

COMMENTS

on

**BOWEN CENTRAL COAL
MANAGEMENT PTY LTD.**

MINING, MORANBAH, QLD.

OPEN CUT COAL MINING 7KM NE MORANBAH

Reference No 2005/2070

7th April 2005

by

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FOREWORD

We are a preservation and conservation organisation who is not opposed to development provided that the development is environmentally sustainable. The following principles are *principles of ecologically sustainable development*:

- a) *if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;*
- b) *the principle of inter-generational equity – that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;*
- c) *the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making.*

Section 3A of the Environment Protection and Biodiversity Conservation Act 1999

The Wildlife Preservation Society of Queensland aims to:

- Preserve Australia's flora and fauna by all lawful means;
- educate all sections of the community in the importance of habitat protection and biodiversity; and
- encourage rational land use while discouraging the destruction and exploitation of the natural environment

It is vital that the degradation of our environment ceases, for there can be no more destruction of threatened ecological communities, vital habitat for threatened species and migratory species, or any further loss of values and attributes of the Great Barrier Reef World Heritage Area.

To this end we, Wildlife Whitsunday¹, will keep an ever vigilant watch on all developments, agricultural and horticultural activities, aquaculture, fishing, and mining within Queensland and specifically our region, to ensure that the Biodiversity of this great country is protected.

Jan Lee

President
Wildlife Whitsunday

18th April 2005

This report is not necessarily the views of Wildlife Whitsunday's parent organisation the Wildlife Preservation Society of Queensland.

¹ Wildlife Whitsunday is the Proserpine/Whitsunday branch of the Wildlife Preservation Society of Queensland.

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1. INTRODUCTION

1.1 WAVE OF EXTINCTION HITS AUSTRALIA

Australia has the highest number of threatened amphibians and reptiles in the IUCN's Red List of Threatened Species, the world's most authoritative status list of threatened plants and animals.

Australia has the second highest annual ranking of global threatened animal species, according to the World Conservation Union (IUCN). 12,259 species are now threatened with extinction across the world, including 1,324 Australian species.

According to Dr Ray Nias, WWF Australia Conservation Director:

These figures are extremely alarming particularly given the massive increase of species listed as vulnerable. This is a clear indication that a wave of extinction is sweeping through the Australian fauna. A large number of animal species are moving into the threatened category for the first time, primarily as a result of landclearing, the impact of weeds and pests and the loss of wetland habitat.

Australia is still in a position to reverse this trend but only if we take immediate and massive action on these issues. We know that 1557 plants, animals and ecological communities - are now listed as threatened under Australia's Environment Protection and Biodiversity Conservation Act 1999. 115 plants and animals are already extinct.

WWF Australia 19th November 2003

Australia (1324) is second only to the United States (1911) for the total number of animals listed under all categories. Australia is also ranked second in threatened categories only (critical, endangered and vulnerable)

- | | |
|--------------------|-----------------------|
| 1. USA (859) | 5. South Africa (252) |
| 2. Australia (527) | 6. China (238) |
| 3. Indonesia (411) | 7. India (236) |
| 4. Brazil (282) | |

Australia has the highest number of threatened reptiles (38) and amphibians (35) of any country, according to the 2003 Red List. Australia has 74 threatened fish species and is ranked third after Mexico (106) and China (91)

More than 20 per cent of all of Australia's mammals are now threatened with extinction, according to WWF Australia. Now the Red List ranks the country as 6th highest for the number of threatened mammals.

Dr Nias said:

Landclearing and its consequences, such as salinisation of rivers and landscapes, are the foremost threat to the majority of species on this list. For many species, the additional impact of climate change is now providing the final straw. The impact is on the entire landscape. The fact that a large number of plants are now reaching threatened status means that animals relying on these for food and shelter are also directly affected.

There is no question that land clearing throughout Australia must be stopped. This is the minimum measure for halting this alarming rate of species decline. Serious revegetation measures also need to be put in place to compensate for the damage already done.

According to the Federal Government's Terrestrial Biodiversity Audit, released in April 2003, one third of the world's extinct mammals were Australian.

1.2 ISSUES AND CONCERNS

The most challenging environmental issues for the region and for Queensland are the cumulative consequences over many decades of unsustainable resource management practices by an increasing and resource-demanding population. Planners cannot simply turn their backs on the state of the environment and continue on their merry way towards economic progress to the detriment of the environment.

The following are our key issues and concerns regarding this development:

- ✦ Matters of National Environmental Significance
 - Threatened species;
 - Threatened ecological communities;
 - Wetlands of International Significance;
 - World Heritage Areas; and
 - Migratory species.
- ✦ Land Clearing
- ✦ Greenhouse gas emissions
- ✦ Water

These will be discussed in the following section.

2. ISSUES AND CONCERNS

2.1 MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

2.1.1 *Threatened Species*

A) TREND IN THREATENED SPECIES

The *Australian Terrestrial Biodiversity Assessment 2002* reported:

The status of threatened vascular plants is declining across much of the continent (177 of the 384 subregions), as are threatened birds (240 subregions) with extinctions in arid parts of Western Australia (14 subregions).

