifying which properties should be acquired at the request of the landholder and the procedure for acquisition.

- Where the relevant criteria for air quality, noise or blasting emissions are exceeded at a residence or over 25% of any privately owned land, the landholder may request that the land be acquired by the Proponent. The Proponent anticipates that the relevant criteria at which acquisition may be requested would be the assessment criteria presented in Part D of the *Environmental Assessment*.
- Within 3 months of receipt of a request to acquire the land, the Proponent should make a binding written offer to the landowner based on;
  - the value of the land as if the land were unaffected by the Project;
  - reasonable costs associated with relocation within the local area and obtaining legal and expert advice regarding the value of the land; and
  - reasonable compensation for any disturbance caused by the acquisition process.

- If agreement cannot be reached on the value of the land to be acquired, then either party may refer the matter to the Director-General of the Department of Planning who would appoint an independent valuer to determine a reasonable acquisition price.
- Within 14 days of receipt of the valuer's determination, the Proponent would make an offer to the landowner at a price of not less than the valuer's determination.
- If within 6 months of the Proponent's offer, the landowner has not accepted the offer, the Proponent's requirement to acquire the property shall cease.

As the Department of Planning determines the criteria that would apply to determine which properties should be acquired, the Proponent has deferred identification of such properties until the application for project approval is approved.

As a result, the Proponent believes that it would be inappropriate for the *Environmental Assessment* to provide a detailed list of properties that would be required to be acquired as the criteria for triggering acquisition would be determined during the Department of Planning's assessment.

4.2.4 Identification of Property Owners and Residences

A number of submissions complained that incorrect landholder information was presented on Figure D5 of the *Environmental Assessment.*

Submission 4(a)

In the Environmental Assessment:

(i) Several residents' names are incorrect.

(ii) Section D11, the location of building 39 appears too high on the plan and is adjacent to No. 40.

(iii) Section D11, either No. 41 or No. 42 does not exist, there is only one residence on this property.

(iv) On page D-137, Photo Plate D2 is not taken from residence 45 but instead from residence 43. (The mine cannot be seen from No. 45).

Graeme & Kay Cheetham

Submission (a) (from Table 2.3)

We wish to bring to your attention some anomalies in EA, Page D-37, Figure D-11. We have gone through the list of land with residences and cross matched it with the information that was supplied in the Glendell EIS.

- *Property No. 64 – Is a mine-owned residence.*
- *Property No. 53 – Is a mine-owned residence.*
- *Property No. 54 – Is a mine-owned residence.*

- *Property No. 61 – Is a private residence with acquisition rights under existing consent.*
- *Property No. 65 – Is a private residence with acquisition rights under existing consent.*
- *Property No. 63 – Is a private residence with acquisition rights under existing consent.*

Three other properties on Glennies Creek Road are listed as land with residence, but are land only.

Mark & Georgina Smith

Submission 15(a)

We wish to advise that the residence listing is incorrect. Our Integra Coal Operations Pty Ltd allotted number is 102. This number in your recent CD-ROM states that we are non-projected vacant land.

Edward & Brenda Kleinman

Submission 14(a)

At present, our family live at residence 41, or 42, indicated by the EA document, we can assure you there is only one residence on this property.

Barry & Susanne Finney

Figure D5 of the *Environmental Assessment* was prepared using aerial photographs, inspection of private properties from public road reserves and searches of the NSW Department of Lands. As a result, it is possible for errors to occur through:

- misidentification of buildings, ie. identification of sheds as residences and visa versa;
- omission of recently constructed residences that do not appear on aerial photographs and are not visible from road reserves; or
- apparently incorrect names of property owners as a result of transfer of property ownership after the date of the search of the land titles register or the registered owner being different from the resident or beneficial owner.

The Proponent recognised the potential for incorrect information to be presented on Figure D5. As a result, copies of this figure were available for inspection at the information evening held on 2 May 2006 and each person who attended was requested to ensure the information regarding their own and their neighbours properties was correct

On the basis of the submissions received and subsequent investigations, the Proponent acknowledges that some errors appear on Figure D5. These included the following.

- Two residences, namely residences 41 and 42 appear on a property owned by GW and JH Cheetham. Only one residence exists on this property.

- Property 102 was marked with a symbol indicating that the property does not have a residence, despite a residence being shown on the figure. The Proponent acknowledges that a residence does occur on Property 102.
- A residence was recently constructed on Property 106, indicated on Figure D5 to be vacant land.

The Proponent notes that:

- Residence 64 is owned by Glendell Investments, not G. Donellan as indicated on Figure D5 of the *Environmental Assessment*.
- Residence 53 is owned by Xtrata Mt Owen Pty Limited not M. & D. Lancaster as indicated on Figure D5 of the *Environmental Assessment*.
- Residence 54 is owned by Hunter Valley Coal Corporation Pty Ltd, not M. & J. Westcott as indicated on Figure D5 of the *Environmental Assessment.*

Figure 4.1 presents an updated version of Figure D5, correcting the above information.

Plate D2 from the *Environmental Assessment* was taken from the Glennies Creek Road reserve at the 90° bend in the road adjacent to Residence 45.

4.2.5 Supplementary Revegetation

One submission complained of a lack of consultation in relation to proposed remediation of an area of land adjacent to Glennies Creek.

Submission 4(n)

> *The EA document states rehabilitation of 10ha along the riparian zone of Glennies Creek in the northern and Supplementary biodiversity areas with its neighbours. We are those neighbours and at this stage the mine has had no contact with us for those proposals.*
>
> Graeme & Kay Cheetham

Part B15.10.3 of the *Environmental Assessment* states that approximately 10ha of Project-related land adjacent to Glennies Creek would be planted with species representative of the Narrow-leaf Ironbark – Spotted Gum – Forest Red Gum Community. This would not include any non-Project-related land. However, the Proponent would consult with neighbouring landowners, including Mr and Mrs Cheetham, prior to undertaking such work. This commitment has been incorporated as Commitment 8.12 in the Statement of Commitments presented in Section 5.

4.2.6 Complaints Procedures

Submissions 9(b)

> *We have rung the magic complaint number on many occasions only to get an answering service and when we did eventually get to talk to someone it was always too late as the damage was done. Why wouldn't we all get complacent and not ring up, hence the low number of complaints as per report.*
>
> DR & MK Bridge

Figure 4.1
Land Ownership and Residences – Amended

A3 / Colour

The Proponent advertises and maintains a dedicated telephone complaints line. This line is generally answered during business hours and is diverted to a mobile telephone at other times. In the event that calls to this line are not answered, a facility exists to record a message. The Proponent's procedure for managing complaints is to respond to the complainant within 24 hours of the complaint being made. If the complaint cannot be resolved immediately, a procedure is implemented to investigate the complaint and a response is provided to the complainant explaining how the issue will be resolved or indicating why not action will be taken. Records are maintained of all complaints received and the resulting actions and outcomes. During the 2 years to 31 December 2006, 28 complaints were received. 25 complaints were resolved immediately or following further investigation. No action was taken in relation to 3 complaints because the complaint was proven to be unfounded or no action was possible. Finally, no complaints have been recorded from Mr or Mrs Bridge.

4.3 Health

4.3.1 Introduction

The following sub-sections provide additional information on the health-related issues raised in submissions received.

(i) Independent health studies (see Section 4.3.2).

(ii) Dust in drinking water (see Section 4.3.3).

(iii) Health - general (see Section 4.3.3).

4.3.2 Independent Health Studies

Three submissions raised the issue of the need for independent studies into health-related issues in the Hunter Valley,

Submission 5(c)

> *We request, YET AGAIN, an independent study of the affects of the coal mining in the Singleton / Muswellbrook shires on the health of the residents due to the concentration of 26 mines and 3 coal-fired power stations, concentrated in this small section of the Valley.*
>
> Wendy Bowman

Submission 11(e)

> *Health effects on both adults and children living in relatively close proximity to these mines should be studied in detail. We have several mines already in the immediate area, Mt Owen, Camberwell Coal, Ashton, Rixs Creek and Hunter Valley, just to name a few.*
>
> G & W Cooper

Submission 13(c)

In the Hunter Valley we have the highest rate of Type 1 Diabetes in Australia. This corresponds with the highest concentration of open cut coal mining in Australia. Why?

Steve & Carol Ernst

The Proponent acknowledges that issues related to health and the cumulative impact of coal mining and other development on the health of individuals is a matter of concern for the community in the vicinity of the Project Site. The Proponent would be willing to participate in and support any independent study of the health of residents surrounding the Project Site. However, this is a matter for the relevant government agencies and, as a result, is not a matter relevant for this application for project approval.

4.3.3 Dust in Drinking Water

Seven submissions raised concerns related to deposited dust settling in rainwater tanks and related health impacts.

Submission 4(b) and (f)

We currently rent out two other homes on our property, but if we experience dust and noise from the mine, renting these houses would be more difficult at their present rate. Also our three homes rely on rainwater tanks for domestic supply and we fear this will be polluted from the mine's dust.

We like to open our house, windows and doors when a cool southerly is blowing but this will be difficult with increased dust levels from the new mine. The dust entering our drinking water is a very real health worry.

Graeme & Kay Cheetham

Submission 5(a)

Dust is in the air we breathe 24 hours a day, namely PM_1's, $PM_{2.5}$s, PM_{10}s. The effect of dust on the residents of the Camberwell area is noted in the attached results of the "Federal Pollutant Inventory". Dust falls on roofs, then into water tanks. The water in our tanks is no longer drinkable. A number of residents have been ill and this has been proven to be the tank water. We request that Ashton and Integra Mines provide drinking water for ALL residents in Camberwell.

Wendy Bowman

Submission 10(f)

Tank water is polluted with black sludge from mining.

Thelma De Jong

Submission 13(b)

Fresh water in home tanks too polluted to drink. Ashton and Integra Mines to provide drinking water for ALL residents of Camberwell Village and surrounding landholders until mining ceases.

Steve & Carol Ernst

Submission 16(b)

We demand Ashton and Integra to supply the residents and surrounding landowners of Camberwell with clean drinking water until mining ceases.

John & Judith McInerney

Submission 20(b)

Fresh water in our home is too polluted to drink, even though Ashton Mine has cleaned the tank out. We request Ashton and Integra Mines to provide drinking water for ALL residents of Camberwell Village and surrounding landholders until mining ceases.

Keith & Yvonne Moss

Submission 21(a) and (b)

The dust is that thick in our gutters, and the air is so polluted from dust emissions from the mines.

Tank water is polluted with black sludge from mining. I have recently had my tank cleaned and there was 3 foot of grey and black sludge found in the tank.

Dierdre Olofsson

The Proponent acknowledges the community concern in relation to the health impacts of dust settling in rainwater tanks. However, the Proponent contends that dust deposited on roofs and washed into rainwater tanks is a natural event that would occur irrespective of whether the Project receives project approval or otherwise.

In addition, the Proponent contends that a large residence with a roof area of 200m^2 that experiences the maximum acceptable rate of deposited dust accumulation, namely 4g/m^2/month, would receive approximately 9.6kg of dust deposited on the roof of the residence per year. It would be reasonable, in the absence of other mitigation measures, to assume that the majority of this material would be washed into the rainwater tank and would settle at the bottom of the tank. Assuming a rainwater tank of 50 000L, with a height of 2.5m, the area of the tank would be approximately 20m^2. If the density of the particulate material at the base of the rainwater tank is conservatively assumed to be the same a fresh water, namely 1g/cm^3, then 9.6kg per year of deposited dust would equate to approximately 0.5mm of dust per year in the base of the rainwater tank. Over the six to eight year life of the Project, this would equate to between 3mm and 4mm of dust in the bottom of the rainwater tank The Proponent acknowledges that these calculations are approximate only and actual amounts of deposited material in the base of rainwater tanks would vary between residences.

The Proponent, however, also notes that community concern is focused primarily on deposition of 'black' dust in rainwater tanks. However, the Proponent is not aware of any studies that highlight any adverse health impacts resulting from drinking water from rainwater tanks in areas when a component of deposited dust is related to coal mining.

Finally, the Proponent contends that community concerns in relation to this matter would be more appropriately addressed via the Community Consultative Committee, directly with the operators of the individual coal mining operations and/or the relevant government agencies. Therefore, in the Proponent's opinion, health impacts related to deposited dust in rainwater tanks is not a matter relevant for this application for project approval.

Not withstanding the above, the Proponent, if requested, assist any resident who is anticipated to experience annual average dust deposition levels from the Project alone in excess of 2g/m^2/month to install mitigation measures to limit the amount of dust that enters the rainwater tank(s) of the residence in question. This commitment has been incorporated as Commitment 4.9 into the Statement of Commitments presented in Section 5.

4.3.4 Health – General

Two submission raised general health-related issues.

Submission 6(a), (b), (c), (d) and (f)

We live nearby and are very concerned about:

- *Increased dust and noise pollution.*
- *Increase respiratory problems, eg. asthma.*
- *Being unable to use our tank water and having to buy bottled water for drinking.*
- *The recent increase in fine dust inside our house that is relatively new.*
- *We are worried about the impact on our health, especially the likelihood of getting lung cancer.*

Dallas & Pauline Baker

Submission 20(c)

Mrs Moss has recently been diagnosed with a cist 6cm in diameter on her liver. She does not drink alcohol or smoke and her medical practitioner believes she has picked up a bacterial infection from inhaling the amount of dust daily.

Keith & Yvonne Moss

The Proponent acknowledges the sensitivity of health-related matters to the community surrounding the Project Site. However, the Proponent contends that, with a limited number of exceptions, the Project would comply with all relevant environmental criteria at residences surrounding the Project Site. Where those criteria are likely to be, or are exceeded, at individual residences, the Proponent anticipates that the conditions to project approval, if it is granted, will enable affected land owners to request that their properties be acquired.

While the Proponent acknowledges that some individuals are be more sensitive to Project-related impacts than others, Proponent does not believe that, based on the information available at the time of preparation of this document, the Project will result in adverse health impacts to members of the community surrounding the Project Site.

4.4 Air Quality

4.4.1 Introduction

The following sub-sections provide additional information on issues related to the following air quality-related issues.

(i) Modelling methodology (see Section 4.4.2);

(ii) Dust Monitoring (see Section 4.4.3);

(iii) Blasting and air quality (see Section 4.4.4);

(iv) Dust Mitigation Measures (see Section 4.4.5);

(v) Greenhouse gas emissions (see Section 4.4.6);

(vi) General (see Section 4.4.7);

4.4.2 Modelling Methodology

Three submissions raised concerns in relation to the effects of variable meteorological conditions and topography within and surrounding the Project Site.

Submission 4(e)

> *We feel this will be a real problem with south and southeasterly winds bringing dust directly on our property. We are in a natural valley or amphitheatre with Glennies Creek entering at one end and exiting at the other. We experience variable wind patterns and speeds not necessarily the same as prevailing winds as stated in the EA document. The RL level of this area is a lot lower than the mine and would create dust setting due to the low valley floor, (dust and noise will be even more excessive during times of temperature and cloud inversion). It was noted that dust projections from the proposed Glendell mine were not used as this would increase the cumulative effect.*
>
> Graeme & Kay Cheetham

Submission 11(a)

> *The data collected from the high volume sampler at the residence of AH Lambkin (11) is insufficient as it is at the bottom of a hill which makes it susceptible to inaccuracies and even though only 500m away will not indicate increases in dust at our residence.*
>
> G & W Cooper

Submission 14(c)

> *This area locating residence 39, 40 (41, 42) experience varying wind patterns and speeds not necessarily the same as prevailing winds as stated in the EA document. This area is also of a lower RL than the designated mine area which would definitely create dust settling in the lower area noted.*
>
> Barry & Susanne Finney

The air quality assessment presented in HAS (2007) and summarised in the *Environmental Assessment* provides a best estimate of the air quality-related impacts of the Project. The air quality assessment took into consideration all meteorological conditions that have been measured in the vicinity of the Project Site, including the south-east winds that prevail in the summer months, as well as topographic information, when estimating the likely air quality-related impacts of the Project. As a result, the Proponent contends that the air quality assessment has, to the extent possible, taken into account variability in meteorological conditions and topography.

The issue raised in relation to the proposed Glendell Coal Mine is addressed in Section 3.2.

Submission 4(h)

> *The EA illustrates dust emitted from haul roads at different years of operation but did not see any figures for dust from blasting, which will create clouds of dust and would have to impact neighbouring residences.*
>
> Graeme & Kay Cheetham

Table 9 of HAS (2007) identifies all emission sources included during the air quality assessment. Line item 3 lists blasting emissions.

Submissions 8(a) to (c)

> *Being on top of a hill at approximately 72m we are sure to be adversely affected by noise, dust and night time light.*
>
> *The accumulative effect of dust with other mines will be intolerable.*
>
> *The Autumn to October wind direction and topography places us right in line for all the above, contrary to the EIS wind rosette which I believe to be the reverse.*
>
> JB & MF Bradford

The noise and air quality assessments took into account the topography of the area in the vicinity of the Project Site. In addition, Figure D23 of the *Environmental Assessment* indicates that the Project Site would not be visible from the residence of Mr and Mrs Bradford. In addition, the loom of lighting from within and surrounding the Project Site at night would be dominated by lights associated with the Camberwell South Pit and CHPP, the Glennies Creek Underground Coal Mine surface facilities and surrounding mining operations, all of which are existing and approved operations. The additional night-time lighting associated with the Project would be limited to a small number of mobile lighting plants which, where practicable, would be located as deep as possible within the proposed open cut and would be directed away from residences surrounding the Project Site.

Submission (u) (from Table 2.3)

> *EA, Page D17, D2.2.2 – Dust Deposition – in part this states average deposited dust levels in rural NSW between 1g/m^2 and 2g/m^2/month. It then goes on to state dust gauge D7 recorded levels of 4.1g/m^2 to 4.7g/m^2/month. This was due to increased activities at Camberwell south pit. According to the map Figure D7 the relation between the position of D7 and the Camberwell south pit is very similar to the relation between Integra's proposal and our home.*
>
> Mark & Georgina Smith

HAS (2008) states that results of the air quality assessment presented in Tables 11, 12 and 13 of HAS (2007) and summarised in Table 7 of HAS (2008) indicate that the anticipated dust deposition levels at the residence of Mr and Mrs Smith are below the impact assessment criteria and that the predicted annual average contributions from Project are less than 0.6g/m^2/month.

Submission (w) (from Table 2.3)

> *There can be little doubt if Glendell and Integra's proposal are approved, the PM_{10} readings on Glennies Creek Road and our home will increase as we are located in the centre of these projects and in the direction of dominant winds in this area.*
>
> Mark & Georgina Smith

As indicated in Section 4.2 of HAS (2007), the air quality assessment took into consideration 12 months of meteorological data measured within the Project Site during 2003. In addition, cumulative contributions from surrounding mining operations were also incorporated into the air quality assessment. Finally, the results of the air quality assessment presented in Part D2.7.1 indicate that the 24-hour and annual average PM_{10} concentrations at the residence of Mr and Mrs Smith would be less than the assessment criteria.

Submission (x) (from Table 2.3)

> *EA, Volume 1, Page 1-31, Table 12 – this table states cumulative predicted PM_{10} concentrations on our property for 24 hours as 17 and 23µg/m^3. The recorded levels of PM_{10} at HV3 (nearest monitor to our home) has recorded a mean concentrate of 22µg/m^3 and are below the 30µg/m^3 goal set by the DECC. But there were readings up to 50µg/m^3. This information was only conducted over a period of 37 days.*
>
> Mark & Georgina Smith

HAS (2008) state that as indicated in Table 12 of HAS (2007), the cumulative 24-hour average PM_{10} concentration at Residence 75 during Year 3 of the Project is predicted to be 50µg/m^3. This concentration is below the allowable cumulative impact assessment criteria of 150µg/m^3.

The Proponent acknowledges that the data presented in Table D9 of the *Environmental Assessment* was incomplete and did not include all the monitoring data presented in Table 8 of HAS (2007). An amended version of Table D9 is presented in **Table 4.1.**

Table 4.1
PM_{10} Concentrations between August 2005 and August 2006

	HV1	HV3
Number of reading days	62[1]	62[1]
Mean concentration*	18[1]	20[1]
Maximum concentration*	49	51
Minimum concentration*	5	4
Number days over 50 µg/m^3	0	1
Note 1: Amended from *Environmental Assessment*. * Units = µg/m^3		
Source: Holmes Air Sciences (2007) – Modified from Table 8		

HAS (2008) note that high volume air samples collect measurements every sixth day, therefore over a complete year approximately 60 samples will be collected. Table 8 of HAS (2007) details the results of 62 samples taken between 25th August 2005 and 26th August 2006.

Submission (y) (from Table 2.3)

> *EA, Volume 1, Figures – we do not believe the predictions for TPM. PM_{10} in these projections take into account the prevailing wind in this area. The second most significant wind rose in this area is S/E. EA, Volume 1, Page 1-57 shows N/E winds are virtually non-existent. Given this information we cannot fathom how the aforementioned predictions are maintained. For example, EA, Volume 1, Page 1-69, Figure 17, how can the predicted 40µg/m^3 contour line be the same distance for prevailing S/E winds as it is for N/E winds. The logic that this prediction uses is the strong S/E winds that are predominant in this area have no effect on where dust will travel.*
>
> Mark & Georgina Smith

HAS (2008) state that isopleth patterns, such as those presented in Figure 17 of HAS (2007), are calculated for a particular modelling scenario taking into account the distribution of dust emission sources as well as prevailing winds. The general location of the sources of Project-related dust emissions are illustrated on Figures 9 to 14 of HAS (2007). These figures indicated that dust emission sources are grouped in two locations, namely the proposed extraction area and the Camberwell CHPP, with a haul road between them. As a result, even in the absence of winds from the northeast, the distribution of dust emission sources will result in isopleth patterns having a significant north-south orientation.

Mr and Mrs Smith express concern that the isopleth patterns presented in Figure 17 of HAS (2007) do not reflect the influence of the prevailing northwest and southeast winds. HAS (2008) note that the figure in question shows the worst-case 24-hour PM_{10} concentrations due to Project-related emissions. To create the isopleths used for this figure, the air quality model estimated the PM_{10} concentration at all receptor locations for each day of the year modelled. The maximum PM_{10} concentrations were then used to generate the isopleths presented. This ensures that the worst-case scenario over the year at every receptor is considered, not the PM_{10} concentration on any particular day or under 'average' wind conditions. As a result, the isopleths presented in Figure 17 reflect maximum PM_{10} concentrations during the 12 months that were modelled under prevailing wind conditions, but also under less common wind conditions which only apply for short periods. Therefore, for receptors which are located generally to the south-east or the northwest of the Project Site, the same PM_{10} concentration may occur more frequently than at a receptor located to the northeast of the Project Site, despite these receptors occurring on the same isopleth.

4.4.3 Dust Monitoring

Two submissions expressed concerns in relation to the location of dust monitoring locations used to establish the existing air quality environment in the vicinity of the Project Site.

Submission 4(g)

It is also concerning that no dust monitoring was done at or close to our properties so we would have a benchmark to work from.

Graeme & Kay Cheetham

Submission 14(b)

Item D7 dust monitors indicated in the EA are not located in our area, in relation to prevailing winds.

Barry & Susanne Finney

HAS (2008) state that it is not practical, nor necessary, to monitor at every residence in the vicinity a proposed emission source to enable the air quality impacts to be determined. The locations of the monitoring sites were selected based on the prevailing meteorological conditions and those locations likely to experience the greatest impacts from existing sources of dust.

Figure D7 of the *Environmental Assessment* presents the locations of dust monitoring locations in the vicinity of the Project Site. Deposited Dust Gauge D3 is located approximately 1.8km to the southwest of Residence 40 (occupied by Mr and Mrs Cheatham) and approximately 2.1km to the southwest of Residence 41 (occupied by Mr and Mrs Finney). Table D7 of the *Environmental Assessment* indicates that deposited dust levels at this monitoring location are consistently below the assessment criteria. In addition, HAS (2008) note that given that the prevailing wind directions in the vicinity of the Project Site are to the north-west and south-east, and the fact that the major sources of airborne dust in the vicinity of the Project Site are to the south and west of the Residences 40 and 41, it would be expected that deposited dust levels at these residences would be less than those recorded at Deposited Dust Gauge D3.

Submission 11 (g)

Benchmarking the status quo (noise / dust / traffic) would surely provide good faith by the Company and a guarantee to maintain the current property assets or to compensate if they can't.

G & W Cooper

Parts D3.2, D2.2 and 12.2 of the *Environmental Assessment* provide a description of the noise, dust and traffic environments respectively in the vicinity of the Project Site.

Submission 17(a)

Dust monitoring every minute of the day not a 24-hour period. No permittable blasts over the limit. Every blast should be monitored and within the boundary's regulations.

Stephen McInerney

The Proponent anticipates that the project approval and conditions associated with the Environment Protection Licence for the Project would specify the type, location and frequency of monitoring that would be required for air quality and blasting.

Mr and Mrs Smith raised two issues in relation to the PM_{10} concentrations measured in the vicinity of their residence.

Submission (v)and (ll) (from Table 2.3)

> *EA, Page D18, Table D9 – as shown in Figure D7, P_{M10} monitoring station HV3 is the closest PM_{10} monitoring station to our property. In Table D9, it states minimum concentration recorded at 22µg/m^3 and maximum of 51µg/m^3, it states annual average PM_{10} concentrations are below DECC goal of 30µg/m^3. This may be so but it also shows that the PM_{10} readings at this site have been recorded at nearly double the acceptable concentrates.*
>
> *Information and predictions as contained in this EA can be distorted or interpreted to suit one's own agenda. So we wish to state the following facts on this issue as we see it.*
> *(v) PM_{10} levels on Glennies Creek Road were recorded over a 2 year period which exceeded acceptable levels.*
>
> Mark & Georgina Smith

HAS (2008) states that the values presented in Table D9 of the *Environmental Assessment* are 24-hour average concentrations, for which the DECC goal is 50µg/m^3. The DECC goal of 30µg/m^3 applies to annual average PM_{10} concentration. Annual average PM_{10} concentrations are presented in Table D8 of the *Environmental Assessment* and are below the DECC goal.

Finally, one submission requested that a deposited dust gauge be erected in the vicinity of the respondent's residence.

