

Bulga Milbrodale Progress Association Inc.



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Re: Submission on Warkworth Mine Amendment 6. DA300-9-2002-iMOD6

This detailed statement expands upon the Holding Submission sent to the Department of Planning by the Bulga Milbrodale Progress Association Inc. (BMPA) on the 29 November 2012. The BMPA representing residents of Bulga and the surrounding rural areas, objects to the project on the basis of the reasons set out in this submission.

References

The correct name for the Ridge under discussion in the EA is Saddle Ridge. The Warkworth Mining Limited has called the ridge Saddleback Ridge which is erroneous. For the purpose of identification read Saddleback Ridge for Saddle Ridge and Saddle Ridge for Saddleback Ridge. Also, for Rio Tinto read Coal & Allied, Warkworth Mining Ltd, the Mining Company, RTCA).

1. STATEMENT

- a) Rio Tinto states that it must get approval to mine into Saddle Ridge to “preserve the viability of the Warkworth Mine and maintain current employment as close as possible to current levels”. Rio Tinto signed a Deed of Agreement in 2003 promising that it would never open cut mine Saddle Ridge and that it would apply to Singleton Council to have the Saddle Ridge and the balance of the NDA1 that was to protect Bulga, rezoned as a permanent conservation area. After 10 years, Rio Tinto has still not made this application to Council. Rio Tinto is breaking its promise with both of these important undertakings and thus cannot be trusted to honour any of the promises it is making with this amendment application.

- b) This broken promise is supported by the NSW Government when Minister Hazzard on 27 September 2013 signed an amending Deed which effectively takes away all the protection of the 2003 Deed.
- c) In 2013 the NSW Land & Environment Court rejected the mining of Saddle Ridge as part of the previous application. This new application to mine into Saddle Ridge must be refused.

2. THE 2003 DEVELOPMENT CONSENT AND DEED OF AGREEMENT

- a) In 2002 Warkworth Mining Limited (WML) made a development application to expand its mining operations. The Development Consent from NSW Planning included a Deed of Agreement with the Minister whereby WML agreed to conserve and manage the land in the Non Disturbance Areas and Habitat Management Areas. The NDAs were to be permanently protected for conservation and open cut mining was to be excluded. WML has now applied to mine NDA1.
- b) In 2003 under Condition 4 of Schedule 4 Deed of Agreement states *"Prior to carrying out any development in the extension area, the Applicant shall enter into a Deed of Agreement with the Minister."* It is clear that the intention of the Minister, when approving the mine extension, wanted the undertaking from the mine to *"Permanently protect the land in the NDAs for conservation and exclude open cut mining."* (see clause 4(b) in the Conditions of Consent).
- c) To ensure that the NDAs were not open cut mined the Deed required the mining company Warkworth Mining Ltd and we quote Clause 3.1 of the Deed *"Warkworth must request Council amend the SLEP in accordance with section 74 of the EPA Act by the creation of a New Conservation Zone."*
- d) The intent of the agreement was that this application to ensure the preservation of the NDAs was to be submitted to Council *"Prior to carrying out any development in the extension area"* This was one of the very important conditions contained in the approval. So important in fact that the Minister required a separate special Deed to ensure the land was protected.
- e) The mining company was able to obtain development consent by agreeing to preserve certain areas. Now that they have gained access to the extension area and have benefitted by the coal extracted they now wish to set alter one of the very important (if not the most important) conditions of consent.
- f) The Mining Company states that there was no time frame set down for the application to be made and thus states in CCC minutes of 2010 that it will apply to Council in 2011 for the rezoning. There was no time limit stated because it was the intention of the Minister that this application would be done prior to commencement of development in the extension area
- g) The Company has started development in the area without having satisfied the intent of the agreement (i.e. ensuring the preservation of the NDAs by applying to Council for permanent protection for these areas) and therefore is in breach of its Development Consent.

- h) The BMPA has no confidence in WML commitment to environmental protection particularly relating to ecological conservation. We believe that the requirements and commitments of the existing Development Consent have not been honoured. Our position is that NDA1 must be excluded from open cut mining and listed in Singleton Council LEP as promised by the Deed of Agreement and that Saddle Ridge be maintained as the intended abatement against noise and dust impacts.
- i) We are concerned that in a secret deal, the 2003 deed of agreement has again been amended to suit the mining company. Without any advice to the community this amending deed was signed on 25 September this year. After several requests, a copy of this amending deed was received by the community on Friday 6 December at 6pm. The government has given a very brief and inadequate time to review the EA and submissions. This amending deed is an important part of the assessment and yet they did not give us a copy in sufficient time for the Community to include the impact of this further amendment in their submissions.
- j) This original deed was intended by the government in 2003 to protect the community from the noise, dust and visual impacts of Warkworth mine and yet they are not only watering down the protection provided by the deed but not enforcing the requirement contained in the deed that Rio Tinto must apply to Singleton Council to have the whole of the non-disturbance areas defined in the 2003 approval re-zoned as permanent conservation areas. The community requires the State Government and Rio Tinto to carry out the obligations of the original Deed.

2.1. The New Amending Deed of Agreement

- a) Although the Amending Deed of Agreement was signed on the 25 September 2013 the document was not received by BMPA until Friday 6 December 2013. Prior to the issuing of this new application we were not aware of the existence of the amening Deed. Of concern is the statement "This Deed has been amended so as to permit any development approved under the EP&A Act in the NDAs and HMAs". This statement negates the whole basis of the 2003 Deed. Sections from the current EA are quoted below:
 - *In 2003, WML entered into the Deed with the then Minister Assisting the Minister for Infrastructure and Planning, consistent with Condition 4 of Schedule 4 of the development consent. The Deed recognised that WML may wish to mine areas west of the current development consent limits in the HMAs at some stage in the future. This Deed has been amended so as to permit any development approved under the EP&A Act in the NDAs and HMAs.*
 - *It is proposed to mine resource beneath NDA1. It is acknowledged that the design of the original offset package under the development consent was flawed as it was above substantial coal resources. This was also acknowledged by the DP&I in their Director-General's Assessment Report for the Warkworth Extension Project, stating: In this particular case, the Department believes there is considerable merit in reviewing the previous offsets. This is principally because the design of the original offset was flawed: it is underlain with substantial coal resources, a conflict which was acknowledged (but not resolved) in both the 2003 development consent and the associated Deed of Agreement.*

- b) We do not accept that the original offset was flawed. It is stated seven times in the 2002 EA that the Saddle Ridge was to be preserved as a protection zone for Bulga against the noise, dust etc. from Warkworth Mine. Further the Endangered Ecological Communities require protection equally now as they did in 2003. This approach by the Mine and the DOPI is false and endeavours to reduce the importance of the EECs and the impact of the mine's activities on Bulga.
- c) Under the original Deed of Agreement the Mine was required to have Singleton Council rezone the area known as NDA1 as a permanent Conservation Zone. With the consent of the Minister Hazzard this requirement has now been removed such that the NDA areas can be open cut mined. This is a complete abrogation of the protection and duty of care the Government owes to the residents of Bulga and is unacceptable. All of the protection the community had has now been removed and places in doubt any promises, deeds, conditions they may be part of any conditions of consent agreed at the time of consent.

3. NSW SUPREME COURT OF APPEAL

- a) No further application should be made on land that was the subject of the previous 2010 application and which was rejected by the Land and Environment Court. The area of land which is the subject of this current application is part of the contested application
- b) This Land and Environment Court decision is currently with the Supreme Court of Appeal and no decision has been delivered by the Court. No further processing of the application should be allowed whilst this previous application is being considered by the Court. This current application shows a blatant disregard and disrespect for the Court process.

4. STATE ENVIRONMENTAL PLANNING POLICY (MINING, PETROLEUM PRODUCTION AND EXTRACTIVE INDUSTRIES) AMENDMENT (RESOURCE SIGNIFICANCE) 2013

4.1 Aims of Policy

- a) We do not see any evidence in the EA that would satisfy the aim 'to promote the development of significant mineral resources'. The DA is simply a holding approach which does nothing to promote development of significant mineral resources.
- b) There is a statement contained in the EA which quantifies the mineral resource contained in the area applied to be mined as 15 Mt. This is insufficient evidence a) to support this claim and b) there is no economic justification based in a single resource statement.
- c) The 'removal of overburden' as stated by the mine in advice to employees is not sufficient to satisfy the Aims of Policy

4.2 Significance of the resource

- a) There is nothing in Clause 13.6 of the EA which satisfies the aims of the mining SEPP under this heading
 - i. [13.6 Aims of the Mining SEPP](#)

- ii. The consent authority must consider the aims of the Mining SEPP in determining an application for development consent for the purposes of mining. The proposed modification meets the aims of the Mining SEPP which include:
 - to provide for the proper management and development of mineral, petroleum and extractive material resources for the purpose of promoting the social and economic welfare of the State; The proposed modification encourages the proper management and development of a natural mineral resource. It will utilise existing equipment, plant, and workforce and will allow for the continuation of operations in the short term. It will also maintain production and employment levels at, or as close as possible to, current levels.
- b) . The L&E Court Judgement states at paragraph 168 of the judgement:
 - i. *“Obviously, for a mineral resource, a mine needs to be located where the mineral resource occurs. However, the existence of the mineral resource does not necessitate its exploitation. There is no priority afforded to mineral resource exploitation over other uses of land, including nature conservation. There must be an assessment of all of the different, and often competing, environmental, social and economic factors in order to determine what is the preferable decision as to the use of land.....”*
- c) This paragraph (b1) below does not refer to resources within this area of application but refer to resources further west. There are no ‘significant reserves below the area under application stated in the EA
 - (b1) to promote the development of significant mineral resources, CCL753 contains significant amounts of thermal and semi-soft coking coal. There are estimated to be over 555 Mt of coal within the lease area. These are significant identified reserves and resources which will be further developed under the proposed modification.
- d) In the EA this extension application states that the continuation of waste material movement which the removal of the massive overburden from Saddle Ridge would be the major activity. This assumes that no coal will be extracted from the area of the extension for the two years proposed. The ramping up occurs after the two years and therefore this application does not meet the Aims of the Policy
- e) Also with no coal being extracted there is no economic benefit to the State and Commonwealth in the form of taxes or royalties.
- f) The complete lack of economic analysis or justification of this project is contrary to the NSW government’s adopted position that greater weight should be given to the economic aspects of mining proposals and also to the guidelines issued by NSW Treasury and the Department of Planning last year, *Guidelines for the use of cost benefit analysis in mining and coal seam gas proposals.*

5. ECONOMICS

- a) There is no economic justification or work methodology presented to justify the statements made that the mine must have this incursion into a Non Disturbance Area to “maintain the viability of the operation” and “maintain current employment as close as possible to current level”. The threat of job losses and Mine viability appears to be scare tactics to allow the Mine to make a start on the larger expansion that was rejected by the Community and the Courts.

- b) Judge Preston stated:
 - i. *I am not satisfied that the economic analyses provided on behalf of Warkworth support the conclusion urged by both Warkworth and the Minister, namely that the economic benefits of the Project outweigh the environmental, social and other costs. (Judgement p155)*
- c) The latest application, consent modification 6, addresses none of these points and makes no attempt to make an economic case for the modification. The environmental assessment includes no cost benefit analysis, no economic impact assessment, no calculation of royalty or tax revenues, no estimate of profits which will accrue to overseas interests.
- d) Economic impacts on the NSW community are also unaddressed in the latest assessment. There is no discussion of impacts on health, property values or the economic value of environmental damage that would occur if this modification is approved.
- e) The expansion of the Warkworth mine may result in minor economic benefits to NSW but the considerable costs remains unchanged. While the proponents claim the expansion is necessary to “maintain” jobs, this is not supported by any analysis or undertaking. The simplistic idea that expanding a coal mine leads to more jobs is contradicted by recent experience in NSW. For example, the Stratford and Duralie mines of the Gloucester Basin recently shed staff despite applying for approvals to expand.
- i. We request the Department reject this application as it is not in the economic interests of NSW.

Project justification

- a) No economic support for the project has been provided and no evidence is available to justify statements that Rio Tinto must to expand the mine to maintain its viability and the maintenance of jobs.

6. INTER-GENERATIONAL AND INTRA-GENERATIONAL EQUITY

- a) This Amendment Application does not address the equity or fairness in either the distribution of the benefits and burdens.

7. DISTRIBUTIVE JUSTICE.

- a) Some of the entities to whom a distribution of benefits would be made if the Project were to be approved, would be Warkworth and its shareholders the NSW Government the Commonwealth Government, local councils and employees and contractors; however, the EA does not have adequate regard to the people of Bulga who would suffer the burdens of significant adverse noise, dust, visual and social impacts, as well as degradation of the natural environment of the local area.

