

colong bulletin

No. 231 | May 2009

RTA keeps rolling on Public campaign needed

KEITH MUIR AND PAT THOMPSON

EARLY in April the RTA announced by newsletter that it had rejected the Newnes Plateau as an option for a new Great Western Highway deviation over the western escarpment. Following an analysis of more than 450 submissions received during the corridor display period, the Roads and Traffic Authority (RTA) has confirmed four modified corridors in which route options may be feasible. The RTA's decision not to proceed with the Newnes option may not however be due to public concern as the RTA reports: 'The Australian Department of Defence has indicated it has a long term commitment to the Marrangaroo Army Base that provides essential facilities. This 1338-hectare site area covers the entire width of the Newnes

corridor. This base is used for training specialist personnel and disposing of ammunition. The Department of Defence is very clear in its response to the corridors that a highway would not be compatible with its activities on the base. The cost for the Federal Government to relocate this base would be very high. This relocation cost would be in addition to the cost for a route within the Newnes Plateau corridor.'

The Colong Foundation is pleased that the RTA has removed this threat to the Newnes Plateau but it continues to hold grave concerns for the implications of other options, as the remaining road corridors still threaten the environment. Each option requires major embankments to be bulldozed over the Blue Mountains National Park and on adjoining steep bushlands north of Mount Victoria village. Some

road options pass on either side of the River Lett Hill to enable a better grade. Most of the Hartley Valley remains affected by road options.

What's next?

Over the next year the RTA plans to narrow down the widths of its four road corridors and so develop specific routes. The community will be invited to refine these routes, which will then be put out on public display toward the end of 2009. Finally, in the first half of 2010 a preferred route will go on display.

The Colong Foundation view is that the highway upgrade in its proposed form is not needed. It is a case of RTA yet again dictating overall transport and freight planning. What is required, we believe, is for integrated planning, which in this case means, rail options needed to be included.

We are not here referring to motorist needs. The rebuilding of the Great Western Highway to the west of Blackheath is about freight, not about motorist. What the RTA proposes is the expenditure of hundreds of millions of public monies so millions of tons of existing and additional coal and other freight can use road over rail. This means substantially more trucks, including B-double trucks moving through Blue Mountains towns and villages.

Clearly, these are matters of major strategic planning that go way beyond the brief of the RTA. Much of the freight is bound for Port Botany and so will have

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impacts on populations and traffic movement well beyond Blue Mountain townships. The freight is not only of vital importance to the State but has national significance.

The Colong Foundation has in its forty-year history witnessed many conservation issues that appear only of local concern by determining authorities but once alerted, the public, sees their wider importance. The rebuilding of the Great Western Highway beyond Mt Victoria is not a simple planning operation. It is a major infrastructure undertaking with potentially huge environmental impact. It needs both a State and Commonwealth response in the light of climate change policies, as well as integrated transport and urban planning for the Blue Mountains and Sydney Basin.

TRADING WATER SECURITY FOR COAL

PUBLIC SEMINAR

Wednesday, 20 May at 6.30pm

The Sydney Mechanics' School of Arts, 280 Pitt Street, Sydney

Learn from local experts about the extent of damage caused by underground coal mining in our water catchments. Guest speakers include

Dr Ann Young (Geomorphologist) and Dave Burgess (TEC).

For years NSW Government authorities have stood by while coal miners cracked stream beds and damaged swamps in the water supply catchments for Sydney and Wollongong. Now, higher impact coal mining proposals are coming forward.

Discover the disparity between what is being done and what must be done to stop the damage. A panel discussion to answer questions from the floor will complete the evening.

RSVP by calling Hilda or Keith on 92612400 or email hilda@colongwilderness.org.au or just turn up.

Wilderness giving

**BY CARMEN WELLS,
FOUNDATION FOR NATIONAL
PARKS AND WILDLIFE**

DIRECTLY or indirectly many threatened animal species depend on Australia's river systems. They live in the water, feed on the plants of the riverbank or find ideal habitat on the rocky slopes of the river's valley. One example is the Barnard River at 'Kalungra' in the Curracabundi Wilderness. The Foundation for National Parks and Wildlife has purchased the 3,670 hectare property to protect its river and the rich ecosystems it supports, including steep valleys with rocky outcrops, which are a haven for the endangered Brush-tailed Rock-wallaby.