Threatened mammal species are rapidly declining in 20 subregions and declining in 174 subregions, particularly in arid parts of Western Australia. Reptiles are declining across 119 subregions. Threatened amphibians are declining in southeastern Australia (65 subregions) and are rapidly declining in South East Queensland, Brigalow Belt South and Wet Tropics bioregions.

Little information was recorded for non-vascular plants and invertebrates reflecting not only the paucity of information but the limited protection afforded in State and Territory legislation. For example, the decline in land snails in Tropical Savannas has not yet been reflected in State or Territory listings of threatened species. Where information was available, decline in status was recorded. These species groups should be more comprehensively assessed.

Mammals and Birds

The key findings regarding mammals and birds in the *Australian Terrestrial Biodiversity Assessment 2002* were:

- *Mammal extinction has been substantial within the last 200 years. Twenty-two Australian mammals are now extinct which represent a third of the world's recent extinctions: a further eight species now persist only on islands.*
- *There has been massive contraction in the distribution of mammals in arid and semi-arid parts of the continent, particularly the small to medium critical weight range species.*
- *The rapid decline and loss of many mammal species that respond rapidly to environmental stress provides an insight of what may be occurring with other groups of species over a longer time frame.*
- *For birds, though the extinction debt has yet to become apparent in many bioregions as they are more mobile and can persist longer, populations of some species have markedly reduced.*
- *Based on an analysis of 6 million records, 29 species over the past 20 years show significant decrease in agricultural areas where an increased proportion of the landscape has been cleared.*
- *Birds most affected are the grassland, woodland and ground nesting guilds.*

B) COMMENTS ON THREATENED SPECIES THAT OCCUR OR MAY OCCUR IN THE AREA OF THE PROPOSED MINING OPERATION

We have concerns regarding all species listed in the *Threatened Species list* in the *EPBC Act Protected Matters Report* obtained on the 15th April 2005 (see Appendix 1), however, we will only discuss two (2) of these species to highlight the need for further environmental assessment.

Squatter pigeon (southern) – present and observed in the area

The proponent summarily dismisses the loss of 45ha of habitat as having little or no effect on the vulnerable squatter pigeon:

.... given the limited extent and poor condition of remnant habitats within the study area, it is not anticipated that the study area represents critical habitat for any rare, threatened or migratory species (bullet points 3 and 4)..... Furthermore, given the proposed minimal disturbance of remnant vegetation (approximately 45 ha), and considering the mitigation measures that will be employed, it is not anticipated that the project will lead to significant impacts on local rare, threatened or migratory species, communities or populations listed under the EPBC Act.

EPBC Referral p.16

Potential impacts to the EPBC-listed Squatter pigeon (Geophaps scripta scripta) found on the project site should be minimal as only 45 ha of woodland habitat known to be utilised by the species will be removed. The balance (215 ha) of suitable woodland habitat within the study area will not be affected by the proposal, including the continuous riparian woodland along Smoky Creek. More extensive areas of potential woodland habitat occur in the surrounding area, particularly the broad band of riparian woodlands along the nearby Isaac River. Retaining the balance of woodland would also protect other EPBC-listed species not sighted but which may potentially occur in the area. The rehabilitation program involves restoring native bushland post-mining.

EPBC Referral p.17

We contend that the loss of habitat, however small or large, will have a significant impact on the squatter pigeon. The Australian Biodiversity Assessment 2002 recommended that protection and conservation of threatened species is needed to prevent species being raised to a higher category of 'threat'. Currently the squatter pigeon is listed as vulnerable, but if small parcels of land are continually given over to development then it is obvious that sooner or later the squatter pigeon will become *critically endangered* and on the path to extinction.

DON'T LET THE SQUATTER PIGEON BECOME ANOTHER STATISTIC SIMILAR TO THE NORTHERN HAIRY-NOSED WOMBAT

Fitzroy tortoise

The proponent describes the likelihood of the species occurring in the area as:

Unlikely; suitable aquatic habitat is not available within or adjacent to the study area. Study area is outside of the known distribution of the species.

EPBC Referral p.9

The proponent further states:

The proposed project area is approximately 5 km to the northeast of the Isaac River and the coal seams (proposed open pits) strike parallel to its course (Figure 2). Smoky Creek watercourse flows in a north-east/south-west direction through the proposed mining lease. A smaller tributary of the Isaac, referred to as the 'Unnamed Watercourse', flows through the southern portion of the proposed mining lease.....

EPBC Referral p.2

It is clear that the proponent has done insufficient research into the known distribution of the tortoise as it can be found in the Isaac River, but sightings of the specie are rare:

*The Fitzroy River tortoise (Rheodytes leukops) can only be found in the Fitzroy basin including the Fitzroy, Mackenzie, Dawson, Connors and **Isaac Rivers**. Sightings of the species is rare as it does not bask and rarely surfaces.....*

ISSUES AND CONCERNS

.... *The Fitzroy river turtle is listed as vulnerable by both Environment Australia and the Environmental Protection Agency (Queensland). The species was only first discovered in 1980 and more research is needed to understand both the biology and the conservation issues effecting this unique creature.*

Queensland Conservation Council, Rivers Alive, 2004

Further, the EPA (Qld) is aware of the threats and actions required to protect this unique creature:

Threatening processes: *This turtle is threatened by the pollution and siltation of rivers and creeks, and the modification of riparian (waterway) vegetation by grazing and agricultural practices, mining, and timber harvesting. It is also likely that foxes eat their eggs.*

Actions: *The Action Plan for Australian Reptiles identifies a number of actions to protect the Fitzroy River turtle. These are:*

- *To prevent pollution and silting of the Fitzroy River and its tributaries,*
- *To increase public awareness of the species,*
- *To reduce erosion, and*
- *To increase the amount of native vegetation along the river edges.*

Environmental Protection Agency (Qld), Endangered Animals, Fitzroy Turtle, 2004

Further assessments are needed regarding this vulnerable creature as it is our belief that this proposed mining operation will have a significant impact on the Fitzroy tortoise. Our argument for further assessment is reinforced by the Minister for the Environment's decision under s75 of the EPBC Act re *The Nathan Dam* (ref no. 2002/770) "*that the proposed action was a controlled action on the basis of, and the controlling provisions were, ss18 and 18A (Threatened species and ecological communities) of the Act*". One of the reasons for this decision was that the threatened Fitzroy tortoise was endemic to the Fitzroy catchment and that the dam would have a significant impact on this species. A mining operation admittedly is not a dam, however, do not disregard the fact that mining is classified as a threatening process by the EPA.

Further, the proponent states that contaminated mine water will be released when stream flows are sufficient:

.....*The mine water management system consists of clean stormwater diversion, treatment of runoff from land disturbance areas in sediment dams and containment of mine water in release dams with controlled releases when stream flows are sufficient to achieve the design dilution ratio.*

EPBC Referral pp.3 & 4

Water from a washed coal mining operation is highly contaminated, so we ask the question:

1. Has there been sufficient tests carried out to ensure that there is no possibility of leaching into the surrounding water streams? and
2. can the proponent be certain that the stream flow is sufficient to achieve the designed dilution ratio given that Smoky Creek and Unnamed Creek flow through the property and are tributaries of the Isaac River?

We believe that these questions can only be answered by an appropriate Environmental Impact Assessment.

2.1.2 Threatened Ecological Communities

The report to the Prime Minister's Science, Engineering and Innovation Council (Morton et al. 2002) urges that we protect and maintain our natural systems rather than be faced with an ever increasing repair bill. The high number of threatened ecosystems identified in this assessment indicates how extensive the repair task will be unless comprehensive action is taken.

ISSUES AND CONCERNS

In accord with the findings of the report to the Prime Minister's Science, Engineering and Innovation Council, urgent action is required to halt the clearing of all threatened ecosystems as well as broad-scale clearing within the Murray-Darling Basin. Priority areas should also include any subregion containing less than 30% remnant vegetation (see Chapter 9) and where the clearing of areas may threaten regional biodiversity values, including hotspots, and ecosystem function.

The wide range of threatening processes means that a variety of approaches to the protection of biodiversity is needed for different parts of the country. Protection and recovery both through protected areas and across the wider landscape is discussed later in this report

Australian Biodiversity Assessment 2002



Brigalow ecosystems stretching across the Arcadia Valley in the 1960s: Brigalow Belt South. It is now cleared and many ecosystems are now threatened. (R.W. Johnson)

The Brigalow Belt Bioregion (North & South) has been declared a biodiversity hotspot and yet vegetation clearing for agriculture and mining is still rife in the bioregion. The *Australian Biodiversity Assessment 2002* is clear that comprehensive action is needed now to protect and maintain our ecosystems and ecological communities rather than allow the repair task to get out of hand.

The proposed mining area is in a region that contains two (2) endangered ecological communities – Bluegrass (*Dicanthium spp.*) and Brigalow (*Acacia harpophylla*).

Even though surveys carried out by the proponent indicate that both these species are not in the proposed mining area:

Field inspections confirmed that none of these ecological communities occur within the study area, although it is likely that patches of brigalow once occurred in the areas previously developed for improved pasture.

EPBC Referral p.12

We are still concerned that insufficient studies have been undertaken and the adjacent areas may contain these endangered ecological communities. These communities may be under threat from contaminants leaching from the reservoirs containing the water from the coal washing process. A full environmental impact study needs to be undertaken to ascertain the likely impacts of this mining operation on the surrounding environment.

2.1.3 Wetland of International Significance

The proponent is adamant that no Wetlands of International Significance occur in the area:

A search of the EPBC map search indicates that no World Heritage properties, RAMSAR wetlands, Commonwealth Marine Areas, or Commonwealth land, conservation, reserves/parks occur on or near the subject site.

EPBC Referral p.5

However, our research shows that the proposed mining site falls within the same catchment as a RAMSAR site – the Shoalwater and Corio Bays Area.

ISSUES AND CONCERNS

The analysis of the impacts of the action provided in the referral is limited to the site-specific impacts of the mining operation. The referral gives no consideration to the impacts that the mining operation is likely to have and the consequential impacts of this on matters of national environmental significance.

We submit that a further environmental impact assessment needs to be done to ascertain the likely impacts that this proposed operation will have on the Wetlands of International Significance.

2.1.4 World Heritage Areas

A) IMPACTS OF CLIMATE CHANGE ON MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

Global warming is already impacting on matters of national environmental significance and, unless major changes are made in current greenhouse gas emissions, will severely impact on matters of national environmental significance in the future.