Submission 15(b)

> *We request that a dust monitor be placed at our property as we are closest to the creek that feeds the dam used by Integra.*
>
> Edward & Brenda Kleinman

The Proponent believes that a deposited dust gauge would not be required at the residence of Mr and Mrs Kleinman given the fact that Deposited Dust Gauge DG4 located at Residence 11 is located approximately 0.5km to the north of the residence. Despite this, the Proponent will erect a deposited dust gauge at the residence for 12 months. If at the completion of that period, the annual average deposited dust level at the residence is within 15% of the level recorded at Deposited Dust Gauge DG4, the gauge at Mr and Mrs Kleinman's residence would cease to be monitored. This commitment has been included as Commitment 16.2 in the Statement of Commitments included in Section 5.

4.4.4 Blasting Fumes

Two submissions querying the impacts of blasting fumes on surrounding residents were received.

Submission 14(i)

Preamble – F19 – I have not found any indications relating to air quality related to blasting activities, after burn etc. It has been my experience as a contractor in the mining industry the pollution from blasting is quite high with the result of many coal mining companies regulating their blasting activities around weather conditions, to the point of being fined for any breach in policy and procedure.

Barry & Susanne Finney

Submission 16(a)

Every time we have a blast the fallout of dust is smelt, and felt in our eyes. What is happening to our respiratory tracts?

John & Judith McInerney

Blasting would be conducted using explosives of an approved type, namely only those explosives approved by the NSW Chief Inspector of Dangerous Goods. Detonation of such explosives produces a range of gaseous products. The principal gases are nitrogen, water vapour and carbon dioxide, together with trace amounts of other gases such as carbon monoxide and nitrogen oxides. The latter are produced primarily as the result of non-ideal detonation, namely through non-optimal fuel oil mixtures and contact with water. Nitrogen dioxide has a characteristic yellow to orange-red colour, and it is this gas which is responsible for visible post-blast fume.

The National Occupational Health and Safety Commission (Worksafe Australia) has issued Exposure Standards for nitrogen dioxide as guides to be used in the control of occupational health hazards. The short term exposure limit (STEL) in the occupational environment is 5ppm. This is the average airborne concentration of a 15 minute period which should not be exceeded at any time during a normal eight-hour work day.

In a 1992 study by Holmes Air Sciences, orange coloured nitrous oxide fumes from a blast at Ravensworth open cut mine in the Upper Hunter Valley, were observed and measurements of nitrogen dioxide were taken as the plume passed over the observation site, which was located approximately 400m northwest of the blast area. Concentrations of 0.1ppm to 3.0ppm of nitrogen dioxide were recorded in the six minutes or so that it took for the plume to blow over the observation site. It should also be noted that this particular blast was fired after the explosives had been in the ground for approximately 28 days, with the delay in firing due to operational factors and unfavourable winds.

The World Health Organisation in Holmes Air Sciences, (1992) notes that near busy roads hourly average concentrations often reach 0.5ppm.

The Proponent would conduct blasting operations in accordance with the Shotfiring and Explosives Management Plan developed for the Camberwell South Pit and amended to include the proposed Glennies Creek Open Cut Coal Mine. The aim of the plan is to provide a safe, environmentally acceptable and efficient shotfiring and explosives operation. The Drill and Blast Coordinator / Supervisor will ensure that explosives are suitable for the proposed application. In considering the type of explosive to be used, the Drill and Blast Contractor / Supervisor will take into account the amount of water present in the ground, the susceptibility of the ground to the creation of fume and the time the explosives will be in the ground prior to the firing of the shot.

4.4.5 Dust Mitigation Measures

Three submissions querying the methods that would be employed to control dust emissions and their effectiveness were received.

Submission 10(a)

> *How are they going to control the dust? Yes they will water the roads, but what happens to the dust created from digging, blasting and overburden?*
>
> BW & RA Cherry

Submission 14(e)

> *Only one water cart is not adequate for the work scope for this size and type of development, considering dust suppression is a major consideration for all concerned.*
>
> Barry & Susanne Finney

Submission 19(a)

> *How can they stop the dust? No matter how much watering they do, they will not stop the dust. Do they stop mining on high windy days?*
>
> JH & MR Moore

Part D2.5 of the *Environmental Assessment* presents the proposed dust management and mitigation measures that would be employed by the Proponent. These measures, together with meteorological data collected within the Project Site, were incorporated into the air quality assessment.

In addition, the Proponent states that the assertion that one water truck is not adequate for the proposed open cut is incorrect and would appear to be based on observations of equipment used at other mines with much higher production rates and/or areas requiring routine dust suppression than that proposed. The size and/or number of water trucks employed on a mine site is related to the volume of materials to be moved, the area to be watered, in particular the length of haul roads, and the frequency of water application required to minimise dust generation consistent with environmental and occupational health and safety requirements. The equipment list presented in Table B7 of the *Environmental Assessment*, including the inclusion of a CAT 773 water truck, was based on mine scheduling, the efficient utilisation of all equipment, satisfaction of production and environmental objectives, and experience. For example, although the Proponent currently operates one 70 000L and one 50 000L water truck, the equivalent of one truck employed on a full-time basis is generally more than adequate for dust suppression activities at the Camberwell South Pit where annual ROM coal production is 3.8Mtpa compared with the 1.5Mtpa proposed for the Project, total materials movement is three times greater annually, and there is a greater active surface area requiring routine dust suppression activities.

Notwithstanding the above however, the Proponent would undertake to vary the dust management and mitigation measures should monitoring data or observations indicate that dust emissions are higher that anticipated or are having unanticipated impacts on the community surrounding the Project Site. This would include increasing the number of water carts, varying the areas of operations on windy days or utilising dust suppressants.

One submission queried the dust suppression methods that would be utilised by the Proponent during drilling operations.

Submission 25(h)

> *The findings in this report challenges the acceptability of vacuum dry dust suppression and throws into question any legitimacy for using any system other than one that wets the drill cuttings as they are created at the base of the hole. This document highlights an existing health and safety issue, and if wet drilling is not intending to be employed at a site, then a term of the consent should require this type of drilling method to be adopted.*
>
> Construction Forestry Mining & Energy Union

The Proponent notes that a number of systems for controlling dust emissions during drilling operations are available. The Proponent would select the most appropriate method for dust suppression based on a risk analysis, taking into account the Proponent's responsibilities to ensure the health and safety of its employees is not adversely affected and the environmental impacts associated with all operations satisfy the relevant criteria.

4.4.6 Greenhouse Gas Emissions

Submission 25(a)

> *The Proponent fails to provide any reference to greenhouse gas emissions in the EA submitted. Whilst there is no requirement by the Director-General for this criterion to be addressed, it is disappointing that as a regulatory body, the Director-General does not take a stance on this issue.*
>
> Construction Forestry Mining & Energy Union

The Director-General's Requirements presented in Appendix 1 of the *Environmental Assessment* state that a greenhouse gas assessment is required. The results of this assessment were provided in Part D2.7.2.

4.4.7 General

Three submissions requested an independent study of the composition of deposited dust.

Submission 13(a), 20(a) to (c)

> *We request an independent study of the composition of the dust, not just the amount falling.*
>
> Steve & Carol Ernst
> Keith & Yvonne Moss

Submission 16(c)

> *We request an independent study of the fallout to determine the composition of the dust, not just the amount.*
>
> John & Judith McInerney

The Proponent acknowledges the community concern related to the health implications of deposited and suspended dust, including the composition of that dust. Whilst the Proponent would be happy to participate in such a study, the issue is one more properly addressed by the relevant government agency. As a result, the Proponent contends that this issue is not relevant to the application for project approval.

Three submissions concerned the impact of dust deposition and suspended dust on horses.

Submission 13(f)

> *Our horses have suffered from a dry cough for many years. We have had our horses checked by our veterinarian. His prognosis was a respiratory problem due to the amount of dust they inhaled daily.*
>
> Steve & Carol Ernst

Submission 20(f)

> *Our horses have suffered from a dry cough from some years. Our veterinary surgeon has consulted with us and seen our horses and cannot find anything wrong with them as such but believe the dry cough must be caused from the amount of dust they inhale and eat from pasture.*
>
> Keith & Yvonne Moss

Submission 23 (c)

> *Over the past few years we have noticed the increase in eye irritation and running eyes, our horses also have had an increase in watery eyes, and this is during the winter months, so the flies have nothing to do with this problem. After the dew settled on the feed during the night it became sticky, so as the heifers fed through the grass the black sticky dust coated their faces from their noses to their eyes, worst of all is that our cattle and horses are digesting this dust everyday as they feed.*
>
> Joanne Watling

HAS (2008) state that the air quality impact of the Project was assessed by comparing estimates of dust concentrations and deposition levels with DECC air quality criteria. The air quality criteria have been set for the protection of human health and to keep dust nuisance within internationally accepted levels.

The air quality criteria would also be expected to protect the health and amenity of other mammals, including horses. Horses and other mammals are kept and raced in Sydney and other cities where PM_{10} concentrations would be similar and in many cases higher than would be experienced in the vicinity of the Project Site. For example, the DECC's Action for Air 2006 update publication shows that the number of days that the 24-hour average PM_{10} goal was exceeded is substantially lower in the Lower Hunter Valley Region than the Sydney Metropolitan region (DECC, 2006) for the period 1994 to 2005. In addition, HAS (2008) state that in the normal course of events cattle ingest up to 1 kg of dust per year without detrimental impacts on their health and that trials conducted in the Hunter Valley (Andrews and Sriskandarajah, 1992) have demonstrated that the production of dairy cows is not impacted by the presence of coal dust on pasture.

As a result, the Proponent contends that the Project would not have any adverse effects on the health of horses in the vicinity of the Project Site.

One submission indicated that the respondent's property was part of a study of $PM_{2.5}$ concentrations in the vicinity of the Project Site.

Submission 23(b)

> *On our property we have a monitoring station for a major NSW university which have been doing air studies since 2004. Results from the study have not been finalised as yet but they have stated the increase in fine dust particles in the air were quite significant. "Glenville" is our property name. (In summary, their findings state that PM10 and PM2.5 dust levels are at or near the NEPM goals and would be likely to increase with a new development to the north of Glenville.)*
>
> Joanne Watling

HAS (2008) state that the air quality monitoring undertaken on the property of Ms Watling is part of larger project which is funded by the Australian Coal Association Research Program (ACARP) project. The project entitled "Assessing Fine Particle Concentrations in the Hunter Valley" has not yet published any of the data collected and therefore it is not possible to make detailed comment on the above statement. However, HAS (2008) note that the purpose of the dispersion modelling study undertaken for the Project was to quantify air quality impacts on neighbouring properties.

Four submissions raised general concerns in relation to dust emissions from the Project and other sources within the vicinity of the Project Site.

Submission 7(b)

> *The dust levels will also increase.*
>
> Bob & Kim Bell

Submission 22(a)

> *My home and my washing are often covered in a sheen of black dust and it has sadly become commonplace to see enormous clouds of dust billowing our way. If this new mine opens these massive clouds of dust are only going to become worse.*
>
> Sandra Turner

Submission 23(a)

> *The mine does make an effect during the day to control the dust from their sites but at night if you go outside with the car lights or a torch you can see the foggy dust in the air, it is very disturbing to think we and our animals are breathing this in constantly.*
>
> Joanne Watling

Submission (q) (from Table 2.3)

> *It is clear that dust emissions are increasing in this area. Also, if Integra's new mine is approved and is operating the dust emissions will increase further. It is proven fine dust particles can have an adverse affect on respiratory health and since we are far more exposed to this dust than the Singleton township, our desire to remove our family from this exposure is paramount.*
>
> Mark & Georgina Smith

HAS (2008) state that the results from dust deposition data between July 1999 and June 2006 indicate that there has been very little change in dust levels over that period. The Proponent acknowledges that the Project would result in additional emissions of dust in the vicinity of the Project Site. However, the results of the air quality assessment presented in Part D2.7 indicate that, with limited exceptions, the cumulative dust concentrations and levels in the vicinity of the Project Site would be within the relevant assessment criteria.

Submission (r) and (t) (from Table 2.3)

> *It is obvious to us that if the area of mining is to significantly increase, re: Integra's proposal, than (sic) the area of dust generation will increase as a direct consequence of this. Thus the dust generated must increase. The affect of this increased dust generation on our home will be exaggerated by the strong southwesterly winds which are a feature of this area.*
>
> *Given it is only approximately 1.5km from Integra's proposed mine site to our home, there can be no doubt when the S/E wind blows our home will be significantly impacted by dust from Integra's proposed mine and overburden areas.*
>
> Mark & Georgina Smith

HAS (2008) state that the air quality assessment prepared for the Project provides a best estimate of the anticipated air quality-related impacts as a result of the Project. These estimates took into consideration all meteorological conditions that have been measured within the Project Site, including the southeast winds that prevail in the summer months. Southwest winds have not been measured to be prevalent in the area. Detailed topographic information was also included in the air quality assessment.

Submission (s) (from Table 2.3)

> *EA, Page D18, Last paragraph – the last sentence states Glendell was not included in the cumulative modelling process in regard to estimates of particulate matter emissions.*
>
> Mark & Georgina Smith

The inclusion of the proposed Glendell Coal Mine in the air quality assessment is addressed in Section 3.2.

4.5 Noise and Blasting

4.5.1 Introduction

The following sub-sections provide additional information on issues pertaining to the following noise and blasting-related issues.

(i) Modelling methodology - noise (see Section 4.5.2);

(ii) Modelling methodology - blasting (see Section 4.5.3);

(iii) Monitoring - noise (see Section 4.5.4);

(iv) Monitoring - blasting (see Section 4.5.5);

(v) General - noise (see Section 4.5.6);

(vi) General - blasting (see Section 4.5.7);

4.5.2 Modelling Methodology - Noise

A number of submissions relating to the noise assessment methodology were received.

Submission 4(d)

We wish to complain about the technique of the noise recording carried out by Heggies.

(i) Firstly, it was done for a short time only.

(ii) Secondly, it happened to occur at the same time there was an unusual number extra number of trucks transporting road ballast to Glennies Creek Underground (the monitor was in the front paddock close to the road).

(iii) Thirdly, the fixed recorder was in place close to a pet dairy cow which was in season and bellowed excessively for two days.

(iv) Fourthly, one afternoon I was doing some tractor work with a machine that is very noise when Mr Muller stopped his car and monitored it with a mobile microphone from the car window next to where I was working. This was not a typical noise sample.

Graeme & Kay Cheetham

Heggies (2008) make the following comments regarding this submission.

(i) Background noise monitoring was conducted at the "Ventura" property for a total of 13 days, almost double the period of 7 days required by the Industrial Noise Policy.

(ii) Increases in local traffic volumes do not influence the background noise environment.

(iii) An in-season bellowing cow would not influence the background noise environment due to the intermittency of the bellowing.

(iv) The operator-attended noise survey noted the operation of the tractor, however no assumption was made as to the tractor operation being a typical occurrence and the associated noise emissions were not used to determine the background noise level.

Accordingly, Heggies (2008) state that in their opinion, the Rating Background Levels (RBLs) presented in the *Environmental Assessment* are appropriate and justified.

Submission 11(b) and (g)

Noise impacts are judged on the increase from the normal and without determining the true benchmark background noise level.

Benchmarking the status quo (noise / dust / traffic) would surely provide good faith by the Company and a guarantee to maintain the current property assets or to compensate if they can't.

G & W Cooper

Heggies (2008) state that "the potential noise impacts from the Project have been determined in accordance with the procedures detailed in the INP." In addition, the Proponent notes that the existing air quality, noise and traffic environment surrounding the Project Site is described in parts D2.2, D3.2 and D12.2 of the *Environmental Assessment.*

Submission (b) (from Table 2.3)

> *Table D13 show background noise levels for our location at 34dB(A) Day, 35dB(A) Evening, 35dB(A) Night. This information was conducted in March 2005. We believe these figures to be higher than otherwise stated. XMO EIS for Glendell mine shows background noise levels for our location at 30dB(A) Day, 32dB(A) Evening, 32dB(A) Night. These levels have been verified by other noise testing on our land. Since it is stated as above that the noise level from the project should not exceed 5dB(A) above background, the actual noise levels not to be exceeded on our land using an average of background noise should be 37dB(A) Day, 38dB(A) Evening, 38dB(A) Night.*
>
> Mark & Georgina Smith

Heggies (2008) state that the unattended noise monitoring results for Noise Monitoring Group F, which includes the residence owned by Mr and Mrs Smith, presented in Table D13 of the *Environmental Assessment*, are consistent with the operator attended noise monitoring results presented in Table D14. Further, Heggies (2008) state that they "satisfied that the reported background noise levels are representative of the receivers within the nominated [noise assessment] groups."

The Proponent accepts that the noise assessment for the Glendell Project prepared by Advitech Pty Ltd for the proposed Glendell Coal Mine dated August 2007 nominated RBLs during the day, evening and night at location Gld02 (Residence 62) as being 30dB(A), 32dB(A) and 32dB(A) respectively. However, Heggies (2007) also undertook unattended noise monitoring in the vicinity of Residence 62 and determined the day, evening and night RBL for Noise Assessment Group F to be 34dB(A), 35dB(A) and 35dB(A) respectively. Heggies (2008) note that the following may influence the measured background noise level.

- Monitoring position.
  - Local shielding by a house or a shed could reduce noise levels by up to 10dB(A).
  - Local reflection from a house or a shed could increase noise levels by up to 3dB(A).
  - The proximity to pumps and fixed plant, trees, tall grass/pasture, water ways, fauna habitats and livestock could increase noise levels by between 1dB(A) and 20dB(A).
- Development stage of various neighbouring mining operations.
- Seasonal variations.
- Noise monitoring equipment model, type and calibration.
- Analysis and filtering procedures.

Submission (c) (from Table 2.3)

> *EA, D3.4.3 - We reject the information in this section based on the following. As previously shown, the current consent conditions state Integra must not exceed 38dB(A) LAeq 15 on our property. We note that XMO current consent conditions state that 48dB(A) Evening and 43dB(A) Night is the cumulative noise level at which acquisition is implemented. Since it is predicted Integra will have similar conditions, we reject the information in this section as overestimating the maximum expectable levels.*
>
> Mark & Georgina Smith

Heggies (2008) note that the cumulative noise assessment criteria presented in Part D3.4.3 of the *Environmental Assessment* are consistent with the findings of the Heggies (2007) which in turn are consistent with the procedures specified in the INP.

Submission (e) (from Table 2.3)

> *SCSC Vol 1, Table 8 – states noise assessment at group F ambient level at 57dB(A) Day, 64dB(A) Evening, 39dB(A) Night LAeq 15. Given that it has been proven the background noise levels at our property are 30dB(A) Day, 32dB(A) Evening, 32dB(A) Night, there is a huge differentiation in these figures. Where is the excessive noise emanating from?*
>
> Mark & Georgina Smith

The Proponent notes that Mr and Mrs Smith doubt the validity of the noise assessment, in particular, the background noise levels that have been determined by Heggies (2007). However, the Proponent notes that HAS (2007) indicates that the noise assessment has been prepared in accordance with the INP using commonly accepted noise assessment methodologies.

In addition, Heggies (2008) state that the noise sources contributing to the ambient noise environment have been identified in the operator-attended noise monitoring results presented in Appendix D of Heggies (2007) and Part D3.2.3 of the *Environmental Assessment.* Typically, the $L_{Aeq(15minute)}$ noise levels are controlled by contributions from local traffic, birds, insects, wind, planes and mining activity.

In addition, Heggies (2008) also state that the $L_{Aeq(15minute)}$ noise levels presented in Heggies (2007) and the *Environmental Assessment* are comparable to the noise levels presented in the noise assessment for the proposed Glendell Coal Mine.

Finally, Heggies (2008) state that the noise assessment was prepared in accordance with the requirements of the INP. As a result, the operator-attended ambient noise environment presented in Table 8 of Heggies (2007) and Table D14 of the *Environmental Assessment* are appropriate and justifiable.

Submission (h) (from Table 2.3)

> *Volume 1, 2-35, Tables 14, 16 and 18 – states our property (75) the daytime, evening and night time predicted noise will be: Table 14 – 31, 32, 31dB(A). Table 16 – 35, 36, 32dB(A). Year 3 assessment and Table 18 – 35, 36, 31dB(A). Given that it has been*

established the background noise level is 32dB(A) at our house, is Integra seriously stating that an open cut mine operation producing 1.5 million tonnes of coal per year, that is located 1.5km from our house, that we look directly down on, is going to have no impact in the first 3 years and minimal after that, in regard to noise on our home?

Mark & Georgina Smith

The issue related to background levels at the residence of Mr and Mrs Smith has been addressed in the response to Submission (b) (from Table 2.3). Heggies (2008) state that the noise assessment has been prepared in accordance with the INP using widely accepted methodologies.

Submission (g), (j) and (k) (from Table 2.3)

Presently as stated, we have complained numerous times to Integra regarding excessive noise. A large proportion of these complaints have been during the night-time frame. A proportion of complaints we make about excessive noise have previously been attributed to coal loading and preparation. Obviously if this new proposal by Integra is approved, the coal loading and preparation activity will significantly increase to accommodate the large increase in coal mining. Given the noise generated by this process is already excessive, there can be no question the increased activity 24/7 will have another detrimental affect on this noise. Also the highwall and auger mining activity will be significantly closer to our property than other current mining activities. It is obvious that will also contribute to the unacceptable cumulative 24/7 noise already affecting our land.

EA 3.7.3 – Assessment of Sleep Disturbance Noise Impacts – this section states sleep disturbance assessment criteria of rating background level plus 15dB(A). 32dB(A) being proven background noise this puts their idea of sleep disturbance at 47dB(A). We believe this figure is not correct. We have previously checked via the data from SentineX 4 what the recorded noise levels were when we have suffered sleep disturbance. The recorded figures have been considerably lower than this on these occasions.

Also, the issue of sleep disturbance is much deeper than being woken from one's sleep. By definition, sleep disturbance is a disturbance to one's sleeping pattern. This includes noise that prevents a person from falling asleep. Also the noise that prevents a person from continuing their sleep once they have awoken for whatever reason, an example being a trip to the bathroom, drink of water or whatever the person's normal sleeping pattern is. It would have to be conceded the level of noise that prevents a person falling asleep or continuing their sleep once awoken would be substantially lower than the noise level required to wake someone who is already sound asleep. This issue has not been addressed in the EA.

Mark & Georgina Smith

In accordance with the INP, sleep disturbance criteria apply only during the night time, namely from 10:00pm to 6:00am. During this period the only Project-related activities that would be undertaken would be:

- the continued use of the existing Camberwell Coal Handling and Preparation Plant (CHPP) and rail loading facilities at the present rate of production;

- the continued intermittent loading and transportation of run-of-mine coal from the RL100 Stockpile area to the Camberwell CHPP via Haul Route E at the existing approved rate of extraction; and
- intermittent extraction of coal from within the lower sections of the extraction area using highwall or auger mining techniques.

The results of the noise impact assessment are presented in Part 3.7.1 of the *Environmental Assessment*.

As the Project would not increase the currently approved throughput of the Camberwell CHPP and rail loading facility, or the approved rate of haulage of run-of-mine coal using Haul Route E, there would be no increase in the approved noise emissions associated with these activities. In addition, Heggies (2008) state that as the contribution of highwall/auger mining operations are significantly lower than the contribution from the CHPP and train loading operations, the overall night-time Project-related noise emissions would not be greater than the existing, approved noise emissions.

Finally, the sleep disturbance criteria used during the noise assessment were derived in accordance with the INP. However, as noted in Heggies (2008), the INP specified sleep disturbance criterion are a screening criterion only. The Proponent would investigate any complaints of sleep disturbance on an individual basis in accordance with the Project's Noise Management and Monitoring Program.

4.5.3 Modelling Methodology - Blasting

Two submissions queried the methodology used during the blasting assessment.

Submission 4(i)

> *Blasting is of real concern as we experienced damage to our property from the original Camberwell North Pit, which was repaired and paid for by Camberwell Coal. We can only expect we will experience the same damage or worse than before because this new mine is closer.*
>
> Graeme & Kay Cheetham

The results of the blasting assessment are presented in Table D29 of the *Environmental Assessment*. The assessment indicates that at Residence 42, the ANZEC recommended assessment criteria for basting would be complied with for both ground vibration and airblast overpressure.

Submission 14(h)

> *Table D29 – Residences 39, 40, 41 are not listed on this graph and why?*
>
> Barry & Susanne Finney

Table D29 of the *Environmental Assessment* lists representative residences within each noise assessment group, namely those residences closest to the propose extraction area. As blasting impacts are proportional to the distance from the source of the blast, residences further from the proposed extraction area would experience lower blasting-related impacts than residences closer to the proposed extraction area.

Finally, the Proponent notes in relation to the previous submissions that all blasting operations would be planned and implemented by a suitably qualified blasting engineer to ensure that the relevant blasting criteria are met at all residents in the vicinity of the Project Site.

4.5.4 Monitoring - Noise

One submission querying noise monitoring results and existing noise emissions was received.

Submission (f), (m) and (p) (from Table 2.3)

> *We have constantly maintained for over 2 years that Integra are breeching their consent regarding excessive noise on our land. Remembering that Integra's consent requires them not to exceed 38dB(A) on our property, we supply the following report (Spectrum Acoustics on behalf of Integra), as shown in Table 2 and Table 3 proves the background noise level of 32dB(A), Table 4 shows readings of 37.5 and 40 and 37dB(A). This is stated as emanating from Integra and Table 5 shows 36 and 39dB(A) emanating from Integra. It states at all of the monitoring locations mine noise was clearly audible from the direction of the Integra operations. This categorically proves Integra have breached their consent conditions on our land.*
>
> *Given this information was conducted over 6 nights compared to the 2 nights that have been used in all of information in this EA. Also the report we show is more than 1 year more recent than that supplied in the EA. It must be conceded the report we show is more relevant and clearly demonstrates again that Integra are constantly breaching their consent conditions regarding excessive noise on our home, since their current open cut consent requires that Integra not exceed 36dB(A) on our property. Given this noise is emanating from mine activities that are substantially further away and much more buffered than Integra's proposed mine in relation to our property. This again proves if Integra's proposal is approved it will have a negative impact regarding excessive noise on our property.*
>
> *Given we have shown the night time mine-related noise on or near our home constantly exceeded mining consent, there can be no doubt if Integra's current proposal is approved this will continue and as we have shown, it will increase.*
>
> Mark & Georgina Smith

The report referred to by Mr and Mrs Smith is a report prepared by Spectrum Acoustics Pty Ltd in October 2006 in response to a noise related complaint made by Mr and Mrs Smith. In response to Mr and Mrs Smith's submission, the Proponent notes the following.

