



STEP Matters

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STEP Committee

President

Michelle Leishman

Committee

Tim Gastineau-Hills
 Bruno Krockenberger
 Neroli Lock
 John Martyn
 Tony Morrison
 Ann Perry
 Helen Wortham

Diary Dates

25 Sept	Walk West Head (see next column)
25 Oct	Talk on Ku-ring-gai Council's Environmental Initiatives and AGM (see next column)
11 Dec	Christmas Barbecue (details to be advised)

Walk West Head

Date: Sunday 25 September
 Time: 12:45 pm for a 1 pm start
 Place: West Head Road, Resolute Picnic Area, car park (as signposted beyond the road cutting)
 Grade: Medium — excellently maintained walking tracks with a steep but evenly-stepped section on Resolute Track
 Bring: Water, walking shoes/boots, hat, sunscreen, binoculars (recommended)
 Cost: \$11 National Park entry
 Leader: Tim Gastineau-Hills
 9449 2094, 041 925 1586

We begin with the short Koolewong Track and then proceed to Resolute Track, which descends gradually to the shoreline, passing West Head Beach and Resolute Beach. A short steep climb will put us on a major ridgeline that leads back to the starting point, on which we expect to see a variety of native wildflowers amongst typical coastal heath. We will also pass an Aboriginal engravings site and hand stencil cave (Red Hands Cave).

On our return to the picnic area, there will be an optional side trip to visit the main igneous intrusion in the area. Often referred to as the West Head diatrema, recent fieldwork has defined a large plug-like intrusion of medium-grained dolerite. A marked change to red clay soil can be seen on a service trail that roughly bisects this intrusion. This central area features a very attractive glade of diverse tall trees and cabbage tree palms and is well worth visiting botanically.

Talk on Ku-ring-gai Council's Environmental Initiatives and AGM

Date: Tuesday 25 October
(note change of date)
 Time: 8 pm
 Place: St Andrews Church Hall
(Vernon Street, South Turramurra)
 Contact: Michelle Leishman
(9489 8972)

Our AGM will probably take about 15 minutes, after which Peter Davies, Manager of Environment and Sustainability at Ku-ring-gai Council, will talk to us about Council's environmental initiatives.

STEP Positions

We've recently been looking at opportunities for our members to become involved with STEP and have identified two jobs.

Publicity officer — this basically involves promoting our publications (particularly the Middle Harbour maps) and advertising our activities (by sending e-mail media releases to newspapers).

Walks/talks coordinator — ideas and contacts for our walks/talks are discussed at committee meetings, but we would like one person to coordinate the organisation and running of the walks/talks.

You need not be a committee member to take up these positions, but you would be welcome to join the committee. Contact Michelle (9489 8972), Helen (9144 2703) or email secretary@step.org.au for further information or offers of help.

STEP Inc

Community-based Environmental Conservation since 1978
 PO Box 697, Turramurra, NSW 2074

Nuclear Energy

Bruno Krockenberger

In the future STEP's objective of bushland conservation is likely to be severely impacted by climate change, and the abatement of greenhouse gas emissions is of direct importance to our objective, therefore any prospective solution to the problem is of interest to us. Propelled by the intractability and increasing urgency of the greenhouse gas problem, the nuclear energy debate has come to prominence again.

A few decades ago the nuclear energy industry was stopped in its tracks by the problems of safety, waste disposal and the threat of fissile material getting into the hands of terrorist or criminal organisations, and of course the cost factor.

The dire predictions of climate change and the slow progress of building up renewable energy sources now provide the setting for a resurgence of a nuclear energy solution. The protagonists in the debate are broadly the same as before, with a few defections from the anti-nuclear side. The arguments look similar, but the 'climate' has changed somewhat.

Safety

The nuclear industry insists that technology has improved to a sufficient extent to prevent accidents of the Chernobyl and Three Mile Island type recurring.

Waste Disposal

No real progress has been made on the waste disposal problem. No technical solution has been found and disposal remains a political hot potato.

Criminal and Terrorist Misuse

This risk, if anything, has increased since it has become clear that terrorist organisations could easily produce a 'dirty' bomb (conventional explosives mixed with fissile material).

Cost

Nuclear power generation has in the past been subsidised

massively by governments and the only change to this situation is that interest rates are currently much lower. The latter point is emphasised by the pro-lobby, but the former is alleged by the anti-lobby and not denied by the pro.

