

SUBMISSION ON EIS FOR ROCKY HILL COAL PROJECT

DEVELOPMENT APPLICATION NUMBER SSD-5156

BY

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1. THIS SUBMISSION

I'm a retired water resources engineer, a member of Groundswell Gloucester and president of the Gloucester Environment Group. However, this is my personal submission. As my background is in groundwater, I have gone into some detail in that area.

2. INTRODUCTION & CONTEXT

I strongly object to the Rocky Hill Coal Project (RHCP). I live with my wife in the Gloucester Shire. Our 4 hectare property is about 10km north-west of Gloucester, so we are not directly affected by current developments and plans to the south of Gloucester. However, we chose the Gloucester area for our retirement as the minute we drove into the town, having also looked in the south coast, the southern highlands and the Hunter valley, it *felt right*. After talking to people who were living in Gloucester and looking at more information about the town, it felt even better. Now having lived here for 10 years, our hunch was right and we love living in this beautiful place. Gloucester has what has been called "*a sense of place*".

Why does Gloucester have a sense of place? Largely because of its location and beauty. It's in a narrow valley between two magnificent small ranges, the Bucketts and Mograni. It has four significant rivers which confluence closeby then flow into the Manning River. These rivers all have their sources and flow from the Barrington Tops World Heritage Area and surrounding forests. Much of the cleared land surrounding Gloucester is beautiful grazing country that is green most of the year and at its greenest in summer. The drive to Gloucester from any direction is beautiful, with the main road from the Pacific Highway largely following a valley with parallel hills which join up to the Bucketts and Mograni ranges. It passes through beautiful towns and villages with Stroud being the most beautiful.

The beauty of the Gloucester Vale and its sense of place has been recognised the National Trust.

So why under any circumstances would anybody want to put Rocky Hill coal mine so close to town and in a prime visual position on the edge of the valley?

It just does not make any sense.

This mine is far too close to Gloucester and in the wrong landscape.

3. ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

The Environmental Impact Assessment (EIA) in Part 4 of the *Environmental Planning and Assessment Act* is applied by the Department of Planning and Environment in a very selective way. It only considers the proposal for the RHCP that is in the current Environmental Impact Statement (EIS). As such it should only form part of the Government's decision making process.

It is clear that contrary to what Gloucester Resources Limited (GRL) has said, this should only be considered as 'Stage 1'. GRL has mostly been careful not to talk about future stages. (Although it is noted that there is at least one place in the EIS where it is stated "*if the mine life is extended....*".) This is very deceptive. GRL has given back to the Government part of their original exploration licences, to the north-west, no doubt because this section does not contain a significant coal resource.

However, GRL has kept the licence areas directly to the north and west of the current proposal. Geological mapping clearly shows that some of the same coal seams to be mined as part of the current development (call it Stage 1) are also in these areas. The Department of Planning and Environment (DP&E) has acknowledged that it is almost certain GRL will apply for mines in one or both of these areas if Stage 1 is approved. To get their 'foot in the door', GRL chose Stage 1 as it is a little further from town and will have a little less environmental, social and health impacts.

Nevertheless, I believe that the impacts of Stage 1 are totally unacceptable. But the impacts of future stages will be far worse for Gloucester. It is a nonsense and wrong that the EIA process only considers Stage 1. Even though the need to consider cumulative impacts is in the Director-General's requirements, DP&E only requires GRL to address this for the Yancoal mines, i.e. Stratford and Duralie further south in the valley. GRL is not required to look at the likely cumulative impacts for future stages of the Rocky Hill Mine.

If the Government approves Stage 1 without considering the likely impact of future stages, it is clearly complicit in accepting this nonsense of a process.

Although GRL would say that they have no plans for the future stages that can be assessed at this point in time, it is almost certain that they have some initial or notional plans. At least for the flawed AGL Gas Proposal, it was clearly acknowledged that there were in the order of another 220 wells being considered for future stages on top of the 110 wells for Stage 1.

In the case of noise, air quality and groundwater and surface water resources, extension of the mine to these areas would mean that the impacts will be even worse than for the current development due to the location of the likely economic coal seams close to town and the route of the Avon River and associated alluviums.

4. NOISE AND AIR QUALITY

Two fundamental issues for the RHCP are noise and air quality. The EPA's submission on this project is telling. It states:

"However the EPA highlights in relation to noise that:

- *DP&E needs to consider in its assessment of this application that if approved many residents and visitors to Gloucester will experience a changed noise environment (hearing mining noise for the first time).*
- *The Gloucester Valley experiences weather conditions like temperature inversions and southerly breezes reasonable regularly. Those conditions will increase noise from the mine, if approved, within Gloucester and its southern rural-residential estates.*
- *To achieve the noise contours predicted and shown in the EIS multiple layers of controls will be necessary. The required controls may not be practical to implement, due to the frequency of noise enhancing weather conditions like inversions and southerly breezes.*
- *Based on the frequency of temperature inversions in the Gloucester Valley, the modelling may have under-predicted noise levels from the mine at residential sensitive receivers.*

This means that noise impacts from the mine, if approved, may be greater than suggested by the EIS."

This is a very alarming assessment. I also understand that no matter what the standards might say and how they might be met by the proponent, a very large number of people will have mine noise in the background whenever the mine is operating. This is totally unacceptable and should be enough to reject the project without even considering other issues.