- The 38dB(A) criteria noted by Mr and Mrs Smith comes from the approval to the Glennies Creek Colliery – Surface Facilities Project Approval (No. 06-0057) granted in January 2007. This noise limit relates to operations at the surface facilities for the Glennies Creek Underground Coal Mine, not noise emissions associated with all of the Proponent's operations cumulatively.
- The Environment Protection Licence 7622 held by the Proponent for the Glennies Creek Colliery does not specify a noise emission limit.

- The fact that noise emissions are "clearly audible" from an operation does not imply that the operation is exceeding its noise emission criteria.
- Heggies (2007) state that the noise assessment undertaken for the Project, including the attended noise monitoring program, was undertaken in accordance with the INP.
- Spectrum Acoustics in their report state that the temperature inversion at the time of their monitored noise assessment was **greater than** 3^{o}C / 100m. The conditions associated with DA 105/90 (granted by the Minister of Planning on 1 November 1991 for the operation of the Glennies Creek Underground Coal Mine) and Project Approval 06-0057 state that noise criteria apply under temperature inversions of **less than** 3^{o}C / 100m.
- The noise emissions measured by Spectrum Acoustics were emissions from both the Glennies Creek Underground and Camberwell South Pit, as well as other industrial noise emissions and do not represent project-specific noise emissions.

As a result, the Proponent contends that it has not breached its development consent in relation to noise emissions as asserted by Mr and Mrs Smith.

4.5.5 Blast Monitoring

Submission 1(c)

> *I am concerned that blasting activities may occur on the average of 5 times per week and the anticipated levels, although predicted to be within the accepted guidelines, they are never the less very high. Should the development be approved, I request an appropriate monitor be permanently established in close proximity to my residence.*
>
> C Payne

Monitoring of blasts within the Camberwell South Pit has been undertaken at the residence of Mrs Payne since at least 2005. Detailed blasting records for the period 1 September 2006 to 31 August 2007 indicate that approximately 263 blasts were initiated. The maximum recorded ground vibration and airblast overpressure at the residence of Mrs Payne during that period was 0.60mm/s and 113.02dB(A) Linear respectively. These results indicated that all blasts during that period were less than the ANZEC recommended levels.

The ANZEC criteria are recommended criteria for human comfort and as a result, while Mrs Payne may perceive the blasting impacts as "very high", the actual impacts are of a level that would not disturb most people.

In addition, as stated in Part D2.5.1 of the *Environmental Assessment,* the Proponent has approached Mrs Payne with a view to negotiating an appropriate arrangement regarding the anticipated project-related impacts at her property. Mrs Payne has elected not to proceed with such negotiations and have requested to be kept informed of the Proponent's intentions. The Proponent has agreed to this request.

The Proponent, however, acknowledges that Mrs Payne's residence would be one of the closest residences to the proposed extraction area and would, as a result, be one of the residences most likely to be affected by blasting impacts. The Proponent intends to continue the current blast monitoring program at the residence of Mrs Payne.

Finally, the Proponent notes in relation to the previous submissions that all blasting operations would be planned and implemented by a suitably qualified blasting engineer to ensure that the relevant blasting criteria are not at all residents in the vicinity of the Project Site.

Submission 17(a)

> *Dust monitoring every minute of the day not a 24-hour period. No permittable blasts over the limit. Every blast should be monitored and within the boundary's regulations.*
>
> Stephen McInerney

Part D3.4.5 presents the ANZEC recommended blasting assessment criteria, including acceptable and maximum criteria. In addition, Part D3.5.4 states that the Proponent would establish a network of blasting monitoring locations surrounding the Project Site and that each blast would be monitored.

Submission 12(d)

> *The invasion of noise from the industry can place a strain on individuals and their families, having these increasing amounts of stress placed on the residents of Camberwell can affect their health.*
>
> Thelma De Jong

Submission 23(d)

> *We had to install ducted air conditioning 2 years ago, because it became impossible for us to leave our houses open to cool off naturally with the breeze. Because of the night noise from the mines we were unable to leave windows open at night because you couldn't sleep or you would be woken by the continuous banging of truck bodies, bulldozer and the rock crusher at the underground.*
>
> Joanne Watling

The Proponent acknowledges that noise related impacts from the Project and surrounding approved and operating mining operations affect individuals differently, however, the Proponent also notes that the noise assessment was undertaken in accordance with the INP and, with the exception of the Residences and Properties identified in Part 3.7.1 of the *Environmental Assessment,* as well as Residence 102, no other Residences or Properties are expected to receive noise emissions in excess of the Project-specific noise assessment criteria.

4.5.6 General - Noise

One submission was received relating to noise and dust emissions.

Submission 1(b)

> *The EA discloses that my residence will be exposed to impacts as follows.*
>
> *(i) Exceedance of intrusive noise.*
>
> *(ii) Exceedance of dust emissions.*
>
> C Payne

The Proponent acknowledges that the property of Mrs Payne is anticipated to receive dust and noise impacts in excess of the assessment criteria. However, the Proponent notes that, as stated in Part D2.5.1 of the Environmental Assessment, it has approached Mrs Payne with a view to negotiating an appropriate arrangement regarding the anticipated project-related impacts on her property. Mrs Payne has elected not to proceed with such negotiations and has requested to be kept informed of the Proponent's intentions. The Proponent has agreed to this request.

Six submissions were received with general noise-related queries or comments.

Submissions 9(c)

> *The mine is too noisy now. Will work stop when noise reaches 5dB(A) limit? Who polices this?*
>
> DR & MK Bridge

The Proponent anticipates that acceptable noise emissions levels would be specified as a condition of project approval, if granted. In addition, Part D3.5.1 of the *Environmental Assessment* describes the noise management and mitigation measures that would be implemented during the life of the Project. Finally, the Proponent would implement a procedure to monitor noise emissions to ensure compliance with the requirements of all approvals and licences, would implement additional measures as required should monitored levels exceed the modelling predictions and investigate all complaints of excessive noise emissions.

Submission 7(a)

> *The noise levels in the area of our residence will increase to a level well above what we have now. This will happed all year round including public holidays and weekends.*
>
> Bob & Kim Bell

Table D23 of the *Environmental Assessment* indicates that noise emissions at Property 106, owned by Mr and Mrs Bell, would be between 1dB(A) and 5dB(A) above the Project-specific assessment criteria during Year 1 of the Project. As a result, the property would be classified as being within the Project's Noise Management Zone. Procedures for managing noise emissions within this zone are identified in Part D3.5.2 of the *Environmental Assessment*.

Two submissions relating to the impact of noise emissions on individuals were received.

Submission 19(d)

> *The extra increase in noise from the mining activity and increased traffic we do not accept.*
>
> JH & MR Moore

Part D3.7.1 of the *Environmental Assessment* presents the results of the noise assessment. This assessment was undertaken in accordance with the INP.

Submission (l) (from Table 2.3)

> *Volume 1, Page 2-89, Table D5 – Night Time Operator Attended Noise Survey Results 9 March 2005 and 30 March 2005 – we have not been included in this section. The nearest reference is location 35 which is at approximately the same distance from Integra's current mining activities to our home. Also we have attached results from noise monitoring for 19, 21, 22, 27 & 28 August 2006 and 14 September 2006.*
>
> Mark & Georgina Smith

Heggies (2008) note that is not feasible or necessary to measure the background noise levels at all residential receivers surrounding the Project Site. As a result, nine areas or noise assessment groups were identified with similar noise characteristics. Within each noise assessment group, a representative residence was selected to establish the background noise levels within each group. Mr and Mrs Smith's residence is located within Noise Assessment Group F. Residence 62 was selected to establish the background noise levels within this group. This residence is located approximately 540m to the southwest of the residence of Mr and Mrs Smith, at a similar elevated location overlooking the Project Site.

Submission (n) and (o) (from Table 2.3)

> *As can be seen our property is in the middle of all three mines shown in the map. Also our home is located on top of a ridgeline. As we have stated our home is at an elevation of approximately 115m. The highest point of our land is 120m and this is the highest point between XMO operations, Ashton, Glendell's proposal and Integra's current operations and new proposal. So our land and home is very exposed to the effects of noise and dust from all local mining activity.*
>
> *If Integra's proposal is approved, it will have a significant effect on cumulative noise on our home and land.*
>
> Mark & Georgina Smith

The Proponent acknowledges that the residence owned by Mr and Mrs Smith is located to the southeast of the Mount Owen and Ravensworth East Coal Mines, to the east of the Ashton and the proposed Glendell Coal Mines and to the north, to the north of the Camberwell and Glennies Creek Underground Coal Mines and to the northwest of the Project Site. The Proponent also acknowledges that the residence of Mr and Mrs Smith is located at an elevation a few metres lower than the highest point of the ridge to the northwest of the Project Site.

However, as stated in Parts D3.6.1 and D3.6.2, two types of noise assessment were undertaken for the Project, namely an assessment of the potential intrusive noise impacts from the Project alone, and an assessment of the cumulative noise emissions from all industrial noise sources, including each of the previously listed mining operations. Heggies (2008) state that both the intrusive and cumulative noise assessments were prepared strictly in accordance with the INP. The results of the intrusive and cumulative noise assessments are presented in Parts D3.7.1 and D3.7.2 of the *Environmental Assessment* and indicate that intrusive and cumulative noise emissions at the residence of Mr and Mrs Smith (Residence 75) are less than the Project-specific noise assessment criteria.

An assessment of the air quality assessment is presented in Section 4.4.2.

Submission (ll) (from Table 2.3)

Information and predictions as contained in this EA can be distorted or interpreted to suit one's own agenda. So we wish to state the following facts on this issue as we see it.

(i) Background noise levels for our residence is approximately 32dB(A).

(ii) Average accumulative noise levels at our residence over a 12 month period are approximately 42dB(A).

(iii) Noise levels at our residence often exceed 42dB(A).

(iv) The current cumulative noise level which necessitates acquisition at our residence in current consents of local mining companies is 43dB(A) $L_{Aeq\ 15}$ night.

(ix) As we have pointed out in our submission, noise predictions for XMO expansion were exceeded 44% of the time. The disparity in the prediction and the actual recorded noise was substantial. Noise predictions can be very understated.

Mark & Georgina Smith

Heggies (2008) state that the noise assessment was prepared strictly in accordance with the INP and that the assessment is objective and unbiased. Furthermore, Heggies (2008) note the following in relation to each of the issues raised by Mr and Mrs Smith.

(i) The noise assessment established the background noise levels within Noise Assessment Group F as follows.

- Daytime - 34dB(A).
- Evening - 35dB(A).
- Night time 35dB(A).

(ii) The cumulative noise levels determined during the noise assessment within Noise Assessment Group F are expected to be 37dB(A).

(iii) Noise levels from all sources measured during the operator-attended survey presented in Table D14 of the *Environmental Assessment* commonly exceed 42dB(A) at all measurement locations.

(iv) The Proponent anticipates that project approval, if it is granted, will specify the noise criteria at which a right to request acquisition of property will be triggered.

(ix) Noise predictions presented in the *Environmental Assessment* and Heggies (2007) represent the anticipated typical worst case noise emissions from the Project. Heggies (2008) state that the noise assessment was conducted in accordance with the requirements of the INP.

4.5.7 General – Blasting

One submission queried the impact of blasting operations on residences and "unstable cliffs" in the vicinity of the Project Site.

Submission 4(j) and (k)

A complete inspection of all three houses and irrigation mains should be taken out at the mine's expense prior to commencement of the mine, and a guarantee that any subsequent damage will be compensated for and repaired.

We have also brought to the mine's attention the presence of unstable rock cliffs on Integra owned land creek bank, opposite our property. There is no mention of this in the EA. There is a risk of major rock falls as a result of ground vibrations. People fish in this creek and our children often kayak in the creek.

Graeme & Kay Cheetham

Mr Chris Smith of Integra Coal Operations Pty Ltd and Mr Colin Coxhead, geologist, met with Mr Cheetham on 18 December 2007 to inspect the houses and "rock cliffs" identified in Mr and Mrs Cheetham's submission. Mr Cheetham noted that Camberwell Coal Pty Ltd had undertaken repairs to Mr Cheetham's house in approximately 1994 and that Camberwell Coal Pty Ltd stated at the time that the repairs did not constitute an acknowledgement of responsibility for the damage to the residence. The Proponent would, if requested, undertake inspections of residences and other items of infrastructure surrounding the Project Site that are reasonably be expected to be adversely impacted by blasting operations within the Project Site prior to the commencement of blasting related operations. This commitment has been incorporated as Commitment 5.24 the Statement of Commitments presented in Section 5.

In addition, as noted in Part D3.8 of the *Environmental Assessment*, the Proponent would, with landowner approval, establish a network of blast monitoring locations at residences surrounding the Project Site.

Mr Coxhead states that the "unstable cliffs" referred to be Mr Cheetham are a highly jointed outcrop of conglomerate with numerous overhangs located on the southern bank of Glennies Creek. Mr Coxhead states that there is evidence of blocks of this material toppling out of the rock face and coming to rest on the bank of the creek. The exposure is located approximately 700m north of the proposed extraction area. Mr Coxhead notes that the composition of the outcrop, namely lenses of sandstone and conglomerate, together with the Proponent's understanding of the orientation of geological units within and surrounding the Project Site indicate that the outcropping material is likely to be a strike extension of overburden to ply 271, intersected within the Camberwell South Pit. Mr Coxhead notes this geological unit is not anticipated to be intersected within the proposed open cut. As a result, Mr Coxhead concluded that the stability of the rock face would be unlikely to be adversely impacted by blasting operations. The Proponent would, however, adopt a risk-based approach to managing this issue when developing the Blasting Management Plan for the Project. This commitment has been incorporated as Commitment 5.25 into the Statement of Commitments presented in Section 5.

Eleven submissions raised queries regarding blasting-related damage to houses in the vicinity of the Project Site.

Submission 5(d)

Homes in the Camberwell area are constantly rocked by blasting from Ashton and Integra Mines, resulting in cracking of walls and concrete water tanks. These mines are exceeding their conditions to our detriment.

Wendy Bowman

Submission 7(d)

Blasting will not only increase the noise and dust levels in the area, but will also increase the vibration which may affect our residence.

Bob & Kim Bell

Submission 10(f)

Noise from blasting and possible damage caused to our house, who will pay? We have enough vibration from Integra Open Cut now, we do not need any more.

BW & RA Cherry

Submission 12(e)

The mining companies do not take responsibility for the damage of homes from blasting due to the ground vibrations.

Thelma De Jong

Submission 13 (e)

Ashton and Integra both exceed continually. Our house has had windows cracked from blasting and after having our bathroom totally renovated this year, within a month of completion, the bathroom tiles cracked. A concrete fresh water tank on our property sustained cracks due to an excessive blast on 2/7/06 and now leaks profusely.

Steve & Carol Ernst

Submission 19(f)

Vibration from the blasting could cause extra damage to our house.

JH & MR Moore

Submission 19(g)

There are far too many blasts now, we do not want this to increase

JH & MR Moore

Submission 20(e)

Ashton and Integra both exceed continually. Blasting from Ashton and Integra Mines constantly rocks our home resulting in severe warped flooring.

Keith & Yvonne Moss

Submission 21(e)

The mining companies do not take responsibility for the damage of homes from blasting due to the ground vibrations.

Dierdre Olofsson
(no address)

Submission 22(b) and (c)

It is no longer possible to enjoy the peace and quiet of the country which I once experienced in my childhood and the possibility of this new mine opening is only going to increase the noise pollution in the area.

Because of the mine blasts I have had to relocate many precious ornaments in my house because the mine blasts often make the entire house shake. Over time, blasting from the mines surrounding me has caused large cracks to appear on the ceiling of my roof and also created large gaps between my kitchen cupboards. It is also sometimes extremely unsettling to my pets. I can only see the opening of a new mine leading to the continuation of these problems.

Sandra Turner
Camberwell

Submission 23(e)

The older house has sustained minor insignificant damage from the blasting as yet because of its solid construction. The other house on brick piers has sustained considerable damage. The mine explains as natural clay movement because of the changing weather, even though it didn't start until they started mining. The house had stood there some 100 years undamaged.

Joanne Watling
Singleton

As stated previously, the blasting assessment presented in part D3.7.5 of the *Environmental Assessment* states that blasting-impacts at all residences within the vicinity of the Project Site would be less than the ANZEC recommended guidelines for blasting impact assessment.

Notwithstanding this however, as stated previously, the Proponent would, if requested, to undertake inspections of residences that are reasonably expected to be adversely impacted by blasting operations within the Project Site prior to initiation of the first blast. These commitments have been incorporated as Commitment 5.24 in the Statement of Commitments presented in Section 5.

Finally, in relation to current blasting operations, blast monitoring records from six residences surrounding the Camberwell South Pit indicate that during the period 1 September 2006 to 31 August 2007, 263 blasts were initiated. During that period, six blasts exceeded the "maximum" airblast overpressure level of 120dB(A) Linear at one or more residence and one blast exceeded the "maximum" ground vibration level of 10mm/s.

4.6 Rehabilitation

4.6.1 Introduction

The following sub-sections provide additional information on submissions related to rehabilitation and consider issues related to:

(i) the status of the existing rehabilitation (see Section 4.6.2);

(ii) management of the kangaroo population (see Section 4.6.3); and

(iii) implementation of the rehabilitation program (see Section 4.6.4).

4.6.2 Status of Existing Rehabilitation

One submission complained that the assessment of the proposed rehabilitation-activities was inadequate because the Proponent's existing rehabilitation-related activities have proven unsuccessful.

Public Submission 5(g)

> *The Environmental Safeguards and Residual Impacts" are laughable if they are to be compared with the rehabilitation so far. Camberwell Coal rehabilitation is a complete disgrace, possibly one of the worst of any mine site in the Valley. This needs to be looked at very closely with ongoing checks.*
>
> Wendy Bowman
> "Rosedale"

The Proponent states that drought conditions have adversely impacted on rehabilitation-operations over the last few years. However, the Proponent also notes that the areas undergoing rehabilitation are inspected annually by officers of the Department of Primary Industries – Mineral Resources and have been deemed to be acceptable.

4.6.3 Management of the Kangaroo Population

One submission questioned the procedure for managing kangaroos with the Project Site and biodiversity offset areas following completion of the Project.

Submission 4(p)

> *It is noted that Integra presently cull kangaroos near their entrance roads but don't worry about their neighbours. What will be left for residents to deal with then the mine finishes? Who will look after the mine land and control noxious weeds and animals and bushfires?*
>
> Graeme & Kay Cheetham
> "Ventura"

Part B15.10.2 states that that the Proponent would continue to manage the biodiversity offset areas during the life of the Project and while ever the Proponent continues to own the relevant land for the purposes of nature conservation. This would include, in consultation with neighbouring landowners, appropriate management of the kangaroo population within and surrounding the biodiversity offset areas. Part B15.10.2 also notes that should the biodiversity offset areas be donated to a public authority, sufficient resources would be made available to that authority to allow the ongoing management of the donated land.

In addition, the Proponent would manage land within the Project Site no longer required for mining-related operations for nature conservation. This would initially include rehabilitation operations on disturbed sections of the Project Site and ongoing management of undisturbed section of the Project Site. As for the biodiversity offset areas, this would include management of the kangaroo population within the Project Site.

Finally, Part B15.9 states that as the Glennies Creek Colliery would continue to be operational after the end of the life of the Project, personnel and resources would be available to manage the Project Site and biodiversity offset areas after mining and rehabilitation-related operations have been completed.

4.6.4 Implementation of the Rehabilitation Program

One submission expressed concern regarding the Proponent's implementation of the rehabilitation program.

Public Submission 22(d)

I am not confident in the mine's rehabilitation program.

Sandra Turner

The Proponent anticipates that the Department of Planning will require progressive rehabilitation as a condition of the project approval, should it be received. In addition, the Proponent would be required to prepare a Mining Operations Plan prior to commencing mining operations. This plan would require a detailed description of how and in what timeframe rehabilitation activities would be undertaken. Progress against the proposed rehabilitation activities would be required to be reported annually in the Annual Environmental Management Report that would be prepared for the Project. As a result, any inadequacies in the proposed rehabilitation program or unacceptable rehabilitation outcomes would be readily identified and rectified by the relevant government agencies.

Finally, the Proponent anticipates that the Department of Primary Industries – Mineral Resources would require the security held for the various Mining Leases to be increased to reflect the proposed disturbance associated with the Project. As a result, should be Proponent be unable to satisfactorily complete the proposed rehabilitation operations, funds would be available for the Department of Primary Industries – Mineral Resources to complete the program.

4.7 Fauna

4.7.1 Introduction

The following sub-sections provide additional information on the following fauna-related issues.

(i) Impacts on Threatened Species (see Section 4.7.2).

(ii) Spotted-tailed Quoll (see Section 4.7.3).

(iii) Impacts of fauna generally (see Section 4.7.4).

4.7.2 Impacts on Threatened Species

One submission queried the impact of the Project on the threatened Grey-crowned Babbler and the Brush-tailed Phascogale.

Submission 10(g)

> *The removal of any trees in the valley is not acceptable. The fauna that cannot be relocated will die. Once the species has disappeared they will be lost to us forever. This could happen to the Grey Crowned Babbler and the Brush Tailed Phascogale, both threatened fauna.*
>
> BW & RA Cherry

Parts 4.6.3.2 and 4.6.3.6 of the *Environmental Assessment* determined that the Project-related impacts on the Grey-crowned Babbler and the Brush-tailed Phascogale would not be significant in accordance with the draft *Guidelines for Threatened Species Assessment* published by the DECC and Department of Primary Industries.

4.7.3 Spotted-tailed Quoll

One submission queried the impact of the Project on Spotted-tailed Quoll.

Submission 5(e)

> *Spotted Quolls now found in the village – forced out of what is left of the Ravensworth State Forest by Mt Owen Mine.*
>
> Wendy Bowman

Submission 20(g)

> *We have had dozens of spotted quolls on our property recently which has never occurred before and we believe it is because they have no where to live.*
>
> Keith & Yvonne Moss

Table D32 of the *Environmental Assessment* provides an assessment of the likelihood of Spotted-tailed Quoll occurring within the Project Site. This assessment concluded that no habitat suitable for this species was present within the Project Site. As a result, the Project would be unlikely to have an adverse impact on this species nor cause any individuals of this species to relocate into areas surrounding the Project Site.

4.7.4 Impacts on Fauna Generally

Two submissions queried the impact of the Project on fauna generally.

Submission 6(g)

> *The impact on the native fauna.*
>
> Dallas & Pauline Baker

Submission 19(i)

What happens to the wildlife that lives there? No one cares.

JH & MR Moore

An assessment of the likely Project-related impacts on fauna within the Project Site is presented in Part D4.6 of the *Environmental Assessment.* This assessment concluded that the Project would have no significant impact on threatened fauna species observed within or likely to utilise the Project Site.

4.8 Flora

One submission queried the cumulative impact of the Project on flora and fauna.

Submission 18(a) and (b)

The application should be rejected as the Project Description Report (PDR) does not comply with the Director-General's requirements to assess the cumulative impact of the proposed activity on flora and fauna.

Further clearing of already extensively cleared vegetation communities cannot be considered as having minimal cumulative impact, particularly with no objective assessment.

Marg McLean

Parts D5.5.3 and D4.6.7 present an assessment of the cumulative impact of the Project on flora and fauna respectively which were undertaken by qualified and experienced specialists in both fields. The Proponent asserts that these assessments comply, to the extent practicable, with the Director-General's and government agency requirements for the Project.

One submission made a general statement regarding removal of vegetation.

Submission 19(h)

We do not want to see any more trees removed.

JH & MR Moore

The Proponent notes that removal of vegetation would undertaken in accordance with the relevant legislation and that a Biodiversity Offset Strategy would be implemented to compensate for the removal of approximately 75.1ha of native vegetation.

4.9 Visual Amenity

4.9.1 Introduction

The following sub-sections provide additional information on the following visual amenity-related issues.

(i) Location of lighting plants (see Section 4.9.2).

(ii) General visual amenity impacts (see Section 4.9.3).

4.9.2 Location of Lighting Plants

One submission was received relating to the location of lighting plants at night.

Submission 14(d)

> *B30 mining equipment – lighting plants have not been listed and in what position will they be facing in operations?*
>
> Barry & Susanne Finney
> Glennies Creek

Table B7 on Page B-30 of the *Environmental Assessment* indicates that diesel generators would be used to provide power for lighting plants. Part D9.3 indicates that;

> "Where lighting is required during mining operations, lighting plants would preferentially be placed in the deeper portions of the open cut or would be directed towards the existing mining infrastructure and not towards residences surrounding the Project Site."

4.9.3 Visual Amenity - General

A number of submissions complained about the general impacts on visual amenity in the vicinity of the Project Site.

Submission 8(a)

> *Being on top of a hill at approximately 72m we are sure to be adversely affected by noise, dust and night time light.*
>
> JB & MF Bradford
> Singleton

Mr and Mrs Bradford's property is located approximately 2.25km to the southeast of the Project Site. Figure D23 in the *Environmental Assessment* indicates that the property would have partial or no visibility of the Project Site. As the property is located to the southeast of the Project Site, activities that may be visible would include the construction of the out-of-pit waste rock emplacement. Once construction of the emplacement is complete, however, the Proponent contends that none of the Project-related activities would be visible from the property of Mr and Mrs Bradford.

The issue of visual amenity was raised by Mr and Mrs Smith in their submission.

Submission (ee) to (hh) and (ll) (from Table 2.3)

> *As shown in Photos (Attachment 1) our home looks directly down on Integra's proposed site. Currently, we look at Possum Skin Dam and beyond, we have a clear view of what we believe is coal haul route E. At night the flashing lights of the haulage trucks are clearly visible. We can see down to the proposed open cut access road and can see the area of the proposed open cut facilities.*

Volume 2, Page 9-33, Section 5.3, Visual Impacts – we totally disagree with the statements in this section. As seen in the abovementioned photo, there can be no denying, depending on where you stand on our verandah and around our home, we have a clear view of every part of the project site.