8. MINING

- a) The proposed extension to mining of the coal resource in the NDA1 by open cut will cause major community adversity and unnecessary destruction. The destruction of valuable EECs and the current NDA1 can be avoided by underground mining methods.
- b) The coal reserve can be successfully extracted by alternate methods as shown by the adjoining Beltana Highwall Mine. The efficiency of the highwall concept has made Beltana Mine one of the most efficient and cost effective ventures in Australia. The coal resource can be accessed by efficient highwall mining techniques that will not cause the destruction of valuable EEC's nor excessive noise and air quality degradation.
- c) We note that there has been no mine plan submitted showing the method proposed for extraction. In addition there has been conflicting statement issued by Rio Tinto as follows: In the letter to residents it states that *"This Modification if approved would provide for a further two years of mining at MTW at its current production rate"*
- d) In a further statement issued to employees, Rio Tinto states *"While production will drop by approximately 1Mt next year, this approval will allow us to maintain waste material movement at current levels for around two years, preserving the ability to ramp back up to 12Mt for the longer term."*
- e) As well as the conflict in statements, the continuation of waste material movement which the removal of the massive overburden from Saddle Ridge (estimated to be 20 to 1 strip ration) would be the major activity assumes that no coal will be extracted from the area of the extension for the two years proposed. The ramping up therefore must assume that this is only the first stage of a further staging of mining into Saddle Ridge
- f) Also with no coal being extracted there is no benefit to the State and commonwealth in the form of taxes or Royalties
- g) Clause ES2.2 states
 - i. *The disapproval of the Warkworth Extension Project in 2013 has effectively halved the width of the main pit at Warkworth. This loss of strike length (i.e. working room) is placing significant constraints on the operation of the site's draglines, shovels and mining fleet. As a result, production is already expected to drop by around 1 million tonnes in 2014. If these constraints continue, MTW will be unable to avoid a further drop in production and employment levels. A further drop in production is likely to impact the economic viability of the entire operation, which needs to run at current production levels to avoid an increase in unit costs. Pursuing this modification will allow MTW to continue mining across the full width of the existing pit it had operated until 2013, for around two years. This will allow the site to continue to operate as close as possible to current production and employment levels over this period, and maximise its economic viability in a challenging environment for the Australian coal industry. During this time, further planning will be conducted for the longer term future of MTW.*

- h) The above statement is erroneous. The effective strike length has been reduced by 14% and not 50% as stated in the EA. This is calculated by adding the average strike length of North Pit, plus average strike length of West pit (average of this is 1.0 km and not 1.5km because of the triangular shape of the proposed extension) as a percentage of the overall current strike length of .
- Total strike length of North Pit and West Pit (Putty Road to NDA2) 4.9k
 - Total average strike length under this Application (av of triangle) 4.2k
 - Average strike length of North Pit without this application 3.2k
 - Loss of strike length comp. with tot. length (Tot. less av under this application) 0.7k
- i) It must be noted that the open cut mine to the south of Mount Thorley operated very efficiently and economically with a much lesser strike length.
- j) The proposed extension is not an ecological sustainable development because of the high strip ratio of approx. 20 to 1 for the coal resource in this Saddle Ridge area. This high strip ratio produces enormous dust and noise. The no.1 dust producer for Warkworth Mine (AEMR 2011) is the overburden dumps. The dust problem will get worse if this current application is approved.

8.1 Dumping of overburden

- a) Nothing in the 2003 approval allows overburden to be dumped onto Mount Thorley site. This continuing activity is in breach of the 2003 Warkworth approval and the 1996 Mount Thorley approval. The approval to dump onto Mount Thorley site was part of the 2010 Development Application but this was rejected by the Land and Environment Court in 2013.

9. AIR QUALITY

- a) We do not believe that the Air Quality Assessment for this EA adequately addresses the health implications of the mining extension proposal. The current application is smaller than the original expansion proposal but the massive strip ratio will be a serious source of dust and noise for the residents
- b) The relationship between exposure to air pollutants and potential health impacts is now widely recognised. Recent epidemiological research, based on long term observations in cities in the developed world, has consistently revealed an association between air pollution, particularly fine particles and human health impacts.
- c) Statistical analyses of urban air pollution worldwide have revealed a correlation between Particulate Matter concentrations and short term impacts on health (Dockery et al. 1993; Wilson and Spengler 1996; HEI 2002). Recent results (Pope et al. 2002) have extended these findings to long term impacts. For example, Pope et al (2002) found that each 10 µg m³ increase in the concentration of fine particles (PM_{2.5}) was associated with an 8% increased risk of lung cancer mortality. A similar magnitude of impacts has been observed worldwide.
- d) For fine and superfine particles there is no threshold below which no effects occur. On this basis, the World Health Organisation (WHO 2000) decided not to

recommend a health goal for particulate matter, at this stage, on the grounds that “The available information does not allow a judgement to be made of concentrations below which no effects would be expected.”

- e) The 2102 report titled ‘Health and Social Harms of Coal Mining in Local Communities’ (Ruth Clogiuri, Johanne Cochrane, Seham Girgis, The University of Sydney states as its key findings “*There are clear indications from the international health research literature that there are serious health and social harms associated with coal mining and coal fired power stations for people living in surrounding communities*”.
- f) It is undesirable for governments to inflict a proposal on a community that has a high apprehension of health, injury or other serious environmental dangers. The government has a Duty of Care. This lack of Duty of Care is compounding as each new mine opens or existing mines expand and as the life of Coal Mining and Industrial Development in the Hunter Valley lengthens.
- g) For health reasons alone, any expansion of Warkworth Mine must not be approved.

9.1 The importance of the size of airborne particulate matter

- a) Without in any way discounting the danger posed by other pollutants, the effect of respired particulate matter on human health is a major concern because of these factors:
 - the effects of particulate matter may be both physical (in the sense of e.g. abrasion) and/or chemical because of their inherent chemical properties or the chemicals adsorbed on to them. A Macquarie University study done in Singleton (Nelson et al 2008 ACARP 13036) found that the fine particles had adsorbed elemental carbon, silica, aluminium, chromium, iron, nickel and lead.
 - the common measure of weight of particulate matter may be an inadequate measure of risk compared to the number, shape and chemistry of particles; and
 - the finer the particles, the longer they stay in suspension and the further they can travel.
- b) Particulate Matter sizes are reported according to whether they are equal to or less than 10 microns (PM10), in which case they are inhalable and regarded as fine particulates. Once they reduce to 2.5 microns or less (PM2.5), they are respirable (capable of entering the lungs) and represent a particular danger not only in themselves but in regard to the other chemicals adsorbed or bonded with them. A study by Macquarie University and CSIRO found that PM2.5 particles in the Hunter are enriched with carbon, sulphur and chromium (Nelson, Morrison, Halliburton, Rowland and Carras, 2007). Robinson (2009) states “PM2.5 particles are not suppressed by spraying with water”. Moreover, being so fine, they remain in suspension in the air much longer than larger ones and are carried further by the wind.
- c) The proposal to extend the Warkworth Mine will increase the ground-level concentrations of nuisance dust (as indicated by TSP and dust deposition rates) and dust that can affect human health (PM10 and PM2.5) in Bulga.
- d) The proposed Rio Tinto Warkworth Modification Application directly impacts on the health of the residents of Bulga, Singleton and the Upper Hunter. Investigations showed that:

- coal mining and coal-fired power generation overseas have been linked with poor health of people living in their proximity;
 - the major sources of air pollution in the Upper Hunter are coal mining and power generation, with each emitting very large amounts of pollutants;
 - there are 37 types of pollutants, some in the form of particles such as visible dust and others as gases such as sulphur dioxide. Some of the gases, including sulphur dioxide, subsequently interact with other chemicals in the atmosphere and form particles, in this case, sulphates;
 - coal mining contributes most of the coarser particles, and coal combustion through power generation produces most of the finer ones.
- e) Further investigations have since been undertaken by NSW Health, the Environmental Protection Authority and Office of Environment and Heritage. These have been supplemented by the recent Air Pollution and Health Forum in Newcastle, sponsored by the University of Newcastle and the Centre for Air Quality and Health Research and Evaluation in the Woolcock Institute at Sydney University.
- f) The World Health Organisation's International Agency for Research on Cancer has given its judgment that air pollution and air particulates are carcinogenic.
- g) The Upper Hunter Air Quality Monitoring Network, in operation since early 2012, shows many exceedences of the standards for particles of 10 microns and less in size, known as PM10s. PM10 exceedences are already far more frequent on the Bulga side of Singleton than elsewhere in the Valley except Camberwell. The National Pollutant Inventory shows that coal mining is the major source of particles toward the upper end of this scale. Coal mining provides around 88% of the PM10s in the Hunter Valley
- h) Any level of PM2.5 is injurious to health. There is no threshold below which we are not affected, with most of the damage being done to our respiratory and, especially, cardiovascular systems. Since the conference, the World Health Organisation's International Agency for Research on Cancer has also declared air pollution and these particles carcinogenic, principally causing lung cancer and, probably, bladder cancer. The evidence for the coarser particles which frequently exceed standards points to damage to the upper respiratory system where most of these particles are filtered out before the finer ones proceed into the lungs and beyond. This results in exacerbation of existing respiratory diseases and inflammation of the upper airways.
- i) These effects are being felt by current generations, but it is important to recognise that they are generally delayed rather than immediate. For most adults who have lived with the problem for much of their lives, the damage is already done. But, it is not too late to avoid the same fate for our children and grandchildren.

9.2 Diesel Fumes

- a) The extraction of coal by open cut methods requires the consumption in trucks, on and off site machinery etc, of millions of litres of diesel fuel each year. The WHO advises that diesel fumes is carcinogenic. And residents living closet to the mines are most affected

10. NOISE

- a) The increase in the noise levels proposed by this extension, however slight, adds to the excessive noise being received by residents surrounding this mine. Rio Tinto has been fined for exceeding noise limits. Last year the mine received 800 noise complaints. No increase in noise levels is acceptable and more stringent actions must be taken to reduce existing noise levels from the Warkworth Mine.
- b) Saddle Ridge was set aside under the previous mine approval to act as a buffer zone to protect Bulga. Under this proposal it is to be partially removed reducing the effectiveness of the buffer between the mining operation and the community of Bulga and the surrounding rural residents.

10.1 Background noise

- a) The Land and Environment Court found major discrepancies in how the DoPI applied the NSW Industrial Noise Policy to approvals and the monitoring of conditions of consent. It appears errors in establishing high maximum noise levels in favour of the Mine disadvantaged the residents of Bulga and surrounds.
- b) Background noise levels were monitored at six (6) representative locations back in 2002 by ERM, and according to this noise study, noise levels were monitored continuously throughout 2008 in the vicinity of the Proposal, these datasets were found to be representative of the current environment.
- c) Warkworth is one of several mines in the area, others being:
 - Mount Thorley Mine,
 - Bulga Mine
 - Wambo Mine
 - South Lemington, and
 - Hunter Valley Operations (HVO).
- d) The concern is that given that this area contains a number of mines within a reasonably close proximity to each other and to the properties in the Bulga community and the surrounding rural area, monitored background noise levels are likely to have been significantly affected by the existing operations (mine pits, coal transporting conveyors, coal preparation plant facilities, mine related road traffic etc.), could have significantly influenced the monitored results. That is, according to the requirements set out in the INP, background noise levels used to set intrusive noise goals for a proposed expansion of an existing operation, should be determined by excluding background noise emissions and influences from the existing operations.
- e) The background noise levels used to set noise criteria for this Proposal do not appear to have been acquired or analysed in a manner that ensures the influence of noise from existing operations have been extracted and removed from the datasets. Furthermore, the influence of noise from other surrounding mines in the area also does not appear to have been extracted and discarded.
- f) For example, Table 2.2 on p6 of the August 2002 'Extension of Warkworth Coal Mine – Noise and Vibration Study', presented below, includes comments that accompany the monitored noise levels. The comments provided for five of the six noise monitoring sites state that the Warkworth Mine, which is the subject mine for

the study, produced audible noise. No information is presented in the 2002 study that might indicate that noise data affected by the subject mine was removed or discarded from further analysis, therefore it appears that the monitored background or RBL noise levels would have been contaminated by the subject mine itself, rendering these levels and subsequently the noise criteria that rely on these levels, as erroneous.