There is strong scientific evidence of severe impacts on the Great Barrier Reef World Heritage Area (**GBRWHA**) in coming decades due to global warming. A comprehensive study by Hoegh-Guldberg and Hoegh-Guldberg, *Implications of Climate Change for Australia's Great Barrier Reef*, indicated the best case scenario for the GBRWHA is recoverable loss if global temperature increases remain below 2 degrees. Under the worst case scenario, coral populations will collapse by 2100 and the re-establishment of coral reefs will be highly unlikely over the following 200-500 years.

There is similar strong scientific evidence of severe impacts on the Wet Tropics World Heritage Area (Wet Tropics WHA) in coming decades due to global warming. The Rainforest Cooperative Research Centre, *Environmental Crisis: Climate Change and Terrestrial Biodiversity in Queensland*, concluded that the likely impacts of climate change on terrestrial biodiversity within the Wet Tropics WHA would be very serious and could be catastrophic under some scenarios. Even moderate levels of warming, well within the envelope defined by the IPCC, have the potential to pose serious threats to biodiversity. The predicted impacts will be particularly acute for regions with many local endemic species (such as the Wet Tropics) because the current climatic ranges of local endemics are generally restricted. Modelling shows that high elevation species (i.e. species that live at or near the tops of mountain ranges) especially may become progressively restricted as their already limited habitat shrinks or even disappears due to climate change affecting rainfall and temperature. For example, the climatic habitat of the Bellenden Ker Nursery frog, *Cophixalus neglectus*, is predicted to disappear entirely with 1°C average annual warming. As these endemic species have been important in the listing of the Wet Tropics WHA on the World Heritage List, the loss or decline of these species has important ramifications for the ongoing heritage values of the area.

B) LIKELY IMPACTS OF THE ACTION MUST CONSIDER IMPACTS ON GLOBAL WARMING

The referral by the proponent estimates that the coal resource developed over a 9 year life of the mine will be 18 million tonnes:

Mining of coal will be undertaken at a rate of approximately 1.9 million tonnes per annum, run-of-mine, with a lifespan of approximately 9 years, based on resource estimates of 18 million tonnes for a strip ratio up to 15:1 (bank cubic metres per tonne). The coal will be crushed, sized and washed on site in a coal handling and preparation plant, before being railed to Dalrymple Bay Coal Terminal for export.

EPBC Referral p.2

The referral states that the coal will be exported. The relevant action for the purposes of the EPBC Act is the mining and export of 18 million tonnes of coal (**the action**).

Although not stated in the referral the ultimate purpose of the action is to burn the coal for power production.

The production of greenhouse gases is almost certain to occur as a result of the action and can reasonably be imputed as within the contemplation of the proponent of the action. As you are aware, in *Minister for the Environment and Heritage v Queensland Conservation Council* [2004] FCAFC 190 (**the Nathan Dam Case**) at [57] the Full Court indicated that for the purposes of section 75 of the Act:

..... all adverse impacts' includes each consequence which can reasonably be imputed as within the contemplation of the proponent of the action, whether those consequences are within the control of the proponent or not.

Applying this principle the Victorian Civil and Administrative Tribunal last year found that a planning scheme amendment to allow an expansion of a coal mine was required to consider the indirect impacts of greenhouse gas emissions resulting from the burning of the coal at a power station.²

The burning of 18 million tonnes of coal will have an impact on global warming, how much of an impact the production of this amount of greenhouse gases will have on global warming and, consequently, on matters of national environmental significance is more difficult to determine but must, at the very least, be considered when assessing the likely impacts of the action.

Consideration of the impacts of the action under section 75 of the EPBC Act must consider the potential impacts of greenhouse gas emissions from the burning of the coal on global warming and the consequential impacts on matters of national environmental significance.

We contend that when the ultimate greenhouse gas emissions are considered the proposed action is likely to have a significant impact on matters of national environmental significance, including the World Heritage Areas.

2.1.5 Migratory Species

The proponent is dismissive of the migratory species of the area, and it is obvious from Table 3 of the referral that consideration has not been given to all migratory species listed under the *EPBC Act*.

An example of the proponent's failure to recognise listed migratory species is as follows:

- Nankeen kestrel – Family Falconidae (species recorded in the study area)
- Willie wagtail – Family Muscicapidae (species recorded in the study area)
- Square-tailed kite – Family Accipitridae (species possibly utilises the area)

Once again further environmental assessment is needed to ascertain the migratory species that inhabit or are likely to inhabit the area or as a result of this proposed mining operation will be/or are likely to be impacted upon.

2.2 LAND CLEARING

Land clearance is listed as a *key threatening process* under the *EPBC Act*. The conclusions by the Threatened Species Scientific Committee about land clearance were:

TSSC believe that land clearance:

- *could cause a native species or an ecological community to become eligible for listing in any category, other than conservation dependant;*
- *could cause a listed threatened species or a listed threatened ecological community to become eligible to be listed in another category representing a higher degree of endangerment; and*
- *adversely affects 2 or more listed threatened species (other than conservation dependant) or 2 or more listed threatened ecological communities.*

² *Australian Conservation Foundation v Minister for Planning* [2004] VCAT 2029.

