Submission by John Cleary to the *Inquiry into the impacts of mining in the Murray Darling Basin*

a. the potential impacts of current and projected mining operations on all environmental values in the Murray-Darling Basin and, in particular, the potential impacts upon surficial and groundwater flows and quality in the alluvial flood plains at its headwaters in the Namoi Valley and the Darling Downs catchments; and

b. evaluation of the potential impacts in the context of the Murray-Darling Plan and agricultural productivity.

In these terms of reference, 'mining operations' includes all minerals exploration and all minerals extraction including exploration for and extraction of gas.

By 2050, the world's population is estimated by the UN and the US Census Bureau to increase by more than 2 billion from the current level to exceed 9 billion. The UN estimates that food production will need to double by 2050, due to population growth and a variety of additional factors, to feed the world's population. Australia is well-placed, with sustainable farming practices and some of the most efficient farming methods in the world, to play its part in supplying this increased demand. The soils of the Darling Downs are world-renowned for their productivity. Australian farmers produce clean, green, healthy foods. The greatest assets are the soils, water and air. This should not be compromised.

As the population of the world (and Australia) increases, there are four resources for which demand increases - food, water, land, energy. Food & water are the most basic necessity to sustain life and therefore are the highest priority of the four resources. Technology is making renewable sources of energy a reality, however technology is not moving the basics of food production away from the need for prime agricultural land.

Coal mines should not be developed on prime agricultural land due to the potential detrimental/adverse impacts upon the natural environment. Specifically:

- Prime agricultural land (such as the Darling Downs, Liverpool Plains) is amongst the most fertile and productive food producing land in the world. It is also being farmed in a sustainable manner and, if continued to be farmed sustainably, there is no reason why it should not continue to produce food and fibre for thousands of years to come.

- Prime agricultural land cannot be created or re-created (alluvial plains take millions of years of the right geological conditions to create - man is unable to replicate that process).

- Mining is at odds with food production as mining irreversibly destroys the land, which can then never again be used to sustainably produce high-value, high-quality food.

- Mining of prime agricultural land is to take the short-term high-value energy gains at the expense of long-term, sustainable agricultural production. It is short-sighted in the extreme and is undertaken in the absence of a thorough analysis of the relative merits of the two options and the long-term holistic value of each. And it is a choice between the two – they cannot co-exist.

- Coal exists under much of mainland Australia - the massive majority of reserves being located outside prime agricultural land.

- Prime agricultural land is at least as important to human existence as rainforest, yet rainforest is morally and legislatively protected from being mined - should not prime agricultural land be equivalently protected given its crucial importance to human existence?

- We need a paradigm shift away from mining at the expense of all other land use - that sort of thinking is not sustainable. A sustainable community must have the same abhorrent reaction to mining in prime agricultural land as it does for mining in rainforest.

- The Main Range Volcanics basalt aquifers that underlie the proposed location of the Felton open-cut coal mine are already under significant pressure. The city of Toowoomba (largest provincial inland city in Australia) is currently drawing approximately 5,000 megalitres of water per annum from these aquifers (refer to attached extracted copy of article from *The Australian*).

- Presumably due to pressure on the aquifers, as of Sep 2008 limitations were imposed on nominal allocations for the taking of groundwater from the Main Range Volcanics for the purposes of irrigation.

- What evidence is there that open-cut coal mines do not have significant adverse, irreversible impacts upon the dynamics and balance of underground aquifers? The Main Range Volcanics in the Felton area, for example, can be located only several metres beneath the ground surface and can extend to less than 100 metres beneath the ground surface. Would a large-scale excavation not intercept these aquifers, disturbing natural underground flows that have been established over millions of years? What impacts would this have not only on the underground aquifers but also on spring flows to creeks and rivers located at the headwaters of the Murray-Darling Basin?

- The Acland coal mine, currently operated by New Hope, is also located over the Main Range Volcanics basalt aquifers. Anecdotally, I am told of domestic and stock bores that have run dry since the development of this open-cut mine.

- The Australian Government's own website (http://www.anra.gov.au/topics/water/gmu/gmu-nobby-basalts.html) includes some sober facts on the current condition of the basalt aquifers in the Main Range Volcanics of the Clarence-Moreton basin. These aquifers are thought to be recharged by rainfall infiltration at basalt outcrops on ridges. What impact would a mine at Felton have on aquifer recharge? Of particular concern would be the Nobby Basalts and the Upper Hodgson Creek Basalts.