Kalungra's landscape features undisturbed old growth woodlands and over 20 kilometres of clear creeks feed the river that runs through the property. More than 400 species of trees, shrubs, ferns, herbs and grasses filter rainwater that falls on the land before it reaches the river. These diverse forests also provide habitat for many other threatened wildlife including the Sooty Owl, the Yellow-bellied Glider, Spotted-tailed Quolls, wombats and Koalas.

The riparian zone, where the land meets the water along the river and the creeks is covered in specialised plant communities that thrive with changing water levels, which deliver nutrients to plant roots. These roots keep a firm hold of the banks, where platypus build their burrows and provide shelter for the endangered



*Kalungra property acquired as part of the proposed Curracabundi Wilderness.
PHOTO: L. GALE*

Hastings River Mouse.

Kalungra is the second property purchase of the Foundation that protects both a river and its rocky slopes for the endangered Brush-tailed Rock-wallaby. In 2003, 'Green Gully' consolidated the last great stronghold of these wallabies in NSW in Oxley Wild Rivers National Park.

Both 'Kalungra' and 'Green Gully' are vital additions to the Australian Eastern Escarpment Wildlife Corridor. The Foundation purchased Kalungra with donations raised through the Wildlife Corridor appeal and matching funding from the Hunter Central Rivers Catchment Management Authority under the Federal Government NHT National Partnerships Program Grant.

Following this success, the Foundation for National Parks and Wildlife is now working towards securing bushland that supports the plants and

animals of a key part of the Snowy Mountains, as well as the mighty Snowy River.

'Snowy Ridge' provides important summer breeding habitat for the vulnerable Gang-gang Cockatoo, the threatened Diamond Firetail, Speckled Warbler and Pink Robin, and its stands of white box eucalypts provide habitat for the endangered Regent Honeyeater. Equally if not more important are the delicate plant communities that include endangered plants, such as the Shining Cudweed, the Small Snake Orchid and the Anemone Buttercup.

Snowy Ridge is a 150 hectare enclave of private land that is part of the Byadbo Wilderness on the slopes of the Snowy River valley, making it a key property that needs protection. The Foundation is seeking to raise \$38,000 to buy Snowy Ridge and protect the wilderness as part of Kosciuszko National Park.

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**THE COLONG FOUNDATION FOR WILDERNESS LTD
2/332 Pitt Street Sydney NSW 2000 (ABN 84 001 112 143)**

TELEPHONE: (02) 9261 2400 **FAX:** (02) 9261 2144 **EMAIL:** foundation@colongwilderness.org.au **WEBSITE:** www.colongwilderness.org.au

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Carbon Polluters Reward Scheme?

Since its release in draft form in early December 2008, the Rudd Government's proposed Carbon Pollution Reduction Scheme (CPRS) has attracted widespread criticism from many expert environmental and economics commentators...

ALEX O'BRIEN

GLOBAL climate change has been widely acknowledged as one of the most pressing problems confronting contemporary society, with a global agreement to address this issue embodied in the United Nations Framework Convention on Climate Change (UNFCCC) signed in 1992, and the Kyoto Protocol agreement negotiated in 1997, and activated in 2005. The Intergovernmental Panel on Climate Change (IPCC) has been set up to provide policymakers with up to date expert advice on climate change science. A series of high level international negotiations is now under way, which will culminate in an intergovernmental meeting in December 2009 at Copenhagen to map out an agreement for climate change targets and actions required when the Kyoto Protocol expires in 2012.

Australia has the largest per capita emission level of greenhouse gases in the world, and our aggregate national emissions exceed those of Italy or France. The Federal Labor party employed climate change as one of the defining issues in its successful 2007 election campaign, and ratified Australian involvement under the Kyoto Protocol as one of its first actions following the election. The recently announced Carbon Pollution Reduction Scheme (CPRS) is the centrepiece of the Rudd Government's formal response to climate change.

However, since its release in draft form in early December 2008, the CPRS has attracted widespread criticism from many expert environmental

and economics commentators. This article outlines some of the key problems identified with the CPRS, potential remedies and what current science is telling us.