Ambient Noise Monitoring Survey

| Location | | RBL ¹ , dB (A) | | Existing L _{eq} Industrial Noise Level, dB (A) | Comments |
|--|-----|------------------------------|-------|---|--|
| Label | Day | Evening | Night | | |
| N1 | 30 | 30 | 30 | 35 | Warkworth Mine slightly audible |
| N2 | 33 | 33 | 33 | 35 | Redbank Power Station audible and Warkworth Mine slightly audible |
| N3 | 30 | 30 | 30 | 33 | Redbank Power Station audible and Warkworth Mine slightly audible |
| N4 | 33 | 33 | 33 | 35 | Wambo Mine and Warkworth Mine slightly audible |
| N5 | 30 | 31 | 30 | Low | Mining noise from Wambo Mine, Hunter Valley Operations and Warkworth Mine slightly audible |
| N6 | 33 | 34 | 33 | Nil | Bulga commercial and domestic noise audible |
| Notes: 1. RBL = Rated Background Level | | | | | |

- g)
- h) Furthermore, although no mention is made of the Mount Thorley Mine in the 2002 Noise and Vibration Study, it was operational at that time, as were a number of other mines in the vicinity such as Wambo Mine and Hunter Valley Operations, which were mentioned in the study and these would also have contributed to background noise levels.
- i) As a result, the reported background noise levels and subsequently the Intrusive noise criteria set for assessing this Proposal, may be higher (less stringent) than what they would have been had the influences and effects of existing mine operations been removed from the background noise monitoring results.
- j) The Land and Environment Court states in its decision that Clause 282
- *“The PAC accepted that there are substantial noise impacts from the Project (TB vol 5, tab 112, p 2583). One factor which the PAC noted was relevant to the noise impacts is the high stripping ratio, which means that the noise impacts are sustained for longer per tonne of coal extracted than at many comparable mines, thus causing a greater overall noise impact on the community. Secondly, the PAC accepted, based on submissions made, that many decisions to acquire residential property and businesses in the vicinity of Bulga or to remain in the vicinity of Bulga had been made on the basis that the western extent of mining was firmly limited to the boundaries in the 2003 approval, which fixed the proximity of noise generating activities in relation to the residences.”*

10.2 The NSW Industrial Noise Policy

- a) Rio Tinto is not applying the requirement if the NSW Industrial Noise Policy with regards to Low Frequency Noise. This is a serious breach of the current approvals and will continue with the new expansion if granted. This continuing breach is being ignored by the Government and is unacceptable.

6.2 NSW Industrial Noise Policy

The overall aim of the NSW Industrial Noise Policy (INP) is to allow the need for industrial activity to be balanced with the desire for quiet in the community. One of the specific objectives of the policy is to establish noise criteria that would protect the community from excessive intrusive noise and preserve amenity for specific land uses.

The INP discusses that within the community, there is a very large range of human reaction to noise. There are those in the community who are very sensitive to noise. This noise-sensitive sector of the population will react to intruding noises that are barely audible within the overall noise environment, or will have an expectation of very low environmental noise levels. On the other hand, there are those within the community who find living in noisy environments, such as near major industry, on main roads or under aircraft flight paths, an acceptable situation. The bulk of the population lies within these two extremes, being unaffected by low levels of noise and being prepared to accept levels of noise that are commensurate with living in an urban, industrialised society.

- b) This is totally irrelevant. The residents of Bulga live in a RURAL environment, not an “urbanised, industrial society”. The noise intrusion and amenity conditions for a RURAL environment are far lower than for an “urbanised, industrial society”.

The INP sets two separate noise criteria to meet environmental noise objectives: one to account for intrusive noise and the other to protect the amenity of particular land uses. For mining projects generally the intrusive noise criterion is adopted. The intrusiveness of an industrial noise source may generally be considered acceptable if the equivalent continuous (energy-average) A-weighted level of noise from the source (represented by the LAeq descriptor), measured over a 15-minute period, does not exceed the background noise level measured in the absence of the source by more than 5 dB. The INP requires intrusive noise criterion to be measured over a 15 minute period.

- c) The issue here is with respect to the “background”. In previous assessments for intrusive noise criteria, The Dept. of Planning and Infrastructure (the Dept.) has assumed a level of 30dbA and in some cases 33dbA as being the background in the Bulga area.
- d) However, Judge Preston, in his disallowing of the 2012 Warkworth approval (which this “extension” seeks to encroach upon) stated:

Establishing too high background levels

- 330 The INP addresses the importance of establishing background levels before intrusive noise can be assessed (3.1, p 22). The respondents relied on the selection of 33 dB(A) as the background noise level based on a noise survey taken at six representative monitoring stations as part of the preparation of the 2002 EIS, and results of monitoring in 2008 which suggested that the 2002 data remained representative of background noise (Minister's Notes in relation to Noise Conditions dated 7 September 2012 [B]). The Department was satisfied that this method of establishing background noise levels, and the levels themselves, were "reasonable and consistent with guidance levels provided by Australian Standards and the INP" (Minister's Notes in relation to Noise Conditions dated 7 September 2012 [B], referring to TB vol 2, tab 9, p 810). In his affidavit Mr Parnell stated (at [20]) that in assessing the Project, he had considered that calculation of the RBL to still represent valid background levels. In assessing the noise impact assessment prepared on behalf of Warkworth, Mr Parnell had noted that "[l]evels adopted as background noise levels are generally within 3-4 dB(A) of the minimum accepted RBL of 30 dB(A) recommended in the INP as a basis for calculation of intrusive noise criteria" (Parnell aff, Annexure D, at 2.1).
- 331 However, the evidence establishes that the background noise level for some residences to the north of Bulga village is 30 dB(A) rather than 33 dB(A). The 2002 Noise and Vibration Study undertaken on behalf of Warkworth by ERM (Supp TB vol 4, p 2199), included data from two noise logger locations in Bulga (N6) and to the north of Bulga (N5). Relying on table 2.2 of the ERM 2002 report, residences close to N5 would have a background noise level of 30 dB(A) during the day and night, and 31 dB(A) in the evening. The correlation of Figures 2.1 and 2.2 of the 2002 ERM report with the mapping of residences in Exhibit W20 confirms that a number of residences to the north of Bulga village, being numbers 25, 27, 29, 34 and 42, would be in that locality. If that is correct, and the background is 30 or 31 dB(A), applying the INP would lead to an intrusive noise level for those residences of 35 or 36 dB(A), rather than 38 dB(A).
- 332 This variation in background noise levels in one part of the Bulga area likely to be affected by noise of the Project raises doubts as to the reliability of the adopted background noise levels for other parts of that area. The six monitoring stations used in preparation of the 2002 EIS for the original mine are not distributed over all of the area likely to be affected by the current Project. The residents' evidence is that there are differences in noise levels and the characteristics of the noise at different receivers to those at or near the monitoring stations.
- 333 The consequence of adoption of too high background noise levels is not only to increase the project-specific noise levels (and the still higher noise levels set in the proposed conditions of approval), but also to apply less noise mitigation strategies. The proposed conditions of approval make the undertaking of noise mitigation or acquisition of properties dependent on the noise generated at the Mount Thorley-Warkworth mine complex exceeding specified criteria. Those criteria are based on the adopted background noise levels plus 5 dB(A) for the intrusiveness criterion plus the margins applicable for either mitigation (3-5 dB(A)) or acquisition (>5 dB(A)). Using the example of the residences to the north of Bulga, a adoption of a background noise level of 33 dB(A) for the night period results in a noise mitigation criterion of 41 dB(A), (that is, assigning a right to obtain mitigation measures if the noise generated by the Mount Thorley-Warkworth mine complex is greater than 41 dB(A), being 33 plus 5 plus 3 dB(A)) and a noise acquisition criterion of 43 dB(A) (that is, assigning a right to have the property acquired if noise generated is greater than 43 dB(A), being 33 plus 5 plus 5 dB(A)). However, if a lower background noise level is used, such as 30 dB(A) measured for the night period, the noise mitigation criterion would be 38 dB(A) and the noise acquisition criterion would be 40 dB(A). A lowering of the noise mitigation and acquisition criteria increases the number of properties likely to require mitigation or acquisition.

- e) Our experience of background in our area is somewhat lower than the 30dbA attributed to us by the Dept.
- f) Excerpts from the MTW Barnowl monitor records (below) show that when there is no noise from the mine, the total noise level is around 26dbA, and if the noise limit was set at 5dbA above that (as recommended), it would be 31dbA, not 35 dbA. The leftmost yellowed column is the total measured noise level. The rightmost yellowed column is the noise from the two directions of the Warkworth and Mt Thorley mining operations.

| | A | B | C | D | E | F | G | H | I | J | K |
|----|-----------|------|---|---|---|---|---|---|---|--|-----------------------------------|
| | Date | Time | L _{Aeq} Total - All Pass (dB(A)) | L _{Aeq} Total - <1000Hz Low Pass (dB(A)) | L _{Aeq} Sources Total - All pass (dB(A)) | L _{Aeq} Sources Total - <1000Hz Low Pass | L _{Aeq} MTW Direction - All Pass | L _{Aeq} MTW Direction - <1000Hz Low Pass | L _{Aeq} Other Sources - All Pass | L _{Aeq} Other Sources - <1000Hz Low | Impact Assessme nt Criteria |
| 15 | 5/07/2013 | 4:00 | 27.81 | 25.93 | 25.02 | 21.84 | 13.76 | 2.79 | 24.66 | 21.76 | 35 |
| 16 | 5/07/2013 | 4:15 | 25.93 | 24.01 | 23.21 | 19.53 | 13.63 | 0.00 | 22.69 | 19.52 | 35 |
| 17 | 5/07/2013 | 4:30 | 25.10 | 22.77 | 22.26 | 18.41 | 12.71 | 0.00 | 21.74 | 18.41 | 35 |
| 18 | 5/07/2013 | 4:45 | 24.53 | 22.56 | 21.99 | 18.46 | 9.78 | 0.00 | 21.72 | 18.46 | 35 |
| 19 | 5/07/2013 | 5:00 | 23.77 | 21.86 | 21.36 | 18.46 | 7.24 | 0.00 | 21.19 | 18.45 | 35 |
| 20 | 5/07/2013 | 5:15 | 27.18 | 23.71 | 25.25 | 19.61 | 11.59 | 8.44 | 25.06 | 19.27 | 35 |
| 21 | 5/07/2013 | 5:30 | 24.21 | 21.77 | 21.93 | 17.43 | 14.94 | 13.01 | 20.90 | 15.30 | 35 |
| 22 | 5/07/2013 | 5:45 | 26.56 | 23.01 | 24.71 | 17.81 | 10.34 | 0.00 | 24.54 | 17.75 | 35 |
| 23 | 5/07/2013 | 6:00 | 26.33 | 24.76 | 22.46 | 18.85 | 12.17 | 6.66 | 22.02 | 18.58 | 35 |
| 24 | 5/07/2013 | 6:15 | 28.14 | 24.89 | 25.90 | 19.28 | 13.63 | 0.00 | 25.61 | 19.26 | 35 |

10.3 Development Consent Conditions

- a) The maximum noise levels have been set higher than recommended in the INP. This favours the mine and disadvantages the residents of Bulga

6.3 Development consent conditions

The existing development consent contains noise impact assessment conditions designed to control the noise produced by the mine and provides acceptable standards and levels of protection from noise for the community. Schedule 4, Condition 28 of the development consent prescribes that operational noise from Warkworth Mine is not to exceed the criteria in Table 11 at any privately-owned land, as reproduced below in Table 6.1. The criteria are based on the INP's intrusiveness criteria.

- b) However, Judge Preston, in his disallowing of the 2012 Warkworth approval (which this "extension" seeks to encroach upon) stated:

Indeed, the reality is that the Project cannot achieve, by controlling noise at the source or the transmission of noise, the project-specific noise levels that would be derived by application of the INP. The noise limits proposed in the conditions have therefore been increased beyond what would be the project-specific noise levels to match the predicted noise levels of the Project.

- c) And

337 The approach adopted by the Department of Planning and Warkworth in setting the noise limits in the approval conditions is not consistent with the approach recommended by the INP. There should be first a correct identification of the project-specific noise levels, derived from application of the INP. In the case of the Project, these would be lower at many locations than the noise limits proposed in the approval conditions. Next, the predicted noise levels, after applying all feasible and reasonable mitigation strategies, should be calculated. Then there should be an assessment that quantifies the remaining or residual noise impacts of the Project that exceed the project-specified noise levels, after applying feasible and responsible mitigation strategies.

- d) And

339 Whilst some of these factors were taken into account by the Department and Warkworth, all of the factors were not taken into account in setting the noise limits in the approval conditions. There has been no evaluation of the acceptability of setting those noise limits for the Project above the project-specific noise levels recommended by the INP. The twin reasons given, that setting higher limits accords with the departmental practice since 1994 and with what is able to be achieved by the Project, are not cogent reasons for departing from project-specific noise levels recommended by the INP.

340 In my view, consideration of the factors suggested in the INP for evaluating the acceptability of the residual impacts supports a conclusion that setting the noise limits above the project-specific levels recommended by the INP is unacceptable.