If Integra's proposal is approved, this rural aspect will significantly change. There can be no denying we will also be affected by light from the project at night.

There is no doubt the visual aspect of Stony Creek Road will resemble what the highway end of Glennies Creek Road now looks like if Integra's proposal is approved.

Information and predictions as contained in this EA can be distorted or interpreted to suit one's own agenda. So we wish to state the following facts on this issue as we see it.
(viii) From our front verandah, we look directly down on the proposed site.

Mark & Georgina Smith

The Proponent agrees that from the residence of Mr and Mrs Smith (Residence 75), all sections of the Project Site are visible through a screen of existing native vegetation. Plate D4 in the *Environmental Assessment* provides an example of the visibility of the Project Site from the residence. As stated in Part D9.4 of the *Environmental Assessment:*

> The degree to which an individual is be impacted upon by alterations to the visual landscape generally depends on the individual and the personal values that they place on the various aspects of that landscape. As such, visual impact assessment is highly subjective.

While the *Environmental Assessment* notes that, in the Proponent's opinion, the Project would not be likely to result in impacts that would be considered unacceptable to the community in general, Mr and Mrs Smith may perceive the impacts to a greater extent.

One submission complained of the visual and noise related impacts generally

Submission 19(e)

The increased lighting and extra noise at night we totally object to.

JH & MR Moore

Part D9.4 of the *Environmental Assessment* indicates that in the Proponent's opinion, the Project would not be likely to result in impacts that would be considered unacceptable to the community in general. Part D4.6 indicates that noise impacts at Mr and Mrs Moore's property would be less than the Project-specific noise assessment criteria.

4.10 Surface Water

4.10.1 Introduction

The following sub-sections provide additional information on the following surface water-related issues identified in the submissions.

(i) Surface water quality (see Section 4.10.2).

(ii) Surface water quantity (see Section 4.10.3).

(iii) Surface water – general (see Section 4.10.4).

4.10.2 Surface Water Quality

Four submissions were received relating to water quality impacts on the land surrounding the Project Site and Glennies Creek.

Submission 4(l)

> *We rely on water from Glennies Creek for irrigation of crops and fear contamination of supply if there is a dirty water dam breach in heavy storms.*
>
> Graeme & Kay Cheetham

Submission 5(f)

> *This open cut project brings a problem with the surface water. The EA states "two dams for dirty water". Having seen the result of the cyclonic storm in the June long weekend, these dams would not have held and the water and sediment would have washed down into the creek.*
>
> Wendy Bowman

Submission 23(f)

> *We have noticed the deterioration of the quality of the water in the creek over the past 5 years. Once the creek was clear and now we can see a constant murky and rusty look to the water. We use the water for household use and we used to drink it. We now, for the past 4 years, buy bottled water.*
>
> Joanne Watling

Submission 19(j)

> *We are concerned about excess water contamination from the mine spreading over our property and polluting Glennies Creek.*
>
> JH & MR Moore

Part D10.3 of the *Environmental Assessment* details the existing and proposed design and management safeguards and measures that would be implemented to manage surface water impacts within and surrounding the Project Site. These include construction of a two Dirty Water Containment Dams and a series of diversions structures to divert all potentially sediment-laden water to the Dirty Water Containment Dams, Possum Skin Dam or the proposed open cut. The Dirty Water Containment Dams and diversion structures would be constructed to a standard to contain all surface water flows within the Project Site to an annual recurrence rainfall event of 1 in 50 years.

In addition, a site water balance is presented in Part D4.10.1 of the *Environmental Assessment.* The water balance indicates that no-discharge of potentially sediment-laden water from the Project Site would be required. As a result, the Project would be unlikely to have an adverse impact on the quality of surface water within natural drainages within or surrounding the Project Site and consequently no impacts on Glennies Creek.

4.10.3 Surface Water Quantity

Two submissions were received querying the impact of the Project on the quantity of surface water within Glennies Creek

Submission 12(b)

> *Camberwell was recently declared in drought an water supply is at an all time low and yet the government is placing the needs towards the mining industry due to cause of money. This is not fair to anyone living in this district because everybody deserves the right to have water.*
>
> Thelma De Jong

Submission 21(c)

> *Camberwell was recently declared in drought and water supply is at an all time low and yet the government is placing the needs towards the mining industry due to cause of money.*
>
> Dierdre Olofsson

As highlighted previously, no potentially sediment-laden water would be required to be discharged from the Project Site to Glennies Creek. In addition, Part D10.5.1.2 of the *Environmental Assessment* states that retention of incident rainfall within disturbed sections of the Project Site would reduce the area of the catchment of Glennies Creek by approximately 0.2%. This is considered by PSM (2007) to be a negligible impact. Finally, the Proponent does not propose to extract water from any off-site source, including Glennies Creek. As a result, the Project would be likely to have no significant impact on the quantity of surface water within Glennies Creek.

4.10.4 Surface Water - General

One submission related to surface water issues of a general nature was received.

Submission 16(f)

> *Glennies Creek water management and conservation is of utmost importance and needs careful consideration.*
>
> John & Judith McInerney

Part D10 of the *Environmental Assessment* presents a detailed assessment of the likely impacts on the surface water resources in the vicinity of the Project Site.

4.11 Groundwater

4.11.1 Introduction

One submission was received in relation to groundwater-related issues in the vicinity of the Project Site.

Submission 4(a) and (m)

> *Under groundwater section D11.2.1, they show only 5 registered bores on Figure D32, omitting our bore (well). They have also omitted test results taken from our well by Daniel Barclay from AGE Consultants Pty Ltd, on Table D44.*
>
> *We also rely on well (bore) water for stock and domestic supply from a licensed well on the property. A guarantee is needed that this well would not be affected in any way.*
>
> Graeme & Kay Cheetham

The Proponent acknowledges that a well exists on the property of Mr and Mrs Cheatham and that this well was inadvertently omitted from Figure D32 and Table D44 of the *Environmental Assessment*. The Proponent, however, notes that a commitment was made in Part D11.6.4 to monitor this well as part of the Project's groundwater monitoring regime. This well is registered with the Department of Water and Energy (Bore Number GW067291) and occurs approximately 150m to the east of the residence of Mr and Mrs Cheetham.

The construction of this bore is summarised in Table 13 of AGE (2007). This table indicates that the well is approximately 27.4m deep and is licenced for stock / farming and domestic purposes. The table indicates that the aquifer intersected by the well is not known. However, given the purpose for which the bore is licenced and the quality of groundwater within the alluvial aquifer (electrical conductivity between 500µs/cm and 540µs/cm and near neutral pH) and the Permian-aged aquifers (electrical conductivity between 7 280µs/cm and 10 280µs/cm and alkaline pH), it is reasonable to assume that this well intersects the alluvial aquifer associated with Glennies Creek.

The Project would not intersect the alluvial aquifer associated with Glennies Creek. In addition, Part D11.6.4 of the *Environmental Assessment* states that:

- there is no indication of significant connectivity between the alluvial and Permian-aged aquifers in the vicinity of the Project Site;
- the alluvial aquifers have a high level of hydraulic connectivity with Glennies Creek; and
- the standing water level in wells intersecting the alluvial aquifer is likely to reflect the water level within the creek.

Finally, Part D11.6.3 of the *Environmental Assessment* indicates that the Project is anticipated to have a negligible impact on water levels within Glennies Creek. As a result, variations in the standing water level, and therefore yield, within the well on "Ventura" would be unlikely to be impacted by the Project and would be more likely to be influenced by variations in the water level within Glennies Creek unrelated to the Project.

Figure 4.2 presents an amended version of Figure D32.

Figure 4.2
Groundwater Bores – Amended

A4 / Colour

4.12 Traffic

4.12.1 Introduction

The following sub-sections provide additional information on the following traffic-related issues.

(i) Traffic levels (see Section 4.12.2).

(ii) Transportation routes (see Section 4.12.3).

(iii) Intersection performance (see Section 4.12.4).

(iv) Road maintenance (see Section 4.12.5).

(v) Road closures (see Section 4.12.6).

(vi) Traffic – general (see Section 4.12.7).

4.12.2 Traffic Levels

One submission queried the likely impacts of increased traffic levels on Bridgman Road.

Submission 7(e)

There will also be an increase to the volume of traffic on Bridgman Road from Singleton to Stony Creek Road which is not mentioned in the Executive Summary.

Bob & Kim Bell

The Proponent acknowledges that the impact of Project-related traffic on Bridgman Road was not assessed in the *Environmental Assessment.* However, the Proponent notes that the width of the sealed section of Bridgman Road is 9.3m, with 2m shoulders on each side. The road surface is generally in good condition. Table D52 of the *Environmental Assessment* notes that roads with lane widths of 3.25m (total width of 7.5m) and shoulders of 1.2m have a capacity of more than 6 000 vehicle movements per day. As the Project would result in an additional maximum of 130 vehicle movements per day, or an additional 2.2% of the minimum capacity of Bridgman Road, the Project would be unlikely to have a significant impact on the operation of Bridgman Road.

Two submissions related to the classification of Stony Creek and Middle Falbrook Roads were received

Submissions 10(b)

Local rural roads not industrial roads as stated in the assessment, traffic will increase.

BW & RA Cherry

Submission 19(b)

Our road is not an industrial road, it is a local road.

JH & MR Moore

Part D12.2.2 of the *Environmental Assessment* refers to Stony Creek and Middle Falbrook Roads as "rural collector roads," not "industrial roads" as asserted. In addition, the Proponent acknowledges that the traffic levels on these roads would increase as indicated in Part B9.4.

One submission related to the existing traffic levels on Stony Creek and Middle Falbrook Roads was received

Submission 11(d) and (g)

> *The increase in traffic on already overtaxed essentially country roads in also a concern. Bridgman, Stony Creek and Middle Falbrook Roads are already overloaded and should be upgraded before any further increase in traffic flow is allowed. Children alighting from buses are a particularly concern.*
>
> *Benchmarking the status quo (noise / dust / traffic) would surely provide good faith by the Company and a guarantee to maintain the current property assets or to compensate if they can't.*
>
> G & W Cooper

Part D12.2.2 of the *Environmental Assessment* describes the existing traffic levels on Stony Creek and Middle Falbrook Roads, as determined by automated traffic counts. Taking into consideration the anticipated increase in traffic volume on these roads as a result of the Project, the anticipated maximum vehicle movements on Stony Creek Road would be approximately 690 movements per day. Table D52 of the *Environmental Assessment* presents capacity criteria for roads of various dimensions. That table indicates that rural roads such as Stony Creek and Middle Falbrook Roads, with a sealed width of approximately 6.5m and unsealed shoulders of approximately 2m on each side, have a capacity of greater than 6 000 vehicle movements per day. As a result, Stony Creek and Middle Falbrook Roads are not operating at capacity as asserted.

Finally, the existing air quality and noise environment in the vicinity of the Project Site is described in Parts D2.2 and D3.2 respectively.

4.12.3 Transportation Routes

One submission queried the transportation routes used by vehicles to access the Project Site.

Submission 14(f)

> *Road access to the mine – the EA statement is very vague in its interpretations. At present we have an increased level of light vehicles, heavy vehicles, earthmoving floats and B-Double trucks attempting to access Glennies Creek underground mine by the rout from the Camberwell district New England Highway intersection, Glennies Creek Road, to Middle Falbrook Road across Glennies Creek Bridge to Glennies Creek Mine. These traffic movements create some extreme concern and inconvenience to residents in this area for the following reasons. ..... The Glennies Creek Bridge at present is in severe state of disrepair with the approaches failing due to this heavy traffic, this issue needs to be clarified for the present and future traffic movement.*
>
> Barry & Susanne Finney

Part B9.3 of the *Environmental Assessment* states that employees, contractors, supplier representatives and other visitors, together with supplies required for ongoing mining activities, such as fuel, would access the site via Middle Falbrook Road. In addition, Part 12.3.3 of the *Environmental Assessment* states that "employee access [to the Project Site] via Nobles Lane would be actively discouraged by the Proponent."

The Proponent acknowledges that the heavy vehicle access to the Project Site via Glennies Creek Road and the Middle Falbrook Bridge would not be appropriate. As a result the Proponent would encourage operators of heavy vehicles transporting materials to or from the Project Site to travel via Stony Creek Road only. This commitment has been incorporated as Commitment 14.7 in the Statement of Commitments presented in Section 5.

4.12.4 Intersection Performance

One submission querying the performance of the Stony Creek Road / Middle Falbrook Road intersection was received.

Submission 4(o)

> *An increase in traffic on Stony Creek and Middle Falbrook Roads would require an upgrade of the intersection of these roads as at present it is very dangerous. Also, the Middle Falbrook Bridge requires a substantial upgrade.*
>
> Graeme & Kay Cheetham

The Proponent does not agree with the assertion that the operation of the intersection between Middle Falbrook and Stony Creek Roads is unsafe. However, in order to allay these concerns, the Proponent is prepared to engage an appropriately qualified and experienced traffic consultant to determine the adequacy of performance of this intersection. This commitment has been incorporated as Commitment 14.15 in the Statement of Commitments presented in Section 5.

In addition, as described above, project-related traffic would be discouraged not to access the Project Site via the Middle Falbrook Road Bridge.

4.12.5 Road Maintenance

One submission was received querying the responsibility for road maintenance.

Submissions 10(c)

> *Middle Falbrook is a local rural road and with the increase in heavy trucks and trailers (nearly as big as B-Doubles) who will pay for the repair of our road from the damage caused by these large trucks?*
>
> BW & RA Cherry

The Proponent notes that an annual road maintenance levee is currently paid to Singleton Shire Council. The Proponent anticipates that this will continue should planning approval be granted and that the amount of the levee would be adjusted to reflect the additional Project-relate traffic movements.

One submission was received requesting centre lines be marked be painted on Stony Creek Road

Submission (jj) (from Table 2.3)

> *We believe the majority of traffic using Stony Creek Road is mine-related traffic. If the Integra proposal is approved, this traffic will substantially increase. We currently have issues on Stony Creek Road with cars and trucks moving to the incorrect side of the road on corners (cutting corners). We request Integra mark centre lines on Stony Creek Road to help prevent this dangerous situation.*
>
> Mark & Georgina Smith

The Proponent acknowledges that a large proportion of traffic using Stony Creek Road is related to the Proponent's activities. As a result, the Proponent upgraded this road prior to commencement of operations at the Glennies Creek Underground Coal Mine. However, the Proponent will consult with Singleton Council regarding painting of additional centre lines on this road, where required, and would pay for this to be done if Singleton Council agrees that this would improve road safety on this road. This commitment has been incorporated as Commitment 14.5 in the Statement of Commitments presented in Section 5.

4.12.6 Road Closures

One submission was received regarding notification of the timing of road closures for blasting.

Submission (kk) (from Table 2.3)

> *If Integra's proposal is approved we request a process put in place that takes away this ambiguity and informs residents in advance exactly when Stony Creek Road will be closed and for how long.*
>
> Mark & Georgina Smith

Part D12.4 of the *Environmental Assessment* states that the Proponent would:

> provide notification 30 to 60 minutes prior to a blast of updated closure times via automated SMS text messages to residents and others who request to be included on the notification list.

4.12.7 Traffic - General

One submission was received related to heavy vehicle movements of Stony Creek and Middle Falbrook Roads.

Submissions 9(d)

> *We also note there seems to be no mention of the blasthole stemming trucks and dog trailers etc. who tear up and down the road.*
>
> DR & MK Bridge

Table B10 in the *Environmental Assessment* identified anticipated heavy movements associated with the Project. These movements would include heavy vehicles transporting blasthole stemming material to the Project Site.

Detailed monitoring data indicates that at Monitoring Site 1 (Middle Falbrook Road south of the intersection with Stony Creek Road) and Monitoring Site 2 (Stony Creek Road west of the intersection with Middle Falbrook Road) total truck and dog heavy vehicle movements, were 13 and 14 during the day period between 14 and 20 July 2007. This constituted approximately 3% of all heavy vehicle movements recorded during the survey period. No truck and dog vehicles were recorded using the Middle Falbrook Road bridge over Glennies Creek.

Two submissions were received relating to rubbish on the side of roads in the vicinity of the Project Site.

Submissions 10(d)

> *We have seen an increase of rubbish on the side of Middle Falbrook and Stony Creek Roads over the last few years. Extra 130 light and 10 heavy vehicles per day) that adds up to a lot more rubbish.*
>
> BW & RA Cherry

Submission 19(c)

> *There is an increase of rubbish on the roadside, empty cans and bottles from vehicles. This will become worse with the extra traffic.*
>
> JH & MR Moore

The Proponent acknowledges that this issues was not addressed in the *Environmental Assessment.* The Proponent would encourage it employees, contractors, supplier representatives and other visitors not to dispose of rubbish inappropriately within or in the vicinity of the Project Site. To assist with this, the Proponent would supply covered rubbish bins in the car park within the Amenities Area to allow rubbish from light vehicles to be disposed of appropriately. This commitment has been incorporated as Commitment 14.6 in the Statement of Commitments presented in Section 5.

4.13 European Heritage

A number of submissions were received highlighting concerns over damage to St Clements Church, Camberwell and reduced heritage values within the village of Camberwell.

Submission 5(h)

> *Again, we request that Camberwell and Jerry's Plains Villages be heritage listed as "whole villages".*
>
> Wendy Bowman

Submission 12(c)

> *We need to protect our heritage by placing an exclusion zone around the church and the village from mining to preserve our history for future generations.*
>
> Thelma De Jong

Submission 13(g) and 20(h)

Camberwell has the second oldest Church in the Newcastle Diocese. It MUST be protected and we request a mine exclusion zone surrounding the village.

Steve & Carol Ernst
Keith & Yvonne Moss

Submission 16(g)

Our historic village of Camberwell needs your protection as we have the second oldest church in the Newcastle Diocese. The mine exclusion zone needs to be extended to save our heritage.

John & Judith McInerney

Submission 21(d)

Camberwell has the second oldest Church in the Hunter Valley, St Clements Church and the village of Camberwell has been dated back to 1820s. We need to protect our heritage by placing an exclusion zone around the church and the village from mining to preserve our history for future generations.

Dierdre Olofsson

Submission 22(e)

The village of Camberwell has existed for 167 years. St Clements (built in 1851), the church and cemetery, much loved by local residents, are still in use today. The lovely, quiet, peaceful ambience which once existed in Camberwell has now been destroyed by the arrival of at least 4 mines and I believe the opening of a new mine in this area will only create more noise, dust and mini earthquakes in this beautiful place.

Sandra Turner

Submission 24(a)

We lodge our objection to another mine in the Camberwell area, concerning the welfare of the 2nd oldest church in the area. Our major concerns are the blasting damage from ground vibration.

St Clements Congregation

The Proponent notes that the village of Camberwell is located approximately 4.2km from the closest point of the Project Site boundary and approximately 4.8km from the closest point of the proposed open cut boundary. Part D3.7.3 of the *Environmental Assessment* states that blasting emissions at all residences surrounding the Project Site would be less that the ANZECC recommended guidelines. As the residences surrounding the Project Site are significantly closer to the Project Site than the village of Camberwell, it is highly unlikely that the Proponent's activities would have any adverse impact on St Clements Church or the heritage value of the village of Camberwell.

Finally, listing of locations as items of heritage value is not a matter for the Proponent, nor is it a mater that is relevant to the assessment of the Project.

4.14 Socio-economic

4.14.1 Introduction

The following sub-sections provide additional information on the following socio-economic-related issues raised in the submissions.

(i) Community interaction (see Section 4.14.2).

(ii) Property values (see Section 4.14.3).

(iii) Socio-economic-general (see Section 4.14.4).

4.14.2 Community Interaction

One submission was received in relation to the community interaction in the vicinity of the Project Site.

Submission (aa) and (bb) (from Table 2.3)

> *Volume 2, Page 9-21, Section 3.2.4 – states in part that residents of Glennies Creek rarely interact as a community group. Also there is a high transient population. In the last 3 years, since the ever increased mining activities and expansions, this has changed dramatically. Now there are only approximately 5 privately owned residences on these roads. These are residences not mine-owned or under an acquisition consent or not in a financial agreement with the mines. The number of residence acquired in recent times is approximately 30 on these roads. Due to the escalating mining activity, this will exacerbate the already unacceptable situation regarding the devastation on what once was a very sociable and friendly community.*
>
> *Volume 2, Page 9-16, Snapshot of Glennies Creek Community and Surrounds – we believe there are positives for Singleton as a whole. However, the EA does not address the very negative socio-economic effects for the residents of Glennies Creek area due to mining. These effects include: loss of community due to acquisition, very few privately owned residences so very transient population, continuing detrimental impact on market ability and value on properties in the area, ever decreasing quality of life due to ever increasing noise, dust and visual impacts.*
>
> Mark & Georgina Smith

The Proponent acknowledges that there has been an increase in the number of residences occupied by tenants in the vicinity of the Project Site. However, the proportion of tenant versus owner occupiers in the vicinity of the Project Site is not a matter which the Proponent has control over, nor is it a matter which has been influenced by the Project. The Proponent maintains, as stated in Part D14.2.4 of the *Environmental Assessment*, that:

> the current social environment in Glennies Creek community is one where individuals access social and recreational services in Singleton and other nearby towns. Glennies Creek community-wide activities have become far less frequent as evidenced by the decreased utilisation of the Glennies Creek Community Hall.

4.14.3 Property Values

Eight submissions raised issues related to property values.

Submission 1(a)

I consider the close proximity of the open-cut development will substantially reduce the value of the property.

C Payne

Submission 4(c)

We fear that with a mine so close it would severely depreciate the value of these properties and affect our hard worked for assets. In fact, property No. 139 (a residential building block we started to develop prior to Integra announcing the development of the new Glennies Creek Open Cut) is losing potential buyers due to their concern with the mine.

Graeme & Kay Cheetham

Submission 7(c)

It is more than likely that the value of our property will decrease due to the location of the mine and the increase of the noise and dust levels.

Bob & Kim Bell

Submission 11(c)

The drop in property values associated with being close to a coal mine is another concern.

G & W Cooper

Submission 13 (h)

Any future approvals for mining in close proximity to our property may render it uninhabitable and drastically impact on the value, which will obviously affect our future upon retirement from the work place.

Steve & Carol Ernst

Submission 16(e)

Property values are also an issue.

John & Judith McInerney

Submission 20(i)

Any future approvals for mining in close proximity to our property may render it uninhabitable and drastically impact on the value, which will obviously affect our future upon retirement from the work place.

Keith & Yvonne Moss

Submission (z) (from Table 2.3)

Due to ever increasing mining activity, Glennies Creek, Middle Falbrook and the Camberwell areas have become well known no go zones for anyone contemplating buying property in the Singleton area. This can be confirmed by any local real estate

> *agents or property valuers. This situation has a significant impact on the value of homes and land in this area. This issue of devaluation of land and homes due to Integra's activities and proposal does not seem to have been addressed in this Integra EA.*
>
> Mark & Georgina Smith

Part B1.1 of the *Environmental Assessment* presents the objectives of the Project. One objective is to "to operate [the Project] in a manner that would minimise surface disturbance and impacts on surrounding residents and the local environment." A detailed description of the design and management measures and safeguards that have been or would be implemented to achieve this objective is presented in Parts B and D of the *Environmental Assessment.* In addition, a summary description and assessment of these mitigation measures and safeguards is presented in Part F2.3. Briefly, the Proponent contends that it has minimised the likely impacts on surrounding residents to the greatest extent practicable.

The Proponent acknowledges that residents surrounding the Project Site perceive that the Project and other existing and proposed coal mining operations in the vicinity of the Project Site have adversely affected property values in the vicinity of the Project Site. However, the Proponent would highlight the following.

- As stated in Part D14.2.5 of the *Environmental Assessment*, existing coal mining operations in the vicinity of the Project Site, namely Camberwell, Mt Owen, Rixs Creek and Ravensworth East Open Cut Coal Mines and the Glennies Creek Underground Coal Mine produce approximately 16.4Mt per year of coal. The Project would increase annual coal production within this area by approximately 8%.
- As stated in Table D54 of the *Environmental Assessment,* census data from 2001 indicates that 16% of employed persons within the Glennies Creek Community and the Singleton Local Government Area are employed within the mining industry. As mining-related positions are generally well remunerated, it is likely that property values within the wider Singleton Local Government Area are higher than they would otherwise be as a result of coal mining activities.
- Property values, and perceptions of property values, are influenced by many factors and it would be unreasonable to attribute any perceived decrease in property values to one factor or to one project alone.
- The Proponent notes that the Property 139 identified by Mr and Mrs Cheetham was recently sold for close to the advertised asking price.

4.14.4 Socio-economic - General

Three submissions related to matters of an industrial relations nature were raised by the Construction Forestry Mining & Energy Union.

Submission 25(b) to (e)

> *The Proponent is yet to determine whether mining-related activities would be undertaken by the Proponent or mining contractor. This weighs heavily against the socio-economic benefits of the project.*

The Project, should it not have its mining activities undertaken by the Proponent and a commitment by the Proponent to continue, if possible, its existing Camberwell South Pit employees, then the Project would not secure ongoing employment for its current employees. This would significantly reduce the socio-economic benefits to the Project.

An assessment of the economic benefits through wage distribution and stability of labour relationships is missing from the assessment.

The Project is a coal mining industry project and wages and conditions that should be afforded to persons engaged to work at the Project should be consistent with those fair wages and conditions that are generally provided to others employed in the coal industry. It is further conditional upon continued employment for current Camberwell South Pit employees.

Construction Forestry Mining & Energy Union

Matters related to whether the mining operation are undertaken by the Proponent or a contract mining company, whether priority of employment would be given to existing employees of the Proponent's other coal mining operations, matters of wage distribution and stability and conditions of employment are not matters relevant to the application for project approval. Notwithstanding this, the Proponent would engage employees for the Project on terms and with conditions that reflect industry standard terms and conditions and the particular skills and attributes of the individual.

Submission 25(f) to (g)

Additional areas of concern with respect to the socio-economic consideration contained within the Environmental Assessment is the paucity of any reference to the infrastructure and coal supply chain bottlenecks that mitigate any perceived socio-economic benefits from the Project.

The Proponent may be required to show that they have access to both rail and port capacity that will not result in reductions in other producers' access, resulting in other producers having to reduce its workforce.

