

**A Collection of documents by the National Parks Associations
and other organisations involvement to save the Wedderburn Koala colony**

(1988-1994)

***Showing the NPA Macarthur branch successful
fight to save the Wedderburn colony***

Compiled by

Lynn Bowden and Stephen Fellenberg 2017

National Park Association fight for The Wedderburn Koala Colony (1988 - 1994)

Date	Source	Title	Author
29-05-88	NPA Press release	Imminent threat to koalas	NPA Macarthur Branch
03-06-88	Press release- letter to the Editor	Letter from the project manager for the Yeomans estate	P.W. Lean
04-06-88	NPA Press release	NPA welcome minister's announcement	NPA Macarthur Branch
01-07-88	NPA Press release	Government sell-out on koalas	NPA Macarthur Branch
12-07-88	Press release	Notice of revocation of interim protection order No.1	Tim Moore Minister for the Environment
13-08-88	Press release	Wedderburn Koalas Protection	Minister for the Environment
15-08-88	National Park & Wildlife Service	Why N.P.W.S. Recommended Minister lift koala interim protection order	Knowsley Management Systems
	National Park Association of NSW	Report to Campbelltown City Council	
	Fairfax Community Newspaper	A:Koala	Jane
	Fairfax Community Newspaper	B: Park	Jane
14-06-89	Minister for the Environment	Letter to Michael Knight from Tin Moore re Letter from Sue Dobson	Tim Moore Minister for the Environment
		Can You help the Wedderburn Koalas	
		Letter to N.F. Greiner re Yeomans Property	Campbelltown Association to save the Wedderburn koala colony
		Map of blocks which NPA wishes to be omitted from subdivision	Planning and management committee meeting
		Letter to Premier Greiner	From Wedderburn
		Cartoon of bulldozer	
		NPA submission to Land and Environment Court	
08-05-98		Letter to Paul Zammit: Koala Colony Wedderburn	Campbelltown Association to save the Wedderburn koala colony
21-10-88	CSIRO report	Wedderburn Koala Colony Report	CSIRO
		Koala colony Wedderburn	
		Wedderburn -A History	
1990	NPA	The Wedderburn koala colony	Julie Sheppard
1990	NPA of NSW Inc, Macarthur Branch	Can You help the Wedderburn Koalas at Wedderburn	Sue Dobson
1990	Campbelltown Committee to save the Wedderburn Koala colony	Health Assessment of the koala	Rosemary Booth Veterinarian Melbourne Zoo
1993	Annual conference of AKF	Good news for Wedderburn koalas	Dr Liz Kernohan
06-12-94	Press Release		



PRESS RELEASE

GOOD NEWS FOR WEDDERBURN KOALAS

Premier John Fahey today announced that the wait is over for the Wedderburn koalas: the habitat will now become a reserve for their permanent protection.

The land at Wedderburn has been resumed by the State Government and the owner will be paid a sum determined a fair price by the NSW Valuer-General.

Mr Fahey thanked the Member for Camden, Dr Liz Kernohan, whose representations on the plight of the koalas prompted the decision to purchase the land.

After prolonged negotiations between the State Government and the owners failed to reach an agreed price, the decision was made to resume the land.

"Both parties have agreed to the use of the resumption process as the best means of now resolving the issue," Mr Fahey said.

Dr Kernohan said she was delighted with the news.

"The many people who were concerned about the fate of the koalas will share my delight at this announcement," Dr Kernohan said.

"It ends once and for all any doubts that may have lingered about their future."

ENDS

PR310-6/12/94



MEMBER FOR CAMDEN



PARLIAMENT OF NEW SOUTH WALES
LEGISLATIVE ASSEMBLY

DR LIZ KERNOHAN, M.P.
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Telephone: (048) 55 3303
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FACSIMILE TRANSMISSION

DATE: 6-12-94

TIME: 2:15

TO: DR ROBERT CLOSE
UWS MACARTHUR

FROM: Dr Liz Kernohan MP
~~Heather Sandman~~
Peta Whitelaw

FACSIMILE NO: 26-6683

No. of pages including Cover Sheet = 2.

MESSAGE:

As promised

Liz Kernohan

Macarthur Branch
20 November, 1993

Dear Member,

You may have read in the media that the Premier has announced O'Hares Creek Catchment is to be declared a Reserve under the Crown Lands Act, to be administered by the Department of Conservation and Land Management and a Trust. We are totally opposed to this move.

Ever since the Campbelltown sub-branch of NPA (now the Macarthur Branch) was formed in the 1970s, we have been lobbying to have the National Parks & Wildlife Service manage O'Hares Creek Catchment and parts of the Wedderburn plateau as the Dharawal Nature Reserve.

In 1988, NPA Macarthur Branch produced a detailed submission entitled *Dharawal Nature Reserve and Macarthur State Recreation Area*.

In 1990 O'Hares Creek Catchment was listed on the Register of the National Estate, in recognition of its high conservation values. O'Hares Creek is situated in the upper reaches of the Georges River. The area comprises natural heathland, woodland and rainforest. Over 500 plant species occur in the O'Hares Creek catchment. Sixteen plant species are nationally endangered or rare and another 30 species are considered regionally significant. O'Hares Creek is also home to a diverse array of animal species including the koala and platypus. Once inhabited by the Dharawal Aboriginal clan, the area is rich in reminders of their past presence.

The catchment is currently managed by the Water Board and public access is restricted. Other activities in the area including coal mining and Army exercises are closely supervised. There are currently one coal mining surface facility within the catchment and two other facilities immediately adjoining the area. Army activities in the area are restricted to driving on existing roads and navigation exercises. Although under Water Board control, there are no dams in the catchment. The undisturbed condition of the catchment together with careful management by the Water Board results in a sustained yield of high quality water to the Georges River system and Botany Bay. This fresh clean supply water is essential for fishing and other recreational pursuits further downstream.

In September 1993 the Leader of the State Opposition, Mr Bob Carr, promised that a Labor Government would dedicate a 'Dharawal National Park' within its first year in office. Mr Carr followed this promise by a visit on November 7, when he inspected highlights of the area.

../2

Annual Conference
of Aust. Koala Pondalio
Sydney 1993

HEALTH ASSESSMENT OF THE KOALA
Rosemary Booth, Veterinarian, Melbourne Zoo

With the steady destruction of koala habitat which has occurred, with increasing urbanisation, koalas end up in veterinary clinics and wildlife shelters with increasing frequency. It is important to be able to accurately assess the health of injured and diseased koalas to make rational decisions about their treatment, and wherever possible, their rehabilitation into suitable habitat.

Many misconceptions have formed about koala health, particularly regarding the use of antibiotics, anaesthetics, fracture repair, fluid therapy, supplementary feeding and susceptibility to stress. Standard veterinary diagnostic and therapeutic techniques can be used in koalas with success provided that every effort is made to discover the idiosyncrasies of the species from those who have gone before.

It has often been stated that koalas are unusually susceptible to stress, based on their small adrenal glands and apparently unwarranted death in captivity under a variety of circumstances. There is increasing evidence that starvation rather than stress is the true cause of death in cases where little pathology is found on post-mortem. Anorexia associated with injury or anxiety, combined with provision of inadequate food quantity and quality can rapidly lead the koala to a state of irreversible undernutrition. Koalas are specialised to live on a low energy diet, and have very little fat reserve to assist them through periods of energy shortage, or raised energy requirement as occurs following injury, or during disease.

The critical areas of examination in the health assessment of koalas are body weight, muscle condition, palpation of the stomach and caecum, examination of faecal pellet size and number, examination of the teeth and assessment of appetite. Combined with routine general physical examination, these features will assist in establishing the prognosis for individual koalas.

The diagnosis of "stress" should not be used as a crutch for ignorance. A rational thorough approach to the initial examination will often save the koala and carer much unnecessary grief later. Wherever possible, this initial examination should be carried out by a veterinarian, using sedation or anaesthesia.

KOALA SUMMIT MANAGING KOALAS IN NSW
PROCEEDINGS OF THE KOALA SUMMIT HELD AT THE
UNIVERSITY OF SYDNEY 7-8 NOVEMBER 1988.
EDITED BY D. LUNNEY, C. URQUHART AND P. REED
NSW NATIONAL PARKS AND WILDLIFE SERVICE SYDNEY 1990 P. 70-73

11. The Wedderburn koala colony

Julie Sheppard

NPA of NSW Inc., Macarthur Branch, PO Box
792, Campbelltown 2560

The colony

- Re-discovered 1986 after not being seen since the turn of the century.
- Largest colony on the outskirts of Sydney with 85 recorded sightings in 28 month period.
- Appears to be disease free.
- Numerous young indicate a breeding colony.

The threat of development

- Approved rural residential sub-division of 26 blocks of 4 to 10 ha (See Figs 1, 2) (approved by previous council prior to discovery of koalas in area.)
- Blocks intrude directly into koala habitat.
- Roads and housing development will lead to increased fire hazard, increased human interference, feral animals and particularly the threat of domestic dogs allowed to run loose.

Efforts to protect them

- 4.6.88 Interim Protection Order No. 1 placed on area by Minister for Environment, Tim Moore.
- 12.7.88 IPO lifted after Voluntary Conservation Agreement drawn up with owner (Yap Yan Pin P/L) and placed as covenants on the blocks (Appendix 1).
- Union Green Ban placed on development of FEDFA (covering bulldozer drivers) and Building Trades Group of Trades and Labour Council. First Green Ban in the world to protect animal habitat.
- Sept. 88 Council commissioned CSIRO survey to ascertain extent of koala habitat.
- Oct. 88 On basis of survey results (Cork *et al.* 1988), Council resolved to draw up new LEP to rezone the land as Regional Open Space.
- All the above occurred because of opposition by NPA, Macarthur Branch and a local residents' action group.
- The role of NPWS in all this? Apart from drawing up the unenforceable and therefore ineffectual Conservation Agreement with the developer, they have done nothing. They consider the issue a low priority!

The solution

- Acquisition of the whole area by the State Government and its inclusion in the proposed Dharawal Nature Reserve (Fig 3). This action on the part of the Government is needed now! This is not just a local government issue as Tim Moore would have us believe. The ultimate compensation payout to the developer should not have to be borne solely by the Council.
- More long-term research is needed into the colony's numbers, range, preferred feed trees etc. so that an effective plan of management can be drawn up to ensure the koalas' survival in this area.

