

# **Bulga Milbrodale Progress Association Inc**



**President      John Lamb      6574 5205**  
**Vice President   John Krey      6574 5376**  
**Secretary      Pauline Rayner      6574 5293**  
**Treasurer      Phillip Reid      6574 5237**

## **Correspondence**

**PO Box 1032   Singleton 2330**

**Email   [bmpa@savebulga.org.au](mailto:bmpa@savebulga.org.au)**

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Executive Director  
Major Project Assessments  
NSW Department of Planning and Environment  
GPO Box 39  
Sydney NSW 200

[elle.donnelley@planning.nsw.gov.au](mailto:elle.donnelley@planning.nsw.gov.au)

**Warkworth Continuation Project. Project Application number SSD6464.**

## **STATEMENT**

This detailed statement expands upon the Holding Submission sent to the Department of Planning & Environment by the Bulga Milbrodale Progress Association Inc. (BMPA) on the 6 August 2014.

The Bulga Milbrodale Progress Association Inc. (BMPA) representing residents of Bulga and the surrounding rural area objects to the project on the basis of the reasons set out in this report.

The principal objection is that this application is generally the same project as submitted by the Rio Tinto/Warkworth Mining Ltd (WML) in 2010, approved by the PAC in 2012, rejected by the Land and Environment Court in 2013 and by the Supreme Court of NSW in 2014. The findings of both courts apply to this application equally and must be considered in this assessment against the relevant subjects.

The NSW Government has altered certain assessment criteria to assist WML obtain inappropriate approvals. However the impacts of this proposed extension are the same as they were for the original 2010 application. Changing the assessment criteria does not alter the projects impacts on the surrounding communities and the environment.

This application must be rejected for all the reasons as set out in the two court judgements

The BMPA has employed independent expert consultants to review sections of the Environmental Impact Statement (EIS). The results of their reviews enabled the residents to understand the implications of the EA on Bulga and the surrounding rural area and to make comprehensive and meaningful written submissions to the NSW Dept. of Planning and Environment (DPE).

The Consultants commissioned were:

- Eastcoast Flora Survey (Dr Stephen Bell)    Warkworth    Sands    Woodlands (Appendix 2)
- Day Design Pty Ltd    Acoustics (Appendix 3)
- Professor Glenn Albrecht    Social Impact (Appendix 4)
- The Australia Institute    Economics (Appendix 5)

Each of the consultant's reports is attached to this submission.

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## THE REASONS FOR OUR OBJECTION

The BMPA tenders the following reasons and basis for their objection to the proposed extension of the Warkworth Mine.

### 1. OVERVIEW OF THE EXECUTIVE SUMMARY

The BMPA's observations of the Executive Summary are as follows;

#### **ES 1 Context to the proposal.**

Second paragraph notes that mining in the west pit of Warkworth mine is forecast to reach consent limits by 2015. The report talks of inefficiencies making the alternative methods more costly and slower the subjecting the viability of the mine. However, we refer to the original 2003 approval in which none of this area was to be mined. Accordingly this mine should continue until 2021 and then close.

*Last paragraph of Clause ES1 (Residual and social impacts meeting government policies)*

This Clause states that some *“residual social and environmental impacts some of which would be experienced locally but that the impacts meet all current government policies and would be managed in accordance with industry best practice.”*

These residual social and environmental impacts are the major impact that this expansion will have on the village of Bulga and other close locations and the environmental impacts they speak of include destruction of many hectares of the Warkworth Sands Woodlands. This proposal is completely contrary to the land and environment court judgement. It states that would meet all current government policies and would be managed in accordance with industry best practice.

Firstly the current government policies have been amended as required by Rio Tinto and with the concurrence of the Department of Planning and Environment in order to offset and overturn the Land & Environment Court (L&E) judgement. The management *‘in accordance with industry best practice’* is not what the residents of Bulga have experienced over the past five years.

#### **Clause ES2**

*Section ES 2 (background to the proposal.)*

This clause states that the Warkworth Extension is in an area where the dominant land-use is mining. This of course is because the Dept. of Planning over recent years has allowed the incursion of the mining industry into an agricultural and wine producing area. Open cut mining is dominant because of its major visual impact, the impact upon the environment and the impact upon the people who live near the mine. The impact and scar on the landscape and this

dominance by this intrusive and destructive industry cannot be allowed to continue past the current approval. While the mines have the biggest visual impact on the Hunter, coal mining is not the biggest employee or contributor in the Valley

*Page E2 (Existing approval does not support further capital investment)*

This clause notes that the existing mining approvals do not provide adequate longevity to support further capital investment into the Mount Thorley Warkworth business and the extraction of the remaining resource already approved for mining. That is a matter of mismanagement within Rio Tinto's organisation as their current capital management plan can only assume approval until 2021. This lack of poor financial planning cannot be allowed to be used as an excuse to have this mine approved for further expansion.

It notes also that Mount Thorley Warkworth is a high strip ratio operation and that it has associated high costs of operation. Clearly this is a mine which should not continue in operation. Other mines are far more efficient and do not require expansion to justify their existence.

*Last paragraph on page 2 ('Saddle Ridge a feature of interest')*

This paragraph states that Saddleback Ridge and Warkworth Sands Woodlands are '*features of interest to a range of stakeholders*'. It notes that avoidance of these areas is not possible for the continuation of viable mining at Warkworth mine.

This statement that Warkworth Sands Woodlands is a 'feature of interest' severely underestimates the value that is placed on this ecological community and severely underestimates the importance that the Land and Environment Court and the Supreme Court placed upon the Warkworth Sands Woodlands. This report is false and misleading when it speaks of 'features of interest'. The Warkworth Sands Woodlands is world unique and must be preserved. It cannot be reproduced and must be maintained.

The statement which says 'avoidance of these areas is not possible under this approval' should be sufficient to have this application rejected.

**Section ES3 Approval History**

*Page E3. (EPBC Act approval)*

The statement under clause ES 3 approval history notes that no further approval is required under the EPBC Act for the proposal. We note however that elsewhere in the document Rio Tinto maintains this is a new and different application to that rejected by the Land and Environment Court and the Supreme Court. If this is correct then the approval obtained in 2010 is no longer applicable and must be applied for again for the 'new scheme'.



## **Section ES4 Improvements in differences to the Warkworth extension 2010.**

### *First paragraph page E3 (Differences between the new and old applications)*

This clause states that “*while the proposal has similarity to the Warkworth expansion 2010 there are a number of important improvements and differences which are summarised below*”.

### *Dot point 1. (Stakeholder engagement)*

This clause notes “*operational improvements in response to ongoing stakeholder engagement particularly regarding the proactive and reactive management of noise and dust resulting in changes to operations*”. The residents of Bulga have not noted any ‘operational improvements’ and the ongoing stakeholder engagement is simply the complaints made by the residents to Warkworth about dust and noise. It is wrong for WML to state that they have improved the management of these matters and we refer to the 800 complaints for noise last year and a continuing number of complaints this year.

### *Page E4 Dot point 1 (Changes in legislative and policy environment)*

It is important to note that the changed legislative and policy environment does not make this project different. The project is exactly the same with the same impacts and the same unacceptable intrusion into the surrounding neighbourhood. The important change to the legislative and policy environment is the introduction of Clause 12 AA of the State Environmental Planning Policy (the Mining SEPP) which makes the ‘significance of the resource’ the principle consideration of the matters the Minister is to consider under Part 3 of the Mining SEPP. This artificial change to the SEPP was introduced by ex-Minister Hatcher at the behest of Rio Tinto and other mining interests. This is a matter of dishonesty and disgrace to the current State Government and attempts to artificially create more value for the economic consideration than the ecology, social impact etc. This SEPP amendment puts an imbalance into the assessment process and must be rejected. It does not lessen the impact on the environment or the village of Bulga.

### *Dot point 3 (design elements)*

The additional comments noted under dot point 3 on page E4 “design elements” does not make this project different to the 2010 project.

The design elements such as more undulating landform and optional underpass of Putty Road again does not make this project any different from the previous 2010 project.

## **Noise**

### *Dot point 4 page E.4. (Back ground noise levels)*

One of the key matters raised in the L&E Court judgement which they state have been addressed is background noise. WML maintains background noise levels

have been confirmed through further detailed studies in an advanced way of allocating background noise levels to each individual receiver. It is stated that this was discussed by the NSW EPA. The details of such discussions should be made available to the residents of Bulga to allow us to understand the arrangements made between these two government departments. Our concern is that these discussions would probably be to the disadvantage of the community.

*Dot point 5. (Bulga below cumulative noise limits)*

This clause notes that all residences and Bulga are below the mining SEPP cumulative noise limit from all industrial noise sources. This is not correct as will be seen from our specific section on noise by the BMPA Acoustic Consultant. The results established by Day Designs indicate to us that the maximum noise levels to be received at Bulga have modelled such that the impact has been reduced

**Ecology.**

*Page E4 dot point 1 (Application complies with contemporary policies)*

States that “The proposed offset strategy fully satisfied contemporary policies and provides a significant ecological benefit in the long term”. These contemporary policies are of course those altered by the Government to ensure that the previously rejected proposal now meets “contemporary policies”. This does not detract from the fact that the Endangered Ecological Communities will be substantially damaged and in particular the loss of Warkworth Sands Woodlands. Government should not be changing the policies to allow the destruction of these endangered ecological communities. These communities must be preserved and not lost due to artificial and biased changes in policy. The policy changes will not save the endangered species and have been altered only to ensure this application receives approval.

**Economics page E5.**

*Dot point 1. (New economic noise models)*

The EIS states that “*New models have been provided to assist the consent authority to understand the economics of the proposal.*” The previous models used in the 2010 project were discounted by the Court such that a new approach had to be taking. However the input data appears to be such that an economic assessment favours unreasonably the WML. We refer to the independent assessment carried out by The Australia Institute which show that the mine is not viable and that the economic benefits flowing to the community are inflated.

*Dot Point 2. (Economic significance of the coal resource)*

States that “*The resource within the proposed 2014 disturbance area approx. 230 million tonnes is economically significant.*” (It should be noted that the total ROM coal tonnage quoted here is not the saleable coal.

This is stated elsewhere as 155 million tonnes). The view of the Chief Judge Preston in the Land and Environment Court, the value of the resource does not outweigh the significant impacts on the ecology and the village of Bulga. The fact that the economic significance has been artificially altered in the SEPP clause 12 AA (2) does not change the impact that the extraction of coal will have on the surrounding population and the environment.

### **Social.**

This social impact analysis where it states that *“while immediate neighbours have expressed subjective concerns”* they state that the objective evidence that the actual impacts meet the levels prescribed in various government policies.

We refer the DPE to the evidence submitted to Land and Environment Court. The evidence contained in the judgment that the WML method of measuring social impact was sadly lacking. The Department of Planning must give serious consideration to the judgement from the Court. On a review of the Judgement it will be apparent that the social impact is very high and the outcomes arrived at in the EA understate the impact on the community and must be rejected.

Further, the Social Impact statements made in the EA fall short of the appropriate standards of acceptable surveys and reports. We refer to our assessment later in this report and also the statements from Professor Glenn Albrecht

*Last paragraph under the ‘Key matters’ (L&E Court judgement not a legal binding precedent)*

It is noted that the decision by the Land and Environment Court was *“a merit based appeal determined on those particular facts and the subject of the appeal and that it is not a legal binding precedent that limits the discretion of future decision makers in respect of the proposal”*. We refer to our following sections of this submission whereby we provide evidence that this new submission is exactly the same as the previous 2010 application which was soundly rejected by the Land and Environment Court and the Supreme Court. Clearly the findings of the two courts of New South Wales must be considered when assessing this project.

This assessment must arrive at the conclusion that this project being virtually the same as the previous must be rejected.

### **ES5.1 Noise and vibration**

*Page E6 first dot point (Reasonable and feasible measures applied to control noise)*

This clause states that *“all reasonable and feasible measures have been applied to control noise from the Warkworth mine”*. This statement is broad and vague. All reasonable and feasible measures is a subjective assessment and made only in the interests of Warkworth Mining Ltd.

*Page E6 second dot point (noise impacts below acceptable noise levels)*

It is stated here that noise impacts will be below the acceptable noise levels and amenity of the village as a rural area would be maintained. It is our view that the back ground noise for Bulga Village south and north is 30dba and thus a maximum limit of 35 should be applied. Weekly Barnowl reports show noise levels now are well above 35dba and as high as 45dBA. The mine cannot now keep its noise at receivers to the stated maximums required under the 2003 approval. We refer to the Acoustic report attached to this submission.

It must be noted that the previous noise levels allowable for Mount Thorley mine were 35dba until artificially altered to 38 when the original 2010 Warkworth application was approved. This 35dba is the maximum level that should be required for Bulga. This correction makes the results of the modelling contained in the EIS well above the acceptable limits.

*Dot point 3 (background noise levels)*

The section states that background noise levels have been determined in compliance with required processes for the INP in setting background levels. We cannot accept this statement and we refer you to our Acoustic report in the submission and to the attached consultant report. The mine immediately adjacent to the Mount Thorley being the Bulga open cut reports in its Optimisation Project EIS of having a background noise level for Bulga Village as 29 DBA. Clearly the modelling inputs by the consultants for Warkworth Mining Ltd. are such that it is able to manipulate the outcomes to favourably suit and support the Warkworth mine expansion. The community does not accept modelling by the applicant in supporting this application.

*Dot point 5 (Secret agreement between EPA and DoPI)*

We refer to the agreement made in 1998 between be EPA and the Dept. of Planning whereby the noise levels to be included in the approvals were set artificially high and suited the modelling produced by the mining company applicant. The method of assessing the INP and noise levels must be in accordance with the INP and not artificially elevated in accordance with a secret agreement between the EPA and the Dept. of Planning as taken below from the Court Judgement. Using these arrangements the DPE simply raises the max noise allowed for the mine in accordance with the WML noise modelling. This is not in accordance with the NSW NMP

*"The established practice between the Department and the EPA is [sic] to follow the protocols below for setting the intrusive noise criteria for a project:*

- (a) If the predicted noise levels at a receiver are less than the PSNL: Set criteria for the receiver at predicted level with a minimum level of 35 dB(A).*
- (b) If the predicted noise levels at a receiver are the same as the PSNL: Set criteria at the PSNL. For Bulga, this would be 38 dB(A) at night.*
- (c) If the predicted noise levels at a receiver are 12 dB above the PSNL: Set criteria at the predicted level, provided reasonable and feasible mitigation measures have been implemented. For Bulga this would be 3940 dB(A) at night.*

*(d) If the predicted noise levels at a receiver are 35 dB(A) above the PSNL: Set criteria at predicted level but assign treatment rights (the right to obtain mitigation measures on request) to the property. For Bulga this would be 4143 dB(A) at night.  
(e) If the predicted noise levels at a receiver are greater than 5 dB(A) above the PSNL: Assign acquisition rights to the property. For Bulga, this would be greater than 43 dB(A) at night."*

*Dot point 7 (low frequency noise levels will not meet INP requirements but will for Broner rules)*

This clause states that low frequency noise levels are predicted to meet the relevant Broner criteria for low frequency noise. The Broner criteria has not been accepted by the EPA and is not part of the Industrial Noise Policy. It appears that the mining company is using a measurement and assessment method that is not yet gazetted nor has it been reviewed in consultation with the community.