Construction Forestry Mining & Energy Union
Cessnock

The Proponent acknowledges that issues related to capacity constraints exist on the rail network and coal loading facilities within the Hunter Valley. The Proponent has followed the protocols developed by the Hunter Valley Coal Chain Logistics Team for accessing rail and port capacity and has been granted access to these facilities if project approval is granted and mining operations commence Notwithstanding this, however, these are not matters relevant to the application for project approval.

Submission (cc) (from Table 2.3)

Volume 2, Page 9-28, Quantifying Noise Impacts – it is absolutely unbelievable to us that Integra have the gall to suggest as they do in this section that the significant negative impacts on our residence as shown in our submission can be wiped away by a small monetary payment.

Mark & Georgina Smith

ACG (2007) attempted to quantify, as part of a community-wide economic assessment of the Project, the likely economic impact of noise on property values. As acknowledged by the authors of that report in Section 5.1, there is limited data available regarding the economic value of noise-related impacts on property values. However, Table 5.3 of that report presents ACG's assessment of the value of noise impacts related to the Project, based on a community-wide assessment. These values are not provided as a guide to the appropriate level of compensation for individual affected land owners. Any such arrangements, if implemented, would be negotiated between the Proponent and the land owner.

4.15 General

4.15.1 Introduction

The following sub-sections provide additional information on the following general issues.

(i) Cumulative impacts (see Section 4.15.2).

(ii) Hours of operation (see Section 4.15.3).

4.15.2 Cumulative Impacts

Six submissions highlighted concerns with cumulative impacts related to the Project.

Submission 1(d)

> *With regard to cumulative impact, I am disappointed that any impacts forthcoming from the Glendell Mine appear to be disregarded. Part of the Glendell operations will in fact be closer than the Ashton Mine that has been taken into account.*
>
> C Payne

As identified in Section 3.2, the air quality impacts related to the proposed Glendell operation were not specifically included in the air quality impact assessment. However, an allowance was made for "distant" and "mine-related" sources. In addition, as stated in Part 3.6.2 of the *Environmental Assessment,* the approved Glendell operation was included in the cumulative noise assessment for the Project.

Submission 2(a)

> *The operation of the project as described, will make it impossible for us to continue to live at our present address due to the environmental and personal impact factors of dust, noise, light, increased traffic flow, traffic dislocation due to blasting and of course lack of amenity which we have enjoyed for 21 years and had presumed to enjoy for the oncoming decades.*
>
> BH & BL Evans

The Proponent acknowledges that Project-related impacts at the residence of Mr and Mrs Evans are likely to exceed the relevant criteria that would trigger a right to request that the property be acquired. As stated in Part D2.5.1 of the *Environmental Assessment,* the Proponent has

approached Mr and Mrs Evans with a view to negotiating an appropriate arrangement regarding the anticipated project-related impacts on their property. At the time of submission of the *Environmental Assessment*, Mr and Mrs Evans elected not to proceed with such negotiations and have requested to be kept informed of the Proponent's intentions. On 12 February 2008, discussions recommenced and actions were initiated which are a pre-requisite to purchase.

Submission 3(a)

> *I strongly object to the project on the grounds that it will create dust, noise and blasting vibrations at my home and property at Glennies Creek. This may potentially make my living conditions less comfortable and cause possible damage to building structures. Likewise, I object to the accumulative effect this project may potentially have, those being dust related health issues, ongoing noise and damage to property.*
>
> AC Noble

The Proponent acknowledges that the closest point of Mr Noble's property is approximately 700m from the closest point of the Project Site boundary and approximately 775m from the closest point of the proposed open cut. However, the Proponent also notes that the air quality, noise and blasting assessments undertaken for the Project do not indicate exceedances of the relevant assessment criteria, including the cumulative assessment criteria, at any of the residences owned by Mr Noble. Notwithstanding this, however, as highlighted in Section 4.2.3, the Proponent anticipates that a procedure for identifying properties that the Proponent would be required to acquire on request would be included as a condition to project approval, if it is granted.

Submission 6(e)

> *We are already surrounded by mines.*
>
> Dallas & Pauline Baker

The Proponent notes that the Singleton local government area is a coal mining area and that there are a number of coal mining operations surrounding the Project Site. The Proponent also notes that the proposed operations are a minor northerly extension of an area of prior mining-related activity.

Submission (ii) (from Table 2.3)

> *We believe this EA has endeavoured to play down the actual effects of the total cumulative effect, eg. noise, dust, visual and socio-economic effects Integra's proposal and all other mining activity that has been commenced in the past 3 years is having on this area.*
>
> Mark & Georgina Smith

Heggies (2008) and HAS (2008) state that the noise and air quality assessments have been prepared strictly in accordance with the INP and DECC guidelines. In addition, the Proponent contends that the visual amenity assessment appropriately assesses the impact of the proposed development in light of existing mining-related development in the vicinity of the Project Site. Finally, the Proponent contends that while the anticipated socio-economic benefits may not be evenly distributed through the community surrounding the Project Site, the overall socio-economic impact of the Project is positive.

Submission (ll) (from Table 2.3)

Information and predictions as contained in this EA can be distorted or interpreted to suit one's own agenda. So we wish to state the following facts on this issue as we see it.

(vi) Glendell and particularly Integra's proposal is substantially closer to our residence that any current open cut mining activity in this area.

(vii) Our property is approximately 1.1km from Integra's project boundary and our residence is approximately 1.8km from the proposed pit face.

Mark & Georgina Smith

The closest point of the Project Site is approximately 1.2km from the closet boundary of Mr and Mrs Smith's property and approximately 2.0km from the closest point of the proposed extraction area.

The Proponent acknowledges that, should the Project proceed, it would be the closest mining operation to the property of Mr and Mrs Smith. The Proponent also acknowledges that the property of Mr and Mrs Smith is located approximately 2.9km from the proposed Glendell Mine Site.

4.15.3 Hours of Operation

Five submissions querying the hours of operation were received.

Submission 5(b)

[Camberwell] Village is surrounding by mines, Ashton to the west, Integra to the east and Mt Owen working to the north. ALL mines to cease working at 10:00pm immediately.

Wendy Bowman
"Rosedale"

Submission 13(d)

Work at all mines to cease at 10:00pm.

Steve & Carol Ernst
Camberwell

Submission 16(d)

Noise affects our sleep nightly. ALL mining operations should cease at 10:00pm.

John & Judith McInerney
Camberwell

Submission 20(d)

Work at all mines should cease at 10:00pm. We both experience sleep disruption due to the excessive amount of noise and light at night.

Keith & Yvonne Moss
Camberwell

Table B11 of the *Environmental Assessment* states that, with the exception of the proposed highwall or auger mining, the continuing approved haulage of coal via Haul Route E from the RL100 Stockpile Area to the Camberwell CHPP and the processing and despatch of coal within the Camberwell CHPP and associated rail loading facility, the proposed hours of operation would be from 7:00am to 10:00pm.

Submission 14(g)

Table D16 – do these figures truly represent all start and finish times for all shifts worked? This table seems to only represent one day shift only.

Barry & Susanne Finney
Glennies Creek

Table D16 of the *Environmental Assessment* presents the estimated peak vehicle movements for the Project, not the hours of operation.

5 STATEMENT OF COMMITMENTS

This section presents the amended Statement of Commitments, reflecting the commitments made by the Proponent in the Draft Statement of Commitments presented in Part E of the *Environmental Assessment*, together with commitments made in response to submissions are presented in this document. In addition, **Figures 5.1** and **5.2** present an aerial photograph of the Project Site and surrounds, together with the boundaries of the main Project components, and all monitoring locations respectively.

Table 5.1
Draft Statement of Commitments for the Proposed Glennies Creek Open Cut Coal Mine

Page 1 of 13

Desired Outcome	Action		Timing
1 ENVIRONMENTAL MANAGEMENT			
Compliance with all conditional requirements in all approvals, licences and leases.	1.1	Comply with all commitments recorded in **Table E1**.	Continuous and as required.
	1.2	Comply with all conditional requirements included in the: • Project Approval; • Environment Protection Licence; • Mining Lease(s); and • any other approvals.	
All operations conducted in accordance with all relevant documentation.	1.3	Undertake all activities in accordance with the accepted Mining Operations Plan, environmental procedures, safety management plan and/or site-specific documentation.	Continuous and as required.
2 AREA OF ACTIVITIES			
All approved activities are undertaken generally in the location(s) nominated on the figures shown in Parts B & D.	2.1	Mark, and where appropriate, survey the boundaries of the areas of proposed disturbance.	Prior to the commencement of the relevant activity.
	2.2	Prepare a plan identifying the various areas of coal mining operations within CL 382 and CL 357 and identify the Operations and Mining Engineering Manager responsible for each.	Prior to commencement of mining operations.

Table 5.1 (Cont'd)
Draft Statement of Commitments for the Proposed Glennies Creek Open Cut Coal Mine

Desired Outcome	Action		Timing
3 OPERATING HOURS			
All operations are undertaken within the approved operating hours.	3.1	Vegetation clearing, soil stripping and rehabilitation activities: • 7.00am to 10.00pm / 5 days a week	On campaign basis
	3.2	Open cut mining (including waste rock and coal mining), ROM coal transportation (Haul Routes A to D) and rehabilitation activities: • 7.00am to 10.00pm / 7 days a week	Continuous.
	3.3	ROM coal transportation (Haul Route E): • 24 hours / 7 days a week	Continuous.
	3.4	Coal processing and despatch: • 24 hours / 7 days a week	Continuous.
	3.5	Blasting: 9.00am to 5.00pm / Monday to Friday	Up to 5 blasts per week (typically 2 to 3 per week)
	3.6	Highwall / auger mining: • 24 hours / 7 days a week	Continuous.
4 AIR QUALITY MANAGEMENT			
Site activities are undertaken without exceeding DECC air quality criteria or goals.	4.1	Disturb only the minimum area required for the operation of the open cut.	Continuous during operations.
	4.2	Re-vegetate soil stockpiles not required for more than 3 months.	
	4.3	Use water sprays and water truck to keep coal stockpiles and coal handling areas in a moist condition.	
	4.4	Use water truck within the open cut, along haul routes and in other areas to minimise the generation of dust.	
	4.5	Minimise the creation of minor roads and access tracks during soil stripping, mining operations and rehabilitation.	
	4.6	Use dust aprons, dust extraction systems, water injection or sprays during drilling operations.	
	4.7	Use adequate stemming during blasting.	
	4.8	Commence rehabilitation as soon as practicable once an area is no longer required for mining operations.	
Appropriate arrangement with impacted residents negotiated.	4.9	Assist with the installation of measures to limit deposited dust entering rainwater tanks at any residence predicted to received deposited dust levels from the Project alone in excess of 2g/m^2/month.	Ongoing.
	4.10	Continue negotiations to reach an appropriate arrangement with the owners of Residences 32 and 36 (see **Figure E2**).	

Table 5.1 (Cont'd)
Draft Statement of Commitments for the Proposed Glennies Creek Open Cut Coal Mine

Desired Outcome	Action		Timing
5 NOISE AND VIBRATION			
Project-related noise impacts on surrounding residences minimised.	5.1	Restrict hours of open cut mining and ancillary activities (except highwall / auger mining) to 7.00am to 10.00pm.	Continuous during operations.
	5.2	Use noise mitigated mobile equipment such that the total sound power level from operating equipment meets the noise emission levels predicted in the *Environmental Assessment* for each receiver.	
	5.3	Restrict evening mining operations, where practicable, to the deeper sections of the open cut.	
	5.4	Sequence construction of the out-of-pit waste rock emplacement, and those portions of the in-pit waste rock emplacement that are above the existing ground surface such that during day time operations material would be preferentially placed at the margins of the emplacement to create an acoustic bund, while during evening operations preferentially place material immediately behind the acoustic bund.	
	5.5	Preferentially place waste rock within those portions of the in-pit waste rock emplacement that are deepest within the open cut during evening operations.	
	5.6	Construct acoustic bunds adjacent to haul roads where appropriate and practicable.	
	5.7	Undertake development activities such as tree clearing and soil stripping during day time operations only, where practicable.	
	5.8	Refine on-site noise mitigation measures and operating procedures, ie. based upon monitoring results.	
	5.9	Inform residents that the existing complaints line for Glennies Creek Colliery (1800 505 361) would apply to the open cut mine.	
	5.10	Encourage all residents to contact site management with issues of concern.	
	5.11	Initiate regular discussions with potentially affected residents to proactively identify noise-related issues of concern.	
	5.12	Promptly respond to any issues of concern.	
	5.13	Consider acoustic mitigation at residences where exceedances of the Project specific criteria are substantiated by monitoring.	
	5.14	Consider negotiated agreements with landowners where exceedances of the Project specific criteria are substantiated by monitoring.	

Table 5.1 (Cont'd)
Draft Statement of Commitments for the Proposed Glennies Creek Open Cut Coal Mine

Desired Outcome	Action		Timing
5 NOISE AND VIBRATION (CONT'D)			
Project-related blasting impacts within ANZECC Guidelines.	5.15	Develop a Blast Management Protocol to ensure the safety of employees and the public and adherence with the ANZECC guidelines.	Continuous during operations.
	5.16	Restrict blasting between the hours of 9.00am and 5.00pm on weekdays, unless blasts outside this time are required for misfire re-blast, emergency or safety reasons.	
	5.17	Undertake blast design and implementation by a suitably qualified blasting engineer and experienced shot-firer to ensure ANZECC Guidelines met at all non-project related residences surrounding the Project Site. Monitor each blast at representative surrounding residences.	
	5.18	Refine blast mitigation measures and operating procedures ie. based upon monitoring results.	
	5.19	Review site specific blasting procedures to manage airblast and ground vibration impacts through modification of the blast design, as required.	
	5.20	Use appropriate signage, advertisements, phone calls, automated SMS-text messages and letter drops, to notify residents surrounding the Project Site of days and times of blasts and closure of Stony Creek Road.	
Minimise impacts on the users of Stony Creek Road	5.21	Minimise the duration of the road closure	Continuous during operations.
	5.22	Schedule initiation of blasts to avoid peak traffic periods and interference to school bus timetables.	
	5.23	Provide advance notification of planned closure times in local media outlets and via signs on Stony Creek Road and Middle Falbrook Road.	
Identify the condition of residences that are potentially be impacted by blasting-related operations.	5.24	Inspect, on request, any residence or other item of infrastructure that might reasonably be expected to be adversely impacted by blasting operations to determine its condition.	Prior to the commencement of blasting operations.
Identify risks associated with the stability of the "rock cliffs" on the property "Ventura".	5.25	Undertake a risk assessment and develop appropriate management measures to mitigate the risks associated with blasting and potential rockfalls at "Ventura".	Prior to the commencement of blasting operations.

Table 5.1 (Cont'd)
Draft Statement of Commitments for the Proposed Glennies Creek Open Cut Coal Mine

Desired Outcome	Action	Timing
5 NOISE AND VIBRATION (CONT'D)		
Minimise impacts on the users of Stony Creek Road	5.26 Provide notification 30 to 60 minutes prior to a blast of updated closure times via automated SMS text messages to residents and others who request to be included on the notification list. 5.27 Co-ordinate blasting times as far as practicable with Ashton Coal Operations Pty Ltd to ensure that both Glennies Creek and Stony Creek Roads are not closed during at the same period. 5.28 Enable traffic controllers stationed on Stony Creek Road to request the short-term suspension of a blast to allow emergency vehicles to pass.	Continuous during operations.
Identify traffic-related noise impacts.	5.29 Identify actual offset distances between the residences closest to Middle Falbrook, Stony Creek and Bridgman Roads and the road on those sections of those roads where project-related traffic comprises a significant proportion of total traffic, ie. from the Project Site entrance to the entrance to the Camberwell South Pit and CHPP area.	Prior to commencing construction operations.
6 FAUNA		
Minimise Project-related impacts on fauna within and surrounding the Project Site.	6.1 Develop Species Management Plans for the Brush-tailed Phascogale and the Grey-crowned Babbler. 6.2 Erect nesting boxes suitable for the Brush-tailed Phascogale in trees adjacent to Glennies Creek. 6.3 Erect roosting tubes suitable for microbats in trees within the biodiversity offset areas.	Prior to the commencement of operations
	6.4 Restrict the removal of native vegetation to those areas required for operational purposes in the during the next twelve month period. 6.5 Preferentially clear vegetation during late Spring and early Autumn to avoid impacts on nesting fauna and over wintering bats. 6.6 Inspect hollow-bearing trees for arboreal mammals, nesting birds and roosting bats prior to their removal. When located, individuals would be relocated to an appropriate location within the most appropriate biodiversity offset areas. Measures would be implemented to ensure that the hollows are not occupied by roosting or nesting fauna between the visual inspection and the commencement of tree clearing operations.	Continuous during operations.

Table 5.1 (Cont'd)
Draft Statement of Commitments for the Proposed Glennies Creek Open Cut Coal Mine

Desired Outcome	Action		Timing
6 FAUNA (CONT'D)			
Minimise Project-related impacts on fauna within and surrounding the Project Site. (Cont'd)	6.7	Relocate suitable vegetation, where practicable, to undisturbed areas or areas undergoing rehabilitation.	Continuous during operations.
	6.8	Exclude stock from the biodiversity offset areas and areas undergoing rehabilitation.	
	6.9	Provide a means whereby Phascogale nesting in trees within the footprint of the Dirty Water Containment Dams have free access to the area surrounding the dam should the trees become surrounded by water (see **Figure E1**).	
	6.10	Undertake enhancement of the biodiversity offset areas, including establishment of vegetation in an approximately 10ha area adjacent to Glennies Creek within the Northern and Supplementary Biodiversity Offset Areas (see **Figure E1**).	
	6.11	Undertake revegetation of a 20m wide corridor on the southern side of and adjacent to Stony Creek Road (see **Figure E1**).	
	6.12	Continue pest and weed control programs across the Project Site and biodiversity offset areas targeting in particular European Red Fox, European Rabbit, feral cat and feral dog.	
	6.13	Revegetate with species consistent with the existing communities.	
7 FLORA			
Project-related impacts on flora within and surrounding the Project Site are minimised.	7.1	Limit native vegetation removal to the minimum area required for operational purposes during the next 12 month period.	Continuous during operations.
	7.2	Clearly define and mark areas to be cleared.	
	7.3	Undertake vegetation clearing and topsoil stripping in campaigns only as required.	
	7.4	Progressively rehabilitate all disturbed areas	
	7.5	Harvest any vegetation suitable for commercial timber, if present.	Prior to each clearing campaign.
	7.6	Clear the remaining larger vegetation by bulldozer with the blade positioned just above the ground.	During clearing campaigns.
	7.7	Remove remaining vegetation with the topsoil.	During each topsoil campaign.
	7.8	Relocate vegetation material directly to an active rehabilitation area where practicable.	
	7.9	Exclude stock from all biodiversity offset areas.	As soon as practicable following the grant of project approval.
	7.10	Erect appropriate fences to exclude domestic stock from the biodiversity offset areas and prevent access by fauna to active mining areas and areas undergoing rehabilitation.	
	7.11	Establish 10ha of native vegetation adjacent to Glennies Creek within the Northern and Supplementary Biodiversity Offset Areas as described in Part B15.10.2.	

Table 5.1 (Cont'd)
Draft Statement of Commitments for the Proposed Glennies Creek Open Cut Coal Mine

Desired Outcome	Action	Timing
7 FLORA (CONT'D)		
Project-related impacts on flora within and surrounding the Project Site minimised.	7.12 Rehabilitate disturbed areas with seedlings or seed of the species listed in Part D5.4.3. 7.13 Preferentially propagate locally collected seed for use during rehabilitation where practicable.	During rehabilitation and revegetation programs.
Introduction of weeds avoided and existing weed species controlled.	7.14 Spray all areas where topsoil is to be stripped to reduce weeds prior to being stripped, when feasible. 7.15 Retain all topsoil within the Project Site ie. in accordance with Division 2 of the *Noxious Weeds Act 1993* (NSW). 7.16 Control noxious weeds and other weeds within the Project Site and the biodiversity offset areas.	Continuous during operations.
8 BIODIVERSITY OFFSET STRATEGY		
Compensate for disturbing approximately 75.1ha of native vegetation	8.1 Agree with the relevant government agencies on a procedure to establish three biodiversity offset areas on Project-related land, namely the Northern, Southern and Western Biodiversity Offset Areas. 8.2 Agree with the relevant government agencies on a procedure to establish an additional biodiversity offset area on non-Project-related land, namely the Supplementary Biodiversity Offset Area, should a suitable arrangement be negotiated with the owners of this land.	As soon as practicable following the grant of project approval.
	8.3 Locate, assess the biodiversity value and appropriately secure one or more areas of Narrow-leaf Ironbark – Spotted Gum – Forest Red Gum community, totalling 140ha, to be incorporated within the Project's Biodiversity Offset Strategy.	Within 2 years following the grant of project approval.
Perpetual restriction on the use of the land covered by the biodiversity offset areas for native vegetation conservation.	8.4 Secure the land covered by the biodiversity offset areas through an enduring covenant or restriction on the use of the land under Section 88B of the *Conveyancing Act 1919,* Part 4, Division 12 of the *National Parks and Wildlife Act 1974* or a similar arrangement, to the satisfaction of the relevant government agency.	
Prepare detailed management procedures for management of the biodiversity offset areas.	8.5 Prepare Flora, Fauna and Biodiversity Management Procedures as a supporting document(s) to the Mining Operations Plan including the following. • A detailed description of the vegetation found within the Open Cut Area and biodiversity offset areas prior to mining commencing.	

Table 5.1 (Cont'd)
Draft Statement of Commitments for the Proposed Glennies Creek Open Cut Coal Mine

Desired Outcome	Action	Timing
8 BIODIVERSITY OFFSET STRATEGY (CONT'D)		
Prepare detailed management procedures for management of the biodiversity offset areas (Cont'd).	• Identification of all areas of vegetation disturbed as a consequence of mining-related activities. • Detailed management strategies and procedures, for: – areas within the Open Cut Area and biodiversity offset areas to be rehabilitated to improve biodiversity; and – areas within the Open Cut Area and biodiversity offset areas to be protected to allow natural regeneration to occur. • Identification of species to be planted, scheduling of planting programs, locations of nesting boxes and roosting tubes to be constructed, etc. • Monitoring and reporting procedures, including adaptive measures.	
Resources available for the ongoing management of the land covered by the biodiversity offset areas.	8.6 The Proponent would manage the land in accordance with the requirements of the Biodiversity Offset Strategy, the conditions of the project approval and any other relevant requirements.	While ever the Proponent retains ownership of the land covered by the biodiversity offset areas.
	8.7 Negotiate an appropriate arrangement for the ongoing management of the land with the appropriate government agency should the Proponent donate the land to a public authority	Prior to transfer of the land.
Improvement in the habitat value of Glennies Creek riparian zone within Project-related land	8.8 Implementation of weed control programs within the riparian zone of the Glennies Creek, including removal of willow and other non-native trees. 8.9 Replant the riparian zone with appropriate species as described in Section B15.10.2. 8.10 Fence riparian zone or provide individual tree guards to protect the planted vegetation from grazing by stock. 8.11 Undertake maintenance of remediated areas. 8.12 Consult with neighbouring landowners in relation to proposed revegetation programs.	Complete remediation of the riparian zone at a rate of 1 000m per year.

Table 5.1 (Cont'd)
Draft Statement of Commitments for the Proposed Glennies Creek Open Cut Coal Mine

Desired Outcome	Action		Timing
8 BIODIVERSITY OFFSET STRATEGY (CONT'D)			
Improvement in the habitat value of Glennies Creek riparian zone within non-Project-related land	8.13	Proactively seek to enter into arrangements with surrounding landowners to remediate and manage those sections of the Glennies Creek riparian zone, including land within the creek alignment, that forms critical 'linkages' between the biodiversity offset areas and other areas of high biodiversity value.	Ongoing while ever the Proponent retains ownership of the land covered by the biodiversity offset areas.
	8.14	View favourably any request by land owners the Project Site for assistance in remediation of sections of the Glennies Creek riparian zone.	Upon request.
9 ABORIGINAL HERITAGE			
Identified Aboriginal sites are appropriately managed.	9.1	Develop a Management Protocol for Aboriginal Sites GC1 to GC19 in consultation with the Aboriginal groups listed in Section D7.1.2 (see **Figure E1**).	Prior to commencement of operations.
Unidentified Aboriginal sites are not disturbed by the Proponent's activities.	9.2	Confine ground disturbing work to areas where an Aboriginal heritage assessment has been completed.	Continuous during operations.
	9.3	Advise all staff and contractors regarding their responsibilities with regards to Aboriginal archaeological items under the *National Parks and Wildlife Act 1974*.	
	9.4	Cease work immediately and contact the NSW DECC for advice, in the event that any further Aboriginal objects, including skeletal remains, are discovered.	As required.
10 SOIL MANAGEMENT			
The Proponent's activities do not result in soil degradation or loss.	10.1	Strip soils in accordance with **Table D38**.	Continuous during operations.
	10.2	Minimise handling of soils through direct replacement where practicable and selection of soil stockpile locations to avoid subsequent relocation.	
	10.3	Limit handling of soils during periods of high soil moisture.	
	10.4	Exclude mobile equipment from soil stockpiles once created.	
	10.5	Create topsoil stockpiles between 0.6m and 2m in height, and subsoil stockpiles less than 3m in height.	
	10.6	Position stockpiles away from direct surface water runoff or install upslope water diversion banks or similar controls.	
	10.7	Install downslope sedimentation controls until the soil stockpiles are appropriately stabilised.	
	10.8	Construct stockpiles such that the surfaces are rough.	