Table 6.1 Table 11: Noise impact assessment criteria

| Day/evening/night $L_{Aeq}(15 \text{ minute})$ | Land number |
|--|---|
| 35 | <p>125 – Clemson D</p> <p>All other residential or sensitive receptors, excluding the following:</p> <ul style="list-style-type: none"> • 6 – Klasen J and R • 10 – Russell P and C • 34 – O'Hara R and J • 36 – Heuston P/L • 46 – Berry GE and EA • 127 and 128 – Stuart D, B and P; and • 129 – Kime V. |

Notes: (a) Noise from the development is to be measured at the most affected point on or within the residential boundary, or at the most affected point within 30 m of a dwelling (rural situations) where the dwelling is more than 30 m from the boundary, to determine compliance with the $L_{Aeq}(15 \text{ minute})$ noise limits in the above table. If it can be demonstrated that direct measurement of noise from the development is impractical, the EPA may accept alternative means of determining compliance (see Chapter 11 of the INP). The modification factors in Section 4 of the INP shall also be applied to the measured noise levels where applicable.

- e) The proponents (Warkworth Mining) would have us believe that they do everything in compliance with the INP. But that is simply not true. A major concern of the residents of Bulga is the low frequency noise that is received from the mining operations. Judge Preston, in his disallowing of the 2012 Warkworth approval (which this “extension” seeks to encroach upon) stated:

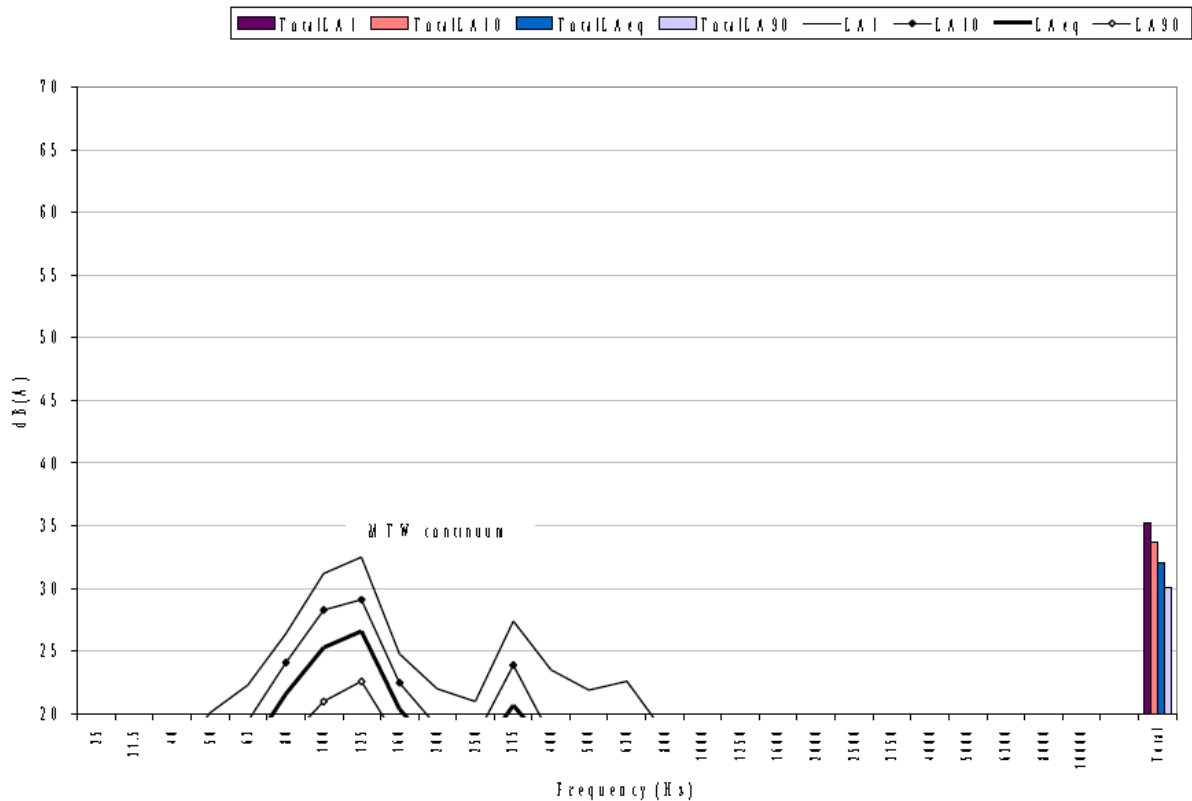
Insufficient accounting for annoying noise characteristics

362 The INP requires modifying factor corrections to be applied to the noise from the source measured or predicted at the receiver before comparison with the noise criteria (see Section 4 of INP). The particular modifying factor affecting noise from the Project is the low frequency content. The SKM report (Ishac report, Appendix C) concluded that two of the eight locations monitored (345 Wambo Road and 339 Inlet Road) were significantly impacted by low frequency noise, as over 30% of results exceeded the INP criteria; and a further two (129 Wambo Road and 5a Noses Peak Road) were moderately affected by low frequency noise (6.3.2, p 33).

363 The noise criteria in the proposed conditions of approval have not been set having regard to, and do not refer to, low frequency noise. Low frequency noise is taken into account in evaluating compliance with the noise criteria in the conditions of approval. Conditions 3 and 4 of Sch 3 provide that Appendix 12 sets out “the requirements for evaluating compliance with these criteria” specified in these conditions. Paragraph 4 of Appendix 12 requires compliance monitoring to be carried out in accordance with the relevant requirements for reviewing performance set out in the INP (in Section 11) relating to, amongst other matters, “modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration”. One of the penalties for modifying factors would be to apply a correction of 5 dB to the source noise level at the receiver if the difference between the C-weighted and A-weighted levels over the same period is 15 dB or more (INP, Table 4.1, p 29). Making this correction may result in the corrected source noise level at the receiver exceeding the noise criteria in the proposed conditions of approval for that receiver.

- f) That the noise from the mine is low frequency is indisputable. Following graph from a Global Acoustics study, shows that ALL the noise at night is low frequency and it ALL comes from the mine :

Environmental Noise Levels At Leslie Residence
20 Aug 2013, 2255 hours



- g) Whilst the Warkworth Consent Conditions clearly state that the modification factors in Section 4 of the INP **SHALL** also be applied.... The proponent with the assistance and consent of the Dept, refuses to do it..ie measure dBc and apply the 5db penalty where applicable.
- h) Yet, in a **sworn affidavit** to the Land and Environment Court, Mr Jeff Parnell, the Dept's acoustic expert, stated :

52 It is my understanding that the EPA has engaged Dr Broner to undertake further studies as part of a commitment to revise the LFN component of the INP to a contemporary standard. In the interim, the Department will, in accordance with the INP assess the need to apply a LFN penalty when assessing complaints, with regard to;

- noise from all sources, individually and in combination, that contribute to the total noise at a site; and
- the nature of the noise source and its characteristics,

AFFIRMED at 23-33 Bridge Street, Sydney NSW 2000

Signature of deponent

Name of witness Kirsty Thomas

Address of witness 23-33 Bridge Street, Sydney NSW 2000

Capacity of witness Solicitor

And as a witness, I certify the following matters concerning the person who made this affidavit (the deponent):

- 1 I saw the face of the deponent.
- 2 I have confirmed the deponent's identity using the following identification document:

Drivers Licence

Identification document relied on (may be original or certified copy)

Signature of witness

Thomas

- i) i.e...he SWORE in court that the Dept would do it, but they do not. Representatives of the proponent tell us that "until the Dept tells us to do it, we're not going to."

10.4 Compliance with Current Noise Limits

6.4 Existing acoustic management

6.4.1 Overview of noise management plan

There are a number of existing acoustic management and monitoring procedures which are managing the existing operations to ensure compliance with the conditions of the development consent. The audits of the site have demonstrated a level of predominant compliance. Given the successful use of these existing acoustic management and monitoring procedures to date it is expected that they can manage any noise impacts associated with this modification to ensure compliance with the existing noise limits in the development consent.

- a) In our view "predominant compliance" is not sufficient. The Consent Conditions state that "the proponent SHALL ENSURE that the noise levels at any residence do not exceed....." There is no room for variance here. Furthermore, the proponent is in direct breach of the Consent Conditions with regard to the low frequency modification as discussed above.

i **Trigger Action Response Process (TARP)**

MTW manage noise using a TARP. Triggers are enacted following measurement of elevated noise from a range of sources including:

- **real-time directional noise monitors via real-time alarm;**
- supplementary surveillance noise monitoring, by a team of trained operational personnel monitor the operations external impact, respond to calls received on the 24 hour free call complaints hotline and advise mining operations. This proactive and reactive monitoring of the operation allows for a reduced response time to community concerns and an 'eye' for the mining management outside the fence line; and
- routine compliance attended noise monitoring undertaken by experienced and independent experts.

When a trigger is enacted to warn operational personnel of noise levels that are approaching criteria or being exceeded an appropriate response is implemented by MTW. This may include substitution or elimination measures to reduce noise emissions to where the trigger was enacted.

- b) This all sounds fine, however, the trigger level at one property at least is at the "SHALL not exceed level" :

From: ☐ Speechly, Andrew (RTCA) <Andrew.Speechly@riotinto.com> Sent: Fri 12/07/2013 4:45
To: ☒ Judith Leslie
Cc: ☐ Scott Brooks; ☐ Turner, Andrew (RTCA); ☐ Gleeson, Gerard (RTCA)
Subject: RE: Noise Management follow-up

From: Gleeson, Gerard (RTCA) [<mailto:Gerard.Gleeson@riotinto.com>]
Sent: Friday, 5 July 2013 3:35 PM
To: Judith Leslie
Cc: Speechly, Andrew (RTCA); Turner, Andrew (RTCA)
Subject: Noise Management follow-up
Importance: High

Hi Alan,

Following up with responses to recent questions regarding noise management at your residence, particularly regarding the real time noise monitor.

- Implementation of noise alarms (triggers) for the unit on your property
 - A noise alert, set at 35dB has been implemented for your property. The alert will trigger response through our Community Response Officers in the first instance, who will validate the noise alarm through handheld assessment. Operational changes will be implemented if required to reduce noise accordingly.
- Access to the data for our Community Response Officers
 - MTW's Community Response Officers have access to this information and can provide you with the noise readings upon request. I will continue to forward you through data on a weekly basis as is the current practice.

Best regards

Gerard Gleeson

Environmental Specialist - Systems and Monitoring

Hunter Valley Services
Coal & Allied - Rio Tinto Coal Australia

- c) The noise limit in the Consent Conditions is 35dba. So, this “TARP” only alarms at 35, ie too late. It is not possible for the proponent to comply with the Consent Conditions, if the alarms are only triggered when the limit is exceeded.

Figure 6.3 shows the trending noise levels at the monitoring location at Inlet Road West. The figure (and subsequent figures in this section) shows that the noise measurement presented is a noise level for frequencies less than 1,000 Hz assigned to the direction of MTW. This was measured during the most recently completed 15 minute block as a subset of the total noise. It should be noted there are a number of noise sources in the acoustic environment that are frequently detected through the real-time system, including animals, farming activities and road traffic. The real-time system is therefore used as a management tool only, rather than an accurate measure of compliance with consent conditions.

- d) There are two issues here.
- e) Whilst the proponent goes to great lengths to state how wonderful these directional monitors are, how they can pinpoint where the noise is coming from etc, the actual practice is quite different. ref the follwing excerpts from an email from the local DoPI Compliance officer :

The use of Community Response Officers (CRO's):

The Barnowl was installed at your property to be used for management purposes. I have observed a number of instances where the Barnowl results are not entirely consistent with my infield observations or the observations of others. **Whilst Barnowls are widely used, it is recognised by the industry that they do have limitations.** The close difference in angle from the Warkworth mine to the Mt Thorley mine is one potential problem. They also have trouble splitting major non-mine noise sources from mine noise sources.

being done with real people, with training, who can assess the source. Having been on site a number of times, assessing the source is not easy, but now needs to be done to determine the total noise level for action to occur. Further on the nights of correlation testing **the Barnowl indicated noise to be predominantly coming from Warkworth, when our universal observations indicated that Mount Thorley was the dominant noise source.** Therefore I believe noise is better managed by the CRO's once the Barnowls indicate further assessment is required.

I hope this provides some clarity to your concerns.

- f) The statement that other noise sources, animals, farming activities and road traffic cause measurement difficulties would be true if we lived in an environment where there was a lot of this activity, but frankly there isn't; especially in the middle of the night when noise from the mine is the predominant if not the only source of noise in the area.

Table 6.3 Supplementary attended noise monitoring data – 1 July 2013 to 30 September 2013

| Month | No of measurements | No. of measurements > trigger | No. of nights where measurements > trigger | % greater than trigger |
|----------------|--------------------|-------------------------------|--|------------------------|
| July 2013 | 341 | 14 | 6 | 4.1 |
| August 2013 | 306 | 25 | 11 | 8.2 |
| September 2013 | 312 | 29 | 10 | 9.3 |
| Total | 932 | 68 | 27 | 7.29 |

- g) This table purports to demonstrate that all is satisfactory. But it isn't. The percentage of measurements greater than trigger may be low 7.29%. **BUT The number of nights when the trigger was exceeded is 27 out of 92.....that's 29% !!!**

- h) When trigger levels are exceeded, we know from years of listening to the noise produced by the mine, we are woken from sleep. To say that 29% of nights exceed the trigger level and that is acceptable is ridiculous.
- i) Judge Preston, in his disallowing of the 2012 Warkworth approval (which this “extension” seeks to encroach upon) stated:

275 Even if it can be accepted that the mines are operating within the noise limits required under the existing consents or proposed under the new conditions, I am satisfied, based on the evidence of the residents which was supported by the available monitoring data, that the noise levels of the present operations of the mine are at a level sufficient to impact on amenity, including sleep disruption.

