

**Towards a Good Future for**  
**WILTON JUNCTION**

PART B of a submission about the  
Greater Macarthur Land Release

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# TABLE OF CONTENTS

<b>Recommendations .....</b>	<b>3</b>
<b>Introduction .....</b>	<b>4</b>
<b>Our Position in a Nutshell .....</b>	<b>4</b>
<b>Biodiversity .....</b>	<b>5</b>
<b>Aesthetics and Recreation .....</b>	<b>7</b>
<b>Sustainable Development .....</b>	<b>8</b>
<b>Demography, Employment and Transport Infrastructure.....</b>	<b>10</b>
<b>Urban Aesthetics .....</b>	<b>12</b>
<b>Concluding Comments .....</b>	<b>12</b>
 Appendix One, The National Park Proposal Summary .....	13
Appendix Two, Broad Actions for Sustainable Development .....	31
Appendix Three, A Town Favouring Retired People .....	32

# **Towards a Good Future for WILTON JUNCTION**

## **Recommendations**

The National Parks Association, Macarthur Branch, recommends that the planners involved in the Creation of Wilton Junction:

- 1) become very familiar with what is meant by Ecologically Sustainable Development and that they consider many of the items on the list in Appendix Two.
- 2) become familiar with the message from the most reputable scientists involved in research on global warming

and plan a town that:

- 3) will receive 80% of its electricity from solar cells and wind turbines by 2030
- 4) re-uses a large percentage of its waste water
- 5) has an irrigated, publicly owned productive APZ
- 6) treats to an extremely high standard, any waste-water that is discharged into the Nepean or a tributary of the Nepean.
- 7) has a buffer 200 metres wide between the lip of the Gorge and an APZ or a road or a residential lot.
- 8) does not allow nutrient rich waste-water into the buffer
- 9) involves re-vegetation in the buffer with appropriate native vegetation, especially the expansion of suitable Critically Endangered Ecological Communities
- 10) includes bicycle ways and much recreation space, especially in or near the buffers and including tracks into the Gorge and onto the most prominent hilltops
- 11) is suitable for retired people
- 12) has much public transport so that traffic congestion on the Freeway does not become a major issue.

## **Introduction**

Although Sydney's population growth is less rapid than the growth of several dozen other cities of the world, it is growing rapidly when compared with most cities. Also, it is already a sprawling city when compared with most. Although there has been a very noticeable increase in the number and height of high-rise apartments, in Sydney in recent years, there is still a demand, in the Greater Sydney Region, for detached dwellings surrounded by a lawns and gardens. Also, Sydneysiders of the more affluent suburbs of Sydney have been opposing high-rise developments. For these reasons, Wollondilly Shire is becoming a part of the outer south-western fringe of Sydney.

Our main concern is with the protection and enhancement of the native vegetation in and near the Bargo and Nepean Rivers. We have already produced a large document proposing a National Park, along the rivers from Wilton to Colo Vale. The first 14 pages of that document, to the end of the summary, have been reproduced as Appendix One of this submission.

There are many intelligent people who think Sydney should become more compact and that Wollondilly Shire should remain rural. However, for various reasons, the State Government has decided that Wollondilly should accept a significant number of Sydney residents. And so we find ourselves commenting on the Greater Macarthur Land Release Investigation (GMLRI). This submission deals with Wilton Junction. The National Parks Association, Macarthur (NPA) has already produced a submission on the northern half of the GMLRI.

We are endeavouring to produce a constructive submission that encourages innovation. We cannot stop Wilton Junction but we hope we can prevent it from becoming a bland and old fashioned development which is a slum and/or an inefficient use of land and other resources. We are urging planners and decision makers to avoid relying too heavily on assumptions that were justifiable 20 – 30 years ago. Instead, we have to look 20 – 30 years into the future. By the time Wilton Junction is fully developed, Australia and the world will have changed significantly. It is always hard to predict the future, of course, but there are trends that are emerging and these shouldn't be ignored.

## **Our Position in a Nutshell**

We have certainly been busy trying to protect the Gorge at Tahmoor, only a very small part of which is a part of Wilton Junction. However, the Tahmoor Gorge is a part of the very important wildlife corridor which extends, along the rivers, from Colo Vale to the Freeway bridge at Pheasants Nest. The corridor includes the south and south western edge of Wilton.

We recommend that the corridor be enhanced by having, as much as possible, a buffer between the cliff-tops and the roads or private property boundaries. If the boundary is wide enough, the Critically Endangered Shale Sandstone Transition Forest can be expanded. The fragments of that Community and any other endangered community should be expanded and linked to each other. The resulting large fragments should then be linked, by native vegetation, to the riverine habitats. The maps, provided by the Dept of Planning, suggest that it will be easy to do so.

The rivers and the buffer, along the rivers, should be managed as an important recreation resource. Tracks should be made to the best pools and a bicycle-way, possibly more than 20km long, should be created in and/or near the buffer. If this is done, Wilton Junction will not be just a place for those who cannot afford to buy a house closer to the centre of Sydney. It will instead become a desirable town which attracts a wide range of residents. In fact there are many reasons for thinking that retirees should be encouraged to live in the town. Retirement villages and the like can be created.

The environment can become even more desirable if some or all of the treated sewage is put to good use. It can be used to irrigate lawns, gardens, crops or an artificial rainforest. Such spaces could be, at the same time, a very effective APZ.

If planners see Wilton Junction as being mainly a place for workers, then they are planning for an increase in long-distance-commuters who have difficulty attending to their families and who generate carbon dioxide which is causing global warming. In other words, Wilton Junction may become anything but an example of Ecologically Sustainable Development. However, there is no reason why Wilton Junction cannot generate its own electricity via renewable sources.

## **Biodiversity**

This topic is dealt with in much more detail in Appendix One which is mainly the summary of the National Park proposal document. The full document can be found on Facebook under Bargo Nepean National Park Proposal. The following are some major points:

THE IMPORTANT WILDLIFE CORRIDOR – The Nepean River, upstream from Junction Pool, where the Bargo and Nepean Rivers meet, is a part of the only significant link between the Greater Blue Mountains World Heritage Area and the several hundred square kilometres of pristine native vegetation between the F5 Freeway and the coast. This corridor goes under the large Freeway bridge at Pheasants Nest. There are no significant bridges south of Pheasants nest until one crosses the Nattai River. Furthermore, the Nattai, at that point, is just an appendage to the World Heritage Area.