Outline of the CPRS

In essence, the CPRS proposes a modified emissions trading system where Australia's total notional greenhouse gas emissions will be reduced by between 5% to 15% by 2020 (based on year 200 emission levels), with the final target being dependent on whether there is global agreement on targets achieved at the UNFCCC Copenhagen meeting in December 2009.

In summary, emissions trading would work like this:

1) The government set its 'target' for how many tonnes of CO₂ Australia will produce in a given year, reflecting the overall national reduction level between 5% and 15%.

2) The government allocates 'permits' to emit the targetted level of pollution, with the allocation taking the form of either a gift to polluters, an auction of permits, or a combination of both.

3) Allowing permit holders trade their permits with each other. The significance of the scheme is that it enables polluters who would like to increase their emissions to buy permits from polluters who do not need their full quota of permits.

The CPRS proposes special treatment for large emitters and energy intensive trade exposed industries (so called "EITES"), with up to 90% of permits being given out for free to some industries. On average, industries responsible for 37% of Australia's emissions would get 80% of their permits for free. In addition, the CPRS allows polluters to purchase unlim-

ited amounts of permits from overseas sources in developing nations through the Clean Development mechanism (CDM), which was originally designed as a supplementary tool to "top up" reduction requirements, and not as a substitute for real emissions reductions within developed countries.

Science and the CPRS

The CPRS is at odds with the latest climate change science, which points to the need to make rapid and large reductions in global greenhouse emissions in order to forestall potentially catastrophic climate change. Current global emissions of greenhouse gases are above the upper range projections used in IPCC analyses, and will result in carbon dioxide concentrations above 800 ppm (parts per million) by 2100 under a business as usual scenario. In contrast, current scientific understanding indicates that we need to achieve concentrations in the 350-450 ppm range, or perhaps even lower, if we are to avoid significant risk of dangerous climate change, usually defined as greater than a 2 degrees Celsius rise in global average temperature. This is an extremely challenging objective, given that current carbon dioxide concentrations are already 386 ppm and rising.

As part of the preparation for the December 2009 UNFCCC meeting in Copenhagen, a major gathering of more than 2,500 scientists from nearly 80 countries was held in Copenhagen in March 2009 to provide updated scientific advice for the December meeting. The key messages from this scientific gathering are outlined below.

1. Climatic Trends. Recent

observations confirm that, given high rates of observed emissions, the worst-case IPCC scenario trajectories (or even worse) are being realised. For many key parameters, the climate system is already moving beyond the patterns of natural variability within which our society and economy have developed and thrived. These parameters include global mean surface temperature, sea-level rise, ocean and ice sheet dynamics, ocean acidification, and extreme climatic events. There is a significant risk that many of the trends will accelerate, leading to an increasing risk of abrupt or irreversible climatic shifts.

2. Social disruption.

The research community is providing much more information to support discussions on "dangerous climate change". Recent observations show that societies are highly vulnerable to even modest levels of climate change, with poor nations and communities particularly at risk. Temperature rises above 2°C will be very difficult for contemporary societies to cope with, and will increase the level of climate disruption through the rest of the century.

3. Long-Term Strategy.

Rapid, sustained, and effective mitigation based on coordinated global and regional action is required to avoid "dangerous climate change" regardless of how it is defined. Weaker targets for 2020 increase the risk of crossing tipping points and make the task of meeting 2050 targets more difficult. Delay in initiating effective mitigation (i.e. emissions reduction) actions increases significantly the long-term social and economic costs of both adaptation and mitigation.

4. Equity Dimensions.

Climate change is having, and

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will have, strongly differential effects on people within and between countries and regions, on this generation and future generations, and on human societies and the natural world. An effective, well-funded adaptation safety net is required for those people least capable of coping with climate change impacts, and a common but differentiated mitigation (i.e. emissions reduction) strategy is needed to protect the poor and most vulnerable.