Figure 6.7 Noise rose – Bulga BarnOwl monitor (21:15 18 July 2013)

Night shift 16 August 2013

Supplementary monitoring undertaken during the night shift on 16 August 2013 detected elevated noise at the ‘Wambo Road’ monitoring location (Figure 6.8). Real-time monitoring data supported the observations of the operator conducting the supplementary assessments. Operational modifications were promptly introduced, with follow-up verification monitoring undertaken to validate and verify the effectiveness of the controls.

Meteorological conditions on the night assisted noise propagation toward the Bulga village area (calm winds of less than 2 m/sec) and blowing from the south-east). A summary of the actions implemented are presented in Table 6.5.

- j) Mount Thorley operations is to the East of Bulga, Warkworth is to the North East. It is not logical that a wind blowing from the South East would assist noise propagation from the mining operations.
- k) The wind would surely have to be blowing from the East or North East to have that effect.

6.7 Compliance history

Compliance assessment monitoring for the Warkworth Mine has been undertaken in a number of forms during the period 2004 to 2013 including:

- routine compliance assessment (Global Acoustics) – 2004 to present and in more recent years, monitoring has included low frequency noise assessment;
 - Long Point supplementary monitoring program (EMM) – June to October 2011); and
 - independent review of noise impacts – Bulga (Sinclair Knight Merz) – December 2011 and January 2012).
- l) It was not until 2012 and on the insistence of local residents that “compliance” monitoring has included low frequency noise assessment. For 8 years they never included it and the Dept never commented. But whilst they apparently “assess” the low frequency noise, the compliance officers do not incorporate the low frequency modification factor into their measurements. From that point of view they are non-

compliant; the Consent Conditions are quite clear as detailed earlier, concerning the Section 4 modification factors

- m) Judge Preston, in his disallowing of the 2012 Warkworth approval (which this “extension” seeks to encroach upon) stated:

Insufficient accounting for annoying noise characteristics

362 The INP requires modifying factor corrections to be applied to the noise from the source measured or predicted at the receiver before comparison with the noise criteria (see Section 4 of INP). The particular modifying factor affecting noise from the Project is the low frequency content. The SKM report (Isaac report, Appendix C) concluded that two of the eight locations monitored (345 Wambo Road and 339 Inlet Road) were significantly impacted by low frequency noise, as over 30% of results exceeded the INP criteria; and a further two (129 Wambo Road and 5a Noses Peak Road) were moderately affected by low frequency noise (6.3.2, p 33).

363 The noise criteria in the proposed conditions of approval have not been set having regard to, and do not refer to, low frequency noise. Low frequency noise is taken into account in evaluating compliance with the noise criteria in the conditions of approval. Conditions 3 and 4 of Sch 3 provide that Appendix 12 sets out “the requirements for evaluating compliance with these criteria” specified in these conditions. Paragraph 4 of Appendix 12 requires compliance monitoring to be carried out in accordance with the relevant requirements for reviewing performance set out in the INP (in Section 11) relating to, amongst other matters, “modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration”. One of the penalties for modifying factors would be to apply a correction of 5 dB to the source noise level at the receiver if the difference between the C-weighted and A-weighted levels over the same period is 15 dB or more (INP, Table 4.1, p 29). Making this correction may result in the corrected source noise level at the receiver exceeding the noise criteria in the proposed conditions of approval for that receiver.

- n) Whilst the Warkworth Consent Conditions clearly state that the modification factors in Section 4 of the INP **SHALL** also be applied.... The proponent with the assistance and consent of the Dept, refuses to do it..ie measure dB_C and apply the 5db penalty where applicable.

An assessment of monitoring data (publically available via the Rio Tinto Coal Australia website www.riotintocoalaustralia.com.au) demonstrates that a high level of compliance with noise criteria has been achieved throughout the life of the mine. Non-compliant noise measurements account for only 0.39% of the monitoring dataset (10 non-compliances measured from 2,540 individual assessments undertaken). These are shown in Figure 6.11 and tables 6.7 and 6.8. These tables also demonstrate that there are no sustained exceedances.

- o) They cannot say this truthfully when they do not follow the Consent Conditions with regards to noise measurements i.e. the modification factors of Section 4.

- p) And again:

When considering the impact of the Warkworth Mine on the area of Bulga village, the level of non-compliant measurements is also relatively low and accounts for 0.12% of the monitoring dataset (two non-compliances measured from 1,621 individual assessments undertaken). This is shown in tables 6.9 and 6.10. These tables also demonstrate that there are no sustained exceedances from Warkworth Mine.

- q) Because they don’t measure the noise in accordance with the Consent Conditions, they cannot say this truthfully.
- r) Judge Preston, in his disallowing of the 2012 Warkworth approval (which this “extension” seeks to encroach upon) stated:

366 The evidence of attended monitoring in the past is insufficient to allow the Court to draw any inference that attended monitoring in the future is likely to evaluate adequately compliance with the noise criteria. Past attended monitoring has been at too few locations on too few occasions.

Source to receiver distance – the proposed extension and infrastructure areas are westward towards receivers in Bulga village and hence if there is to be any noise implications they would relate to these receivers. To that end, current operations are approximately 4.65 km from Bulga village (eg residence 58 near the centre of the village). Progressing West Pit westward for the proposed modification, includes approximately 10 to 12% of plant items potentially working within the proposed extension area. This translates to approximately a 0.1 dB possible increase in noise from operations within the proposed extension area, based entirely on the change in distance between source and receptor. This possible 0.1 dB increase would include any, although unexpected, low frequency noise associated with the proposed modification. In mining, the operation of CPP's are generally associated with low frequency noise emissions and no change to the CPP is sought as part of this modification.

- s) We assume that CPP means "Coal Processing Plant", but this not defined anywhere in the document.
- t) "any, although unexpected, low frequency noise...." The SKM report showed that some properties were seriously affected by low frequency noise already.
- u) Judge Preston, in his disallowing of the 2012 Warkworth approval (which this "extension" seeks to encroach upon) stated:

Insufficient accounting for annoying noise characteristics

362 The INP requires modifying factor corrections to be applied to the noise from the source measured or predicted at the receiver before comparison with the noise criteria (see Section 4 of INP). The particular modifying factor affecting noise from the Project is the low frequency content. The SKM report (Shac report, Appendix C) concluded that two of the eight locations monitored (345 Wambo Road and 339 Inlet Road) were significantly impacted by low frequency noise, as over 30% of results exceeded the INP criteria; and a further two (129 Wambo Road and 5a Noses Peak Road) were moderately affected by low frequency noise (B.3.2, p 33).

363 The noise criteria in the proposed conditions of approval have not been set having regard to, and do not refer to, low frequency noise. Low frequency noise is taken into account in evaluating compliance with the noise criteria in the conditions of approval. Conditions 3 and 4 of Sch 3 provide that Appendix 12 sets out "the requirements for evaluating compliance with these criteria" specified in these conditions. Paragraph 4 of Appendix 12 requires compliance monitoring to be carried out in accordance with the relevant requirements for reviewing performance set out in the INP (in Section 11) relating to, amongst other matters, "modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration". One of the penalties for modifying factors would be to apply a correction of 5 dB to the source noise level at the receiver if the difference between the C-weighted and A-weighted levels over the same period is 15 dB or more (INP, Table 4.1, p 29). Making this correction may result in the corrected source noise level at the receiver exceeding the noise criteria in the proposed conditions of approval for that receiver.

In summary, given the above it is considered that any possible changes to current mining noise levels experienced at residences due to the proposed modification would be marginal and imperceptible. Given this the proponent is not requesting any increase in the noise limits in the development consent. However it is important to confirm that existing operations are in compliance and that these systems will continue to operate and ensure compliance with the development the subject of the modification.

Hence, the most accurate way to assess potential noise impacts is to review compliance monitoring data for the most current operations. This was done by reviewing MTW's 2012 Annual Environmental Monitoring Report (AEMR) and more recent available compliance monitoring data. The findings of this review include the following:

- v) But for the reasons outlined above, the compliance monitoring data is data produced from a non-compliant method of measuring. So, it offers no assurance at all that either the current operations or the proposed extension are in any way compliant with the Consent Conditions.
- w) Judge Preston, in his disallowing of the 2012 Warkworth approval (which this “extension” seeks to encroach upon) stated:

275 Even if it can be accepted that the mines are operating within the noise limits required under the existing consents or proposed under the new conditions, I am satisfied, based on the evidence of the residents which was supported by the available monitoring data, that the noise levels of the present operations of the mine are at a level sufficient to impact on amenity, including sleep disruption.

The historic compliance monitoring data demonstrates Warkworth’s noise management system is operating effectively to existing noise levels prescribed in the development consent. It is expected therefore that the proposed modification would not result in non-compliances for the potentially most affected receivers of Bulga village.

- x) However, Judge Preston, in his disallowing of the 2012 Warkworth approval (which this “extension” seeks to encroach upon) stated:

386 The evidence of attended monitoring in the past is insufficient to allow the Court to draw any inference that attended monitoring in the future is likely to evaluate adequately compliance with the noise criteria. Past attended monitoring has been at too few locations on too few occasions.

- y) The Mine cannot and does not comply now such that the community cannot accept the any proposed conditions will protect them from noise

11. BLASTING AND VIBRATION

11.1 Vibration

- a) Vibration is felt in varying degrees throughout Bulga during blasting and will increase if the mine is allowed to advance closer to the village. At various times damage has been caused to residential structures in Bulga. As the open cut process gets closer we anticipate the damage and discomfort will substantially increase. Evidence is available of serious damage to buildings in the Mt. Thorley industrial area and we believe there will be a similar pattern of damage in Bulga.
- b) Whilst the ground vibration levels are allegedly within acceptable limits, the EA does not take into account the Bulga Mountain to the West which may provoke an ‘energy eruption’ at ground level affecting and damaging nearby buildings. This is the view of residents who live near the Mountain and the escarpment.

11.2 Blast fumes

- a) At the public forum (Singleton, November 2008) there were complaints about the orange fumes which fill the air after blasting. A CSIRO study (Attalla, Day, Lange, Lilley and Morgan, 2007) notes that “Although NO_x (nitrogen oxides) from blasting for open cut mining may contribute only a small proportion of total NO_x emissions, the rapid release and high concentrations that may be associated with such activities may pose a health risk should the resulting plume not dissipate rapidly and subsequently drift on to the populations in the surrounding environs”.

- b) Below is a view of blast fumes at Mount Thorley Mine taken from a residence in Wollemi Peak Road in Bulga.



12. SURFACE AND GROUNDWATER

2.1 Generally

- a) There is competition for water in the Wollombi Brook as sufficient water is required for use by users downstream and for general environmental flows to ensure river health. The Wollombi Brook is a stressed river fully allocated in the relevant Water Sharing Plan. Recent drought conditions revealed how precious this water is. There have been unexplained reductions in flow in the Wollombi Brook so we as an Association reject any proposal which potentially could increase the levels of stress to the vital water course.
- b) Because open cut mining has been shown to have major impacts on streams, alluvial aquifers and alluvial soils we suggest the only solution is that all impacts to watercourses or groundwater systems should be avoided. Mining which removes alluvium to reach coal beneath has an obvious impact on an alluvial aquifer, requiring it to be dewatered during mining, and with very little probability of successful restoration afterwards.
- c) Mining puts pressure on natural surface and ground water systems. It can impact on the quality of these water sources. Salt occurs naturally in many of the rocks and soils of the Hunter Valley. Some of this salt is leached into groundwater and nearby rivers. During coal mining, salty water collects in mine pits, and has to be pumped out to allow mining to continue. What to do with this saline water is a major management problem for many coal mines. In addition natural water distribution systems are critical to ecosystem survival.

12.2 Cumulative Impacts

- a) We take the view that the cumulative impacts that the proposed extension could have on the surface and groundwater regimes have been inadequately dealt with. Reliance on EISs for data is unreliable, unscientific and fundamentally flawed.

- b) When mining impacts from individual operations are considered in isolation the catchment wide impacts can easily appear inconsequential. However, if the impacts of mining across numerous operations in the same catchment are viewed collectively the cumulative impact of mining and mine expansion on downstream water users and the environment may be much more substantial and potentially prohibitive.