Table 5.1 (Cont'd)
Draft Statement of Commitments for the Proposed Glennies Creek Open Cut Coal Mine

Desired Outcome	Action		Timing
10 SOIL MANAGEMENT (CONT'D)			
The Proponent's activities do not result in soil degradation or loss. (Cont'd)	10.9	Sow appropriate non-regenerating pasture species to stabilise stockpiles immediately following creation.	Continuous during operations.
	10.10	Exclude stock from the final rehabilitated landform and stockpiles.	
	10.11	Establish and use a soil inventory to identify all areas where soil has been stripped, re-spread or stockpiled, and the volumes of material involved.	
	10.12	Conduct a trial soil stripping program in areas of previous rehabilitation to determine whether previously placed soil resources may usefully be stripped for later re-use and report the result of the trail in the Annual Environmental Management Report for the Project.	When land preparation activities are required in previously rehabilitated areas.
11 VISIBILITY			
Day-time visibility of site activities limited.	11.1	Construct a visual amenity bund along Stony Creek Road to screen the open cut from motorists and others (see **Figure E1**).	During the initial operational phase
	11.2	Progressively reshape and rehabilitate the waste rock emplacements.	Continuous during operations.
	11.3	Consider any request by a potentially affected resident for assistance to create a visual screen on private land.	As required
Night-time visibility of site activities limited.	11.4	Construct haul routes as far as practicable such that headlights from haul trucks are not directed towards residences (see **Figure E1**).	Continuous during operations.
12 SURFACE WATER			
All surface water managed such that dirty water is retained on-site and clean water is directed into natural drainage lines.	12.1	Construct the Northern Dirty Water Containment Dam and equip with a pump with a pumping capacity of 21L/s, as well as associated dirty water catch drains (see **Figure E1**).	Prior to commencement of operations
	12.2	Construct clean water diversions to divert clean water away from areas of disturbance to a standard suitable to contain an ARI 50 rainfall event (see **Figure E1**).	
	12.3	Construct the Southern Dirty Water Containment Dam and equip with a pump with a pumping capacity of 50L/s, as well as associated dirty water catch drains (see **Figure E1**).	Prior to the catchment for the Northern Dirty Water Containment Dam reaching 11ha.

Table 5.1 (Cont'd)
Draft Statement of Commitments for the Proposed Glennies Creek Open Cut Coal Mine

Desired Outcome	Action		Timing
12 SURFACE WATER (CONT'D)			
All surface water managed such that dirty water is retained on-site and clean water is directed into natural drainage lines. (Cont'd)	12.4	Maintain the Dirty Water Containment Dams in an empty state and pump water out of these dams promptly following a rainfall event.	Continuous during operations.
	12.5	Maintain the maximum operation level of Possum Skin Dam at 87.5m AHD.	
	12.6	Progressively rehabilitate waste rock emplacements to maximise the volume of clean water runoff to natural drainage and losses by evapotranspiration.	
	12.7	Continue current Water Management System.	
	12.8	Pump water from the Camberwell North Pit sump to Possum Skin Dam, the open cut and/or Camberwell South Pit in the event that water levels in the sump approach the level of the Glennies Creek Underground Coal Mine portal.	As required.
13 GROUNDWATER			
All saline groundwater retained on site.	13.1	Pump groundwater from in-pit drainage sumps in accordance with the Glennies Creek / Camberwell site water management system.	Continuous during and following operations.
No build up of highly saline water within final void.	13.2	Backfill the final void with breaker stone or reject material from the Camberwell CHPP.	Following completion of mining related activities.
14 TRANSPORTATION			
Project-related impacts on transportation and the road network surrounding the Project Site are limited.	14.1	Adopt an appropriate design for the intersection of the site access road and Middle Falbrook Road.	Prior to commencement of operations.
	14.2	Development of a Traffic Management Plan to minimise safety risks and impacts associated with construction of the intersection between the site access road and Middle Falbrook Road.	Prior to construction of the proposed intersection.
	14.3	Adhere to RTA and Council restrictions on transport hours and safety/warning requirements for transportation of "oversize" loads.	Prior to commencement of operations.
	14.4	Include a requirement for all employees, contractors, suppliers and service providers to drive responsibly on local roads, as well as a mechanism to report alleged incidents of irresponsible driving to the Proponent.	
	14.5	Consult Singleton Shire Council regarding the requirement for additional lines to be painted on Stony Creek Road and implement such marking if required.	Continuous during operations.
	14.6	Install covered rubbish bins within the carpark within the Amenities Area.	
	14.7	Encourage all operators of heavy vehicles transporting material to or from the Project Site to travel via Stony Creek and Bridgman Roads.	
	14.8	Minimise the duration of the road closures on Stony Creek Road as a result of blasting.	During all blasts.

Table 5.1 (Cont'd)
Draft Statement of Commitments for the Proposed Glennies Creek Open Cut Coal Mine

Desired Outcome	Action	Timing
14 TRANSPORTATION (CONT'D)		
Project-related impacts on transportation and the road network surrounding the Project Site are limited. (Cont'd)	14.9 Schedule blasts to avoid peak traffic periods and school bus timetables. 14.10 Notify the community of approximate road closure times via local media outlets and signs on Stony Creek Road.	Prior to all blasts.
	14.11 Notify the community of updated closure times 30 to 60 minutes prior to a blast via automated SMS text messages to those who request to be included on the notification list. 14.12 Co-ordinate blasting times with Ashton Coal Operations to avoid the potential for coincident closure of both Glennies Creek and Stony Creek Roads. 14.13 Control blasts such that the traffic controllers stationed on Stony Creek Road may suspend the blast to allow Emergency vehicles to pass.	Continuous during operations.
	14.14 Develop a Blast Management Plan consistent with the above to ensure the safety of employees and the public. 14.15 Undertake an assessment of the operation of the intersection between Middle Falbrook and Stony Creek Roads.	Prior to commencement of operations.
15 SOCIO-ECONOMIC ENVIRONMENT		
Any negative impacts on the social fabric or facilities available to the Glennies Creek community are minimised.	15.1 Give preference to prospective tenants of Project-related residences based on those with primary aged children who would attend the Mt Pleasant Public School. 15.2 Consider funding support to maintain the current levels of staff and facilities at the Mt Pleasant Public School should enrolments fall below the relevant funding thresholds as a result of the Project.	As required.
16 ENVIRONMENTAL MONITORING		
Ongoing monitoring of air quality.	16.1 Continue operation of and recording of data from the following monitoring locations. a. Camberwell Coal meteorological station. b. PM_{10} monitors HV1 and HV3. c. High volume dust monitors, HV1, HV2 and HV3. d. The current network of dust deposition gauges (see **Figure E2**).	Ongoing.
	16.2 Erect a deposited dust gauge at Residence 102 for a period of 12 months. If at the end of that period the recorded annual average deposited dust level at Residence 102 is within 15% of the average deposited dust level at Deposited Dust Gauge DG4, the gauge at Residence 102 would be removed.	Prior to the commencement of mining operations.

Table 5.1 (Cont'd)
Draft Statement of Commitments for the Proposed Glennies Creek Open Cut Coal Mine

Desired Outcome	Action	Timing
16 ENVIRONMENTAL MONITORING (CONT'D)		
Ongoing monitoring of noise and blast impacts.	16.3 Establish a network of monitoring locations and report the results of regular noise and blast monitoring in each Annual Environmental Management Report (AEMR) (see **Figure E2**). 16.4 Monitor each blast at a selection of local residences, subject to landholder agreement.	Continuous during operations.
Ongoing monitoring of fauna-related impacts.	16.5 Monitor the fauna within the Project Site and biodiversity offset areas in accordance with the objectives recorded in the Mining Operations and Species Management Plans.	Continuous during operations.
Ongoing monitoring of flora-related impacts	16.6 Undertake annual surveys of selected monitoring sites 16.7 Report the results of the monitoring program in each Annual Environmental Management Report	Annually during and following operations until rehabilitation has been completed successfully.
Ongoing monitoring of surface water impacts.	16.8 Continue monitoring of the water level within the Camberwell North Pit sump. 16.9 Monitor and regularly report the volumes of water pumped between storages on site. 16.10 Monitor and regularly report volumes of water used in the Camberwell CHPP and exported to other mining operations.	Continuous during and following operations.
	16.11 Measure the salinity of water in the proposed open cut and final void.	Monthly during and following operations.
Groundwater impacts monitored.	16.12 Monitor bores GC01 to GC16, GCTB, GW067291, GW049285 and GW011543 for the water level, pH, EH and salinity (see **Figure E2**), until such time as any bore is removed by mining activities or mining has ceased within the open cut and groundwater impacts have stabilised.	Monthly during and following operations.
	16.13 Monitor the above bores biannually for Na, Mg, Ca, Cl, HCO_3, SO_4 and total Fe, until such time as any bore is removed by mining activities or mining has ceased within the open cut and groundwater impacts have stabilised.	Biannually during and following operations.
17 DOCUMENTATION AND RESPONSIBILITIES		
Ensure appropriate documentation of the proposed mining-related activities.	17.1 The Proponent would prepare the following documentation. • Mining Operations Plan. • Safety & Health Management System.	Prior to commencement of operations with annual review and revision.

Table 5.1 (Cont'd)
Draft Statement of Commitments for the Proposed Glennies Creek Open Cut Coal Mine

Desired Outcome	Action	Timing
17 DOCUMENTATION AND RESPONSIBILITIES (CONT'D)		
Ensure appropriate documentation of the proposed mining-related activities. (Cont'd)	• Hazard Management Plans for: - Explosives; - Airborne Dust' - Slope Stability; - Transport; - Electrical Engineering; - Mechanical Engineering; and - Lighting • Threatened Species Management Plans. • Traffic Management Plan. • Cultural Heritage Management Protocol. • Rehabilitation Plan. • Weed Management Plan • Erosion and Sediment Control Plan. • Water Management. • Waste Management Plan.	Prior to commencement of operations with annual review and revision.
	• Mine Closure Plan.	Two years prior to cessation of mining operations.

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Figure 5.1
Project Site Layout

A3 / Fold Out / Colour

Figure 5.2
Environmental Monitoring - Amended

A3 / Fold Out / Colour

6 REFERENCES

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APPENDICES

Appendix 1 Response to Public and Government Agency Submissions with Respect to Air Quality Prepared by Holmes Air Sciences

Appendix 2 Response to Noise and Blasting-related Public and Government Agency Submissions Prepared by Heggies Pty Ltd

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Appendix 1

Response to Public and Government Agency Submissions with Respect to Air Quality Prepared by Holmes Air Sciences

(No. of pages excluding this page = 13)

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1 February 2008

Subject: Glennies Creek Open Cut Coal Mine – Response to Public and Government Agency Submissions with respect to air quality

Dear Mitchell

Holmes Air Sciences are pleased to provide responses to the submissions received from the public and government agency with respect to the air quality assessment of the proposed Glennies Creek Open Cut coal mine.

Table 2.1 – Government Agency Submissions

Department of Planning

1 (a) ***The cumulative air quality assessment does not appear to include emissions from the approved Glendell mine. The assessment should be revised to include these emissions.***

Plans for future mine developments are subject to significant uncertainty. Mining at Glendell was first assessed in 1982 (**Croft and Associates, 1982**). At the time that the Glennies Creek proposal was being assessed Holmes Air Sciences had commenced a revision to the assessment for Glendell, but the work was on hold pending revisions to the mine plan. The revised plan was not available at the time that the Glennies Creek assessment needed to be completed and therefore it was not possible to incorporate a detailed emissions inventory into the cumulative assessment for Glennies Creek. However it was known that the interaction between the two mines would likely be minor and this turns out to be the case.

The modelling work for Glendell is now complete and the Glendell model results have been combined with the Glennies Creek results for the worst-case. The worst-case has been taken to be Glendells Year 6 (**Holmes Air Sciences, 2007a**). Year 6 was selected because it is the year of maximum TSP emissions from Glendell and is a period when emissions from mining at Glendell are likely to interact most strongly with emissions from Glennies Creek. This is because of the relative positions of the dust emissions sources and the prevailing winds. This causes the isopleth patterns to run parallel to each other rather than overlap. The results are shown in **Table 1** and do not identify any additional exceedances beyond those already identified.

Two haul route options were modelled for Glennies Creek (BD and CE). The worst-case impact from the Glennies Creek proposal and other sources was for haul route CE and therefore only this option has been presented in **Table 1**.

The assessment for Glendell did not make predictions at all the residences included in the Glennies Creek proposal. Only the annual averages are presented as the 24-hour average PM_{10} impact is unlikely to be cumulative due to the relative locations of the mines and the prevailing meteorological conditions.

These data demonstrate that the cumulative impact including the Glendell mine does not result in any exceedances of the impact assessment criteria.

Table 1: Predicted impacts at residential receptors including Glendell (Year 6)

Pollutant			PM_{10} ($\mu g/m^3$)			TSP ($\mu g/m^3$)			Dust deposition (g/m^2/month)		
Averaging period			Annual			Annual			Annual		
			Impact Assessment Criteria								
ISG coordinates		**ID**	*30 $\mu g/m^3$*			*90 $\mu g/m^3$*			*4 g/m^2/month*		
X (m)	**Y (m)**		**CE**	**Glendell**	**CE + Glendell**	**CE**	**Glendell**	**CE + Glendell**	**CE**	**Glendell**	**CE + Glendell**
316099	1402638	1	13	No prediction		19	No prediction		1.2	No prediction	
316022	1402960	2	14	No prediction		19	No prediction		1.1	No prediction	
316616	1403256	3	12	No prediction		18	No prediction		0.9	No prediction	
315886	1403351	4	14	No prediction		20	No prediction		1.1	No prediction	
315728	1403637	5	14	No prediction		20	No prediction		1.1	No prediction	
315751	1403782	6	14	No prediction		20	No prediction		1.1	No prediction	
315800	1403976	7	13	No prediction		19	No prediction		1.0	No prediction	
315831	1404122	8	13	No prediction		19	No prediction		1.0	No prediction	
316118	1404249	9	12	No prediction		18	No prediction		0.9	No prediction	
316509	1404240	10	12	No prediction		17	No prediction		0.8	No prediction	
315947	1404762	11	13	No prediction		18	No prediction		0.9	No prediction	
316321	1404975	12	12	No prediction		17	No prediction		0.8	No prediction	
316257	1405189	13	12	No prediction		18	No prediction		0.8	No prediction	
316241	1406188	14	12	No prediction		17	No prediction		0.8	No prediction	
316375	1406030	15	12	No prediction		17	No prediction		0.8	No prediction	
316390	1406180	16	12	No prediction		17	No prediction		0.8	No prediction	
316556	1406585	17	11	No prediction		17	No prediction		0.8	No prediction	
316831	1407284	18	11	No prediction		16	No prediction		0.8	No prediction	
317286	1408296	19	10	No prediction		15	No prediction		0.7	No prediction	
317575	1408446	20	10	No prediction		15	No prediction		0.7	No prediction	
316964	1408531	21	11	No prediction		16	No prediction		0.8	No prediction	
317057	1408769	22	10	No prediction		16	No prediction		0.7	No prediction	
317724	1408851	23	10	No prediction		15	No prediction		0.7	No prediction	
317077	1407965	24	10	No prediction		16	No prediction		0.8	No prediction	
316475	1408357	25	11	No prediction		17	No prediction		0.8	No prediction	
316175	1408114	26	12	No prediction		17	No prediction		0.9	No prediction	
315725	1408163	27	13	No prediction		18	No prediction		0.9	No prediction	
315145	1408377	28	13	No prediction		19	No prediction		1.0	No prediction	
314938	1409139	29	13	No prediction		19	No prediction		1.1	No prediction	
315447	1409187	30	13	No prediction		18	No prediction		1.0	No prediction	
315868	1409160	31	12	No prediction		17	No prediction		0.9	No prediction	
314234	1407572	32	15	1.2	17	21	1.3	23	1.1	0.2	1.3
311522	1405459	33	27	1.6	29	37	1.8	39	2.9	0.2	3.1
311548	1405789	34	26	1.6	27	35	1.8	37	2.8	0.2	3.1
312938	1408257	35	17	1.2	18	23	1.3	25	1.4	0.2	1.6
313936	1407863	36	16	1.2	17	22	1.3	23	1.2	0.2	1.3
313821	1408161	37	16	1.2	17	22	1.3	23	1.2	0.2	1.4
313252	1408624	38	16	1.2	17	22	1.3	24	1.3	0.2	1.5
313852	1408538	39	15	0.9	16	21	1.0	22	1.2	0.1	1.3
314068	1408312	40	15	1.1	16	21	1.2	22	1.2	0.2	1.3

Table 1: Predicted impacts at residential receptors including Glendell (Year 6) *continued*

Pollutant			PM_{10} ($\mu g/m^3$)			TSP ($\mu g/m^3$)			Dust deposition (g/m^2/month)		
Averaging period			Annual			Annual			Annual		
			Impact Assessment Criteria								
ISG coordinates		**ID**	*30 $\mu g/m^3$*			*90 $\mu g/m^3$*			*4 g/m^2/month*		
X (m)	**Y (m)**		**CE**	**Glendell**	**CE + Glendell**	**CE**	**Glendell**	**CE + Glendell**	**CE**	**Glendell**	**CE + Glendell**
314394	1408350	41	14	0.9	15	20	1.0	21	1.1	0.1	1.2
314457	1408129	42	15	0.9	15	20	1.0	21	1.1	0.1	1.2
314183	1409158	43	15	0.9	16	21	1.0	22	1.2	0.1	1.3
314258	1409381	44	15	0.9	15	21	1.0	22	1.2	0.1	1.3
314174	1409487	45	15	0.9	16	21	1.0	22	1.2	0.1	1.4
314902	1410018	46	13	0.0	13	19	0.0	19	1.0	0.0	1.0
313949	1409717	47	15	1.1	16	21	1.2	23	1.3	0.2	1.5
313669	1409682	48	16	1.1	17	22	1.3	24	1.4	0.2	1.6
313585	1409885	49	16	1.1	18	23	1.3	24	1.4	0.2	1.6
313814	1410119	50	16	1.1	17	22	1.3	23	1.4	0.2	1.6
313561	1410142	51	17	1.1	18	23	1.3	24	1.5	0.2	1.7
313477	1410158	52	17	1.1	18	23	1.3	25	1.5	0.2	1.7
313303	1409901	53	17	1.1	18	24	1.3	25	1.5	0.2	1.7
313117	1410069	54	18	1.1	19	24	1.3	26	1.6	0.2	1.8
312480	1410452	55	20	1.2	21	27	1.3	29	2.0	0.1	2.2
312748	1409488	56	18	1.1	19	24	1.3	25	1.5	0.2	1.7
312806	1409236	57	17	1.1	18	24	1.3	25	1.5	0.2	1.6
313505	1409123	58	16	1.1	17	22	1.3	23	1.3	0.2	1.5
312585	1409082	59	18	1.7	19	24	2.0	26	1.5	0.3	1.8
312380	1408635	60	18	1.9	20	24	2.2	26	1.5	0.3	1.9
312288	1408536	61	18	1.9	20	25	2.2	27	1.6	0.3	1.9
312113	1408300	62	19	1.9	21	26	2.2	28	1.7	0.3	2.0
311720	1408034	63	19	1.8	21	26	2.1	29	1.9	0.3	2.2
311300	1407989	64	20	1.9	21	27	2.3	29	1.9	0.4	2.2
311165	1408156	65	20	3.6	23	26	4.5	31	1.9	0.9	2.7
311091	1407833	66	19	2.1	21	26	2.5	29	1.9	0.4	2.3
310740	1407857	67	19	3.0	22	26	3.8	30	1.8	0.7	2.5
310897	1407549	68	19	2.4	21	26	3.0	29	1.8	0.5	2.3
310064	1407017	69	18	3.8	21	24	4.8	29	1.6	0.9	2.5
309900	1406889	70	17	3.3	21	24	4.0	28	1.6	0.7	2.2
309950	1406030	71	18	2.8	21	25	3.4	28	1.7	0.6	2.3
311079	1404734	72	25	1.5	26	38	1.7	40	3.5	0.2	3.7
310855	1404451	73	23	1.6	25	37	1.8	38	3.6	0.3	3.8
312331	1408582	74	18	1.9	20	24	2.2	27	1.6	0.3	1.9
312475	1408744	75	18	1.9	19	24	2.2	26	1.5	0.3	1.8
312606	1408890	76	17	1.9	19	24	2.2	26	1.5	0.3	1.8
315635	1409799	77	12	No prediction		17	No prediction		0.9	No prediction	
315650	1409669	78	12	No prediction		17	No prediction		0.9	No prediction	
315506	1409640	79	12	No prediction		18	No prediction		0.9	No prediction	
315564	1410312	80	12	No prediction		17	No prediction		0.9	No prediction	
312187	1407763	GC1	20	No prediction		27	No prediction		1.9	No prediction	

Note: An allowance was made in the cumulative impacts for non-mine sources and distant mines of 5 $\mu g/m^3$ (PM_{10} annual average), 10 $\mu g/m^3$ (TSP annual average), and 0.5 g/m^2/month (dust deposition annual average). More recent analysis has shown that for TSP annual average, an allowance of 27 $\mu g/m^3$ is more appropriate (**Holmes Air Sciences, June 2007b**). However, inclusion of this value would not change the conclusions of the assessment and the cumulative TSP predictions would remain below the impact assessment criteria.

Department of Environment and Climate Change

2 (a) ***In Year 3, the model predicts exceedances of annual average PM_{10} at residence number 33 (Figures 38 and 39). This residence was incorrectly identified as number 32 on page 1-30 of the report.***

It is noted that this residence was incorrectly identified in the report.

Table 2.2 – Public and Special Interest Group Submissions

4. Graeme & Kay Cheetham "Ventura" – Residences ID 39 and 40

4 (e) ***We feel this will be a real problem with south and south-easterly winds bringing dust directly on our property. We are in a natural valley or amphitheatre with Glennies Creek entering at one end and exiting at the other. We experience variable wind patterns and speeds not necessarily the same as prevailing winds as stated in the EA document. The RL level of this area is a lot lower than the mine and would create dust setting (sic) due to the low valley floor, (dust and noise will be even more excessive during times of temperature and cloud inversion). It was noted that dust projections from the proposed Glendell mine were not used as this would increase the cumulative effect.***

The air quality assessment provided a best estimate of the impact zone due to dust emissions arising from the proposed operations. These estimates took into consideration all meteorological conditions that have been measured in the study area, including the south-east winds that prevail in the summer months. Detailed topographic information was included in the calculations.

As noted in the response to the comment from the Department of Planning regarding Glendell (Table 2.1, Comment 1 (a)), the revised mine plan for Glendell was not available at the time the Glennies Creek proposal was assessed. Combination of the results for Glendell and Glennies Creek has not identified any additional exceedances beyond those already identified.

4 (f) ***We like to open our house, windows and doors when a cool southerly is blowing but this will be difficult with increased dust levels from the new mine.***

As presented in **Table 2**, the maximum predicted impact at Residences 39 and 40 would occur in Year 1 of the operations. All the predicted impacts are significantly below the impact assessment criteria which are set to protect both health and amenity.

It is therefore unlikely that the dust generated from the activities of the mine would cause any significant impact at these residences.

Table 2: Summary of predicted impacts at Residences 39 and 40

Pollutant			PM_{10} ($\mu g/m^3$)				TSP ($\mu g/m^3$)		Dust Deposition (g/m^2/month)		PM_{10} ($\mu g/m^3$)				TSP ($\mu g/m^3$)		Dust Deposition (g/m^2/month)	
Averaging Period			**24-hour**		**Annual**		**Annual**		**Annual**		**24-hour**		**Annual**		**Annual**		**Annual**	
Integrated Survey Grid Coordinates			***Impact Assessment Criteria***															
			50		***30***		***90***		***2***		***150***		***30***		***90***		***4***	
ISGx	**ISGy**	**ID**	**Year 1 - Project alone**								**Year 1 - Project and other sources**							
Haulage route			BD	CE	BD	CE	BD	CE	BD	CE	BD	CE	BD	BD	BD	CE	BD	CE
313852	1408538	39	23	27	4	4	5	6	0.7	0.8	52	58	20	20	27	28	2.0	2.0
314068	1408312	40	30	34	4	5	6	7	0.8	0.8	60	68	20	21	28	28	2.0	2.0
ISGx	**ISGy**	**ID**	**Year 3 - Project alone**								**Year 3 - Project and other sources**							
Haulage route			BD	CE	BD	CE	BD	CE	BD	CE	BD	CE	BD	BD	BD	CE	BD	CE
313852	1408538	39	21	24	1	1	2	2	0.2	0.2	53	55	17	17	23	23	1.4	1.4
314068	1408312	40	24	26	1	2	2	2	0.2	0.2	59	62	17	17	23	23	1.3	1.3
ISGx	**ISGy**	**ID**	**Year 6 - Project alone**								**Year 6 - Project and other sources**							
Haulage route			BD	CE	BD	CE	BD	CE	BD	CE	BD	CE	BD	BD	BD	CE	BD	CE
313852	1408538	39	7	7	0	0	0	0	0.0	0.0	38	39	15	15	21	21	1.2	1.2
314068	1408312	40	6	6	0	0	0	0	0.0	0.0	41	42	15	15	21	21	1.2	1.2

The dust entering our drinking water is a very real health worry.

Any area predicted to experience cumulative annual average dust deposition levels at or above 4 g/m^2/month is considered in the assessment process to be impacted. If it is assumed that all the deposited dust on a 100 m^2 roof is washed into a rain water tank then the annual average quantity of dust entering the rain water tank would be approximately 5 kg. This material will settle to the bottom of the tank and will need to be cleaned out every 10 to 20 years. Much of the accumulation of particulate matter could be avoided via the use of simple systems that prevent the first flush from the roof entering the tank.

Holmes Air Sciences recommend that Integra agree to install a first flush system to the rain water tank of any resident that is concerned about the impact of dust fallout on the water quality with the mines zone of influence.

4 (g) ***It is also concerning that no dust monitoring was done at or close to our properties so we would have a benchmark to work from.***

It is not practical, nor necessary, to monitor at every residence in the vicinity of the site. The locations of the monitoring sites have been selected based on the prevailing meteorological conditions and the locations likely to experience the greatest impacts from existing sources of dust.

As shown on **Figure 1**, D3 (dust deposition gauge) is the closest monitoring location to Residences 39 and 40. D3 is located approximately 1.8 km south-west of these residences, within the Glennies Creek boundary.