5. Inaction is Inexcusable

There is no excuse for inaction. We already have many tools and approaches - economic, technological, behavioural and management - to deal effectively with the climate change challenge. But they must be vigorously and widely implemented to achieve the societal transformation required to decarbonise economies. A wide range of benefits will flow from a concerted effort to alter our energy economy now, including sustainable energy job growth, reductions in the health and economic costs of climate change, and the restoration of ecosystems and revitalisation of ecosystem services.

6. Meeting the Challenge.

To achieve the societal transformation required to meet the climate change challenge, we must overcome a number of significant constraints and seize critical opportunities. These include reducing inertia in social and economic systems; building on a growing public desire for governments to act on climate change; removing implicit and explicit subsidies; reducing the influence of vested interests that increase emissions and reduce resilience; enabling the shifts from ineffective governance and weak institutions to

The Rudd government has designed a scheme in which every tonne of emissions saved by households frees up an extra permit for the aluminium or steel industry to expand their pollution.

innovative leadership in government, the private sector and civil society; and engaging society in the transition to norms and practices that foster sustainability.

In essence, the CPRS is at odds with all of these key scientific messages, given its small target which, if adopted globally, would ensure that concentrations of greenhouse gases force global average temperature increases well above 2 degrees Celsius, and possibly trigger irreversible changes, such as the total melting of the Greenland and Arctic ice sheets, which would generate a global sea level rise of around 7 metres, flooding many heavily populated and economically significant areas. The CPRS would also allow Australia to outsource all of its emissions reductions, which is clearly inequitable and a recipe for the rest of the world to do nothing if the CPRS approach is adopted as a global template. The recent impacts of bushfires in Victoria and cyclonic flooding in Queensland and NSW underscore how vulnerable Australia is to impacts of climate change, which can be expected to increase into the future if the CPRS is not amended and a strong co-ordinated global approach initiated.

Industry, economics and the CPRS

In addition to the weak emissions reduction targets, concerns have also been expressed over the economic and industrial impacts of the CPRS, with a group of 10 economists from a variety of institutions issuing the following open letter:

"In our view the CPRS fails on the following criteria:

First, while there can be no doubt that a high carbon price will result in a significant transformation of the Australian

economy, it must be remembered that such transformation is the actual goal of an emissions trading scheme. It is ironic that while the usual purpose of compensation packages is to ease the pain of such transformation, in the case of the Rudd Government's package compensation is being used to prevent such a transformation. The CPRS actually rewards the major corporate emitters for failing to act despite having been on notice since at least 1997 that the emission reduction targets would be adopted.

Second, the most significant consequence of the global financial crisis is to increase uncertainty and, in turn, reduce new investment. The creation of more ambitious emission targets would provide certainty that would stimulate major investment in renewable energy infrastructure. The consensus scientific and economic opinion is that the consequences of failing to address climate change will dwarf the costs of the current financial unrest.

Third, the Rudd scheme structures the compensation opportunities for energy-intensive, trade-exposed corporations in such a way as to provide an incentive for these corporations to expand production and emissions. This will effect further restructuring of Australian industry that consolidates its energy-intensive character to the disadvantage of low-energy, energy-efficient industries.

Fourth, the proposed compensation of trade-exposed energy-intensive industries is underpinned by the implicit notion that government should ensure a level, and thus competitive, playing field. Yet the proposed compensation package will benefit industry sectors dominated by international corporations which hold considerable market power. The proposed compensation package will further enhance that market power not create competitive markets.

Fifth, the Rudd government

has designed a scheme in which every tonne of emissions saved by households frees up an extra permit for the aluminium or steel industry to expand their pollution. In addition to destroying the moral incentive for households to 'do their bit' to reduce emissions, this design feature renders all other policies aimed at reducing emissions pointless. For example, households who spend \$7,000 installing photovoltaic solar panels might believe that they are helping to reduce emissions but in fact the only impact of such investment will be to slightly lower the demand, and in turn the price, of the fixed number of pollution permits issued by the government.

Sixth, the Rudd scheme fails to cost the complex administrative arrangements that will be required in order to effect the auctioning, the free allocations and the redistribution of permit revenues across the economy.

The CPRS is based on neither sound economics nor sound science. We call on the Government, or the Senate, to make major improvements to the proposed 'solution' to Australia's rapidly rising greenhouse gas emissions.