12.3 The Final Void

- a) Over a period of three hundred years, the final void will ultimately be filled with highly saline water and will have no practical, visual or environmental values.
- b) There is an inadequate understanding of the connectivity between the Wollombi Brook and the adjacent hard rock aquifers to determine the behaviour of the final void post mining. This is crucial to the protection of the water regimes and needs further assessment. Design criteria and specifications for the final void must be based on verified data not predictions.
- c) It is unconvincing and not proven that the water from the final void will not drain back into the Wollombi Brook alluviums. There is no convincing evidence in this EA that there will no hydraulic gradient from the Wollombi Brook and the alluvial aquifers towards the mine void thereby placing ongoing demands on an alluvial aquifer resource. If the groundwater equilibrium is reached, though we are unconvinced that it will be, it could take many more decades than predicted. As the void water level rises its evaporative surface areas will increase concentrating the salts that are held in solutions. We argue the long term water quality implications for these final voids and their impact on the surrounding hydrology dependent ecosystems and water users is too uncertain.
- d) A serious concern is the potential for super-saline void water to exit through the high wall and/or end wall of the mine pit once the groundwater rises to its new equilibrium. Further without any confining layers to maintain the groundwater at depth there is a concern that high groundwater pressure levels (driven by recharge from surface runoff) may result in final void water levels above those existing pre-mining, thus potentially leading to a breach of the void walls (overtopping) and consequent discharges of super-saline water. This is a totally unacceptable risk.
- e) It is unclear how the final lake will be managed well into the future or who will take moral, legal and financial responsibility for it well past the cessation of mining.

13. ECOLOGY

13.1 Woodland EECs

- a) The proposed mining extension intends to destroy part of this endangered ecology. For an ecology with such a limited extent this is pure environmental vandalism. The proposed offset for this does not even approach "like for like". So there is no such thing as a "like for like" offset for this area.
- b) We reject mine rehabilitation or revegetation as an offset for the loss of high conservation status, Endangered Ecological Communities. Mines are required to rehabilitate their disturbed landscapes whether there is an offset required or not. Rehabilitation work cannot ensure that the area of native vegetation established is

consistent with the pre-mining extent of native vegetation nor that it will be of the same ecological diversity. Past experiences on mine sites indicates it will not. In addition mine rehabilitation is slow and cannot offer the habitat replacement required to protect the endangered and vulnerable species before the threatening processes of mine activity takes its toll. Mine rehabilitation creates landscapes that are artificial and environmentally unacceptable. Rehabilitation areas are degraded areas with poor and shallow soil cover, little nutrients and generally weed infested.

13.2 The Endangered EECs

- a) CHGBIW is not only of value as an endangered ecological community, but also provides habitat for an endangered population of the orchid *Cymbidium canaliculatum*, the vulnerable species of orchid *Diuris tricolor* and the tree *Eucalyptus glaucina*, and the endangered species of orchid *Pterostylis gibbosa* (Scientific Committee's Final Determination, [7]). *Diuris tricolor* has been recorded in the Warkworth area (Umwelt (2011), p 32).
- b) The Scientific Committee finds that the current CHGBIW is subject to ongoing threats, including continual clearing related to opencut coal mining and rural subdivision, and weed invasion (NSW Scientific Committee's Final Determination, [10]). These threats are real as an area of 2.3ha of CHGBIW will be cleared and coal mined for the Project.
- c) CHGBIW has very poor reservation status, not occurring in conservation reserves (except for possibly very small areas in Wollemi National Park) (Peake (2006), p 64).
- d) CHISGGBF is not only of value as an endangered ecological community but also provides habitat for the endangered population of orchid *Cymbidium canaliculatum*, the vulnerable species of orchid *Diuris tricolor*, and the tree *Eucalyptus glaucina*, the endangered species *Lepidium hyssopifolium*, and the critically endangered species *Persoonia pauciflora* (Scientific Committee's Final Determination, [7]).
- e) The Scientific Committee found CHISGGBF is subject to ongoing threats including continual clearing related to open cut coal mining and rural subdivision, and weed invasion (at [11]). An area of 13.3ha of CHISGGBF will be cleared and coal mined for the Project. CHISGGBF has very poor reservation status, with only an area of 1.6% of the total extant community conserved in Belford National Park (Peake (2006), p 160).

13.2 Clause 139 of the L&E Decision states

- a) "Under the 2003 development consent, Warkworth was required to "permanently protect for conservation and exclude open cut mining" in the non-disturbance areas, including NDA 1. The Project involves clearing and open cut mining of around half of NDA 1. Most of the vegetation in NDA 1 which would be lost is CHGBIW EEC. CHGBIW was listed as an EEC in 2010, after the 2003 development consent was granted. Nevertheless, the 2003 development consent required the permanent conservation of the vegetation in NDA 1, which by the subsequent listing, became CHGBIW EEC. The consequence of the Project would be that a sizeable remnant of CHGBIW EEC, which by being in NDA 1 was to be conserved in perpetuity, would be lost. Currently CHGBIW has very poor reservation status, not occurring in conservation reserves (Peake (2006), p 64). The intended permanent conservation of the CHGBIW in NDA 1 was therefore of

importance. The loss of this rare example of an intended to be permanently conserved remnant of CHGBIW is significant.

- b) In the case of the Project, Warkworth has proposed no avoidance measures and little mitigation measures to reduce the scale and intensity of the significant impacts on biological diversity particularly on the affected EEC. As a consequence, the significant impacts identified in the preceding section remain essentially unabated. Rather, Warkworth has proposed an offsets package in order to compensate for the significant residual impacts of the Project."

13.3 Clause 205 of the Land and Environment Court decision states

- a) "The consequence of the non-inclusion of the EECs impacted by the Project is that these five biodiversity areas do not offset (compensate for) the impacts of the Project on these EECs. Contrary to Dr Robertson's suggestion, the existence of Ironbark forest or woodland vegetation communities in these remote biodiversity areas does not compensate for the loss of the specific EECs in the disturbance area. The ecological communities are not the same in the disturbance area compared to the remote biodiversity areas and hence there is not like for like offsetting (see principle 10 of the Principles for the Use of Biodiversity Offsets in NSW: TB vol 7, p 4118 and Bell Report pp 6265,67). It is not appropriate to trade offsets across different ecological communities. Where a project impacts on a specific ecological community, any offset must relate to that same ecological community which is impacted. The consequence is that the majority of the biodiversity areas proposed in Warkworth's offset package as direct offsets do not achieve the fundamental objective of improving or maintaining the viability of the EECs impacted by the Project."
- b) We therefore urge you to reject this mining extension on environmental grounds. The proposed offsets are not like for like.

14. FAUNA

14.1 Impact on Endangered and Vulnerable Fauna

- a) The BMPA argues that this development is likely to have an adverse effect directly and indirectly on a number of threatened and vulnerable species under both the TSC Act and EPBC Act, so that the viable local populations are likely to be placed at significant risk of extinction. Woodland bird species are in serious decline in NSW and the Hunter Region evidenced by the number of species on the TSC list.
- b) Removal or modification of habitat and other mining disturbances caused by noise and lighting have not been adequately assessed by the proponent in his EA.
- c) For each species or population likely to be affected, the proponent failed to provide details of its local, regional and State-wide conservation status, the key threatening processes generally affecting it, its habitat requirements and any recovery plan or threat abatement plan applying to it.
- d) We argue that the proposal is not consistent with the goals and findings of the Recovery Plans for the Green and Golden Bell Frog, the Grey-Headed Flying-Fox, the Regent Honeyeater and the Swift Parrot.

- e) Conserving habitat for the Swift Parrot, and other wide-ranging fauna species, is challenging since impacts in one area tend to be dismissed based on the assumption that there is sufficient habitat in other areas. We dispute this applies to all species identified.
- f) Although the Swift Parrot has not been recorded in this area since 2002, dispersive species can be difficult to detect because surveys are required to cover large areas at times and locations which may be highly variable. Where dispersive species occur in small groups, their detectability is further reduced if the population size is small and they occur across a broad landscape. For example, the ability to detect Swift Parrots in an area is constrained by their small population size and the large geographic area they occupy. Recent studies (Dr Debra Saunders ANU) have found that the Swift Parrot is known to use the same locations throughout their winter range repeatedly.
- g) We seek the application of the precautionary principle which requires that a lack of scientific certainty about the potential impacts of an action does not itself justify a decision that the action is not likely to have a significant impact. If information is not available to conclusively determine that there will not be a significant impact on a threatened species or its habitat, then it should be assumed that a significant impact is likely.

14.2 The Extension Area

- a) The proposed mine extension area is an important area of vegetation for wildlife migration between large areas of foraging and breeding habitats. It has regional corridor significance. The potential loss of the Upper Hunter foraging sites beyond what is already experienced will result in a significant impact on the populations as they are so close to extinction already. For example it is estimated that there are fewer than 250 Regent Honeyeaters in NSW and fewer than 1000 Swift Parrots Australia wide. Further clearing might result in the long-term decrease in the size of important and tenuous populations. The rate of decline and the pressures on the populations are so enormous that protecting their habitat and preserving its quality in the Hunter is a necessary measure for long term survival.
- b) The primary fauna habitats located within the study area are;
 - Open forest communities (Central Hunter Ironbark - Spotted Gum - Grey Box Forest)
 - Woodland communities (Warkworth Sands Woodland Central Hunter Grey Box - Ironbark Woodland)
 - Derived native grassland, and
 - Riparian vegetation around the dam
- c) The woodland formations identified in the project area provide habitat for a variety of fauna species, particularly birds. Clearing of the vegetation in the mine extension area will have a detrimental impact on these birds' foraging and nesting ability.
- d) Identified endangered and vulnerable bird species occur in eucalypt woodlands including Box-Gum Woodland usually with an open grassy under storey with one or more shrub species or with an open under storey of acacias, typical of the extension area. This is the habitat for the Speckled Warbler, Grey-Crowned Babbler and Brown Treecreeper.

- e) An abundance of mistletoe provides resources for specialist species such as the nomadic Regent Honeyeater.
- f) Winter-flowering canopy trees are moderately widespread and provide important resources for winter migrants such as the Swift Parrot. Both the Swift Parrot and Regent Honeyeater are protected under the EPBC legislation while international treaties (CAMBA & JAMBA) have been formed for their protection. No reference has been made to these treaties and Australia's obligations under them.
- g) The diversity of flowering canopy trees attracts large numbers of insects which provide foraging habitat for a diversity of threatened micro-bats.
- h) Many of the under storey species are valuable flowering resources utilized by a diversity of nectarivorous bird species.
- i) She-oaks provide foraging habitat for cockatoos and parrots, including the threatened Glossy Black-Cockatoo.
- j) Large amounts of terrestrial habitat (leaf litter, rocky areas, low vegetation and fallen timber) provide protection, foraging resources and breeding options for small terrestrial mammals including the Spotted-Tail Quoll.
- k) The moderately dense shrub and canopy layers provide excellent habitat for arboreal mammals, such as possums and gliders.
- l) This is compelling evidence for the conservation of this area and for refusal of the development application.
- m) The extent of habitat clearance has resulted in several Swift Parrot habitats being listed under state, territory and commonwealth legislation as endangered ecological communities. This includes Grassy White Box Woodlands, Lower Hunter Spotted Gum Ironbark Forest, Grey Box and Yellow Box Ironbark. These habitats have been reduced to between 6% and 30% of their former distribution (NSW Scientific Committee). The Non Disturbance Area (NDA) consists of significant patches of these communities. Clearing of extant endangered woodland for mining cannot be approved.
- n) The Regent Honeyeater is under similar level of threat. They also depend on Box-Ironbark Open Forests. The Regent Honeyeater has fallen to a critically low level perhaps fewer than 1000 birds. Stands of box woodland growing on sites where nectar production is plentiful and predictable are critical to the survival of the Regent Honeyeater. Very little of the box-ironbark ecosystem currently occurs in conservation reserves. Of this habitat, only a small amount is suitable for these species at any given time. Flowering of Box-Ironbark Eucalyptus is greatly variable from year to year, with a stand of eucalyptus rarely producing a large amount of nectar in two successive years. Destruction of large areas of remnant woodland has a very serious potential to lead to a long-term decrease in the size of this important species population.

14.3 Endangered and Vulnerable Fauna

- a) The BMPA argues that this development should be rejected because of the large number of species, populations and EECs adversely affected.

