Appendix B – Submissions received

Submission Number: 1

Marcel van Schie, Balgowlah

I notice that the draft report claims that from your process you have determined that the best fit of the majority of the area is E3.

This flies against all the bushwalking and mountain biking community consultation and responses to date who have attended your community consultations and responded to questionnaires. The local community of Warringah, including us outdoor recreational users STRONGLY disagree with zoning existing bushland and areas of significant to prohibitive environmental constraint to be zoned E3.

We discussed at the meetings and made the suggestion and NOW DEMAND that these areas be Zoned E5 " environmental protection. We look forward to a revised proposed zoning map with these amendments and trust that you take account of our submissions as they do not seem to have been recognized in your draft report to date.

Submission Number: 2

Nick Booth, Chatswood

This area is currently heavily used for many forms of recreation such as walking, running, cycling, mountain biking, 4wd, nature watching and orienteering. To lose these areas would take away not only these people's recreation but the major difference between north and south Sydney, being that we on the north have extensive bush land areas worth exploring and that attract visitors from all over Sydney and the country.

There is also extensive wildlife and natural heritage to be found here with native snakes, birds like the Emu (found no where else in rural Sydney) and aboriginal rock carvings.

I would ask that these important areas be left for our kids to enjoy and to let the northern beaches retain its identity.

Submission Number: 3

Peter Ruszkowski, Manly Vale

Red Hill/Oxford Falls/Cromer currently has beautiful expanses of wild native bushland which I enjoy walking and mountain bike riding in with my kids (it keeps us healthy).

Please do not blanket rezone it E3 as much native bushland will be lost to development for ever. Please reconsider rezoning it E5 and save this precious resource. It is smarter to build upwards in developed areas than out in poorly accessible areas.

Regards Peter Ruszkowski

Submission Number: 4

Confidential

Would like to have existing bushland preserved. Would not like to see further residential, industrial or business development allowed on this land.

Existing bushland needs to be preserved to allow for recreational use and environmental protection.

Submission Number: 5

Confidential

Strongly oppose any land subdivision or land clearing. Any development will decimate biodiversity and the environment. All existing non developed/urban should be zoned for environmental protection.

Submission Number: 6

Confidential

I don't support development including seniors housing on the land adjacent to Lady Penrhyn Drive in the south eastern portion of the study area. It appears the Environmental Protection zone includes this area and therefore prohibits this type of development. I support this approach to the future preservation of the environmental and passive recreation activities in the area.

Submission Number: 7

James Gibson, Dee Why

My wife and I are interested in the new land release in Belrose. We are currently living in a small 2 bedroom unit with our 9 month old baby. We feel that this new land release would be beneficial to us as we expand our family in the future.

We appreciate the opportunity for your consideration.

Kind regards

J Gibson

Submission Number: 8

Roland Griplas, Cromer Heights

The whole area should be zoned E3 environment management protection because:

- It includes Narrabeen Lake catchment area.

- Aboriginal sites including carvings.

- endangered fauna and flora.

Submission Number: 9

Confidential

I strongly object to having my land zoned E3 a zoning Warringah Council pushes for it prevents the development of retirement Senior Living accommodation which currently is allowed and has happened.

E3 is not the most suitable comparison to our current zoning, it is more restrictive and has devalued our properties since it was proposed. A lovely 6 Bedroom house on 5.6acres at 1041 Oxford falls Road sells for $4.5m in Nov 2009 yet 34 Barnes Road a 2 story 4 Bedroom home on 4.5 acres sells for $1.94m this March when asking $2.7m.

This re-zoning has caused a reduction in the value of our properties, something politicians promised not to do. For example: 34 Barnes Road, Frenchs Forest – being a 2 storey, 4 bedroom, 3 bathroom, double garage residence with an in-ground pool, on 4 ½ acres, 17800m2 – sells for $1.94m in March 2013 when it is listed at $2.7m. You should remember this area as you once considered buying a block of land here. A 2 storey, 5 bedroom, 3 bathroom residence up the road in Myra Street, with double garage on 594m2, sells for $1.25m showing that the Real Estate market is strong and rising.

As our properties are devalued, do we get a refund on our rates and land tax bills?

Warringah Council was correct when it predicted there would be few changes and this exercise appears necessary to prevent losses in the Land and Environment Court because the Council's policy of implementing originally was flawed.

I'm disappointed that, firstly, our objections had little impact on having E3 forced on us because this is what Warringah Council wanted to stop Senior Living Development, and secondly, that the Green element in Warringah Council has more influence than us land owners.

I note there is a study in the future to rectify the errors of applying E3. Decades ago the zoning of 1 house/ 20 acres was introduced as a temporary measure to allow studies to help make the right decisions when most of the privately owned land was one dwelling per 5 acres. We are still waiting for the outcome of these studies; how long do we wait for the new studies?

I must again scream loudly that we landowners of privately held, cleared land are being punished by forcing E3 on us, instead of the more appropriate R5 zoning.

Submission Number: 10

NSW Rural Fire Service

Re: Review of Oxford Falls Valley and Belrose North Strategic Review

I write in response to the recent release for public comment of the above review document.

Bush fires are a natural and periodic element of our landscape. Due to historic settlement patterns and the need to provide housing for people, development has occurred in areas that are bush fire prone, placing lives and property at risk. NSW has experienced a number of large scale and severe bush fire events which have resulted in significant loss of life and property, causing considerable social and economic disruption.

NSW is recognised as leading best practice for the provision of bush fire protection measures for new development in bush fire prone areas. This is achieved through various sections of the Environmental Planning and Assessment Act 1979 which give support to the consideration of bush fire protection measures in land use planning and development assessment.

The Review of Oxford Valley Falls and Belrose North Strategic Review has the potential to incorporate appropriate provisions and controls for managing development in bush fire prone areas to improve community resilience as outlined below.

Issue E3 Environmental Management Zone

The NSW RFS notes that the proposed E3 recommendation council takes note that this zoning would permit home based childcare without any consent requirements in this area. The RFS considers home based childcare as 'Special Fire Protection Purpose' development which requires a risk assessment by the RFS.

Home based childcare should not be permitted on bush fire prone land without consent due to the vulnerability of these types of developments to the effects of bush fires.

Such a requirement may help in the reduction of potential losses from bush fires as experienced in previous fire seasons.

For any enquiries regarding this correspondence please contact Alison Moad on 8741 5443.

Yours faithfully,

Corey Shackleton

Group Manager

Community Resilience

NSW Rural Fire Service

Submission Number: 11

Michael Olofinsky, Belrose

As a land owner in the affected area, I strongly reject councils reasons for locking our land into E3, it is more appropriate to exclude All land with existing dwellings from the change .It is also appropriate to review the size of these lots for subdivision, under the old planning controls temporarily set up to block Hawker sidley, dividing its large land holding. A one dwelling in 50 acres is not appropriate for our area, as all privately owned properties have a dwelling sit on between 1- 5 acres it would be more appropriate to revisit this and make it allowable to breakdown land into 1 acre lots.

I support E3 on non-developed land. 95 % of the proposed land should be E3 as proposed.

Submission Number: 12

Confidential

Sir / Madam,

As a resident of the area under review I consider the current status quo in relation to land use and note in effect the submission maintains the stance of the Council and the previous planning committee's advice, namely that the area is unsuitable for urbanisation.

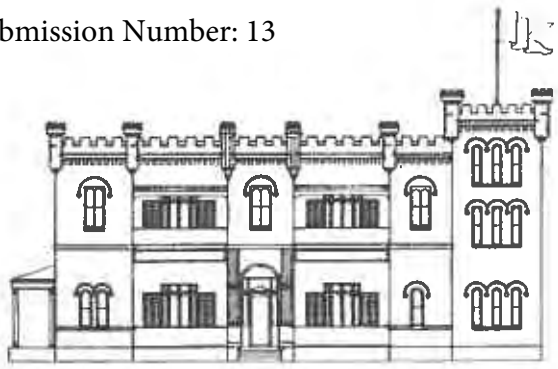
To the effect that the area in the main will be preserved for the benefit of residents, bushwalkers, mountain bikers, downhill bikes and horse owners etc. this is a satisfactory result.

The area is unique and needs to be preserved from future urbanisation, to do otherwise will rob the greater community of one the last remaining assets of green belt on the Northern Beaches.

The page needs to be turned on this and Council be permitted to Zone the area and move on to other more pressing issues.

I fear the cost to the ratepayer of this research and enquiry could have been much better spent on worthwhile projects and improvement of facilities across the Council's jurisdiction.

Submission Number: 13



Peter Montgomery A.M.

Solicitor and Attorney

Fernleigh Castle
5 Fernleigh Gardens
Rose Bay 2029
Sydney, Australia

DX1193 Sydney
Tel: 61-2-9371 7788
Fax: 61-2-9371 9752
Email: m@vahedin.com.au

15.7.13

Mr. Malcolm Ryan,
Deputy General Manager,
Warringah Council,
725 Pittwater Road
Dee Why NSW 2099
council@warringah.nsw.gov.au

Dear Mr. Ryan,

Re: SUBMISSION: Have your say on Oxford Falls Valley and Belrose North Planning Controls - Property Address: Lot 33 Pinduro Place, Cromer NSW 2099 - Lot 33 DP 870625 ("the land")

I confirm that I act for the registered owner of this company and that I am a Director thereof.

I refer to voluminous correspondence about the land over many years with the Council and the repeated assurances by your predecessors that the land would not have its rights reduced. I also refer to my discussion with you on the subject at the meeting held at Forestville, which the Minister attended and which attracted a very large crowd. You confirmed to me that it was most unlikely that land would be downzoned as a result of this current review being done.

In short, the land was a residue block from the sub-division of Pinduro Place, of which development the company for which I act was a partner. There was an agreement with Council and the Department that the block (which comprises 1.55ha) would have the ability to have "at least" one house built on it. This was whittled down subsequently in a rezoning to remove the words "at least" but still to provide that one house could be built on the land.

I refer you to paragraph 42(5) specifically referring to the land. It seems to me that in the new proposal this specific entitlement referred to in paragraph 42(5) is to be deleted and I am to rely upon a general "theoretical" right to build a house in a zone defined as Environmental Management with all the difficulties and hysterical reactions by some opponents of development.

I would be most grateful for your advice as to whether the specific reference to the land will remain or confirmation that Council and the Department intend to further downzone the land.

I look forward to your advices.

Yours faithfully,

Peter Montgomery

Cc The Hon. Brad Hazzard, MP office@hazzard.minister.nsw.gov.au
Director General of Planning Mr. Sam Haddad sam.haddad@planning.nsw.gov.au
Regional Director Sydney Region Juliet.grant@planning.nsw.gov.au

Submission Number: 14

Plan Urban Services Pty Limited
7 Chudleigh Street
Rydalmere NSW 2116

tel/fax: 02 8812 5331
mob: 0416 233 541
abn: 91 528 083 843

16 July, 2013

The Regional Director,
Department of Planning & Infrastructure,
Sydney Region East
GPO Box 39
Sydney. NSW. 2001

Dear Ms Grant

Re: Draft Oxford Falls Valley & Belrose North Strategic Review.

I refer to the above Strategic Review and the associated Draft Report (**the Strategic Review**) in relation to the Catholic Archdiocese of Sydney land (jointly beneficially owned by way of agreement with the Catholic Dioceses of Broken Bay & Parramatta since their establishment in 1986) (**Church Land**). The purpose of this submission is to provide comment on the Strategic Review in relation to that land and respectfully request further consideration of how the methodology should be applied to this parcel of land.

The Church Land comprises Lots 908 – 918 in DP 752038 and Lots 4 – 6 in DP 789407 on and adjoining Lady Penrhyn Drive, Beacon Hill. In total the Church Land holding has and area of 33.28 hectares (ha). The property is largely undeveloped and is partly covered by native coastal bush, with parts cleared and is inclusive of bush tracks and perimeter fire trails. The location of the Church Land is shown below.

Figure 1- Location

The Minister for Planning deferred the Oxford Falls Valley was deferred by the Minister for Planning from the Warringah LEP 2011, (LEP 2011) reverting its zoning to that applicable under Warringah LEP 2000 (LEP 2000).

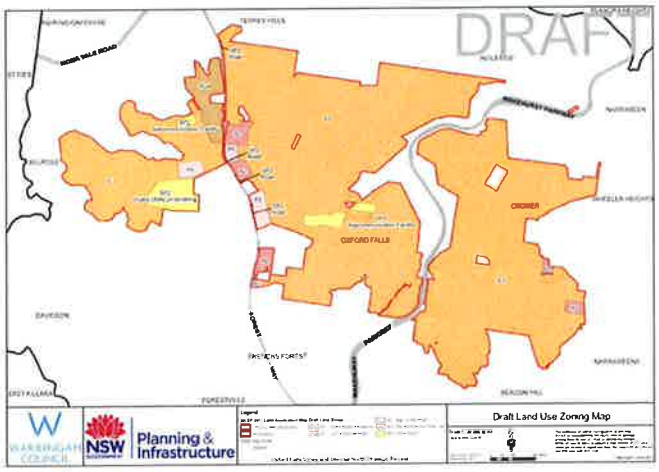
On 5 June 2012, Warringah Council resolved to undertake a joint strategic review with the Department of Planning and Infrastructure of the Oxford Falls Valley and Belrose North localities. The purpose of the Strategic Review was to translate the planning controls under LEP 2000 into the "best fit" zones and land use controls under LEP 2011. The Review did not seek to undertake any additional studies of the land and was in effect Stage 1 of a strategic planning exercise, which may lead to a Planning Proposal and eventual re zoning of the land.

The Church land currently falls within the ***B2 Oxford Falls Valley Character Area*** as shown in figure 2 below.

Figure 2- Current Zone

As exhibited the draft LEP 2011 proposed to zone the Church land ***E3 Environmental Management***. The Strategic Review has determined that this zoning remains appropriate for the land and should form the basis of any future Planning Proposal as indicated in figure 3 below.

Figure 3 – Proposed Zoning



In arriving at its "best fit" zoning, the Strategic Review adopted a four step methodology a as to the environmental value / constraints of the land. This approach was undertaken on the basis of existing ownership parcels. The report outlines its four step approach as follows:

Step 1 involved undertaking a primary environmental constraint review to identify land that was significantly constrained.

Step 2 involved identifying sites that weren't significantly constrained by primary environmental constraints analysis but are isolated sites or sites that would have a significant cumulative impact if upzoned. These sites did not meet the criteria in the sieving process and were not considered for zoning other than E3 Environmental Management.

Step 3 involved identifying individual important environmental layers in a secondary environmental sieve to eliminate additional sites that were significantly affected by an important environmental consideration.

Step 4 examined the remaining sites on a site by site basis in order to identify a best fit zone for each.

Section 3.6.1 of the report states in part:

The primary environmental constraints methodology used for this review is an updated version of the methodology developed for the Warringah Council (2007) Planning Report – Oxford Falls Valley Assessment of Rezoning/Development Proposals and which informed the 2009 PAC review of the four sites in Oxford Falls Valley.

The previous assessment tool was based on the best available data at the time. Since this time, Council has undertaken a number of additional studies and data collection assessments including updated vegetation and biodiversity mapping and mapping of the Flood Planning Level for LEP development.

Eight primary constraints were considered including the following constraints:

- ***riparian;***
- ***significant vegetation;***
- ***wetland buffers;***
- ***slope;***

- ***designated wildlife corridor or core habitat;***
- ***flooding;***
- ***acid sulphate soils; and***
- ***threatened species habitat.***

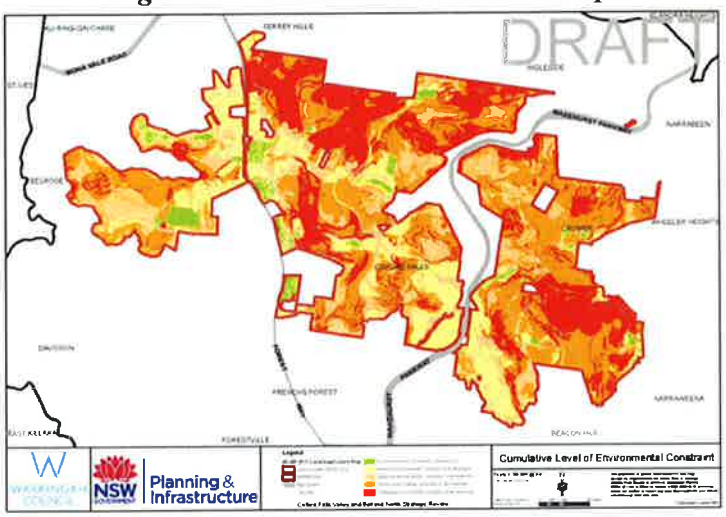
The report then clarifies that:

Once a weighted score was determined for individual environmental constraints, a cumulative level of environmental constraint was then determined and categorised as either:

- ***prohibitive;***
- ***severe;***
- ***significant;***
- ***moderate; or***
- ***no significant environmental constraint.***

The cumulative environmental constraint levels were then applied a numeric value as indicated in table 2 of the report, leading to the mapping of the area as shown in ***figure 4 below.***

Figure 4 – Cumulative Constraints Map



As a result of the assessment the Church's land has been categorized as ***Severe environmental constraints to development.***

The Church Land is largely cleared, disturbed and immediately adjoins existing residential land in Lady Penrhyn Drive. In this regard, while we support the methodology adopted from the point of view of considering environmental constraints, the application of specific locational constraints to a whole parcel, regardless of where the constraint is evident, is considered to be inappropriate.

This position is taken in consideration of the varied levels of environmental constraint that may be evident in differing parts of a large site that is simply in a single ownership. In the context of the Church Land, it is our view that the overall site does not have uniform constraints. The northern portion of the Church Land is clearly sensitive in relation to some of the identified constraints, however the southern portion does not necessarily experience those constraints.