References

- Cork, S.J., Margules, C.R. and Braithwaite, L.W. (1988). A Survey of Koalas and their Habitat near Wedderburn N.S.W., Suggestions for Management, and an Assessment of the Potential Effects of a Proposed Subdivision of Four-hectare Environmental Lots. A Report for Campbelltown City Council. (CSIRO Division of Wildlife and Ecology).
- Douglas, G. and Sheppard, J. (1988). Proposals for Dharawal Nature Reserve and Macarthur State Recreation Area. (National Parks Association of N.S.W.).

Appendix 1

Part of the Voluntary Conservation Agreement drawn up between the Minister for Environment, Tim Moore and the developer, Yap Yan Pin P/L

2. USE OF THE SUBJECT LAND:

The Owner covenants with the Minister as follows:-

- 2.1 No development shall be undertaken on the subject land other than on residential allotments or for purposes of suppression of bushfires or provision of essential services including roads unless the prior written approval of the Director has been obtained.
- 2.2 The clearing of vegetation on residential allotments on the subject land shall be restricted to a total area of 2 hectares and no trees shall be removed from the subject land in any clearing of vegetation which does occur without the prior written approval of the Council and the Director.

- 2.3 Dogs shall not be permitted outside the immediate curtilage of dwellings constructed on residential allotments or elsewhere on the subject land unless on a leash, the "immediate curtilage" of dwellings being defined for the purposes of this Deed as an area not larger than 1 hectare.
- 2.4 Any fencing erected on the subject land shall be to a design and standard and constructed of materials previously approved in writing by the Council and the Director so as not to unduly impede free passage of koalas on the subject land.
- 2.5 Intensive agriculture, including but not restricted to intensive animal husbandry, feed

lots, poultry farming, mushroom farming, pig keeping, pig keeping establishments or stables shall not be permitted on the subject land without the prior written approval of the Council and the Minister.

3. RIGHT TO INSPECT:

The Minister, the Director and the Council and their servants and agents may at all times enter upon the subject land excluding however dwellings constructed upon residential allotments and the immediate curtilage thereof in circumstances not permitted under the Act to ensure protection and care of koalas and due compliance with this Deed.

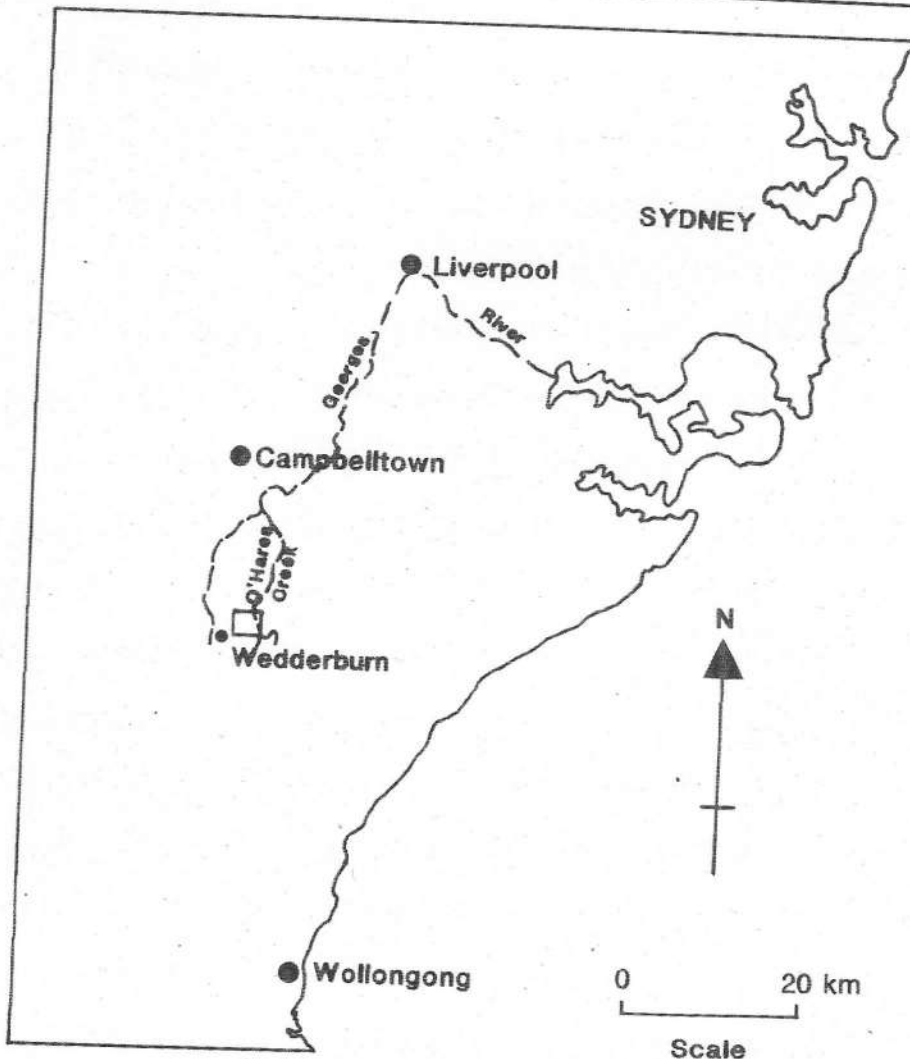


Fig. 1. The sub-division shown in relation to Campbelltown and Sydney (From Cork et al. 1988).

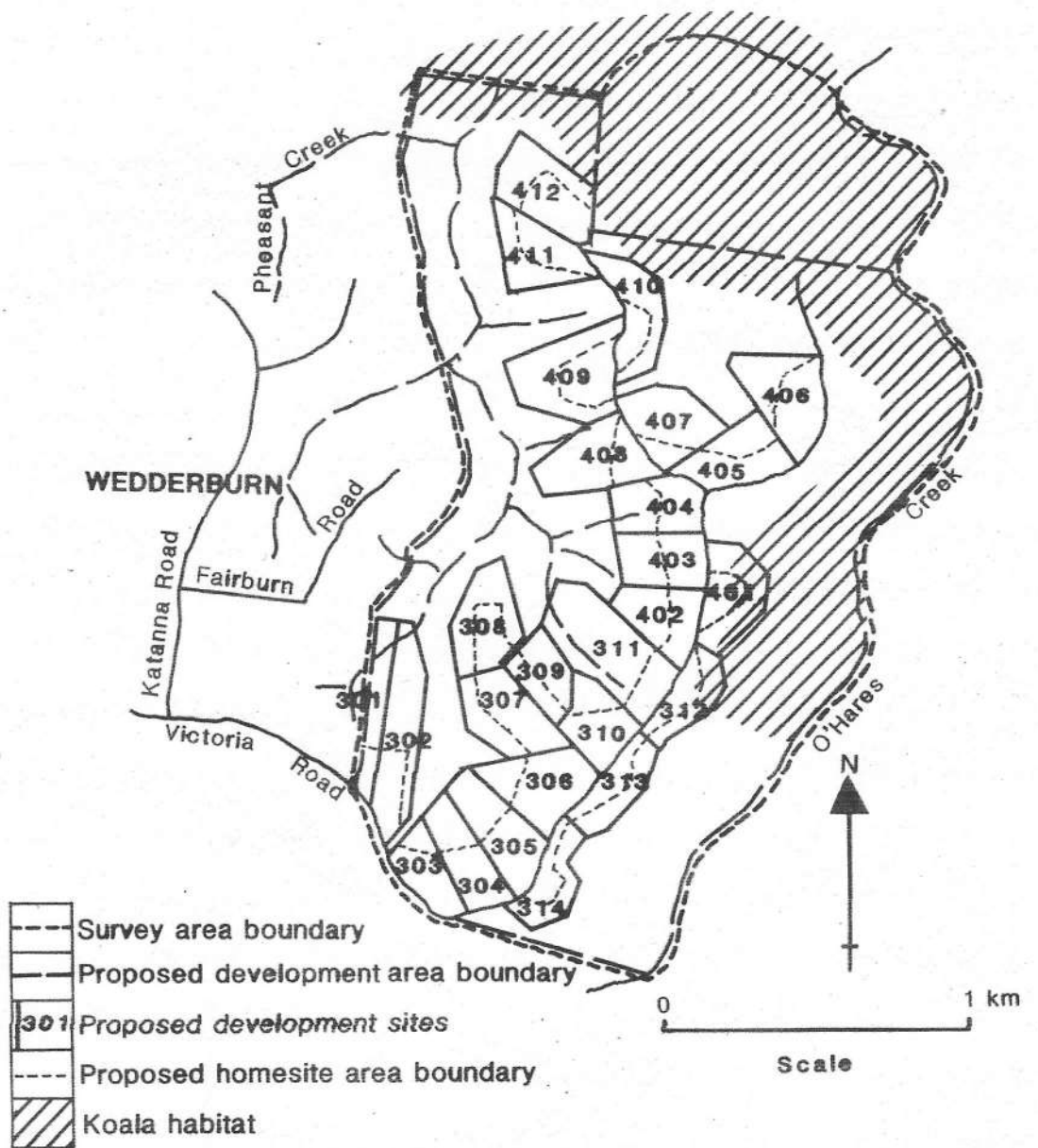


Fig. 2. The sub-division in detail with the proposed 4 ha environmental lots indicated and numbered according to engineering plan 67426/6. All areas within the proposed development area boundary other than the numbered lots are designated for public reserve (From Cork et al. 1988).