- b) The following threatened and vulnerable species of birds and mammals were recorded across the study area. The list does not include those endangered or vulnerable birds and mammals which were considered likely to inhabit the area though not detected in surveys. It does not include the numerous examples which have regularly been sighted there but which are not listed under either legislation.
- Squirrel Glider (Vulnerable under the TSC Act)
 - Eastern Bentwing Bat (Vulnerable under the TSC Act)
 - Large-Eared Pied Bat (Vulnerable under both the EPBC Act and the TSC Act)
 - Eastern Free-Tail Bat (Vulnerable under the TSC Act)
 - Little Bent-Wing Bat (Vulnerable under the TSC Act)
 - Large-Footed Myotis (Vulnerable under the TSC Act)
 - Grey-Headed Flying-Fox (Vulnerable under the EPBC and TSC Act)
 - The Spotted-Tail Quoll (Endangered under the EPBC Act and Vulnerable under the TSC Act)
 - Little Lorikeet (Vulnerable under the TSC Act)
 - Brown Treecreeper (Vulnerable under the TSC Act)
 - Grey-Crowned Babbler (Vulnerable under the TSC Act)
 - Speckled Warbler (Vulnerable under the TSC Act)
 - Hooded Robin (Vulnerable under the TSC Act)
 - Diamond Firetail (Vulnerable under the TSC Act)
 - Glossy Black Cockatoo (Vulnerable under the TSC Act)
 - Spotted Harrier (Vulnerable under the TSC Act)
 - Little Eagle (Vulnerable under the TSC Act)
 - Varied Sittella (Vulnerable under the TSC Act)
 - Scarlet Robin (Vulnerable under the TSC Act)
 - Regent Honeyeater (Endangered under the EPBC Act and TSC Act)
 - Swift Parrot (Endangered under the EPBC Act and TSC Act)
- c) Key impacts to habitats for these species would be the removal of Central Hunter Box-Ironbark Woodland. These birds are dependent on woodland communities. The Warkworth Amendment Proposal is likely to result in unsustainable losses and have a highly significant impact on the survival of these threatened species. Mitigation measure through offsetting and rehabilitation are inadequate to ensure the viability of these populations in the longer term. The removal of hollow logs is a disruptive activity on breeding cycles.
- d) It is impossible to say that the loss of habitat will not be such that it adversely affects habitat critical to the survival of these species. Vegetation clearing is going on and has gone on in areas adjacent to this area to such an extent that cumulatively their habitat is under enormous stress. There may soon be very little areas for the Spotted-Tail Quoll and gliders to migrate to. The Grey Headed Flying-Fox colony roosting in Burdekin Park in Singleton is an excellent example of what can happen when development disrupts breeding habitats. Other animals can become so traumatized by clearing activity that they will just die. Their homes may be suddenly uprooted during the night, noise may make them hide instead of escape.

14.4 Regional Corridors and the Synoptic Plan

- a) The "Synoptic Plan Integrated Landscapes for Coal Mine Rehabilitation in the Hunter Valley NSW (1999)" says;

- *“Many fauna are particularly sensitive to the size and shape of remnant vegetation patches as well as the distance between remnants. As a result the decreasing size and increasing distance between remnants in the valley has reduced the viability of natural ecosystems.”*
- b) The Warkworth remnant represents one of the largest surviving remnants of native vegetation on the Hunter Valley floor and is significant due to its functionality as a fauna refuge and ‘stepping stone’ in a highly fragmented landscape. The trend of small and decreasing size of remnants in the Hunter Valley floor means that they are no longer fully functioning ecosystems that can support a variety of native fauna species.
- c) Reduction in the movement of wildlife will decrease the gene flow between fragmented populations increasing the likelihood that populations will be viable.
- d) Corridors also provide native animals with shelter and protection from feral predators as they move between habitat remnants.
- e) The chance of survival for wildlife contacting heavy mining equipment is nil. Example of fatal encounters can be seen on visiting any mine haul road. The regeneration process is a slow process on a very small scale, historically rarely more than 40ha per year. The regeneration of flora on spoil dumps will occur but take decades to provide consistent habitat for displaced fauna. The quite habitat will not be present till mining ceases. The movement of equipment throughout both the Mt Thorley and the Warkworth Mine will be maintained to provide shortest access to each end of the open cut. The maintaining of the haul roads throughout the mine will cause fauna to leave the area. The access to the adjoining Bulga Mine rehabilitation area is also across a working haul road.
- f) The existing corridor in front of the Mt Thorley highwall links with the adjacent Bulga Mine providing a wildlife corridor. The proposal is to over dump this corridor and stop wildlife access for many years while the transfer of overburden continues across the Putty Road.

14.5 Key Threatening processes.

- a) Habitat loss is recognised as one of the key threatening processes. There can be direct and indirect impacts on animal habitat which threaten the survival of species and/or their populations.
- b) The Director General’s requirements specifically say that measures must be taken to avoid impact on Biodiversity. This EA has ignored potential indirect impacts from mining operations on the local wildlife. The impacts of project related activities which can affect species such as loss of shade or shelter, predation by domestic or feral animals, deleterious hydrological changes, increased soil salinity, erosion, fertiliser drift, biosolid spreading, noise and lighting.
- c) Felling of hollow-bearing trees has the potential to impact considerably on hollow-dependent fauna species during the felling process.
- d) The inability of these animals to escape the area and the loss of potential habitat may result in disruption of breeding habitat and the loss of a vital gene pool for those animals.

- e) The Ecology Assessment is further flawed in the absence of any cumulative ecological assessment taking into consideration the compounding impacts on fauna and flora of the other near and regional, multiple, large mining enterprises.

15. REHABILITATION

15.1 Ground disturbance

- a) From reading the AEMR's between 2007 and 2010 it is clearly evident that the predicted disturbance areas have been underestimated and the predicted rehabilitation areas have been overestimated, in the MOP.
- b) The total for the four year period gives an actual disturbance of 546.7ha against an MOP commitment of 384.9ha – a 42% increase. Likewise total commitment to rehabilitation was 243.8ha against an actual value of 200.7ha – a 21.5% decrease. No figures are available for 2011 and in 2012 a figure of 67.4ha of actual rehabilitation was recorded.
- c) Interestingly no disturbance areas were included in the report, possibly as a result of the extensive clearing at MTO where approximately 100ha of future mining land was exposed. The 2012 report is now named an Annual Review with the words “Environmental Management” deleted.
- d) This chronic use of under and over estimating must be viewed with suspicion. Similarly WML has cleared land ahead of excavation well in excess of the accepted 50 metres maximum creating larger areas for dust production. These methods of operation fall well below Department and Community expectations.
- e) WML is currently operating under the 2003 approval and MTO their 1996 approval. The 2003 approval does not give consent to Warkworth to dump overburden on MTO land however this is occurring to the east of Loder's Pit and not to the west as proposed in the 2012 EA.
- f) After 30 years of enduring the unwelcomed view of bare overburden dumps at Mount Thorley the Bulga residents were confident that after half a lifetime the MTO open-cut would soon end and rehabilitation would commence. This will not happen if WML is allowed to continue this practice.
- g) The limited area of successful rehabilitation is now being shielded by more bare dumps and both MTW and DOPI say nothing can be done to rectify this situation.
- h) The construction of bund walls designed to conceal activities within the mine site and the removal of public viewing points casts suspicion on those activities.

15.2 Rehabilitation

- a) Rehabilitation and regeneration of spoil dumps is well below acceptable standard. A vast area to the east of North and West Pits has lain bare for years while the overburden has been dumped to an ever increasing height and is now clearly visible from the Bulga village with the associated impacts of noise and night lighting causing concern to residents.
- b) The trialling of different methods of fertilizing and planting has been generally disappointing with the strike rate of plants and grasses mostly unsuccessful introduced species of noxious weeds and grasses used to stabilize ground slopes

e.g.: Galenia and African Rhodes grass have created an eradication problem on the mine site.

- c) The habit of dumping over rehabilitated land is not good practice and creates a negative value in the overall rehabilitation scheme. If this extension is allowed to proceed the longstanding fresh water catchment dam at Doctor's Creek will be severely impacted and discharge into the Hunter River will no longer be possible.
- d) Below is an aerial photograph of Warkworth Mine showing vast unrehabilitated areas.



16. HERITAGE

16.1 Non-Aboriginal Heritage

- a) Mount Thorley Warkworth has an extremely poor track record regarding heritage issues.
- b) The Environmental Assessment ignores the non-registered heritage items, St Mark's Church and Cemetery at Bulga. Graves within the Cemetery have collapsed in recent years as a direct result of mine blast ground vibration. The mining company has been made aware of this.
- c) Other heritage items of local but unlisted significance that have been destroyed since mining commenced are:-
 - McGregor's shearing shed and sheepyards at Doctors Creek,
 - The pioneer slab cottage with wooden shingle roof at Sandy Hollow Creek,
 - The remains of the hotel beside old Jerrys Plains Road, Warkworth and
 - The 1856 Martin's Wine Shop at Charlton Road which was bulldozed to make way for a relocated power line.

- d) No effort was made to salvage, relocate or preserve any of these historically significant structures.
- e) The mining company has shown a total disregard for the non-indigenous examples of early architecture within their mining lease boundaries.

16.2 Aboriginal Heritage

- a) The BMPA has serious concerns regarding the tactics used by the mining company to remove or destroy culturally significant aboriginal treasures within the mining area.
- b) A total of 24 Aboriginal groups both local and non-local were invited to attend meetings with cultural heritage advisors from the mining company. The various groups do not appear to have had independent legal or heritage representatives present at the meetings.
- c) The ongoing culturally important concerns of the various groups appear to have been ignored by the mining company.
- d) It clearly suits the mining company to set aside the Bora Ground which is outside of the proposed mining area whilst seeking destruction of ancillary and related items in the surrounding area. The overall entourage attending the last Bora Ceremony in 1952 would have approached 2,000 persons. ("600 warriors were in attendance" – Elizabeth Collins Memoirs – 1914). The various tribes were camped over a wide area including that area proposed to be mined. That extended area should be included in the conservation zone. The whole locality should be protected in perpetuity as a unique sacred cultural place of national Aboriginal and Non-Aboriginal significance.

17. SOCIAL IMPACTS

17.1 Generally

- a) Bulga is historically important as it is the location where explorer John Howe entered the Upper Hunter Valley from Windsor in 1820. It is truly the "Gateway to the Hunter since 1820". Bulga is a rural-residential village with surrounding rural properties and cannot be classified as an urban locality. Bulga was occupied by indigenous tribes for thousands of years and by white settlement from 1825.
- b) Bulga has a Church, Community Hall, Police Station, Scout Hall, Rural Fire Service, NPWS Office & Depot, Sports Ground, Hotel and Service Station/Café with approximately 500 residents living in the locality. The closely knit Community gathers regularly at Hall, Hotel and Sports Ground functions as well as Church services, RFS and Progress Association meetings.
- c) The social impact on the people of Bulga has not been sufficiently assessed in the Mining EA. People form strong bonds with their Community, and they suffer grief when those bonds are broken by the activities of mining companies, with people having to move away, facilities being downgraded, and whole Communities destroyed, such as has happened with Ravensworth, Warkworth and Camberwell. The psychological cost of losing control over your immediate environment has never been taken into account and has caused people to become mentally and

physically ill. These two factors add up to a great deal of harm and suffering which has never been calculated, evaluated or compensated by mining companies, and it must be taken into account.

- d) This Application is presented as “An Amendment” to the 2003 Approval. As such, it fails to address many of the fundamental Conditions in that 2003 Approval.
- e) Socially, a major provision was the Deed which promise to protect the village of Bulga “in perpetuity” by disallowing significant movement westwards and providing for NDAs (non-disturbance areas) and protected any destruction of Saddle Ridge which was acknowledged as a protective factor for the village in respect of noise and dust.
- f) Schedule 4 “Specific Environmental Conditions”
 - 4.4: Deed of Agreement: **“PRIOR to carrying out any development in the extension area the Applicant SHALL enter into a Deed of Agreement with the Minister. In this agreement the Applicant SHALL AGREE to;**
 - **PREMANENTLY protect the land in the NDAs for conservation and EXCLUDE open cut mining**
- g) The Company’s failure to ratify the Deed and to lodge an Application to SSC to entrench the areas defined in the local LGA was a travesty of due process. RTCA’s ongoing failure to lodge the Deed and now to actually seek to mine through some of the NDAs is cynical in the extreme.
- h) Bulga a rural village first settled almost 200 years ago. Descendants of the first settlers still live here. It is not a Tourist Destination a place for Sightseeing (although much European and Aboriginal Cultural history resides here). It is “A much loved Home” to many families.
- i) Effects of dust have forced some residents to, reluctantly, move to protect their children.
- j) The report by the Department of Health “Respiratory and Cardio-vascular Diseases and Cancers among residents in the Hunter New England Area Health Service” (May 2010) has reached the following preliminary conclusions;
 - Compared with the rest of NSW the Singleton and Muswellbrook areas have higher rates of
 - emergency department attendance for asthma and respiratory disease
 - emergency admissions for all respiratory conditions other than asthma
 - hospital admissions for cardio-vascular disease
 - death from all causes and cardio-vascular disease.
 - Clearly the Hunter valley is already seriously affected by pollution from the open cut mines and further exacerbation of this condition should not be entertained.
- k) It is undesirable for governments to inflict a proposal on a community that has a high apprehension of health, injury or other serious environmental dangers. The Government has a Duty of Care. This Duty of Care is

compounding as each new mine opens and as the life of Coal Mining and Industrial Development in the Hunter Valley lengthens.