- Apart from the likely adverse impacts upon groundwater aquifers, what of the risk of pollution to surface water runoff and consequential downstream flows? What of the more severe risk of major pollution and runoff from any mine sites in flood conditions. Most people around Australia would be all too aware of the scenes of the flooded mines in Central Queensland in early 2008 discharging untreated floodwater from the open-cut mine to the Fitzroy River catchment. What of the impacts of mineral salts and heavy metals if such a scenario were to occur in the headwaters of the Murray-Darling Basin? How many people, downstream, rely on this water system for their drinking supply? And what of the uptake of heavy metals in food crops irrigated with this water? The likelihood of high intensity rainfall events, leading to extensive flooding, is high on the Darling Downs. Refer to flood events in 1956, 1974, 1981 and 1983 to nominate just some.

- What of the impact of coal dust in local water catchments and the consequent impact on aquatic life and other wildlife in the food chain?

Furthermore, the following socio-economic impacts are likely to be realised by permitting an open-cut coal mining operation in a relatively heavily populated area:

- What of the impact of traffic on a road network that already is over-capacity and operating at a poor level of service. The Queensland Rail network is inadequate with bulk coal movements from the Acland mine and others overflowing from the rail network to a dangerous Warrego Highway. Felton mine would lead to more trucks on local roads, State roads and highways; through an over-capacity road network within Toowoomba and through Brisbane to the port.

- The risk of adverse social impacts on residents surrounding the proposed Felton mine is magnified by the closely settled nature of the district.

- What of the health impacts for nearby residents who collect drinking water from house and shed runoff and whose roofs may have coal dust settle on these same roofs should a mine be developed at Felton?

Thank you.

Submitted by:
John Cleary

Attachment (Story from *The Australian* newspaper)

Parched Toowoomba first to draw water from 'exploited' basin

Greg Roberts | *October 17, 2008*

Article from: The Australian

TOOWOOMBA will become the first large urban centre to draw its town water from the Great Artesian Basin, with more than 400 megalitres a month to be extracted to meet the needs of the drought-ravaged city on Queensland's Darling Downs.

A $17million project is under way to drill bores to meet Toowoomba's requirements as experts warned that water levels in the 1.7 million sqkm basin were falling sharply from overuse.

A referendum to pump recycled waste water to shrinking storages in Toowoomba, Australia's biggest inland city with a population of 120,000, was defeated in a 2006 referendum, with 62 per cent of residents voting no.

Toowoomba will be connected to southeast Queensland's $9 billion water grid in 2010, when it will receive water from the Wivenhoe Dam, but with city dam levels at 9.5per cent capacity yesterday -- half what they were at the time of the referendum -- alternative water sources are needed.

"Our water will run out if it doesn't rain and we don't do something," said Toowoomba Regional Council water services director Kevin Flanagan.

"The last time we had run-off into our dams was in 1999. We've got kids born in this town who've never seen it rain properly."

The Great Artesian Basin covers 20per cent of the Australian land mass. About 500,000megalitres of water a year are extracted annually from the basin, primarily for grazing and mining.

Lesser quantities are used for irrigation and to supplement supplies in small inland towns, mainly in western Queensland.

Toowoomba's dam supply was being supplemented by groundwater from the local Main Range Volcanics Aquifer, but its level has dropped so low that irrigators had allocations slashed last month.

Five bores to tap the Great Artesian Basin are now being drilled. One basin bore is supplying 5per cent of Toowoomba's water. By early next year, more than half the city's supply will come from the basin, with a weekly volume equivalent to 50 Olympic swimming pools.

"There were no other options on the table," said Toowoomba Deputy Mayor Paul Antonio.

"We will stop using water from the bores as soon as we can."

CSIRO groundwater expert Andrew Herczeg said programs were under way to reduce water extraction from the Great Artesian Basin, particularly in western Queensland.

"There has been overuse and over-exploitation in parts of the basin so there needs to be a cautious approach to the use of its water," Dr Herczeg said.

"Water in the Great Artesian Basin that was once close to the surface is now 100 metres underground."

NSW University of Technology water expert Stuart White said the tapping of the basin to meet Toowoomba's water needs was avoidable.

"It's a great pity the waste water issue was put to a referendum in the first place," Professor White said. "All that did was to create a politically polarised row, when there should have been a reasoned community debate about options."