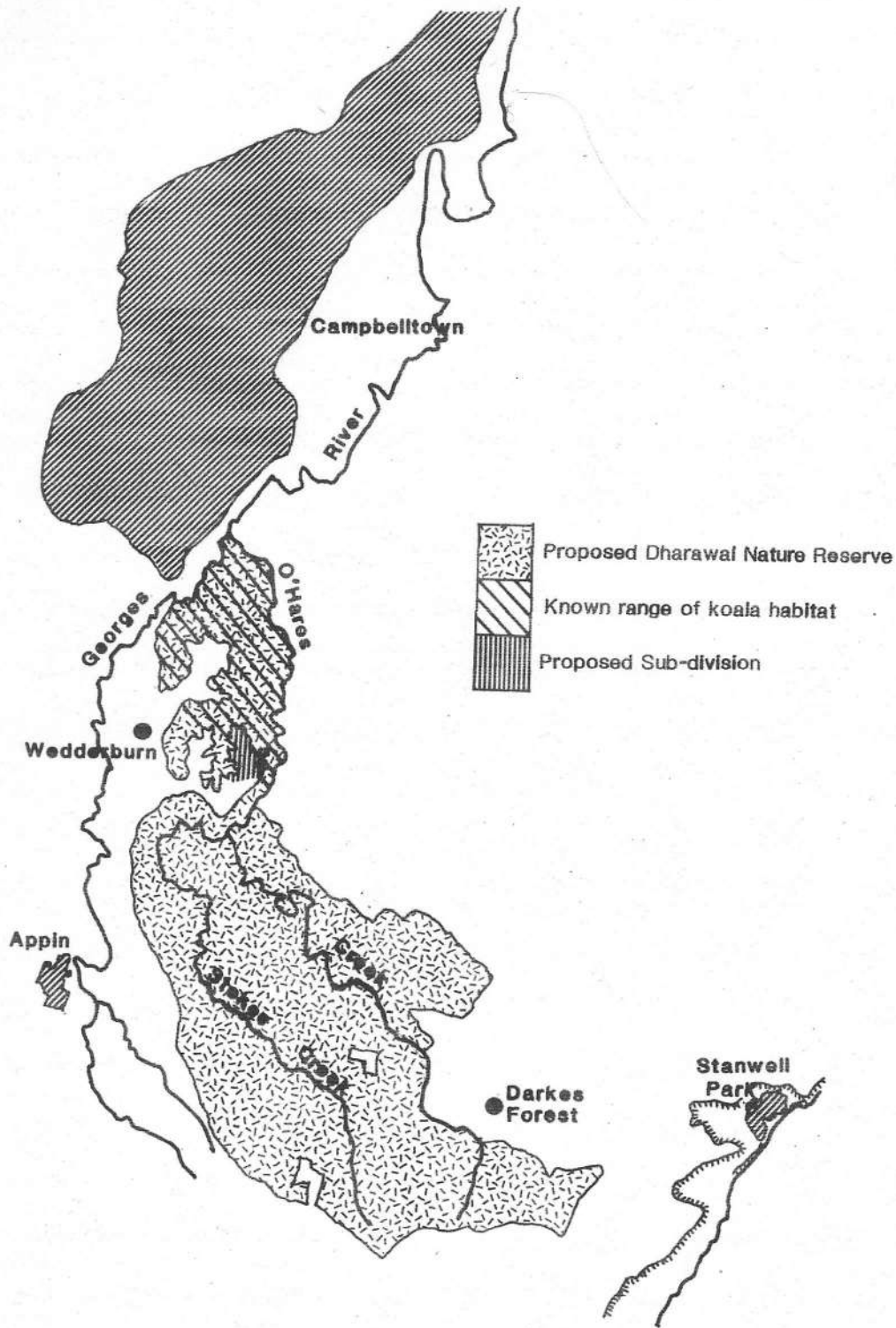


Fig. 3. The proposed Dharawal Nature Reserve (From Douglas and Sheppard 1988).

39. Can you help us save the koalas at Wedderburn?

Sue Dobson

Campbelltown Committee to Save the
Wedderburn Koala Colony, PO Box 1162,
Campbelltown. NSW 2560

Introduction

It is a well known fact that our koalas are in a desperate plight, hence the Koala Summit. Sterility and blindness are well documented problems facing koalas, but a graver concern is destruction of their habitat. There has been a great deal of publicity about how disease is wiping out koalas. The truth is that if their habitat is not preserved, there will be no koalas to catch the disease. Disease is more prevalent in koalas where their habitat has been disturbed (Lester Pahl, pers. comm.)

Wedderburn is on the upper tract of the Georges River about 8 km east of Campbelltown and some 60 km south west of Sydney. Here there is a disease-free colony of koalas which is under great threat. Their habitat is threatened by a proposed housing development by Yap Yan Pin Pty Ltd. Road building, tree felling and construction work is in the early stages and then car traffic, and dogs will ruin this natural habitat and kill this disease-free colony of koalas.

Breeding koalas need a safe territory free of vehicular traffic and dogs. Naturally they also need large stands of their favourite *Eucalyptus* trees. Jean Starr from the Port Macquarie Koala Hospital reports that 45% of koalas handled there have been hit by traffic. Obviously, koalas, cars, dogs and land clearing do not mix.

What has the NSW Government done?

Tim Moore, the Minister for the Environment, sought media coverage when he symbolically nailed an Interim Protection Order on a tree to protect the koalas, while a full study could be done at this Wedderburn site. However, a few weeks later this same Minister lifted this protection order. This Minister has betrayed the koalas by his actions. Why did the Minister, or what caused the Minister, to change his mind? Surely the protection of koalas and their habitat is part of the portfolio for the Minister for the Environment. Will Tim Moore be remembered as the Environment Minister who nailed the death warrant for the Wedderburn koalas? It is clear that the NSW Government has given the koalas a low priority. By examining the 1988

NSW Government Appropriation Bill some interesting comparisons can be shown.

Koalas: a \$15,000 grant for a Koala Preservation Society.

But what of these amounts?

A Peace sculpture in Bi-centenary Park
\$ 56,000

Fire arms compensation
\$1,700,000

Tow Truck Industry Corporation
\$1,900,000

Darling Harbour Authority
\$74,000,000

Overseas visits to check Casino operations
\$69,000

How do our koalas rate against these?

How much does the Premier and the Ministers spend on overseas visits each year (Junkets if you like)? It is true that the Government organised this Summit but action more than words is required to save our koalas. So much koala habitat has already been destroyed in the name of progress for farmland, housing estates, industry or timber cutting. It is time to turn around and save a koala colony and its habitat. Disease-free colonies are now rare and this is to our shame.

The Wedderburn koala habitat and its cuddly occupants must be saved from the developers death blow. Money is needed to protect this and other endangered koala habitats, to set up more Nature Reserves and National Parks. Beyond this habitat problem is the need to find solutions for koala blindness and sterility. The conservation/environmental movement, Governments and the community have a responsibility to ensure the survival of our koalas.

Can you help us save the koalas at Wedderburn?

KOALA COLONY, WEDDERBURN

- JUNE 1986 - 1st sighting
- SEPT. 86 - Representative of Australian Museum (Mammal Section) inspected area - 2 koalas sighted
- 1 Koala found up power pole near Wedderburn bridge. Removed by Prospect County Council and released in bushland away from road.
- OCT. 86 - Submissions^{to} Malacothus Regional Environmental Study from NPA and Aust. Museum about koala colony and importance of preserving habitat.
- Aust. Museum begins to co-ordinate records of sightings re site cards and map plotting.
- Late 86 - Council erected 2 fire gates, one at end of Victoria Rd. and one further in along fire trail to prevent vehicular access and so protect koalas (Harold Stuart, former head of Health & Bldg Dept. was responsible for this)
- JAN. 87 - NPA requested Council by letter (13.1.87) to look at some modification of subdivision to protect Koala habitat. NO REPLY.
- Summer 1987 - Phil Reed, doing NPWS survey on koala distribution in NSW visited area twice in company of Council Ranger, Keith Longhurst.
- NOV. 87 NPWS South Metropolitan District Advisory Committee requested urgent action by Service (via Advisory Council) to ensure koala habitat protection in Wedderburn in the face of this mass residential sub-division.
- NPWS was also requested to contact Campbelltown City Council to advise them of their responsibilities re koala protection. As far as we know, this contact was never made and no reply has been received by the Advisory Council.

JAN. 1988

NPA, Macarthur Branch produced a reserves proposals document for this area. This was widely circulated to all politicians, local govt. NPWS etc. Emphasis was made in this document on the need to declare the Shadawal Nature Reserve to protect koalas under threat of rural residential sub-division.

FEB. 1988

- Suli Sheppard, Secretary of NPA Macarthur Branch was interviewed on ABC National Radio "Earthworm" program about the koala colony at Wedderburn. A plea was made for govt. to act to protect their habitat.

From June 1986 to date (2 years) 66 individual sightings have been made incl. numerous females with young. There is no evidence of chlamydial disease in this population. Sightings have ranged in area from north of the Woolwash to south of Yemans sub-division, and from Wedderburn bridge in the west to the O'Hares Ck gorge in the east. It is very hard to estimate how many koalas we have based on these sightings but in any case they have been acknowledged by both the Australian Museum and the NPWS as being highly significant

- because they are so close to Sydney
- because they are in the south
- because they appear to be disease-free
- because they appear to be an expanding population rather than on the decline as is the case elsewhere in the state.

Over the 2 years, apart from those listed above there have been numerous inspections of the site by -

- NPWS rangers including the Superintendent of Str. Met. District, Ken Ayers (Horti) - all who have sighted koalas
- Council officers and aldermen
- The Georges R. Council's Committee (Horti)

There has not been much publicity about the koalas as we feared unwelcome visitors but now we have no choice but to go public in order to gain some protection as normal channels have failed.

YEOMANS' SUB-DIVISION HISTORY

Dec. 1981 - Application to sub-divide lodged.

Deferred pending further investigation by Council, due to environmental sensitivity of area and the need to complete the Wedderburn Development Control Plan.

July 1982 - Adoption of Draft LEP for Wedderburn. Subject land considered for environmental protection. Lot sizes reduced, valleys protected & designated as Open Space. Whole area designated Environmental Protection zone with controls over development to protect "intrinsic qualities" of site.

The 2nd stated objective of the LEP is "To ensure the protection of the rural landscape and natural bushland by restricting development to occur only on cleared land." The 4 northern-most blocks (409-412) at least, in this stage of the development are on areas not previously cleared and this would then appear to be in contravention of the LEP.

The Draft LEP was exhibited for 3 weeks in Aug-Sept 1982. Submissions were received from Dept Mineral Resources, Clutha Developments P/L and Soil Conservation Service of NSW.

Oct. 1982 - The Draft LEP was adopted after concessions made to coal concerns re siting of ventilation shafts etc. and controls suggested by Soil Con. re erosion and sedimentation included.

WEDDERBURN

The koala colony, other rare and endangered fauna and flora, significant Aboriginal sites and the pristine headwaters of the Georges River are/were under threat from three directions.