It is suggested that if the land were assessed in sections, a varied constraints outcome would be arrived at, with substantially less restrictions in the southern portion. The land is already subdivided and incorporates a number of Crown roads. These roads while not formed in hard-stand materials, are in place, are trafficable and regularly used. The roads also provide reasonable boundaries to various sections of the site

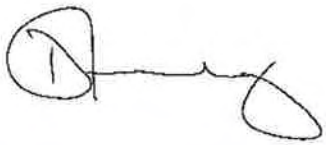
If the methodology were applied as suggested above, it is the Church's view that portions of the land subject to the review may be capable of being zoned in an alternate manner, with some form of urban redevelopment possible, such as under an ***R2 Low Density Residential*** zoning. This is particularly the case for that part of the Church Land adjacent and nearby to Lady Penrhyn Drive

In view of the above, it is recommended that a more appropriate application of the methodology be applied to the Church Land, based on the actual physical characteristics of it now, rather than as a single entity based on land ownership. In my view this would lead to a conclusion that the northern part of the Church's land may potentially remain zoned ***E3 Environmental Management*** and the southern part ***R2 Low Density Residential*** under the LEP 2011.

My client and I remain happy to continue our on going dialogue with both the Department and Council as part of this strategic planning exercise and thank you for your time in this matter.

Please do not hesitate to contact me should you have any enquiries with regard to this submission and I look forward to furthering the resolution of this matter.

Yours Sincerely



David Furlong BTP, MPIA

Director

CC – Michael Moore – Financial Controller Archdiocese of Sydney

Submission Number: 15

Dorothy Price, Belrose

The proposed development at the end of Ralston and Wyatt avenues Belrose in its current form is undesirable on two major points.

1. At present the paths or extensions of the two roads are used for passive recreation by many walkers, cyclists and horse riders. Has information been collected on these users? If the development goes ahead access too many of the bushland paths will be blocked.

2. The planned location of residential houses on the northern edge of the site exposes them to a major bushfire threat from the fire prone north east in the valleys below. How much will the residents have to pay in additional fire insurance? Have you checked the fire history as I believe 2 severe fires have burnt this site in the last 30 or 40 years? The planning design unlike that at Oxford Falls Frenchs Forest Corymbia Circuit does not even have an outer ring road from which fire appliances could work.

3. The number of houses proposed for the Belrose North/ Ralston Avenue site is too great suggesting a greedy over reach by the developers. Ideally the number should be closer to 40 residential lots rather 180.

Thank you Dorothy Price

Submission Number: 16

Confidential

I am entirely opposed to development of Red Hill and Oxford Falls.

The geology, history of the Aboriginals, flora and fauna are all exceptional and we ought to be protecting them.

The reason we choose to live on the Northern Beaches is because we have the bush close to the ocean, take away the bush and we will end up being like Bondi. Devoid of bush and just buildings.

You can't take the bush back. You can't save the animals buy decimating bush and putting people in.

We have wallabies, echidnas, bush turkeys, fairy wrens on our property to name just a few - not one magpie or introduced bird.

The vision for the future should be to protect bushland from development so that the children of future generations have places to go to exercise and be in touch with nature. It needs to be SAVED.

Submission Number: 17

NSW GOVERNMENT Department of Primary Industries

Our Ref: C13/16

Your Ref: Draft Oxford Falls Valley & Belrose North Strategic Review Report

16 July 2013

Juliet Grant
Regional Director, Sydney Region East
Department of Planning & Infrastructure
c/o: http://www.planning.nsw.gov.au/planning-reviews-and-panels online submission

Dear Juliet,

Public Exhibition of the Draft Oxford Falls Valley & Belrose North Strategic Review Report

Thank you for your notification of 17 June (INW13/21059) seeking comment on the draft Strategic Review report from Fisheries NSW, a division of NSW Department of Primary Industries.

Fisheries NSW is responsible for ensuring that fish stocks are conserved and that there is no net loss of key fish habitats upon which they depend. To achieve this, Fisheries NSW ensures that developments comply with the requirements of the *Fisheries Management Act 1994* (namely the aquatic habitat protection and threatened species conservation provisions in Parts 7 and 7A of the Act, respectively), and the associated *Policy and Guidelines for Fish Habitat Conservation and Management (2013)*. Fisheries NSW is also responsible for ensuring the sustainable management of commercial, recreational and Aboriginal cultural fishing, aquaculture, marine parks and aquatic reserves within NSW.

Fisheries NSW has reviewed the draft report in light of those provisions and policies and existing zoning in the Warringah Local Environmental Plan 2011 (LEP). Fisheries NSW concurs with the proposal to zone the majority of the area, including the numerous first and second order waterways, as E3 Environmental Management.

Appendix 7 refers to threatened species listed under the NSW *Threatened Species Conservation Act 1995* and/or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, but does not refer to similar provisions and listings in the FM Act. Fisheries NSW is pleased to advise DP&I and Warringah Council that the study area does not contain any threatened species currently listed in Schedules 4 (Endangered species, populations and ecological communities), 4A (Critically endangered species and ecological communities) or 5 (Vulnerable species and ecological communities) of the FM Act. However, subsequent stages in the LEP amendment process should reassess the situation and make specific references to the FM Act. Additionally, Schedule 6 lists key threatening processes that should also be used to inform future zoning of waterways and riparian lands in the study area.

If you require any further information, please do not hesitate to contact me on 8437 4986.

Yours sincerely,

M. Green.

MARCEL GREEN
Senior Environmental Assessments Officer
Aquatic Habitat Protection (Central)
Fisheries NSW

Fisheries NSW
Locked Bag 1, Nelson Bay NSW 2315
Email: ahp.central@dpi.nsw.gov.au
ABN 72 189 919 072

Submission Number: 18

Ralph Bennett, Queenscliff

All planning frameworks including Oxford Falls must reflect the need to stabilise population growth.

More people, more pollution means the loss of precious habitat remnants.

Our species is out of control. Death by a million small cuts.

Witness the stupidity of the new hospital site.

Best,

Ralph Bennett

Submission Number: 19

John Chadwick, Oxford Falls

I don't agree on council's interpretation of E3 our land is cleared, we use to grow flowers, bulbs still flower but are not picked & should our circumstances change we would re instigate the land to commercial use as a Market Garden. Our land abuts C3 church & St Pius ovals & school annex. At the back of the block is oxford heights housing estate. We would like council to address the lot sizes as previously the reasons for IDO 51 does not still apply

Please leave the zoning as Rural.

Submission Number: 20

PCU046739

Sydney WATER

23 July 2013

Juliet Grant
Regional Director Sydney Region East
Department of Planning and Infrastructure
GPO Box 39
Sydney NSW 2001

Re: Draft Oxford Falls Valley & Belrose North Strategic Review Report

Dear Ms Grant,

Thank you for the Department's letter dated 17 June 2013 requesting comment on the Draft Oxford Falls Valley & Belrose North Strategic Review Report. Sydney Water has reviewed the plan and provides the following comments.

Sydney Water's preferred zone for its critical water, wastewater and stormwater assets is SP2 Infrastructure. We understand that under the *State Environmental Planning Policy (infrastructure) 2007,* operating and maintenance activities for water, wastewater and stormwater management can be carried out in any land zoning. However, we do not want to create a situation where the development expectations of current and future land owners are unrealistically high because of inappropriate zoning. We believe that the SP2 zone will ensure that the existing dominant function of the land and Sydney Water's assets are protected.

Sydney Water suggests that the surrounding land use be adopted for some parcels of land that form part of the Belrose Reservoir site. This land neighbours an aged care retirement facility and, subject to meeting conditions, should be considered for a zoning that allows aged care or large lot rural residential

In general, Sydney Water will apply the preferred zones to its assets as outlined in the table below. We have reviewed our properties in the Review Report and our preferred zonings for each lot are outlined in Attachment 1.

Sydney Water Asset	Preferred zoning under Standard LEP
Wastewater Treatment Plant	SP2- Infrastructure (Sewerage System)
Water Filtration Plant	SP2- Infrastructure (Water Supply)
Wastewater Pumping Station	Adopt surrounding land zoning
Reservoir	SP2- Infrastructure (Water Supply)
Water Pumping Station	Adopt surrounding land zoning
Depot	SP2- Infrastructure (Sydney Water Maintenance Depot)
Office	B3 Commercial Core
Major Stormwater Canal	SP2- Infrastructure (Stormwater Management System)
Major Trunk Mains	SP2- Infrastructure (Sewerage System / Water Supply)

If you require any further information, please contact Jordan Faeghi of the Urban Growth Branch on 02 8849 4649 or e-mail jordan.faeghi@sydneywater.com.au.

Yours sincerely,

Adrian Miller
Manager, Growth Strategy

FACILITY TYPE	SITE			ADDRESS		SYDNEY WATER DESCRIPTION	PROPOSED ZONING FOR REPORT	PROPOSED ZONING FOR LEP
WATER PUMPING STATION	Lot 1	DP	536909	WYATT AVE	BELROSE	WPS 149	E3	Adopt surrounding land zoning
	Lot 1	DP	527659	FOREST WAY	BELROSE	BELROSE WT0070 WP0089	E3	Adopt surrounding land zoning
WASTEWATER PUMPING STATION	Lot 1	DP	808682	WEARDEN RD	OXFORD FALLS	SP0584	E3	Adopt surrounding land zoning
	Lot 1	DP	774348	BARNES RD	FRENCHS FOREST	SP0615	E3	Adopt surrounding land zoning
	Lot 1	DP	1010366	MORGAN RD	BELROSE	SP0941	E3	Adopt surrounding land zoning
	Lot 1	DP	1010367	MORGAN RD	BELROSE	SP0999	E3	Adopt surrounding land zoning
	Lot 911	DP	1031528	JERSEY PL	CROMER	SP1080	E3	Adopt surrounding land zoning
RESERVIOR	Lot 2	DP	700298	FOREST WAY	BELROSE	BELROSE RESERVOIRS	E3	Adopt surrounding land use

FACILITY TYPE	SITE			ADDRESS		SYDNEY WATER DESCRIPTION	PROPOSED ZONING FOR REPORT	PROPOSED ZONING FOR LEP
						WS0155 (PT)& WSO DEPOT		
	Lot 2034	DP	752038	FOREST WAY	BELROSE	BELROSE RESERVOIR R281, R282 (PT)	E3	Adopt surrounding land use
	Lot 1	DP	867540	FOREST WAY	BELROSE	BELROSE RESERVOIR R155 (PT)	E3	SP2-Infrastructure (Water Supply)
	Lot 11	DP	807907	FOREST WAY	BELROSE	BELROSE RESERVOIR R155 (PT)	E3	Adopt surrounding land use
RESERVIOR	Lot 7	DP	700298	FOREST WAY	BELROSE	BELROSE RESERVOIR R282 (PT)	E3	Adopt surrounding land use
	Lot 5	DP	700298	FOREST WAY	BELROSE	BELROSE RESERVOIRS R282, & WSO DEPOT (PT)	E3	SP2-Infrastructure (Water Supply)
	Lot 3	DP	700298	FOREST WAY	BELROSE	BELROSE RESERVOIRS R282, & WSO DEPOT (PT)	E3	Adopt surrounding land use
DEPOT	Lot PT 2	DP	87700	FOREST WAY	BELROSE	BELROSE RESERVOIR R155 (PT)	E3	SP2-Infrastructure (Sydney Water Maintenance Depot)

Submission Number: 21

Stefan Williams, Oxford Falls

I am writing in relation to my property in Spicer Rd, Oxford Falls which has been earmarked for rezoning to E3 in the draft report. I would like to object to the rezoning of my land on a number of grounds:-

1/ The Site Analysis conducted at my property on 11th December 2012 incorrectly states the amount of clearing and also wrongly classifies by property as purely residential. My land is more than 75% cleared and I have a herd of Alpaccas and other animals as well as an orchard. Our block is clearly being used for rural not just residential means. I enclose a copy of the site report.

2/ The E3 classification clearly states that it is not appropriate for cleared lands. Given our lands are at least 75% cleared already we feel the rezoning is completely inappropriate

3/ Although our current animals are owned by my wife and myself, we have intention of offering agistment of horses in the future. This activity is currently permissible under our current zoning, but will no longer be applicable under E3, which is reducing the usefulness and utility of our land.

4/ We have plans to put in bee hives on our land, which is an agricultural activity I understand will also not be permissible under E3, but that is now permissible.

5/ Our block, according to your environmental analysis maps, are classed as being 'moderate'. Properties on the west of Forest Way have classifications of 'moderate' to 'Severe' - yet these properties have received RU5 and R5 classifications instead of E3. How does a more environmentally constrained property escape E3 when we don't. It is neither fair nor does it make any sense. If they are able to be zoned RU4 and R5 then so should we.

6/ The primary and secondary constraints analysis undertaken in production of your draft report included several of the same parameters in each of the maps (primary and secondary), and did not use the same basis of evaluation as past analysis. Clearly these things were done to ensure an outcome that would see our property able to be put in an E3 recommendation.

We feel strongly that we have been mis-classified in the draft report and that any rezoning of our land will substantially impact the value of our land. We have no objection to E3 on the uncleared lands that constitute the bulk of the area in the study - but think our own re-zoning is based on an incorrect site analysis as well as questionable methodology.

Sincerely - Stefan Williams

NSW GOVERNMENT Planning & Infrastructure

Warringah Council

OXFORD FALLS VALLEY & BELROSE NORTH STRATEGIC REVIEW
SITE ANALYSIS

Date: 11 Dec 2012 **Precinct:** D **SITE ID:** 9

Property Address: [redacted] **Lot/DP:** [redacted]

Inspection Officers: [redacted] **Contact:**

Owner's consent to access land: ☐ Yes ☐ No **Owner(s) present** ☐ Yes ☒ No

Left calling card? ☒ Yes ☐ No

DESKTOP ANALYSIS	Verified on site (Y/N)
Owner ☒ Private ☐ Commissioner for Roads ☐ Minister for Education ☐ Minister Administering the Sporting Venues Management Act ☐ State Planning Authority ☐ Crown Land ☐ Warringah Council ☐ Metropolitan LALC ☐ Ausgrid ☐ Optus ☐ Sydney Water Corporation ☐ Telstra ☐ NSW Electricity Transmission Authority	
Adjoins an urban area ☐ Yes ☒ No **Adjoins bushland** ☒ Yes ☐ No	
Vegetation ☐ Bushland ☒ cleared paddocks Percentage cleared (60 %) ☐ Other _____	
Proximity to a telecommunications facility ☐ < 500m ☒ 500-1,000m ☐ 1,000-1,500m ☐ 1,500-2000m ☐ >2,000m	
Environmental Constraints ☐ No env. Constraints (__%) ☒ Moderate (90%) ☒ Significant (10 %) ☐ Severe (__%) ☐ Prohibitive (__%) ☐ Bushfire ☐ Heritage	

SITE VISIT ANALYSIS	
Building on site ☒ Yes ☐ No ☐ Unable to determine	
Type of buildings on site (if applicable) ☒ Dwelling (Seniors, attached, detached) ☐ Domestic outbuildings ☐ Agricultural ☐ Commercial ☐ Utilities e.g. sub station, satellite dishes ☐ Storage ☐ Educational ☐ Other _____	
Use of site ☒ Residential ☐ Rural ☐ Commercial ☐ Educational ☐ Industrial ☐ Infrastructure ☐ Retail ☐ Mixed ☐ Other _____	
Additional comments/ observations Cleared site a bit for construction of house.	

Submission Number: 22

Transport Roads & Maritime Services

25 July 2013

SYD13/00708 (A4766630)
Your Reference: N/A

The Director
Metropolitan and Regional Projects East
Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attention: Juliet Grant

DRAFT OXFORD FALLS VALLEY & BELROSE NORTH STRATEGIC REVIEW REPORT

Dear Sir/Madam,

I refer to your letter dated 17 June 2013 with regards to the abovementioned proposal, which was referred to the Roads and Maritime Services for comment.

RMS has reviewed the draft Oxford Falls Valley & Belrose North strategic review report and supports the proposed rezoning of lot 9 in DP 737253 and lot 48 in DP 221112 to R2.

Any inquiries can be directed to Jana Jegathesan by telephone on 8849 2313.

Yours sincerely

Pahee Sellathurai
Senior Land Use Planner
Land Use Planning and Assessment

Roads & Maritime Services

Level 11, 27-31 Argyle Street, Parramatta NSW 2150 | PO Box 973 Parramatta CBD NSW 2150 DX28555 Parramatta
T 02 8849 2490 | **F** 02 8849 2918 | **E** development.sydney@rms.nsw.gov.au **www.rms.nsw.gov.au | 13 22 13**

Submission Number: 23

Catherine Meek, Belrose

Information provided previously and also discussion with council have led me to understand that no lots would be split during the classification process.

The property I am raising this submission about is a residential home and has a small wooded area at the rear of the property that has been incorrectly classified as zoning E3 according to the Primary Environmental Constraint Analysis (Map 5) - It would be like saying your back yard is classified differently to your front yard!

Since this area is part of our property (and enclosed via fencing) it should be zoned the same as the rest of our property (Yellow) - Moderate Environmental Constraints.

Additionally, across the entire strategic review area - there is a restriction imposed of one residence per 20 ha. This ruling seems to have been imposed a long time ago when such restrictions could be useful in controlling over-development, and impacts on environment. This seems to be out of date with today's land usage (and ownership) as well as council commissioned studies of water catchment in the area. This residential dwelling restriction is out dated and should be revised as well - in light of the recommendations of reports already commissioned and paid for by council.

Submission Number: 24

Grant Fenn, Oxford Falls

Dear Minister Hazzard

Thank you in advance for taking the time to read this email. I am a land owner at 1041 Oxford Falls Road (West) and my property is about to be re-zoned as E3. I am understandably upset about the rezoning as it will place significant restrictions on my use of the property and will reduce its resale value.

I will not be compensated by Warringah Council and I consider this an attack on my property rights. My property has been used for commercial and rural purposes for decades. There are plenty of uncleared areas in Oxford Falls that could be zoned E3 with little if any objection but privately owned cleared properties should not be zoned E3. As you know, process is often used to justify poor outcomes and this is the situation here. We need you to stand up for the Oxford Falls property owners on this issue. We didn't vote for the Liberal Party to have our property rights taken from us under the guise of LEP harmonisation.

The precedent for you to intervene has been set. In September 2012 you stepped in to stop the E3 zoning of rural land on the Far North Coast. Minister for the North Coast Don Page said "There are very strong concerns that these restrictive controls could reduce the value of existing properties. The NSW Government will act to ensure the rights of existing landowners are protected." You said "this Government is not going to stop farmers and other existing landowners from carrying on their business through overly restrictive environmental zones."