Independent information is difficult to obtain, but an indication is given by the high energy requirement of the uranium enrichment process.

The Current Debate

The green movement is still generally opposed to the use of nuclear energy on the basis of the above factors and argues that if the same support was given to renewable energy production as given to the fossil fuel industry, renewable energy would be capable of a much quicker response to the emerging environmental crisis.

Its other argument is that there is a lot of potential in demand management which is not being pursued under the influence of the established energy industry. However its position does involve a value judgement about the risks.

On this score a number of well known environmentalists have abandoned their anti-nuclear stance and have advocated the use of nuclear energy as the lesser of two evils, since they regard the impact of climate change to be too horrendous to contemplate.

Patrick Moore, one of the founders of Greenpeace, has reportedly been persuaded that nuclear energy will provide a solution to climate change.

A leading European eco-centre, the Centre for Alternative Energy, has stated that:

... the worst possible nuclear disasters are not as bad as the worst possible climate change disasters.

James Lovelock, of GAIA theory fame, has never opposed nuclear energy *per se*, but has now also taken the position that it is better to accept the nuclear energy risks

rather than risking the effects of climate change.

(The GAIA theory holds that the earth is a living organism which will repair itself, but it is also completely indifferent as to whether the human race remains present in its repaired state.)

One of the weaknesses of the argument for a nuclear solution is that additional nuclear power plants cannot have any effect for another fifteen years, the lead time for new plants to come on stream, a time span which is extremely critical in the progress of climate change. Also, after a twenty year productive life the power plants need to be replaced.

When nuclear energy was being promoted last century there was an expectation that a clean nuclear alternative, nuclear fusion power generation technology, would be ready to take over within three or four decades. It seems now that we are no closer to nuclear fusion power plants than thirty years ago.

An aspect which is downplayed by the industry is the limited supply of uranium, which would dictate an eventual change to plutonium reactors, increasing the risk of misuse of fissile material.

Whichever way the debate proceeds in Australia, the fact that 40% of the earth's uranium deposits are in Australia will ensure that there will be extreme pressure for Australia to allow the mining and export of uranium.

A very harmful side effect of the nuclear energy debate is that it diverts attention from the potential for better energy demand management and renewable energy sources such as wind, solar, tidal, wave, geothermal.

Note: The author is personally opposed to nuclear power generation because of the risks involved. He deplores the lacklustre national approach to demand management and to the development of renewable energy, but has tried to present the arguments objectively. Please voice your opinion if the above is lacking or you disagree either way.

New Status for Blue Gum High Forest

The Blue Gum High Forest ecological community has finally been listed under the *Federal Environment Protection and Biodiversity Conservation Act 1999* as 'critically endangered' (see www.deh.gov.au/biodiversity/threatened/communities/sydney-blue-gum.html#conservation).

This new status provides added protection for the existing remnants of Blue Gum High Forest as any activity likely to have an impact on it will need to be assessed and approved by the Federal Minister for the Environment.

As the St Ives Blue Gum High Forest has local, state and national significance, the Blue Gum High Forest Group believes that the remaining one hectare of privately owned land at 100–102 Rosedale Road must be brought into public ownership to provide permanent protection. To this end, Ku-ring-gai Council has resolved to commit funds towards the acquisition. It is also seeking funding from both the State and Federal Governments. A community fund has been set up under the auspices of the Nature Conservation Council where provision has been made for tax-deductible donations.

For more information see <http://www.step.org.au/bghf.html>.

Talk on Exotic Plant Invasion in Hawkesbury Sandstone Vegetation

About 40 people attended our last talk which was given by our president, Michelle Leishman. Michelle gave an update on the research work in her lab at Macquarie University, which focuses on understanding exotic plant invasion. Although Michelle's talk was about exotic plants invading Sydney Hawkesbury Sandstone vegetation, she pointed out that exotic plant invasion is a global issue, not just a problem in our backyard.

Michelle showed us evidence that urban development has resulted in greatly increased soil phosphorus, particularly associated with stormwater runoff from unsealed roads and stormwater outlets. Surveys of vegetation have shown that exotic plants are found on nutrient-enriched bushland soils, while tracks and physically disturbed sites that are not nutrient-enriched do not support exotic plants.

Glasshouse and field experiments showed conclusively that only high soil nutrient concentrations favoured exotic plant survival and growth. Additional soil water or physical disturbance did not favour exotics. Other experiments showed that high soil nutrient concentrations (typical of soils below stormwater outlets) can also kill native plants.