- 1 The controversial Victoria Road rural/residential subdivision which was the subject of Union Green Bans.
- 2 Draft Local Environment Plan No. 127 - which encompasses most of Wedderburn.
- 3 O'Hares Creek Catchment Area, previously managed by the Water Board as pristine catchment, the subject of a proposed Nature Reserve to be managed by National Parks & Wildlife Service (NPWS), but instead gazetted a Crown Land Reserve under the management of the Department of Conservation and Land Management (CALM) — administered by the Dharawal Reserve Trust.

A HISTORY

- pre-1816 Wedderburn and the surrounding region is home to Dharawal-speaking tribes.
- 1816 After conflict with white settlers, Dharawals are massacred at Appin by the Military.
- 1880s/1890s Settlers take up land at Wedderburn, establishing orchards and vineyards.
- 1920s Large numbers of koalas are trapped at Wedderburn so that their pelts can be exported.
- Fruitgrowing at Wedderburn expands.
- 1927 Gazettal of O'Hares Creek Catchment to be managed by the Water Board. Water from O'Hares Creek is to augment supplies to Sydney Metropolitan Area. (*This never eventuates, but the Water Board continues to protect the area.*)
- 1978 Premier Neville Wran announces the establishment of a State Recreation Area at O'Hares Creek, Wedderburn. The area is to encompass 7,600 hectares. (*The SRA does not proceed.*)

- 1983 Campbelltown Council gazettes LEP No. 32 which covers Yeoman's Estate in Victoria Road, Wedderburn and permits subdivision of 4-hectare lots.
- 31 Dec 85
June 27 86
1986 Koalas are sighted by NPA on Yeoman's Estate and the adjoining Army land known as H Range. NPA advises the NPWS, the Department of Environment and Planning and Campbelltown City Council regarding the koala sightings.
- Oct 1988 In co-operation with the Australian Museum, NPA (Macarthur Branch) begins to monitor the colony by completing site cards, photographs and map plotting.
- Dec 1986 The owners of Yeoman's Estate are granted an extension to an existing development consent, to subdivide their land into 26 four-hectare rural-residential blocks. Of the total 326 ha., 146 ha. are to be developed with the balance (180 ha) being dedicated to Council as open space.
- 1990
Jan 1988 NPA releases its proposal for the Dharawal Nature Reserve, encompassing the O'Hares Creek Catchment, H Range and Open Space from Yeoman's subdivision. Under this NPA proposal, the area will be managed by NPWS.
- Jun 1988 The then owner of land in Victoria Road, Wedderburn, Yap Yan Pin, seeks to commence work on the site by bulldozing roads. *(The original developer, Yeoman's Pty Ltd, went into liquidation. The next developer, Boxola, also went into liquidation. The third developer, Yap Yan Pin Pty Ltd., is owned by Indonesian property speculators.)* Upon being alerted, NPA begins a media campaign in Sydney and local media.
- 4 Jun 1988 Minister for Environment places an Environmental Protection Order (EPO) over the koala colony. NPA contacts the NSW Labor Council seeking a Green Ban which the FEDFA and Building Industry Group of the NSW Labour Council agree to.
- 12 Jul 1988 Minister for Environment revokes EPO. Instead a "voluntary conservation agreement" is drawn up to restrict dogs and to limit tree clearing on the Yap Yan Pin Estate.
- Jul 1988 NPA organises two public protest meetings, one at Wedderburn and one at Mawson Park in Campbelltown, to protest the lifting of the EPO. These rallies receive extensive media coverage. At about this time a new group called Campbelltown Residents for the Protection of Wedderburn Koalas is formed. The Australians for Animals also joins the fight.
- Aug 1988 Campbelltown Council commissions a report from the CSIRO on koalas management on the Yap Yan Pin Estate. The consultants have just under seven weeks in which to prepare and deliver their report, and they state "the short time available meant that no studies on koala ecology at

- Mar 1992 the site were possible". Consultants make a number of recommendations about how to protect koalas, and warn that bushfire is a series threat to the koalas.
- Oct 1988 Campbelltown Council prepares a draft Local Environment Plan which would rezone the Yap Yan Pin site as Regional Open Space. This would necessitate the acquisition of the land by the State Government through the Dept. of Planning. The proposal is refused by the State Government.
- Oct 1989 Yap Yan Pin lodges two new development applications and as council does not determine the matter, the developer seeks action in the Land and Environment Court to overturn Council's "deemed refusal". The court approves a subdivision but with four blocks on the edge of the escarpment excised from the development.
- 1990 Dr Robert Close, Head of Biological Sciences Department, University of Western Sydney, Macarthur campus, starts monitoring Wedderburn koalas.
- Jan 1993 A small group of Wedderburn landowners fund an Environmental Study to have Wedderburn rezoned for 2-hectare rural-residential lots. The Environmental Study includes a flora study that confirms the presence of rare plants. **No fauna study is included.** Council officers prepare a report critical of the Environment Study but Alderman resolve to prepare an Local Environmental Plan for Wedderburn based on the flora study only.
- Sep 1993
- Nov 1993
- Jan 1991 Bushfire emergency at Wedderburn. Dense smoke in the vicinity of Wedderburn causeway blocks access to Wedderburn.
- Dr Close confirms fire is a major problem to koalas.
- Despite protests and picketing by local residents, Yap Yan Pin brings in earthmoving equipment and clears roads.
- Apr 1991 Dr Close reports an increase in koala sightings close to homes in Wedderburn since fierce bushfires in January.
- May 1991 Campbelltown Council's Fire Control Officer conducts a control burn which destroys prime koala habitat. Following media criticism, Council resolves to form a committee to prepare a management plan for the bushland at Wedderburn to ensure future protection of flora and fauna. *(The proposed committee is never formed.)*
- Sep 1991 Veterinarians at the Elizabeth Macarthur Agricultural Institute (EMAI) test their first koala in a joint project with UWS. EMAI collect faecal and blood samples to look for chlamydia. Dr Close monitors koala movements by attaching ear-tags to koalas.

- Mar 1992 Draft LEP No. 127 - Wedderburn is put on public exhibition. Dr Close recommends that the Draft LEP should identify and protect wildlife corridors.
- May 1992 A meeting of creditors of Yap Yan Pin, which has now gone into liquidation, says the company has liabilities of \$19 million and assets of only \$12.5. The major creditors, which include the merchant bank OUB Australia, decide to go ahead with the sale of the land.
- Subdivision blocks on "Wedderburn Grange" (previously owned by Yap Yan Pin) are advertised for sale, but union Green Bans remain.
- With the support of funding from the UWS, NPA and GREAT, Dr Close begins attaching telemetry collars to koalas to help trace their movements.
- Jan 1993 Dr Close expresses concern that, if the Wedderburn Grange development goes ahead, koalas might be at risk because subdivision lots are surrounded by two major core habitat areas and it appears the koalas are using the proposed housing site as a corridor between the two.
- Sep 1993 Bob Carr, Leader of the Opposition, promises to dedicate O'Hares Creek Catchment area as a National Park. The catchment area is already listed on the Register of the National Estate and has outstanding conservation values including numerous significant Dharawal sites.
- Nov 1993 Bob Carr visits O'Hares Creek Catchment Area and reaffirms pledge that a "Dharawal National Park will be created in the first year of a Labor Government".
- Dr Liz Kernohan, Member for Camden, says that coal mining jobs would be jeopardised if a National Park were created. NPA advises that the area **can** be managed by NPWS as a Nature Reserve without jeopardising employment.
- One week later, John Fahey announces that the O'Hares Creek Catchment will be gazetted as a Crown Land Reserve (to be known as the Dharawal Reserve) to be managed by the Department of Conservation and Land Management (CALM). A Reserve Trust is to be set up.
- NPA warns that Reserve Trusts elsewhere in NSW are considering cattle grazing and other unsuitable activities in areas of high conservation value elsewhere in NSW. These Reserves are being given "miniscule" funding by CALM.
- Dec 1993 "Buttercup", a koala tagged at Kentlyn near Campbelltown, is found in Heathcote National Park only 1 km from Royal National Park. "She must have crossed two rivers and travelled about 25 km." says Dr Close.

- Jan 1994 There is a widespread Bushfire Emergency across the State. Dr Close expresses concern that "Buttercup" may have perished in the Royal National Park fire.
- Feb 1994 Council decides that a Fauna Study must be completed for Wedderburn before Draft LEP No. 127 can go ahead. At the same time, they water down some protections included in the Draft LEP.
- O'Hares Creek catchment is gazetted as a Reserve to be managed by CALM for the public purpose of environmental protection, public recreation and **rural services**. The latter purpose of **rural services** would permit grazing of stock, as feared by NPA.
- Mar 1994 Wedderburn artist Suzanne Archer wins Wynne Prize of \$10,000 for her painting "Waratahs Wedderburn Series". Suzanne is one of a number of Wedderburn artists whose works are represented in major national collections.
- Apr 1994 The building union division of the Construction, Forestry, Mining and Energy Union (CFMEU) is awarded the Community Award at the inaugural National Trust Heritage Awards for its part in a number of environmental projects including protecting the Koala Colony at Wedderburn.
- The NSW Labor Council re-endorses the green bans at Wedderburn Grange.
- May 1994 Bob Carr says he will swap government land to stop housing development on the Wedderburn Grange site.
- Jul 1994 David Keith publishes paper on flora of O'Hares Creek catchment in "Cunninghamia", the journal of the Royal Botanic Gardens Sydney. He confirms there are 17 species of flora listed as rare or threatened nationally and a further 24 are of regional conservation significance.
- Dr Keith says that the area includes some of the highest species-richness values in the world for shrub and sedge-dominated vegetation.
- Oct 1994 Wildfire at Wedderburn.
- Nov 1994 Fire ravages 300 ha of bush at Wedderburn. Due to the drought, dams are empty so water has to be shipped in. SES controller says people were thankful the fire had not taken hold two days earlier when winds reached speeds up to 140 km/hour. Concern is expressed by conservationists that the building of hundreds of new homes (permitted under Draft LEP No. 127) will inevitably result in widespread destruction of bushland to protect homes in what is obviously a high risk bushfire area.