I appreciate your interventions on this matter to date but the land owners need your help now. We are being run over by Warringah Council who simply rely on the process as justification. I can be contacted on 0407062749.

Thank you for your time.

Regards

Grant Fenn

Submission Number: 25

Ian Woolcott, Belrose

Submission to the Oxford Falls Valley & Belrose North Strategic Review in Regard to the Property at 217 Forest Way Belrose

31st July 2013

1. General Description of the Property

1.1 Internal Characteristics

The land is approximately 80% cleared with a residence and out buildings including a tennis court. There is a small degree of 'home farming' in place with chickens, fruit trees and several large vegetable gardens.

Approximately 10% of the land, at the north western part of the block, is planted with a wide range of Australian native rainforest trees. A small number of these are local but the majority are sub-tropical species.

5% of the block consists of remnant native vegetation, located in the south eastern corner.

The remaining 5%, along the eastern boundary, is totally infested with lantana and crofton weed, with very little remaining native vegetation.

1.2 Surrounding Land

The block is bounded on the west by Forest Way, with a nursery and rugby field opposite; on the north by a small parcel of crown land with badly degraded native vegetation on it; on the east by a gravel road leading to a residential property; and on the south by a fully cleared block used for residential and horse agistment purposes.

2. Application of the Zoning Evaluation Process

2.1 Step 1

At step 1 the vast majority of the block was determined to have no significant constraint. Small patches at the eastern boundary were found to have moderate environmental constraint, but this would seem to be based on outdated information, since, as mentioned, most of this land has no native vegetation at all.

2.2 Step 2

The site was not identified as isolated or likely to have a significant cumulative effect.

2.3 Step 3

As a result of the secondary environmental assessment, the block was classified as Category 'A', low restriction.

2.4 Step 4

When considered on a site by site basis, for some reason the block was determined as appropriate for the E3 zoning. No specific reasons are provided for this recommendation.

3. E3 Determination

3.1 The E3 Zoning Intention

The draft strategic review document summarises the application of the E3 zoning as to "be applied to land that has special ecological, scientific, cultural or aesthetic attributes, or land highly constrained by geotechnical or other hazards. This zone might also be suitable as a transition between areas of high conservation value and other more intensive land uses."

The application of E3 is further clarified by the NSW Dept of Planning practice note PN 09-002, which states:

a) "…the zone is generally not intended for cleared land."

b) "… (it may be applicable) as a transition between high conservation value land, e.g. land zoned E1 or E2 and other land such as that zoned rural or residential."

3.2 Draft Review Determination

The block was not determined to have special ecological, scientific, cultural or aesthetic attributes as a result of Steps 1 to 3 in the review process. In fact by the stage of Step 3 it had been given the lowest restriction classification. Presumably environmental value was therefore not the basis for the E3 recommendation.

It would appear that the only logical basis for the E3 recommendation was therefore that the land should act as a transition between areas of high conservation value and other more intensive land uses.

4. Submission

4.1 The "Transition" Proposition

In my view it is difficult to see how land zoned E3 could be a transition from land zoned E3. The Dept of Planning practice note correctly suggests that an E3 transition zone would exist as an area between E1 or E2 land and land of more intensive zoning. In other words, the concept of a 'transition' is that of an area with a distinct differentiation from the zonings on either side of the subject property.

The proposition that this block would be a 'transition' from the E3 zone appears to be nothing more than a simple extension of the E3 zoning area.

4.2 Request

I respectfully request that a reassessment be made of the recommendation for 217 Forest Way Belrose to be zoned E3. I believe that a more appropriate zoning for this block would be either R5 Large Lot Residential, or RU4 Primary Production Small Lots.

My thinking in making this request is as follows:

a) The block consists of substantially cleared land, for which E3 is not intended.

b) It has been determined to be of low environmental value.

c) The concept of this block as a 'transition' appears illogical.

d) There is a natural road barrier to the east of the block which would represent an ideal basis for the commencement of the E3 zoning area.

e) The intention of the R5 zone to "cater for development that provides for residential housing in a rural setting, generally located at the interface of environmentally sensitive land along one boundary and urban land along the other" seems to describe the block almost exactly.

f) If there is a concern that R5 could in the future be too flexible in terms of the possibility of seniors housing, then an RU4 zoning may be considered to be more appropriate.

Ian Woolcott
Property Owner.

Submission Number: 26

Confidential

Dear Officer,

My name is [redacted], the owner of [redacted]. Please refer to my submission below:

Matrixes were used to assess the strategic review to determine LEP2009 is different from matrixes used to determine LEP2011. In the favour of the government and local Council, much more environmental factors were involved in determining LEP2011. We want the same matrixes to be used in LEP2009 for LEP2011 for fairness.

There are R2 residential zones in four directions near my land. The area where my land is in, used to be approved as R2 zoning under Warringah Council LEP 2000, which obviously imposes no significant environmental value on my land.

The current zoning under LEP 2000 is B2, which is a rural zoning and seniors housing is permitted. E3 zoning proposed in LEP 2011 restricts most agriculture activities and even senior housing is not permitted. This would just isolate the area further. We want additional use to permit agriculture and senior living for rural setting. Even on the site analysis report done by Warringah Council on 12/12/12 says rural so why environmental not rural zone?!

My neighbour [redacted] was approved as retirement village. Just next to my property in east direction. There are 2 lots with a very large sized retirement village in [redacted] across the road of my property in north direction. Telecommunication facility and all services are available in three directions, closest one is just across the road so why the site analysis said it is '>2,000m'? I can only think of Council trying to push my area to E3 and try to report with things that is not true, to convince the government to isolate the area and control development totally in favour of Council's own interests of receiving much less complaints and development applications.

There are no dangerous or threaten species on my land. The vegetation in the area is not particularly in good preservation values from various applications and reports that have been undertaken. This is also contradictory to the site analysis report done by Warringah Council on 12/12/12. The Department of Planningâ™s Practice Notes (PN 09-002) states that the E3 zone is for land where â˜there are special ecological, scientific, cultural or aesthetic attributes or environmental hazards/processes that require careful consideration/management and for uses compatible with these values™. Given the current physical characteristics of my property and surrounding lands the appropriateness of applying an E3 zoning to my land is just not justified.

Many of the public ownership land should be considered more suitable for an E3 or another environmental management zoning, not the privately owned land.

Infrastructures are also available across the road from the retirement village. There is no further development funding or managements needed from the government for my area and the land has got much potential for development.

Public transport is very convenient at my property. There is a bus stop at the door to Chatswood, Many and Dee Why etc. Main road Willandra Road leads to various directions and places.

Beacon Hill is a rural residential suburb which is closest to Sydney CBD. It is only less than 15 kilometres away from Sydney CBD.

Narraweena is also next to Brookvale and Dee Why major centre. Within 1 â" 2 kilometres of radius, there is major shopping centre Warringah Mall and Dee Why commercial, industrial and transportation centre, which are all existing employment areas. All the community facilities such as

swimming pool, sports centre, parks, hospitals, schools and universities are in the radius. Beacon Hill shops are also less than 1 km away.

Council has not preceded any protection and restoration plans to look after the vegetation in my area after Council changed my area to proposed E3 zoning. Thus our area does not fit in E3 definition because the primary purpose of changing my area to E3 is not for vegetation rehabilitation and restoration purposes.

In North Coast LEP, Minister Hazzard said â˜the government would not endorse the use of E2 and E3 environmental zones on the land that is clearly rural in council local environment plans on the Far North Coast™. My land is the closest rural area to Sydney CBD and if Far North Coast can stay as Rural zone, there is no reason for my area to be changed to environmental zoning.

We want Council to give us minimum lot size for our area as this has never been determined.

I also support the idea of future higher order development of the subject lands is considered to represent a logical and orderly extension to an existing urban area (north of Frenchs Forest East/Beacon Hill) thereby avoiding the financial and social inefficiencies often associated with the creation of isolated communities and/or fragmented residential development fronts.

DOP still proposes the zoning in my area to be an environmental zone however they have not taken into consideration with my land's current situation. There are illegal dumping and rubbishes everywhere on my land just because it is vacant and how could this be environmental??? Shame on government as my land has simply become a rubbish-dumping place which does no good but harm to everyone and government just want to use environment protection as an excuse to totally ban any developments on private land. There are a lot land owners like me who are not willing to contribute towards maintenance or long term investment in the area. This has been making huge adverse impact on local Council and government however they have not realised our area has always been moving backward not moving forward.

Kind Regards,

[redacted]

NSW GOVERNMENT Planning & Infrastructure

Warringah Council

OXFORD FALLS VALLEY & BELROSE NORTH STRATEGIC REVIEW
SITE ANALYSIS

Date: 12 Dec 2012 **Precinct:** F **SITE ID:** 20 'A'

Property Address: POR [redacted] **Lot/DP:**

Inspection Officers: [redacted] **Contact:**

Owner's consent to access land: ☐ Yes ☐ No **Owner(s) present** ☐ Yes ☒ No

Left calling card? ☐ Yes ☐ No

DESKTOP ANALYSIS	Verified on site (Y/N)
Owner ☒ Private ☐ Commissioner for Roads ☐ Minister for Education ☐ Minister Administering the Sporting Venues Management Act ☐ State Planning Authority ☐ Crown Land ☐ Warringah Council ☐ Metropolitan LALC ☐ Ausgrid ☐ Optus ☐ Sydney Water Corporation ☐ Telstra ☐ NSW Electricity Transmission Authority	
Adjoins an urban area ☐ Yes ☒ No **Adjoins bushland** ☒ Yes ☐ No	
Vegetation ☒ Bushland ☐ cleared paddocks Percentage cleared (____%) ☐ Other_____	
Proximity to a telecommunications facility ☐ < 500m ☐ 500-1,000m ☐ 1,000-1,500m ☐ 1,500-2000m ☒ >2,000m	
Environmental Constraints ☐ No env. Constraints (__%) ☐ Moderate (__%) ☐ Significant (__%) ☒ Severe (60%) ☒ Prohibitive (40%) ☐ Bushfire ☐ Heritage	

SITE VISIT ANALYSIS
Building on site ☐ Yes ☒ No ☐ Unable to determine
Type of buildings on site (if applicable) ☐ Dwelling (Seniors, attached, detached) ☐ Domestic outbuildings ☐ Agricultural ☐ Commercial ☐ Utilities e.g. sub station, satellite dishes ☐ Storage ☐ Educational ☐ Other _____
Use of site ☐ Residential ☒ Rural ☐ Commercial ☐ Educational ☐ Industrial ☐ Infrastructure ☐ Retail ☐ Mixed ☐ Other Bush Land
Additional comments/ observations

Submission Number: 27

Confidential

Dear Officer,

My name is [redacted], the owner of [redacted]. Please refer to my submission below:

Citation of E3 zone â ˜generally not intended for cleared lands including land used for intensive agriculture™. For my land the DA consent will be approved soon and vegetation on my land was cleared by previous owner however the site analysis done by Warringah Council on 12/12/12 did not indicate the percentage of my land clearance. Thus my land is also not applicable under DWLEP 2011.

Matrixes were used to assess the strategic review to determine LEP2009 is different from matrixes used to determine LEP2011. In the favour of the government and local Council, much more environmental factors were involved in determining LEP2011. We want the same matrixes to be used in LEP2009 for LEP2011 for fairness.

There are R2 residential zones in four directions near my land. The area where my land is in, used to be approved as R2 zoning under Warringah Council LEP 2000, which obviously imposes no significant environmental value on my land.

The current zoning under LEP 2000 is B2, which is a rural zoning and seniors housing is permitted. E3 zoning proposed in LEP 2011 restricts most agriculture activities and even senior housing is not permitted. This would just isolate the area further. We want additional use to permit agriculture and senior living for rural setting. Even on the site analysis report done by Warringah Council on 12/12/12 says rural so why environmental not rural zone?!

My neighbour [redacted] Narraweena was approved as retirement village. Just next to my property in east direction. There are 2 lots with a very large sized retirement village in [redacted] across the road of my property in north direction. Telecommunication facility and all services are available in three directions, closest one is just across the road so why the site analysis said it is '>2,000m'? I can only think of Council trying to push my area to E3 and try to report with things that is not true, to convince the government to isolate the area and control development totally in favour of Council's own interests of receiving much less complaints and development applications.

There are no dangerous or threaten species on my land. The vegetation in the area is not particularly in good preservation values from various applications and reports that have been undertaken. This is also contradictory to the site analysis report done by Warringah Council on 12/12/12. The Department of Planning™s Practice Notes (PN 09-002) states that the E3 zone is for land where â Þere are special ecological, scientific, cultural or aesthetic attributes or environmental hazards/processes that require careful consideration/management and for uses compatible with these values™. Given the current physical characteristics of my property and surrounding lands the appropriateness of applying an E3 zoning to my land is just not justified.

Many of the public ownership land should be considered more suitable for an E3 or another environmental management zoning, not the privately owned land.

Infrastructures are also available across the road from the retirement village. There is no further development funding or managements needed from the government for my area and the land has got much potential for development.

Public transport is very convenient at my property. There is a bus stop at the door to Chatswood, Many and Dee Why etc. Main road Willandra Road leads to various directions and places.

Beacon Hill is a rural residential suburb which is closest to Sydney CBD. It is only less than 15 kilometres away from Sydney CBD.

Narraweena is also next to Brookvale and Dee Why major centre. Within 1 â 2 kilometres of radius, there is major shopping centre Warringah Mall and Dee Why commercial, industrial and transportation centre, which are all existing employment areas. All the community facilities such as swimming pool, sports centre, parks, hospitals, schools and universities are in the radius. Beacon Hill shops are also less than 1 km away.

Council has not preceded any protection and restoration plans to look after the vegetation in my area after Council changed my area to proposed E3 zoning. Thus our area does not fit in E3 definition because the primary purpose of changing my area to E3 is not for vegetation rehabilitation and restoration purposes.

In North Coast LEP, Minister Hazzard said â The government would not endorse the use of E2 and E3 environmental zones on the land that is clearly rural in council local environment plans on the Far North Coast™. My land is the closest rural area to Sydney CBD and if Far North Coast can stay as Rural zone, there is no reason for my area to be changed to environmental zoning.

We want Council to give us minimum lot size for our area as this has never been determined.

I also support the idea of future higher order development of the subject lands is considered to represent a logical and orderly extension to an existing urban area (north of Frenchs Forest East/Beacon Hill) thereby avoiding the financial and social inefficiencies often associated with the creation of isolated communities and/or fragmented residential development fronts.

DOP still proposes the zoning in my area to be an environmental zone however they have not taken into consideration with my land's current situation. There are illegal dumping and rubbishes everywhere on my land just because it is vacant and how could this be environmental??? Shame on government as my land has simply become a rubbish-dumping place which does no good but harm to everyone and government just want to use environment protection as an excuse to totally ban any developments on private land. There are a lot land owners like me who are not willing to contribute towards maintenance or long term investment in the area. This has been making huge adverse impact on local Council and government however they have not realised our area has always been moving backward not moving forward.

Kind Regards,

[redacted]

NSW GOVERNMENT | Planning & Infrastructure

Warringah Council

OXFORD FALLS VALLEY & BELROSE NORTH STRATEGIC REVIEW
SITE ANALYSIS

Date: 12 Dec 2012 **Precinct:** F **SITE ID:** 20

Property Address: [redacted] **Lot/DP:**

Inspection Officers: [redacted] **Contact:**

Owner's consent to access land: ☐ Yes ☐ No **Owner(s) present** ☐ Yes ☐ No

Left calling card? ☐ Yes ☒ No

DESKTOP ANALYSIS	Verified on site (Y/N)
Owner ☒ Private ☐ Commissioner for Roads ☐ Minister for Education ☐ Minister Administering the Sporting Venues Management Act ☐ State Planning Authority ☐ Crown Land ☐ Warringah Council ☐ Metropolitan LALC ☐ Ausgrid ☐ Optus ☐ Sydney Water Corporation ☐ Telstra ☐ NSW Electricity Transmission Authority	
Adjoins an urban area ☐ Yes ☐ No **Adjoins bushland** ☒ Yes ☐ No	
Vegetation ☒ Bushland ☐ cleared paddocks Percentage cleared (____%) ☐ Other_____	
Proximity to a telecommunications facility ☐ < 500m ☐ 500-1,000m ☐ 1,000-1,500m ☐ 1,500-2000m ☒ >2,000m	
Environmental Constraints ☐ No env. Constraints (__%) ☐ Moderate (__%) ☒ Significant (15%) ☒ Severe (85%) ☒ Prohibitive (10%) ☐ Bushfire ☐ Heritage	

SITE VISIT ANALYSIS
Building on site ☐ Yes ☒ No ☐ Unable to determine
Type of buildings on site (if applicable) ☐ Dwelling (Seniors, attached, detached) ☐ Utilities e.g. sub station, satellite dishes ☐ Domestic outbuildings ☐ Storage ☐ Agricultural ☐ Educational ☐ Commercial ☐ Other _____
Use of site ☐ Residential ☒ Rural ☐ Commercial ☐ Educational ☐ Industrial ☐ Infrastructure ☐ Retail ☐ Mixed ☐ Other Bushland
Additional comments/ observations

Submission Number: 28

Confidential

Dear Officer,

My name is [redacted]. Please refer to my submission below:

Citation of E3 zone â ˜generally not intended for cleared lands including land used for intensive agriculture™. My land has got the construction certificate from the development application and has already started the work. Vegetation on my land have been cleared according to the consent however the site analysis done by Warringah Council on 12/12/12 did not indicate the percentage of my land clearance. Thus my land is also not applicable under DWLEP 2011.

Matrixes were used to assess the strategic review to determine LEP2009 is different from matrixes used to determine LEP2011. In the favour of the government and local Council, much more environmental factors were involved in determining LEP2011. We want the same matrixes to be used in LEP2009 for LEP2011 for fairness.

There are R2 residential zones in four directions near my land. The area where my land is in, used to be approved as R2 zoning under Warringah Council LEP 2000, which obviously imposes no significant environmental value on my land.