These improvements should include:

** Lifting the targets to 25-40% by 2020 based on the latest scientific evidence*

** Abolishing the free permits granted to the biggest polluters*

** Ensuring that individual action results in lower emissions, not lower carbon prices*

Unless these major flaws in the CPRS can be fixed the government should introduce a carbon tax as a matter of urgency.

In the meantime, we would strongly urge all Australian governments to immediately introduce incentives to maximise investment in the development and use of renewable and low-emissions technologies."

Conclusion

As a result of the issues outlined above, some commentators have dubbed the CPRS as the "Carbon Polluters Reward Scheme". As one submission to the recent CPRS Inquiry from Locals into Victoria's Environment succinctly stated:

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“Notwithstanding the Government’s mandate, its own research findings and its stated policy aims, Australians have been presented with a CPRS Bill which, as the rest of the world enters a low carbon era, will further entrench Australia in a quarry economy - that is one with high volume pollution and low value added activities - by protecting, compensating and rewarding our biggest polluters for being just that”.

And finally there is also the crucial issue that the CPRS is limited to Australia’s internal activities, and neglects our role as an exporter of huge amounts of embodied greenhouse emissions in the form of coal. As Guy Pearse recently observed in The Age newspaper, this aspect has profound long term implications for Australia’s international trade and reputation :

Meanwhile, our biggest contribution to climate change – black coal exports – will be conveniently ignored. These exports are on track to generate 1.2 billion tonnes of carbon dioxide annually by 2030 – rivalling the current carbon footprint of Saudi Arabian oil. That coal won’t be used cleanly either. Treasury’s modelling suggests that “clean coal” technology won’t be deployed in Australia until 2033, let alone in our export markets or other developing countries. Protecting Australia’s carbon lobby will become harder and harder to get away with.

The New Bush Telegraph will keep its readers informed on the progress or otherwise of the Government’s CPRS Bill in future editions. ■

General Meetings

Level 2, Fortuna House, 332 Pitt Street, at 2.00pm on Thursday June 13th, July 9th and August 13th. Visitors welcome.

Gardens of Stone undermined

BY KEITH MUIR

I knew that the northern section of the Baal Bone colliery’s land holdings had the most spectacular scenery in the western Blue Mountains but last month I was again stunned by the beauty of this area. Nestled on the Great Dividing Range among sandstone escarpments that form the watershed of the Cox, Wolgan, Capertee and Turon rivers, it is a hell of a place to put a coal mine. Some places are spectacular but this area has that special something, a spellbinding magic.

Both forms of the sandstone pinnacles, known as pagodas are present; the ‘platy’ and ‘smoothy’. The former have large, ironstone flanges that protrude out from the sides of each pinnacle to create a natural pagoda, or rock temple. The smoothies are usually bigger, massive even, with convex rounded sides, like Buddhist stupas. Both pagoda types crown the Capertee Valley escarpment with veivs north taking in Pantoneys Crown, a mesa in the forested upper Capertee Valley. To the south are the complex internal escarpments of Jews and Baal Bone Creeks, within which is a maze of pagodas on convoluted spurs leading to a forested valley floor.



The Three Sisters are poor relations to the wild grandeur of this pinnacled landscape. Yet this dreamland is being toppled by the spoiling effects of longwall coal mining.

Vandalism at Baal Bone

For decades cliff collapse, pagoda fracturing, surface crevasses and swamp death has been wrought by the land subsidence caused when the entire underground coal seam is removed during underground mining. The Baal Bone, Angus Place and Springvale collieries are primarily responsible for the damage in this area.

Like an endless party trick, where a foolish adolescent whips away the tablecloth from under your the best china; the coal industry for over 25 years has caused so much of the Gardens of Stone to crash onto the valley floor, as it mines the Lithgow coal seam.

New Mining Proposal

Xstrata Coal, who own the Baal Bone colliery, now propose to lodge a Part 3A development application to extend coal mining into the northern end of the Baal Bone lease. This area should be too marginal and too controversial to be mined.