- Nov 1994 Wedderburn Grange subdivision resumed by State Government.
- Jan 1995 State Environmental Planning Policy 44 - Koala Habitat Protection - is announced, however the SEPP does not include the local government area of Campbelltown.
- Feb 1995 A frog and reptile survey in O'Hares Creek Catchment, jointly funded by the National Estate Grants Program and NPA, confirms the presence of the Giant Burrowing Frog, Red-crowned Toadlet and Broad-headed Snake — all of which are endangered.

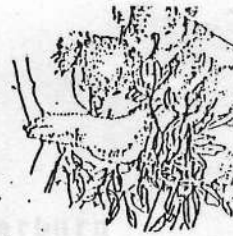
Media release by Fahey Government proposes koala sanctuary on Wedderburn Grange land which was recently resumed. Fahey Government refers to O'Hares Creek Catchment as a Nature Reserve. This causes public confusion as the area is **not** a Nature Reserve. It is still unclear who will manage Wedderburn Grange — NPWS, CALM or Campbelltown City Council, and what funding is available to manage the koala sanctuary.

There are reports that the Trust set up to manage the Dharawal Reserve has only "peppercorn" funding, whereas under Water Board management there were significant funds available to patrol and secure the area, revegetate eroded areas, assist with fire fighting and other necessary works to protect the high conservation values of the area.

Campbelltown City Council awaits results of fauna study before resolving Draft LEP 127, but still refuses to acknowledge that the area is a high bushfire risk area (without reticulated water) unsuitable for further rezoning as rural/residential land.

CALM	Department of Conservation and Land Management
EMAI	Elizabeth Macarthur Agricultural Institute
GREAT	Georges River Environmental Action Team
LEP	Local Environment Plan
NPWS	National Parks & Wildlife Service
NPA	National Parks Association of NSW
UWS	University of Western Sydney, Macarthur

CAMPBELLTOWN ASSOCIATION
TO SAVE THE WEDDERBURN KOALA COLONY.



COMMITTEE FORMED BY THE RESIDENTS OF THE CAMPBELLTOWN COMMUNITY

P.O. Box 1162, CAMPBELLTOWN 2560

CHAIRPERSON: SUE DOBSON PHONE: (046) 25-0289

8th May 1989

Mr. Paul Zammit,
Parliamentary Secretary,
Parliament House,
Macquarie Street,
SYDNEY NSW 200

Dear Mr. Zammit,

SUBJECT: Koala Colony Wedderburn

We ask you to personally intervene on our behalf to the Premier re Wedderburn.

With all respect to your Premier, your letter dated April, 1989 referred our Association onto the Minister of Environment Mr. Tim Moore, this was not the correct procedure as Tim Moore cannot change the zoning of the land at Wedderburn, as our Campbelltown City Council has requested.

We ask you to intervene on our behalf to stop a tragedy at Wedderburn that only Mr. Greiner in his position as Premier of NSW can do. We request the Premier to instruct David Hay, the Minister for Planning, to re-zone the Wedderburn property formerly known as Yeomans Estate to Regional Open Space, so that the unique eco-system which supports a large 'disease free' Koala colony can be preserved for all time.

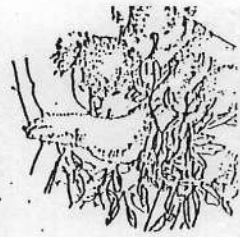
As God created this Earth for humans as well as animals, they do deserve to have rights to survive along with the other flora and fauna and aborigine sites contained in the area which should become a "Nature Reserve".

Mr. Zammit, please find enclosed information which should be presented to the Premier giving reasons in support of **"NO DEVELOPMENT AT WEDDERBURN"**.

Yours faithfully,

SUE DOBSON
Chairperson of the
Above Association.

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The Campbelltown Association to Save the Wedderburn Koala Colony has expressed over the past nine months great concerns on the environmental issues that would result from a proposed land development at Wedderburn in NSW. It is to be noted that the threat to the koala colony at Wedderburn is paramount. But many other broader issues need to be addressed. In a full Environmental Impact Statement a study needs to assess:-

Koalas and their habitat

Other Endangered Fauna Species

Pygmy Possums Platypus Macquarie Perch various Bird Species

Flora Rare Species of plants and trees.

O'Hares Creek and its catchment as an unspoilt ecosystem noted on National Estate for proposed Nature Reserve.

Archaeological sites Paintings Drawings Rock Grooves relating to the Dharwal Tharawal Aboriginal People.

The proposed land development would have an adverse impact on the Flora and Fauna and surrounding areas of the Escarpment and O'Hares Creek.

Threats come from land clearing increases of siltation environment pollution:-

Septic Systems, Pesticides, Fertilizers, Rubbish Dumping. Human intrusion to upset wildlife.

Vandalism to Aboriginal Paintings Fauna is at risk due to vehicular Traffic and Domestic Pets.

the public interest and concern demonstrated in Campbelltown for this Environmental issue is most unique in the Macarthur District. The Koala Association was established by a number of caring persons in response to the

public mood as reflected in the local press. Our concerns are legitimate we most certainly present a heavy proportion of opinion as gauged by the community response, in the form of letters of support, telephone calls financial contributions and letters of support to the local press. We have in excess of 20,000 names on petitions - these names can be supplied upon request. We also have letters endorsing our stand from Canada and New Zealand, these countries have come to learn about Koalas at Wedderburn. The issue of preserving the Koala habitat at Wedderburn is an Australian issue although it is geographically confined to our provincial district.

It is our view that we and our representatives have a responsibility to be cognisant of public attitude relating to the Koalas and the Flora and Fauna which is now under threat at Wedderburn. Our Association has looked at the new proposal for Wedderburn of Lot 505 in DP775431 Victoria Road Wedderburn. It is our assessment that the area in question constitutes a sufficiently unique ecosystem in the Campbelltown region that no development should be allowed to take place now or in the future. We are of the opinion that the new proposal for development on stage 3 should not take place because of the following reasons.

KOALA HABITAT

As cited in the CSIRO report the major relevant feed trees for this local Koala community is the Eucalyptus Punctata or grey gum. These trees have their highest density on the North Western slopes Fig. 5 of report how ever these trees were also found in all but 1 of the 5 Tree communities surveyed in the proposed development. Koalas have been sighted in these areas of low density browse trees, that koalas do frequent the area in the new development proposal.

We believe that the area constitutes a corridor for the movement of Koalas from the Southern reaches of O'Hares Creek which we understand was not covered by the CSIRO report, the area surveyed in the new development proposal have value as Koala habitat, we believe that the area affords a buffer zone albeit a small one between the more populous koala habitat in the Northern reaches and human related activity in the south.

Koalas are highly susceptible to stress and research has demonstrated that unnatural stress increases their susceptibility to diseases.

REPORT KOALA PRESERVATION SOCIETY OF NSW INC. 1987

At Wedderburn the Campbelltown Community has we believe, a disease free colony. As far as we know no one has taken any blood samples for pathology testing to prove the absence of active Chlamydia psittaci, however, the sighting of mothers with healthy young would indicate the absence of the active pathogen.

ENVIRONMENTAL CONSIDERATIONS

WEED INTRUSION

We are concerned that introduced weeds, this includes grasses and non natives, into the Stage 3 development area may have long term effects on the surrounding flora.

WATER QUALITY

O'Hares Creek originating in the Woronora Plateau at the Southern Boundary of the Sydney Basin constitutes a pristine fresh water system is the habitat for platypus a rare species of fish (Macquarie Perch) and crustacia.

Additionally part of the Creek is classified as water catchment area although no part of the creek is dammed for urban use by the NSW Water Resource Board (see report by the Macarthur Branch of the NPA on the Daharawal Nature Reserve). It is our view that the water quality of this ecosystem may be compromised by development too closely approaching the creek.

Human encroachment on koala habitat constitutes a major source of stress due to habitat reduction, noise and the introduction of domestic carnivores. It is for these reasons that the new development proposals at Wedderburn should not proceed.

VOLUNTARY COVENANTS

Item 7, page 7, of the CSIRO report states that "persistence of koalas on the study sight would depend on (1) koalas being protected from undue disturbance (2) -----(3) the areas of prime koala habitat being protected from undue disturbance or influences which would effect the ecology and physiology of the trees.

Land clearing in the event of development would clearly infringe criteria 1 and 3 of the above.

Covenants entered into (1) by the developer with the Minister for Environment and (2) land holders with the Council, relating to the control of domestic animals, use of land and clearing of land! Simply CANNOT Be Enforced On A CONTINUOUS Basis Over A LONG TERM period. Irrespective of how well meaning the existing Council or NSW Government may be, councils, 50 years down-the-track, will not enforce covenants even if covenants will have any validity then.

Our Association is interested in the long term preservation of this koala colony for this colony is probably the successors of the one which existed in the Campbelltown area at the turn of the century, despite being shot to near extinction and dying from natural causes.

Council or Government covenants are codes of conduct which can be negated if the owner so decides. We cite examples of tree clearing on properties in Wedderburn as instances in which land owners can disregard the Councils tree preservation covenant. Similarly, a property owner is entitled to take almost any steps with his land, including turning it into a Desert, if he Deems it necessary for Bush Fires prevention in an attempt to save his assets. Councils are practically powerless to stop a person "protecting" their properties.

"If there was fire at Wedderburn, koalas would need all present habitat available to survive. What is classed as prime or other refer short time available for study."

This view has particular implications for prospective owners of the "escarpment blocks" in the new development proposal. The NSW Bush Fire Council makes specific references to the fire dangers on escarpment areas as a consequence of high convectional wind velocities. If any development were to proceed at this development site blocks. The land owners would indeed be negligent if they DID NOT clear their properties back to the edges of the escarpment. Hence the koala habitat in this region would be permanently damaged if development was to proceed. Current bush fires in this region, although damaging, do not devastate the habitat area given the evolutionary response of Australian flora to fires.

It is our view that the voluntary covenants for this sensitive area at Wedderburn espoused by the NPWS and their Minister, relating to the control of domestic predators, is impossible to enforce because in reality this covenant is totally unenforceable 24 hours a day. Our concern is that koalas in the vicinity of the proposed development will not only be attacked by dogs, particularly during nocturnal hours, but will be stressed by dogs marking boundaries, the scent will drive the koalas out of the area, hence contracting their effective habitat.