*First paragraph page E7 (Bulga will have a rural level of amenity)*

This clause states that the residences at Bulga generally have a rural level of amenity as per the INP. As residents of Bulga we strongly refute that statement and that the noise of the four mines surrounding Bulga is an unacceptable level of intrusion for a rural community. To allow Warkworth mine to expand westward towards Bulga will increase the impacts on a rural village and moving even further from the quiet amenity that a rural community should have.

*Paragraph two (noise levels higher than predicted in previous application)*

The EIS predicts that the noise limits at some residences are even higher than those predicted previously because of the inability of the company to meet the machinery output noise as the 2009 EA. This makes the noise impacts even worse than those submitted to the court in 2012 and is even more unacceptable to the residents.

*Paragraph 3 (Commitment to noise controls)*

This paragraph states that there is a commitment to continuous improvement for noise controls. Clearly when one views the numbers of complaints that had been received by the Warkworth mine and by the Department of Planning this does not represent the facts.

Their statement that compliance assessment monitoring has demonstrated a high level of compliance with noise criteria is not backed up by the various reports received by the residents and by the residents monitoring of the noise at their own receivers.

## **Section ES5.2 Air quality**

### *Dot point 1 on page E7 (all reasonable and feasible measures applied to dust control)*

Notes that “all reasonable and feasible measures have been applied to control dust from Warkworth mine”. Clearly as the photograph evidence contained in this submission shows, the company either cannot or will not control dust. The very nature of an open cut mining operation produces uncontrollable dust. The quality of the air in the Hunter Valley is not acceptable to residents and the majority of this dust is produced by open cut mines. There cannot further expansion of open cut mines near residential areas such as Bulga.

### *Dot point 2 page E7 (significant air quality impacts)*

States that significant air quality impacts will primarily be experienced at the Warkworth Village due to mining activities moving closer as the mine plan progress is westwards. The mine plan shows that the expansion of the open cut mine substantially moves towards the 400 residents of the village of Bulga. It is untruthful for the mine to state that the air quality will be degraded for Warkworth and not Bulga.

### *Dot point 4 (air quality met at Bulga village)*

Notes that the air quality according to the modelling at privately owned residential dwellings is met for Bulga Village and therefore air quality impacts are below acceptable air quality concentrations and amenity of the village should not be reduced.

We refer to the dust alarms experienced in the Hunter Valley last year. The majority of these are from the dust produced by open cut mines and no further expansion of mines should be allowed. It is not logical where an open cut mine moves two kilometres closer to a village that the dust impacts will not be greater.

### *Dot point 5. (Coarse and fine dust)*

The fine fraction dust that is of concerns the human health typically originates from combustion sources and that dust from mining is generally coarse in fraction. The large sized dust also accounts for very high upper respiratory tract infections, asthma etc. This is not providing the DPE with the full truth as this mine burns 100,000,000 litres of diesel per year which is not constrained or filtered through catalytic converters. This pollution by diesel fumes into the atmosphere contributes to the health impacts and must not be allowed to happen. The World Health Organisation states that diesel fumes are carcinogenic. There is no protection for villages near large open cut mines from this cancer producing fume.



*Dot point 3 on page E8 (No impact from diesel emissions)*

This clause makes a statement that “no air quality impacts are predicted to result from diesel emissions”. This cannot be the truth. Where does WML anticipate the 100,000,000 litres of fuel burnt on the site each year together with another 100,000,000 from other nearby mines will go to? Logic dictates that these diesel fumes will fall initially on sites immediately near the mine and then will continue on to far greater areas of the Hunter Valley.

### **Clause ES5.3 Ecology**

*(new Government policies on ecology)*

The first clause on the Ecology on page E8 states that new draft policies brought about by the State Government since the Land and Environment Court judgement. It is the view of the BMPA that these policies were brought into being because of the Land and Environment court judgement and sets out to assist this Warkworth mine to gain approval. The Chief Judge Preston of the Land and Environment Court carefully weighed up the matters of ecology and found that in balance the high price of the damage to the ecology and the environment and the village of Bulga was too much. By changing the rules to make it easier for the mine to get approval does not change the impact on either the village of Bulga or the environment. Changing and lessening the effectiveness of the protection of the environmental laws will not save the destruction of the Warkworth Sands Woodlands or other endangered ecological communities.

These changes in the draft policies are simply a means to assist WML to gain approvals. These policies are only drafts and must be rejected for assessment purposes for this mine. Again we restate artificial changing of the policies to assist WML gain approvals does not assist in preserving the environment and the rural way of life in Bulga. We refer you to the substantial assessment carried out by Justice Preston and this must be applied to this application.

*First paragraph on page E9 (impacts on biodiversity compensated by offsets)*

States that residual impacts on biodiversity would be compensated for by the provision of offsets. Again we refer you to the Land and Environment court judgement and the evidence that was given during that 14 day hearing. If existing Warkworth Sands Woodlands are established or current they cannot be used as a justification to destroying the Warkworth Sands Woodlands contained within this proposed expansion area. The Land and Environment Court stated that the Warkworth Sands Woodlands is unique in the world and must be preserved. No Warkworth Sands Woodlands should be damaged or destroyed and it is not true that they can be confidently reproduced or expanded. The existing extant must be preserved and maintained and no further destruction can be permitted.

*Dot point 3 on page E9 (WML has minimised impacts on Warkworth Sands Woodlands)*

Dot point 3 states that “*the proposal has minimised the impacts on threatened species by providing suitable offsets for the Warkworth Sands Woodlands by both land based and supplementary offsets to maximise the long-term viability of the community*”. We refer the DPE to the Land and Environment Court judgement. This judgment states this proposal is not acceptable. The Warkworth Sands Woodlands cannot be confidently be reproduced or expanded and the current stands must be maintained if

*Dot point 7 (connecting corridor of woodland vegetation)*

WML states that they will provide a connecting corridor of woodland vegetation and fauna habitat across the site. For the next 22 years this site will be an open cut pit destroying the existing corridors of Woodland vegetation and fauna habitat. It will be many years after that before the area can be established to provide a connecting corridor.

#### **Clause ES 5.4 Social**

In this paragraph it states that the social impact assessment that was prepared for this proposal. It further states the SIA was supported by a comprehensive stakeholder engagement program.

Members of the BMPA participated in the social impact interviews but found that the report on these interviews included in the EA bear no relationship to what was discussed and the concerns of the community. It would appear that the SIA included in this EA was generally not based on the interviews carried out. To state that it was a comprehensive stakeholder engagement programme is far from the truth.

*The first paragraph on page E10 (greater social impact if expansion does not proceed)*

This paragraph states that the greater impacts on the socio economic environment and community services from the proposal are predicted to occur if the proposal does not proceed. These would include reduced the viability of services such as local schools and reduce community life and participation. This is creating an alarmist situation and has been well reported in other publications that a reduction in the workforce employed by the mining industry will have little or no impact on the Hunter Valley economy. The reduction of the viability of schools etc. is drawing a very long bow and is far from the truth.

The paragraph notes having received feedback from a range a stakeholders and that a suite of ongoing and proposal specific strategies have been developed by Coal and Allied to improve communications generally and to manage/mitigate or enhance proposal related impacts and opportunities.



Nothing could be further from the truth. Mount Thorley Warkworth has not engaged with the Bulga Communities or other communities around open cut mines and their strategies to improve communications are non-existent.

A recent survey found that 60% of suppliers stated that they receive less than 10% of their revenue from MTW and 30% stated it was less than 30% of revenue. This indicates minimal supplier reliance on MTW and that the community contributions of suppliers will likely continue.

**Clause ES 5.5 Economic.**

The summary of economic assessment in this section speaks only of wages and other benefits. This study does not take into consideration the costs to the community and the environment should this application proceed.

We refer to the BMPA consultant's Australia Institute report contained in this submission

**Clause ES5.6 Groundwater.**

*Page E12 dot point 1 (Proposal not predicted to change water table)*

This clause states the proposal is not predicted to significantly change the water table. It is of concern the use of the word 'significantly'. Clearly what may be insignificant to the WML is a major disaster to the surrounding community. It further states in the second paragraph that the proposal is not expected to impact on the Warkworth Sands ground water system or the associated vegetation community. It says nevertheless monitoring bores would be installed in the western extent of the shallows sands west of the approved mining activities.

Our question is should the groundwater system be shown to be the dewatering or lowering of the water levels what can MTW do about this? The damage has already been done and this will be a disaster to the groundwater systems in this area.

**Clause ES5.7 Surface water.**

*Second paragraph page E12 (minor reduction in runoff)*

WML state that the MTW would capture runoff resulting in a minor reduction of maximum 0.44% in the Wollemi Brook catchment area and a negligible reduction in the Hunter River catchment area.

This of course takes this mine in isolation and this must be added to the cumulative effect of other mines that are currently proposing to expand in this area. We do not accept that this will have a minimal reduction in the Hunter River catchment nor should we be reducing the runoff off 0.44% for the Wollemi Brook.

#### **Clause ES5.8 Aboriginal Cultural Heritage**

Rio Tinto has chosen to use the same data provided in the now disallowed 2010 EA. Once again MTW (ref: EA Vol 1 para. 2 page 311 and minutes of ACHWG meetings in 2010 EA) has chosen to ignore the pleas of the Aboriginal groups requesting that their heritage be not disturbed. To date all 110 sites within the mined area have been destroyed and a further 104 in this proposal area are to meet the same fate.

To remove artefacts such as grinding groove rocks and scarred trees from their original location destroys the heritage value of the site and the artefact, which is inconsistent with Government Law applying to other Aboriginal Heritage Sites.

Rio Tinto's methodology whereby historians, academics, anthropologists and legal representatives have not been included in the ACHWG can only cast suspicion on the possibility of the Aboriginal Community being disadvantaged in negotiations.

#### **Clause ES5.9 Historic Heritage**

To date all white settler built heritage within the mined area has been destroyed. Two important sites are now the subject of this mine expansion.

The WW2 RAAF Base at Bulga has been relinquished by the Federal Government. Consultation in this regard was totally inadequate as Air Force historians and heritage museums were not offered stakeholder input.

It is unclear in the Historic heritage section (Part 9.2.1 page 319 2nd last para.) as to which base is described in the text. Bulga RAAF Base included 2 intersecting runways – the larger being capable of handling fully laden bombers and was strategically located for protection of both Newcastle and Sydney. Rio Tinto has downplayed the importance of the base during WW2.

Similarly Wallaby Scrub Road has been deliberately downgraded in value by Rio Tinto, with an offer of \$200,000 to the Convict Trail Project to relinquish any interest in this portion of the Great North Road. Singleton Shire Council has previously rejected the mine extension proposal and any offer from Rio Tinto to acquire the road. Again, widespread consultation was not made available to other potential stakeholders.

#### **ES5.10 Traffic and Transport**

The EIS speaks of the beneficial effects of traffic changes after opening of the Hunter Expressway but ignores the projected increase in traffic flow along Putty Road after completion of the Badgery's Creek Airport. A 200% increase in traffic flow through Bulga will render the EIS predictions worthless and should be rejected.

The statement that Wallaby Scrub Road is of inferior standard to other roads and dangerous is incorrect. The road is in excellent condition, is wide and constructed in a straight line free of dangerous bends. The accident rate is well below average.

#### **ES5.11. Final Landform and rehabilitation**

In paragraph 1 the EIS states that the rehabilitation of the areas mined under this proposal would continue to be undertaken progressively to create a stable, free draining landform etc. The performance of this company in rehabilitation of the landform does not measure up to their statements in this EIS. Any visual inspection or photo of the mine will show the sad state of rehabilitation and it is a reflection on the WML's attitude and that is to extract coal and not rehabilitate the landscape in a proper manner.

It further states that the final landform would include a void, be developed with the recognition of the pre-mining landform features and would incorporate the existing rehabilitated landforms to be consistent with the surrounding landscape features. This is an extraordinary and untrue statement. On the matter of the final void it states that it is too expensive to fill this final void. The community will be left with a large saline water pit which will take hundreds of years to fill. Clearly the company has no intention of reinstating the landforms in relation to the existing landforms.

#### **ES5.12 Visual amenity**

The EIS states existing topography and vegetation would continue to provide screening to Warkworth mine. The residences in Bulga are generally elevated which provides an unrestricted view of the damage and desolation this mine has and will produce.

It further notes that the residents of potentially sensitive properties would be allowed to request site specific visual assessments which may identify the need for a site specific mitigation measures. The proposed site mitigation measures such as planting, trees etc. takes many years to develop into an appropriate visual screen and accordingly would not assist residents for many years to come.

The visual barrier the community requires to be maintained is Saddle Ridge and the area known as Non-disturbance 1 (NDA1) which provides such barriers for the mining activity. It is to the detriment of this company's reputation that these areas were to be preserved in perpetuity under the Ministerial Deed of Agreement. However, at the request of Rio Tinto, this Deed of Agreement has been amended by the previous Minister Hazzard such that it has no longer any protection for the community or the environment and all the environmental and sensitive areas will be destroyed.

**ES5.13 The land and soils capability.**

The land proposed to be mined under this proposal is shown in the draft 2012 State Regional Land Use Study as the area that should be maintained for viticulture and wine making purposes under the Broke Fordwich Wine Region. This proposed expansion does not recognise this internationally recognised wine region and intends to open cut mine areas that should be preserved for the Wine and Tourism uses. The rehabilitated areas can never be reused for grape or wine production. Some of the areas proposed have been used for grazing in the past but this cannot happen if this proposal proceeds. The depth of soil on rehabilitation is absolutely minimal and cannot provide a return to the original land use prior to mining.

**ES6 Justification and conclusions.**

Paragraph 1 states that Warkworth mine and adjoining MTO are longstanding members of the community.

The residential community was established here almost two hundred years ago and many years before mining commenced. Generally the community regards the operation at Mount Thorley Warkworth as an infringement and an intrusion on their well-being, their health, and quiet amenity. The residents of Bulga state that there is no social licence for this company to continue operating considering the poor record of community relations and the disastrous environmental impacts.

*Dot point 1 (significant resource under footprint)*

Stated under the first dot point, the resource within the footprint of the proposal is significant. However we refer to Judge Prestons comments that even though there is a mineral resource below the ground it does not require that this must be extracted. The resultant damage that this expansion will cause exceeds any financial benefit to any party and must not happen.

*Dot point 2. (application meets majority of non-discretionary standards)*

Second dot point states that the majority of the mining SEPP non-discretionary standards are met. From this statement we assume that there are some mining SEPP non-discretionary standards which are not met. As stated before these non-discretionary standards have been brought about by the NSW Government desperate to give approval for the expansion. It is also noted that if these non-discretionary standards are not met the Government will still allow this mine to proceed even if it does not comply.

*Dot Point 3. (Impact on near neighbours minimised)*

Dot point 3 states that impacts on near neighbours have been minimised to the greatest extent possible using 'all reasonable and feasible measures while maintaining an economically viable mine plan'. Simply stated this is a matter of

economics having priority over any other matters and this is not acceptable to the residents of Bulga

*Dot point 4 (application meets all government policies)*

This paragraph states it meets all government policies. The government policies that are being met are those artificially put in place to ensure this mine gets approval. The assessment of this application must refer to the balanced view of the Land and Environment Court and the Supreme Court and the matter of inappropriately directed changes to the rules by this current government must be rejected. It does not meet the international standard of a balance between economics, environment, and the community.