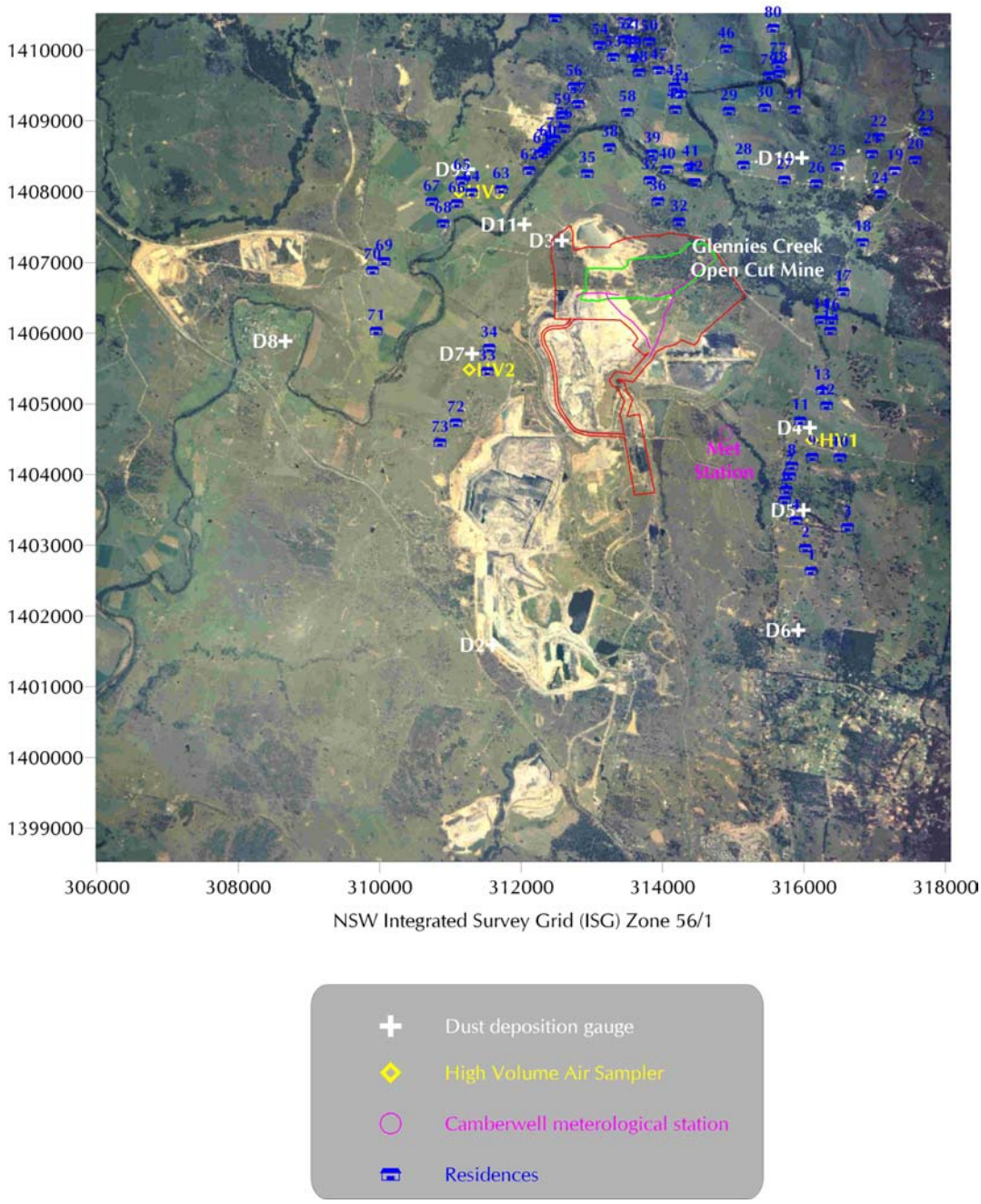

Figure 1: Location of monitoring network and residences

Dust deposition levels (see **Table 3**) at this location have been consistently below the impact assessment criteria and given that the prevailing wind directions are to the north-west and south-east, it would be expected that levels at Residences 39 and 40 would be lower.

Table 3: Dust Deposition Data (insoluble solids) at D3 - 1999 to 2006 (excluding contaminated samples) (g/m^2 /month)

Monitoring period	D3
July 1999 to June 2000	1.3
July 2000 to June 2001	1.9
July 2001 to June 2002	2.8
July 2002 to June 2003	1.9

July 2003 to June 2004	3.8
July 2004 to June 2005	1.6
July 2005 to June 2006	1.4
Average over all data	*2.1*

4 (h) ***The EA illustrates dust emitted from haul roads at different years of operation but did not see any figures for dust from blasting, which will create clouds of dust and would have to impact neighbouring residences***.

Table 9 of the air quality assessment (**Holmes Air Sciences, 2007c**) details estimated emissions from all sources of activities, including blasting.

5. Wendy Bowman "Rosedale"

5 (a) ***Dust is in the air we breathe 24 hours a day, namely PM1's, PM2.5s, PM10s. The effect of dust on the residents of the Camberwell area is noted in the attached results of the "Federal Pollutant Inventory".***

The "Federal Pollutant Inventory" (also known as the National Pollutant Inventory) is a database of all emissions from industrial sources, as opposed to ambient pollutant concentrations to which residents are exposed. Predicted particulate matter concentrations at nearby residences are compared against air quality standards which are set for the protection of human health and to keep dust nuisance within internationally accepted levels.

> ***Dust falls on roofs, then into water tanks. The water in our tanks is no longer drinkable. A number of residents have been ill and this has been proven to be the tank water. We request that Ashton and Integra Mines provide drinking water for ALL residents in Camberwell.***

As noted in the response to Submission 4(f), the annual average quantity of dust entering a rain water tank would be 5 kg (for an area experiencing a fallout of 4 g/m^2/month) and would require a tank to be cleaned out every 10 to 20 years. Much of the accumulation of particulate matter could be avoided via the use of simple systems that prevent the first flush from the roof entering the tank.

Holmes Air Sciences recommend that Integra agree to install a first flush system to the rain water tank of any resident that is concerned about the impact of dust fallout on the water quality with the mines zone of influence.

9. BW & RA Cherry – Glennies Creek

9 (a) ***How are they going to control the dust? Yes they will water the roads, but what happens to the dust created from digging, blasting and overburden?***

Section 9 of the air quality assessment provides details of the proposed dust management and control measures. They are reiterated here for completeness.

Dust can be generated from two primary sources, these being:

(a) wind blown dust from exposed areas, and

(b) dust generated by mining activities.

Table 4 and **Table 5** list the different sources of wind-blown and mining-generated dust respectively, and the proposed controls.

Table 4: Control Procedures for Wind-blown Dust

Source	Control Procedures
Areas disturbed by mining	Disturb only the minimum area necessary for mining. Reshape, topsoil and rehabilitate completed overburden emplacement areas as soon as practicable after the completion of overburden tipping.
Coal handling areas / stockpiles	Maintain coal-handling areas / stockpiles in a moist condition using water carts to minimise wind-blown and traffic-generated dust.
ROM Coal Stockpiles	Have available water sprays on ROM coal stockpiles and use sprays to reduce airborne dust, as required.

Table 5: Mine-generated Dust and Controls

Source	Control procedures
Haul Road Dust	All roads and trafficked areas will be watered as required using water trucks to minimise the generation of dust. All haul roads will have edges clearly defined with marker posts or equivalent to control their locations, especially when crossing large overburden emplacement areas. Obsolete roads will be ripped and re-vegetated.
Minor roads	Development of minor roads will be limited and the locations of these will be clearly defined. Minor roads used regularly for access etc will be watered. Obsolete roads will be ripped and re-vegetated.
Topsoil Stripping	Access tracks used by topsoil stripping equipment during their loading and unloading cycle will be watered.
Topsoil Stockpiling	Long term topsoil stockpiles, not used for over 3 months will be re-vegetated.
Drilling	Dust aprons will be lowered during drilling. Drills will be equipped with dust extraction cyclones, or water injection systems. Water injection or dust suppression sprays will be used when high levels of dust are being generated.
Blasting	Adequate stemming will be used at all times.

Monitoring

In addition to control measures, a monitoring program will be maintained to verify environmental performance and will incorporate the following.

- One meteorological station.
- Two high volume air sampler (HVAS) PM_{10} monitors.
- The current network of deposition gauges, or as otherwise approved by the DECC, would be used to monitor dust fallout.
- Monitoring TSP at three locations at the existing HVAS locations.

11. Thelma De Jong (no address)

11 (a) ***Tank water is polluted with black sludge from mining.***

As noted in the response to Submission 4(f), the annual average quantity of dust entering a rain water tank would be 5 kg (for an area experiencing a fallout of 4 g/m^2/month) and would require a tank to be cleaned out

every 10 to 20 years. Much of the accumulation of particulate matter could be avoided via the use of simple systems that prevent the first flush from the roof entering the tank.

Holmes Air Sciences recommend that Integra agree to install a first flush system to the rain water tank of any resident that is concerned about the impact of dust fallout on the water quality with the mines zone of influence.

12. Steve & Carol Ernst - Camberwell

12 (f) ***Our horses have suffered from a dry cough for many years. We have had our horses checked by our veterinarian. His prognosis was a respiratory problem due to the amount of dust they inhaled daily.***

The air quality impact of the Project was assessed by comparing estimates of dust concentrations and deposition levels with DECC air quality criteria. The air quality criteria have been set for the protection of human health and to keep dust nuisance within internationally accepted levels.

The air quality criteria would also be expected to protect the health and amenity of other mammals, including horses. Horses and other mammals are kept and raced in Sydney and other cities were PM_{10} concentrations will be similar and in many cases higher than will be experienced outside the area that the EIA has identified as impacted by the mine. For example the DECC's Action for Air 2006 update publication shows that the number of days that the 24-hour average PM_{10} goal is exceeded is substantially lower in the Lower Hunter region that the Sydney Metropolitan region (**DECC, 2006**) for the period 1994 to 2005. The years 2002 and 2003 showed the most exceedances of the goal due to significant bushfire activity and dust storms.

In addition, research has shown that in the normal course of events cattle ingest up to 1 kg of dust per year without detrimental impacts on their health (**Healy, 1968).** Trials conducted in the Hunter Valley (**Andrews and Sriskandarajah, 1992**) have demonstrated that the production of dairy cows is not impacted by the presence of coal dust on pasture.

13. Barry & Susanne Finney - Glennies Creek (ID 41 or 42)

13 (b) ***Item D7 dust monitors indicated in the EA are not located in our area, in relation to prevailing winds.***

As discussed in the response to Submission 4(g), the monitoring locations have been selected based on a combination of prevailing wind directions and the locations likely to experience the greatest impacts from existing sources of dust.

As shown on **Figure 1**, D3 (dust deposition gauge) is the closest monitoring location to Residences 41 and 42. D3 is located approximately 1.8 km south-west of these residences, within the Glennies Creek boundary.

Dust deposition levels (see **Table 6**) at this location have been consistently below the impact assessment criteria and given that the prevailing wind directions are to the north-west and south-east, it would be expected that levels at Residences 39 and 40 would be lower.

Table 6: Dust Deposition Data (insoluble solids) at D3 - 1999 to 2006 (excluding contaminated samples) (g/m^2 /month)

Monitoring period	D3
July 1999 to June 2000	1.3
July 2000 to June 2001	1.9
July 2001 to June 2002	2.8
July 2002 to June 2003	1.9
July 2003 to June 2004	3.8
July 2004 to June 2005	1.6
July 2005 to June 2006	1.4

Average over all data	*2.1*
Source: Camberwell Coal Pty Limited Environmental Management Reports.	

13 (c) ***This area locating residence 39, 40 (41, 42) experience varying wind patterns and speeds not necessarily the same as prevailing winds as stated in the EA document. This area is also of a lower RL than the designated mine area which would definitely create dust settling in the lower area noted.***

As noted in the response to Submission 4(e), the air quality assessment provided a best estimate of the impact zone due to dust emissions arising from the proposed operations. These estimates took into consideration all meteorological conditions that have been measured in the study area, including the south-east winds that prevail in the summer months. Detailed topographic information was included in the calculations.

18 JH & MR Moore - Glennies Creek

18 (a) ***How can they stop the dust? No matter how much watering they do, they will not stop the dust. Do they stop mining on high windy days?***

As discussed in detail in the response to Submission 9 (a), Section 9 of the air quality assessment (**Holmes Air Sciences, 2007c**) provides details of the proposed dust management and control measures.

These measures are reiterated in the response to 9(a).

19 Keith & Yvonne Moss - Camberwell

19 (c) ***Mrs Moss has recently been diagnosed with a cist (sic) 6cm in diameter on her liver. She does not drink alcohol or smoke and her medical practitioner believes she has picked up a bacterial infection from inhaling the amount of dust daily.***

Dust from a mine is not significantly different in character or chemical composition from any other sources of dust, for example, agriculture, unpaved roads, etc.

The precise location of the Moss's residence is not known, however, it is located in Camberwell which is approximately 5 km from to the west of the Glennies Creek proposal. The property closest to this area is Residence 73 (shown on **Figure 1**) where the predicted annual average concentrations of PM_{10} due to the Glennies Creek proposal of PM_{10} are a maximum of 3 $\mu g/m^3$ in Year 1. The cumulative annual average PM_{10} concentrations at Residence 73 due to the Glennies Creek proposal, other mines in the area, distant mines, and non-mining dust sources, is a maximum of 27 $\mu g/m^3$, also in Year 1. These predicted concentrations are below the impact assessment criteria of 30 $\mu g/m^3$, which has been set to protect human health.

We have not been provided with the details of the medical advice to Mrs Moss, however we note that there is no documented connection between exposure to mining dust or other particulate matter and liver cysts. We would be happy to take this discussion further with her medical practitioner or the Department of Health.

19 (f) ***Our horses have suffered from a dry cough from some years. Our veterinary surgeon has consulted with us and seen our horses and cannot find anything wrong with them as such but believe the dry cough must be caused from the amount of dust they inhale and eat from pasture.***

As noted in the response to Submission 12(f), the air quality impact of the Project was assessed by comparing estimates of dust concentrations and deposition levels with DECC air quality criteria. The air quality criteria have been set for the protection of human health and to keep dust nuisance within internationally accepted levels. The air quality criteria would also be expected to protect the health and amenity of other mammals, including horses. Horses and other mammals are kept and raced in Sydney and other cities were PM_{10} concentrations will be similar and in many cases higher than will be experienced outside the area that the EIA has identified as impacted by the mine. For example the DECC's Action for Air 2006 update publication shows

that the number of days that the 24-hour average PM_{10} goal is exceeded is substantially lower in the Lower Hunter region that the Sydney Metropolitan region (**DECC, 2006**) for the period 1994 to 2005. The years 2002 and 2003 showed the most exceedances of the goal due to significant bushfire activity and dust storms. Horse racing and stabling are successfully conducted in the Sydney environment.

22 Joanne Watling Singleton

22 (b) ***On our property we have a monitoring station for a major NSW university which have been doing air studies since 2004. Results from the study have not been finalised as yet but they have stated the increase in fine dust particles in the air were quite significant. "Glenville" is our property name. (In summary, their findings state that PM_{10} and $PM_{2.5}$ dust levels are at or near the NEPM goals and would be likely to increase with a new development to the north of Glenville.)***

The monitoring being undertaken at the "Glenville" property part of larger project which is funded by the Australian Coal Association Research Program (ACARP) project. The project entitled "Assessing Fine Particle Concentrations in the Hunter Valley" has not yet published any of the data collected and therefore it is not possible to make detailed comment on the above statement. However, we note that the purpose of the dispersion modelling study undertaken for the EIS was to quantify air quality impacts on neighbouring properties. Clearly additional emissions will cause increases in ambient dust levels. The assessment determines if the increases will cause levels to exceed assessment criteria.

22 (c) ***Over the past few years we have noticed the increase in eye irritation and running eyes, our horses also have had an increase in watery eyes, and this is during the winter months, so the flies have nothing to do with this problem. After the dew settled on the feed during the night it became sticky, so as the heifers fed through the grass the black sticky dust coated their faces from their noses to their eyes, worst of all is that our cattle and horses are digesting this dust everyday as they feed.***

As noted in the response to Submission 12(f), the air quality impact of the Project was assessed by comparing estimates of dust concentrations and deposition levels with DECC air quality criteria. The air quality criteria have been set for the protection of human health and to keep dust nuisance within internationally accepted levels. The air quality criteria would also be expected to protect the health and amenity of other mammals, including horses. Horses and other mammals are kept and raced in Sydney and other cities were PM_{10} concentrations will be similar and in many cases higher than will be experienced outside the area that the EIA has identified as impacted by the mine. For example the DECC's Action for Air 2006 update publication shows that the number of days that the 24-hour average PM_{10} goal is exceeded is substantially lower in the Lower Hunter region that the Sydney Metropolitan region (**DECC, 2006**) for the period 1994 to 2005. The years 2002 and 2003 showed the most exceedances of the goal due to significant bushfire activity and dust storms. Horse racing and stabling are successfully conducted in the Sydney environment.

Table 2.3 –Submissions received from Mark and Georgina Smith (residence 75)

(n) ***As can be seen our property is in the middle of all three mines shown in the map. Also our home is located on top of a ridgeline. As we have stated our home is at an elevation of approximately 115m. The highest point of our land is 120m and this is the highest point between XMO operations, Ashton, Glendell's proposal and Integra's current operations and new proposal. So our land and home is very exposed to the effects of noise and dust from all local mining activity.***

As discussed in the response to Submission 4(e), the air quality assessment has provided estimates of the cumulative impacts of dust emissions from mining and non-mining sources. Detailed topographic information was included in the calculations. Those properties where the DECC's assessment criteria are exceeded have been identified.

(q) ***It is clear that dust emissions are increasing in this area. Also, if Integra's new mine is approved and is operating the dust emissions will increase further. It is proven fine dust particles can have an adverse affect on respiratory health and since we are far more exposed***

to this dust that the Singleton township, our desire to remove our family from this exposure is paramount.

The dust deposition monitoring undertaken in the area demonstrates that there has been very little change in levels over the past few years. The predicted air quality impacts at the Smith residence (ID 75) as presented in **Table 7**. These demonstrate that the predicted impacts are below the impact assessment criteria which are set for the protection of human health and to keep dust nuisance within internationally accepted levels.

Table 7: Predicted PM_{10} and TSP concentrations and dust deposition levels at Residence 75

Pollutant			PM_{10} ($\mu g/m^3$)				TSP ($\mu g/m^3$)		Dust Deposition (g/m^2/month)		PM_{10} ($\mu g/m^3$)				TSP ($\mu g/m^3$)		Dust Deposition (g/m^2/month)	
Averaging Period			24-hour		Annual		Annual		Annual		24-hour		Annual		Annual		Annual	
Integrated Survey Grid Coordinates		ID	*Impact Assessment Criteria*															
ISGx	ISGy		*50*		*30*		*90*		*2*		*150*		*30*		*90*		*4*	
Haulage route			BD	CE	BD	CE	BD	CE	BD	CE	BD	CE	BD	BD	BD	CE	BD	CE
			Year 1 - Project alone								Year 1 - Project and other sources							
312475	1408744	75	17	23	3	4	3	5	0.6	0.6	53	55	22	22	29	30	2.1	2.2
			Year 3 - Project alone								Year 3 - Project and other sources							
312475	1408744	75	14	15	2	3	3	3	0.5	0.5	50	50	20	20	27	27	1.9	1.9
			Year 6 - Project alone								Year 6 - Project and other sources							
312475	1408744	75	7	7	1	1	1	1	0.1	0.1	44	44	18	18	24	24	1.5	1.5

(r) ***It is obvious to us that if the area of mining is to significantly increase, re: Integra's proposal, than (sic) the area of dust generation will increase as a direct consequence of this. Thus the dust generated must increase. The affect of this increased dust generation on our home will be exaggerated by the strong southwesterly winds which are a feature of this area.***

The air quality assessment provided a best estimate of the impact zone due to dust emissions arising from the proposed operations. These estimates took into consideration all meteorological conditions that have been measured in the study area. South-west winds have not been measured to be prevalent in the are. Detailed topographic information was included in the calculations.

(s) ***EA, Page D18, Last paragraph – the last sentence states Glendell was not included in the cumulative modelling process in regard to estimates of particulate matter emissions.***

As noted in the response to the comment from the Department of Planning regarding Glendell (Table 2.1, Comment 1 (a)), the revised mine plan for Glendell was not available at the time the Glennies Creek proposal was assessed. Combination of the results for Glendell and Glennies Creek has not identified any additional exceedances beyond those already identified.

(t) ***Given it is only approximately 1.5km from Integra's proposed mine site to our home, there can be no doubt when the S/E wind blows our home will be significantly impacted by dust from Integra's proposed mine and overburden areas.***

The air quality assessment provided a best estimate of the impact zone due to dust emissions arising from the proposed operations. These estimates took into consideration all meteorological conditions that have been measured in the study area, including the south-east winds that prevail in the summer months. Detailed topographic information was included in the calculations.

(u) ***EA, Page D17, D2.2.2 – Dust Deposition – in part this states average deposited dust levels in rural NSW between 1 g/m^2 and 2 g/m^2/month. It then goes on to state that dust gauge D7 recorded levels of 4.1 g/m^2 to 4.7 g/m^2/month. This was due to increased activities at Camberwell south pit. According to the map Figure D7 the relation between the position of D7***

and the Camberwell south pit is very similar to the relation between Integra's proposal and our home.

As presented in **Table 7**, the predicted dust deposition levels at Residence 75 are below the impact assessment criteria, and the predicted contributions by the proposed Glennies Creek operations are very small. The activities at Camberwell were significantly larger than those proposed for Glennies Creek.

(v) ***EA, Page D18, Table D9 – as shown in Figure D7, PM_{10} monitoring station HV3 is the closest PM_{10} monitoring station to our property. In table D9, it states minimum concentration recorded at 22 $\mu g/m^3$ and maximum of 51 $\mu g/m^3$, it states annual average PM_{10} concentrations are below DECC goal of 30 $\mu g/m^3$. This may be so but it also shows that the PM_{10} readings at this site have been recorded at nearly double the acceptable concentrates (sic).***

The values presented in Table D9 are 24-hour average concentrations, for which the DECC goal is 50 $\mu g/m^3$. The DECC goal of 30 mg/m^3 applies to annual average PM_{10} concentrations. These values are presented in Table D8, and are below the goal.

(w) ***There can be little doubt that if Glendell and Integra's proposal are approved, the PM_{10} readings on Glennies Creek Road and our home will increase as we are located in the centre of these projects and in the direction of dominant winds in this area.***

As discussed in response to Submission (n), the air quality estimates took into consideration all meteorological conditions that were measured in the study area in 2003 (see Figure 3, EA, Volume 1, Part 1).

(x) ***EA, Volume 1, Page 1-31, Table 12 – this table states cumulative predicted PM_{10} concentrations on our property for 24 hours as 17 and 23 $\mu g/m^3$. The recorded levels of PM_{10} at HV3 (nearest monitor to our home) has recorded a mean concentrate (sic) of 22 $\mu g/m^3$ and are below the 30 $\mu g/m^3$ goal set by the DECC. But there were readings up to 50 $\mu g/m^3$. This information was only conducted over a period of 37 days.***

The cumulative 24-hour average PM_{10} concentrations at Residence 75 are shown in Table 12 of Holmes Air Sciences (2007c) to be 50 $\mu g/m^3$ (for both haul route BD and haul route CD). These are below the allowable cumulative impact assessment criteria of 150 $\mu g/m^3$. The annual average PM_{10} concentration at HV3 has been measured to be 23 $\mu g/m^3$, which is below the DECC assessment criteria of 30 $\mu g/m^3$. High volume air samples collect dust sampler measurements every 6th day, therefore over a complete year approximately 60 samples will be collected (365/6). Table 8 of Holmes Air Sciences (2007c) details the results of 62 samples taken between 25th August 2005 and 26th August 2006.

(y) ***EA, Volume 1, Figures – we do not believe the predictions for TPM. PM_{10} in these projections take into account the prevailing wind in this area. The second most significant wind rose in this area is S/E. EA, Volume 1, Page 1-57 shows N/E winds are virtually non-existent. Given this information we cannot fathom how the aforementioned predictions are maintained. For example, EA, Volume 1, Page 1-69, Figure 17, how can the predicted 40 mg/m^3 contour line be the same distance for the prevailing S/E winds as it is for the N/E winds. The logic that this prediction uses is the strong S/E winds that are predominant in the area have no effect on where dust will travel.***

The isopleth pattern that is obtained for a particular modelling scenario depends on the distribution of the dust sources as well as the prevailing winds. The general location of the sources of dust associated with the proposed Glennies Creek project can be seen on Figures 9 through to 14 in the air quality report (EA, Volume 1, Part 1). These show that dust sources are grouped in two locations, north and south of the proposed development area, and are joined together by a haul road. As the question notes, there are almost no winds on an annual basis from the north-east or indeed from the west-southwest. This means that there will be very little transport of dust either to the north-east or to the west-south-west.

However, because the alignment of the dust sources is approximately north-south, even if the winds e only blow from the north-west and the south-east the isopleth patterns would still have a significant dimension running in the north-south direction. This is probably most apparent in the predictions of annual average TSP or PM_{10}, see for example Figure 21 in the air quality report (EA, Volume 1, Part 1). The north-west/south-east alignment of the winds is apparent from this diagram and other similar diagrams see for example Figure 20 in the air quality report (EA, Volume 1, Part 1).

The question specifically refers to Figure 17. This figure shows the worst-case 24-hour concentrations due to emissions from the project. It is important to understand the way that this figure is compiled. The model is run over a 365-day period and the highest predicted 24-hour concentration for each receptor is held in the computer model's memory for each receptor. At the end of the model run, when all 365 days in the year have been modelled, the composite isopleth diagram (see Figure 17. EA, Volume 1, Part 1) is created. This ensures that the worst-case over the year at every receptor is considered. This applies to any contour plot that shows the maximum 24-hour concentration (that is, Figure 16 through to Figure 19). So the isopleth diagram does not represent any particular day but shows the worst day for each receptor regardless of when it occurred throughout the year.

In summary, two effects become important in the contour plots of the 24-hour average concentrations. The first is that the sources of dust are aligned approximately north-south and the second is that it will only take a few hours of wind blowing from the north-east or the south-east to contribute some dust to the north-east or south-west directions. Since the model then picks up the worst day in the year the picture presented by the isopleths will hang on to the highest concentration at that receptor even though it might only occur on one day in the year. For receptors which are located generally to the south-east or the north-west of the dust sources, the same concentrations may occur but will occur much more frequently because these are the directions that the prevailing winds carry the dust.