The current zoning under LEP 2000 is B2, which is a rural zoning and seniors housing is permitted. E3 zoning proposed in LEP 2011 restricts most agriculture activities and even senior housing is not permitted. This would just isolate the area further. We want additional use to permit agriculture and senior living for rural setting. Even on the site analysis report done by Warringah Council on 12/12/12 says rural so why environmental not rural zone?!

My neighbour [redacted] was approved as retirement village. Just next to my property in east direction. There are 2 lots with a very large sized retirement village in [redacted] across the road of my property in north direction. Telecommunication facility and all services are available in three directions, closest one is just across the road so why the site analysis said it is '>2,000m'? I can only think of Council trying to push my area to E3 and try to report with things that is not true, to convince the government to isolate the area and control development totally in favour of Council's own interests of receiving much less complaints and development applications.

There are no dangerous or threaten species on my land. The vegetation in the area is not particularly in good preservation values from various applications and reports that have been undertaken. This is also contradictory to the site analysis report done by Warringah Council on 12/12/12. The Department of Planning™s Practice Notes (PN 09-002) states that the E3 zone is for land where â˜there are special ecological, scientific, cultural or aesthetic attributes or environmental hazards/processes that require careful consideration/management and for uses compatible with these values™. Given the current physical characteristics of my property and surrounding lands the appropriateness of applying an E3 zoning to my land is just not justified.

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Council has not preceded any protection and restoration plans to look after the vegetation in my area after Council changed my area to proposed E3 zoning. Thus our area does not fit in E3 definition because the primary purpose of changing my area to E3 is not for vegetation rehabilitation and restoration purposes.

In North Coast LEP, Minister Hazzard said â The government would not endorse the use of E2 and E3 environmental zones on the land that is clearly rural in council local environment plans on the Far North Coast™. My land is the closest rural area to Sydney CBD and if Far North Coast can stay as Rural zone, there is no reason for my area to be changed to environmental zoning.

We want Council to give us minimum lot size for our area as this has never been determined.

I also support the idea of future higher order development of the subject lands is considered to represent a logical and orderly extension to an existing urban area (north of Frenchs Forest East/Beacon Hill) thereby avoiding the financial and social inefficiencies often associated with the creation of isolated communities and/or fragmented residential development fronts.

DOP still proposes the zoning in my area to be an environmental zone however they have not taken into consideration with my land's current situation. There are illegal dumping and rubbishes everywhere on my land just because it is vacant and how could this be environmental??? Shame on government as my land has simply become a rubbish-dumping place which does no good but harm to everyone and government just want to use environment protection as an excuse to totally ban any developments on private land. There are a lot land owners like me who are not willing to contribute towards maintenance or long term investment in the area. This has been making huge adverse impact on local Council and government however they have not realised our area has always been moving backward not moving forward.

Kind Regards,

[redacted]

NSW GOVERNMENT Planning & Infrastructure

Warringah Council

OXFORD FALLS VALLEY & BELROSE NORTH STRATEGIC REVIEW
SITE ANALYSIS

Date: 12 Dec 2012 **Precinct:** F **SITE ID:** 69

Property Address: [redacted] **Lot/DP:**

Inspection Officers: [redacted] **Contact:**

Owner's consent to access land: ☐ Yes ☐ No **Owner(s) present** ☐ Yes ☒ No

Left calling card? ☐ Yes ☒ No

DESKTOP ANALYSIS		Verified on site (Y/N)
Owner ☒ Private ☐ Commissioner for Roads ☐ Minister for Education ☐ Minister Administering the Sporting Venues Management Act ☐ State Planning Authority ☐ Crown Land	☐ Warringah Council ☐ Metropolitan LALC ☐ Ausgrid ☐ Optus ☐ Sydney Water Corporation ☐ Telstra ☐ NSW Electricity Transmission Authority	
Adjoins an urban area ☐ Yes ☐ No	**Adjoins bushland** ☒ Yes ☐ No	
Vegetation ☒ Bushland ☐ cleared paddocks Percentage cleared (____%) ☐ Other_____		
Proximity to a telecommunications facility ☐ < 500m ☐ 500-1,000m ☐ 1,000-1,500m ☐ 1,500-2000m ☒ >2,000m		
Environmental Constraints ☒ No env. Constraints (5%) ☒ Moderate (5%) ☒ Significant (5%) ☒ Severe (5%) ☒ Prohibitive (35%) ☐ Bushfire ☐ Heritage		

SITE VISIT ANALYSIS		
Building on site ☐ Yes ☒ No ☐ Unable to determine		
Type of buildings on site (if applicable) ☐ Dwelling (Seniors, attached, detached) ☐ Domestic outbuildings ☐ Agricultural ☐ Commercial	☐ Utilities e.g. sub station, satellite dishes ☐ Storage ☐ Educational ☐ Other _____	
Use of site ☐ Residential ☒ Rural ☐ Commercial ☐ Educational ☐ Industrial ☐ Infrastructure ☐ Retail ☐ Mixed ☐ Other Bushland		
Additional comments/ observations		

Submission Number: 29

INGHAM PLANNING Pty Limited

Our Ref: 12138

1 August 2013

Director General
Department of Planning and Infrastructure

By email

Dear Sir,

Re: Draft Oxford Falls Valley and Belrose North Strategic Review

We act on behalf of Oxford Falls Grammar School located at 1078 Oxford Falls Road, Oxford Falls. We have been requested to review the relevant documentation and provide planning advice. Our conclusion following this review is that the proposed zoning changes have an adverse impact on the school and are contrary to the relevant guidelines for rezoning. The reasons for this conclusion are outlined below.

Site

The subject property is known as 1078 Oxford Falls Road, Oxford Falls. It is described as Lot 1 DP 1046451 and has a total area of around 3.5Ha. It is located on the western side of Wakehurst Parkway and is also bound by Oxford Falls Road and Dreadnought Street (see **Figure 1 – Location and Figure 2 – Site**).

Source – Google maps

Figure 1 - Location

Urban and Regional Planning, Environmental Planning and Statutory Planning
Registered Office: Lyndhurst, Suite 19, 303 Pacific Highway, Lindfield N.S.W 2070
Telephone: (02) 9416 9111 Facsimile: (02) 9416 9799
email: admin@inghamplanning.com.au
A.C.N. 106 713 768

Source – Department of Lands

Figure 2 - Site

Background

The proposed zoning for the school in the Strategic Review is E3 Environmental Management. This is the zoning that is intended to apply to the majority of the area subject of the Review. However, the methodology of how the Review concludes that this is the appropriate zoning for the subject land appears flawed.

The first stage of determining the appropriate zone was Primary Constraints mapping. As indicated in **Figure 3** below, the site is nominated has having 'moderate' constraints (with the exception of the existing creek running through the site).

The only less constrained land is land having no constraints. All areas with a higher level of constraints were considered appropriate for an E3 zoning as this meant they were consistent with the objectives of this zone. The remaining less constrained lands were subject of further review. Land which were considered to be isolated or subject to secondary constraints were also nominated as being appropriate for an E3 zoning. Sites with existing Physical and Human Infrastructure (including Oxford Falls Grammar School), were the subject of more specific consideration. The matters that are noted as being part of this consideration were:

- Relevant planning legislation, studies, policies and guidelines;
- The broader strategic context;

- How and why other land was zoned to underpin LEP 2011;
- Consideration of key planning issues as outlined in Section 3.5 of this report;
- Existing information on environmental constraints and infrastructure provision on the subject and surrounding land;
- Whether the site adjoins an urban area and/or environmentally sensitive land;
- Verification of information via site visits and consideration of stakeholder submissions to date;
- The existing and desired future character of the area;
- Determination of best fit zoned and planning controls based on controls under LEP 2000.

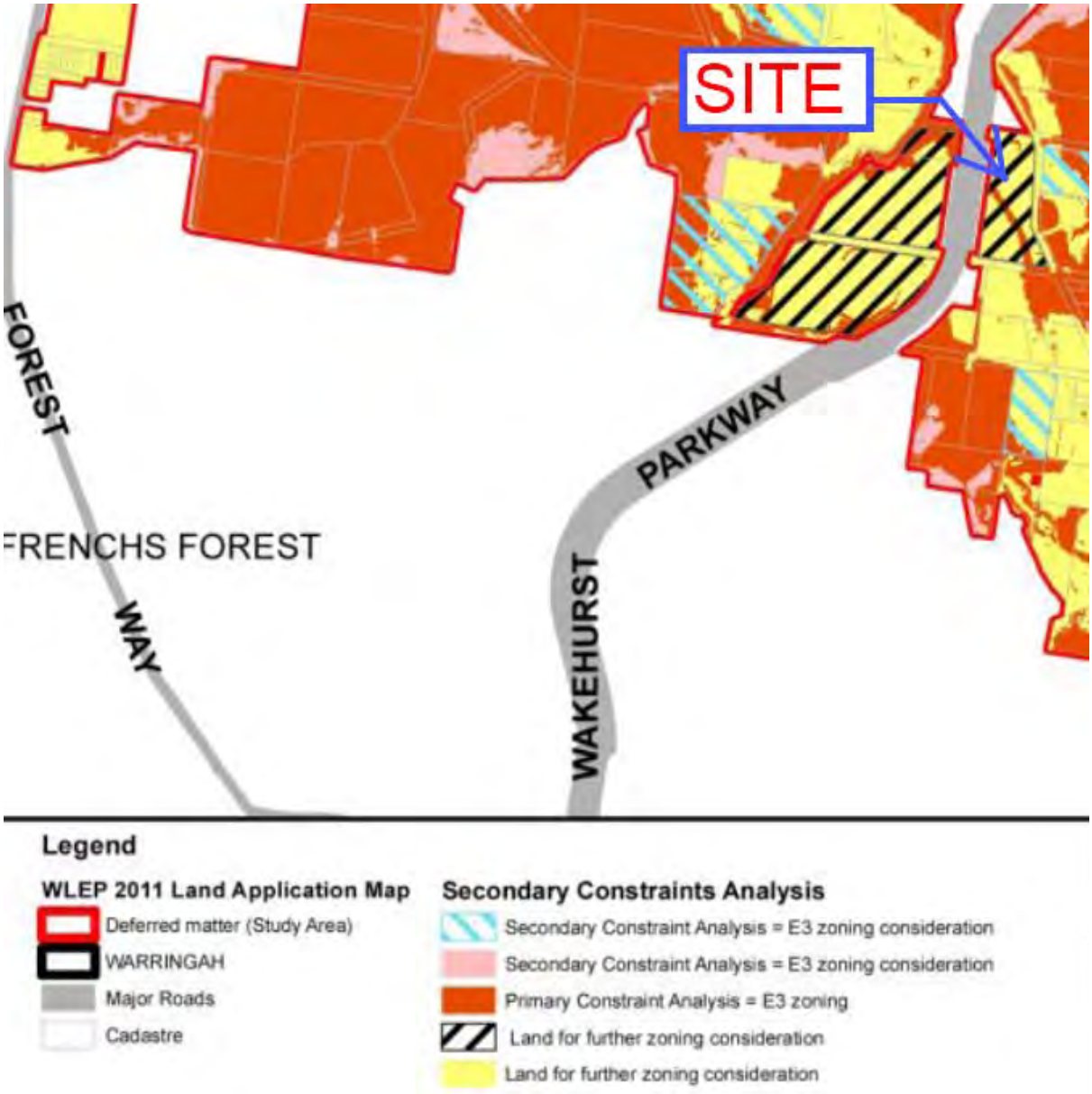

Figure 3 – Secondary Constraints Map
Oxford Falls Valley and Belrose North Strategic Review

However there is no detailed information about these matters in relation to specific sites and no explanation as to how it was concluded that the E3 zone was determined to be the most appropriate zone. The problem with educational establishments being prohibited in the E3 zone is simply dismissed by reference to the Infrastructure SEPP which permits such uses despite prohibition in an LEP (see discussion below). However, it is noted that the same approach was not undertaken in relation to existing telecommunications facilities which are also permissible under this SEPP but are recommended for an SP2 zoning. This is highly inconsistent.

The E3 Zone

The proposed E3 zoning is considered inappropriate for the subject land for the following reasons.

The objectives of the E3 zone are as follows:

"Zone E3 Environmental Management

1 Objectives of zone

- *To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.*
- *To provide for a limited range of development that does not have an adverse effect on those values.*
- *To ensure that development, by way of its character, design, location and materials of construction, is integrated into the site and natural surroundings, complements and enhances the natural environment and has minimal visual impact.*
- *To protect and enhance the natural landscape by conserving remnant bushland and rock outcrops and by encouraging the spread of an indigenous tree canopy.*
- *To protect and enhance visual quality by promoting dense bushland buffers adjacent to major traffic thoroughfares."*

Large scale development such as a school is likely to be incompatible with these objectives and as such, uses such as educational establishments are prohibited within this zone. In this circumstance, an educational establishment (were it not for SEPP Infrastructure) would be an 'existing use' which is subject to specific provisions of the Environmental Planning and Assessment Act 1979 ('the EP&A Act'). The overall intent of such a situation is that in the longer term the use of the land will conform with the zoning of the land (ie the existing use will cease). However in this case it is highly unlikely that the school use would cease and the land revert to a use consistent with the E3 zoning.

Another aspect to the consideration of the appropriateness of the E3 zoning is the existing character of the site. In this regard the land is cleared and it is unlikely that this would change. Therefore the existing character of the land is different from the majority of the land that is proposed to be zoned E3 and it has no '*special ecological, scientific, cultural or aesthetic value'.* This was acknowledged in the Strategic Review and for this reason, such land was not automatically designated E3.

Planning Circular 09-002 deals specifically with Environmental Protection Zones and in relation to the E3 zone states:

E3 Environmental Management
This zone is for land where there are special ecological, scientific, cultural or aesthetic attributes or environmental hazards/processes that require careful consideration/management and for uses compatible with these values.

As noted above, the subject site does not have these attributes and this is not likely to change. This is supported by the Strategic Review constraints mapping which indicates that the site generally has moderate constraints to development (the next level up from having no constraints). Circular 09-002 also says:

"Where the primary focus is not the conservation and/or management of environmental values, a different zone type should be applied."

This circumstance applies here, where the focus is not environmental but ensuring that an important piece of social infrastructure is maintained and supported.

SEPP Infrastructure

It is noted that as the proposed use is an educational establishment, regardless of the prohibition that would result from the E3 zoning, it would remain permissible under State Environmental Planning Policy (Infrastructure) 2007 ('SEPP Infrastructure'). This seems to be the only justification put forward in the Review as to why the E3 zone is appropriate. However this does not change the fundamental conflict between the existing use and the intended zoning of the land. Such an outcome is contrary with one of the main principles of the new 'Template LEP' process – that the zoning of the land should reflect its use and that there should not be any special provisions that permit the use. This is even more relevant given that the E3 zone is not a 'prescribed zone' for educational establishments in SEPP Infrastructure. The SEPP will only make the school a permissible use because it already exists. This is not dissimilar to treating the school as a 'existing use' and subjecting it to the typically restrictive assessment process that applies in such cases.

Special Purposes (SP) zoning

The Department of Planning and Infrastructure (DP&I) has specific guidelines for the zoning of infrastructure uses in LEP's – Practice Note P10-001. Principle 1 relates to the zoning for infrastructure that is permitted on all land, however this does not apply to educational establishments. Principle 2 relates to zoning for infrastructure that is permitted only in 'prescribed zones'. This is the case with educational establishments, however the proposed E3 zoning is not a 'prescribed zone' and there are no prescribed zones adjacent to the site. Principle 3 applies where certain special purpose zones should remain as special purpose zones. Whilst the existing zoning of the land is not special uses, this is primarily because Warringah LEP 2000 did not zone land. The previous zoning under Warringah LEP 1985 was either Special Uses or at least a zone where the use was permissible. In this circumstance, Principle 3.1 should apply – "*where the land use is unlikely to change, and where the use is not otherwise covered in this practice note, land may be zoned SP2 Infrastructure.*"

As there are no adjoining zones or any other zones which would be appropriate, it is considered that the most appropriate zoning of the land is SP2 Infrastructure. This acknowledges the existing and likely future use of the land, in a manner consistent with the principles for zoning under Template LEP's. Further, it is noted that there are a number of other school and other 'special uses' adjoining or adjacent to the site. One of these, the C3 Church, is proposed to be acknowledged as an 'additional use' and identified on the relevant LEP map. Again this is not the approach favoured by DP&I as the main objective is to zone land appropriately without the need for special provisions. A Special Use zoning would be more appropriate. Also, as noted above, other infrastructure (telecommunications facilities) which are also permissible under SEPP Infrastructure, are proposed to be zoned SP2. The same approach should be adopted for the subject site.

Traditionally non-urban areas in LGA's such as Warringah have accommodated uses which require large areas and are generally not feasible within urban zones. The existing school and church uses clustered in this location are reflective of this tradition. It is likely that this type of demand will continue into the future and as such land needs to be zoned to accommodate this need. Therefore the proposed prohibition of such uses is questioned and the 'greater good' provided by such uses to the wider community need to be balanced against the potential impacts in a particular area. If these uses are not going to be permitted in the E3 zone, an appropriate compromise may be to zone an area focussed on the existing cluster of 'special uses' to allow for their expansion and for new uses to be established. As noted above, the appropriate zoning is one or more 'SP' zones.

Other alternatives

It is noted that the Strategic Review indicates that under LEP 2011 all schools in non-urban areas have been zoned either RU4 Primary Production Small Lots or E3. It is noted that RU4 is a 'prescribed zone' under SEPP Infrastructure so if the above request for an SP2 zoning is not adopted, an RU4 zoning would be more appropriate than E3, as at least the SEPP acknowledges that a school should be treated as a permissible use within this zone.

Conclusion

It is considered that the methodology for determining that the zoning of the Oxford Falls Grammar School land as E3 is flawed and no specific justification has been provided. The fact that a school use will remain permissible under SEPP Infrastructure is not adequate justification, particularly when this is also the case with telecommunications facilities, yet they are intended to be zoned SP2.

The process is meant to have been a Strategic Review, however there has been no discussion of the traditional use of non-urban land by 'special uses' nor how the demand for continued or additional services will be met if such uses are prohibited.