Further, the *Australian Biodiversity Assessment 2002* found that:

The most widespread processes threatening ecosystems are vegetation clearing, fragmentation of remnant vegetation, grazing pressure, exotic weeds, feral animals, firewood collection, salinity and other changed hydrology, and altered fire regimes.

Clearing and increased fragmentation of remnants are the principal factors threatening ecosystems in eastern Australia and other locations

The legacy of broad-scale clearing in southern Australia is widespread land degradation and loss of biodiversity. In areas that have already been subject to clearing, increased fragmentation and removal of small patches of remnant native vegetation can have major impacts on the plant and animal species as habitat falls below critical thresholds

and recommended:

In accord with the findings of the report to the Prime Minister's Science, Engineering and Innovation Council, urgent action is required to halt the clearing of all threatened ecosystems as well as broad-scale clearing within the Murray-Darling Basin. Priority areas should also include any subregion containing less than 30% remnant vegetation (see Chapter 9) and where the clearing of areas may threaten regional biodiversity values, including hotspots, and ecosystem function.

As mentioned previously the Brigalow Bioregion is categorised as a 'biodiversity hotspot' and further assessment needs to be undertaken to ascertain the impact of the proposed land clearing and open-cut mining operation.

2.3 GREENHOUSE GAS EMISSIONS

Our geographical and environmental circumstances mean that Australia is vulnerable to the potential impacts of climate change. Potentially significant impacts include those of our agricultural productivity, coastal communities, threats to human health, and the imposition of further survival pressures on a range of native plants and animals.

Loss of terrestrial climatic habitat caused by anthropogenic emissions of greenhouse gases is listed as a *key threatening process* under the *EPBC Act*. Previously we discussed the affects of climate change on World Heritage Areas (s 2.1.4), however, it must be recognised that coal mining both during the extraction process and the burning of the end product is a major contributor to the greenhouse effect.

Further, Australia has international obligations that it must meet:

- a) As a signatory to the Convention on Biological diversity Australia must adhere to Article 3 of the Convention:

Article 3. Principle

*States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, **and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.***

- b) Australia's obligation under the *World Heritage Convention*

Consideration of the impacts of the action under section 75 of the *EPBC Act* must consider the potential impacts of greenhouse gas emissions from the extraction process and the eventual burning of the coal on global warming and the consequential impacts on matters of national environmental significance and international significance.

2.4 WATER

We tend to think of water in the most personal terms – a mother bathing her child or a cool drink on a hot day – but only 10% of the water consumed worldwide is for household use.

Agriculture takes 70% and half or more of that water is lost to evaporation or runoff. Industry consumes the remaining 20% of water, often inefficiently. One example is a liquor company in China which washes bottles with water that is used once and then discarded. **Water used once to wash coal is a similar example.** This tends to be a worldwide practice.

2.4.1 Issues

A) WATER IN GENERAL

- Among the environmental spectres confronting humanity in the 21st century – global warming, the destruction of rainforests, overfishing of the oceans – a shortage of fresh water is at the top of the list.
- Recently the UN said that 2.7 billion people would face severe water shortages by 2025 if consumption continues at the present rate.
- All over the globe farmers and municipalities are pumping water out of the ground faster than it can be replenished.
- That the planet's fresh water is consumed extravagantly is beyond doubt, particularly in agriculture, which accounts for 70% of all water usage.
- Industry uses 20% of all water often extravagantly.
- As the world's population increases and the demand for food soars, unchecked irrigation poses a serious threat to rivers, wetlands and lakes.
- Increased water stress is likely due to higher temperature and evaporation.
- Water is a scarce and essential natural resource.
- Conserving and maintaining water quality is especially important in Australia, the world's driest inhabited continent.
- Preventing or reducing water pollution protects our water quality and is essential to maintaining the health of our environment and our own quality of life.
- Water resources already are stressed in some areas and are therefore highly vulnerable, especially with respect to salinisation and competition for water supply between agriculture, power generation, urban areas and environmental flows.
- Increased evaporation and possible decreases in rainfall in many areas would adversely affect water supply, agriculture, and the survival and reproduction of key species.

B) INLAND WATERS

- Excessive surface and groundwater abstraction.
- Loss of riparian vegetation.
- Loss of wetlands.
- Altered flow regimes resulting from dam and barrage construction.
- Increased sediment, nutrient, and pesticide input from agricultural and urban development.
- Hazardous industrial and **mining waste discharges**.
- River modification.

2.4.2 Pressures

- Australia is the driest of the world's inhabited continents containing the least river water. Increasing pressures to extract more water from our rivers for consumptive uses are leading to the continuing decline in the health of our waterways.
- The era of dam development is dead in all Australian states and in the rest of the developed world. NSW has recently hosted Australia's first dam removal, and in the US, 63 dams across 16 states have been either removed or earmarked for removal. However, over the last 12 months the Queensland government has continued to lack the political will to make decisions to ensure our rivers remain healthy and functioning into the future.