- l) Encroachment of the mine with attendant increase in noise and dust problems has considerably decreased the value of homes in the area particularly those most prized by long-term residents. These properties comprise many acres of natural beauty populated by native animals birds and trees they require time and effort to upkeep and have become virtually “unsaleable” due to proximity to mining activity
- m) Such properties are not desirable to mine workers working long shifts. These are the only people now seeking to live in the area.
- n) The disruption attendant on mining operations has made the area unattractive for other prospective buyers. This has the effect of changing the cohesiveness of the village. People who work long and unsociable hours are unable or unwilling to be involved in the community.
- o) As Judge Preston found;
 - *“In relation to social impacts, I find that the Project's impacts in terms of noise, dust and visual impacts and the adverse change in the composition of the community by reason of the acquisition of noise and air quality affected properties, are likely to cause adverse social impacts on individuals and the community of Bulga. The Project's impacts would exacerbate the loss of sense of place, and materially and adversely change the sense of community, of the residents of Bulga and the surrounding countryside.”*
- p) The Mining Company (RTCA) has omitted to include any comment on social impact in their EIS. This omission confirms their cynical disregard for what comprised a large part of Judge Preston’s findings. The activities of RTCA from 2110 onward have materially changed the “essence” of Bulga, the annoyance and sleep disturbance of residents has impacted upon relationships. The Social impact is not only measured in numbers such as falling property values it is an impact felt “existentially” i.e. in the lived experience.
- q) For these reasons of social cost to the Community of Bulga we urge you to refuse the application to extend the Mount Thorley Warkworth Mine.

17.2 Clause 445 of the L&E Court decision states

- a) *“I am satisfied that approval of the Project would have some positive social impacts, particularly in the form of continuing employment in the local and broader community, but there will be significant negative social impacts arising from continuation of adverse impacts of noise and dust, visual impacts, and adverse impacts arising from a change in the composition of the Bulga community. Those impacts must be taken into account in the consideration of all the relevant factors in determining whether the Project should be approved.”*

18. INTER-GENERATIONAL AND INTRA-GENERATIONAL EQUITY

- a) This amendment application does not address the equity or fairness in either the distribution of the benefits and burdens. Below are excerpts from the L&E Court’s decision:

- In an assessment of the equity or fairness of the Project's distribution of benefits and burdens, assistance can be gained by consideration of two distinct principles of ecologically sustainable development, intergenerational equity and intra-generational equity. The principle of intergenerational equity provides that the present generation should ensure that the health, diversity and productivity of the environment are maintained or advanced for the future generations (see s 6(2)(b) of the *Protection of the Environment Administration Act 1991*). The principle of intra-generational equity involves people within the present generation having equal rights to benefit from the exploitation of resources as well as from the enjoyment of a clean and healthy environment: This EA does not address the principles of ESD in dealing with the application for this amendment under the former Part 3A of the EPA Act:
- With respect to inter-generational equity, the EA does not directly determine whether the Project, if approved, would maintain or enhance the health, diversity and productivity of the local environment at Bulga for the benefit of future generations or the value of doing so with respect to intra-generational equity, the EA fails to consider the burdens that would be imposed on the people of Bulga and the components of biological diversity in the Bulga environment, and on the ability of those entities to live in and enjoy a clean and healthy environment.

19. DISTRIBUTIVE JUSTICE.

- a) This amendment application does not address the equity or fairness in either the distributive justice. Below are excerpts from the L&E Court's decision
 - *Some of the entities to whom a distribution of benefits would be made if the Project were to be approved, would be Warkworth and its shareholders (profits of the mine), the NSW Government (royalties and State taxes), the Commonwealth Government (company and income taxes), local councils (community infrastructure contributions) and employees and contractors (remuneration for goods and services provided), however, the EA does not have adequate regard to the entities to whom a distribution of burdens would be made.*
 - *One of these entities is the people of Bulga who would suffer the burdens of significant adverse noise, dust, visual and social impacts, as well as degradation of the natural environment of the local area.*

20. EMPLOYMENT

- a) Rio Tinto is making a big issue about the preservation of jobs at Warkworth mine.
- b) Rio Tinto has no concern for jobs but only for its financial bottom line. Last year Rio Tinto gave 25 million dollars to the University of Sydney to research and develop field robotics for the mining industry. This is the automation of the mining industry.
- c) Already Rio Tinto has automated driverless trucks in Western Australia and the 25 million dollars will take automation even further.

- d) With plans for a major underground mine future for Warkworth (decision to be taken by Rio Tinto in two years) jobs such as truck driving at current levels will not survive.
- e) With the falling price of coal we must look at the employment future for the Hunter Valley after the Miners have left the Valley and not trying to expand polluting and invasive industries such as open cut coal mines. The NSW State Government should be working with Singleton and Muswellbrook Councils planning our future post mining and not doing back room secret deals with mining companies at the expenses of local communities.
- f) The engineering advice received by this Association is that with proper management there will be no loss of production and thus no reason for loss of jobs. This is the original mine plan prepared for the 2003 approval and is still current and relevant for the period leading up to the mine closure in 2021.

21. PROPERTY VALUES

- a) Property values are also affected. As soon as a mine is within close proximity, the property values become depressed.
- b) With a mine expanding those who wish to sell and move away will find it harder to sell their property (after all, who wants to live near a mine with all the dust, noise and disruption) and they will get a reduced price. Even though the mine will buy properties immediately next to a mine, all the properties in the area are affected.

22. SADDLERIDGE

22.1 Agricultural Suitability

- a) Clause 12.2.2 of the EA states that the effected land has low to very low productivity for grazing. This is not correct. Before Warkworth mine bought this property from Mr. McGregor it was a large and very successful sheep station. The property was around 90% open grazing land and with around 10% lightly timbered.
- b) The area affected in this application at the time was open grazing with a dam that could be seen from the Putty Road.
- c) Since Warkworth purchased the property this area has been neglected and trees allowed to take over the southern end of this area.
- d) Warkworth's rehabilitation policy is to return the mine site to bushland with some open grazing land. This is the opposite to what the property was before they purchased it

22.2. Importance of the Saddle Ridge as a visual screen

- a) The value of the Saddle Ridge as an important visual screen is stated seven times in the 2002 Warkworth EA.
- b) The significance of the removal of Saddleback Ridge is also considered as an element of the social impact of the proposed Project.

23. VISUAL IMPACT

- a) Bulga is on the western side of the Wollombi brook with the sloping ground coming away from the mountain range down towards the brook on the eastern side of Bulga.
- b) When families decide to build a home they looked at their block then decide on the position and orientation of their new home to take advantage of the best available view. The general sloping ground towards the east has over years lead to most homes being built facing east to give a better view from the front of the house.
- c) In the past this was an appealing view with undulating farmland in the foreground and Barrington tops and mountains north of Maitland in the background. This has changed over years now with a 120 degree view of unrehabilitated overburden replacing the view.
- d) Most residents find this very depressing. In the centre of that view there is a 25 degree view of remaining natural landscape. This application threatens 10 degrees or 40% of that last remaining view of the natural landscape. Effecting 40% of the last remaining natural landscape is not negligible as stated in the section 8 conclusion
- e) Warkworth mine states in their application that topography will screen most of the impact of the development, but this is the same topography they wish to remove in their previous application.
- f) In the decision by the Land and Environment Court the Judge noted in Clause 285 last sentence:
"While it may be accepted that Saddleback Ridge does not provide substantial noise attenuation, of greater significance is its contribution to screening the visual impact of the mine, an environmental benefit acknowledged in the EIS for the 2003 development consent (TB vol 5, tab 114, p 26156)."

24. NON-DISTURBANCE AREA

- a) The EPL 1376 eastern boundary line near this proposed extension coincides with the eastern NDA1 boundary. However the development consent boundary appearing on MTW maps is approximately 300 metres to the west along the northern NDA1 boundary.
- b) Areas within this subject land have been disturbed for some time, which is not in compliance with the 2003 approval. This current proposal is then a further intrusion into the NDA1 protection zone. In contrast to this proposed amendment which is going through the proper process the aforesaid parcel of land has not been properly assessed nor approved in the correct manner including notification to the public.
- c) This encroachment is a serious breach of conditions of consent considering that it was part of a very important Ministerial Deed of Agreement which the local Community has relied on for the past ten years.

25. PROJECT JUSTIFICATION

25.1 No stated economic support for the project

- a) No economics support for the project has been provided and no evidence is available to justify statements that Rio Tinto must to expand the mine to maintain its viability and the maintenance of jobs.
- b) The EA states that the disapproval of the Warkworth Extension Project in 2013 halved the width of the main pit (North and West pits) at MTW. This is not correct and an inspection of the plan will show that the strike length will be reduced by 14% of the current effective length. Notwithstanding that the mine plan from 2003 is now current and what was economical for that plan must be economical now. This loss of strike length (i.e. working room) is what was planned for in the 2003 approval.
- c) The 'bit by bit' methodology could continue for several years continuing to expand the open cut and the devastation of the landscape and the loss of EECs.
- d) On the basis that the Mine gets approval for this application then the same argument will be used in two year time to justify a further extension into Non-Disturbance Area until the whole of Saddle Ridge disappears.

25.2 Clause 168 of the Land and Environment Judgement states

- a) *"However, the existence of the mineral resource does not necessitate its exploitation. There is no priority afforded to mineral resource exploitation over other uses of land, including nature conservation."*

26. PERFORMANCE AND CONSENT BREACHES

- a) The BMPA considers the MTW has failed to act responsibly in the following areas.
 - MTW has breached government guidelines in honesty and transparency by showing total disregard to CCC members and the community in failing to disclose details of this proposal prior to public announcement.
 - MTW refrained from pursuing Singleton Council for rezoning of EEC's to Conservation Areas for the current mining operation. This was part of their obligation under Conditions of Consent.
 - MTW has been fined for breaches in noise levels and dust exceedences
- b) Given the above matters the BMPA is concerned that the mining company will not honour its agreements or intentions included in the EA.

27. 2013 PLANNING ASSESSMENT COMMISSION DECISION

- a) We quote from the PAC statements in their report of 3 February 2012 "The PAC acknowledged that the community had relied on that agreement in making their homes in the places that they did. To focus on that particular point we quote last paragraph page 8 of the 2013 Planning Assessment Commission Report:
"A number of rural communities have been faced with this situation in the past. In most all case the mines have been approved and the communities have either been radically altered in character or become non-viable. With the current price of coal this outcome is almost inevitable when the overall economic

benefits of the mines are balanced against the local community impacts. It appears that it is only if there are wider negative implications from the mining proposal that refusal becomes a possibility. If this is to change, then NSW will need to develop a clear policy position that provides further guidance to decision-makers as to how social impacts on rural villages are to be balanced in the approval process for coal mines.”

- b) No clear policy has been published and so we must apply the L&E Judgement
Clause 555 In my view, the marginal impact of the Project as an extension of an existing mine has to be considered in its landscape and the area of adverse effect on the local residents and community (the affected catchment area); not in statistical suburbs or local government areas whose boundaries bear no relationship to the affected catchment area. In this affected catchment area, the marginal impacts are more significant.

28. LIFE AFTER COAL MINING

- a) There appears to be little or no planning for the future of Singleton and Muswellbrook after coal is finished. The future for coal is very much dependent on the world price for coal and that particularly for Warkworth must be approaching the cost of extraction Warkworth will not continue if the price of coal drops below the cost of extraction. So what is our future?

29. CONCLUSION

- a) Approving this extension will be the start of the end for the village of Bulga. For the future of Bulga this application must be rejected.
- b) The Modification 6 application should not have been accepted by the Department of Planning in the first place, considering that it is a proposal to mine part of the Warkworth Extension site – a project which is awaiting a judgement from the NSW Court of Appeal, and which the NSW Land and Environment Court has previously ruled should not be mined.
- c) We urge the suspension of the assessment process, pending the outcome of the Court of Appeal review of the Warkworth Extension project. The Government must not allow Rio Tinto to have the Warkworth Extension approved *de facto*, piece by piece, and avoiding proper assessment.

- d) At the very least, there must intervention to restore fairness and objectivity to the current assessment process for Modification 6. In particular, we ask that:
- the 19th December PAC Meeting be indefinitely adjourned.
 - the public submission period be reopened and allow at least four weeks for submissions.
 - Rio Tinto be required to read each submission received on the project and respond adequately to all issues raised. This cannot be done in a weekend.
 - Require the Department of Planning to read and adequately respond to all submissions in its Assessment Report. This cannot be done overnight.
 - The Amending Deed and the Further Amending Deed be withdrawn.

Bulga Milbrodale Progress Association Inc.

Pauline Rayner
Secretary

EO&E