The ability to continue and to expand the existing school use needs to protected and part of this process needs to be an appropriate zoning that supports this function, which is the primary planning consideration on this site. The Strategic Review notes that the site is generally free of environmental constraints and that the presence of existing physical and social infrastructure means it is different from other land. However, this has not been supported by zoning the land appropriately. Reliance on SEPP Infrastructure is not considered adequate as even under these provisions, the use is effectively an 'existing use'. This is not adequately supportive of a land use that is essential social infrastructure.

In our view an SP2 zoning would better reflect the existing use and support its continuation and potential growth. This zoning would be more consistent with the relevant DP&I guidelines for the zoning of land generally and more specifically in relation to environmental conservation and special purposes zoning.

If there are any further enquiries regarding the above please do not hesitate to contact the undersigned on 0409911868.

Yours faithfully

Brett Brown, Director

Submission Number: 30

Juliet Grant
Regional Director
Sydney Region East

Dear Ms Grant
We thank you for the opportunity to make this submission concerning the Oxford Falls Valley strategic review.

Our property is located at 199 Forestway Belrose and is adjacent to the Glenaeon Retirement Village on the Eastern side of Forestway.

The proposed rezoning from E3 to R5 large lot residential is entirely satisfactory to us as we believe this property is eminently suitable for over 55 years/ senior citizens as it is serviced by public transport to Chatswood, Brookvale and the city and has direct vehicular access to Forestway.

On completion of the Northern Beaches hospital, residents will be within 4 kilometres of hospital care by direct public transport.

The established shopping centres of Glenrose, Forest Way and the Supercentre are all within 4 kilometres of this property.

Our only areas of contention are contained in the bushfire and environmental constraint maps of 2013. Our concerns are as follows:

- Our property is classified as a bushfire buffer area. This is related to the adjoining property which is Crown Land, not having been cleared of native bushland for the 32 years we have resided in this area. If this narrow strip adjoining our property was cleared of excess vegetation our property would not be considered a buffer area.

Map of environmental constraint to development:

- This map indicates our property is subject to moderate environmental constraint to development. This property was 100% cleared of all native vegetation in 1988 by the previous owner. All trees, shrubs and vegetation are introduced species consisting of palm, hibiscus and associative shrubs. The adjacent property is the Glenaeon retirement village which is shown as having no constraints to development.
- As both properties have identical land contours and share the same access road, why the difference in zoning?
- The properties 169-181 Forestway which are on the same side of Forestway as our property contain a significant amount of native vegetation, especially 188 where it covers 50% of the total area.
- All of these properties have extremely steep declines, far in excess of the contour of our property but are zoned free of environmental constraints to development. So why is ours not zoned the same way?

We look forward to the next stage in this review process and some indication as to when we can expect our property will brought into LEP 2011.

Thanking You
John & Colleen Lindley
Email: jfl_cw@optusnet.com.au

Submission Number: 31

1st August 2013

Ms Danijela Karac
Project Manager
Project Delivery Unit
NSW Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Ms Karac,

Re: Public Exhibition – Draft Oxford Falls Valley & Belrose North Strategic Review Report

In relation to the letter from the Department dated the 17th June 2013, Optus would like to confirm that it agrees with the Departments view that that the most appropriate land use zoning for our Belrose and Oxford Falls sites is "SP (Special Purpose) 2 Infrastructure Zone". We also agree with the Departments view that land surrounding both of our nationally significant telecommunication facilities should be zoned "E3 Environmental Management Zone".

The use of the E3 zoning surrounding our sites will provide for the necessary buffer between the sensitive and strategically important telecommunication function of the facilities and the more intensive residential and industrial land uses nearby.

Please note that the contact for any further correspondence on this matter is the undersigned and not Mr Brent Gerstle who has left Optus.

Yours sincerely

David Donehue

David Donehue

Director Risk & Environmental Affairs

optus.com.au

SingTel Optus Pty Ltd
ABN 90 052 833 208

1 Lyonpark Road, Macquarie Park, NSW 2113 Australia

PO Box 888, North Ryde, NSW 1670 Australia

Telephone +61 2 8082 7800
Facsimile +61 2 8082 7100

Submission Number: 32
Anthony Reardon, Terry Hills

Response to Oxford Fall and Belrose North Strategic Review

The rezoning of land has the potential to affect land valuations and it would seem that the opportunity for comment and involvement of the owners of private land would naturally be part of any rezoning process.

The reaction by land owners to the zoning of land within Warringah as E3 – environmentally protected has demonstrated the concerns that the proposed zoning has raised and this review is part of the response to this.

However this review does not encompass all of the affected land in the area and specifically omitted the small number of properties at Terrey Hills designated as B9 in the original planning documents from Warringah council.

As one of the owners of a property within the B9 area, I would like to make two related but different points:-

The first is to do with the process that the Council has followed in assigning revised zoning classifications.

It appears to me that the land owners such as myself have been ignored and excluded from this process and have been treated with complete disdain by the council. I would make the point that one's primary residence is, for most people and certainly for me, their major asset and that rezoning has the potential for a severe impact on what is often a multi-million dollar investment so one would hope for and expect that any rezoning process would recognise this and give land owners the opportunity to have input to the process. This has not been done.

After the new zones were applied with apparently zero input from land owners, enough fuss was created that some areas were reviewed. However, our B9 properties were not included in this review. I have tried to raise this issue at various points but would note that there does

not seem to have been any formal mechanisms for doing this. I learn from the documents now published that because our land was not 'deferred' in the first place it has not been included as part of the review so we are back to square one with a zoning we do not consider appropriate and no justification as to why we have the zoning that has been assigned.

Which leads me to my second point - the actual zoning that has been assigned. Someone at some point has designated our land as zoned E3 Environmental Management. The LEP practice notes state that this is ".. for land where there are special ecological, scientific, cultural or aesthetic attributes or environmental hazards/processes ...", going on to say that "Where the primary focus is not the conservation and/or management of environmental values, a different zone type should be applied." and makes the point that "..the zone is generally not intended for cleared lands...".

My block of land is a residential block with a house, driveways, swimming pool, tennis court and landscape gardens with lawns and ponds. How is this reconciled with the E3 classification? The response when I asked this question was that "these are only guidelines." This implies that Warringah council has some special reasons to classify my block that don't meet these guidelines. Can anyone tell me what these are? Can anyone tell any subsequent purchaser what these are? How about any subsequent planning application?

It seems to me completely ridiculous to have state wide zoning with published rationales and meanings and then to have someone in Warringah council use some different criteria.

There do not seem to have been any published justifications for either the actual zonings assigned or for the selection process whereby only certain land parcels were selected for deferral and review.

I would also note that at no point in this whole process has anyone in the council written to us, visited or inspected the property.

Submission Number: 33

Elise Berkeley, Belrose

As the owner of these two properties - I would like to submit my approval of the proposed change to E3 Zoning.

Submission Number: 34
Confidential
2 August 2013

To Whom It May Concern,

[redacted]

Our property [redacted] immediately adjoins an urban area. It is bounded by 5 separate low-density residential properties (zoned R2 Low Density Residential) along the eastern boundary:

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

We purchased this property with the express purpose of building a single residence. We held a Pre-DA Lodgment Meeting with Warringah Council and the minutes detail our expressed forward plans. Since then we have been active in undertaking the necessary reports and development of suitable architectural plans to meet Council's current requirements.

The ***Draft Oxford Falls Valley and Belrose North Strategic Review*** makes no allowance for the proximity of our block to the existing low density residential subdivision.

The ***Draft Oxford Falls Valley and Belrose North Strategic Review***, p35, says the following:
"The E3 Environmental Management zone is proposed to apply to the majority of the review area on land that is significantly constrained by environmental and infrastructure factors. This also includes land that is isolated, does not adjoin urban areas and/or would cumulatively have a significant impact if zoned to an alternative zone without first undertaking studies recommended by the PAC."
Our block is *not* isolated and *does* adjoin urban areas. If treating our block alone, then the cumulative effect of an alternative zone is very low.

Additionally, the ***Draft Oxford Falls Valley and Belrose North Strategic Review***, p35, says the following:
"The R5 Large Lot Residential zone is recommended for areas of land located on the northern side of Wyatt Avenue and eastern side of Forest Way. This land is generally located at the interface of environmentally sensitive land along one boundary and urban land along the other. The recommended zoning provides a way of minimising landuse conflicts within the zone and adjoining zones. It also supports residential housing in a rural setting whilst preserving and minimising impacts on environmentally sensitive locations and the scenic quality of the area.
"The recommended R5 Large Lot Residential zone will ensure that future development will not result in an unreasonable increase in the demand for public services and facilities and can make efficient use of existing infrastructure and services prior to finalisation of a future Warringah Housing Strategy which will determine how best to meet Warringah's housing targets and housing needs. In this regard, the minimum lot size restrictions that currently apply to the land are recommended to remain unchanged."

If allowance has been made for certain properties on Forest Way and Wyatt Avenue to be Zoned R5 Large Lot Residential due to the interface between zones, then the current proposed zoning of E3 for our block and certain other fringe blocks is inconsistent.

Further, in Appendix 2, in the answer to Question 17, the report states, "Cleared land does not automatically indicate that E3 Environmental Management Zoning is inappropriate and matters such as desired future character, whether the land is in an interface location, isolated from an urban area etc are considered." This statement clearly identifies E3 as inconsistent to interface locations.

Furthermore, the stated objective of R5 includes "...to provide residential housing in a rural setting while preserving, and minimising impacts on, environmentally sensitive locations and scenic quality" and "…to minimise conflict between land uses within this zone and land uses within adjoining zones". A "buffer zone" created between the R2 and the E3 zones would have the following benefits:

- According to other Council planning instruments, potentially a greater allowance for creation of bush fire asset protection zones – which would help protect the entire locality
- According to Phase 2 outcomes, greater allowances to develop the block in keeping with the existing character of the adjoining suburb without impacting the biodiversity and the environmentally-sensitive nature of the location thus minimizing conflict between zones

Impact on Stage 2

Having established a fair and reasonable case for a different zoning for our block (i.e. R5 in lieu of E3), we note that the report states "…stage 2 of the review will examine whether some areas of non-urban land are suitable of for future urban growth" (Appendix 2 answer to Question 38). We believe that the decision to blanket zone the region as E3 Environmental Management Zoning automatically limits the outcomes of the future study regarding suitability for future development. E4 or R5 on various fringe blocks would allow a more even future consideration, without unjust weighting toward barring of all development for urban growth.

We would also like to go on record that, while not in our current plans, we wish to reserve the possibility of future development of our block, along similar lines stated by the Catholic Archdiocese of Sydney which, "has aspirations to develop part of its land for low density residential development (adjoining existing R2 Low Density Residential land) and offset a significant portion of its landholdings for bushland" (Appendix 5, p59).

Sources for the Study

Additionally we wish to make a statement regarding the sources for the study (pp43-44). While Warringah Council has not received the Flora and Fauna, Bushfire Management, Aboriginal Heritage, and many other reports requisite for our forthcoming Development Application (DA) for our planned single residence, we suggest that Warringah Council must be privy to many such private reports provided to Council as an element of DA's within the study zone. These sources would furnish additional and specific data on specific blocks, allow a more targeted approach, and reduce the dependence on high-level and generic reports.

Thanks for your consideration.

Submission Number: 35

Confidential

I strongly support the proposal for the establishment of an off-road motorcycle riding facility to be called Warringah Family Motorcycle Park in the area of the recycling facility once it closes in 2014.

In my view, this would encourage the safe and legal fulfilment of a fun outdoor activity. It would also address a chronic shortage of places on the northern beaches of Sydney to pursue this hobby in a responsible manner, without fear of infringing any laws or taking unnecessary risks.

My understanding is that this is all that the off-road motorcycle community is asking for.

As far as noise and pollution are concerned, all homologated and registrable off-road motorcycles have to pass stringent noise and pollution tests.

Off-road motorcycle riders are acutely aware of wider community perceptions and I believe they would be committed to cooperating in making the proposed Warringah Family Motorcycle Park a success in every aspect of its operation.

I urge the Council to take the next step and approve the development.

Submission Number: 36

Confidential

When we purchased our landover 25yrs ago, it was a Quarry, with more than 70% exposed rock. It took a year to fill in to the current levels, plant native and other trees, allowing for some natural bushland regrowth. Even now, about 50% is cleared, more than your assessment. Land that has been mostly cleared, with a house built should NOT be zoned E3, especially when ours was mostly cleared when purchased.

We have been away over the school holidays and would like more time to seek Legal opinion. Our neighbour sold his property at a considerably reduced price because of the E3 uncertainty. Zoning ours as E3 will devaluate ours even further.

The assessment process applied primary and secondary environmental constraints to justify the E3 zoning. This process is flawed and invalid.

E3 zoning will affect my property rights and severely restrict our usage.

We do not wish to be used as a buffer or riparian corridor.

RU4 is the preferred zoning. NOT E3

Thanking you

Submission Number: 37

Belrose Open Space Corridor Association

Belrose Open Space Corridor Association (BOSCA)

The above Association consisting of a large number of local residents has been involved in researching and advising Warringah Council on aspects of inappropriate development in the abandoned road corridor in Belrose for the past twenty years.

In relation to this Strategic Review Report we wish to reiterate the findings of the Review concerning the area of land in the road corridor east of Forest Way (below the existing Soccer Field) and the bushland that runs along the eastern side of Lord St, Belrose. The Review defines this land as "prohibitive, severe or significant environmental constraints to development". We agree with this assessment and wish to add the following information that illustrates that there should be no development of any nature within this defined area.

The bushland bordering Lord Street and the abandoned road corridor running from the end of Lord Street up to the soccer field has undergone extensive bush regeneration over many years and has been recognised by the Warringah Council with the installation of a bush regeneration sign at the end of Lord Street. This area also includes a hanging swamp and has a continuous runoff of water down the valley. During times of heavy rain, the runoff is significant and flooding at the end of Lord Street is common place. The bush corridor leading into the valley is one of the few remaining natural filters of runoff flowing from the ridge down the valley into Narrabeen Lake. The area includes one of the few remaining bush areas outside the suburb of Duffys Forest that is classified as natural Duffys Forest vegetation.

It has already been determined by the Department of Planning that this area forms a significant wildlife corridor in association with the section of the corridor west of Forest Way and that any development that may take place in the corridor west of Forest Way must allow for the integrity of this ecological corridor. In addition, this land is extensively used by recreational walkers as it provides three way access between Lord Street, Meridian Close, Dawes Road and Forest Way via the soccer field. There are also a number of rock pools that are considered to have been created and used by Aboriginal dwellers. These are fed by a continuous trickle of water from the hanging swamp in this bush corridor.

The eastern side of Lord Street also has significant constraints that prohibit further development. Firstly, there is a sharp drop off into the valley only 30-40 metres east of the roadway edge. At the lowest part of Lord Street is one of the first tributaries that lead into Oxford Falls Creek. It is most important that pollution of this tributary which is piped to this point is kept to an absolute minimum as it opens out into the valley below.

We concur with the Strategic Review initial assessment and wish to be consulted if there is any proposal to undertake any development in this area in any form.

Yours sincerely,

John Buggy

Chairperson

Belrose Open Space Corridor Association

Submission Number: 38
Christine Condos

6 Wyatt Avenue
Belrose NSW
2085

t: 02 9451 8395
f: 02 9975 2071

JOHN COLET SCHOOL

K-6 co-educational, multi-faith school

Draft Oxford Falls Valley and Belrose North Strategic Review

- submission by John Colet School, 6-8 Wyatt Avenue, Belrose.

John Colet School is an independent primary school located on Wyatt Avenue and has been operating as a school in its current address for 15 years, and before that the property had a similar use as a Christian training centre.

Under the Draft Belrose North Strategic Review ("Review"), John Colet School is proposed to be zoned E3 Environmental Management. Under the proposed E3 zone, "educational establishments" are prohibited. The Review states that schools in this scenario can rely upon the provisions of Clause 28 of the Infrastructure SEPP and existing use rights for ongoing permissibility.

John Colet School would like to ensure that it will be able to carry out the activities of an educational establishment. Typically, educational establishments are constantly in a state of change, as student numbers vary and teaching requirements regularly need review and updating. This means that the School regularly reviews its accommodation needs, and occasionally requires more building work.

Whilst the Review states that this can be easily addressed by utilising the Infrastructure SEPP or existing use rights for any new development associated with a school, we do not consider this to be an efficient way of preserving the school's continued use of the land.

In the first instance, the Infrastructure SEPP was originally introduced to prevail over restrictive and preventive planning provisions in Local Environmental Plans (LEPs), ensuring the delivery of important infrastructure, such as schools. We do not believe that where a new LEP is prepared, that it should rely on this State policy to preserve existing and guide future infrastructure provision in the local government area. Rather we submit that a more ~~It is an~~ appropriate strategic planning outcome for a local environmental plan to adequately reflect and permit existing land uses where appropriate. We consider this to be the case for John Colet School.

In the second instance, the Review states that existing use rights would preserve the rights of schools such as John Colet School to continue to operate as an existing educational establishment, notwithstanding the prohibition under the proposed E3 zoning. The underlying purpose of defining existing use rights is to control historical and now non-conforming uses, allowing them to continue to operate in spite of land use zoning changes. Again, we consider it to be an inefficient approach to strategic land use planning to rely upon existing use rights for developments such as John Colet School, which are steeped in historical operations and contribute greatly to the surrounding locality in the provision of an important educational service. Especially when the

strategic planning process allows the regularisation of permissibility as the Review currently provides. Relying on existing use rights would require every application made to the Council to demonstrate evidence of development consent and possibly, records of activity relating to the land that relies of the existing/continuing use rights. Whilst this is not necessarily an issue for John Colet School, ~~it is~~ we considered it to be unnecessary and inefficient in view of this current opportunity to make the school a permitted use on the land under the proposed Review. With existing use rights also tightening over the past years, relying on existing use rights could potentially limit the amount of additional expansion the school could seek approval for .

The Belrose North Strategic Review and its recommendations should not restrict these normal requirements of an educational establishment.