*Dot point 5 (history of minimal non-compliance)*

Dot point 5 states that the Warkworth mine has a long history of minimal non-compliance with government conditions of approval. We refer to the section later in this submission which states that there were 800 noise complaints for last year and a similar number will be received by the mine this year. The government and the mining company use loopholes in the INP and noise management plans to avoid compliance issues. One should ask the community of their views on this mines compliance and the real story will be evident. Warkworth Mt Thorley mines run by Rio Tinto and are unwelcome neighbour of Bulga and the other surrounding areas.

*Dot point 6 (maximises return on capital invested)*

WML states it '*maximises returns on the substantial capital invested in the mine since it commence in 1981 and has access to existing infrastructure such as road, rail and port*'. This mine under the 2003 approval is due for completion in 2021. The equipment used generally will be reaching the end of its economic life by the completion of this approval. WML is seeking to purchase or justify new equipment with this approval. The return on capital invested and the mine has already been realised with the financial plan and business plan for the 2003 approval nearing completion (in 2021). It cannot be accepted that expansion can be justified by an investment in a mine that was due for completion in 2021. The current equipment and infrastructure will have been amortised over the period 2003 and 2021. New equipment purchases would be as a result of an approval and not the other way around.

*Dot point 7 (significant economic benefit)*

WML notes that it provides State significant economic benefit to the local regional state and national economies. We refer to the substantial economic study carried out by the Australia Institute part of which is included in our submission. A recent survey by the Australian Institute notes that in the Hunter Valley only five per cent of the working population is employed in mining and only two per cent of royalties from coal mining etc. make up the total revenue to the State Government.

## **Summary**

In summary, this application must be rejected as has the Land and Environment Court, the Supreme Court of New South Wales and the residents of Bulga and surrounds.

Rio Tinto does not have a social licence to continue operating in this area based on the poor relations with the community, the non-compliance with the approvals, the active discrimination against residents, the removal of protection such as Saddle Ridge and Non-disturbance Area 1 and the annulling of the 2003 Ministerial Deed of Agreement.

## 2. THE 2003 DEVELOPMENT CONSENT AND DEED OF AGREEMENT

In 2002 Warkworth Mining Limited made a development application to expand its mining operations. The Development Consent from NSW Planning included a Deed of Agreement with the Minister whereby the application agreed to conserve and manage the land in the Non Disturbance Area and Habitat Management Areas. The NDAs were to be permanently protected for conservation and open cut mining was to be excluded. MTW has now applied to mine NDA1.

- 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) WML 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) WML states that there was no time frame set down for the application to be made and thus states in its 2010 AEMR 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) WML 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.



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 an abatement against noise and dust impacts and to protect the ecology.

We are concerned that in a secret deal, the 2003 Deed of Agreement was amended to suit the WML. Without any advice to the community this further Amending Deed was signed in September 2013. This nullified the protection provided by the original Ministerial Deed of Agreement.

This 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 removed the protection provided by the Deed but also did not enforce the requirement contained in the Deed. That requirement was that WML 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.

### **The New Amending Deed of Agreement**

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.

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 Amendment 6 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.*

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.

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 confirmed by the 2003 Deed of Agreement has now been removed and places doubt on any promises, deeds, conditions of consent they are part of any conditions agreed at the time of consent.

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 a conservation area and abatement against noise and dust impacts.

### **The 2013 Planning Assessment Commission decision**

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 paragraph 67 of the judgement of Judge Preston:

*"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."*

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."*

### **3. AIR QUALITY AND HEALTH**

#### **Independent health Study**

The BMPA joins its voice to the other groups in the Singleton Local Government Area calling for a comprehensive and independent Health Study. We do not believe that the Air Quality Assessment for this EIS adequately addresses the health implications of the mining extension proposal.

#### **Generally**

Particle, or dust, emissions from open cut coal mining have been the subject of significant investigation over a number of years. Given the increased focus on the human health impacts of atmospheric fine particles, concerns becoming more acute.

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.

In a USA study of 16,493 West Virginians, Hendryx and Ahern (2008) investigated the relation between health indicators and residential proximity to coal mining. They found “high levels of coal production were associated with worse adjusted health status and with higher rates of cardiopulmonary disease, chronic obstructive pulmonary disease, hypertension, lung disease and kidney disease.” While they did not isolate airborne pollutants as a likely cause, the nature of the diseases mentioned clearly suggests they are the cause.

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  $\mu\text{g m}^{-3}$  increase in the concentration of fine particles (PM<sub>2.5</sub>) was associated with an 8% increased risk of lung cancer mortality. A similar magnitude of impacts has been observed worldwide.

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.” In summary, these studies suggest that atmospheric particles have substantial impacts on human health with more recent data indicating PM<sub>2.5</sub> has more significant impacts than PM<sub>10</sub>.

Early investigation 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 and
- death from all causes and cardio-vascular disease.

The report says “These data may indicate an adverse health effect due to exposure to coal mining or coal fired power generation activities. Further investigation is required to determine the role of pollutant exposure.” The BMPA endorses the need for the further investigation but believes it should take place before any further mining activities are approved.

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.

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.

### **The importance of the size of airborne particulate matter**

Without in any way discounting the danger posed by other pollutants, the effect of respired particulate matter on human health is attracting particular and widespread concern. The NPI began reporting the levels of particulate matter below 2.5 microns in 2008 as a result of international research, and there is mounting evidence that particles below 1 micron should also be reported separately, given their heightened hazard. This burgeoning interest stems from three 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 carried out 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.

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.

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.

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.

### **Dust at Bulga**

Cumulative depositional dust maps from Community Consultative Committee Meeting reports of October, 2008 and March, 2010 indicate exceedences beyond the maximum allowable criteria of 4g/m<sup>2</sup>/month total deposited dust at the Bulga monitoring site. The values were derived from HVO, Wambo, Warkworth, Mt Thorley (MTO) and Bulga Coal monitoring sites. At the time Mt Thorley mine was extracting coal only from the Abbey Green south Eastern pit.

The 2008 and 2010 results do not include dust emissions from Mt Thorley's large Loders Pit nor from Warkworth operations to the west of Saddle Ridge.

Mt Thorley proposes to continue coal production well past the end date of expiration of consent in 2017. This operation will be working concurrently with Warkworth Mine until that time and dust emissions from both mines, with no physical barrier to mitigate dust flow to the Bulga locality will substantially exceed the 4g/m<sup>2</sup>/month criteria.

The EA does not take into consideration the affect that Bulga Mountain has and upward air movement and wind direction in the vicinity of Bulga Village. With the removal of Saddle Ridge Bulga will be exposed to the impacts from road haulage dust, noise and spill lighting as well as impacts from dumping and stockpiling of overburden.

#### **Statement from a Bulga resident**

To graphically represent to impact of dust on home in Bulga a resident has provided at Statutory Declaration together with supporting photos which show the coal dust collected on his drinking water filter. This will give DPE and others what the residents of Bulga are experiencing now with the mine 5 kilometres away from this residence. The expansion of the mine to within 2.6 kilometres of the village can only worsen the dust impact seen in the attached photos. The resident's Stat Dec and the photos are Attachment 6 to this submission

#### **Health Department report**

We refer to the letter from the NSW Health for the previous 2010 application which states that this mine should not proceed. Nothing has changed; in fact the impacts of mining on health are now greater than before.

## **SURFACE AND GROUNDWATER**

### **Water**

Water is a finite resource with competing demands. There is competition for water in the Wollombi Brook as sufficient water is also 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. 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.

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.

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. In this case the groundwater dependent ecosystems the River Redgums and River Oak communities need protection.

It is a serious omission that there are no measures and procedures to mitigate or offset any adverse impacts on groundwater dependent ecosystems or riparian vegetation whether on the extension site or adjacent the area.

There is nothing in this EIS to give desirable level of confidence that the state's valuable water resources are protected and that there are no risks to the water users and water dependent ecosystems.

### **Cumulative Impacts**

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

An inadequate risk assessment was done on the agricultural enterprises along the Wollombi Brook and the Hunter River adjacent to the mine. Agriculture along the Wollombi Brook and Hunter River alluviums has an economic and social importance to the State. There is no response plan which will be triggered by exceedences to groundwater and surface water assessment criteria. Measures

and procedures to be implemented have been ignored. The BMPA considers compensation an unsatisfactory response to any interference with water availability or quality. Avoidance is the only acceptable action.

The Surface Water Study acknowledges that expansion of the mine to the west of the current mine pit will result in a reduction of the Wollombi Brook catchment of approximately 0.44%. In the 2010 EA the estimate was 0.60% approx... there is no explanation for this difference This reduction is described as “*minor*” with “*unlikely to be significantly different to the existing approved operations*” While the effects of operations at one mine may be unmeasurable in the context of flows in Wollombi Brook the EA does not adequately assess the cumulative impacts of undertaking large scale operational expansion in a catchment already heavily dominated by other open cut mining operations.

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.

### **Alteration to Catchment Regimes**

The proposed mine extension will capture a substantial volume of water from the Wollombi Brook catchment. This water will comprise both groundwater from the alluvial aquifer and surface water runoff that would otherwise have flowed to the Wollombi Brook. Not only will the mine measurably reduce catchment size throughout the operational life of the mine but it will permanently reduce the Wollombi Brook catchment following cessation of extraction at the site. This is unacceptable to the BMPA whose members rely on their bores and wells to operate their agricultural businesses.

The mine water management system relies heavily on the ability of the company to obtain additional water licences licence from the Wollombi Brook water source to compensate for losses to the catchment area and recharge volume that will result from the mine expansion. As indicated above in this submission under the “Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2009” the Wollombi Brook water source is fully allocated. The BMPA objects most strongly to further depletion of the water flow to an unsustainable rate and submits to Planning NSW that WML secure those water entitlements before any recommendation is made.

The EA under clause 17.4.1 proposes water sharing with other mines. Approval for water sharing from other mines cannot be guaranteed as two of the three mines have no relationship with Rio Tinto and thus water sharing cannot be guaranteed or accepted.



In addition to this, the catchment to the East of the mining activity will be reconfigured to allow increased flows through water courses to the Hunter River. The BMPA believes that this water could have increased salinity levels as there will be an increased flow across overburden dumps. We object to this.

### **Hunter River Salt Trading Scheme (HRSTS)**

The water balance model showed that a nil discharge regime was unworkable and the HRSTS will continue to be used and that no water will be taken from the MTJV scheme due to high volumes of stored water.

No accurate quantities of pit water seepage have been predicted to allow assessment of the capacity of the mine water management plan to deal with MTW's needs. More information is required as to the Water Management Plan in respect of holding the water in prolonged dry periods when the HRSTS might not permit discharge.

The BMPA believes that further information needs to be provided on the site's water balance with particular attention to the capacity of the mine waste water storage to hold all runoff and seepage in dry times when the HRSTS cannot be accessed.

### **Water needs**

The EA notes that should the contingency plan be utilised that an extraction licence for this purpose would need to be obtained. It is not clear whether this would be a groundwater or river water licence.

### **The Final Void**

Assessing the potential interactions between the Wollombi Brook and its alluviums and the final void is too important to be left till late in the mine operation life.

The final void as described will be huge, stagnant and brackish, and will have no practical, visual or environmental values.

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.

It is unconvincing and not proven that the water from the void will not drain back into the Wollombi Brook alluviums. There is no convincing evidence in this EA that there will be 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.

The most 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.

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.

#### 4. ECOLOGY.

The BMPA engaged independent consultants Eastcoast Flora Surveys to carry out an Ecology review of the proposed Warkworth Mine Extension. A full copy of Eastcoast Flora Survey's review is attached to this document.

##### **Key differences between the 2010 and 2014 proposals**

The main issues appear to be as follows.

- no assessment of the Precautionary Principle in the 2014 Application
- no discussion on the risk of extinction in the 2014 Application
- no Biodiversity Management Plan with the 2014 Application
- three new vegetation communities in the 2014 Application
- closure of Wallaby Scrub Road rather than its relocation in the 2014 Application
- recognized extent of WSW reduced from 1,133ha to 465ha, following the NSWLEC judgment
- WSW assessed as Groundwater Dependent in the 2014 Application
- a reduction in the amount of vegetation to be cleared from 2010 (765ha) to 2014 (611ha)
- a reduction in the amount of WSW to be cleared from 2010 (104ha) to 2014 (72ha)
- the removal of potential habitat of *Macrozamia flexuosa* in the 2014 Application
- a reduction in the amount of vegetation to be removed from fauna corridors from 2010 (765ha) to 2014 (456ha)
- a reduction in Biodiversity Management Areas to NBA and SBA only in the 2014 Application
- no discussion of the Putty Road Conservation Area in the 2014 Application, despite its inclusion on Figure 7.1 and others (Appendix H)
- a small decrease in the extent of forest & woodland in the SBA from 2010 (661ha) to 2014 (559ha)
- a small increase in the extent of forest & woodland in the NBA from 2010 (123ha) to 2014 (124ha)
- a reduction in the amount of EEC vegetation in the SBA from 2010 (635ha) to 2014 (497ha)
- a small increase in the amount of EEC vegetation in the NBA from 2010 (123ha) to 2014 (124ha)
- an increase in the total area of the SBA from 2010 (718ha) to 2014 (788ha)
- a reduction in the total area of the NBA from 2010 (342ha) to 2014 (306ha)
- inclusion of an Integrated Management Plan and development of completion criteria for WSW in the 2014 Application
- a reduction in the amount of WSW to be conserved in the SBA from 2010 (85ha) to 2014 (56ha)
- no change in the amount of WSW to be conserved in the NBA from 2010 to 2014 (both 20ha)
- limited discussion of the 5 year \$5.5 million research program undertaken by the University of New England on WSW restoration, and no detail on the results of that study

While these differences are many they do not constitute a substantially different project to that applied for in 2010 and rejected by the Land & Environment Court and the Supreme Court.

#### **Distribution and extent of Warkworth Sands Woodlands.**

Our consultant believes that the Warkworth Sands Woodlands is in the vicinity of 800 hectares and not the 3038 hectares of pre-European settlement Warkworth Sands Woodlands. Both of the figures quoted which is area extant and area pre-European settlement have important implications insofar as the significance and impacts on Warkworth Sands Woodlands and more generally on the acceptance to remove portions of such critically restricted vegetation community.

#### **Significance of Warkworth Sands Woodland.**

Warkworth Sands Woodlands is a community of very high significance. It is listed only as endangered in the New South Wales on the threatened species conservation act 1995. However applying the threat criteria of the International Union for Conservation of Nature also results in an assessment of Critically Endangered. For all intents and purposes Warkworth Sands Woodlands is a factually critically endangered ecological community.

The proposal to remove the bulk of high quality areas of Warkworth Sands Woodlands and to compensate with low-to-medium condition Warkworth Sands Woodlands in the northern biodiversity area and the southern biodiversity area land-based offsets is unacceptable. The areas of old growth Warkworth Sands Woodlands should be attributed greater conservation significance.

Warkworth Sands Woodlands is a factually critically endangered ecological community of highly restricted distribution. To date there has been no demonstration of successful restoration of Warkworth Sands Woodlands so claims that such activities will be adequately offset the removal of 72 hectares of this community are unsupported.