Reference: Urban Encroachment on Koala habitat. Koala Preservation Society of NSW Inc. 1988-1989

Extracts: We find many of the Wet Bottom Syndrome cases have been subjected to great and constant pressure for example, coping with injury new obstacles such as fences, dogs, destruction of its territory and overcrowding just to mention some.

Other cases handled are dog attack, sarcomas, lymphosarcoma, bloat, drownings in pools, victims of tree felling, and koalas caught in man-made obstacles such as lattice, gates, fences and traps.

Seriously ill koalas are treated privately at home because of the constant care required. These koalas are transferred to the koala hospital when they are well enough to be outside and care continues until they are returned to the wild.

If the area is safe koalas are always returned to the exact locality from which they came, alternative habitat is difficult

These types of situations must never be allowed to arise at Wedderburn and there is no doubt they will if development proceeds.

The recent Koala Survey has shown that the largest colonies of koalas live on the North Coast, the area now under massive pressure from development. The koala food trees are being removed at an alarming rate and there has been a rapid increase in traffic, dogs, pesticide use and obstacles such as paling fences placed across their territories. This disruption and the need to travel to find food is leading to many road deaths, debilitation and disease amongst the coastal koalas.

No doubt there are many other trees from which the koalas browse in these areas, but they have not been positively identified.

Koalas are very territorial and at about two years of age the young have to disperse away from the colony and find their own territory.

At different times of the year some of the eucalypts become unpalatable and even poisonous, so the koala at all times needs a variety of tree types to choose from. As well as ensuring the koalas health it also stops over-grazing of some favourite trees.

Because the koala is territorial, once dispersed by, say, tree felling of its range, the koala has great difficulty in establishing itself somewhere else and usually dies.

Some good shelter of any tree types, but with a few koala food trees away from severe winds and adverse climate conditions also helps as koalas commonly fall victim to pneumonia.

Fires can be the koalas big enemy. Most koalas caught in a smokey or hot fire die within three weeks, even if they look O.K. after the fire passes. Their lungs are affected by smoke inhalation and pneumonia follows, burns become infected and because the koala climbs as high as it can then looks down into the fire, its eyes are damaged, conjunctivitis occurs, then starvation and death. If the koala survives the fire their leaves are usually dried and, as the koala gets 70% of its moisture from the leaf it eats dehydration becomes a problem. When regrowth starts on the trees it appears to be unpalatable, probably nature's way of protecting the new foliage. So if fires are necessary, it seems that very low burns following rains may be the answer.

TRAVELLING

Although koalas move from tree to tree at any time, they are most active between sunset and sunrise. This is when they are most vulnerable.

PESTICIDES AND POISONS

As part of its normal diet, the koala consumes a quantity of soil, especially dirt brought to the surface by ants and placed round their nests. The use of pesticides either on the ground or by aerial spraying of trees when koalas are present is highly dangerous to the animals.

DISEASE

While there is plenty and a variety of good habitat, the koala usually remains healthy. Debilitation leads to disease.

SICK OR INJURED KOALAS - RECOGNISING THE SIGNS

Koalas showing injuries, bleeding, infected eyes, wet tail and especially if it is curled up on the ground, should be checked and treated. If lethargic, on the ground, it should be placed in a warm basket until help arrives. Care should be taken to use a bag when handling sick koalas, as they will naturally defend themselves.

CONCLUSION

It appears that the North and Central Coast of NSW is exploding into ribbon development such as Queensland has experienced in the past 20 years. We have watched the slow demise of the local Koalas due to habitat destruction and human intrusion into its lifestyle and we would be very naive to believe the future for the Koala is secure, particularly along the 20km wide coastal strip of NSW. In the Society's opinion, large areas of established Koala habitat perhaps with some farmland as well, suitable for planting need to be set aside as National Parks especially

aimed at Koala conservation. These park boundaries need to be managed in such a way that the effect of fire is minimal on the koala and its habitat. As long as the Koala continues to co-exist with urbanisation and small lot farming, its demise will continue.

End of reference Urban Encroachment on Koala habit
Koala Preservation Society of NSW Inc. 1988-1989.

Voluntary covenants do not offer any workable protection.

It is clear that our unique Wedderburn koala habitat must be preserved for its environmental significance, as in the formation of a Dharwal Nature Reserve including the Development site known as Yeomans Property. With boundaries enlarged south-west of Campbelltown and Appin to the Bulli Pass.

ABORIGINAL HERITAGE

The Wedderburn area was home to the Dharawal also written as Tharawal) Aboriginal people.

Numerous studies have been conducted on the environmental issues of the region, that led to Premier Wran announcing that a "State Recreational Area" would be established at O'Hares Creek Wedderburn encompassing 7,500 h.a. of land. (Media Release 13.9.78).

It was to protect flora, fauna, streams and known Aboriginal areas.

The Dharawal people were a peaceful people who lived in harmony with their environment. At Wedderburn (close to the proposed development) there are numerous Aboriginal sites, where art work depicts the legends and their food sources (wallabies, wombats, fish etc). Bringing people in close proximity to these sites, bringing the risk of vandalisation.

In 1816, the tribe were all but annihilated when Captain Wallis led a party of soldiers to ambush the Aborigines. This became known as the Appin Massacre. Prominent citizens like John Warby, Dr. Charles Throsby and Elizabeth Macarthur protested to Governor Macquarie over the unwarranted attack on the Dharawal people. Influenza in the 1820's further reduced the tribal numbers. So that by 1833 the tribe only had about 20 members.

Aboriginal sites near the proposed land development show rock engravings, charcoal and clay drawings, hand stencils and axe grooves.

Much more research is needed into this significant and historic site. Protection must be afforded against vandalism of these heritage sites.

Our association strongly believes that given the unique ecological features of the proposed development area and surrounding environs at Wedderburn that the proposed development should not proceed. We are particularly concerned that the tragic impact of man deliberately inflicted upon koala populations at Wedderburn at the turn of this century should not be repeated at the termination of the century by human indifference to their living space.

It was quite clear from evidence given at the Koala Summit that a six week survey of koala habitat is insufficient time to evaluate a koala population. The CSIRO report states that the short time available to scientists meant that no studies on koala ecology on the site were possible.

Gathering information on tree communities does not provide sufficient evidence to justify a development which will jeopardise the future survival of this koala colony.

There is a great deal of controversy on what constitutes "prime" koala habitat, and given the lack of adequate scientific studies into koala feed trees, it cannot be said that Wedderburn contains or does not contain "prime" food trees.

(High preference doesn't mean Koalas do not also use other gums). Most people like best quality food if they can obtain it.

Koalas need to move at certain times of the year, the animals have been observed in many areas of the State eating leaves of eucalypts in stands which would not be regarded as "prime habitat".

Mortality rate in young male koalas is high, and researchers believe it is a direct result of failure to find new habitat, there are also major concerns raised over the diminishing gene pool.

According to Dr. Pahl, small populations have low genetic diversity and are prone to extinction. Given the early history of exploitation of koalas at Wedderburn, one would expect that remnant populations have bred up, but the gene pool may be quite small and therefore, highly vulnerable to extinction.

The CSIRO report concludes that the koalas on the study site represent a remnant of a larger population which once ranged over a wider area, now cleared, in the Wedderburn district.

If this information is correct, then any disturbance of their habitat could have disastrous results for the remaining population which has a limited gene pool.

A minimum gene pool has been described as one which contains 500 animals. The loss of genetic diversity leaves any species highly vulnerable to disease.

In any event, the significance of diseases affecting koalas appears to be related to habitat. Koalas traumatised as a result of loss of habitat are more likely to develop disease problems. Experts at the Koala Summit stated categorically that reduction of habitat resulted in reduced numbers of koalas.

In any event, there is documented evidence that disruption of habitat leads to stress which in turn, exacerbates disease in particular, chlamydia psittaci resulting in high mortality.

The CSIRO reports states in its summary, the conditions of Development and Subdivision Consents S109 and S110, the Campbelltown Local Environmental Plan No. 32 - Development Control Plan No. 6, and the voluntary conservation agreement between the Minister for the Environment in NSW and the developers, Yap Yan Pin Pty Ltd, are sufficient in their opinion, to minimise the risk of such adverse consequences and to enable koalas to utilize most if not all of their present habitat, if and only if the conditions are adhered to and enforced (their emphasis).

Local Government has limited funding available for their areas of responsibility, and there is little question that Campbelltown Council has no funds available to enforce Voluntary Conservation Agreements.

The CSIRO report is deficient in many areas, rather. It does not take into account any long term management and survival needs of the koala colony.

The plight of Australia's koala has aroused international concern. People all over the world are very seriously concerned about this unique animals' survival.

The protection of the koala should transcend national boundaries, the animal is a global heritage and imposes on all Australians a real responsibility to safeguard koalas for the future.

SPECIFIC CRITICISMS OF CSIRO REPORT

- * The report states that previous research has shown that koalas are highly selective in their choice of food. However, the report fails to document the overall picture in NSW, ie, that more than 90% of available habitat has been decimated.
- * Nor does the report take into account that when 50% of a known habitat is cleared, die-back usually results in the remaining trees.
- * The report states that no definitive chemical analysis can be performed on eucalypt foliage to assess its nutritional quality for koalas. In the limited six week period of the study, this statement negates the assumption that there are sufficient feed trees to permit survival.
- * It is also clear from the report that individual tree species can grow over a wide range of nutritional and climatic conditions but their physiology and abundance relative to other species can differ greatly between sites.
- * Kath Handasyde, a researcher from Monash University has carried out extensive studies on koala feed trees. She found bizarre dietary behaviour, for example:- a koala which was fed the leaves of a certain species at Melbourne Zoo was moved to Healesville Sanctuary. There, the animal was offered exactly the same leaves from the same species but refused to eat.

Quite obviously, differences in climate and nutrients can alter the acceptability of feed trees and for this reason, great caution should be exercised in stating that known habitat is sufficient for dietary needs.

- * The report also makes clear the fact that koalas need other eucalypt species which may not be regarded as a source of food to rest in, and that the animals may move seasonally into adjacent habitat containing a relatively low frequency of trees of the staple species.

- * CSIRO experts state that the most reliable way to assess the extent and distribution of habitat for koalas at Wedderburn (or any other place) is by relating direct observations of koalas locations to tree communities and mapping the distribution of preferred tree communities.