With this in mind, it would be reasonable and appropriate planning practice, for the school to be listed as an "additional permitted use" in Schedule 1 of the Draft LEP. It is commonly known that Schedule 1 is appropriate to be used providing it can be demonstrated that the proposed land use is appropriate on the particular parcel of land, but not generally within the zoning. This is certainly the case with John Colet School, as has been demonstrated by many previous development consents.

Our proposed approach would be similar to that marked as "Area 11" in Map 008 "Additional Permitted Uses". This can specifically relate to the parcel of land held by John Colet School and will therefore not set a precedent (refer to page 12, clause 5. Special Purpose Zones and Schedule 1 (Additional Permitted Uses). In Map 006 "Secondary Constraints Analysis", John Colet School has already been annotated as "Land for further zoning consideration", as this land is the least constrained in the study area" (p.33). This would be consistent with Clause 3 on page 40 "Schedule 1 Additional Permitted Uses" – (2) Development for the purposes of educational establishments, ... is permitted with consent." And it would also be consistent with Map 003 "Landuse Analysis", where the property is already noted as Educational. This is similar to the nearby Kamaroi School, Yanginanook School and any other schools within the proposed E3 area.

Further to the above, we note that there appear to be a few inconsistencies with the mapping in the Review. Please refer below for discussion.

- John Colet School notes that the extent of the property as indicated on Map 003 "Landuse Analysis" is incorrect, and the pink colour demarcating it as Educational should cover the entire property. There is an area to the west of the pink marking that forms part of the school but is not classified as "Educational". We request that this map be amended to adequately reflect the extent of the school's existing boundaries.

- John Colet School also notes that on Map 005 "Outcome of the Primary Environmental Constraints Analysis", the extent of the red area marking it as prohibitive, severe or significant environmental constraints to development, is incorrect and extends too far south within the School's property.

We trust that in the preparation of the revised Warringah Local Environmental Plan 2011 the comments made in this submission are taken into account.

Submission Number: 39

Erik Madsen, Oxford Falls

I strongly object to having my land proposed rezoned to E3.Page 7 out of Practice note PN09-002 specifically states under the E3 zoning information "this zone is generally not intended for cleared land “Our land is approx. 90% cleared. As such it is considered moderate eviromental.A more suitable zoning would be R5 or Rural. An E3 zoning would mean a substantial reduction of the land value as any potential buyer would not buy a property with a E3 zoning. As ratepayers and locals we strongly ask Council to listen to the majority in the affected area and NOT change our land to E3.

Benjamin Pines

Por 2087 Oxford Falls Rd
Oxford Falls 2100
0413 094 511

NSW Planning and Infrastructure

Re: Draft Oxford Falls Valley and Belrose North Strategic Review

I object to the proposed E3 zoning for my block based on the below information.

The Telecommunication Facilities built on the western end of Oxford Falls road West, Oxford Falls means that the character of this precinct is Light Industrial/Commercial.

As these facilities are unlikely to be removed the future character of this area will continue to be Light Industrial/Commercial.

We do not object to the telecommunication Facilities, as we are next door to one we feel that our block Por 2087, just North West of the Optus Facility, should be included with this existing and future character.

We note that Por 2087 has been given a Cumulative Level of Environmental Constraint score of 1 - 15 in the review document, we are interested in where the data came from for the determination of the rear of this block that produced a higher score (severe environmental constraint). We have recently had bush fire consultants determine the land as having an adequate APZ which includes limited canopy cover and limited undergrowth.

Our personal experience of living there is that we encounter limited wildlife

Regards,

Ben Pines

Rachel Pines

Por 2087 Oxford Falls Rd
Oxford Falls 2100
0413 094 511

NSW Planning and Infrastructure

Re: Draft Oxford Falls Valley and Belrose North Strategic Review

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Our personal experience of living there is that we encounter limited wildlife

Regards,

Rachel Pines

Submission Number: 42

Peter Marshman, Narrabeen

With regard to the Warringah Local Environmental Plan 2011, all land currently proposed E3 should be zoned E1 for the formation of the Gai-mariagal National Park or a State Park.

This area is already widely used for environmental and recreational activities and is a precious, non-renewable resource.

The infrastructure and transport options within the area do not support any future urban development allowed under the proposed E3 zone.

Zone E1 and maintain this area for environmental and recreational activities of our future generations.

Submission Number: 43

Kevin Collins

Australian Tennis Academy, Oxford Falls

I would just like to make two points

1. The attached photographs show the condition of this property in 1985. As you can see it was of no environmental value, being used as a horse riding training school, and previously denuded of top soil and loam.

Its present beauty is only as a result of investment in time and money by the current owners.

My point is, that if it had been left in its 1985 condition and the E3 zoning was now imposed, the E3 zoning would only permit me to increase the shed in size by a maximum of 10% (under existing uses rights).

Would that be the wishes of the community or do you think they would prefer the social and recreational facilities that now exist.

There is something wrong with this methodology.

2. There is a Bus stop outside of our venue on Oxford Falls Rd

I notice on the REVIEW'S link below that the bus stop outside of our premises is not identified.

The stop is used by School buses on school days and private buses dropping off and picking up our patrons at various times during the day.

SJB Planning

The Director-General
Department of Planning & Infrastructure
GPO Box 39
Sydney NSW 2001

6 August 2013

Re: Draft Oxford Falls Valley and Belrose North Strategic Review

Dear Sir,

We act for Dukor 24 Pty Limited, who have an interest in land known as 1113 Oxford Falls Road, Frenchs Forest (Lot 1113 DP 752038) (the 'subject site'). The land, shown in Figure 1 below, abuts Barnes Road to the south and adjoins residentially zoned land fronting Barnes Road.

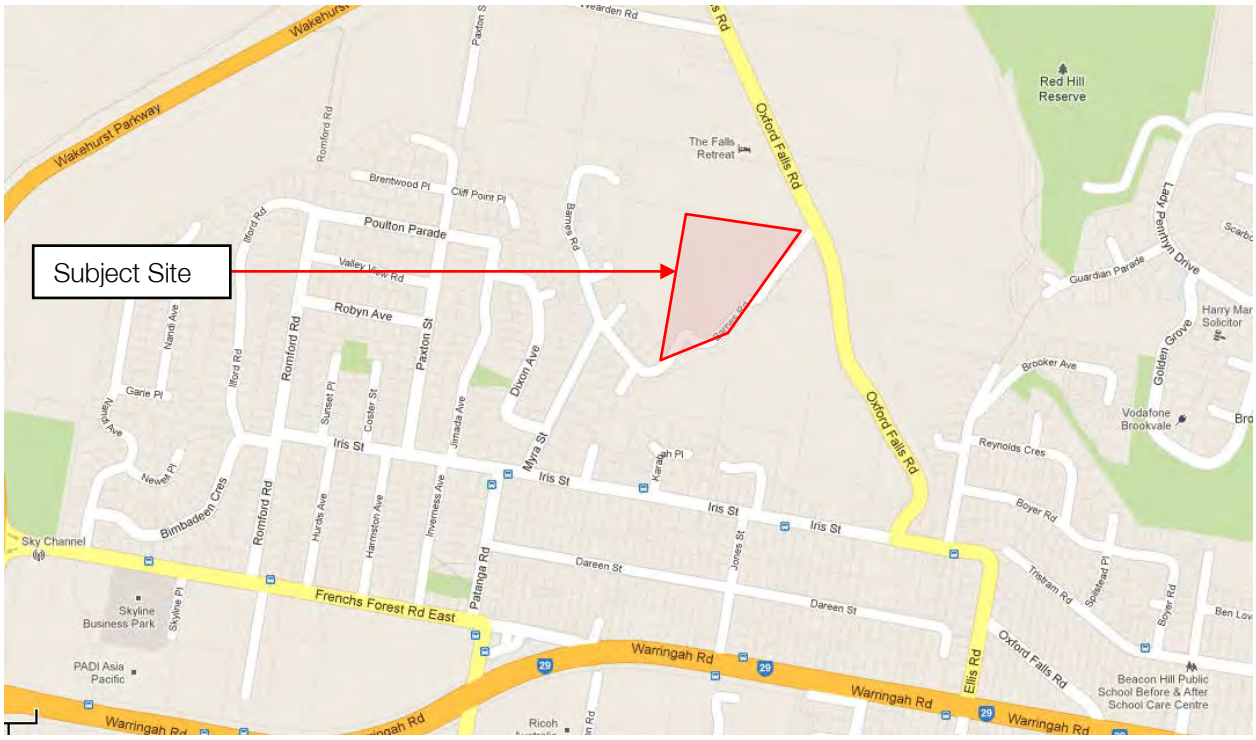


Figure 1: Location of the site (Source: Google Maps)

The land in which our client has an interest is within the Oxford Falls Valley and Belrose North Strategic Review study area ('the study').

We have been engaged to review the study, with particular reference to the subject site, and any implications upon the recommended zoning and therefore future development potential.
As detailed in the attached review of the study, our review has determined that a consistent outcome for our Client's land would be a recommendation that a Planning Proposal be prepared to have the subject

L2/490 Crown St, Surry Hills
Sydney NSW 2010
planning@sjb.com.au
sjb.com.au
T 61 2 9380 9911
F 61 2 9380 9922

site zoned R5 Large Lot Residential. This would be consistent with the recommended outcome for other sites in the study area that have been determined to have similar levels of development suitability.

The application of the assessment criteria established for the study to the subject site does not support the recommended application of an E3 Environmental Management zone contained in the study.

The subject site is located adjacent to existing residential land and abuts land with much lower levels of development constraint than other land recommended to be zoned R5 Large Lot Residential. The application of the criteria in the study to the subject lot would be consistent, appropriate and will not result in extensive rezoning that would necessitate extensive studies to be undertaken as it would apply to limited additional land.

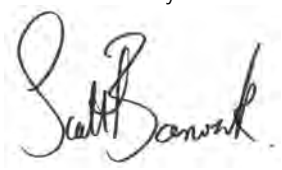
To be consistent with the application of the criteria established for the study, a recommendation to zone the subject land to R5 Large Lot Residential is consistent and maintains the veracity of the study process and criteria for consideration established. That is the subject site:

- Is not isolated from urban land;
- Is not surrounded by bushland or vacant land with prohibitive, severe or significant constraints;
- The character of the land and existing development is compatible with the objectives of the R5 Large Lot Residential zone;
- Zoning the land to R5 Large Lot Residential would not result in a cumulative impact that would necessitate the undertaking of further studies to support the zoning; and
- Zoning the land R5 Large Lot Residential is consistent with the nature and form of existing development on the land.

A revision of the study to recommend the preparation of a Planning Proposal to zone the land R5 Large Lot Residential is sought.

Should you require any further clarification or wish to discuss any matters raised in this submission, please do not hesitate to contact me on (02) 9380 9911 or by email sbarwick@sjb.com.au.

Yours sincerely



Scott Barwick
Associate Director

Encl.

Attachment 1: Review of Lot 1113 DP 752038

The Site

The subject site has an area of approximately 3.371ha and contains a substantial dwelling and outbuildings. The site is largely cleared and is bisected by a small escarpment, resulting in the site comprising two (2) distinct levels.

The site is within the deferred area of Warringah LEP 2011. The land is currently located within Locality B2 – Oxford Falls Valley under Warringah LEP 2000.

The study the subject of the exhibition recommends the preparation of a Planning Proposal to zone the land E3 Environmental Management under a future amendment to Warringah LEP 2011.

The Review

The scope of the review has essentially adopted a constraints and analysis approach to identify the land use suitability of the land within the study.

The constraints mapping has involved considering:

- Physical constraints (i.e. topography, flora and fauna); and
- Secondary constraint analysis (i.e. heritage, infrastructure provision, distance to services).

Primary Constraints Mapping of Subject Land

Eight (8) Primary Constraints were utilised in the study to determine the level of constraint to development of land within the study area.

The constraint assessment categorised five (5) levels of constraint ranging from No Environmental Constraints through to Prohibitive Environmental Constraints.

The categorisation of the constraint level using these criteria s they apply to the subject land is summarised in the following table:

Constraint Type	Constraint Level	Constraint Weighting
Riparian	Not applicable.	0
Significant Vegetation	Not applicable.	0
Wetland Buffers	Not applicable.	0
Slope	Majority less than 20% / part 20-30% / part 30+%	0 /5 / 15
Wildlife Corridor / Core Habitat	Regional Corridor	5
Flooding	Not applicable.	0
Acid Sulfate Soils	Not applicable.	0
Threatened Species Habitat	Not applicable.	0
Total Constraint Score		5 / 10/ 20

Table 1: Categorisation of constraint level of subject site

Utilising the constraint weighting to categorise the level of constraint, the subject land has a score of 5-10 for the majority of the site and a sore of 20 for the area comprising the small escarpment running through the site. Land with a score of between 1-15 is identified as having moderate environmental constraints.

Land with a score of between 16-32 has a significant environmental constraint to development.

The mapping produced for the study – "Outcome of the Primary Environmental Constraints Analysis" correctly identifies the majority of the subject site and the surrounding lands as having a "moderate environmental constraint to development" (Figure 1). That is, from a consideration of the physical attributes of the land, the majority of the subject site and surrounding land has a moderate constraint to urban development.

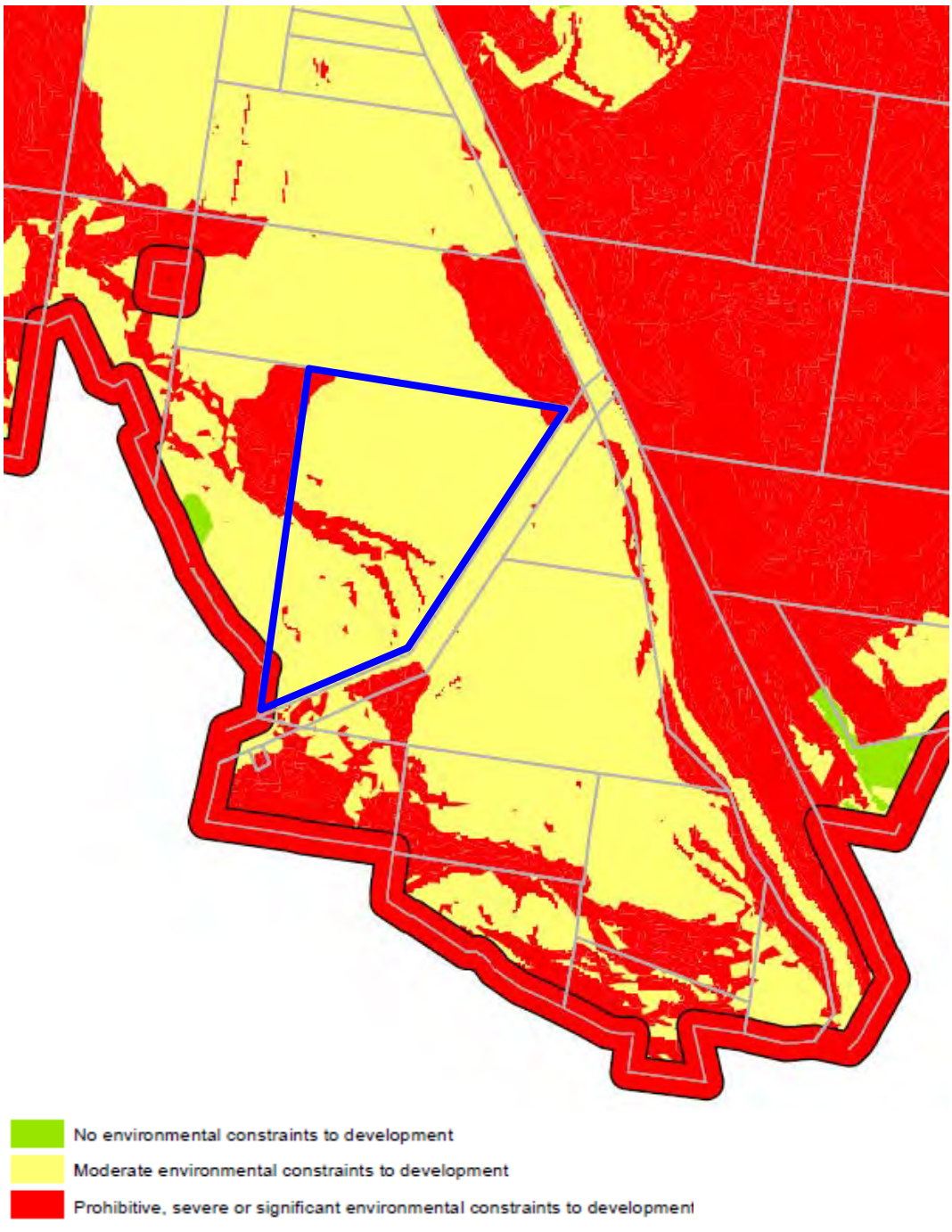


Figure 1 – Extract from the Outcomes of Primary Constraints Mapping – subject site in blue border

Secondary Constraints Mapping

The study has determined that any land identified through the Primary Constraint Mapping that was identified as having No or Moderate environmental constraints should be further assessed against the secondary constraints. The subject site is assessed against the Secondary Constraints analysis in the following table.

Constraint Type	Constraint Level	Constraint Ranking
Heritage	Not affected.	0
Bushfire	Not affected / part buffer / part Category 1 or 2	0 /2 / 3
Proximity to Centres	Within 800m of Neighbourhood Centre	2
Proximity to Public Transport	Within 400m bus stop / within 800m bus stop	1 / 2
Availability to connect to water, sewer & electricity	Lot currently serviced.	0
Telecommunications Buffer	Greater than 250m from telecommunications facility	0
Riparian Corridor	Not affected.	0
Significant Vegetation	Not affected.	
Wildlife Corridor & Core Habitat	Regional corridor.	0
Threatened Species	Low habitat.	0
Flooding	Not affected.	0
Wetland buffers	Not affected.	0
Cumulative Constraint Score		3 / 5 / 7

Table 2: Assessment against Secondary Constraints Analysis

The cumulative score is utilised to identify the development potential of land as:

- Category A Low restriction to development (Score 2-10)
- Category B Moderate restriction to development (Score 11-14)
- Category C Significant restriction to development (Score 15+)

The subject land has a score of between 3-7, with a conservative approach taken where the northern portion of the site is identified as being within 800m of public transport and the southern portion is within 400m of a bus stop, thus resulting in a higher score. Regardless, the worst case outcome identifies the site as being Category A – Low restriction to development, and suitable for further zoning consideration

The Mapping prepared for the exhibition “Secondary Constraints Analysis” correctly identifies the subject land as primarily “Land for further zoning considerations” (Figure 2). A minor area of the site is identified as constrained, being the small escarpment running through the site.