ISSUES AND CONCERNS

- The Water Resource Planning process for the Burnett Basin regarding the proposed Paradise Dam clearly showed the additional water will not allow sustainable environmental flows and that this level of development is likely to have major to very major impacts on the geomorphic and/or ecological conditions within the river.
- The State of the Environment Report 2001 confirmed that Australia's rivers are under increasing pressure from overextraction, pollution, algal blooms, catchment modification, habitat destruction, and flow modification. In Queensland, the area of irrigated land has doubled in the last 20 years, and is continuing to increase.

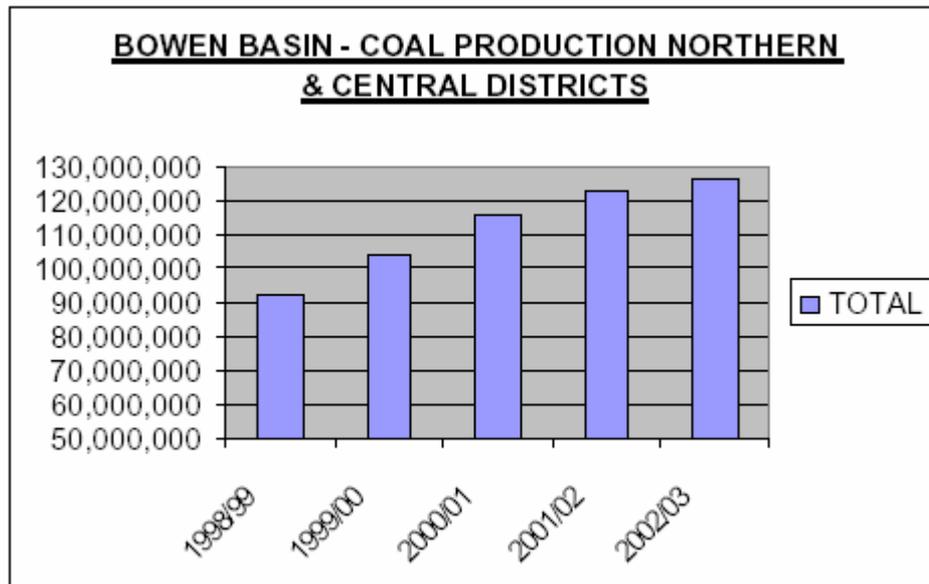
2.4.3 Comments

In a report *A Looming Water Crisis in Bowen Basin Coal & Power Generation Industries April 2004*, water was the major concern for any future expansion in the coal mining industry:

Coal Mines in the Northern Bowen Basin (exporting through Hay Point and Abbot Point), produced in excess of 87 million tones in 2003, generating wealth in excess of \$6 billion for QLD. This has increased from 49.9 million tones in 1996, a 75% increase in 7 years.

Water is a key input into the mining process, and the availability and reliability of water is an important component of any investment decision to establish or reinvest in a mining operation.

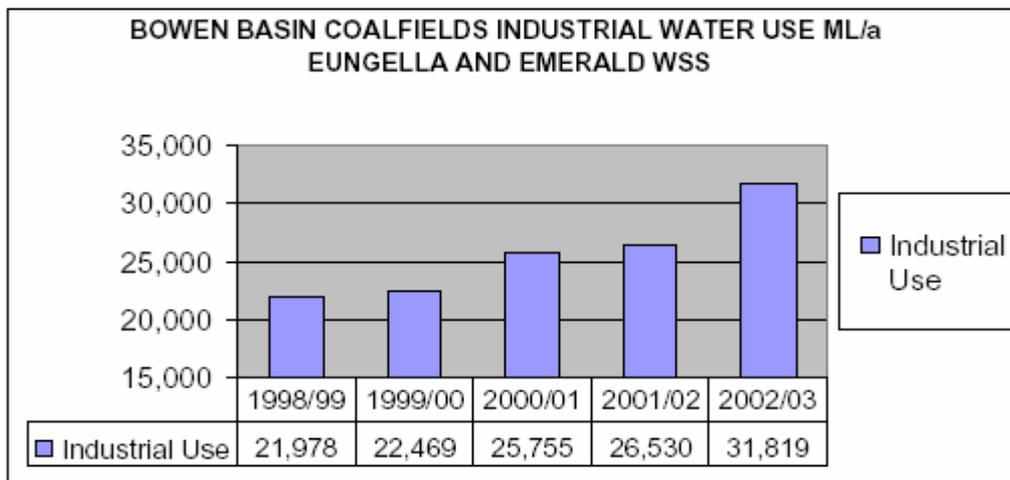
As world demand for coal continues to increase, and supply of quality coking and thermal coals are becoming tighter, the indicators are that coal production in the Bowen Basin will continue to expand at similar rates to the growth experienced over the past 5 years. Since 1999, coal production in the Central and Northern Bowen Basin has increased from 92.6 mtpa to 126.2 mtpa, a 36% increase in 5 years.



Coal mines in the Central and Northern Bowen Basin are supplied by Eungella Dam / Collinsville Weir (via the Eungella, Newlands and Collinsville Pipelines) and Fairbairn Dam, via the Bedfors, Bingegang, and Tartus weirs.

Total water use for industrial purposes has increased from 21,978 ML/a in 1998/99 to 31,819 ML/a in 2002/03, a 45% increase over 5 years. During the same period, coal tonnages mined have increased by 36%, so water use is growing at a faster rate than coal tonnages mined.