The Colong Foundation has taken representatives of all political parties and key

independents like Clover Moore MP to this area in preparation for the coming battle. The mining proposed at the northern lease area is at the economic limits for mining. The Lithgow Coal Seam thins and terminates within the northwestern part of the coal lease. The high cliffs of the Capertee Escarpment would be protected due to public relation reasons, but the precious internal cliffines and their many padogas are at risk.

The mining would come to within 60 metres of the surface, the minimum depth of cover for longwall mining. Mining at such a depth would see the swamps of the headwaters of Baal Bone Creek and Jews Creek ruined by a maze of surface cracks, fissures and crevasses that would starve these swamps of water.

A series of cliff falls at this colliery have occurred over the last five years, and some of these can be seen from ‘Google Earth’ (just type in Baal Bone in your Google Earth browser). The cliff falls in the northern proposal area can be expected to be severe. The northern extension of the Coxs River Fault may limit mining in the east of the proposal area, and that would cause further difficulties.

Taken altogether, these constraints make for a very limited resource, with major mine operational problems in an area of high ecological sensitivity. Any mining that could occur would exhaust the resource in 3 to 4 extra years even at much reduced production levels. Baal Bone has the least remaining coal resources of all X-strata collieries, and it is believed that Xstrata Coal is considering selling the colliery. The new part 3A development application may well be part of an on-selling strategy.

It is for these reasons that the Colong Foundation opposes this extension of an operating coal mine.

Spectacular pagodas at the head of Baal Bone Creek. PHOTO: K. MUIR

Sandstone plateaus, upland swamps and catchment integrity

BY ANN YOUNG

SYDNEY is surrounded by sandstone—which is fortunate because its soils and topography are not good for agriculture. Consider the foresight of those who did not see these areas as useless, but protected them, establishing Royal National Park (from 1879), the 'metropolitan' catchments (1907-1936), Blue Mountains National Park (from 1959) etc, as places of refuge from the city, healthy places, places to enjoy nature, and places to protect natural resources. The Metropolitan (Cataract, Cordeaux, Avon, Nepean) and Woronora catchments lie on the Woronora Plateau, south of Sydney.

The plateau is an old surface geologically. The rock that caps it is the Hawkesbury Sandstone, formed from sediments laid down by vast river systems about 180 million years ago. These sands were consolidated into rock and then tilted up to their present height more than 80 million years ago. And since then, the plateau has been eroded by the streams that flow down it. Deep gorges, with waterfalls at their heads, have cut back into the plateau like jagged slices into a cake. It is these gorges we have dammed to hold our water supply.

Above the waterfalls, on the gentle plateau surface, the streams have broad shallow valleys. These are often filled with several metres of sands blackened by decayed organic matter. The organic-rich sandy soils are too wet for trees and so these upland swamps are



covered by heath and sedges. The swamps are storages for water, slowly releasing it during dry times and providing a significant part of the baseflow of the rivers. And they too are old. They have been stable features of the plateau for at least 12,000 years. In comparison to now, their vegetation changed only slightly (some species change but no structural change) during the cooler and drier and windier conditions of the last Ice Age. And indeed swamps like these may well have been on the plateau for very much longer, but of course, the loose sediments in them occasionally are eroded and we lose the record of very old features.

Below the Hawkesbury Sandstone, sometimes only a few tens of metres below but usually several hundred metres down, are coal seams. They are closest to the surface or exposed on escarpments around the edges of the plateaus around Sydney, and have been mined since the mid 1800s from below Sydney harbour, along the escarpment behind Wollongong, near Lithgow, and in the Hunter valley. Over time the mines have extended further and further underneath the plateaus, following the coal seams. At present, mining is not permitted below national parks. However it is permitted below water catchments. And of course, mining has been carried out below the metropolitan catchments for decades, with little apparent impact. It has seemed that both resource uses—coal mining and water storage—could co-exist.

We have long seen the impact of mining on cliffs in the Blue Mountains—Narrow Neck, Hassaans Walls, Nattai—and damage to built structures such as houses, roads etc has also been taken into account in legislation. The possibility of loss of water from the dams was considered in the Reynolds Inquiry into Mining Under Stored Waters (1977), and this

Inquiry acknowledged that there could be some loss of groundwater that could reduce storage. However the severe threat now facing the water supply catchments due to the potential for loss of the upland swamps is a more recently recognised danger.