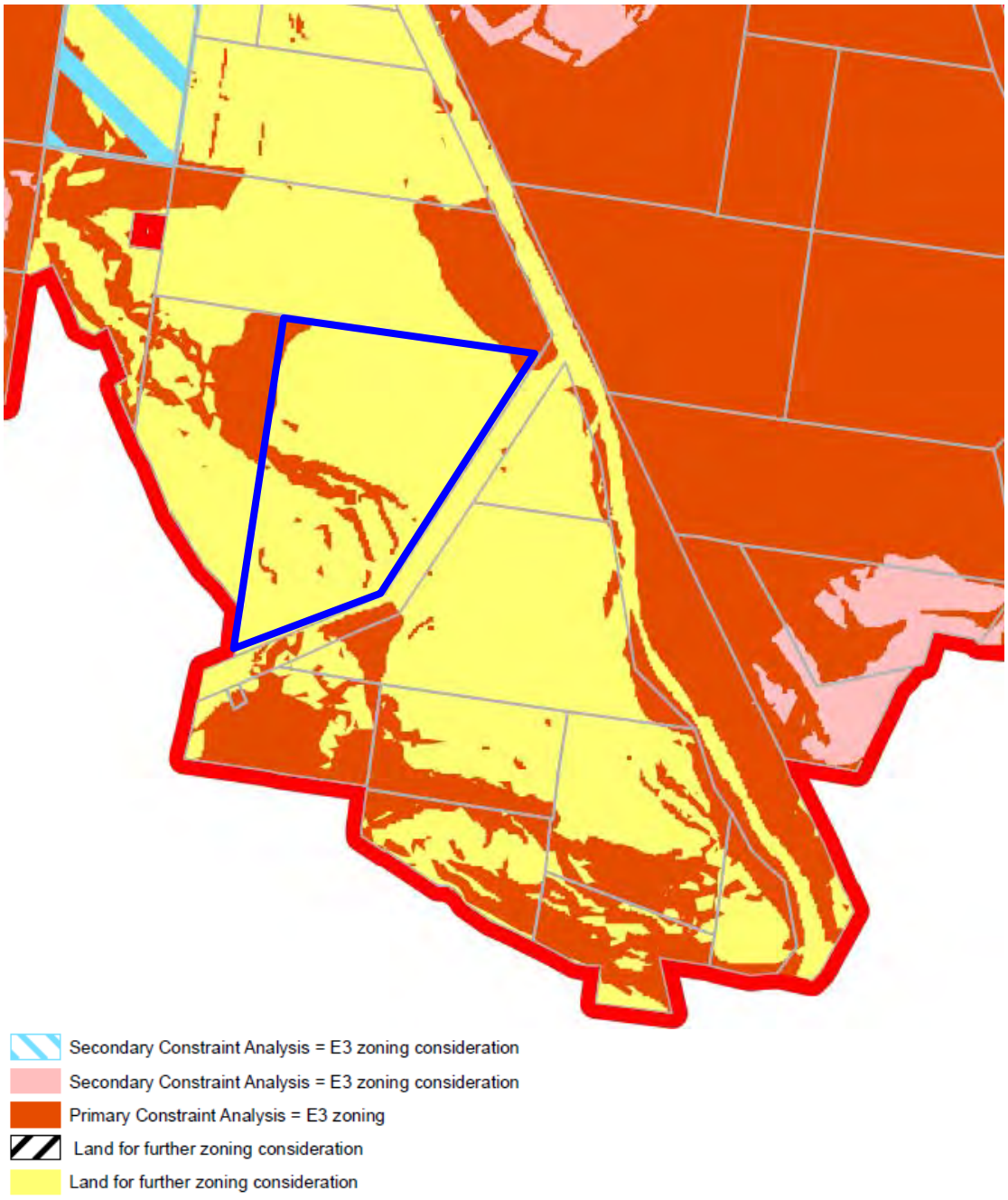


Figure 2 – Extract from the Outcomes of Secondary Constraints Mapping – subject site in blue border

It is noted that the sites recommended in the study to be zoned R5 Large Lot Residential also contained portions of land identified as having some environmental constraints.

Application of Findings

The study has determined that the E3 Environmental Management zone should be applied to land that has been:

- Identified as having significant constraint to development;
- Is isolated;
- Does not adjoin urban areas; or
- Would cumulatively have a significant impact if zoned to an alternate zone without first undertaking studies as recommended by the PAC.

The subject site has been mapped in the study as predominantly constraint free. Further, the site is not isolated and adjoins existing urban areas zoned R2 Low Density Residential. Despite this, the land is recommended to be zoned E3.

There is no clear justification for this recommended approach when the criteria set out in the study are applied to the site and adjoining land. The land is clearly identified via the Primary and Secondary Constraint Analysis as having development potential with few constraints to development.

The inconsistency of the recommendation is highlighted when the three (3) pockets of land recommended to be zoned R5 – Large Lot Residential are considered.

These three (3) instances are:

(1) 10-26 Wyatt Avenue, Belrose;
(2) 195-199 Forest Way and 1A Morgan Road; and
(3) 169-181 Forest Way, Belrose.

These three (3) areas have similar constraints scores in the Secondary Mapping. Indeed, sites 1 and 3 have greater areas that are mapped as having primary constraint mapping as being suitable for E3 zoning. Further all three (3) sites abut land that is mapped as having far higher constraints to development than the land surrounding the subject site.

The lots that have been recommended to be zoned to R5 Large Lot Residential are also developed in a similar manner to the subject site with substantial single dwellings.

The land in the vicinity of the subject lot should be similarly zoned to these three (3) examples. That is, applying the rigour of the Constraints analysis consistently should result in the recommendation for Lot 1113 and adjoining heavily cleared lots in the vicinity with few constraints to development being zoned R5 Large Lot Residential.

It is our submission based upon the rationale of the study that the subject site and possibly some adjoining sites that also abut land currently zoned R2 Low Density Residential, should be recommended to be zoned R5 Large Lot Residential.

Consideration of zone objectives

The subject site has been identified as being substantially free of physical and locational constraints to urban development. Despite this, the current recommendation is for the land to be zoned E3 Environmental Management. The detailed review undertaken for this submission identifies that applying the criteria of the assessment consistently would lead to a conclusion that the subject site should be recommended to be zoned R5 Large Lot Residential. A consideration of the zone objectives for each zone from the Standard Template LEP provides further justification for the sense of this outcomes rather that the recommendation that has been exhibited.

The objectives for Zone R5 Large Lot Residential are:

- *To provide residential housing in a rural setting while preserving, and minimising impacts on, environmentally sensitive locations and scenic quality.*
- *To ensure that large residential lots do not hinder the proper and orderly development of urban areas in the future.*
- *To ensure that development in the area does not unreasonably increase the demand for public services or public facilities.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*

The objectives for Zone E3 Environmental Management are:

- *To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.*
- *To provide for a limited range of development that does not have an adverse effect on those values.*

The criteria established for the review when applied to the subject site confirms that the land does not contain any special ecological, scientific, cultural or aesthetic values that should be protected, managed or restored. The recommended application of the E3 Environmental Management zone to the land is not only inconsistent with the outcomes of the study but also the objectives of the zone proposed to be applied.

The R5 Large Lot Residential zone objectives are however consistent with the suitability of the land for urban development and the current use and occupation of the land.

The application of such a restrictive zone to the subject site is contrary to the outcomes of the study and an inappropriate application of the E3 Environmental Management zone.

Submission Number: 45
Confidential

OXFORD FALLS VALLEY AND BELROSE NORTH STRATEGIC REVIEW

OBJECTION BY LANDOWNERS [redacted]

This submission is in 2 parts :- 1. Comments on the Draft Review's processes, and
2. specific objections to the site analysis of the above property.

FLAWS IN THE DRAFT REVIEW (DR).

1. Historical usage.
Regarding Oxford Falls,(not the "Oxford Falls Valley" as more widely used by Warringah Council (WC) in recent years), the WC has been in possession of a document prepared in 2006, a copy of which was given to Mr Gary Thomson who was representing WC at a meeting convened by the then Minister for Planning, Mr Frank Sartor with some landholders.
This document details the historical usages of the properties along Oxford Falls Road, Spicer Road, and Dreadnought Road, going back to more than 100 years in some cases. It showed that these properties were inextricably linked to primary production, from quarries to pig and chicken farms, all the way to abattoirs, of which there were two.
The WC has never responded to this document, nor sought to refute any part of it.
The historical uses of these properties pretty much determined their current Environmental Value - minimal at the very best. Almost none of these properties have any original soils - much was stripped and sold as topsoil in the 1950's and 1960's. The current soil profiles - if analysed independently - would show them to be landfill. And they have very little by way of natural vegetation.

2. Report to WC Meeting 13 March 2007, - Environmental Constraints / Land Capability Map of the Oxford Falls Valley.
This map actually shows that for the area to which we are referring, *there were no significant constraints to development* to most of the areas of these properties.
What has changed so dramatically in the last 6 years?

3. Definition of "Rural"
The DR attempts to redefine the term "Rural" beyond any normal understanding of what the word means. For example, in the Non-Urban Land Study (NULS) commissioned in 1998 by the WC undertaken by planners PPK, "rural" is defined as ""Single dwelling on allotments with associated activities, including stables, agriculture (market gardening) and boarding kennels."
Speaking with DOP officers, their view seemed to accord with that, yet almost no property site analysis in this area found them to be "rural".
My Oxford English Dictionary says " Rural - in, of, suggesting, the country (opp URBAN), pastoral or agricultural."

The DR's reinterpretation is presumably because in 2012the Ministers for Local Government and Planning were quite outspoken where several northern NSW Councils were trying to move rural land into E2 and E3 zones; the logic adopted in our case seems to be that if the DR doesn't acknowledge they are rural, then they aren't.
In our own case, for about 28 years we have had an approval from the (then) Warringah Shire Council to operate as primary producers; that is, as growers of indoor and outdoor plants, to be onsold to retailers. We received a Primary Producers' Rates Rebate from the WSC and the WC for several years until it was removed from all primary producers some time in the 1990's.
We have about 1 ½ acres (out of 5 acres) of old shade houses, and chicken sheds (some 60 years old) converted into glasshouses

4. Assessment criteria.
Firstly, the DR sought to use "primary criteria" twice, which is plain wrong.
Secondly, this whole process is supposed to relate to nothing beyond Environmental Values (EV's). Why, then, would the DR attempt to assess against other criteria which relate specifically to developability? What has "Access to public transport" got to do with EV's? Or "Distance from earth satellite stations"? Or "Distance from a shopping centre"?

5. Rehabilitation.
The DR seeks to have large areas of private property, with a long history of agricultural usage, and found by the PPK study to consist largely of "Disturbed land of lower environmental value", (i.e., the area nominated earlier) to be included as "buffer zone". The DR then hints that, over time, pressure may be applied to the landowners to "rehabilitate" such land - presumably to the condition where what started out as "buffer" could then be claimed to have high Environmental Values and properly within an E3 Zone.

6. Core habitat.
The DR allocates this whole area as "Core habitat".
This was not the finding of the PPK Report, and flies in the face reality. Regarding flora, 90% of all native trees and shrubs on our property were planted by us. Most remnant vegetation on the property consisted of lantana, coral trees, oaks, poplars and cassia.
Regarding fauna, there are far more bandicoots now than there were 28 years ago. They are not endangered. The possum population continues to be augmented by possum releases by others, which means constant possum wars to gain territory.
Wallabies - we never saw wallabies until the last 6 or so years; they confined themselves to their natural habitat - rocky scrub around gullies in the old Crown Lands areas. Now, the extremely cynical campaign to fence of the Wakehurst Parkway and *not enclose the southern end of the territory range* is funneling them onto private land in Oxford Falls where they used not to be.
A word of warning here. Down the track - next time we have a prolonged drought - the over-population of wallabies will result in many being killed as they seek to browse in built-up areas. By then, no doubt, the people who are foisting this on us will have moved on, and the fall-out will have to be mopped up by others. At least the ACT Greens have had to deal with a

kangaroo cull necessitated by their past policies.
There is no habitat on our property for quolls or other marsupials.
Like nearly everybody else, including in built-up urban areas, we have recently been invaded by scrub-turkeys; other bird species seem to be plentiful, but their native habitat does not occur on our property to any real extent.

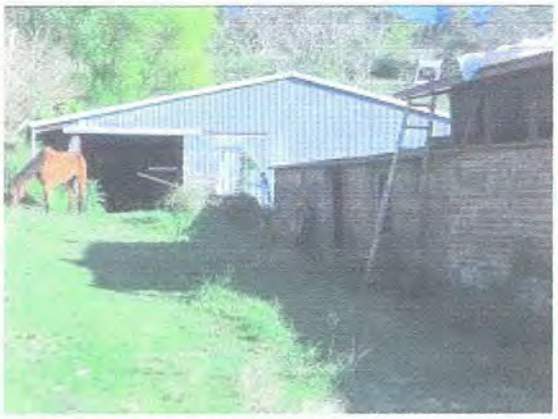
7. Timing of the release of the Draft Report.
The DR was released to coincide with a school holiday period, as seems to happen regularly with the WC.
We request a 3-week extension of the period to make comment, as many parties involved, including Ministers, local Members and Councillors, were absent for part of the time at least. We ourselves were required to be away for 3 weeks.

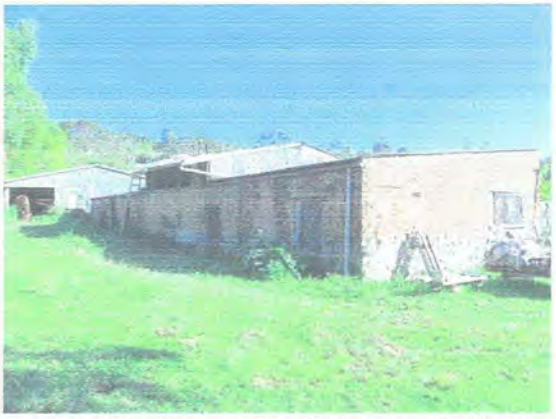
[redacted]

Primary Constraints
Riparian. We have No Riparian area.
Significant Vegetation. We have No Significant Vegetation.
Wetland Buffers. We have No Wetland Buffers.
Slope. We have probably ½ - to 3/ 4 of an acre of slope.
Designated Wildlife Corridor or Core habitat.. Any mapping that shows this property as Core Habitat is not ground-proved, and is flawed. It has never been brought to our attention, and needs to be tested before it is accepted as correct. Regarding being a Local Corridor, so are all of the urban areas in Frenchs Forest, Forestville, Narrabeen and Collaroy, and all other local suburbs.
Flooding. We are not subject to flooding. We are, however, adversely affected by the changes to Middle Creek which mean that the Wakehurst Parkway is closed far more often than it used to be. Who initiated those changes? Will they be fixed?
Acid sulfate Soils. We have no Acid Sulfate Soils.
Threatened Species Habitat. We have no Threatened Species Habitat.

Secondary Constraints.
These need to be divided into 2 categories; firstly, the repeating of the Primary Constraints here makes no sense whatsoever.
Then there are the other additional constraints, talked about earlier, including distance from a shopping centre, access to public transport, and so forth. These have *nothing to do with the consideration of whether or not our property should be mad Environmental Management, and we will make not comment on them.* Other than to say that it is further evidence that this whole exercise appears to have been flawed, biased, inequitable and deeply conflicted.

The inspection officers found 80% of the property had Moderate Constraints, 15% Significant Constraints, and 5 % Severe Constraints. Against what criteria?
To describe the "inspection" as desultory would be an exaggeration; 4 officers walked around the place with one of the owners for about 10 minutes, asked almost nothing, and left.
As said earlier, we have about 1 ½ acres of footprint of shadehouses and glasshouses. Additionally, we have 2 very large agricultural sheds (see Photo), a house and a tennis-court. All up, these alone would add up to towards another acre, plus the linking spaces which are also pretty flat. So, there would be some 3 ½ acres (of 5 acres, i.e, 70%) which should be classified as No Environmental Constraints, for starters.





The inspectors ticked "dwelling" and "commercial" in "type of building on site"; please see photo above. These are Agricultural Buildings and nothing else. That comes under "rural", not "commercial". There appears to be some confusion about whether "wholesale nursery" is "commercial". A "wholesale nursery" may in fact not be a grower (which we are); it may in fact buy in all of its stock from growers, and be a wholesaler to retailers, which would make it "commercial" - which we are not.
The inspectors only ticked "residential" under "use of site". We are and continue to be primary producers, as we have been for 28 years. We have had a lot of damage by storms in 2012, and are in the process of rebuilding. You may not know this, but most shade- and glass-houses need to be replaced every 6-8 years; it is the nature of the materials used.
In "additional comments/observations", the analyst wrote "*Previous nursery, no longer used. And/or under upgrading - destroyed in storm +- 1 year ago*". In fact, what was said by [redacted] "We had a lot of damage by a storm in the last year, and we are rebuilding." He never said that it was no longer used.
There were 4 people who inspected our property. We would like to be advised of the following: - who was from WC
- who was from DOP
- the employment status of each officer; were they permanent or temporary employees
- the position and qualifications of each officer.

For the purpose of this, please don't name them if you wish not to, but call them Inspectors A,B,C and D perhaps.

CONCLUSION

This appears to be a deeply flawed exercise, and we expect it will now be corrected in light of its shortcomings, bias and misinformation.
And we wish to have the period to comment on the Draft Review extended by 3 weeks.

[redacted]

[redacted]

5 August 2013

Submission Number: 46
Confidential

[redacted]

PCU046955

5 August 2013

Oxford Falls and Belrose North Strategic Review
Department of Planning and Infrastructure
GPO Box 39
Sydney NSW 2001

Dear Sir / Madam,

Submission to the Draft Oxford Falls Valley & Belrose North Strategic Review Report

I request that the draft LEP be amended to permit dwelling houses to be constructed on existing allotments of land over 2,000m^2 in area within the R5 Large Lot Residential zone subject to a requirement that all developments are to implement erosion and sedimentation control works to prevent the transmission of silt or polluted waters from the site.