(II) ***Information and predictions as contained in this EA can be distorted or interpreted to suit one's own agenda. So we wish to state the following facts on this issue as we see it:***

(v) ***PM_{10} levels on Glennies Creek Road were recorded over a 2 year period which exceeded acceptable levels.***

As discussed in the response to Submission (v), the 24-hour average PM_{10} concentrations presented in Table D9 comply with the DECC goal of 50 $\mu g/m^3$. The annual average PM_{10} concentrations are presented in Table D8, and are below the DECC goal of 30 $\mu g/m^3$.

Do not hesitate to contact me should you have any further queries.

Kindest regards

Judith Cox
Senior Air Quality Engineer

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Appendix 2

Response to Noise and Blasting-related Public and Government Agency Submissions Prepared by Heggies Pty Ltd

(No. of pages excluding this page = 15)

HEGGIES

REPORT 10-3857
Revision 0

Response to Noise and Blasting-Relation Public and Government Agency Submission Glennies Creek Open Cut Coal Mine

PREPARED FOR
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11 FEBRUARY 2008

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Response to Noise and Blasting-Relation Public and Government Agency Submission Glennies Creek Open Cut Coal Mine

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DOCUMENT CONTROL

Reference	Status	Date	Prepared	Checked	Authorised
10-3857	Revision 0	11 February 2008	Mark Blake	Dick Godson	Mark Blake

TABLE OF CONTENTS

1 INTRODUCTION

An Environmental Assessment (EA) was prepared by R W Corkery & Co Pty Ltd (RWC) for the proposed Glennies Creek Open Cut Coal Mine (the Project), Singleton NSW, on behalf of Integra Coal Operations Pty Ltd (ICO) in October 2007. Heggies Pty Ltd (Heggies) prepared the Specialist Consultant Studies Part 2: Noise and Blasting Assessment of the EA.

A number of submissions were received by ICO from government agencies, special interest groups and the public in response to the EA's public exhibition.

This document has been prepared by Heggies, on behalf of ICO, in response to the submissions related to the noise and blasting aspects of the Project's EA.

2 ISSUES AND RESPONSES

2.1 Table 2.1 - Government Agency Submissions

2.1.1 Department of Environment and Climate Change

Issue 2(c)

Consistent with the "Application Notes - NSW Industrial Noise Policy" an evening / night criteria will not be adopted that is higher than the day time criteria.

Response

The Department of Environment and Climate Change's (DECC's) *"Application Notes - NSW Industrial Noise Policy"* (dated 10 October 2006) state that:

"it is generally recommended that the intrusive noise level for evening be set no greater than the intrusive noise level for daytime. The intrusive noise level for night-time should be no greater than the intrusive noise level for day or evening. Alternative approaches to these recommendations may be adopted if appropriately justified."

Heggies' experience in conducting environmental noise monitoring in the Hunter Region, together with a review of published data of noise monitoring conducted in the vicinity of the Project, reveals that daytime $L_{A90(15minute)}$ noise levels are typically lower than the evening and night-time levels. Typically, insect activity and unstable conditions prevail during the spring, summer and autumn evening periods, thereby increasing the background noise levels. During the night-time period, however, prevailing stable atmospheric conditions tend to increase the noise level contribution from distant traffic and mining operations. The Noise and Blasting Assessment background noise monitoring results are consistent with these observations.

The intrusive noise criteria presented in the Noise and Blasting Assessment have been reviewed and Heggies confirm that they are appropriate for the Project as higher evening and night-time noise levels are a feature of the subject area. Therefore, the Rating Background Noise level (RBL) plus 5 dBA intrusive criterion is appropriate for assessing the $L_{Aeq(15minute)}$ intrusive noise emissions from the Project.

In order to cater for the increase in evening and nigh-time background noise levels due to enhanced noise propagation from surrounding mining activity, it is appropriate to limit the Project's noise emission contributions via the amenity criterion.

Issue 2(d)

The RBLs for location C will not be adopted without further justification and the RBLs for location B will be adopted.

Response

Noise Assessment Group C (Group C), representing only two residences (Residence 35 and Residence 38), was identified as an acoustically differentiated group of residences. Group C is located in a relatively large open area which receives reduced topographic acoustic attenuation from the surrounding mining operations and therefore is exposed to higher ambient noise levels (when compared to Group B). As a result, the RBL presented in the Noise and Blasting Assessment for Group C is considered to be appropriate and justifiable.

Note, due to access and safety restrictions, the operator-attended noise surveys were conducted on Middle Falbrook Road and not at the noise logger's location (Residence 35). Therefore, there were discrepancies between the operator-attended noise levels and the unattended noise logger noise levels.

Issue 2(e)

Table 11 in the NIA presents the proposed project specific noise levels (PSNLs) for the project. The DECC does not fully concur with the existing ambient noise monitoring results from which they were established (see above) and therefore does not concur fully with the PSNLs.

Response

See above responses to Issue 2(c) and Issue 2(d).

Further, the Project Approval Noise Limits, determined in accordance with the procedures specified in the INP, are recommended in the Table 21 of the Noise and Blasting Assessment.

Issue 2(f)

Sleep Disturbance Criteria - A specific and quantitative assessment of the potential for sleep disturbance has not been undertaken. The DECC recommends that the screening levels sleep disturbance criteria contained in the "Application Notes - NSW Industrial Noise Policy" are applied as limits.

Response

Sleep disturbance criteria have been nominated in Section 5.1 of the Noise and Blasting Assessment and are consistent with the subject Application Notes.

Further, the monitoring, assessment and management of potential sleep disturbance arising from the Project would be addressed through the Project's Noise Management and Monitoring Programme.

Issue 2(g)

Meteorological Conditions - Temperature inversions have been included in the noise modelling. However, a 2m/s drainage wind flow had not been included in the modelling of inversion conditions on the basis that light winds are not a significant feature of the area for winter nights. This approach is not strictly in keeping with the guidelines of the INP. The recommended noise limits apply under inversion conditions with light winds up to 2m/s. This may represent a compliance risk for the Proponent.

Response

Further to light winds not being a significant feature of the area during winter nights, Project source to receiver drainage-flow winds would generally not develop due to the receivers being at higher elevations than the operating plant and equipment and/or higher intervening topography.

Also, the Noise and Blasting Assessment was prepared in accordance with the procedures specified in the DECC's INP. Accordingly, the licence and consent noise limit compliance conditions should reflect the Recommended Operating Noise Limits presented in Table 21 of the Noise and Blasting Assessment, together with the corresponding atmospheric conditions under which the noise limits apply (Table 21 of the Noise and Blasting Assessment).

Issue 2(h)

Predicted Noise Levels and Impacts - The text in the NIA indicates that the operational noise modelling includes the Camberwell CHPP and the rail load out facility. However, the diagram at Appendix B5 – "Noise Emission Sources" does not show noise sources at the CHPP or the rail load out facility. The DECC has undertaken the assessment on the basis that all noise sources identified in the NIA have been considered, ie. consistent with the text.

Response

The Noise and Blasting Assessment includes the operation of the Camberwell CHPP, rail load out facility and raw coal haulage between the pit and the Camberwell CHPP, together with in-pit and dumping operations ie consistent with text. The subject diagram will be amended accordingly.

Issue 2(i)

Construction Noise Impacts - The noise modelling for the construction of the bund has been considered receivers in A - north and B. The greatest impacts are predicted for residence 32 where a level of L_{A10} 55dB(A) is predicted. This represents a 5dB(A) exceedances of the background plus 20dB(A) goal. Construction noise impacts will need to be effectively managed and it is recommended that only construction of the Stony Creek Bund be exempted from the operational noise limits.

Response

Activity associated with the construction of the Stony Creek Bund would be clearly identified (by nearby residences) as being quite separate from typical mining activity, as well as being a one-off construction activity (at the beginning of site activity) for the betterment of the local amenity. It is therefore appropriate to assess the noise impacts of the construction of the Stony Creek Bund against the construction noise criteria nominated in the Noise and Blasting Assessment. All other site activities would be assessed against the project specific operational noise limits.

The potential construction noise impacts on the neighbouring residences would be managed in accordance with the Project's Noise Management and Monitoring Programme.

Issue 2(j)

Operational Noise - The general conclusions in the NIA regarding the magnitude of noise impacts cannot be solely relied upon given that DECC has recommended changes to the PSNLs. Impacts at receiver locations 32 and 36 need to be managed via the project approval.

Response

See above responses to Issue 2(c), Issue 2(d) and Issue 2(e).

Further, a number of residences have been identified as being in either the Noise Management or the Noise Affectation Zone and the noise impacts on these residences would be managed in accordance with the Project's Noise Management and Monitoring Programme.

Issue 2(k)

Road Transport Noise - The quantitative assessment is based on graduated distances of 25m, 50m and 75m from the respective roadways, however, the actual offset distances of residences from the roadways has not been stated. To investigate this issue further, DoP could require the Proponent to consider the actual offset distances of potentially affected residential receivers.

Response

The nearest receivers adjoining the primary access roads are located between 25 m and 75 m from those roadways. Accordingly, the Noise and Blasting Assessment presents traffic noise levels at the range of actual offset distances from the roadway.

Issue 2(l)

Rail Noise

(i) *Note 2 in "Table 27 - Existing and Proposed Freight Train Movements" in the NIA states as follows. "The number of proposed project rains will not add to the number of existing coal trains since the Project will not add to the number of trains departing from the Camberwell CHPP". On this basis you would expect no increase in rail noise levels on the Main Northern Line unless the configuration of the train set has changed. There appears to be no information in the EA to support this note.*

(ii) *The NIA reports no increase in existing rail noise levels on the Main Northern Line as a result of the project, except during the night time period at an offset distance of 90m where an increase of 1dB(A) is reported. This is curious as no increase in noise is predicted at 30m and 60m respectively, as you would expect if rail movement numbers are not increasing*

Response

Further to the statement that *"the Project will not add to the number of trains departing from the Camberwell CHPP"*, there are no plans to change the current train set configuration or time tabling. Accordingly, the predicted train noise emissions presented in Table 28 of the Noise and Blasting Assessment show no change between the existing and proposed cumulative train noise emissions.

There is a typographical error in Table 28 of the Noise and Blasting Assessment. The corrections are presented below.

Table 28
Predicted Train Noise Emissions (dB(A) re 20 µPa)

Distance to Receiver	Daytime Existing Trains[1]			Daytime Cumulative Trains[2]		
	Average LAeq(15hour)	Peak LAeq(15hour)	Passby LAmax	Average LAeq(15hour)	Peak LAeq(15hour)	Passby LAmax
30 m	66	66	86	66	66	86
60 m	63	63	83	63	63	83
90 m	61	61	81	61	61	81

Distance to Receiver	Night-time Existing Trains[1]			Night-time Cumulative Trains[2]		
	Average LAeq(9hour)	Peak LAeq(9hour)	Passby LAmax	Average LAeq(9hour)	Peak LAeq(9hour)	Passby LAmax
30 m	67	67	86	67	67	86
60 m	64	64	83	64	64	83
90 m	63*	63*	81	63*	63	81

Note 1: Train noise emissions from existing freight trains and pre-Project consented rail traffic.
Note 2: Train noise emissions from cumulative rail traffic, including Project-related traffic.
* Corrected trains noise emission levels.

2.2 Table 2.2 - Public and Special Interest Group Submissions

2.2.1 Graeme and Kay Cheetham "Ventura"

Issue 4(d)

We wish to complain about the technique of the noise recording carried out by Heggies.

(i) Firstly, it was done for a short time only.

(ii) Secondly, it happened to occur at the same time there was an unusual number extra number of trucks transporting road ballast to Glennies Creek Underground (the monitor was in the front paddock close to the road).

(iii) Thirdly, the fixed recorder was in place close to a pet dairy cow which was in season and bellowed excessively for two days.

(iv) Fourthly, one afternoon I was doing some tractor work with a machine that is very noise when Mr Muller stopped his car and monitored it with a mobile microphone from the car window next to where I was working. This was not a typical noise sample.

Response

i) Background noise monitoring was conducted at the "Ventura" property for a total of 13 days, almost double the period (of 7 days) required by the INP.

ii) Increases in local traffic volumes do not influence the background noise environment. Accordingly, the RBLs presented in the Noise and Blasting Assessment are valid.

iii) An in-season bellowing cow would not influence the background noise environment due to the intermittency of the bellowing. Accordingly, the RBLs presented in the Noise and Blasting Assessment are valid.

iv) The operator-attended noise survey noted the operation of the tractor, however no assumption was made as to the tractor operation being a typical occurrence.

Further, the operation of the tractor did not influence the RBLs presented in the Noise and Blasting Assessment.

2.2.2 G and W Cooper Singleton

Issue 10(b)

Noise impacts are judged on the increase from the normal and without determining the true benchmark background noise level.

Response

The potential noise impacts from the Project have been determined in accordance with the procedures detailed in the INP, the methodology of which is detailed in Section 5.1 of the Noise and Blasting Assessment.

2.2.3 St Clements Congregation Camberwell

Issue 23(a)

We lodge our objection to another mine in the Camberwell area, concerning the welfare of the 2nd oldest church in the area. Our major concerns are the blasting damage from ground vibration.

Response

The ground vibration levels resulting from the proposed mine blasting would be limited to a 'safe' vibration level at the church in accordance with the Project's Blast Management and Monitoring Programme

Table 2.3 - Submissions Received from Mark and Georgina Smith

Issue (b)

Table D13 show background noise levels for our location at 34dB(A) Day, 35dB(A) Evening, 35dB(A) Night. This information was conducted in March 2005. We believe these figures to be higher than otherwise stated. XMO EIS for Glendell mine shows background noise levels for our location at 30dB(A) Day, 32dB(A) Evening, 32dB(A) Night. These levels have been verified by other noise testing on our land. Since it is stated as above that the noise level from the project should not exceed 5dB(A) above background, the actual noise levels not to be exceeded on our land using an average of background noise should be 37dB(A) Day, 38dB(A) Evening, 38dB(A) Night.

Response

The Noise and Blasting Assessment long term noise monitoring results are consistent with the operator attended noise monitoring results and Heggies are satisfied that the reported background noise levels are representative of the receivers within the nominated groups.

However, we note that the following could influence the background noise level:

- Monitoring position - local shielding by a house or a shed could reduce noise levels by up to 10 dBA; local reflection from a house or a shed could increase noise levels by up to 3 dBA; the proximity to pumps and fixed plant, trees, tall grass/pasture, water ways, fauna habits and livestock could increase noise levels by between 1 dBA and 20 dBA.

- Monitoring location - general exposure to distant continuous noise sources, such as highways and mining operations.
- Development stage of various neighbouring mining operations.
- Seasonal variations.
- Noise monitoring equipment model, type and calibration.
- Analysis and filtering procedures.

Issue (c)

EA, D3.4.3 - We reject the information in this section based on the following. As previously shown, the current consent conditions state Integra must not exceed 38dB(A) LAeq 15 on our property. We note that XMO current consent conditions state that 48dB(A) Evening and 43dB(A) Night is the cumulative noise level at which acquisition is implemented. Since it is predicted Integra will have similar conditions, we reject the information in this section as overestimating the maximum expectable levels.

Response

The Cumulative Noise Assessment Criteria presented in Section D3.4.3 of the EA are consistent with the findings of the Noise and Blasting Assessment, which in turn is consistent with the procedures specified in the INP.

Issue (d)

It is of concern that the EA does not address acquisition criteria at any stage. We note that previous EISs we have perused have addressed this issue at length. This information has included at what noise level acquisition should take place.

Response

The Noise and Blasting Assessment was prepared in accordance with the requirements of the DECC's INP. As a result, Heggies believe that the operator-attended Ambient Noise Environment Figures presented in Table 8 of the Noise and Blasting Assessment are appropriate and justifiable. The INP does not contain criteria for the purposes of land acquisition. Further, noise is only one factor considered (by the Department of Planning, DoP) when determining whether the impact from mining operation(s) on a particular residence is sufficient to warrant land acquisition.

The DECC's preferred approach is firstly apply all reasonable and feasible mitigation measures, with land acquisition being a last resort option.

The DoP, in approving other mining developments, have in the past nominated land acquisition criteria as a condition in the development consent. Where land acquisition noise criteria have been nominated, these lands have typically all been identified in the EA as being in the Noise Affection Zone. Refer to Section 5.1 of the **NOISE AND BLASTING ASSESSMENT** for the DECC's recommend considerations, where 'negotiated agreements with landowners' could involve land acquisition.

Accordingly, if the nomination of land acquisition criteria is warranted for the Project, the DoP nominate the appropriate criteria as a condition of the development consent for the Project.

Issue (e)

SCSC Vol 1, Table 8 - states noise assessment at group F ambient level at 57dB(A) Day, 64dB(A) Evening, 39dB(A) Night LAeq 15. Given that it has been proven the background noise levels at our property are 30dB(A) Day, 32dB(A) Evening, 32dB(A) Night, there is a huge differentiation in these figures. Where is the excessive noise emanating from?

Response

The noise sources contributing to the ambient noise environment have been identified in the operator-attended noise monitoring results presented in Appendix D of the Noise and Blasting Assessment. Typically, the $L_{Aeq(15minute)}$ noise levels are controlled by contributions from local traffic, birds, insects, wind, planes and mining activity.

Further, the Noise and Blasting Assessment $L_{Aeq(15minute)}$ noise levels are comparable to the noise levels presented in the XMO Glendell NIA. See also the response to Issue (b).

Issue (f)

We have constantly maintained for over 2 years that Integra are breeching their consent regarding excessive noise on our land. Remembering that Integra's consent requires them not to exceed 38dB(A) on our property, we supply the following report (Spectrum Acoustics on behalf of Integra), as shown in Table 2 and Table 3 proves the background noise level of 32dB(A), Table 4 shows readings of 37.5 and 40 and 37dB(A). This is stated as emanating from Integra and Table 5 shows 36 and 39dB(A) emanating from Integra. It states at all of the monitoring locations mine noise was clearly audible from the direction of the Integra operations. This categorically proves Integra have breached their consent conditions on our land.

Response

This issue is a licence and/or development consent compliance issue and it does not form part of the Project EA assessment process. Also, note that this issue relates to a different development.

See also the response to Issue (b).

Issue (g)

Presently as stated, we have complained numerous times to Integra regarding excessive noise. A large proportion of these complaints have been during the night-time frame. A proportion of complaints we make about excessive noise have previously been attributed to coal loading and preparation. Obviously if this new proposal by Integra is approved, the coal loading and preparation activity will significantly increase to accommodate the large increase in coal mining. Given the noise generated by this process is already excessive, there can be no question the increased activity 24/7 will have another detrimental affect on this noise. Also the highwall and auger mining activity will be significantly closer to our property than other current mining activities. It is obvious that will also contribute to the unacceptable cumulative 24/7 noise already affecting our land.

Response

The Project not does propose to increase the currently approved throughput of the Camberwell CHPP and rail loading facility and therefore no increase in the noise emission levels are predicted.

The predicted night-time noise emission levels from the operation of the CHPP, train loading and auger/highwall mining operations are presented in Section 6 of the Noise and Blasting Assessment. The contribution from the auger/highwall mining operations are significantly lower than the contribution from the CHPP and train loading operations and would therefore would not contribute significantly to the cumulative noise exposure.

Issue (h)

Volume 1, 2-35, Tables 14, 16 and 18 – states our property (75) the daytime, evening and night time predicted noise will be: Table 14 – 31, 32, 31dB(A). Table 16 – 35, 36, 32dB(A). Year 3 assessment and Table 18 – 35, 36, 31dB(A). Given that it has been established the background noise level is 32dB(A) at our house, is Integra seriously stating that an open cut mine operation producing 1.5 million tonnes of coal per year, that is located 1.5km from our house, that we look directly down on, is going to have no impact in the first 3 years and minimal after that, in regard to noise on our home?

Response

The potential impacts referred to above are stated in the Noise and Blasting Assessment and have been assessed according to the procedures specified in the DECC's INP. Based on the INP procedures, the predicted noise levels are at an acceptable level of intrusiveness.

Issue (i)

We have no confidence in projected figures due to the significant impact of weather conditions on these figures. It seems astonishing to us the EA for Integra does not provide a provision for the same principle of buffer land. It is clear to us that because of the close proximity of some privately owned homes and land to Integra's proposed mine, also in our case the topography of the land that has our home looking directly down on the proposed site, that there is no question Integra should be instructed to provide this buffer zone in accordance with normal practice. We believe because of the reasons stated we should be included in this zone and acquired by Integra according to the conditions in their consent.

Response

See response to Issue (d). Further, if appropriate, the DoP is responsible for nominating noise level based land acquisition criteria.

Issue (j)

EA 3.7.3 - Assessment of Sleep Disturbance Noise Impacts - this section states sleep disturbance assessment criteria of rating background level plus 15dB(A). 32dB(A) being proven background noise this puts their idea of sleep disturbance at 47dB(A). We believe this figure is not correct. We have previously checked via the data from SentineX 4 what the recorded noise levels were when we have suffered sleep disturbance. The recorded figures have been considerably lower than this on these occasions.

Response

The DECC's background plus 15 dBA sleep disturbance criterion is only a screening criterion for sleep disturbance. Any complaints of sleep disturbance would be investigated on an individual basis in accordance with the Project's Noise Management and Monitoring Programme.

Issue (k)

Also, the issue of sleep disturbance is much deeper than being woken from one's sleep. By definition, sleep disturbance is a disturbance to one's sleeping pattern. This includes noise that prevents a person from falling asleep. Also the noise that prevents a person from continuing their sleep once they have awoken for whatever reason, an example being a trip to the bathroom, drink of water or whatever the person's normal sleeping pattern is. It would have to be conceded the level of noise that prevents a person falling asleep or continuing their sleep once awoken would be substantially lower than the noise level required to wake someone who is already sound asleep. This issue has not been addressed in the EA.

Response

As indicated above, sleep disturbance is a very complex issue with an acceptable objective assessment process undecided upon, as it is generally a subjective level of disturbance. Hence the simplified screening criterion identified in Issue (j).

See also the response to Issue (j).

Issue (l)

Volume 1, Page 2-89, Table D5 – Night Time Operator Attended Noise Survey Results 9 March 2005 and 30 March 2005 – we have not been included in this section. The nearest reference is location 35 which is at approximately the same distance from Integra's current mining activities to our home. Also we have attached results from noise monitoring for 19, 21, 22, 27 & 28 August 2006 and 14 September 2006.

Response

The nearest representative receiver location to Location 75 is Location 62, the representative location for all receivers in Noise Assessment Group F.

Note, it is not feasible to measure the background noise environment at all residential receivers and therefore representative locations are chosen to represent a group of residences of similar background noise environment. Refer to Section 4 of the Noise and Blasting Assessment for more information.

Issue (m)

Given this information was conducted over 6 nights compared to the 2 nights that have been used in all of information in this EA. Also the report we show is more than 1 year more recent than that supplied in the EA. It must be conceded the report we show is more relevant and clearly demonstrates again that Integra are constantly breaching their consent conditions regarding excessive noise on our home, since their current open cut consent requires that Integra not exceed 36dB(A) on our property. Given this noise is emanating from mine activities that are substantially further away and much more buffered than Integra's proposed mine in relation to our property. This again proves if Integra's proposal is approved it will have a negative impact regarding excessive noise on our property.

Response

Refer to response to Issue (b) and Issue (c).

Further, the proposed Project is a substantially reduced operation compared to the current Camberwell mining operations. Accordingly, the potential noise impacts from the Project would also be reduced.

Issue (n)

As can be seen our property is in the middle of all three mines shown in the map. Also our home is located on top of a ridgeline. As we have stated our home is at an elevation of approximately 115m. The highest point of our land is 120m and this is the highest point between XMO operations, Ashton, Glendell's proposal and Integra's current operations and new proposal. So our land and home is very exposed to the effects of noise and dust from all local mining activity.

Response

The Noise and Blasting Assessment presents two types of noise assessments. Firstly, an assessment of the potential intrusive noise impacts from the proposed Project operations is presented which specifically addresses the individual (non-cumulative) noise emissions from the subject development.

The second type of noise assessment looks at the cumulative noise emissions which, rather than considering the intrusive noise emissions from an individual development, considers the noise emissions from all industrial (including mining) operations which could contribute to the ambient noise environment.

Both the intrusive and cumulative noise assessments have been prepared strictly in accordance with the DECC's INP.

Issue (o)

If Integra's proposal is approved, it will have a significant effect on cumulative noise on our home and land.

Response

Refer to response to Issue (n).

Issue (p)

Given we have shown the night time mine-related noise on or near our home constantly exceeded mining consent, there can be no doubt if Integra's current proposal is approved this will continue and as we have shown, it will increase.

Response

Refer to response to Issue (m) and Issue (o).

Issue (ll)

Information and predictions as contained in this EA can be distorted or interpreted to suit one's own agenda. So we wish to state the following facts on this issue as we see it.

(i) Background noise levels for our residence is approximately 32dB(A).

(ii) Average accumulative noise levels at our residence over a 12 month period are approximately 42dB(A).

(iii) Noise levels at our residence often exceed 42dB(A).

(iv) The current cumulative noise level which necessitates acquisition at our residence in current consents of local mining companies is 43dB(A) LAeq 15 night.

(x) As we have pointed out in our submission, noise predictions for XMO expansion were exceeded 44% of the time. The disparity in the prediction and the actual recorded noise was substantial. Noise predictions can be very understated.

Response

The results and findings presented in the Noise and Blasting Assessment are objective and unbiased. Further, the Noise and Blasting Assessment was conducted following the processes prescribed by the DECC.

i) The background noise levels in the Noise and Blasting Assessment have been established as follows (for Group F): daytime 34 dBA; evening 35 dBA; and night-time 35 dBA.

ii) The cumulative mine noise levels have been predicted in the Noise and Blasting Assessment to be 37 dBA.

iii) Noise levels from all sources often exceed 42 dBA, as presented in the Noise and Blasting Assessment background noise monitoring results.

iv) The DoP will determine the appropriate land acquisition noise criteria for the Project.

x) The noise predictions presented in the Noise and Blasting Assessment represent the typical worst case noise emissions from the proposed Project. However, it is possible, on occasion (ie less than 30%), that higher noise levels than those predicted in the Noise and Blasting Assessment could be experienced by residences. This would typically occur under adverse weather conditions outside the licenced and/or consented conditions.