#### **University of New England research.**

The 2010 application made much of the \$5.5 million paid to the University of New England for research into the ecology of Warkworth Sands Woodlands. While statements to this effect are also included in the 2014 application nowhere are the results of this \$5.5 million research reported on nor how they will be incorporated into the restoration efforts. The fact that no papers or any results have been incorporated into plans to restore Warkworth Sands Woodlands is of some concern. The role of the \$5.5 million towards Warkworth Sands Woodland offsetting should be downplayed since it appears that little of the research completed by the University of New England has been incorporated into Warkworth Sands Woodland restoration plans.

### **Northern and southern biodiversity areas.**

The 2014 application continues to maintain that 19.5 hectares of Warkworth Sands Woodlands is present within the northern biodiversity area together with 156.6 hectares of Warkworth Sands Woodlands grassland. Despite accepting reduction in the overall extent of Warkworth Sands Woodlands currently extant to be 465 hectares the 2014 application does not accept the New South Wales Land and Environment Court judgement that Warkworth Sands Woodland has been over-mapped in the northern biodiversity area by about 50%.

For the Southern biodiversity area 56 hectares of Warkworth Sands Woodland detailed in the 2014 application is a reduction from the 85 hectares proposed in the 2010 application.

### **Supplementary offset measure 2.**

We believe that the supplementary measures in its current form to be a minor compilation task of existing data and should not be presented as an offset measure of any significance.

The BMPA is concerned that the removal of 72 hectares of mostly high quality Warkworth Sands Woodlands will expedite the ultimate demise of this factually critically endangered community. Offset measures proposed have been over-stated in value and restoration efforts planned offer no certainty that Warkworth Sands Woodland can be re-established successfully on former grazing land.

### **Risk of extinction and precautionary principle**

In the New South Wales Land and Environment Court judgement Justice Preston stated that the loss of Warkworth Sands Woodlands and the areas proposed the mine would be permanent and irreplaceable. Coupled with their highly restricted distribution of this community there is a very real risk of extinction.

Offsetting the removal of established Warkworth Sands Woodland and promises of a restoration of the same community on current grassland areas does not acknowledge the Precautionary Principle.

The 2014 application continues to maintain the assumption that such restoration can successfully be achieved. This is despite the research program undertaken by a University of New England on this project with no results achieved to date contained in the 2014 application. It has not yet been established that successful restoration Warkworth Sands Woodlands is achievable particularly on cleared sites which have been used for grazing over many decades. For this reason the Precautionary Principle would dictate that successful restoration Warkworth Sands Woodlands is not possible.

**Biodiversity offsetting.**

In 2010 application the offset package included seven separate parcels of land in addition to the restoration of Warkworth Sands Woodlands and other EEC's. The 2014 application has reduced this down to two and we presume this is in response to the Judgment in the Land and Environment Court which found many of the proposed offsets to be inappropriate. In total this has reduced the land-based offsetting from 5037 hectares in 2010 to 1094 hectares in 2014. This equates to approximately 1/5th of that proposed originally.

Given uniqueness and highly restricted distribution of Warkworth Sands Woodlands it is perfectly understandable that no amount of land-based offsetting can be expected to satisfactorily compensate for the removal of portions of Warkworth sands Woodland. Like for like offsetting is highly unattainable in this case.

To compensate for this reduction in suitable land-based offsets this current application offers what it calls "*a range of supplementary measures*" by which in reality amounts to just two;

- preparation of an integrated restoration implementation plan and
- research into accept all criteria for the re-establishment of Warkworth sands Woodland.

These do not offer anything in the way of additional compensation.

**Northern biodiversity area.**

There are several discrepancies in the current environmental impact statement and these are highlighted in the statement of evidence from our consultant in 2012. It is surprising that the 2014 application maintains that 19.5 hectares of Warkworth Sands Woodlands still present in the northern biodiversity area. We believe this is not correct.

**The University of New England study**

BMPA considers the proof that WSW can be regrown has not been provided

An ecological community consists of the flora and fauna, bacteria in soil and in flora and fauna, a particular soil structure, interdependencies between species, soils and microbes, a whole network of relationships, which cannot be reproduced in another place. Indeed as Paul Adam, past chairperson of the NSW Scientific Committee, points out: "*...the only certain outcome of such an approach is the loss of an existing stand of the community....*". Other experiments of this type have been disappointing, to say the least. The remote possibility that an ecological community could be re-established lies decades or even centuries in the future. To see this as a real possibility is absurd.

The BMPA argues that there is a high probability of failure in any attempt to recreate ecosystems. In this case the chances of collecting sufficient seed from the trees themselves are low as they do not flower every year and then the period of pollination is short and might be missed or dry conditions might make them useless or the birds or ants might get them first. If there is no demonstrated, viable seed bank then this project will fail and the WSW will be lost since the prospects for finding seed elsewhere are very poor.

Even if successful in seed collection and propagation it will take up to 25 years or more before a sustainable ecosystem is recreated which will replace the habitat loss at Warkworth. By this time some of the endangered and vulnerable bird species will have been lost.

### **Review by Dr Stephen Bell. Executive summary**

A review of the proposed Warkworth Continuation Project (the “2014 Application”) has been undertaken, specifically in relation to the Warkworth Sands Woodland Endangered Ecological Community (WSW). In this regard, the 2014 Application, plans to:

- clear 72 hectares of WSW and 0.5 hectares of WSW Grassland, which will be offset by the provision of 75.5 hectares of WSW and the re-establishment of 159.5 hectares of WSW on former WSW Grassland;
- prepare an Integrated Management Plan for WSW;
- develop completion criteria for the re-establishment of WSW.

The key findings that I have found as part of this review are as follows,

#### **Definition of Warkworth Sands Woodland –**

There is a long and convoluted history behind the current listing of WSW. It was originally nominated for listing on the NSW *TSC Act 1995* by the Hunter Rare Plants Group, of which I am a founding member. In our nomination of 2002, after 2 years of deliberations and research (in our own time), we included two separate species lists: one listing those species which were abundant and characteristic of WSW, and the second listing uncommon species which characterised ecotonal areas.

The NSW Scientific Committee merged these two lists, and inadvertently removed the distinction between included ecotonal areas of WSW and excluded surrounding non-WSW clay vegetation (resulting in ongoing confusion by practitioners as to what constitutes WSW). Apart from this, our original nomination was adopted largely unchanged by the NSW Scientific Committee when listing WSW as an EEC.

#### **Distribution & Extent of Warkworth Sands Woodland –**

Despite the NSWLEC acceptance of the 3,038 hectares of pre-European Settlement WSW calculated by Umwelt (2011), I have not changed my opinion that I believe it to be more in the vicinity of ~800 hectares. My calculation, as outlined in Bell (2012), is based on a review of finer scale soils mapping, including the Aeolian unit Czb, than was done by Umwelt (2011).

In relation to the extent of WSW currently remaining, my estimate of ~400 hectares approaches the 465 hectares settled upon by the NSWLEC, which again accepted the calculations of Umwelt (2011). Both of these figures (area extant & area pre-European Settlement) have important implications on the assessment of significance and impacts on WSW, and more generally on the acceptance to remove portions of such a critically restricted vegetation community.

**Variable Condition of Warkworth Sands Woodland** – Previous land use history across the pre-European extent of WSW has resulted in a range of condition classes for the vegetation that does remain, as different areas respond to the easing of detrimental pressures. The proposal to remove the bulk of high quality areas of WSW and to compensate for that removal by the low-to-medium condition WSW in the NBA and SBA land-based offsets (despite the promises of successful restoration) is unacceptable. In the absence of any 'old growth' WSW, these high condition portions of WSW should be attributed greater conservation significance. Such areas have had a longer period of time in which to regenerate and mature following their last clearing event, and consequently are more likely to embody the full complement of characteristics that define the entity.

**Significance of Warkworth Sands Woodland –**

WSW is a community of very high significance. It is listed only as Endangered in NSW on the *Threatened Species Conservation Act 1995*. However, application of listing criteria for State and Commonwealth legislation shows that the community should be considered as Critically Endangered on both the NSW *Threatened Species Conservation Act 1995* and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. Additionally, applying the threat criteria of the International Union for the Conservation of Nature (IUCN) also results in an assessment of Critically Endangered. For all intents and purposes, WSW is a **factually Critically Endangered** ecological community. *Ecological Submission: Warkworth / Mt Thorley Continuation Project*

**Extinction & the Precautionary Principle** – WSW is a factually Critically Endangered ecological community of highly restricted distribution (465ha). For this reason alone the irreplaceability of this ecosystem warrants higher consideration in any proposal that threatens its continued existence. To date, there has been no demonstration of successful restoration of WSW, so claims that such activities will adequately offset the removal of 72ha (15%) of this community are unsupported.

**UNE Research on Warkworth Sands Woodland Restoration–**

The 2010 Application for mining made much of the \$5.5 million paid to the University of New England (UNE) for research into the ecology of WSW. While statements to this effect are also included in the 2014 Application, nowhere are the results of this \$5.5 million research reported on, nor how they will be incorporated into restoration efforts. Apart from the mapping investigation by Kumar et. al. (2009), which yielded little new knowledge, no results of any of the WSW research have been mentioned.

My own investigations have uncovered two published papers on microsatellite markers in *Banksia integrifolia* and *Hardenbergia violacea*, both sampled from WSW (Fatemi et. al. 2012, 2013), one paper on seed bank dynamics and the arrested development of WSW restoration in cleared sites (Gross & Vary 2014), and one research thesis on the role of ants in seed dispersal of selected WSW shrub species (Taylor 2010).



The fact that none of these papers (nor any of their results if their publication dates post-date EA preparation) have been incorporated into plans to restore WSW is of some concern. Instead, it appears as though restoration efforts of WSW will be based on the restoration manual prepared by Niche Environmental (Thackway et. al. 2013). I have not been able to source a copy of this manual, so am unable to comment on the material contained therein. As a consequence, I consider that the role of the \$5.5 million towards WSW offsetting should be perhaps downplayed somewhat, since it appears that little of the research completed by UNE has been incorporated into WSW restoration plans.

#### **Northern & Southern Biodiversity Areas –**

The 2014 Application continues to maintain that 19.5 hectares of WSW is present within the NBA, together with 156.6 hectares of WSW Grassland. Despite accepting a reduction in the overall extent of WSW currently extant to be 465 hectares (as directed by the NSWLEC), the 2014 Application does not accept the NSWLEC judgement that WSW has been over-mapped in the NBA (by about 50%). Evidently, this over-mapping has implications on the value of the NBA as an offset area, and also on the credits that may be retired under the Upper Hunter Strategic Assessments policy. For the SBA, the 56 hectares of WSW detailed in the 2014 Application is a reduction from the 85 hectares proposed in 2010, but this difference is due to some boundary changes within the SBA, and the resolution of 2003 offsetting issues.

#### **Supplementary Offset Measure 1: Integrated Restoration Implementation Plan -**

In addition to the more typical land-based offsetting options, the 2014 Application proposes to prepare an Integrated *Ecological Submission: Warkworth / Mt Thorley Continuation Project*

iv Restoration Implementation Plan (or Integrated Management Plan) for WSW as a supplementary offset measure. This is a good initiative, and aims to collaborate resources towards the recovery of WSW in the region, by the sharing of knowledge and experiences among the various land owners where WSW occurs. There is, however, little information as to how this will be undertaken, nor who will be responsible for its implementation.

#### **Supplementary Offset Measure 2: Research into Completion Criteria for WSW –**

A second supplementary offset measure, research into completion criteria for WSW, has also been proposed in the 2014 Application. While on first reading this is a welcome initiative, the sort of criteria that is proposed to be researched (diversity & abundance of characteristic WSW species; appropriate % cover estimates of all strata; presence of key indicators species; habitat diversity; weed presence; etc.) is already represented by a wealth of existing data which could be readily adapted for such use. In addition, it is unclear if this new research would be a duplication of information already present in the WSW Restoration Manual prepared by Thackway et. al. (2013), since that document reportedly contains: “... a process for tracking the recovery of WSW sites towards a reference state...” For both of the reasons outlined here, I suspect that this supplementary measure, in its current form, to be a minor compilation task of existing data, and should not be presented as an offset measure of any significance.



**In conclusion,**

I remain concerned that the removal of 72 hectares of mostly high quality WSW will expedite the ultimate demise of this factually Critically Endangered community. Offset measures proposed have been over-stated in value, and restoration efforts planned offer no certainty that WSW can yet be re-established successfully on former grazing lands. In addition, the uncertainty regarding the stability from wind erosion of transferred sand material in which to restore WSW requires some clarification.

**BMPA Conclusion**

As a final comment the BMPA calls for an integrated assessment of the vegetation loss and ecological impacts of all the mines in this location and in the Hunter Valley as a whole. Just as this is imperative for air quality assessment, for noise and water effects, a Regional assessment must also be done for biodiversity issues.

We therefore urge you to reject this mining extension on environmental grounds.

## 5. FAUNA

### Impact on Endangered and Vulnerable Fauna

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.

We base our objection to this proposal on the total area of habitat to be cleared and particularly the loss of EEC woodland and the threat posed to a large number of vulnerable and endangered animals. In support of our position we offer the following comments.

- 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.
- 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.
- 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.
- 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.
- We dispute that progressive clearing will mitigate against impacts on the wildlife. This argument is flawed for a number of reasons. If existing habitat were suitable in the offset areas it would already have a population of similar species. The EIS does not demonstrate this is the case. Further the offset areas are separate and fragmented. Setting aside these areas does not prevent an overall loss of specialized fauna habitat or a loss of the displaced animals.
- 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.

## The Extension Area

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.

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 dams and creeks.

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. We offer some examples (though not confined to birds):

- 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.
- An abundance of mistletoe provides resources for specialist species such as the nomadic Regent Honeyeater.
- 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.
- The diversity of flowering canopy trees attract large numbers of insects which provide foraging habitat for a diversity of threatened micro-bats.
- Many of the under storey species are valuable flowering resources utilized by a diversity of nectarivorous bird species.

- She-oaks provide foraging habitat for cockatoos and parrots, including the threatened Glossy Black-Cockatoo. Several pairs of the Glossy Black Cockatoo were seen foraging in the Warkworth Sands Woodland by the UNE team during their exploration of the location for seed collection. It is believed they are nesting there.
- 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.
- The moderately dense shrub and canopy layers provide excellent habitat for arboreal mammals, such as possums and gliders.
- 

This is compelling evidence for the conservation of this area and for refusal of the development application. The impact on woodland dependent birds and animals that currently occupy the area, of the removal large areas of foraging, is highly significant.

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 area under assessment and its adjacent Non Disturbance Area (NDA) consists of significant patches of these communities. Clearing such a large area of extant endangered woodland for mining cannot be approved.

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.

### ***Endangered and Vulnerable Fauna***

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

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)

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 Continuation Project (WCP) 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.

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 which they can migrate. 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.

### ***Regional Corridors and the Synoptic Plan***

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.”*

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.

Reduction in the movement of wildlife will decrease the gene flow between fragmented populations increasing the likelihood that populations will be viable.

Corridors also provide native animals with shelter and protection from feral predators as they move between habitat remnants.

The wildlife corridors shown in the EA will not be freely available to fauna within the working mine area. 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 quiet 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.

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 deign wildlife access for many years while the transfer of overburden continues across the Putty Road.

### **Key Threatening processes.**

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.

The Secretary's requirements specifically say that measures must be taken to avoid impact on Biodiversity. This EIS has ignored potential indirect impacts from mining operations on the local wildlife. We can identify 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.