Under the Pheasants Nest bridge, the corridor is only a little more than 200 metres wide but that is wide when compared with many other links that are called wildlife corridors. In a couple of other places, the corridor is little more than 200

metres but there are many places where it is a kilometre wide and, near Hilltop, it is at least 5 kilometres wide. If the corridor were consistently more than a kilometre wide it would be of international significance. As it is, it is of State significance and if planning in the area is done with respect for wildlife, it could become Nationally significant. NPA is urging the Council and the Government to create mulipurpose buffers along the rivers in exchange for the right to develop.

One purpose of the buffer is, of course, to protect the habitat in the Gorge, between the cliff-tops. Otherwise, the habitat would be affected by rubbish, predatory cats and dogs and non native plant species – especially if garden waste is dumped over the cliffs and is then fertilised by nutrient rich water from on-site sewage disposal systems and watered gardens. Even the sound of barking dogs and ride-on lawnmowers is likely to have an effect on wildlife.

**CRITICALLY ENDANGERED ECOLOGICAL COMMUNITIES** – It appears that Ecological, the consultants hired by the Department, have not done much work in the field at Wilton Junction. NPA hasn't either. We do not trespass on private property and our focus has been on the more scenic Bargo River Gorge – especially between the Fault and Mermaids Pool. However, from what the consultants have said and from our local knowledge, it seems that Wilton Junction has 2 Critically Endangered Ecological Communities – Cumberland Plain Woodland and Shale Sandstone Transition Forest.

According to the map on page 11 of the Greater Macarthur Land Release Investigation – Preliminary Strategy and Action Plan, there are significant areas of Endangered Ecological Community. Much of that vegetation is between the cleared land and the Nepean River. Furthermore, it is fairly continuous though generally narrow. It is also a small part of Wilton Junction which seems to be approximately 35 square kilometres. NPA recommends that the band of the Critically Endangered Ecological Communities be widened so that they are more than 200 metres wide. The existing cleared land would still be available for various forms of development – ranging from agricultural land at one extreme to high-rise residential at the other.

**AN AREA IMPORTANT FOR BIODIVERSITY** – While producing the above-mentioned National Park Proposal Document, NPA has undertaken weeks of tedious work using at least 100 pages of species lists obtained from the CSIRO. Basically, we compared the biodiversity within 10km of Tahmoor, with the biodiversity within 10km of 5 other NSW towns – Thredbo, Eden, Cooma, Lightning Ridge and Byron Bay. We expected Thredbo and/or Eden to score better than Tahmoor but much to our pleasant surprise, of those 5 towns, only Byron Bay was more important in terms of rare species and biodiversity generally. Wilton Junction is just over the river from Tahmoor and although Tahmoor is quite close to the Greater Blue Mountains World Heritage Area, Wilton is closer to the above mentioned hundreds of square kilometres of native vegetation east of the Freeway. It seems highly likely that the land surrounding Wilton would also score well in terms of biodiversity.

**A PRISTINE ENVIRONMENT** – Note that the water of the Nepean is extremely clean as it passes under the Freeway Bridge. According to an engineer who once worked for Sydney Water, the water of the Nepean is world class (Davidson J., pers. comm). It remains extremely clean till it meets Bargo River and even there it is quite

clean. Because it is growing on sandstone and is not fertilised by lots of wastewater, the native vegetation of the Nepean River Gorge and its tributaries, is pristine – extremely close to 100% native.

## **Aesthetics and Recreation**

**THE RIVER AS A RECREATION RESOURCE** – The southern and western sides of Wilton Junction comprise about 20 kilometres of the Nepean River Gorge. The Nepean Gorge is not as scenic as the Bargo River Gorge, Tahmoor East, and it is not as easy to walk along. Nevertheless, it contains very large pools with water that is usually extremely clear. It also contains some sandbanks and some vertical cliffs. It can be entered in a number of places via creeks. It would be good to create some tracks down those creeks so that the residents of Wilton Junction can visit the River. The tracks would also make life easier for those who go to the river with kayaks when there is a somewhat higher than normal level of water in the River.

**A CYCLEWAY** – a cycleway in and/or beside the abovementioned buffer, would be very desirable. The cycleway could be between 5 and 40 kilometres long and could, of course, be integrated with the walking tracks. It would be popular if it tends to follow the contours and therefore does not require strenuous activity. The longer it is, the more likely parts of it will be used.

**PANORAMIC VIEWS** – The trip by car, from Wilton to Maldon, can be described as very scenic. The steep, grassy Razorback Range can be seen and so can the more distant horizon of the Greater Blue Mountains World Heritage Area. Also, on the left as one travels towards Maldon, there are some small, steep, grassy hills. To a very large extent, these should not be covered with houses. The cost of providing services on those hills is likely to be high and, if left alone, the hills will provide residents with a small amount of rural environment to enjoy. Importantly, the panorama from the top of those hills would be impressive unless the urban development, below, is generally drab and full of eyesores. The tops of these hills should therefore be made accessible to the public and could perhaps include picnic facilities.

**SPORTS FIELDS AND THE LIKE** – Sport is such a popular part of Australian life that we do not need to promote it. Hopefully, there will be enough space for residents to watch or participate in sport.

**SEWAGE FOR IRRIGATION** – Near the western side of the Nepean Gorge, near the border between Wilton and Tahmoor, there are fields which are permanently very green because treated sewage is used for irrigation. Pure green fields could certainly add to the beauty of the Wilton Junction area. Note that those who are promoting Wilton Junction are claiming that they intend to keep the rural character as much as possible.

## Sustainable Development

DEFINITION – While reading about Wilton Junction, and various other planning documents, we have encountered the word “sustainable.” We presume that the promoters of the development are claiming that Wilton Junction will be an example of “Sustainable Development” or “Ecologically Sustainable Development” (ESD). This is important because, if a development is not sustainable, it is unsustainable and/or it causes some other development elsewhere to be unsustainable – especially if it contributes to global warming. Unsustainable development will eventually lead to huge problems, according to most scientists – especially those who have the highest relevant qualifications.

Sustainable Development can be, and has been, defined in just one long sentence. The sentence however is vague. Appendix Two of this submission divides ESD up into 18 actions but even they are quite vague. Each one of them needs to be further subdivided. In fact, to make ESD clear, we would have to turn the sentence into many thousands of understandable actions – like dividing a tree trunk into major branches, minor branches, twigs and leaves.

ENERGY AND GLOBAL WARMING – Development can be considered unsustainable if it contributes to global warming. The politicians of the world have declared that they will not let Earth's average temperature rise by more than 2 Centigrade degrees. That decision is based on wishful thinking rather than science. Because of positive feedback, the warmer Earth becomes, the harder it will be to bring the average temperature back to pre-industrial levels. Furthermore, when Earth warmed by 5 or 6 Centigrade degrees, after the last Ice Age, the sea rose by more than 100 metres. This suggests that it will rise, in the future, by at least 20 metres. Most of the world's largest cities would be subject to varying degrees of inundation. If they take more than 500 years to be partially inundated, humanity will easily cope. However, if the inundation it takes less than 200 years, humanity will certainly struggle. Furthermore, the inundation would be just one of several reasons for trying to prevent global warming.