This study has not taken place, and is vitally essential for the future protection of the Wedderburn colony. Nor was the CSIRO commissioned to assess the range of alternative options for use of this land, nor the significance on a regional or broader scale.

Obviously, this research is essential to the survival of this colony, and serves to highlight the lack of a proper brief by Council.

As far as tree communities are concerned, limited research over the past years has shown that koalas eat between 60-100 species of eucalypt. There's little doubt that changes in climate and soil nutrition effect the choice of food.

A drainage system such as Envirocycle can pose further serious risks to the long term survival of koalas, their feed trees and other wildlife especially at Wedderburn where sewerage run off would be a threat. In a country that contains sandstone and rock.

The report states that researchers were not able to survey country surrounding the study site, and that the extent of koala habitat and numbers of koalas south of the study area remain to be investigated.

They point out that currently numbers of koalas present in and around the study site are unknown, nor are their movements and home ranges recorded. Therefore, there are no base-line data with which to assess the ongoing stability of the koala populations in this area.

This statement is critical to the future survival of this colony. It is imperative that the NSW Government, if it is to be regarded as responsible, must undertake a thorough, comprehensive study which takes into account koala movements and home ranges.

Management recommendations by the CSIRO researchers are based on extremely limited information resulting in the short term available for a survey.

Their recommendations are as follows:-

- (i) the koalas being protected from undue disturbance.
- (ii) the koalas being assured of continuous access to the areas of prime habitat in the reserve to the north of the site.
- (iii) the areas of prime koala habitat on the site being protected from undue disturbances or influences which would affect the ecology and physiology of the trees.

The report details undue disturbance which could result from harassment by feral or domestic animals, especially dogs, or excessive or insensitive use of areas by humans.

Question: Who will police the Wedderburn estate 24 hours a day, 52 weeks a year to ensure no undue disturbance by feral or domestic animals?

What guarantees can the NSW Government provide that rangers will be employed to ensure non-harassment?

Question: What arrangements have been made by NSW Government to deal with bushfires and to ensure that koalas will be protected in the event of such a catastrophe?

Question: What steps has NSW Government taken to consult experts on fire behaviour and management to recommend ways of minimising risk of fire without destroying prime koala habitat?

Question: Will the NSW Government provide documentation to demonstrate that experts on fire behaviour have been consulted?

Question: How will the NSW Government implement the recommendation to restrict access to the gorge by people who are unfamiliar with fire risk?

Question: How will the NSW Government determine which people are unfamiliar with fire risk?

Question: What steps have been taken by NSW Government to provide access for koalas between patches of prime habitat, and intermediate areas of marginal habitat?

Note: Experts at the koala summit stated that the minimum size of a wildlife corridor was 100 metres in width.

Question: What steps has the NSW Government taken to investigate the likely affects of human activity altering the flow of water and nutrients down the slopes on which *E. punctata* is found?

Question: Has the NSW Government consulted expert hydrologists and/or geologists to assess the likely extent of nutrient and water flows as recommended by the Report?

Question: Has the NSW Government consulted experts plant physiologists/ecologist on the likely effects on tree communities of the flow of water and nutrients from the proposed development as recommended by the Report?

The report states that: - effective long term management of the koala population on the study site would require the setting up of a monitoring program to assess the continuing size, distribution and viability of the population.

Data on numbers, age, sex and social structure, movements (including "home ranges" and seasonal changes in habitat use and diet), and fecundity/mortality of the population at the site and in surrounding areas are needed.

Question: What arrangements, if any, has the NSW Government made to set up a monitoring program as suggested by the report?

Question: Who will the NSW Government employ to carry out this recommendation? What qualifications will persons employed to carry out this function have?

Question: How will this long term monitoring program be funded? By whom?

The report states that the conditions of the consent which limit the extent of development, clearing of vegetation, erection of fences and agricultural use of the land, and require that access roads to the area be private are necessary to minimise the impact of the proposed development of lots 301-311, 402-404 etc. are sufficient **only if strictly adhered to and enforced** (their emphasis).

Question: Who will supervise and enforce these conditions? Who will pay for the supervision and enforcement?

Question: Will the NSW Government abide by this recommendation:?

The report states that tree communities on the proposed residential lots are poor quality habitat for koalas but they should be preserved in their present state to act as a buffer between residential development and koala habitat.

Question: What steps has the NSW Government taken to protect these tree communities?

Question: Has the NSW Government sought expert opinion on the minimum extent of clearing necessary for suppression of bushfires?

Question: Has the NSW Government established enforceable conditions preventing more extensive clearing than the the established minimum?

Question: Who will the NSW Government employ to carry out this recommendation? What qualifications will persons employed to carry out this function have?

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Given the evidence of irresponsible use of the area, including the dumping of cars etc, the report recommends access to the site should be strictly limited.

Question: How will site access be limited? Will NSW Government employ personnel to monitor traffic in and out of Wedderburn on a 24 hour, 52 week per year basis? How will this recommendation be carried out?

Question: What steps have been taken by the NSW Government to minimise access by dogs to the area?

Question: What steps has the NSW Government taken to limit access to the O'Hares Creek gorge because of the bushfire risk?

The report states that even moderate access by uncontrolled dogs or insensitive people could result in koalas abandoning the site within one year.

Question: How will the NSW Government ascertain what constitutes "a sensitive person" as opposed to an "insensitive person"? Will guidelines be drawn up which are provided to the developer to ensure what personality traits are necessary for an appropriate purchaser?

The regional significance of the study site has not been assessed. Without this information, the long term problems which will undoubtedly affect the koala colony are ignored.

Question: Will the NSW Government undertake a further assessment of koala habitat and movements regionally and locally to resolve these vital considerations?

In its summing up of the report, it has been suggested that the area be designated a nature reserve.

In 1986, the Department of Environment and Planning recommended the entire area including Crown Land be designated a Nature Reserve in its report entitled Macarthur Regional Development Study, 1986.

Some of the relevant points made in this survey include the following:-

- * Sediments in the swamps bear fossilised pollen and macro fossils and are to some extent a record of the last 12,000 years.
- * These swamps are much richer floristically than those found in comparable areas of Royal, Heathcote and Ku-ring-gai Chase National Parks with a total of 140 species having been identified in the swamps to date.
- * Eleven plant species which have been identified as rare or threatened are found in the catchment. Four of these species, *eucalyptus apiculata*, *Pultenaea aristata*, *Gonocarpus salsoloides*, *Blechnum ambiguum*, are not known to be represented within a national park or other conservation reserve.
- * The O'Hares Creek catchment is the known limit of distribution of a number of plant species including *Eucalyptus luehmanniana*, *Gonocarpus salsoloides*, *Tetratheca shiressli*, *Boronia serrulata*, *Pseudanthus orientalis*, *Eriachne glabrata*, all of which are at the southern limit and *Eucalyptus apiculata* which is at its eastern limit.

- * O'Hares Creek is one of the few unimpounded major streams draining the Woronora Plateau, and because it has been protected, is one of the cleanest streams in the region. It is the major source of water to the Georges River in its upper reaches, its estimated discharge being approximately eight times that of the Upper Georges above their confluence at the Woolwash.

It is quite clear that koalas were identified in the area in 1986.

At risk by development too, are feathertail gliders, pygmy possums, and wedge tailed eagles, swamp wallabies, wombats, lyrebirds, platypus, and the rare freshwater fish, the Macquarie Perch.

This submission details the reasons why any development should not be considered at Wedderburn whether it be small or large. The present new application which reduces the sizes of rural blocks will in no way negate the dangers to the koala colony.

"There is no basis to grant a development application which can only pose serious threats to the survival of a precious and irreplaceable colony of koalas".

(Extracts from CSIRO Data.

Digestive utilisation of the foliage of *E. punctata* by koalas has been studied in detail (Cork and Hume 1983; Corke, Hume, and Dawson 1983; Cork and Warner 1983; Cork 1984, 1986). Less detailed data are available on the utilisation of a mixture of 3 other species of eucalypt (*E. melliodora*, *E. robusta*, and *E. sideroxylon*) by koalas in San Diego Zoo (Ullrey, Robinson, and Whetter 1981). These studies have provided information on the nutritional requirements of koalas and suggest that koalas have a precarious energy balance which can only be maintained if acceptable food is abundant and accessible daily. However, studies on captive koalas, or other leaf-eating marsupials (e.g., Cork and Pahl 1984), have so far failed to identify the components of eucalypt foliage responsible for diet selectivity by koalas and possums (Cork 1984; Cork and Sanson in press). Therefore, there is at present no definitive chemical analysis which can be performed on eucalypt foliage to assess its nutritional quality for koalas.

In the eucalypt forest of southern-eastern New South Wales, leaf-eating marsupials like the greater glider are in high abundance in less than 10% of the present forest, and koalas appear to be restricted to an even smaller proportion (Braithwaite, Dudzinski, and Turner 1983; Braithwaite, Turner, and Kelly 1984; Braithwaite 1986). These high quality areas of forest occur mainly on soils containing high levels of nutrients, such as potassium (K) and nitrogen (N) (Braithwaite, Turner, and Kelly 1984; Braithwaite 1986), which are necessary to support high rates of growth and leaf production in trees and which might influence the production of other leaf components of nutritional importance to mammals.

Because of the influence of soil fertility (and probably other environmental factors) on the quality of food for leaf-eating marsupials, it is unlikely that a description of prime koala habitat in terms of the present of individual preferred species alone, as has been the

practice in the past, is adequate. Individual tree species can grow over a wide range of nutritional and climatic conditions but their physiology and abundance relative to other species can differ greatly between sites depending on how much present or past conditions differ from the optimum for the species (Austin, Cunningham, and Fleming 1984). Also, although it is important for koalas to have access to a staple food species, they often feed and rest in other eucalypt species and may even move seasonally into adjacent habitat containing a relatively low frequency of trees of the staple species (Eberhard 1978; Hindell 1984; Hindell, Handasyde, and Lee 1985).

For these reasons we consider that the most reliable way to assess the extent and distribution of habitat for koalas at Wedderburn (or any other place) is by relating direct observations of koala locations to tree communities and mapping the distribution of preferred tree communities.