Finally Michelle described the result of vegetation survey work after the January 2002 fires in Lane Cove Valley. This work showed that fire did not facilitate invasion by exotic plants on undisturbed soils. On nutrient-enriched soils however, fire promoted germination of both native and exotic species. Unfortunately, only native plants that occurred in these sites before the fire, e.g. *Oplismenus*, *Microlaena*, *Entolasia*, *Geranium*, survived beyond initial germination.

The message for bush regeneration from this research work is that additional soil nutrients are the key for successful exotic plant invasion. Bushland managers need to contain and minimise nutrients. We also need to find ways to reduce high soil nutrient concentrations, using biomass harvesting or chemical remediation.

Finally we need to accept that vegetation on nutrient-enriched soils on Hawkesbury Sandstone can never be restored to its previous condition and instead we need to develop an alternative native plant community that is better adapted to the changed soil conditions.

	Unit cost	Number	Cost (\$)
Membership (only complete if 05 is shown on address label on next page)			
Single (per financial year)	\$16		
Family (per financial year)	\$20		
Life	\$200		
Field Guide to the Bushland of the Upper Lane Cove Valley	\$30		
Maps of Walking Tracks (cost of maps to non-members is \$20)			
Lane Cove Valley	\$15		
Middle Harbour Valley. Sheets 1 and 2 Bungaroo and Roseville Bridge	\$15		
Middle Harbour Valley. Sheets 3 and 4 Northbridge and North Harbour	\$15		
Donation (donations of \$2 or more tax deductible)			
E-mail address		Total cost	

A Harbour Circle Walk

North Sydney Walking Volunteers has just produced a regional walking brochure entitled *A Harbour Circle Walk 2006*.

It consists of an A3 sized map of Sydney Harbour between Henley and Kirribilli Point showing a walking route right around that part of the harbour. In addition it shows adjacent walks of interest, a stick map of the trunk walking routes of the Harbour and the North Shore. It also shows approximate walking times for all sections of the circle and adjacent walks. The reverse side of the map has comprehensive notes relating to points of interest and other useful information.

North Sydney Walking Volunteers are a group of individuals who enjoy exploring areas on foot. Their aim is to assist others to share this pleasure and is summed up in their slogan: It's exhilarating and healthy. They believe that walking is one of the most effective and economical ways to combat obesity, fight pollution and reduce congestion on the roads.

Some of their achievements are:

They worked together with North Sydney Council in 1999 to identify a network of six connected circular walks, each with its own brochure, totalling 45 km.

In 2001 they demonstrated the need and practicality of a Lane Cove to Harbour pathway to be built in connection with the Lane Cove Tunnel.

They identified many little known pedestrian laneways, steps and routes throughout North Sydney enabling people to walk to school, work, the shops, picnics etc, which have been incorporated in the brochure and map *Walking North Sydney*. The paths have been sign-posted.

In 2003 they cooperated with Willoughby, Lane Cove, Mosman and North Sydney councils to coordinate sign-posting of pedestrian routes throughout these council areas and to display each others brochures.

In 2003 they also assisted STEP in the preparation of our Middle Harbour maps.

In 2004 they produced the *Walking North Sydney* brochure which identifies many little known pedestrian opportunities, such as lanes and steps at the end of 'no thoroughfare' streets, lanes hidden behind and gardens etc. They are all being sign-posted.

In 2004 funding and cooperation from DIPNR has resulted in the three regional brochures *A Harbour Circle Walk*, *Harbour to Spit Walk* and *Harbour to Great North Walk*. In the process the volunteers have worked with ten

local councils, three state and one federal body.

The North Sydney Walking Volunteers consist of a baker's dozen or so of dedicated and enthusiastic people coordinated by Bill Orme. Bill's activities go well beyond our shores as a contributor to the British Long Distance Walkers magazine *Strider* as well as to other publications, and as a walker in the UK and in France.

The maps and brochures may be downloaded from <http://www.northsydney.nsw.gov.au/www/html/3961-walk-north-sydney.html>.

Membership Renewals Due

If the year '05' is printed underneath your address at the bottom of this page, your membership is due for renewal.

Please complete the form at the bottom of page 3, indicate any changes needed to the address label, and mail the completed form and payment (by cheque made payable to STEP Inc) to:

The Treasurer
Step Inc
PO Box 697
Turrumurra, NSW 2074

You can also use the form to order any of our publications.



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