This section is not based on newspaper articles by extreme right wing ideologues. It is instead based on what the best of scientists have written – especially James Hansen and the less alarmed Sir John Houghton.

In light of the above, we need to be moving as fast as possible into the use of renewable energy. Solar panels have become much cheaper and quite popular in recent years. By the time the building of Wilton Junction is completed, wind and solar may be the dominant source of energy despite rearguard action by very wealthy promoters of fossil fuels.

The plan for Wilton Junction should include very energy-efficient buildings and compulsory solar panels on the roofs of houses, factories and other buildings. If that is not enough to give the town adequate electricity, then several hectares of solar panels can be installed somewhere. In addition, some wind turbines could be erected



on the high ground near the Freeway, where they won't spoil good scenery and where they will probably not annoy anyone. If the community, or part of, owns the turbines and gains an income from them, people will not complain.

Impressive electric cars are becoming available and, sooner or later, all the electricity for them will be derived from renewable energy. Then, the only problem with long distance commuting would be traffic congestion and wasted man hours – unless the cars drive themselves and the drivers sit back reading and relaxing. Self driving cars are already being experimented with and some cars today, take control of themselves in an emergency.

In the short to medium term, it is wise to reduce long distance commuting which has been growing quite rapidly in Wollondilly and is likely to continue to do so. It would also be desirable to put a train line through Wilton Junction so that many people can travel to work in an energy efficient manner. There is already a partially completed bridge, for such a railway, on the western side of Wilton Junction.

USE OF SEWAGE – The use of treated sewage is not new to the region. For instance, some of Camden's treated sewage is used to irrigate some of the Elizabeth Macarthur Agricultural Institute. Also, the Picton-Tahmoor-Thirlmere sewerage scheme has been working for around 15 years and has been irrigating fields of Lucerne. This waste-water scheme came into existence largely because of lobbying by NPA members when other people from the community were objecting to waste-water being pumped into Stonequarry Creek.

Treated sewage should not be pumped into the Nepean River unless it is treated to almost drinking water standard. Even then, it should be pumped into the river towards the northern end of Wilton Junction so that as much of the River as possible is left unaffected by development.

It may be more cost effective to use the treated sewage for the irrigation of crops. Then the planners can honestly say that some of Wilton Junction's rural character is being retained – perhaps enhanced. It certainly seems wise to investigate what has gone wrong and right with the above-mentioned scheme which is probably on very similar soils. Anyway, even if all the sewage was used to irrigate crops, there would probably only need to be less than 10% of the development site set aside for irrigation.

There are various ways of tackling the potential health and odour problems. For instance, it would be possible to make the fields out of bounds and do the spraying between midnight and 5 am. It must be remembered that sewage can be treated so thoroughly that it becomes purer than normal drinking water. If such a scheme is cost-effective, the treated sewage could be used for all garden watering and irrigation anywhere in Wilton Junction.

## **Demography, Employment and Transport Infrastructure.**

EMPLOYMENT – The new towns will bring jobs but we have always thought that for every Wollondilly resident who gets a local job, there are more than a few who have to commute long distances. This has both economic and social effects. It is also likely to put strain on families. According to SGS Economics and Planning, in their Sept. 2015 report, even in areas much closer to the centre of Sydney, about 70% of workers have to travel outside of their Local Government Areas for work (p9). On page 27 of the document, the consultants seem to be saying that “at total capacity” there will eventually be 190,000 people living in the Greater Macarthur Investigation Area but there will be only 30,000 jobs there.

Furthermore, there is no guarantee that the jobs will be given to Wollondilly residents. There are already many people who come from as far away as Cabramatta to work in Picton or Tahmoor. It is hard to escape the conclusion that, for every resident of Wilton Junction who is employed locally, there will be between 4 and 10 who will have to commute to Campbelltown, Wollongong, Liverpool or beyond.

Note that factories are usually like coals in a fire. If the coals are separated, they go cold but, if they are close together, they keep each other hot. To a large extent, a typical factory relies on other factories being nearby. Maldon Cement Works is a notable exception, of course.

TRANSPORT INFRASTRUCTURE – This is of major significance to Wilton Junction. If there are going to be tens of thousands of commuters leaving the town, the Freeway will become very congested. There is already a large number of cars on the Freeway during peak hours. In the middle of the day, the traffic flow is ideal. There are enough vehicles to justify the expense of the Freeway but not so many that trips become unpleasant. That will all change if tens of thousands of people come to live at Wilton Junction. It is inevitable that much money will need to be spent on upgrading the Freeway. That will involve doubling the width of the Freeway and erecting 6 large bridges between Wilton and Campbelltown. If public transport is promoted, the Freeway upgrade can probably be delayed. There is already a partially completed bridge for trains across the Nepean. This can be completed and a rail line can go into the heart of the new town. To many residents, that would be an ideal way of going to work – especially for those who work beyond Campbelltown. Electrification of the line will not be necessary.

RETIREMENT VILLAGES and the LIKE – The need for upgrading the Freeway will be reduced if Wilton Junction becomes popular with retirees who live in such a good environment that they don't feel the need to leave the town every day. Appendix Three gives 16 reasons for believing that retirees would love to live at Wilton Junction if it does not become a slum or an industrial area with many plain and/or ugly buildings. There are many arguments in favour of Wilton Junction becoming a significant place for retirees. Perhaps the main ones are:

- 1) Retirees are becoming a large part of the Australian population
- 2) Retirees like to live in an area of natural beauty

- 3) Wilton Junction contains forest that is likely to be retained and can include picnic areas, walking tracks and bicycle ways.
- 4) Retirees, do not have to live close to major employment centres
- 5) Wilton Junction is close enough to Sydney for many of those who want to visit, or be visited by, family and friends. It is certainly closer than most coastal towns.
- 6) Wilton Junction will have adequate shopping for groceries and will almost certainly have a medical centre.
- 7) Wilton Junction is not far from major medical centres including Campbelltown Hospital
- 8) At Wilton Junction, it would not be hard to locate retirement villages away from the bushfire hazard – especially if a sewage disposal area becomes a lush and wide Asset Protection Zone

POPULATION DENSITY – Generally, cities become denser as their population grows. That trend is occurring in Sydney and, in order to stimulate efficient forms of transport, should occur more rapidly. But should there be medium density and high density areas in Wilton Junction? It could be argued that a dense town at Wilton Junction will result in the place becoming a slum. Some would argue that there should be much emphasis on large lot residential instead. Are they right? We are not experts on this topic but we are inclined to think that the town should become attractive to a wide range of people. Also, if the town has much publicly owned forests and fields, would-be residents may not feel the need to have lots that are an acre or more.