TREE SURVEY

In this region *Eucalyptus punctata*, grey gum, appears to be the food species favoured by koalas. It would be impossible to locate all individual trees of *E. punctata* without a complete inventory of the study area, which was not feasible given the time and financial constraints on this study. In any case, the distribution of koalas is related to the distribution of tree communities as koalas do utilise eucalypts other than their staple species for occasional change of diet and resting. We would expect that favourable koala habitat on the study site is represented by communities with a high proportion of *E. punctata* and that poor habitat consists of communities with no *E. punctata*. Therefore, a survey was conducted to determine patterns in the distribution of tree communities.

Our observations of which tree species koalas or their signs were associated with are summarised in Figure 8. Most records were in *E. punctata*, and all records were close to one or more *E. punctata* trees bearing signs of koalas. These observations strongly support all other evidence that koalas have a high preference for *E. punctata* and that it forms the basis for high quality koala habitat in the Sydney region.

(High preference doesn't mean koalas do not also use other gums). Most people like best quality food if they can obtain it.

Koalas have been sighted only rarely in communities 3 and 4, and these were probably transient animals. These communities were found mostly on south-west to north-west slopes with aspects between 160 and 325° in the north and north-east of the study site. Therefore, they are intermingled with community 2, and we suggest that these communities are important routes and sources of temporary food for koalas moving from one area of prime habitat to another. These communities might be important seasonally if koalas in this area change their diet away from the staple for brief periods as has been reported in some other habitats (Eberhard 1978; Hindell 1984).

We have not been able to survey the country surrounding the study site, but casual observations suggest that much of the country now cleared for housing and agriculture was once covered by forest containing *E. punctata* and *E. tereticornis*, which would have provided prime food for koalas. The military reserve to the east of the study site also may contain areas of prime koala habitat. The observations of the National Parks Association of NSW indicate that koalas and their habitat occur along the O'Hare's Creek gorge to the north of the study site. The extent of koala habitat and numbers of koalas to the south of the study area remain to be investigated.

To provide access for koalas between patches of prime habitat, intermediate areas of marginal habitat should be maintained also undisturbed. Provision of these access routes, especially to the crown land to the north, is important because koala populations have been observed to overutilise their food supplies when confined to an island of good habitat and to crash as a result (Lee and Martin 1988).

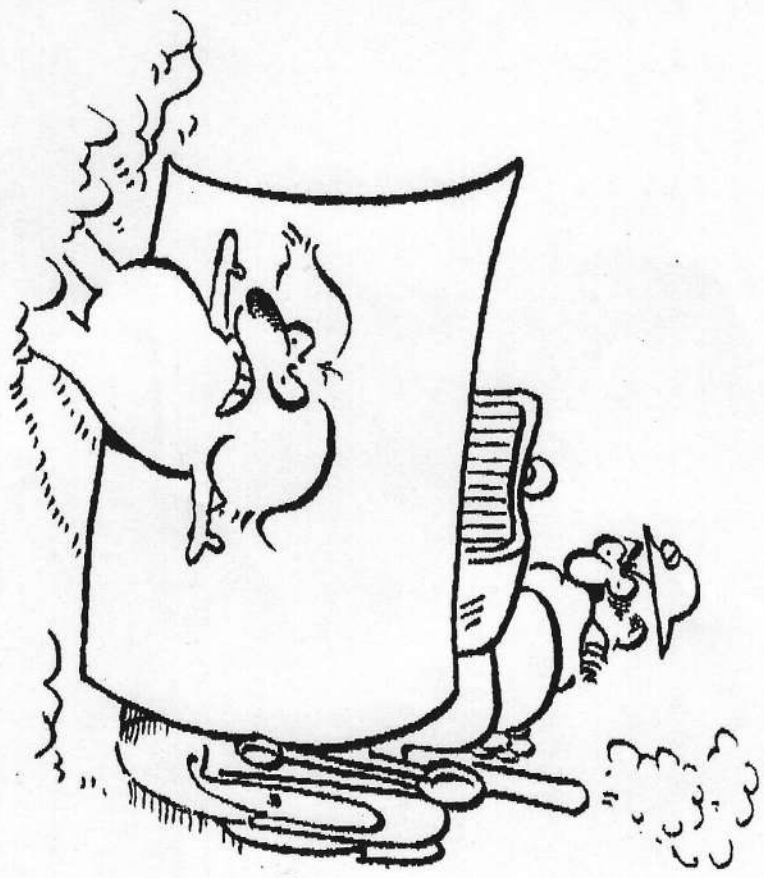
Retention of buffer zones between the koala habitat and human habitation will only minimise the effects that the clearing necessary for construction of dwellings will have on drainage and nutrient flow patterns from the plateau into the gullies.

We see the limitation of access to the O'Hares Creek gorge as being of paramount importance because of the bushfire risk, which we consider to be one of the greatest threats to the Koalas.

The Development and Subdivision consents prohibit clearing of undergrowth on the lots. The agreement between the Minister for Environment and the developers prohibits clearing except for suppression of bushfires or provision of essential services, restricts agricultural practices on the lots, and limits clearing on each lot to 2 hectares. We are concerned at the generality of the provision relating to clearing for suppression of bushfires. We recommend that expert opinion be sought on the minimum extent of clearing necessary for suppression of bushfires, that it be established that this will not substantially reduce the extent of the presently proposed buffer zones, and that enforceable conditions preventing more extensive clearing than the established minimum be introduced.

We have indicated above the importance of buffer zones and the possible effects on Koala habitat of relaxation of restrictions on agricultural use or land clearing. At present there is evidence (in the form of dumped cars) of irresponsible use of the area and access to the site should be strictly limited to prevent this from continuing if the site is settled. Provision of educational material on the site and elsewhere, as indicated in the agreement, should aid Koala conservation by raising the ecological consciousness of people using the public reserve. Care should be taken to minimise the number of access tracks into the public reserve, especially where there is prime koala habitat, so that human traffic and movement of dogs is kept to a manageable level. Any precautions which can be taken specifically to limit access by dogs, evidence of which we observed during our survey, would be beneficial. We see the limitation of access to the O'Hare's Creek gorge as being of paramount importance, because of the bushfire risk, which we consider to be one of the greatest threats to the koalas.

Kim



Premier Greiner

we have the koalas ,

if You **don't** act **now**

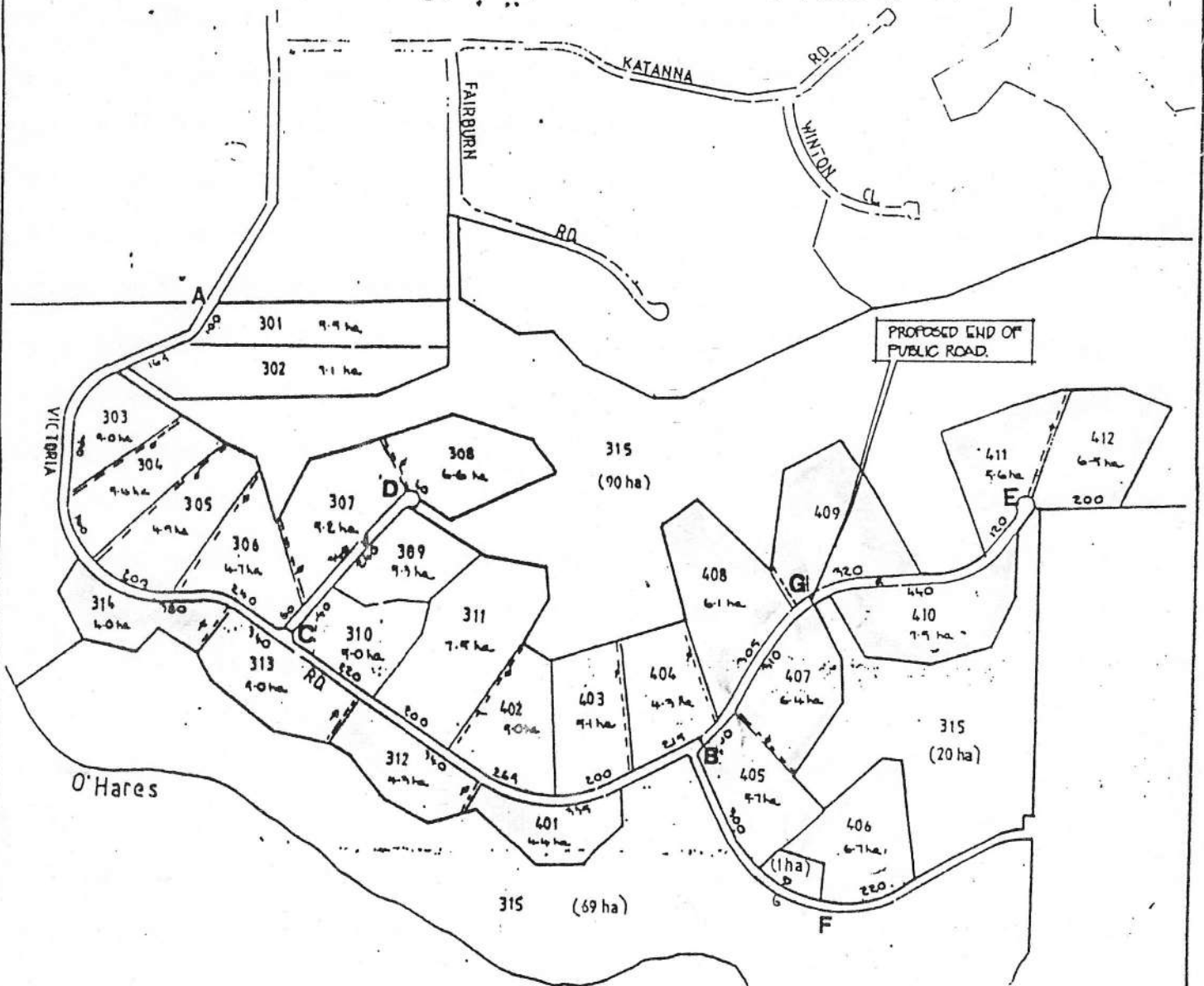
they **WILL** **all** **BE**

slaughtered

Yours sincerely

Wedderburn

PLANNING AND BUILDING COMMITTEE MEETING



*Blocks which NPA wishes
to be omitted from subdivision*

SITE PLAN

PROPERTY

TITLE