Felling of hollow-bearing trees has the potential to impact considerably on hollow-dependent fauna species during the felling process.

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.

The evaluation of impacts did not adequately consider noise and light as it may affect the species in the Offset Areas and adjacent woodland. Noise has the potential to impact breeding frogs with females unable to hear the calls of males. This flows on to reduce spawning activity recruitment and population size.

The impact of light spill disturbance from operations during the night must be determined and its likely impacts on woodland habitat adjacent to roads. The impact of light on terrestrial fauna is poorly understood but is most likely to affect nocturnal fauna such as frogs, bats and mammals. Many frog species are sensitive to light including the Green and Golden Bell frog which may inhabit the area. Male frogs may not call in areas illuminated at night which will affect breeding recruitment of frogs and eventually the population sizes. The response to light of bats also needs investigating. While bats are not attracted to light many of their prey items for example moths, are. The abundance of prey items around a light may attract bats on warm nights.

These indirect impacts must be fully addressed and MTW must be required to do an appropriate assessment.

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.



## **6. NOISE.**

### **Generally**

The BMPA considers that the noise impacts as outlined in the EIS on Bulga has been underestimated and are unacceptable.

Substantial modifications are required to the published EIS in order to present a proposal that provides a reasonable balance between the expansion of the Warkworth mine towards Bulga and the expected noise impacts on the residents of Bulga.

The appeal in the Land and Environment Court (L&E) which overturned the 2012 approval and the Supreme Court Judgment which reinforced the L&E court decision, show that the background noise levels stated in this EIS are incorrect. The background noise levels in particular areas of Bulga have been elevated in this EIS and it is unacceptable that this provides background noise levels higher than would have been measured.

Further as argued by this organisation for the past three years, it is not acceptable to discount the low frequency noise modifying factor required to be assessed in the New South Wales Industrial Noise Policy (INP) as published by the Environmental Protection Agency (EPA).

Further it is not acceptable to discount mitigation measures due to the high cost of implementation.

Generally this organisation states that the impact that the expected noise levels of the proposal is unacceptable and will unduly disturbed the amenity of the residents in the Bulga community.

### **Background noise levels for Bulga.**

In 2002, background noise levels were monitored at six (6) representative locations by ERM, and according to the 2009 EA noise study noise levels were monitored continuously throughout 2008 in the vicinity of the Proposal, and these datasets were found to be representative of the current (2009) environment.

During the Court hearings, Rio Tinto endeavoured to have the RBLs increased over and above those previously determined for the 2002 EA and the 2010 EA. The Courts rejected their demands

Under the 2014 EIS Rio Tinto sets out to establish that background noise levels in excess of 30 DBA are relevant for this application. However even for the 2002 EIS, the background noise levels used to set noise criteria 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.

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 <sup>1</sup> , dB (A)		Existing L <sub>eq</sub> 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					

This view is further reinforced by the BMPA consultant Day Designs as noted below

Furthermore, although no mention is made of the Mount Thorley Mine in the 2002 Noise and Vibration Study, it was operational at that time in the study and this would also have contributed to background noise levels.

As a result, the reported background noise levels and subsequently the Intrusive noise criteria set for assessing the 2002 EA, may have been higher (less stringent) than what they would have been had the influences and effects of Rio Tinto's existing mine operations been removed from the background noise monitoring results.

As noted in the Acoustic Peer Review Report by our acoustic consultant, Day Designs, dated August 2014, the noise level recorded at 98 Wollemi Peak Road, Bulga show that the calculated RBL for the day, evening and night is 30 DBA. This is contrary to the assertions by the acoustic consultants EMM for Rio Tinto

and that Wollemi Peak Road is 33 DBA. We refer to the various arguments put forward over several days in both New South Wales courts on this particular matter and to the L&E Judge's assessment that Rio Tinto was erroneously overstating the background noise levels for parts of Bulga.

The measured data at the Wollemi Road monitor as collected by our noise consultant was lower than the background noise data measured by EMM. A representative of the BMPA has requested the LA90 day data to compare the data obtained by the independent acoustic consultant. The requested data has not been provided to us.

This error or misrepresentation in the back ground noise for Wollemi Peak Road requires the remaining two locations in Bulga with higher background noise levels should be reassessed by an independent noise consultant. It is clear that the arguments put forward and the data produced by the EMM is not correct and has been manipulated to suit the requirements of the mine and the demands put forward by the Dept. of Planning and Environment.

### **Comparison with the 2010 application.**

This application is no different from the original 2010 application and therefore the various reasons for refusal as outlined by the Land and Environment Court decision apply equally to this application. The relevant reasons related to noise impact included in the L&E Court decision of the 15<sup>th</sup> of April are:

- establishing too higher background noise levels (paragraph 330) and
- setting criteria based on what the mine can achieve not was acceptable (paragraph 334) and
- insufficient accounting for annoying noise characteristics (paragraph 362), and
- insufficient accounting for the effect of meteorology on noise levels (paragraph 348).

Further relevant references from the L&E Judgement are quoted below.

#### *Paragraph 342*

*"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."*

#### *Paragraph 336*

*"The INP does contemplate that it may, in some instances, be appropriate to set noise limits for a development above the project specific noise limits recommended by the INP (1.4.7, p 6). Part 9 of the INP states that determining an approval condition should take into account the assessed noise impact (including additional impact caused by meteorological conditions); mitigation measures required to achieve project specific noise levels; identification of a practical limit on noise control; consideration of trade offs; and whether the final*

*noise proposed is acceptable (INP, 9.1, p 47). In particular, there needs to be an evaluation of the acceptability of setting noise limits in the approval conditions above the project specific noise levels.”*

*Paragraph 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.*

*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.”*

*Paragraph 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.”*

**Noise monitoring.**

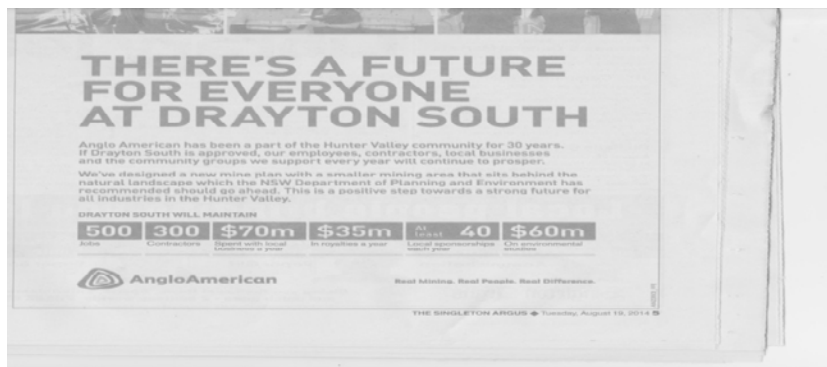
The EIS notes that the Barnowl network has been used to “activate numerous noise alarms during the night shifts in 2014”. This demonstrates that exceedence of noise criteria is common and that further expansion of the mine is likely to intensify the noise impacts with more exceedences more often.

Section 4.3 of the EMM report describes three nights within the period of one month when supplementary noise monitoring occurred and action was taken to shut down plant to reduce the noise impact. This further demonstrates the Mine’s regular exceedences of the noise criteria requiring action is required to be taken through the shutdown of plant to meet criteria.

## Saddle Ridge.

Saddle Ridge was to be preserved permanently under the previous mine approval to conserve the endangered ecological communities contained therein and as noted in the EA of 2009 to act as a buffer zone to protect Bulga. Under this proposal it is to be removed leaving no effective buffer between the mining operation and the community of Bulga and the surrounding rural residents.

The L&E Court judgement of the 15<sup>th</sup> of April acknowledged that the noise attenuation effect of Saddle Ridge was best during calm conditions and provided up to 5 DB attenuation (paragraph 284). During adverse conditions however it was noted that the noise benefit of the Ridge during calm weather which occurs for the majority of time was virtually nullified during adverse conditions or temperature inversions. In the worst case, noise impact prior to the removal of Saddle Ridge is much the same as the noise impact after the removal of Saddle Ridge. However this scenario means this current worst case with the Ridge in place will become the normal case after removal of the Ridge. Clearly the Ridge is providing an important noise barrier for the residents of Bulga and must remain.



The EIS states that Saddle Ridge offers no real benefit in protecting Bulga from the noise impacts etc . However, we draw the Department's attention to the Drayton South application whereby it states (Singleton Argus August 19 2014 cutting included above) *"We've designed a new mine plan that sits behind the natural landscape which the NSW Department of Planning and Environment has recommended should go ahead"*.

This statement indicates double standards when the DPE states that Saddle Ridge offers no benefit and yet DPE agrees with Drayton South that the “Natural Landscape does provide shielding. This latter statement is correct in our view and that of our noise consultant. Saddle Ridge must remain to perform the original protection function as stated in the 2002 EIS.

#### **Low frequency noise.**

The low frequency noise criteria is particularly relevant to this assessment due to the nature of the operation, the quiet background and significant distances to residential receivers. The New South Wales INP provides the assessment method for determining the presence of low frequency noise and provides for a formula to adjust the noise readings and forecasts to determine the real impact of noise for surrounding residents. The noise assessment is required to be carried out in accordance with the INP. However in the EIS, EMM uses the ‘Broner Method’ to assess and forecast adjustments to account for the impact of low frequency noise. This is not acceptable as this is not a recognised method of assessment and the INP method must be applied.

According to the INP low frequency noise assessment 5 DB modifying factors should be applied, however in this EIS the modifying factor is not applied due to the preference of using the Broner method. This is manipulating the assessment process to find a method which suits Rio Tinto and disadvantages the Community. This is not acceptable and is an attempt to corrupt the assessment process.

The INP low frequency modifying factor must be applied for the low frequency noise impact as measured or predicted at residential assessment points. These assessments predicting low frequency noise from the mine must be used when estimating the impact of noise on the residents of Bulga.

The 5 DBA low frequency penalty should be applied to the predicted noise levels in the EMM reports and therefore the predicted cumulative noise levels in table 11.1 at locations in Bulga Village, The Inlet Rd west and Long Point will increase to well above INP noise criteria and thus be considered unacceptable. This is reinforced by the BMPA’s strong objection to the Continuation Project because of our experience of the impact of low frequency noise from the mines.

#### **Cost of reducing noise.**

Section 10.1 of the EMM report discusses the option of relocating plant to into in-pit locations or shutting down plant to achieve the noise criteria at all assessment locations of Bulga. Rio Tinto has elected to discount this as it was considered to be unreasonable and a reported cost of \$100 million over the life of the proposal.



The implication of this is that the noise criterion is likely not to be met at residences in Bulga. This was one the main reasons the NSW Court of Appeal upheld L&E court judgement. The proposal could not meet the noise criteria.

### **Noncompliance**

Section 10.5 of the EMM Report predicts non-compliance at 103 assessment locations out of 221. By applying the low frequency noise modifying factor penalty of DBA all the marginal and moderate exceedences in table 10.7 would become significant. This would further increase the number and extent of the non-compliance. If this level of non-compliance including the low frequency noise was predicted this mine could not proceed without completely discounting the impact on the residential premises.

### **Clause 9.7 Low frequency noise.**

Low frequency noise is a serious issue for the residents of Bulga and surrounds. It appears that Warkworth mine proposes three different methods for assessment of low frequency noise. From these it is apparent Warkworth mine intends to accept that which is most advantageous to their application. The BMPA requires that any assessment must be based on the Industrial Noise Policy and not any other unofficial noise policy to the advantage of the applicant.

The impact of LFN must be part of the noise impact assessment for the residents of Bulga and currently it is not.

### **Clause 9.7 NSW Ombudsman and the NSW Industrial Noise Policy.**

This section notes a letter prepared by the New South Wales Ombudsman's to the Department of Planning and Environment and refers to a response from that Dept. agreeing on the technical merits of the difficulty implying low frequency noise modifying factor in rural areas. This is quite the erroneous and misleading. There is no technical difficulty in applying the low frequency noise modification under clause 4.1 of the INP. The fact that OEH has commissioned a comprehensive study of low frequency noise as part of the INP review does not mean that Rio Tinto can use whatever system of assessment they like suit their purposes.

We are concerned with the statement in the letter from the Ombudsman which says "For the reasons outlined above it appears to me the information and evidence provided by the agencies is sufficient to satisfy me that the DPI has provide adequate reasons for its decision and has properly considered all relevant issues and there is no other evidence of wrong conduct that requires intervention by this office".

This is where the community loses faith in government departments to pursue these matters. The reason that the DPI does not follow this application of the INP is because the adjustment for LFN disadvantages the mine and its operations.



It is clearly stated in the approval that this modification must be applied in accordance with the INP. In this case the government agencies are not being fair and reasonable in the dealings and this is to the disadvantage of the community

In the letter of response from the New South Wales Planning and Infrastructure dated the 27<sup>th</sup> of November 2013 it notes under (2) when asked by the Ombudsman about the live monitoring of low frequency noise, the Dept. response is that the real time monitoring is limited to the assessment of A weighted noise only and hence it is not possible to apply the low frequency modifying factors which requires C weighted noise levels to be measured. This is not correct and we have been advised by the manufacturers of the equipment that the equipment can measure both A weighted scale and C weighted scale noise simultaneously. It is the application of the A and C scale where the problem is and not with the equipment. The Problem is with both Rio Tinto and the DPE and the arrangement they have agreed to.

The attended monitoring appears to be the only method accepted by the Department and the mine. This is not in accordance with the INP which requires any noise measurement and monitoring takes consideration of the INP. This includes the INP section 4.1 adjustment for low frequency noise. The Rio Tinto with the cooperation of the DPE is only applying the modification factors to monitored reports whereas this is required for any noise measurement. Otherwise of the impact of low frequency is not avoided.

The community requires the application of the INP for all noise measured including operational controls and at any point should the C scale exceed the A scale by more than 15 and then five must be applied to the A scale and the mine must take appropriate measures to reduce the noise output. The community does not accept that they must wait for an attended monitoring process to identify that they are currently being impacted by low frequency noise.

It appears the technical opinion provided by the DPE has deceived the Ombudsman's into believing that they are correct. It is noted in our consultant report that the DPE and the mine are wrong in their application or non-application of the INP.

#### **Separate reports**

For a detailed acoustic assessment we refer to the report from Day Designs Pty Ltd Appendix 3

For a noise impact assessment by a resident of Bulga we refer to Appendix 1.

## 7. SOCIAL IMPACT

### Generally

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.

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.

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 is time it was taken into account.

We query the independence of the assessment.

It is our view that the DPE Secretary’s requirements have not been addressed. The perceived social impacts are not explored or illustrated in the detail required as part of a typical SIA practice.

The surveys used and questionnaires should be part of the SIA attachments but there is no such information provided. The EMM report states that many suppliers have a major reliance upon Mount Thorley Warkworth but this is contrary to other surveys as noted in this following report.

Long term surveys of residents of Bulga shown that we have a very stable population but this will not continue if this mine expands. This was described in our discussions with the SIA consultants but does not appear in the EIS documents.

In the EIS there is no sense of an overall assessment of impacts and opportunities, neither is there a matrix to demonstrate all right the impacts. There is no rating of the impacts as required by a good SIA practice

This EMMs SIA simply states technical assessments and provides no real social research or analysis or impact statements. It provides no quantitative or qualitative analysis, no stakeholder quotations and no supporting literature.