We have already argued in favour of the area becoming suitable for retired people. Some retirees may want a large house on a large lot – the sort of house they dreamed about but couldn't afford when they lived closer to the centre of Sydney. Others, however, may want to downsize so that they have less house-work and more money for holidays. Overall, it seems that retirees would tend to increase the overall density of the town.

People who have given themselves a time consuming and interesting job creating and maintaining a one acre garden, may not be inclined to help with bush regeneration projects. At the other extreme, slum dwellers are not likely to be into bush regeneration either. Hopefully, a varied population between these extremes can work on bush regeneration if for some reason, professionals bush regenerators cannot do the work.

## **Urban Aesthetics**

The amenity of urban areas is certainly not core business of NPA but we enjoy trees and other plants whether they be in a pristine forest or in gardens of various sizes in towns. Vegetation should certainly be a conspicuous part of Wilton Junction unless the planners intend the area to become a slum.

Should the development, like many developments these days, be characterised by much grey, brown and beige? Would that be too drab? Should some bright, pure colours, such as sky blue or pale orange be included? Would such colours have a cheering effect? Dark grey roofs may look good in small doses but what about the absorption of heat in summer? We question the desire to make the town less noticeable and instead think that planners should explore various ways of making the town more beautiful – various roof colours to produce a variegated scene would, perhaps, help.

There are arguments in favour of having some apartment blocks 5 to 10 floors high. If such buildings find their way into Wilton Junction, will they spoil the landscape? Can a medium or high rise block of apartments be beautiful without being ornate as they are in Paris? We are not saying that there should be no multi-storey buildings there – just that about 9 out of 10 apartment blocks in Sydney are ugly in the opinion of the authors of this report. If ugly buildings are erected in Wilton Junction, will that cause the place to become a slum? To us, the town should be a desirable place with significant natural and semi-natural areas.

## **Concluding Comments**

There are arguments for and against almost anything and there are certainly arguments for and against Wilton Junction. It seems to us that there are only 3 good arguments in favour of the creation of the new town. First, Sydney's population growth seems unstoppable and people have to live somewhere. Secondly, we live in a fairly free society and some people would prefer to live in a detached house not far from rural land. The third reason is that, if planning is done for the benefit of wildlife and the residents, not just for the benefit of developers, there will be an enhanced wildlife corridor and the fragments of Critically Endangered Ecological Communities will be expanded in exchange for the right to develop.

However, the arguments against the new town are huge. At present, the growth of long distance commuters in Wollondilly is far greater than the growth of local jobs. This situation is likely to continue for many decades. Consequently, automobiles using fossil fuels are likely to clog the Freeway and produce much greenhouse gas which is causing global warming. The latter will create enormous, perhaps overwhelming problems for mankind. It seems that creating a town so far from the centre of Sydney is the antithesis of Sustainable Development.

The new town can however come close to qualifying for Sustainable status if society continues to adopt renewable energy and if the fledgling electric car industry thrives. The reuse of waste water would also contribute to sustainability and can enhance some of the rural land as well. We must look at early signs of big changes to the way humanity will be living – rather than making assumptions which were OK a few decades ago but are very inappropriate now.

## APPENDIX ONE

*(The National Park proposal document up to end of Summary – without the pictures)*

# The Proposed

# **BARGO-NEPEAN NATIONAL PARK**

## Including Mermaids Pool

A Scenic Link Between Two Areas of Exceptional  
Importance For Nature Conservation

*Picture*

Mermaids Pool – note the people enjoying the place

**National Parks Association, NSW Inc.**

Final Draft 15/1/2015

# Acknowledgements

Although this document has benefited greatly from expert input, both inside and outside of the National Parks Association, NSW Inc. (NPA), the final editing was done by NPA, Macarthur. If the document has any flaws, we accept responsibility.

The first and second drafts of this document were entirely the work of Rowland Ware, a retired urban and regional planner and Julie Sheppard, a retired high-school school teacher. For this draft, we have consulted Doug Benson, semi-retired plant ecologist of the National Herbarium, Sydney and he has made numerous helpful suggestions about some details and about the document, generally.

Dr Robert Close, zoologist and retired professor of the University of Western Sydney, worked with Graham Groves, an amateur naturalist who in 1991, produced lists of plant and animal species in or near the Gorge at Tahmoor. These lists are a part of the appendices of this report. Dr David Murray, retired plant physiologist, professor, naturalist, author and President of the Australian Wildlife Society, has given this document his blessing.

Dr Oisin Sweeney, ecologist employed by the National Parks Association, NSW Inc. was involved in the completion and editing of the document. Robert and Beth Michie and Barry and Pat Durman of NPA, Macarthur Branch, were consulted during the production of the document. The photography was provided by Rowland Ware and Julie Sheppard and the artwork, obtained from the 1995 proposal document, is the work of Joanne Wells.

# Past Helpers / Contributors

## Nearly a Century of Campaigning

This document explains that action, to make Mermaids Pool and Bargo River accessible, dates back at least as far as 1921. It is highly likely that all of those early campaigners are deceased but further research may reveal the names of some of the most active. The list would probably include the father of Colin Miller, retired builder and long-time resident of Wollondilly. Since 1986, there has been an intermittent but significant campaign to protect all or part of the Bargo River. So far, the campaigners have been partially successful.

## The Original Proposal Document

About 30 people were involved in the production of the partially successful 1995 document. In addition to the above-mentioned people, whose work has been reproduced for this document, the major contributors included Tim Carroll who was the first person to suggest that we should make a proposal for the entire Bargo River Crown Land. Rowland Ware and Julie Sheppard were also very involved in the production of the document.. Michael Doherty, of the CSIRO, produced a list of Bargo River species near Hilltop and his work was included in the 1995 document and is included in the appendices of this one also. Verlie Fowler did the word processing for the 1995 document and Graham Batty laid out and reproduced the pictures..