The reason is the change in mining technique, from the old bord and pillar, or continuous miner, extraction to increasingly large longwall panels. As coal is extracted, the ground above settles (subsides). Whether there is damage depends on several things:

- how far the ground drops
- how steeply it drops over a short distance
- whether the ground is fairly flat (so movement is even) or steep (so gravity can worsen movement, or rocks can be squeezed together and broken)

In the late 1970s, the most severe subsidence in the Southern Coalfield dropped the ground 2.4m, and caused cracks 600mm wide and 9 m deep. This may sound a lot – and it is. But it is now quite common. We know that the ground often cracks to 10-15m, subsidence of about 2m is routine, and cracks 200mm wide are considered minor. We have seen many examples of upsidence: in a valley, the ground will drop but the floor will be forced upwards relative to the drop, and be crushed and broken. Waratah Rivulet in Woronora catchment is the best-known example.

But what of the upland swamps? The mines now operating below the catchments are planning extensive longwalls that will cause cracking of the sandstone base under the swamp sediments. The mines argue that any cracks will soon be plugged with sediment, and any drainage of the swamps will be temporary. I believe that the integrity of the sandstone bases of the swamps is vital to the health of the swamps. I am sure that if the sandstone is cracked, the swamps will dry out and



that this will be a permanent change. What happens then? Several things:

- the swamp sediments are much more erodible, because they lose the sticky organic matter that binds the sand grains together
- they also are much more susceptible to damage by bushfire, which can burn deep down into the dried peaty materials
- woody and deeper rooted plants such as wattles invade; evapotranspiration increases and water is drawn from deeper in the sediments
- water that drains down the cracks under the swamps *might* reappear further downstream—or it might be evaporated as it does, or it might be stored for years or decades in the rock. Certainly, it will not re-emerge as the clear drinkable water that naturally flows out of the swamps.

How do we know this? Because it has already happened. Of the many swamps in the catchments behind Wollongong, three have suffered serious erosion and drying out. All three have been undermined and cracked by subsidence. The swamps where subsidence effects have been minimal are not damaged. The long term health of our catchments depends on the protection of the upland swamps.

Above: Consequences of swamp collapse at Drillhole Gully, Metropolitan Water Catchment, and left: A pristine Banksia Robur dominated swamp, Metropolitan Water Catchment

Dr Young will be speaking at the Colong seminar advertised on Page 1

SUPPORT THE COLONG FOUNDATION!

To: The Treasurer, Colong Foundation for Wilderness Ltd.
Level 2, 332 Pitt Street, Sydney NSW 2000

The enclosed remittance or advice covers the item(s) indicated by a tick. (One cheque is sufficient to cover subscription and donation.)

- Membership application (\$25) to 31 December 2009
(NB Membership application covers Bulletin subscription)
- Colong Bulletin Subscription (\$11) to 31 December 2009 (non members only)
- Membership renewal to 31 December 2009 (\$25) Life Membership (\$550)
- Tax deductible donation of \$___ to the Colong Wilderness Fund
- PLUS \$___ being for publications as indicated on the reverse side of this form.

NAME (Mr, Ms, Mrs, Miss)

ADDRESS

..... P/CODE DATE

PHONE EMAIL:

SIGNED AMOUNT

Payment by credit card. Mastercard Visa Bankcard Expiry date ____ ____

Card # _____

MEMBERSHIP APPLICATION Why not join or invite a friend to join?

- Yes, I wish to become a member of the Colong Foundation for Wilderness Ltd. I subscribe to the Foundation's aim of preserving Australia's wilderness remnants. I accept the liability provided in the Colong Foundation's Articles of Association to guarantee \$20 should it be needed in the event of the winding up of the Foundation. Signed

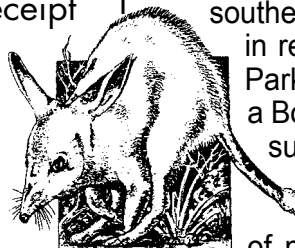
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A BEQUEST

Please remember us in your Will.