The major aspect missing from the submission is discussion on the lack of an assessment matrix to rate the impacts (a feature of all EIA and SIAs). In relation to the EIA, the impacts are rated without reference to a matrix. For the SIA a rating is absent. Assessing the severity and likelihood of impacts and the defining the rating is critical to all the EIA and SIAs. EMM fails to provide an assessment matrix outlining the ratings and their explanation. So in essence, the SIA does not 'assess' at all. It simply outlines some of the issues without any detailed comparative analysis of impacts.

EMM uses Dr. Stubbs analyses which were discredited in the Land and Environment court. The Chief Judge of the Land and Environment court was extremely critical of the social impact on the village of Bulga and surrounds. Various relevant excerpts from the judgement are included in this report.

The proposed management strategies contained in the SIA report are generally those existing at the current operation of Mount Thorley Warkworth. As residents of Bulga we state that the current strategies do not work and for this mine to extend within 2.6 kilometres of Bulga they are extremely inadequate.

Population in Bulga increased by 11.5% in 2006-2011 survey. Singleton had a decrease of -4.7%. This points out the importance of knowing MTW was not moving towards Bulga and would finish in 2021. 71% of people in Bulga have had the same address for the last 5 years. We had the lowest level of net in migration amongst the SSC's. Cessnock was 60%, Muswellbrook was 51%, NSW 57%. No mention of Singleton. This shows that people enjoy their rural lifestyle in Bulga.

Nearly all households in Bulga SSC were characterised as family households. Higher than the state average. No figures were given. Bulga SSC has the highest rate of undertaking voluntary work 23% compared to 11.4% for state average.

846 MTW employees do not live in the Singleton LGA

For these reasons of social and financial cost to the Community of Bulga we urge you to refuse the application to extend the Mount Thorley Warkworth Mine.

## KEY POINTS

### Section 1 and 2

Secretary's requirements received 22 May, 2014, date of the SIA 13 June 2014. How could the Secretary's Requirements be properly is addressed in the SIA or in any other part of the EIS in this time?

Secretary's requirements state "an assessment of likely social impacts on the development including received impacts paying particular attention to Bulga". Perceived social impacts are not explored or illustrated in the detail required as part of typical SIA practice.

Queensland Department of State Development. Infrastructure and Planning (the only available government SIA guidelines available nationally) states "Assessment of potential social impacts and opportunities across each stage of the project life cycle is to be informed by the baseline studies and feedback from stakeholder engagement". "Stakeholder should be given the opportunity to comment on the rating of impacts". "once identified the proponent will develop mitigation measures to address the impacts in consultation with the stakeholders".

The expert SIA consultants who undertook the consultation work with Bulga community are not listed as authors of the document. Why not? Do the current EMM authors have any qualifications in social research and IA?

Use of legal precedents "New Century Developments Pty Ltd v Baulkham Hills Shire Council 2003 Land and Environment Court 154". Telstra Corp. vs. Hornsby Shire Council 2006 Land and Environment court 133. BMPA vs Minister for Planning and Infrastructure and Warkworth Mining Ltd".

- Inappropriate use of legal precedents. Not within remit of an SIA and authors not qualified to be using legal precedents in this way.
- Muslim Prayer House determination and "New Century Developments Pty Ltd vs Baulkham Hills Shire Council 2003 Land and Environment Court 154" is completely unrelated with the judgements reflecting concerns regarding religious discrimination and irrational/unjustified fear.
- Bulga residents currently living with MTW mine and its impacts i.e. 'informed' judgements.
- Use of "BMPA vs Minister for Planning and Infrastructure and Warkworth Mining Ltd." inappropriate considering the EEM conducted the previous EIS which was largely discredited in the Land and Environment Court decision. Also the decision states that the SIA should consider "both the objective data and broader experiential evidence from residents of impacts at a local level". Experiential evidence has not been examined as part of this SIA.

### Section 3.

MTW Employees and Supplier survey.

- What questions were included in the survey? Where employees asked about proposed project or just about current operations? The survey questionnaire should be included as an appendix as in typical social research and SIA practice.
- Employees of the mine who live locally suggested that there was a further online survey conducted by Coal and Allied around the 14<sup>th</sup>- 15<sup>th</sup> of May which asked questions about the proposed projects. Is this survey included in the results discussed here? How many employees/suppliers participated in the survey? Once again the survey questionnaire should be provided as an appendix to the document.
- Current workforce numbers. In the description of an operation the document states that 17.8% of the current workforce reside in Maitland. However in the MTW employees and suppliers survey it states that 30.8 per cent of the workforce reside in Maitland. How can this vary so much considering the size of the survey sample and the fact that all other workforce proportions match almost precisely (page 15 and 18)? If
- The data demonstrates the short-term residency of the workforce with the over half of the workforce residing in the area less than five years.
- Over 60% of suppliers stated that less than 10% of the revenue they receive is from MTW and 30% stated it was less than 30% of revenue i.e. this indicates minimal supplier reliance on MTW and that the community contributions of suppliers will likely continue

Extremely high number of complaints particularly regarding noise, indicates a problem with this operation as acknowledged in the previous Land and Environment Court and Supreme Court decisions.

Community investment figures. How has this changed over time with the Rio Tinto efficiency drives? How does it compare to other nearby operations? (see latest Rio Tinto Sustainable Development Report 2014).

#### **Section 4.**

An increase of 37 and 96 persons respectively in Bulga and Broke cannot justifiably be considered as “significant growth” particularly when other small surrounding villages are declining and Singleton suburb itself is declining. Camberwell and Warkworth have declined substantially between 2006 and 2011 with a population decline of -52% and -67% (a decrease of 198 and 370 persons respectively).

Long-term residency in Bulga. 51 per cent of residents with the same address five years ago. Bulga has lowest levels of in-migration of all areas.

Cherry picked HVRF analysis of the most recent economic analysis from HRVF (March 2014) also states that “The hunter economy which benefited from resource-related investment boom and was largely shelter from the impacts of the global financial crisis is now feeling the effects of the post-boom slowdown to a greater extent than the rest of the State. Total employment has fallen from peak levels of late 2013 and the unemployment rate has started to rise with some prospect that it will fall more slowly than is forecast for the nation. As at March 2014 business confidence in the Region was subdued although positive

on balance while consumer expectations for their personal financial circumstances had weakened. Residential building approvals continue to increase although at a slower rate than elsewhere with signs that the real estate market peaked in the wake of declining demand generated by the investment boom. Overall the prospects are for somewhat slower recovery in the Hunter than in the nation and New South Wales but there are opportunities for lifting regional competitiveness through greater innovation.

Appendices reveal further detail on health and perceptions not provide the main report.

- “More than 80 per cent of respondents were aware of some negative changes in their area. When compared with the identification of positive changes this implies that perceptions of negative impacts outweigh perceptions of positive impacts within the community. Mining expansion was the most frequently cited negative change in the mining impacted areas.” Appendix B
- “It was recommended that respiratory problem management overtime be further explored as comparisons between the 1998-2004 and the 2005-2010 datasets for management of rates of respiratory problems demonstrated no significant change in the Hunter Region despite a significant decrease for the remainder of rural New South Wales over this period. (Merritt et al. 2013).” Appendix C.

#### **Section five.**

This whole impact analysis is devoid of any social research or typical SIA practice. No thematic quantitative analysis (except for one graph on page 71) nor qualitative analysis (and no stakeholder quotations). It is impossible to decipher what some of the impact/opportunity themes listed in the graph on page 71 actually mean e.g. ‘property saleability’. Is this a positive or negative impact? Property market stabilisation. Where? Is this a positive impact?

There is no sense of an overall assessment of impacts and opportunities. How many stakeholders identify positive versus negative impacts?

There are no range of impacts and opportunities. This is considered very typical of any impact assessment and there are a range of standard rating scales used in SIA practice (see Queensland Government SIA guidelines. In addition stakeholders were not provided with the opportunity to comment and provide feedback on impact/opportunity ratings.

The use of the reference case is atypical in SIA practice. It appears the assessment is primarily based on the reference case of ‘no development’. Although this should be considered in the SIA, in this report it completely outweighs consideration of the impacts if the project does not proceed.

Workforce. The report constantly refers an average of 1300 people in the MTW workforce who will continue in their employment. It is impossible that the savage is an accurate reflection of the workforce over time as part of these proposals. Coal and Allied need to provide a detailed workforce planning profile over the life

of the mine and the proposal to show the actual workforce over the life of the proposals.

## **Section 5.2.**

- Reiterates entire economic assessment and does not provide any additional social research or analysis.
- Population change. Proposes 195 workers will leave the region (including Newcastle, Lake Macquarie and the Upper Hunter region) if the project does not proceed. This represents approximately 0.09% population change for the entire region which is insignificant. The assessment does not actually provide a comparative assessment of whether this is significant. However Burge states that permanent population change of less than 5% is considered insignificant (Burge, J. 2004. A community guide to SIA. Wisconsin, Social Ecology Press).
- Property market impacts. Considers only the impacts on the Singleton housing market. What about Bulga?
- Supplier spend. Does not consider the relative lack of reliance of local suppliers on MTW nor the fact in MTW supplier spend has declined significantly in recent years (see Rio Tinto Sustainable Development Report 2014).

## **Section 5.3.**

- Workforce volunteering rates. The ABS undertakes a dedicated survey of volunteering rates nationally which provides a more accurate reflection of volunteering activities than the Census. The most recent survey states that on average 41% of people outside of capital cities and 34% residing in capital cities undertake volunteering work. This is well above the 33% of Mount Thorley Warkworth workforce who undertake volunteering (ABS 4441.0 – Voluntary Work Australia 2010).
- Supply contribution. Again local supplier survey does not demonstrate the reliance on MTW as noted in the Employee and Suppliers survey.

## **Section 5.4**

- This whole section just reiterates the technical assessments and provides no social research, analysis or impact assessment. No quantitative or qualitative analysis provided, no stakeholder quotations, no supporting literature.
- Noise. Considering the obvious significance of noise impacts (based on the complaints profile, the previous EIS for Warkworth and experiential evidence from residents) very little is provided based on social research, relevant literature or the experiences of local stakeholders.
- Community and family cohesion. It states that population decline is considered unlikely despite the fact that the rest of Singleton another similar small mining communities in the area are experiencing decline. Voluntary acquisitions (24 houses out of 150 houses in Bulga) are not considered in the analysis of impacts which is fundamentally misleading in an assessment of social impacts. The report assumes that an 'acceptable level of amenity' will be retained. How is this possible with a 705 hectare



open cut mine within 2.6 kilometres of the village and the level of existing impacts?

- Visual amenity. The 2002/2003 EIS for Warkworth frequently notes the importance of Saddleback Ridge in protecting Bulga from the direct impacts of the mine. Why has this changed when it is the same mine and the same environmental assessment consulting company undertaking the assessment work?
- Loss of sense of place. It is assumed here that this loss will impact the MTW employees as much as Bulga residents. However the mining workforce demonstrates high rates of fluctuation and short-term residency (as noted in Section 3 of the SIA) whereas Bulga demonstrates long-term residency and long-running ancestral connections with the area.
- Claim of school closures is misleading considering the assumption of 107 schoolchildren likely to leave the area if the project does not proceed. This represents just 0.4% of the total number of schoolchildren the region (based on My School data 2011). Is highly unlikely that this level of fluctuation would result in school closures.
- Health and wellbeing. A health impact assessment should be conducted for the impacts on health and wellbeing to be properly assessed. As noted above. Merritt et al (2013) also states that “It was recommended that respiratory problem management over time be further explored, as management of respiratory problems demonstrated no significant change in the Hunter Region despite a significant decrease for the remainder of rural NSW over this period.” Appendix B.11. There are a raft of other health study not referenced here that would indicate concern and the need for further research on health impacts of mining e.g., Commonwealth Senate Inquiry into the impacts on health of air quality in Australia (2013), World Health Organisations work on noise pollution and the impacts on health.
- Property values. The Stubbs analysis used here has already been discredited in the Land and Environment Court. Sample size used is misleading and does not compare like for like properties e.g. a sale of a shed is compared with the sale of a 400 hectare property. The most recent Valuer General’s report indicates an average decrease in property prices around Bulga/Broke of -11.65% (Newcastle Herald report 27<sup>th</sup> of June, 2014).
- Mount Thorley Warkworth is below industry averages on the employment of women and Aboriginal and Torres Strait Islanders (page 85).

## Section 6

The proposed management strategies amount to two pages of the SIA report of which most strategies are already existing and an operation at MTW. Considering the vast scale of the proposals (705 hectares of open cut coal mine within 2.6 kilometres of Bulga) and the existing impacts experienced by this community, the extent of management strategies proposed is inadequate.

The only additional social impact management commitments (i.e. in addition to those already in place at Mount Thorley Warkworth) are: the Social Impact Management Plan (which is not required in New South Wales but is typical part of the SIA practice) the Voluntary Planning Agreement (which is required under planning legislation) and the proposed Near Neighbour Amenity Resource.

Considering extremely high rates of current complaints regarding this operation and the lack of stakeholder trust in the operation, an 'ongoing' approach to impact management is not going to work.

No consultation has been undertaken with stakeholders around the proposed management strategies.