At current rates of expansion, the coal industries water needs could approach 70,000 ML pa within ten years. Well in excess of the capacity of the current water supply system.



It is proposed to build a pipeline from the Burdekin Dam to Moranbah to supplement the Bowen Basin mining operations, and it has also been proposed to build a second dam on the Broken River (Urannah Dam) to alleviate the water shortage. Both these projects would have significant impacts on *matters of national environmental significance*.

The proponent fails to mention the crisis in the Bowen Basin mining region regarding the ever increasing use of water and the demands the industry is placing on a precious commodity.

There is no mention of recycle/reuse only the mention of “... *containment of mine water in release dams with controlled releases when streamflows are sufficient to achieve the design dilution ratio*” (EPBC Referral p.4).

The role of Federal, State and Local governments in water management is to facilitate society’s efforts to achieve the most beneficial uses of this scarce resource, while ensuring that these uses occur in an ecologically sustainable way. There is a need to:

- Formulate education tools to assist stakeholders in acquiring the knowledge necessary to ensure a growing appreciation of ecological processes
- Recognition of the need to adopt sustainable water management practices, and a stewardship role for local communities and private landholders.
- Use water wisely. **Recycle/Reuse.**

Does the mining industry recycle and reuse? If not, why not?

Further environmental assessment is needed to ascertain the impact of this development on our dwindling water resources and also the impacts associated with water supplied from other distant sources or the building of new water supplies (dams).

3. SUMMARY

This development must be declared a '*controlled action*' for the following reasons:

1. It will have impacts on World Heritage Property;
2. it will impact on listed Threatened Species;
3. it will impact on listed Threatened Ecological Communities;
4. it will have impacts on Migratory Species;
5. it will have impacts on Wetlands of International Significance; and
6. Australia has international obligations to uphold.

By failing to declare this development a '*controlled action*' the Minister will be denying the community as a whole the right of reply and input into this development.

The *EPBC Act* was put in place to protect our environment and is a very powerful environment tool, so let's ensure we utilise it and not just let it become another '*lip service*'.

4. REFERENCES

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APPENDIX 1

EPBC ACT PROTECTED MATTERS REPORT 15 APRIL 2005 11:16

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Information on the coverage of this report and qualifications on data supporting this report are contained in the [caveat](#) at the end of the report.

You may wish to print this report for reference before moving to other pages or websites.

The Australian Natural Resources Atlas at <http://www.environment.gov.au/atlas> may provide further environmental information relevant to your selected area. Information about the EPBC Act including significance guidelines, forms and application process details can be found at <http://www.ea.gov.au/epbc/assessmentsapprovals/index.html>

Search Type: Area

Buffer: 0 km

Coordinates: -21.93364,148.02633, -21.92976,148.15963, -22.03043,148.16793, -22.0271,148.07390

Report Contents: [Summary](#)
[Details](#)

- [Matters of NES](#)
- [Other matters protected by the EPBC Act](#)
- [Extra Information](#)
- [Caveat](#)
- [Acknowledgments](#)

Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below.

If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the

Administrative Guidelines on Significance - see

<http://www.deh.gov.au/epbc/assessmentsapprovals/guidelines/index.html>.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Significance: (Ramsar Sites)	1
Commonwealth Marine Areas:	None
Threatened Ecological Communities:	3
Threatened Species:	8
Migratory Species:	8

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place and the heritage values of a place on the Register of the National Estate. Information on the new heritage laws can be found at <http://www.deh.gov.au/heritage/index.html>.

Please note that the current dataset on Commonwealth land is not complete. Further information on Commonwealth land would need to be obtained from relevant sources including Commonwealth agencies, local agencies, and land tenure maps.

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species. Information on EPBC Act permit requirements and application forms can be found at <http://www.deh.gov.au/epbc/permits/index.html>.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Places on the RNE:	None
<u>Listed Marine Species:</u>	13
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	None
Other Commonwealth Reserves:	None
Regional Forest Agreements:	None

Details

Matters of National Environmental Significance

Wetlands of International Significance [[Dataset Information](#)]
(Ramsar Sites)

[SHOALWATER AND CORIO BAYS AREA](#) Within same catchment as Ramsar site

Threatened Ecological Communities [Dataset Information]	Status	Type of Presence
Bluegrass (<i>Dichanthium</i> spp.) dominant grasslands of the Brigalow Belt Bioregions (North and South)	Endangered	Community likely to occur within area
Brigalow (<i>Acacia harpophylla</i> dominant and co-dominant)	Endangered	Community known to occur within area
Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions	Endangered	Community likely to occur within area

Threatened Species [Dataset Information]	Status	Type of Presence
Birds		
Erythrotriorchis radiatus Red Goshawk	Vulnerable	Species or species habitat likely to occur within area
Geophaps scripta scripta Squatter Pigeon (southern)	Vulnerable	Species or species habitat likely to occur within area
Neochmia ruficauda ruficauda Star Finch (eastern), Star Finch (southern)	Endangered	Species or species habitat likely to occur within area
Rostratula australis Australian Painted Snipe	Vulnerable	Species or species habitat may occur within area
Mammals		
Dasyurus hallucatus Northern Quoll	Endangered	Species or species habitat may occur within area
Nyctophilus timoriensis (South-eastern form) Eastern Long-eared Bat	Vulnerable	Species or species habitat may occur within area
Reptiles		
Egernia rugosa * Yakka Skink	Vulnerable	Species or species habitat likely to occur within area
Rheodytes leukops * Fitzroy Tortoise	Vulnerable	Species or species habitat may occur within area