The Law Society of NSW recommends the following wording... "I bequeath the sum of \$... to the Colong Foundation for Wilderness Ltd. for its general purposes and declare that the receipt of the treasurer for the time being of the Colong Foundation for Wilderness Ltd. shall be complete discharge to my executors in respect of any sum paid to the Colong Foundation for Wilderness Ltd."



ABOUT THE COLONG FOUNDATION

The Colong Foundation, the successor to Myles Dunphy's National Parks and Primitive Areas Council, is Australia's longest-serving community advocate for wilderness. Its proposal for a *Wilderness Act* was accepted in 1987. To supplement this legislation, our Red Index, audits NSW wilderness areas, identifies threats and formulates site specific protection remedies. There are now 1,836,000 ha of protected wilderness in NSW. However, many beautiful and environmentally highly significant wilderness areas are not protected, such as the 13,000 ha Green Gully in the Macleay Gorges, Pilliga and Goonoo on the north west slopes, Yengo in the Blue Mountains, the Deua Valley on the South Coast and the Tabletop and Main Range in the Snowy Mountains.

The Colong Foundation for Wilderness has had a long and successful history. From its foundation in 1968 until 1975 it was the fighting force that prevented limestone mining and the destruction of native forest for pine plantations in the southern Blue Mountains. The Foundation not only played a leading role in realising Myles Dunphy's plan for a Greater Blue Mountains National Park, it pushed for its World Heritage listing, as well as the reservation of a Border Ranges National Park and Kakadu National Park. It has initiated successful campaigns for the protection of over a million hectares of wilderness in NSW.

The realisation of Myles Dunphy's vision of a comprehensive system of national parks with protected wilderness areas remains the primary objective of the Colong Foundation.

Now, more than ever, the Foundation needs your support. Well financed and powerful rural interests, miners, loggers, resort developers, as well as four wheel drive enthusiasts, horse riders and others, have greatly increased the threats facing Australia's wild places.

Only with your help, through continued membership and donations, can the Foundation continue its campaigns for the preservation of the natural environment and effective nature-based national park management, and by concentrating on wilderness, these rare areas can be kept safe from development and misuse.

THE COLONG FOUNDATION

SENDER: THE COLONG FOUNDATION FOR WILDERNESS
Level 2, 332 Pitt Street, Sydney NSW 2000



PUBLICATIONS AVAILABLE FROM THE COLONG FOUNDATION

	Price Posted	
WILD PLACES <i>The meticulously researched, beautifully written book on wilderness by Peter Prineas with photographs by Henry Gold (285pp)</i>	27.50 <input type="checkbox"/>	PARK OR PINES – <i>The Battle for the Boyd (42pp)</i> 9.00 <input type="checkbox"/>
BLUE MOUNTAINS WORLD HERITAGE <i>Alex Colley and Henry Gold's description of the 67 year campaign culminating in World Heritage listing. (136pp)</i>	50.00 <input type="checkbox"/>	THE BATTLE FOR THE BUSH 27.50 <input type="checkbox"/> <i>Geoff Mosley's account of the genesis of the nature conservation movement and saving of the Blue Mountains environment (174pp)</i>
SUSTAINABILITY <i>Alex Colley provides his vision on a sustainable future. (90pp)</i>	20.00 <input type="checkbox"/>	MYLES DUNPHY (SELECTED WRITINGS) 43.95 <input type="checkbox"/>
THE BAREFOOT BUSHWALKER <i>by Dorothy Butler, Australian Geographic award winner. A story of a lifetime of adventure in wilderness and high mountains (292pp)</i>	27.50 <input type="checkbox"/>	CLASSIC BUSHWALKING MAPS by Myles Dunphy (Gangerang and Kowmung Maps) 6.00ea <input type="checkbox"/>
HOW THE RAINFOREST WAS SAVED (59pp) 9.00 <input type="checkbox"/>		WILDERNESS RED INDEX – complete \$110 <input type="checkbox"/> <i>The Index describes the land ownership, values, history and threats to NSW wild places</i>
		– Summary brochures \$2.20 <input type="checkbox"/>
		– Listing of individual areas \$5.50 <input type="checkbox"/>
		LIVING WITH THE DINGO (107pp) 19.00 <input type="checkbox"/> <i>by Adam O'Neill</i>