## **8. LAND AND ENVIRONMENT COURT JUDGEMENT. SOCIAL IMPACT RELATED EXCERPTS**

We refer to the sections of the Land and Environment Court Judgement as noted below

### **Social Impacts: the resolution in summary**

*Paragraph 409. "I am satisfied for the reasons below and that although the existing mine along with our other mines in the area had positive impacts (in particular in terms of employment in the community as a whole) those mines also have negative social impacts on the local community and that there would be reasonable to expect those positive and negative impacts to continue for the duration of the project."*

### **Positive Social Impacts**

*Clause 414. "First the comparisons based on LGAs ignore the distributional aspects of social impacts of mining namely that while it can be accepted that there are benefits from coal mining in the form of measures such as employment for Singleton LGA as a whole, costs of a different kind may be borne by the local community."*

*Paragraph 415. "These observations of noise and lights which would not ordinarily be experienced in a rural environment, support the residents' evidence of existing adverse impacts both the Bulga and another similar small communities."*

*Paragraph 417. "Evidence was that following the establishment of the Wambo, Lemington, United and Warkworth Mines from the Early seventies to the eighties Warkworth Village people began to complain about noise and dust; the mine offered acquisitions and as neighbours properties fell into the hands of the mines and became rented or demolished the remaining residents feared for the loss of the village and sought acquisition. As the village shrank the school closed and the last to go was the service station and general store."*

*Paragraph 419. "Hence, although I accept that there are unlikely to be positive social impacts particularly in the broader community in the Singleton LGA and the Hunter region, I do not agree that there will be positive social impacts and the local level to the extent suggested by Dr. Stubbs."*

### **Negative social impacts: solastalgia**

*Paragraph 421. "Professor Albrecht's evidence was that solastalgia is an apt descriptive term for the combined environmentally induced desolation and powerlessness the impacts on people in the zone of affectation of coal mines and power stations."*

*Paragraph 425. "What those testimonies revealed was "deep solastalgic distress about the damage that has already been done to their loved landscape and the bank is the deep anxiety that this level of distress could get even worse as the mine expands towards the edge of the town".*

### **Social impacts from adverse noise and dust impacts**

*Paragraph 431. "The resident evidence which is supported by the monitoring data and the SKM report establishes that the noise impacts of the Warkworth Mining operations are real and disruptive.*

*In my assessment approval of the project on the conditions regarding noise proposed will only increase the noise impacts and their effect on amenity and family relationships."*

*Paragraph 432. "The resident evidence is that the existing mining operations at Mount Thorley Warkworth mine complex are having impacts on amenity which leads to social impacts.*

*Any lack of compliance with air quality criteria would resultant air quality impacts and hence social impacts on the residents of Bulga."*

*Paragraph 433. "While the present conditions and those propose include the entitlement for some owners to request mitigation measures in relation to noise or air quality I accept that for some residents those measures are inconsistent with the decisions to live in Bulga.*

*Acquisition of noise and dust affected properties also has an adverse social impact causing friction within the community and within families."*

### **Social impacts from adverse visual impacts**

*Paragraph 436. "That the screening the effect of Saddleback Ridge from all elevated properties in Bulga such as that owned by Ms Caban and is more limited however I am satisfied that removal would be a factor in the visual impact of mining operations."*

*Paragraph 437. "Professor Albrecht also posited that the loss of Saddleback Ridge is of symbolic significance.*

*The loss of Saddleback Ridge entails the loss of Bulga as a place of its people. This opinion was corroborated by the evidence of Bulga residents who placed importance on the retention of Saddleback Ridge in the landscape."*

Clause 438. *"No evidence was provided as to what visual impact mitigation measures might be provided and how effective they might be in the context of the scale of the mining operation proposed in a rural residential environment.*

*I am not persuaded that any visual impact of the Mount Thorley mine extension would be sufficient to discount the visual impacts of the project in particular those arising from the removal of Saddleback Ridge."*

Paragraph 439. *"In my view the project will have an adverse visual impact of sufficient magnitude and on a sufficiently large number of properties as to have social impacts on the residents of Bulga."*

Paragraph 285 *"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 and environmental benefit acknowledged in the EIS for the 2003 development consent....."*

### **Social impacts from adverse change in composition of the community**

Paragraph 442. *"Professor Albrecht's evidence was that the community is not defined simply by the number of people. People have self-selected Bulga for the rural lifestyle and so the community is built around people who share a common set of values. If the turnover is sufficiently high and there is a change in the type of people the fabric of the community is affected, for example by reducing the degree of involvement by residents with the voluntary organisations. In his opinion sheer numbers do not give a sense of the community."*

Paragraph 444. *"Professor Albrecht on the other hand, the major changes to the landscape, for example the loss of Saddleback Ridge are significant. 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 area of the marginal impacts are more significant."*

### **On balance, negative social impacts are likely**

Paragraph 445. *"I am satisfied that the approval of the project will have some positive social impacts by 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 relevant factors in determining when the project should proceed."*

## 9. ECONOMICS.

### Warkworth not economically viable

It is a view of this organisation that the economic assessment of the Warkworth Continuation Project overstates the benefits and understates the costs of the project.

Importantly the financial difficulties facing the coal sector are entirely ignored in the economic assessment. It is clear in the media statements made by Rio Tinto that the project is under substantial financial pressure. The economic assessment states that this project will continue with the scheduled production and employment levels regardless of financial losses. As a commercial operation Rio Tinto will not continue to operate this mine at a loss.

It is clear from the costs of production and the price being received for coal that this project is not financially viable.

From the data available in the BAEconomics study it appears that their economic model uses a coal extraction cost of \$70.50 which is well below what it is currently costing Rio Tinto. Also the Australian average extraction cost is between \$80 to \$85 per tonne of saleable coal. It also states that the current price achievable by this project for the sale of the coal is \$100 Australian per tonne compared with the current level of at \$83.00 per tonne. The Warkworth continuation project overstates the benefits and understates the costs of the project

We are concerned that the financial analysis by Rio Tinto makes no attempt to mention that this project, with the current prices and exchange rates, is under extreme financial pressure. It is of no concern to the community of Bulga that Rio Tinto will lose money on this project but it is of concern to us that should this project gain approval but does not continue then the long term devastation which will be incurred on the environment and on the village of Bulga will be for no benefit.

In the comparison provided by The Australia Institute comparing their estimates with that of BAEconomics, Rio Tinto's consultant states there will be a surplus of \$1507 million whereas the Australia Institute calculates at **\$-805 million**.

### Employment

Much is claimed in the publicity surrounding this application that mining industry is facing economic difficulty. However the Australian Bureau of Statistics data shows that despite some recent volatility, New South Wales mining employment and the coal sector employment is at or close to record levels.

In all of the media proposals and this EIS it notes that 1300 people will continue to be employed. However media statements and presentations to investors show

that is not the case that the Rio Tinto organisation is setting out to drastically reduce its workforce numbers. It is the responsibility of Rio Tinto management to work in the interest of the shareholders and this means reducing staff levels.

Therefore it is strange to claim that at the same time as they are setting out to reduce staff levels that they will maintain jobs as a key objective. The economic assessment is wrong to assume, contrary to the statements made to their customers and shareholders that staffing levels will be maintained throughout the life of the project.

BAEconomics states that Warkworth employees are unlikely to obtain other jobs either in the coal industry or elsewhere in the Hunter economy. The official statistics show this is not the case as there are now more people employed in the New South Wales Mining industry, more than February 2013 and any time prior to 2011. In addition, Australia wide statistics show that the coal sector has followed similar trends over long term and has actually increased employment by 10,000 people in the last two years.

We are concerned that BAEconomics source for data on coal unemployment is an article in the Australian newspaper which claims up to 12,000 jobs have been lost in the coal sector over the past two years. It appears this report has originated from the lobby group the Minerals Council of Australia. Economists should concentrate on official sources for their statistics and not the industry lobby group.

Outside of the mining industry in the Hunter Valley there is no employment crisis. We refer to the attached study carried out by the Australian Institute and the percentages quoted therein.

Not only has the mining employment growth been strong as shown in the ABS data but more than any other industry mining has recruited skilled workers from other sectors and not from the unemployed. This suggests that workers in the Warkworth project will be able to find employment either within the industry or other businesses that they have come from to a degree that few workers in other industries can achieve.

Further this project application process and the two court cases against it have been running for five years. It is clear that workers who may be concerned about their jobs have had ample opportunity and plenty of notice to look for other work.

### **Impact on the community and property values**

It is also clear that while the benefits of the project have been overstated, the costs it imposes on the local community have been understated. It is of great concern to us that the assessment concludes there will be no change to our property values or general wellbeing if we are required to live next to an open cut coal mine for an extra 15 years. This is an unacceptable assessment and statement.



### **Impact on the ecology**

This project will destroy large areas of an endangered ecosystem, the Warkworth Sands Woodlands and other endangered ecological communities. In the assessment by the Rio Tinto's economists they have assumed that the offset package will perfectly compensate for this impact and it is valued at the cost of planting the new woodland. Our expert ecologist states that there is no guarantee that Rio Tinto can create a unique ecosystem.

Clearly protecting some areas of Warkworth Sands Woodland does not avoid the destruction of the proposed clearing of WSW and it is uncertain about the future commitment to protecting the Woodlands further. There is ample evidence both in the ecology studies by Dr Stephen Bell and evidence heard during both Court cases that Warkworth Sands Woodlands cannot be re-established.

### **Noise, vibration, air quality and visual amenity**

BAEconomics claim they have measured the impacts of noise vibration air quality and visual amenity through '*Financial Instruments*'. Their basis for this is their "*observed behaviour of households or individuals of incurring financial outlays to insulate themselves against a non-market 'Bad' etc..*" This is wrong. Neither Rio Tinto nor BAEconomics have made any observations of people's behaviour in Bulga and have used no market to assess these values. Instead they have used Rio Tinto estimates of expenditure required to mitigate noise vibration etc. to comply with government guidelines. As residents of Bulga we can confirm that there has been no observation made of our behaviour.

BAEconomics assume that the project will comply with all Government criteria. We have many instances documented of non-compliance and given that the mine is under financial pressure there will be strong incentives to minimise expenditure on mitigation measures and this will impose further costs on our local community.

### **Conclusion**

It is fundamental that the Warkworth Mining proposal and the costs do not outweigh the benefits. The royalties earned and the employment effects are not enough to justify the impacts on a rural community and the destruction of unique Woodlands.

The BAEconomics study avoids the difficult issue of the project's viability under current costs and reasonably expected coal prices and must be rejected.

It is clear to us that BAEconomics have constructed their analysis around assumptions that suit their clients but it is not supported by current market conditions, official data or independent scientific opinion.

Based on the economic analysis carried out by The Australia Institute, this application for the extension of the Warkworth mine must be rejected



## **EMPLOYMENT**

Rio Tinto and the Government use the scare tactics of job losses if the expansion does not proceed. There is no acknowledgment by Rio of the impact on the Village of Bulga, the loss of unique woodlands and the dodgy economical modelling used to support their arguments. Without this knowledge naturally an employee in the coal industry will vote in favour of a project which may provide longer term employment. Underlying all of this however is the continuing slide in the price of coal which is of greater danger to jobs than the end of the Warkworth Mine. Rio Tinto is now looking at every position and employee to see what and who can be dispensed with to reduce costs of extraction.

The threat of job losses is an emotional matter for the miner's and their families and of course suits the Government who use this tactic to unreasonably approve mines that should not be approved.

Rio Tinto and the Minerals Council continually push the matter of the jobs for this mine and the industry in general. We draw attention to the recent report by the Australia Institute which in part provides research figures whereby only 5% of the Hunter Valley jobs are in the Coal Industry and Royalties are only 2% of the State Government's income. That research puts the mining industry in the Hunter Valley into perspective. 95% of the working population in the Hunter Valley does not work in the mining industry.

The new Hunter Expressway provides much better and quicker access for displaced miners to work in Maitland and Newcastle and to be included in this 95%. The non-mining sector in the Hunter is in good economic shape.

We must preserve the sustainable industries such as tourism, wine and grape growing, agriculture, and horse breeding. If these two big Mines expand it is generally felt in this area that we will not only lose the township of Bulga but he will also lose a major industry such as the horse breeding industry.

Government must weigh up the benefit of jobs versus the cost to the community of intrusive industries like mining. People have the right to live in quiet enjoyment without the noise, dust and visual impacts of mining.

Finally, on page 360 Volume 1 it states "Mining is the dominant industry of employment across the assessment area representing 22% of the workforce in Singleton LGA and 21% in Bulga. This last figure is not correct as this would equate to 80 of the Bulga Village residents working in the mining industry. On last count we believe 20 residents of Bulga work in the mining industry.

## 10. LAND VALUES

Property values are affected by the expansion plans for a mine. As soon as a mine is within close proximity, the property values become depressed. 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. The mine doesn't compensate anyone for the reduced value of their property. If any other industry had come along and reduced the value of an adjacent property they would have to pay compensation for that, but not mining companies.

The Singleton LGA in 2010 had properties valued by the Valuer General of \$2.48b, in 2014 the figure had increased to \$2.66b - an increase of \$180m or approx. + 6.7%

- When compared to the region a review of properties in the Broke to Bulga area showed that the Valuer General had reduced in value all properties by an average of -11.65%, (the range of the decline in values was from -2% to -31%).
- A sample review of property values in the Hermitage Road area of Pokolbin showed that the Valuer General had applied a reduced value of properties by approx. 4% in the period 2010 to 2013.

These results further challenge the EIS claims, showing that while the Hunter region as a whole may have seen growth in property values, the areas affected by the threat of coal mining have suffered a material decline in value.

It is noted on page 385 of Volume 1, Dr Stubbs misuses the median values of properties stating that the median sale price for the property rose from \$282,500 to \$450,000 in June 2010 a 60% increase. The median price is assessed as a price that is lower than the highest 50% and higher than the lowest 50% but is must be like for like in the listing.

Dr Stubbs report is completely erroneous as the properties included in her assessment range from a \$4.5 million stud farm to a residence on a small holding. You cannot use the median price to make comparison between horse studs and small single dwelling residential properties.

Over the past two years The Valuer General throughout this area has devalued the land in Bulga.

## **11. MINING**

The proposed extension to mining of the coal resource to the west of the Wallaby Scrub Road by open cut will cause major community adversity. The destruction of valuable EECs and the current NDAs can be avoided by underground mining methods. We encourage recent statements by the General Manager of Warkworth Mount Thorley that underground alternatives are still be considered.

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 to the west of the Wallaby Scrub Road can be recovered by highwall mining extending to a safe distance from Wollombi Brook thus recovering a higher percentage of the coal resource. 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 and not requiring the closure of Wallaby Scrub Road.

The cost advantage of open-cut over underground extraction is questionable.

## 12. BLASTING AND ROAD CLOSURES

Given the level of public disquiet relating to blasting activities (year to end June 2014 some 27 complaints), it is very concerning that the assessment is based on work some four years ago. It appears that the study has been undertaken without consultation with mine site personnel, without reference to the site management plans and is not consistent with contemporary recommendations in relation to blast vibration limits for heritage structures. This is evidenced by:

- The vibration predictive formula referenced in Appendix F is at odds with the operational site law. Both the coefficient and worst case K factor are inconsistent with values derived from actual blast monitoring. This being the case, one might reasonably challenge any conclusions in relation to vibration predictions
- The nominated vibration limit of 10mm/sec for heritage structures in Appendix F (St Phillips church and Bulga bridge) is inconsistent with the level recommended by Lewandowski (5mm/sec) and published in the MTW Blast Management Plan. Hunter Valley Operations has also adopted a vibration limit of 5mm/sec for St Phillips church. Studies supporting the recently completed Bulga Optimisation Project EIS have advocated a 3mm/sec limit for heritage structures. A number of heritage structures in the Bulga area have not been included in the blast section and should be protected by 3mm/sec vibration limits
- The 1990 ANZECC report *Technical Basis For Guidelines To Minimise Annoyance Due To Blasting Overpressure And Ground Vibration* has a recommendation that the long term regulatory goal for ground vibration be 2mm/sec. It is not unreasonable to expect that twenty four (24) years after the report was presented that the regulated limits could be set at 2mm/sec with 5% of blasts up to 5mm/sec. It is interesting to note the proponent selectively references the ANZECC report but fails to acknowledge long standing commitments.

Other issues relating to blasting activities and not addressed in the study include:

- The appalling level of service currently provided by the “blast hotline” is very concerning. The hotline is the primary tool used for the purposes of blast notification. Messages are recorded just a few hours ahead of blasting but are invariably misleading. An analysis of hotline predicted blast times for 29 blasts from late May 14 to end of June 14 revealed:
- 21% of blasts were fired without any blast hotline message at all
- 55% of blasts fired were either an average of 60 minutes early or 60 minutes late compared with the time nominated on the hotline (ranging from over 3 hours early to over 2 hours late).

These results are indicative of either (at best) a process out of control or (at worse) a total disregard for consent requirements.

