

## Health Concerns at Stratford. A Health Review of Stratford residents is overdue

Open Cut coal mining commenced at Stratford in 1995. Stratford Village comprises of about 40 dwellings. These dwellings are between only 1km and 1.5km from the mine and they include a primary school. Drinking water to these homes comes from domestic rainwater tanks.

Coal mining has been known to be damaging to health for many years and the miners get paid high wages and their exposure to health damaging factors is reduced by working in air conditioned vehicles, the use of ear muffs and their water supply is brought in from outside in bottles. Miners are medically examined before they start working and only the fit are employed. They only work in this toxic environment for about a quarter of the 168 hours in a week. Any health damage emerging during employment can be reported to and assessed by the Dust Diseases Tribunal for compensation.

No initial health screening was performed for the residents of Stratford Village. No community education of 'At Risk' groups (the pregnant, infants and children, the elderly and the chronically ill) occurred nor were air or water purifiers supplied nor sound mufflers (unless residents happened to also be mine employees). No yearly health checkups are provided yet the elderly, invalid pensioners, housewives and children being schooled at Stratford are in the toxic environment for four times as long as the miners.

The National Pollution Inventory requires polluting industries to lodge a yearly statement of which toxic substances they are emitting. Stratford Mine has complied with that request and the list of heavy metals, Volatile Organic Compounds (VOC), Polycyclic Aromatic Hydrocarbons (PAH) and Particulate Matter (PM) is updated on the web each April. Each of these is associated with separate health problems and a cumulative impact, with the same body system being poisoned by several different pollutants, is inevitable. Its precise extent is unpredictable. (Details of expected health impacts see below). Consent provisions gave 'acceptable/safe levels' for some of these toxins in isolation but ignore the inevitable cumulative aspects. This approach is outdated and overly simplistic:-

The cumulative health damage has never been addressed. Cumulative damage can occur from one toxin e.g PM2.5 dust particles causing lung fibrosis which slowly gets worse and worse over a few years. This is particularly severe for children with immature lungs but now after 15 years of exposure the majority of adults would have been damaged.

Cumulative damage can also be the result of two different toxins combining in a variety of ways:- e.g. 1) VOC react with nitrous oxides to release ozone which in turn triggers asthma in sensitive children. No-one is measuring ozone levels or looking for ozone sensitive asthma in Stratford children, but this could be very relevant for two or three individuals.

2) 20% of children have disturbed sleep from asthma and if this is compounded by sleep disturbance from noisy trains then problems multiply with learning and behaviour problems.

3) PAH from diesel emissions leads to brain damage with a lowering of IQ in infants exacerbating the above.

Medical science has advanced greatly since the original consent provisions were set up in 1995 but the consent provisions have not kept pace with current knowledge despite conditions being reviewed with each of several modifications.

Over 70 breaches of consent provisions have been recorded against Gloucester Coal since 2000.

The community were initially told the mine would have an 8 year life span and this may have influenced them to put up with the noxious environment and not seek proper investigation of health impacts.



The most recent comprehensive review is probably one released in Nov 2009 titled "Coals Assault on Human Health" by a US group Physicians for Social Responsibility. (downloadable from [www.psr.org/coalreport](http://www.psr.org/coalreport)).

This report opens with the statement "Coal pollutants affect all major body organ systems and contribute to four of the five leading causes of mortality in the US: heart disease, cancer, stroke, and chronic lower respiratory diseases"....."It interferes with lung development, increases heart attacks and compromises intellectual capacity".

In June 2010 The American Heart Association produced an 88 page review of Particulate Matter Air Pollution and Cardiovascular Disease and conclude "Exposure to PM2.5 over a few hours to weeks can trigger cardiovascular disease-related mortality and non fatal events; longer term exposure increases the for mortality to an even greater extent than exposures over a few days and reduces life expectancy within more highly exposed segments of the population by several months to a few years....PM2.5 exposure is deemed a modifiable factor that contributes to cardiovascular morbidity and disease".

This type of evidence emphasizes the necessity for abandoning the old fashioned gravimetric air quality monitors that average results over extended times and replace them with laser light monitors that catch the brief peaks of PM exposure such as occur with blasting and can trigger asthma attacks and heart irregularities.

The same mechanisms that cause problems in the arteries of the heart also affect the arteries supplying the brain. Prof F Perera has highlighted the PAH released from burning diesel fuel as causing up to 5 points of lowered IQ in infants and an increase in autistic and antisocial behaviours.

Dr Dick van Steenis reports studies from the UK that demonstrate asthma rates in children increase if they live closer than 5km to an open cut mine. At 3km the rate has doubled and at 1.5km the rate has trebled. This (1.5km) is the distance Stratford school is from the Mine. He also reports in London the rate of low birthweight babies, infant mortality, total number of deaths and heart attacks are the key indicators of high PM2.5 emission areas.

### Conclusion

The close proximity of the mine to Stratford Village -less than 1.5km, and the duration of exposure to open cut mining -15 years together make it inevitable the health of Stratford residents has been adversely affected. The decision to locate an open cut mine so close to a population base was approved by the government in 1995 and successive governments have approved increases in production rates. The precise extent of health damage is undetermined but should be clarified before any further increases in production rates are approved. A very strong moral imperative exists for each of this group of approximately 100 residents to be offered a health assessment with appropriate treatment and compensation.

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N.B. A survey of the heavy metal content of 100 domestic rainwater tanks located close to either Stratford or Duralie Mine is due to take place during Sept 26-28, 2010. This may provide further toxicological details about the burden being borne by this community. We request that we may forward this information for inclusion. We understand results will be available at that time.

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**CC:** <assessments@planning.nsw.gov.au>  
**Date:** 20/08/2010 8:33 am  
**Subject:** Online Submission from Melissa Seale (object)

Stratford mine was originally approved as a boutique mine but shock horror they are expanding! When is it all going to stop? Increased production means more farm land destroyed, more residents removed, more noise and more air pollution. Please stop mining on our beautiful fertile lands and lets move forward with renewable energies.

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Submission for Job: #4148 Modification 4 - Increased Production  
[https://majorprojects.onhiive.com/index.pl?action=view\\_job&id=4148](https://majorprojects.onhiive.com/index.pl?action=view_job&id=4148)

Site: #107 Stratford Coal Mine  
[https://majorprojects.onhiive.com/index.pl?action=view\\_site&id=107](https://majorprojects.onhiive.com/index.pl?action=view_site&id=107)