The EPA goes on to say:

"In relation to air, the EPA is concerned about the omission of information in the EIS and specialist studies regarding potential air quality impacts from blast fume. The EIS should have highlighted the importance of ensuring blasting does not occur in the stable atmospheric conditions experienced in the Gloucester Valley in the morning and evening so as to avoid exceedance of air quality criteria."

This has recently been a huge problem for the people of Broke which is near the Warkworth Mine. The impact of blasting is a critical issue and it has not been properly addressed by GRL

The EPA goes on to say that *"potential effects from spontaneous combustion, should it occur, is an important consideration for DP&E when considering this development application."*

Spontaneous combustion has already been a major problem for the Stratford Mine and a huge issue for a brown coalmine in the Gippsland.

There is no threshold below which particle pollution exposure is not harmful to health according to the World Health Organisation. Gloucester is 'perfectly' located relative to the mine for this to be another critical issue.

5. WATER

The EPA then go on to talk about water stating:

"Further information is needed in the following areas: preventing seepage from salty minewater storages; better characterisation of 'dirty' (sediment laden) water; clear information on the unit operations that are proposed in the water treatment plant; details of how/where brine will be managed/disposed; an assessment of the ephemeral watercourse that is proposed to receive discharges from the water treatment plant; discussion as to whether the treated water needs to be "conditioned" prior to reuse or discharge; better exploration as to whether the proposed reuse of some saline water onsite is appropriate or not, and an appropriate assessment of discharge limits for the water treatment plant."

It is clear that EPA consider that the EIS is totally inadequate in providing what should be considered essential information by the proponent in relation to water as well as noise and air quality discussed above.

6. GROUNDWATER

Groundwater is an area that I have some expertise in due to my 25 years of working with water utility and water resource management Government Agencies in Western Australia. So I will make some detailed comments with respect to this issue.

Groundwater is addressed in Section 4.6 of the main EIS document. The details of the Groundwater Assessment for Rocky Hill by Australasian Groundwater and Environment Consultants (AGE) are located in Volume 3, Part 4 of the Compendium.

6.1 Analysis of the issue

The environmental impacts of the Rocky Hill Mine Coal Project (RHCP) on groundwater and groundwater related issues are of major concern. The Environmental Impact Statement (EIS) states that the impacts of developing this mine on groundwater related issues will effectively be negligible. To illustrate this, the Groundwater section of the Executive Summary states that the groundwater assessment "concluded that:

- there would not be any substantial reduction to the shallow groundwater system;
- there would be no impacts to any groundwater dependent ecosystem;
- there would be no measurable impact on flows within Waukivory Creek or the Avon River; and
- groundwater levels would recover within approximately 10 years after the cessation of coal extraction."

The Executive Summary also:

- acknowledges that with respect to aquatic ecology, "...the Avon River system as a whole is significant..." and
- makes "commitments to protecting water quality within Waukivory Creek and the Avon River" and "would ensure the existing aquatic ecology would not be adversely impacted...."

However, there are significant problems with the EIS that cast doubt on these categorical statements. Some of the assumptions made in relation to water resources generally and in particular, the groundwater model that many of these statements are based on, are highly questionable. For instance the groundwater analysis is based on average rainfall over a short period. The critical time for groundwater systems and associated base flows, is during drought conditions and particularly a series of drought years and these have not been properly considered in the EIS. More details are provided in the section on and below.

6.2 Concerns/problems/issues

The EIS identifies a number of risks that could result from the proposed mine in section 4.6.1 and. These risks and ratings identified by the consultants are as follows:

- Reduction in baseflow in the Avon River and Waukivory Creek (*rated as medium risk*);
- Discharge of poor quality groundwater from the post closure landform (*low*);
- Reduced water quantities within groundwater systems irrespective of saline quality (*high*)
- Impact on groundwater (alluvial) biota (*low*);
- Reduced water quality in groundwater systems (*low*);
- Noticeable reduction in base flow regimes in the Avon River and Waukivory Creek, with impacts on downstream aquatic ecology and other users (*low*).

Continuing GRL's theme of no or negligible impacts, most of these risks have been assessed as *low*. However, perhaps the most important risk, has been set at *medium*. This is the risk of "Reduction in baseflow.....", which must then, even by GRL's standards, be considered as potentially a very significant impact. This is discussed further below.

Interestingly, the second risk of "Discharge of poor quality groundwater from the post closure landform" is rated in the Amended EIS as *low* whereas it was rated as *medium* in the original EIS. To add to this, GRL has included as a *high risk* something that was not listed at all in the original EIS i.e. "Reduced water quantities within groundwater systems irrespective of saline quality".

It is not at all clear why GRL has done this but it would seem that one factor may be that they are trying to play down the stated risk of discharging poor quality water into the Avon River and Waukivory Creek. GRL should also have very specifically addressed this *high risk* issue as to what the *likely* impacts will be.

Section 4.6.4 identifies related "potential environmental impacts". The issues associated with the proponent's identified risks above and the stated potential environmental impacts, together with other issues not specifically listed by the proponent, are addressed below.

6.3 Complex Hydrogeology & Groundwater Modelling

The Mine Area is in a part of the valley where the geology is extremely complex, and therefore the hydrogeology, is also complex. As such, accurately modelling of groundwater flow and drawdown at an acceptable scale is extremely difficult.