- The almost random nature of public road closures has led to heightened levels of frustration with the travelling public. The total disconnect between newspaper advertisements, road signs and blast hotline messages means that it is impossible to predict with any level of confidence when the road will be closed to traffic. Lengthy negotiations between Bulga community representatives and MTW some years ago led to blasts requiring road closure being advertised and executed at 1pm or soon thereafter. This enabled Bulga residents to plan ahead of closures. In recent times the urgency to increase coal production made the agreed timetable inconvenient for the mining company. To suit the changed mine operating plans DPE compliance officers granted extended blasting times to between 9am and 5pm. With mining activities approaching the intersections of Putty Road, Charlton Road and Wallaby Scrub Road MTW has now been given consent to close the three roads simultaneously, effectively preventing egress from Bulga particularly in the event of an emergency. These changes to accepted operating practices have seriously disadvantaged the local community. Many road closures are not detailed on the blast hotline. It is noted that roads are being closed to circumvent wind speed and directions blast restrictions that would otherwise prevent blasts well outside the 500m zone from being fired - the travelling public are being unnecessarily impacted. The impact of road closures will be further exacerbated if the Wallaby Scrub Road is permanently closed.
- Ground vibration exceeding 3mm/sec has over the years damaged houses and public structures and collapsed gravesites at Bulga Cemetery. These reported incidents have not been included in the EIS and in most instances responsibility has been denied although MTW has on occasions carried out repairs to correct the damage. Rio Tinto consultants conveniently blame "reactive soil" for the damage even when cracks appear during a blasting event. The current use of inferior quality explosive products has resulted in an increase in production of dangerous nitrous oxide plumes escaping into the environment.
- Some recent (April, May) blast ground vibration levels have been disturbingly high, with a number well over 5mm/sec. Along with an inability to provide a reasonable indication of blast times, these high vibration levels are symptomatic of a process out of control. At these vibration levels it is very disconcerting as a resident to have no warning of a blast and to experience significant shaking of dwellings. The level of discomfort is well beyond annoyance, with anxiety and distress being a more appropriate description.

- In an age when the majority of air blast and ground vibration results are available to the site within minutes of a blast it is unacceptable that reporting of results online is delayed for up to 7 weeks. In the spirit of openness and transparency results should be available online in near real-time.

In summary, the assessment of blasting should be revisited with predicted impacts being based on parameters derived from actual site measurements. Heritage issues are not satisfactorily addressed in the report. Social impact issues such as blast notification and road closure management remain unanswered. 24 years on from the original ANZECC report, ground vibration of 2mm/sec should be mandated.

### **Vibration and damage from blasting**

Vibration is felt in varying degrees throughout Bulga and the surrounding rural area 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 and the surrounding rural area. 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 and the surrounding rural area.

Whilst the ground vibration levels are allegedly within acceptable limits, the EIS 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 Bulga Mountain and the escarpment.

### **13. SADDLE RIDGE (known as Saddleback Ridge in the EIS)**

#### **Visual Effect**

Bulga is on the western side of the Wollombi brook with the ground leaving the mountain range sloping down towards the brook on the eastern side of Bulga.

When families decide to build a home they look 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.

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. The view of these mountains is being replaced with ugly piles of overburden.

Saddle Ridge is the last of the original landscape for residents looking east. Removing this ridge will give a view of nothing but overburden which locals will find very depressing.

#### *Noise protection by Saddle Ridge*

Saddle Ridge is currently giving Bulga some protection from the Industrial noise of mining in the Warkworth Pit. The Ridge reflects mining noise back toward the mine where it has no effect.

The removal of this ridge will leave the high overburden piles exposed to Bulga residents. With the ridge gone and the overburden behind the mine now reflecting noise towards Bulga, the mining noise will greatly increase.

The backdrop of the Bulga Mountains behind the village has an echoing effect of the mining noise, if a large rock is dropped into an empty truck we get to hear it twice. Now we will have two reflectors facing each other. It's like having a light bulb between two mirrors.

Other mining companies operating near towns either build an earth wall to protect the town from noise or mine in the direction away from the town thus protecting the town having the overburden between the mine and the town. This application is the reverse of that with the mine heading for the village with the overburden behind it creating an amphitheatre of mining noise.

We refer to the recent proposal for the Drayton South project where the applicant proposed a bund wall to protect adjacent horse breeding properties from the impact of the proposed mine. This is supported by DPE. It appears this proposal is the opposite of Drayton South where WML with the support of DPE state that the Ridge (bund wall) offers little or no protection.



An excerpt from the L&E Judgement paragraph 285 states:

*“The applicant did not lead expert evidence to challenge this evidence. On the basis of Mr Ishac's evidence, I accept that Saddleback Ridge may make some contribution to noise attenuation, particularly in calmer meteorological conditions, and that the proposal to remove it by the expansion of mining operations to the west from Year 2 onwards will increase noise impacts to some extent. 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). The significance of the removal of Saddleback Ridge is considered below as an element of the social impact of the proposed Project.”*

## **14. WALLABY SCRUB ROAD**

### **State Significance**

Wallaby Scrub Road forms part of the Great North Road running from Sydney to the north beyond Warkworth village. There has been no attempted interference with the original location of the road until now. The road holds both State and Federal Heritage Status and warranted establishment of a protection and preservation organisation funded by both State and Federal Governments and named "Convict Trail Project" (CTP). The assertion that Wallaby Scrub Road is a branch from the Great North Road and was not constructed by convict labour is incorrect. Records indicate that convict road parties worked on both Wallaby Scrub Road and the bridge over Cockfighter Creek at Warkworth.

The EA Assessment of Heritage Significance (Vol 1 Table 19.2 Item 2 Page 324) states that "this section retains much of the original alignment and is historically significant at State level". This alone should be sufficient evidence to refuse destruction of Wallaby Scrub Road and retain it as part of the longest road constructed at that time in Australia.

Cultural heritage consultation was made with CTP and OEH, who fund CTP, and RMS who have no jurisdiction over this Council owned road.

Widespread consultation was not offered to other interested parties such as The RAHS, State Archives, Singleton Historical Society, State and Federal Museums and historians.

Instead the mining company has selected a small organisation, CTP, as being representative of the wider community.

The former CEO of CTP Ms E Roberts forcefully objected to interference with the road in 2012 however the BMPA is now told that since then lengthy discussion has taken place between Rio Tinto and the CTP to fund projects outside of the subject area to the tune of \$200,000. The CTP is fearful of losing Government funding and obviously has no alternative other than to accept the lucrative offer in order to survive. This financial inducement is seen as no more than a bribe to release Wallaby Scrub Road for ultimate destruction.

A similar project by neighbouring Bulga Coal Mine considered the relocation of Charlton Road, a section of the Great North Road, however as a result of community objection changed their proposal to retain the road extant and preserve the integrity of the Great North Road. This heritage consideration must be commended and should also be respected by Rio Tinto.

The fact that Rio Tinto is prepared to spend money to preserve a small section at the northern end of Wallaby Scrub Road, outside of the proposed mining area, is inconsistent and hypocritical and merely a token effort to convince the approving authority that they really care about the future of Wallaby Scrub Road.

Destruction of the road for the sole purpose of mining coal for the export market must not be allowed. A previous PAC refused relocation of the road as an option.

### **Road Closure**

Singleton Shire Council has on six separate occasions rejected the open-cut mine proposal and refused to hand over Wallaby Scrub Road for mining purposes.

NSW Roads Act 1993 clearly states that the road can only be resumed if the result enhances or improves the road, destroying the road does neither. We have already seen the State Government amend planning policies to assist the approval of this type of development. Any amendment to the Roads Act will only be seen as another move to assist the approvals process.

### **Traffic**

The EA includes results of traffic flow surveys with a mixture of daily and 12 hourly statistics leaving no direct comparison of results. There is no indication of when the 12 hour survey was taken. The EA speaks of the beneficial effects of traffic changes after opening of the Hunter Expressway but ignores the projected increase in traffic flow along Putty Road after completion of the Badgery's Creek Airport. In anticipation of additional generated traffic timber bridges have been replaced, the road has been upgraded and both Windsor and Bulga Bridges remain to be replaced in the next 5 to 10 years, creating a flood-free route to the north. Heavy transport vehicles travelling to the north of the state and Qld prefer to use Wallaby Scrub Road to avoid traffic congestion at Singleton and the New England Highway. A 200% increase in traffic flow through Bulga will render the EA predictions worthless and should be rejected.

Traffic flow figures (Vol 1 Table 20.9 page 345) indicate that there has been a 14.4% increase in traffic flow between Bulga and Wallaby Scrub Road from 2010 to 2014.

The average 800 vehicles currently using Wallaby Scrub Road daily will be required to travel an additional 9km to reach their destination.

800 vehicles x 9km x 350 days p.a = 2.5 million km per annum.

At a conservative running cost of 25 cents per km the cost of additional travel amounts to \$600,000 p.a or \$12 million over 20 years and ad finitum.

These very conservative calculations do not take into consideration the 2% annual increase in traffic flow nor the predicted additional traffic using Putty Road. Is it fair and reasonable to expect the travelling public to meet this additional cost for the benefit of the mining company?

The statement that Wallaby Scrub Road is of inferior standard to other roads and dangerous is incorrect. The road is in excellent condition, is wide and constructed in a straight line free of dangerous bends. The accident rate is well below average.

As far back as 2002 Warkworth Mine's second preferred option was to mine underground leaving Wallaby Scrub Road intact. Coal reserves remain the same today as in 2002.

**Fire Control**

The proposal to provide the Rural Fire Service fire trail access adjacent to mining operations in lieu of Wallaby Scrub Road is solely for the purpose of protecting Warkworth Mine in the event of bushfire in the Wallaby Scrub, will create significantly more ground disturbance and will become redundant as the operation moves further to the west.

Fast access to emergencies on the Golden Highway and Jerrys Plains area by personnel based at the new Upper Hunter RFS Operations Centre at Bulga will be further impeded by an extra 9km travel distance.

**Broke Road**

The Rio Tinto offer to spend to \$2 million to upgrade the Golden Highway/Broke Road intersection resulting from increased traffic flow from closure of Wallaby Scrub Road no longer applies (Ref: Vol 1 Traffic & Transport Section 20.3.2 1<sup>st</sup> para. page 350) as RMS has now made road improvements at that location at tax payers' expense.

## 15. ABORIGINAL CULTURAL HERITAGE

Rio Tinto has chosen to use the same data provided in the now disallowed 2010 EA. Once again MTW (ref: EA Vol 1 para. 2 page 311 and minutes of ACHWG meetings in 2010 EA) has chosen to ignore the pleas of the Aboriginal groups requesting that their heritage be not disturbed. To date all 110 sites within the mined area have been destroyed and a further 104 in this proposal area are to meet the same fate.

Examples from the minutes of ACHWG meeting (page 220 – EA 2010) were a) the chairman told the meeting that the site M grinding groove heritage site could not be preserved if the extension proceeded. b) A number of concerns were raised by community representatives including (Item 2) there is a constant process of destroying cultural sites for mining – Aboriginal people's interests are not being fully considered – we continue to lose our culture. The chairman's response was "open-cut mining development creates significant ground disturbance and unfortunately many cultural sites are destroyed to make way for mining which provides great economic benefit to the district".

In the small Modification 6 area recently approved by a PAC of the 7 CH sites recorded 3 have been destroyed under NPW Act permit and 4 have not been located leaving the area totally devoid of cultural sites.

To remove artefacts such as grinding groove rocks and scarred trees from their original location destroys the heritage value of the site and the artefact, which is inconsistent with Government Law applying to other Aboriginal Heritage Sites.

A recently discovered second section of "History of Bulga" notes written by local anthropologist, Alex Eather in 1921 describes a much larger area of Bora Ground than previously thought extending approximately 400 metres further to the East into the proposed mining area. No effort by Rio Tinto has been made to further investigate this revelation.

Rio Tinto's methodology whereby historians, academics, anthropologists and legal representatives have not been included in the ACHWG can only cast suspicion on the possibility of the Aboriginal Community being disadvantaged in negotiations.

The above issues were publicised at the Mod. 6 PAC meeting but obviously not given serious consideration.

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.

## 16. BUILT HERITAGE

To date all white settler built heritage within the mined area has been destroyed – no attempt had been made to preserve or relocate those structures which included McGregor's historic woolshed and yards, Harborne's residence, a slab wall and shingle roofed residence beside the old Jerrys Plains Road, Scholes' residence on North Charlton Ridge, Bates' 150 year old residence at Saddle Ridge (erroneously referred to as Saddleback Ridge in the EA) and the similar aged Martin's wineshop at Charlton Road – not a good track record.

Two important sites are now the subject of this mine expansion.

The WW2 RAAF Base at Bulga has been relinquished by the Federal Government. Consultation in this regard was totally inadequate as Air Force historians and heritage museums were not offered stakeholder input.

It is unclear in the Historic heritage section (Part 9.2.1 page 319 2nd last para.) as to which base is described in the text. Bulga RAAF Base included 2 intersecting runways – the larger being capable of handling fully laden bombers and was strategically located for protection of both Newcastle and Sydney. Rio Tinto has downplayed the importance of the base during WW2.

The property has been owned by MTW for approximately 30 years during which time structures on site have been allowed to fall into disrepair. Field infrastructure remains in excellent condition and should be set aside as a cultural heritage conservation site as is proposed for the adjoining ACHCA.

Similarly Wallaby Scrub Road has been deliberately downgraded in value by Rio Tinto, with an offer of \$200,000 to the Convict Trail Project to relinquish any interest in this portion of the Great North Road. Singleton Shire Council has rejected the mine extension proposal and any offer from Rio Tinto to acquire the road. Again, widespread consultation was not made available to other potential stakeholders.

MTW has belatedly established a CHWG with a diverse selection of members to focus on preserving remaining heritage structures which happens to be located outside of the proposed mining areas. This effort is too little too late.

## **NEWS MEDIA COVERAGE**

Over the past four years the matter of the Warkworth Extension has attracted substantial interest from new media all over the world. The majority of these outlets express concern for the people of Bulga and the impact on the community. The very few instances where there has been support for the expansion has been in opinion pieces from the Minerals Council and Rio Tinto. Generally the media has reported favourably on the onslaught facing Bulga and provides insights into the impacts the community will experience.

A selection of newspaper and other articles and publications is included in this submission as Attachment 7,



## 18, PERFORMANCE AND CONSENT BREACHES

The BMPA considers the MTW has failed to act responsibly in the following areas.

1. 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.
2. MTW has been fined for breaches in noise levels and dust exceedences
3. MTW has made false statements to the CCC meeting regarding reasons for disallowing use of Wallaby Scrub Road as a gas pipeline route.
4. MTW was dishonest in not disclosing their intentions for future use of Newport Farm.
5. 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 and the Ministerial Deed of Agreement.
6. MTW exhibited tardiness in establishment of four habitat ponds for the endangered Green and Gold Bell Frog. This was part of their obligation under Conditions of Consent.
7. GDP no. 239 for the habitat ponds expired prior to commencement of work in 2008. GDP no. 266 was issued for exploration of bore holes, drill pads and access roads in Non Disturbance Area 1 (reference AEMR 2008 page 107)

Given the above matters we are concerned that the mining company will not honour its agreements or intentions included in the EIS.

As representatives of the residents of Bulga and Milbrodale, the Bulga Milbrodale Progress Association Inc., we are available to answer any questions you may have on the above submission.

Yours faithfully

**The Bulga Milbrodale Progress Association Inc.**

John Lamb  
President

Attachments

APPENDIX 1	Noise review from a Bulga Resident's perspective
APPENDIX 2	Ecology report by Dr Stephen Bell
APPENDIX 3	Noise report by Day Designs
APPENDIX 4	Social Impact by Professor Glenn Albrecht
APPENDIX 5	Economic report from The Australia Institute
APPENDIX 6	Resident affidavit with supporting photographs
APPENDIX 7	Press articles and publication