SINGLETON SHIRE

HEALTHY ENVIRONMENT GROUP

A community-based group looking to address environmental issues affecting Singleton Shire residents

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Rio Tinto Warkworth Modification Application

The proposed Rio Tinto Warkworth Modification Application directly impacts on the health of the residents of Bulga, Singleton and the Upper Hunter. This submission outlines the incontrovertible evidence of the perils to which residents are already exposed, and argues that they must be reduced. In that context, any thought of further expansion of coal mining and transport is immoral.

For the past five years, Singleton Shire Healthy Environment Group has been campaigning to reduce the amount of air pollution affecting residents of the Upper Hunter. For twenty years before that, residents had voiced their concerns that their health was being affected by coal mining. Their concerns were consistently ignored by the government of the day, and the mining industry, and the Group was formed to pursue the matter.

It set out with two questions: Is the health of residents of Singleton being affected by the obvious pollution in the air of the Upper Hunter, and where is the pollution coming from?

Early investigations showed that:

- coal mining and coal-fired power generation overseas have been linked with poor health of people living in their proximity;
- the major sources of air pollution in the Upper Hunter are coal mining and power generation, with each emitting very large amounts of pollutants;
- there are 37 types of pollutants, some in the form of particles such as visible dust and others as gases such as sulphur dioxide. Some of the gases, including sulphur dioxide, subsequently interact with other chemicals in the atmosphere and form particles, in this case, sulphates;
- coal mining contributes most of the coarser particles, and coal combustion through power generation produces most of the finer ones.

But, local information confirming health impacts could not be found, nor could actual concentrations of pollutants in the air and their level of threat.

Further investigations were needed and have since been undertaken by NSW Health, the Environmental Protection Authority and Office of Environment and Heritage. These have been supplemented by the recent Air Pollution and Health Forum in Newcastle, sponsored by the University of Newcastle and the Centre for Air Quality and Health Research and

Evaluation in the Woolcock Institute at Sydney University. And, more recently, the World Health Organisation's International Agency for Research on Cancer has given its judgment that air pollution and air particulates are carcinogenic. Consequently, everyone is now far better informed and able to confidently draw some conclusions.

First, the Upper Hunter Valley Particle Characterisation Study. This was long awaited because, for the first time, we now know the concentrations of some of the pollutants in the air of the Upper Hunter, and their sources. The Study showed that concentrations of the finer particles, PM2.5 (a human hair is about 70 microns in diameter), able to penetrate far into the lungs, approach or exceed advisory limits in winter in Muswellbrook and, to a lesser extent, Singleton. It also demonstrated a mix of sources, the major ones being domestic woodsmoke in winter, and power station emissions, vehicle emissions and coal mining throughout the year. Sea salt and bushfires also make significant contributions.

Second, the Upper Hunter Air Quality Monitoring Network, in full operation since early 2012, shows many exceedances of the standards for particles of 10 microns and less in size, known as PM10, throughout the Upper Hunter, and occasional exceedances of PM2.5 in Muswellbrook. PM10 exceedances are already far more frequent on the Bulga side of Singleton than elsewhere in the Valley except Camberwell. Although both particle sizes are major contributors, the National Pollutant Inventory shows that coal mining is the major source of particles toward the upper end of this scale, and power stations toward the smaller sizes. Indeed, coal mining provides around 90% of the PM10s which have risen an extraordinary five-fold between 1999-2000 and 2100-12 (National Pollutant Inventory) in line with the expansion of mining.

Third, the recent air pollution forum brought together experts from Australia and around the world. The most striking take-home message was that any level of PM2.5 is now well-established as injurious to health. There is no threshold below which we are not affected, with most of the damage being done to our respiratory and, especially, cardiovascular systems. Since the conference, the World Health Organisation's International Agency for Research on Cancer has also declared air pollution and these particles carcinogenic, principally causing lung cancer and, probably, bladder cancer. The evidence for the coarser particles which frequently exceed standards points to damage to the upper respiratory system where most of these particles are filtered out before the finer ones proceed into the lungs and beyond. This results in exacerbation of existing respiratory diseases and inflammation of the upper airways.

These effects are being felt by current generations, but it is important to recognize 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 for them that we must care.

So now there are definitive answers to our questions, and these cannot be ignored by a Government which professes that the health of people is its highest priority. Human health *is* being affected by the obvious and less obvious pollution in the air of the Upper Hunter and this pollution is largely coming from power stations, vehicle emissions and coal mining

and, in winter, domestic wood fires. All of these can and must be reduced. Sea salt and bushfire smoke, also significant contributors, cannot.

In contrast to this obvious moral imperative, we see State Governments reluctant to face up to the *cumulative* impact of each new development. It cannot be ignorant of the fact that every time it approves another mine, it adds more pollutants to the air breathed by the people of the Hunter. In the four years from 2007-08 to 2011-12, for example, the following increases of proven health-damaging pollutants in the Singleton-Muswellbrook area occurred due to the cumulative impact of mining alone: PM2.5 25%, carbon monoxide 49%, nitrogen oxides 55%, and PM10 46%. The Upper Hunter Air Quality Monitoring Network provides frequent evidence of the consequences in the form of many exceedances of PM10 and a lesser number of PM2.5.

What, then, is to be done about this situation? With this knowledge it is reckless and unacceptable to continue to expose people, especially our children, to health risks when they are firmly established as causing harm. There can be no further expansion of coal mining beyond what currently exists, and existing mines must reduce their emissions.

Any increase in air pollution in the Hunter Valley would be a moral, physical and mental insult to the people of the entire Hunter Valley. In this context, the idea that approval could be given to another mine extension would be beyond imagination if it were not for the historical record of the attitudes of less well-informed Governments.

Singleton Shire Healthy Environment Group protests against the Rio Tinto Warkworth Modification Application in the strongest terms. It must not proceed, nor must any further expansion of coal mining beyond what is already occurring.

Will the O'Farrell Government make residents health its first priority? There can be no further delay. Otherwise history will record that it knew the issue but buried its head in the sand to the peril of our and future generations. Unlike some Governments of decades past, it will not be able to escape blame by pleading ignorance.

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for Singleton Shire Healthy Environment Group
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