## Past Campaigners and Contributors

There are numerous people who have in some way contributed to the protection of the Bargo River Gorge at Tahmoor East or the creation of the Bargo River State Conservation Area. This page cannot include them all. There were bushwalkers who encouraged us and bureaucrats and Council officers who contributed in some way. Graham Quint of the National Trust was also helpful. Various mayors, councillors and politicians gave support or encouragement and also walked through the Gorge. They are Phil Costa, Sara Murray, Liz Kernohan, Tim Moore, Peter Primrose, Pam Allan, Peta Seaton and Michael Banasik. Other supporters included Councillors Anna Wilmot and Wendy Underwood and Mayors Helen Kuiper and Des Ayliffe. Of course, we must not ignore the many volunteers we have worked with over the last 25 years. These include, Michael Fairfax, Phil Harrison, David Hunt, Marjan Koopman, Malcolm Maclean and John Sutherland of the Bargo River Protection Group and Mandy Anderson, Dr Charles Warner and Peter Crump of NPA.. Robert Sloss has created tracks at the Gorge and, last but not least, we appreciate the efforts of Dr Philip Pells, whose help was largely responsible for preventing underground coal mining from coming too close to the Gorge. Importantly, in 1997, Miroslav Belik and Robert Close produced a 100 page document, called BARGO RIVER

ISSUES PAPER, for the then Upper Nepean Catchment Management Committee (UNCMC). Another document was commissioned by the UNCMC and is by Muston and Associates. It is called Bargo River Catchment Options Report (2,000). These two documents were studies designed to develop a Bargo River Catchment Management Plan. Unfortunately, the UNCMC was disbanded by the State Government before this could be achieved.

Of course, NPA Macarthur has produced many submissions about the Tahmoor East gorge in response to various proposals by developers and by the local coal mine.

# Supporters

This proposal is supported by the following organisations:

- \* National Parks Association of NSW, Inc.
- \* Nature Conservation Council of NSW
- \* National Trust of Australia (NSW)
- \* Australian Wildlife Society
- \* Wollondilly Shire Council

The above-listed organisations agree with the general thrust of this document. They do not necessarily agree with every point in it.



# TABLE OF CONTENTS

Acknowledgements, etc.....	2
Past Helpers and Contributors .....	3
Supporters .....	4
Abstract .....	6
Summary.....	7
Introduction.....	17
1. The Gorge is Splendid Scenery.....	21
2. The Rivers are a Recreation Resource .....	29
3. The Habitats are Generally Diverse and Pristine.....	33
4. A Wildlife Corridor of National Significance?.....	36
5. Rating Highly for Biodiversity and Threatened Species ...	40
6. A Critically Endangered Ecological Community.....	46
7. Significant Support from the Government's Plan .....	51
8. Obstacles? Yes, but Opportunities too .....	59
Concluding Comments.....	63
Notes and Sources .....	68
Appendix 1 – The Gorge as Scenery.....	
Appendix 2 to 6 – Species Lists from the 1995 Document.....	

Appendix 7 – Other Extracts from the 1995 document .....	
Appendix 8 – Threatened Species within 30 km of Tahmoor.....	
Appendix 9 – The Criteria of Good Wildlife Corridors .....	
Appendix 10 – Towards an Objective Comparison with Other Areas .....	
Appendix 11 – Shale Sandstone Transition Forest at Tahmoor East .....	
Appendix 12 – A Speech – Financial Benefits to Developers and Council .....	

Map 1 – The Vegetation, Roads, Streams and towns.....	
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Map 2 ???	
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Map 3 – The Crown Land map from the 1995 document .....	
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Map 4 – The Gorge at Tahmoor East .....	
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# abstract

The proposed Park, between Camden and Bowral, comprises the Crown Land and the other steep land, that cannot be developed, in the entire Bargo River catchment. It includes the existing Bargo River State Conservation Area (SCA). It also includes a section of the Upper Nepean Gorge. Because it may not be possible to create the entire National Park, decision makers should think in terms of a National Park and/or an expansion of the SCA and/or a Regional Park.

The section of Bargo River downstream of and including Mermaids Pool is exceptionally steep and rocky and has been rated as scenery of at least State significance. It is a splendid combination of rock, water and vegetation. Consequently it could be an "entree" if tourists are on a four day trip to the Southern Highlands, the Illawarra Region and Royal National Park. Because it is close to Australia's largest city, it is already becoming attractive to bushwalkers.

Although unexceptional, at the edge, the native vegetation of the proposed Park is generally very diverse and pristine and it has an altitude range of 643 metres. It is the only significant link between the Greater Blue Mountains World Heritage Area and the almost equally important Cataract-Cordeaux-Avon-Nepean vegetation on the Woronora Plateau which joins the Illawarra Escarpment and its impressive forests. It is not entirely surprising therefore that, in terms of biodiversity, the Tahmoor Area was beaten only by Byron Bay when it was compared with five other areas, including areas known to be important in terms nature conservation.

Importantly, NPA recommends the protection, enhancement and reinstatement of Shale Transition Forest – which is now listed as a Critically Endangered Ecological Community.

The proposed Park gains quite quite strong support from the NSW National Parks Establishment Plan 2008. The case for the proposed Park being a National Park is strong to very strong. The case for it becoming a Regional Park is extremely strong. Now is the time to act. The most scenic part of the proposed Park is about to have urban development very close. Development should not be considered an obstacle. If the planning is good, there will be private land donated to the public in exchange for the right to develop. NPA believes there should be a 150 metre wide publicly owned buffer/enhanced corridor/recreation space between the development and the cliff-tops.

# SUMMARY

The proposed park is between Camden-Campbelltown and Mittagong-Bowral. More specifically, it is between Colo Vale, Tahmoor, Wilton and Yerrinbool. It ranges from 100 metres to 743 metres above sea level.

In 1995, NPA produced a document recommending the creation of a National Park comprising the Crown Land and a little steep, privately owned land that cannot be developed in the entire Bargo River catchment. The Bargo River State Conservation Area (SCA) was created in 2007 and so the document was partially successful. The SCA is approximately 20 square kilometres which is a little smaller than half of what NPA was recommending. NPA is now proposing that the SCA become a part of the National Park and that the Nepean Gorge, upstream from Bargo River, be added to it. The Park would therefore be a significant link between the Greater Blue Mountains World Heritage Area and the Cataract-Cordeaux-Avon-Nepean catchment land on the Woronora Plateau which is a part of Sydney's water supply. Such land joins the magnificent Illawarra Escarpment and the forests further south.

If it is not possible to create a National Park, in the short-term, NPA recommends that the SCA be expanded and/or that a Regional Park be created around the spectacular, scenic Gorge between the very popular Mermaids Pool and Nepean River. We could perhaps have a “Mermaids Pool Regional Park”.

There is a significant amount of development taking place in Wollondilly and Wingecarribee Shires and development is being planned now for the western side of the above-mentioned Gorge which is also known as Tahmoor Canyon. The development is not necessarily an obstacle. One of our main points is that some of the existing private land can become publicly owned land, above the cliff-tops of the Gorge, in exchange for the right to develop.