Migratory Species [[Dataset Information](#)]

Migratory Terrestrial Species

Birds

<u><i>Haliaeetus leucogaster</i></u> White-bellied Sea-Eagle	Migratory	Species or species habitat likely to occur within area
<u><i>Hirundapus caudacutus</i></u> White-throated Needletail	Migratory	Species or species habitat may occur within area
<u><i>Monarcha melanopsis</i></u> Black-faced Monarch	Migratory	Species or species habitat may occur within area
<u><i>Myiagra cyanoleuca</i></u> Satin Flycatcher	Migratory	Species or species habitat likely to occur within area

Migratory Wetland Species

Birds

<u><i>Gallinago hardwickii</i></u> Latham's Snipe, Japanese Snipe	Migratory	Species or species habitat may occur within area
<u><i>Nettapus coromandelianus albipennis</i></u> Australian Cotton Pygmy-goose	Migratory	Species or species habitat may occur within area
<u><i>Numenius minutus</i></u> Little Curlew, Little Whimbrel	Migratory	Species or species habitat may occur within area
<u><i>Rostratula benghalensis s. lat.</i></u> Painted Snipe	Migratory	Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species [Dataset Information]	Status	Type of Presence
Birds		
<u><i>Anseranas semipalmata</i></u> Magpie Goose	Listed - overfly marine area	Species or species habitat may occur within area
<u><i>Apus pacificus</i></u> Fork-tailed Swift	Listed - overfly marine area	Species or species habitat may occur within area
<u><i>Ardea alba</i></u> Great Egret, White Egret	Listed - overfly marine area	Species or species habitat may occur within area
<u><i>Ardea ibis</i></u> Cattle Egret	Listed - overfly marine area	Species or species habitat may occur within area
<u><i>Gallinago hardwickii</i></u> Latham's Snipe, Japanese Snipe	Listed - overfly marine area	Species or species habitat may occur within area
<u><i>Haliaeetus leucogaster</i></u>	Listed	Species or species habitat likely to

White-bellied Sea-Eagle		occur within area
<u>Hirundapus caudacutus</u> White-throated Needletail	Listed - overfly marine area	Species or species habitat may occur within area
<u>Merops ornatus</u> Rainbow Bee-eater	Listed - overfly marine area	Species or species habitat may occur within area
<u>Monarcha melanopsis</u> Black-faced Monarch	Listed - overfly marine area	Species or species habitat may occur within area
<u>Myiagra cyanoleuca</u> Satin Flycatcher	Listed - overfly marine area	Species or species habitat likely to occur within area
<u>Nettapus coromandelianus albigularis</u> Australian Cotton Pygmy-goose	Listed - overfly marine area	Species or species habitat may occur within area
<u>Numenius minutus</u> Little Curlew, Little Whimbrel	Listed - overfly marine area	Species or species habitat may occur within area
<u>Rostratula benghalensis s. lat.</u> Painted Snipe	Listed - overfly marine area	Species or species habitat may occur within area

Caveat

The information presented in this report has been provided by a range of data sources as [acknowledged](#) at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the *Environment Protection and Biodiversity Conservation Act 1999*. It holds mapped locations of World Heritage and Register of National Estate properties, Wetlands of International Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this

information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under "type of presence". For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the [migratory](#) and [marine](#) provisions of the Act have been mapped.

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as [extinct or considered as vagrants](#)
- some species and ecological communities that have only recently been listed
- [some terrestrial species](#) that overfly the Commonwealth marine area
- migratory species that are very [widespread, vagrant, or only occur in small numbers](#).

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites;
- seals which have only been mapped for breeding sites near the Australian continent.

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Acknowledgments

This database has been compiled from a range of data sources. Environment Australia acknowledges the following custodians who have contributed valuable data and advice:

- [New South Wales National Parks and Wildlife Service](#)
- [Department of Sustainability and Environment, Victoria](#)
- [Department of Primary Industries, Water and Environment, Tasmania](#)
- [Department of Environment and Heritage, South Australia Planning SA](#)
- [Parks and Wildlife Commission of the Northern Territory](#)
- [Environmental Protection Agency, Queensland](#)
- [Birds Australia](#)
- [Australian Bird and Bat Banding Scheme](#)
- [Australian National Wildlife Collection](#)

- Natural history museums of Australia
- [Queensland Herbarium](#)
- [National Herbarium of NSW](#)
- [Royal Botanic Gardens and National Herbarium of Victoria](#)
- [Tasmanian Herbarium](#)
- [State Herbarium of South Australia](#)
- [Northern Territory Herbarium](#)
- [Western Australian Herbarium](#)
- [Australian National Herbarium, Atherton and Canberra](#)
- [University of New England](#)
- Other groups and individuals

[ANUCLIM Version 1.8, Centre for Resource and Environmental Studies, Australian National University](#) was used extensively for the production of draft maps of species distribution. Environment Australia is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

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