The donated land could be a place where Shale Sandstone Transition Forest, now listed as a Critically Endangered Ecological Community, can be enhanced and, in some places, reinstated. We must remember that such a

community can be of benefit to a number of endangered animal species. Also the proposed Park is in a region that is very important for biodiversity in general.

The area is also important culturally. The indigenous Australians have a legend about Mermaids Pool. In addition, the first written record of the sighting of Wombats, Koalas and Lyrebirds was made not far from Bargo River.

## **The Gorge is Splendid Scenery**

This document argues that the proposed park is very important ecologically. But we also argue that, even if the area is unimportant in terms of biodiversity, some parts are so beautiful that they deserve to be protected for that reason alone – especially at Bargo River Gorge, Tahmoor East which is also known as Tahmoor Canyon.

Beauty may make us experience emotion but, according to a philosopher, Francis Hutcheson, beauty involves “*unity in variety and variety in unity*”. In other words the perception of beauty is an intellectual exercise – especially when enjoying good music and architecture which is very much about ratios. The perception of beauty is a very important part of our lives. It is used to sell all manner of goods and services including cars.

In relatively flat areas of bush, there may be a variety of species but a few species dominate. The unity tends to exceed the variety. By contrast, at Bargo River Gorge, there is much variety. In addition to vegetation, there is rock and water. And each of these, three can be divided into several major categories. For instance the rock can be divided into grey cliffs, colourful and intricate cliffs, boulders large and small, generally flat, water-worn bedrock and a few features such as dykes. Yet the Gorge still has plenty of unity. There are several common tree species and the cliffs are almost completely made of sandstone.

The saying “*beauty is in the eye of the beholder*” is not completely true. Surveys involving questionnaires, a large number and variety of pictures and a large number of randomly selected people have shown that some scenes are more popular than others. A manual produced by the Department of Planning, in 1988, implies that topographic ruggedness, varied vegetation, natural and/or agricultural landscapes and water features are all valued by most people. The Gorge at Tahmoor rates highly in terms of all of these. In the Gorge, it is possible to escape into a completely natural environment free from eyesores such as powerlines and buildings that are ugly and/or excessively plain. The cliffs are not huge but they are up to 100 metres high and they are a very large part of the landscape. In 7 places they meet the pools and cascades. The pools are mainly in bedrock and some are much larger than Olympic pools. The cascades total 125 metres in height. There are 4 main vegetation communities and although the leaves are mainly olive green, there are small areas of small rainforest trees and other trees which are a brighter green. The pale, blue-grey leaves of Coast Myall (a wattle) are also conspicuous in places. Overall, the Gorge is a splendid combination of rock, water and vegetation. In Australia, there are many wonderful Gorges – especially the ones photographed by Ken Duncan. We do not claim that Bargo River Gorge is as scenic as, or more scenic than, the best of these. However, in some ways, but not all, Bargo River Gorge is more impressive than Mossman Gorge which is near Port Douglas and is visited by people from around the world.

A Department of Planning publication, in 1996, stated that the Bargo River Gorge is of national significance as scenery. One visitor, to Mermaids Pool, said that it was as beautiful as anything she had seen in the Greek Isles. We do not claim, however, that the scenery of the Gorge is world class. There are some amazing and majestic mountains and valleys in the world. However, there are whole countries which do not have topographic ruggedness and would probably love to have the Gorge within their borders.

## **The Rivers are a Valuable Recreation Resource**

According to the Australian Bureau of Statistics (ABS), 2-3% of Australians go on a bushwalk at least once per week. It is one of the ten most popular physical forms of recreation. That is remarkable when one considers the amount of preparation and then driving undertaken to make even a simple bushwalk successful. Sydney is surrounded by natural beauty but most bushwalkers would definitely enjoy a walk at Bargo River Gorge as a change from the grander valleys that we are all familiar with. Walking in the latter is usually very arduous.

The Mermaids Pool area is a popular swimming spot for teenagers and is also visited by adults with young children. The Cave Divers Association of Australia once trained there till they became unnecessarily worried about pollution.

The Gorge is known to at least four National Parks Association branches, a few other bushwalking clubs and many other people. In fact, there has been a recreation reserve at Mermaids Pool since 1933. Unfortunately, due to vandalism of a Scouts hut, the track is no longer open to the public. People now have to walk at least 1.5 kilometres to get to the pool. But a retired local has created a few kilometres of tracks at the Gorge and these are becoming more established due to use.

The National Parks close to Sydney are very important to the Tourism industry which, in Australia, is worth about \$70 billion per year. Mermaids Pool and the Gorge would be like an entree, if part of a four day trip to the best of the natural areas in or near the Southern Highlands and the Illawarra region.

## **Habitats are Generally Diverse and Pristine**

From a road, one may wonder why the National Parks Association (NPA) is advocating the protection of the Bargo River vegetation. The edge is unexceptional. But we have walked well inside that woodland and forest and

have found that most of it is diverse and pristine. It is good habitat for a large number of animal species and, during our excursions there, we have been fortunate enough to see creatures such as Lyrebird, Platypus and the Vulnerable Powerful Owl. We have even seen the Endangered Broad Headed Snake.

NPA's 1995 National Park Proposal document relied heavily on two small surveys – one by a CSIRO botanist the other by an amateur naturalist. The latter dealt with the scenic Gorge east of Tahmoor and the other dealt with a very small part of the Upper Bargo River. In 1997 there was a biodiversity survey, in the Upper Bargo River area and, eventually, the Bargo River State Conservation Area (BRSCA) was gazetted in 2007.

According to a list, provided by the CSIRO, there are 148 rare or threatened species within 30 km of Tahmoor and, according to NSW Government legislation, three are Critically Endangered.

## **A Wildlife Corridor of National Significance?**

The land, within 30 km of Tahmoor, includes all of the proposed National Park a small part of the Upper Nepean catchment and a small part of the Greater Blue Mountains World Heritage Area (GBMWhA). The proposed National Park is therefore the link between these two extremely important areas of native woodland and forest. In that way, the Bargo and Upper Nepean Rivers are of International significance. Unfortunately, the wildlife corridor is less than a few hundred metres wide, in several places. Fortunately, in those places, cliffs are likely to provide protection to various native plants and animals. Also, where creeks join the main streams, the vegetation is around a kilometre wide. In the Bargo River SCA, the pristine vegetation is over 5km wide.

Wildlife corridors are being advocated in many regions because habitat has been fragmented. As a result, large, viable populations of various species have become many small, non-viable populations – populations which can suffer from inbreeding or be wiped out by a fire etc.



But the GBMWhA is huge. Doesn't that mean that it doesn't need to be linked to any other natural area? There are three main answers to that question. First, wildfires are capable of burning a large percentage of the World Heritage Area and such fires are likely to become more common as a result of Global Warming/Climate Change. Secondly, the GBMWhA is tiny when compared with NSW in which much of the most fertile land has been cleared. Thirdly, the GBMWhA contains about 270 Threatened species including a dozen that are Critically Endangered. It seems that the GBMWhA needs every bit of help it can get.

Overall, the corridor is definitely of more than local significance but it is hard to determine just how much more. If as a result of good planning decisions much vegetation is reinstated above the cliffs, the corridor could possibly become of National significance.

## **Rating Highly for Biodiversity and Threatened Species**

The CSIRO has created the Atlas of Living Australia (ALA), a data base which contains information about all of Australia's plant and animal species. The National Herbarium in Sydney has created PlantNET, a data base about the flora of NSW. Both of these data bases have limitations and they are probably still being developed. Nevertheless, we decided to use them in a reasonable manner that was inspired by a consultant hired by the developer of J R Stud.

We did not have the resources to compare the fauna and flora of the Tahmoor area with that of dozens of randomly selected areas across NSW. Instead, we decided to carefully choose five well-known, small towns which are all very different from Tahmoor and all very different from each other. We chose Lightning Ridge, Cooma, Thredbo, Eden and Byron Bay. The last three of these were included so that the Tahmoor area would get some stiff competition in terms of biodiversity.

In addition to obtaining data from PlantNET and the Atlas of Living Australia, we obtained the list of species that are threatened according to the Federal Government's Environment Protection and Biodiversity Conservation

Act (EPBC) and the Threatened Species Conservation Act (TSC) of NSW. We then did much tedious work and that included finding out the extent to which each of the listed species is threatened. The TSC and the EPBC divide the species into Vulnerable, Endangered and Critically Endangered. The PlantNET and ALA lists do not. Note that the EPBC lists have a total of about 1,400 threatened species.

As a result of our work we reduced thousands of pieces of information to 120 pieces of numerical data. For instance we discovered that, according to the ALA, Byron Bay area has 25 Endangered Plant species and, according to PlantNET, the Thredbo area has 33 introduced species that are not gazetted as weeds. These are two of the 120 facts. But what do they all mean in terms of nature conservation? Is it possible to give each town an overall score? It certainly is but that involves giving each fact a weight and such weights are a matter of opinion.

The opinions of professional ecologists who are employed by government organisations should certainly be respected but it is highly likely that they too take other areas into account when they give opinions. It seems impossible to evaluate an area without comparing it with other areas and without giving weight, either consciously or subconsciously, to each piece of information that is considered. In that way, professional opinion is similar to the method we used. Our method certainly has its limitations but we have been methodical and transparent. We have documented in this report, the various assumptions we had to make and our worksheets can be made available to anyone who wishes to scrutinise them.

We definitely did not rig the study to make Tahmoor look important. In fact, for a while it looked as if Tahmoor would be beaten decisively by Byron Bay and that it would be beaten slightly by Eden. We were therefore surprised to find that Tahmoor ended up being beaten only by Byron Bay and that it was significantly in front of Eden.

Although we used numerical scores, we are well aware of the fact that our results depend on weights which are based on assumptions. We believe the assumptions are justifiable but they are, nevertheless, assumptions.

Paradoxically, to be more accurate we have to convert the numbers into words and merely say that the Tahmoor area is important or very important for nature conservation. That may seem surprising to many. Tahmoor is not a remarkable town but it does have a World Heritage Area about five kilometres away.

## **A Critically Endangered Ecological Community**

The task of deciding how and where resources should be spent, on nature conservation, is made simpler if the vegetation of the state is divided into Ecological Communities (EC) and if those communities are rated in terms of level of threat. If definitions are sufficiently precise, it is possible to list hundreds of ECs. In NSW there are dozens of Endangered Ecological Communities and 10 of them are listed as Critically Endangered. Shale Sandstone Transition Forest (SSTF) is now a Critically Endangered Ecological Community and it exists beside and near the most scenic part of Bargo River – the Gorge/Canyon at Tahmoor. .

According to Wollondilly Shire Council's Biodiversity Strategy, SSTF can be divided into High Sandstone Influence and Low Sandstone Influence. The above-mentioned species list for the Gorge, at Tahmoor, suggests that the soil near the Gorge is derived from sandstone more than from shale. We know that there are sandstone outcrops on the relatively flat land above the Gorge. That is a good reason for not allowing houses and their on-site sewage disposal systems close to the Gorge.

The above-mentioned species list suggests that there are no rare plant species in the SSTF at the Gorge. However, as the NSW Scientific Committee has pointed out, SSTF is likely to be very useful to the Regent Honeyeater, the Swift Parrot and the Grey Headed Flying Fox. The Honeyeater is Critically Endangered, the Parrot is Endangered and the Flying Fox is Vulnerable. All 3 have been recorded within 10 km of Tahmoor and if the SSTF is enhanced at the Gorge, the 3 animal species would be less likely to become extinct, even if only common SSTF species are planted.

Another Vulnerable species is Koala. It has been recorded at Tahmoor but probably never at the Gorge. However, Grey Gum (*Eucalyptus punctata*), a species that is a valuable food source for Koalas, is common along the clifftops including on Inghams property.

## **Support from the Government's National Parks Plan**

This proposal document gains quite strong support from the New South Wales NATIONAL PARKS ESTABLISHMENT PLAN, 2008, even though the Plan suggests that the system of parks and reserves should be expanded mainly in central and western NSW where, at present, only 5% of the land is protected from agriculture. By contrast, about 30% of the Coast and Ranges is in National Parks and the like. We agree but we urge decision makers to beware of fallacies. For a start, most of NSW is west of the Great Dividing Range and it is certainly not as topographically complex as the coast and ranges.

It would appear that the Coast and Ranges are the most important – partly because they are also valuable for recreation. The Minister's foreword to the Plan states that many people become conservationists as a result of the “seminal” experience of being surrounded by nature. Also, the ranges are important because the National Parks along the ranges can be fairly easily linked so that there is a continuous wildlife corridor from southern Victoria to the Hunter Valley. In fact it may one day be possible to have the corridor extend to southern Queensland. One of the easiest links would be the Park that this document proposes. Why ignore the opportunity provided by impending development and the associated planning?

It is true that the proposed Park will be rather narrow in places but it can be widened with the enhancement and reinstatement of the Critically Endangered Shale Sandstone Transition Forest. Importantly, although the link does not have an excellent area to boundary length ratio, it is not a small isolated area and what it links could hardly be more important.

On many of its pages, the Government's Plan mentions climate change. This is very relevant to the proposed Park. The Bargo River catchment has an altitude range of 643 metres. That is a lot by Australian standards. Also, because the Proposed Park

would be a part of a north-south corridor, its enhancement would increase the ability of species – especially animal species – to move from north to south in response to global warming.

The Plan makes it clear that, if biodiversity is to be protected for the public, then the Parks have to be publicly owned and managed in a way that is accountable to the public. In NSW, only 0.1% of the land is private land managed for the benefit of biodiversity. Incidentally, NSW lags behind the rest of the world, and especially behind the rest of Australia in terms of the percentage of the land set aside for National Parks and the like. The idea that ecosystems should be rehabilitated is a notable part of the Plan. We are certainly pleased with that. Such rehabilitation will take decades but fortunately, the Plan, although focussing on a 10 year period, recognises that the Government should look ahead at least 50 years as it considers the future of areas required for the protection of biodiversity and the provision of spaces for bushwalkers.

## **Obstacles? - Yes, But Opportunities Too**

Arguably the biggest obstacle to the creation of a publicly owned buffer/wildlife corridor/recreation area is the tendency of many people to believe that almost everything should be privatised and that Government should be as small as possible. We of NPA are glad that we have lived much of our lives in a “mixed economy” – one which has a balance between the private and public sectors.

Note that the two Roosevelts were the Presidents of the USA who were among the firmest supporters of National Parks. One was a Republican and the other a Democrat. Wallace Stegner, a famous writer, said that National Parks are “absolutely democratic”. If he is right, then we should be somewhat alarmed by the results of an Australian National University survey which showed that, in recent years, support for democracy has declined in Australia. Perhaps one cause for disillusionment is the exposure of politicians who have taken bribes from developers.

NPA is not certainly not opposed to the existence of developers and is not even opposed to development, per se, near the Gorge in Tahmoor. However, we may have to oppose the development if it is too close to the lip of the Gorge. We believe that a substantial buffer should be created between the cliff-tops and the private

property. This should be created in exchange for the right to develop. If we have the right ideology, development can provide an opportunity for the enhancement of the environment. Too often, however, development is an obstacle to environmental protection.

There are other obstacles. For instance, even if some land is donated to the public, there is still the question of who pays for the enhancement of the vegetation. There are many answers to that but, even if grants are not available, a Landcare or Bushcare group can slowly improve the vegetation over a long period of time. The thing we need to do most is prevent Privet, African Olive and one or two other non-native species from becoming dominant. They are not prolific there at present and they are almost non-existent in the sandstone terrain below the cliffs.

Another potential obstacle is the existence of about 20 hectares of land that has been intermittently saturated for many years by nutrient rich wastewater from the Inghams processing plant. That land is a few hundred metres from the Gorge, except for some small areas where runoff has occurred. But nutrients may turn out to be an opportunity. It may be possible to create a forest of beautiful native plants that thrive where the soil is fertile. Such a solution would certainly be acceptable if the Gorge becomes a Regional Park but it could be argued that it would also be appropriate to create such vegetation if the Gorge becomes part of a National Park.

Note that, up to a point, a wide publicly owned recreation space will be of benefit to the developer. Most people love to live near a significant natural area and so the properties near such areas are more valuable than similar properties in the heart of suburbia. By promoting the Gorge, NPA is doing the developers a favour. We can only hope that they are wise and generous.

## APPENDIX TWO

### **BROAD ACTIONS for SUSTAINABLE DEVELOPMENT**

#### **Energy and Global Warming**

- 1) Avoiding the use of energy where possible
- 2) Using energy efficiently
- 3) Switching to one or more forms of renewable energy
- 4) Ensuring that a form of so-called renewable energy is truly renewable
- 5) Considering the possibility of using advanced nuclear power plants \*\*\*

#### **Food for Billions**

- 6) Promoting birth control in many countries
- 7) Recycling phosphorus – an element essential in agriculture
- 8) Ensuring that there is an adequate supply of other elements essential for agriculture
- 9) Recycling or re-using water where necessary
- 10) Ameliorating vast areas of land that have been subject to various forms of land degradation including soil erosion and salinisation
- 11) Ensuring that urban development does not cover more good agricultural land – especially arable land

#### **Sustaining Nature**

- 12) Setting aside large areas of land for National Parks and the like
- 13) Using urban development as a means of enhancing rather than degrading areas of native vegetation and substantial wildlife corridors
- 14) Using various measures to preserve biodiversity when 12 and 13 are inadequate for certain endangered species
- 15) Preventing pollution so that all humans and all other species can thrive

## **Recycling and the Future of Hi Tech**

- 16) Recycling and/or finding substitutes for rare elements used in our high-tech world
- 17) Considering the possibility that high-tech may not always be necessary
- 18) recycling most materials where possible

\*\*\* this item on the list is highly controversial

## **APPENDIX THREE – A TOWN FAVOURING RETIRED PEOPLE**

We (justifiably?) assume that people who are retired and/or are over 55:

- 1) are becoming more numerous.
- 2) would like to live in a pleasant environment and would consider a “tree change” if they can't afford, or do not want, a “sea change.”
- 3) are still able to go on easy hikes such as a hike to Nepean River and Junction Pool, if an adequate track exists.
- 4) belong to households that are smaller than the average household.
- 5) partly because of 4), make fewer car trips per household than a typical Australian household.
- 6) work part-time or do not have to go to work, and so they make fewer car trips than most Australian adults.
- 7) have grown up children and consequently do not have to make trips to schools, day care centres etc.
- 8) are more likely, than most adults, to stay at home for a whole day.
- 9) will be even more inclined to stay at home if home is in a very pleasant environment.
- 10) are likely to have, with other elderly people, special outings in a bus.



If those assertions are correct, a retirement village would generate less traffic than a development with large households. That would create much less congestion on the Freeway and would therefore reduce the need for urgent widening of that road. Furthermore, it seems safe to assume that most people over 55 would:

- 11) prefer to have a small private yard, or no yard at all, rather than have one which is big enough for children to run around in.
- 12) are likely to have children and friends in the Sydney region and so a retirement village near the the Gorges would allow people to make a "tree change" without significant social and family disruption.
- 13) would have the time and inclination to belong to a Landcare Group which could help to expand or reinstate the CRITICALLY Endangered Shale Sandstone Transition Forest.

Finally, we assert that that:

- 14) A retirement village, or the like, can have a cluster of dwellings with a communal sewerage scheme.
- 15) A communal sewerage scheme would provide better treatment to waste water than a large number of on-site sewage disposal systems of the variety found in Wollondilly properties that are outside of the sewered areas.
- 16) A sewerage scheme could be used to irrigate a large exciting area of lawn, garden and rainforest which can act as an excellent Asset Protection Zone.