The objective of such provisions would be to protect Narrabeen Lagoon and Middle Harbour whilst enabling landowners to live on their land.

By limiting the application of such controls to existing allotments over 2,000m^2 in area the provisions would apply to a limited number of existing properties. The impacts arising from such a change would be very limited as there would be only 3 allotments within the study area that satisfy this criteria that don't already have a dwelling house erected on them [redacted]

It is noted that these allotments are already mostly cleared land with areas suitable for dwelling house development without the need to remove bushland. I have attached photos of [redacted]. They have reticulated water and sewerage available as well as all other necessary infrastructure and access to services and shops.

By requiring the implementation of soil erosion and sedimentation control works as part of any dwelling house development Council will have the town planning powers necessary to impose conditions on approvals to maintain the environmental integrity of Narrabeen lagoon and Middle Harbour.

The existing planning controls (which include a *density provision of one dwelling per 20 hectares*) date back to the early 1970's (Interim Development Order No. 51 was gazetted in 1974 and introduced those controls). Engineering and environmental practices have moved on greatly since then. Our knowledge of the sources of sedimentation and water pollution has grown greatly over the 40 years since IDO 51 was implemented. It is now possible to provide physical controls on residential development that will effectively protect the receiving waters from pollution.

Furthermore, it is not known if the controls in IDO 51 were based on scientific data or, as is more likely, upon an urgent reaction to the observed deterioration in the condition of Narrabeen Lagoon following large-scale uncontrolled residential development in the catchment throughout the 1960's and early 1970's.

There are currently "hundreds" of properties in the Warringah Council now zoned either RU4, R5 or E3 which have a dwelling and all are less than 20 hectares. No other properties in Wyatt Avenue have 20 hectares but each property has a dwelling.

By virtue of the Draft Report recommending R5 zoning for these properties would suggest they are suitable for housing.

Permitting a dwelling house on existing allotments over 2,000m^2 in area represents good planning as well an equitable approach to land management by permitting landowners who didn't manage to get a dwelling house built on their land prior to 1974 the same rights as those who did.

If you have any questions about this submission please feel free to contact me.

Yours sincerely,

[redacted] (2,412 sqm)

Submission Number: 47
Confidential

[redacted]

5 August 2013

Oxford Falls Valley and Belrose North Strategic Review
Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Assessing Officer

RE: Draft Oxford Falls Valley and Belrose North Strategic Review

I wish to advise that I have been engaged by the owners of the two properties set out below to submit an objection to the proposed Draft Zoning that has been recommended in respect of my client's properties.

[redacted]

[redacted]

In respect of property 1 the land contains a dwelling house together with cleared areas used for the grazing of goats. In respect of property 2 there is a substantial dwelling house together with significant cleared areas used for the grazing, keeping and breeding of horses, cattle and goats.

In preparing this submission due consideration has been given to the content of the document titled 'Draft Oxford Falls Valley and Belrose North Strategic Review'. It is noted that the document has been prepared by way of a partnership between the NSW Department of Planning and Infrastructure and Warringah Council. It is noted that the draft findings of the Strategic Review do not significantly change the urban development potential of land in Oxford Falls. The report also recommends that the "best fit land use zone for the majority of the study area is E3 Environmental Management Zone". My clients are, to say the least, bitterly disappointed that the strategic review has found that the E3 Environmental Management Zone should prevail for the Oxford Falls Valley precinct.

It is respectfully submitted that the review has failed to adequately address the scope of works defined under section 1.2 of the Draft report, in that, the review was aimed at objectively and constructively reviewing existing environmental constraints and identifying, where relevant, where an E3 Environmental Management Zone should remain as previously exhibited. The properties, the subject of this submission, do not possess significant constraints in the form of flora and fauna, topography or access.

The properties are significantly cleared from vegetation and are used principally as a dwelling house and grazing of livestock.

As the Department and Council would no doubt appreciate, there have been comprehensive studies undertaken by the residents and landowners within the Oxford Falls precinct. The submissions made by the Warringah Urban Fringe Association have demonstrated that an E3 Environmental Management Zone is not appropriate for land which has been cleared and contains a dwelling house and other rural type of pursuits. The strategic review has taken a holistic narrow minded approach by recommending a broad brush zoning as opposed to dealing with the merits of the individual land holdings. Attached is a plan demonstrating that there are substantial clusters of small holdings with substantial dwellings and other rural land uses which are ideal to be zoned as UR4 – Primary Production Small Lots.

To apply an E3 Environmental Management Zone in accordance with the Draft Zoning Plan for the Oxford Falls Precinct is unjustified as the objectives of this zone relate to land containing the following criteria:

- To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values;
    - Comment – the subject precinct as a whole cannot fall within an umbrella type zoning as a significant number of the sites do not possess special ecological, scientific, cultural or aesthetic values. It is acknowledged that some areas may fall within this category however it is not a unilateral approach.

- To protect and enhance the natural landscape by preserving remnant bushland and rock outcrops by encouraging the spread of indigenous tree canopy.
    - Comment – as is demonstrated on the attached aerial photo, there are extensive areas of land within the precinct that have been cleared for grazing, dwelling houses and other agricultural, rural activities. These areas warrant an alternate zoning to the E3 Environmental Management.

- To protect and enhance visual quality by promoting dense bushland buffers adjacent to major traffic thoroughfares.
    - Comment – within the Oxford Falls precinct it is absurd to define the road system as being major traffic thoroughfares – therefore it is irrelevant to consider this as an objective to the zoning of land in this precinct.

It is respectfully recommended that my clients properties and others in this immediate enclave should be more appropriately zoned UR4 – Primary Production Small Lots. The objectives of this zone are set out below:

- To enable sustainable primary industry and other compatible land uses.
- To encourage and promote diversity and employment opportunities in relation to primary industry enterprises, particularly those that require smaller lots or that are more intensive in nature.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To minimise the impact of development on long distance views of the area and on views to and from adjacent national parks and bushland.
- To maintain and enhance the natural landscape including landform and vegetation.
- To ensure low intensity of land use other than land uses that are primary industry enterprises.
- To maintain the rural and scenic character of the land.

The above objectives together with the permitted land uses with consent represent a zoning which is more applicable to the areas referred to on the attached plan. My client's properties are shown circled blue.

The UR4 Primary Production Small loL zoning would enable a diversity and employment opportunities in relation to primary industry enterprises, particularly those which can be accommodated on smaller sized rural lots. The zoning would also minimize conflict between land uses within a UR4 and a E3 Environmental Management. The zoning also enables Council to control development which maintains natural landscape which possesses significant environmental values. The recommended zoning would also maintain the rural and scenic character of the selected parcels of land.

On behalf of my clients it is requested that their properties be included within a RU4 Primary Production Small Lot zoning as prescribed under Warringah Local Environment Plan 2011.

Please do not hesitate to contact me if you wish to clarify any matter.

Yours faithfully

[redacted]

[redacted]

Attachments:

1. Aerial photo with subject properties circled blue and red area defined as future UR4 Primary Production Small Lot
2. [redacted]

Oxford Falls Properties

[redacted] – [redacted]

Source: NSW Land and Property Information 2013

Source: NSW Land and Property Information 2013

[redacted]

Source: NSW Land and Property Information 2013

Source: NSW Land and Property Information 2013

Submission Number: 48

CROMER GOLF CLUB

6th August 2013

The Director General
NSW Department of Planning & Infrastructure
23-33 Bridge Street
SYDNEY NSW 2000

Dear Sir,

Re: Draft Oxford Falls Valley and Belrose North Draft Strategic Review

We forward our comments and response to the draft strategic review of the Oxford Falls Valley, which was circulated by the Department for public comment.

As a major landowner in the precinct we own a 13ha parcel of land that is wholly contained within the proposed E3 zoning. We note that we have previously objected for the purposes of this strategy to being included within the Oxford Falls valley as our land is completely detached from that location and should be assessed on its own merit.

Since 2005, we have been attempting to have 4.5ha, a minor portion of our holding rezoned to a low density residential use, in order to generate much needed funds for the Cromer Golf Club to complete substantial environmental works within the course proper as well as to secure the Club's financial future.

During the course of the last 7 years, our consultants have:

- Prepared extensive planning reports that endorse the potential and suitability of the land for development.
- Have engaged leading land planner and urban designer Gabrielle Morrish to prepare a range of suitable development options.
- Engaged specialist flora, fauna, bushfire and archaeology experts to inspect and report on the suitability of the land for development, and,
- Undertaken two rounds of public consultation presentations having notified 2,000 surrounding local households by direct mail.

To date it is our belief that at no time in this process has either the Department or the Warringah Council read a single word of these extensive submissions and the development potential of the land has yet to be considered in any professional manner.

Indeed we attach a copy of the Councils assessment of the land undertaken as part of the PAC review. We note that a key undertaking of the PAC was to invite the landowners to be present when this inspection took place. We were not afforded that opportunity or courtesy.

CROMER GOLF CLUB LIMITED. A.B.N. 22 612 147 077. CROMER ROAD, CROMER NSW AUSTRALIA 2099.
PHONE (02) 9982 3088 FAX (02) 9981 3782 PRO SHOP (02) 9971 2263
e-mail: membership@cromergolfclub.com.au www.cromergolfclub.com.au

The one page tick the box analysis is superficial and totally inadequate as a means of assessment of whether land is suitable for any particular zoning consideration. When compared to the very extensive professional assessments undertaken by the Club, which have yet to be read or considered by Council, the Club questions the integrity of the entire process underpinning this Strategic Review.

The land, which we believe, needs to be assessed for development is shown overlayed on the attached zoning plan prepared by the Department. This land will support about 45 low-density dwellings and will be the final stage following the rezoning and development of adjoining land for housing with Landcom in the 1990's. Our land has no constraints at all and being located immediately adjacent to an existing urban precinct should qualify it for consideration as worthy of rezoning to a residential use.

Specifically, the reports attached to our submission coordinated by Andrew Wilson Town Planning Consultancy Service demonstrate in the constraints summary the following performance:

Riparian	No riparian zone
Significant vegetation	No evidence of threatened flora
Wetland buffers	No wetlands
Slope	No steep slope
Wildlife corridor	No evidence of threatened fauna
Flooding	No flood prone land
Acid Sulphate soils	No acid sulphate soils
Threatened species habitat	No evidence of threatened fauna
Isolated constrained land	Abuts existing urban area
Physical human infrastructure	Available
Cultural Heritage	No evidence
Bushfire	Not prohibitive
Proximity to centres	Commensurate with low density housing
Public transport	Available
Essential services	Available
Telecommunications buffer	No buffer

In short, the site identified has no constraints whatever and should be able to be assessed for new housing development and zoned R2 Low Density Residential.

We would also make comment upon the notions previously expressed by Council that there is no need for additional land for housing supply on the northern beaches at this time, and that our site is small, its yield is minimal and therefore it has no real value.

We submit that there is overwhelming evidence demonstrating an undersupply of housing in Sydney that is not keeping pace with demand and that our site is in a location more accessible and suitable than other housing release areas on the northern beaches. Its size and potential yield is irrelevant.

The site, if zoned residential, would be developed straight away to provide housing choice, which is a matter of planning concern to the Department. It would also potentially provide the community with a financial dividend from infrastructure charges as well as an enhanced environment on the Golf Club. The sites low constraints, low yield, low impact will have a much bigger financial impact for the community.

We submit that our 4.5ha site should be given serious consideration to be excised from the E3 zone and rezoned to R2 Low Density Residential as demonstrated on the attached draft zoning plan.

Yours Sincerely

Katrina Brown
President
Cromer Golf Club Ltd

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Andrew Wilson - Town Planning Consultancy Service
PIA Certified Practising Planner

6 August 2013

Department of Planning
GPO Box 39
Sydney NSW 2001

Dear Sir / Madam

RE: DRAFT OXFORD FALLS VALLEY AND BELROSE NORTH CORRIDOR STRATEGIC REVIEW

1. INTRODUCTION

This submission on the Draft Oxford Falls Valley and Belrose North Corridor Strategic Review is made on behalf of Cromer Golf Club which owns approximately 13ha. of land surplus to its needs within the area covered by the Draft Strategic Review. It is accompanied by the 'Planning Report for Residential Release Area – Cromer Golf Club' prepared by JBA Urban Planning Consultants dated March 2006 (hereafter referred to as the enclosed JBA Planning Report).

This submission and the enclosed JBA Planning Report demonstrate that approximately 4.5ha. of the surplus Cromer Golf Club land is suitable for low density housing, and we request this 'subject site' be zoned R2 Low Density Residential in Warringah LEP 2011.

The surplus Cromer Golf Club land is legally described as Lot 2 DP 525492, Lot 859, 860 and 861 DP 752038 and Lot 22 DP 859782 and shown in Figure 1. The 'subject site' proposed for an R2 Low Density Residential Zone comprises parts of these lots as shown in Figure 2 and in the enclosed JBA Planning Report.

This submission and the enclosed JBA Planning Report are supported by an evidence base of detailed specialist studies prepared specifically for the subject site which remain relevant including the following:

- Flora and Fauna Assessment prepared by Cumberland Ecology;
- Geotechnical Assessment prepared by Douglas and Partners;
- Traffic Implications prepared by Colston Budd Hunt & Kafes;
- Bushfire Assessment prepared by BES;
- Aboriginal Archaeological Assessment prepared by Mary Dallas Consulting;
- Initial Engineering Assessment of Constraints and Opportunities prepared by Patterson Britton and Partners; and
- Masterplan Design Options Report prepared by GM Urban Design and Architecture.

The following section of this submission provides an assessment of the subject site against the constraint criteria in the Draft Strategic Review using the detailed findings in the specialist environmental planning studies supporting the JBA Planning Report which demonstrates its suitability for an R2 Low Density Residential Zone under Warringah LEP 2011.

Phone: 0412 575 942 E-mail: awplanning@outlook.com
ABN: 56 870 994 097

Figure 1 – Surplus Cromer Golf Club Land (13ha. shown orange with red outline)

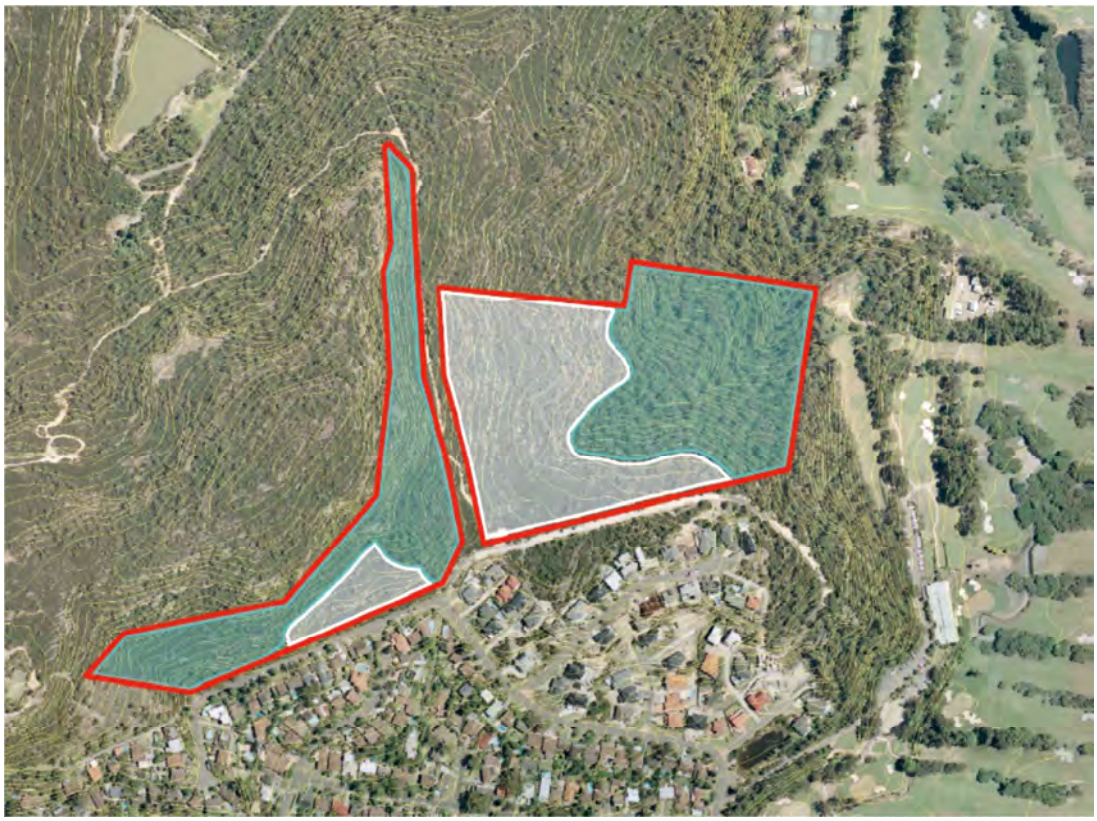


Figure 2 – 'Subject site' proposed for R2 Low Density Residential Zone (4.5ha. shown shaded white)

2. ASSESSMENT OF CONSTRAINT CRITERIA WITH DETAILED EVIDENCE BASE OF SPECIALIST ENVIRONMENTAL PLANNING STUDIES FOR SUBJECT SITE

The Draft Strategic Review includes an environmental constraints methodology for assessing land with primary and secondary environmental constraint criteria. This submission provides an assessment of the primary and secondary environmental constraints on the subject site according to the findings in the more detailed specialist environmental planning reports supporting the enclosed JBA Planning Report.

2.1 Assessment of Primary Environmental Constraints

The primary environmental constraints methodology used in the Draft Strategic Review comprise the following eight primary constraints:

- Riparian;
- Significant vegetation;
- Wetland buffers;
- Slope;
- Designated wildlife corridor or core habitat;
- Flooding;
- Acid sulphate soils; and
- Threatened species habitat.

An assessment of the above primary constraints on the subject site based on the findings in the specialist environmental planning reports used in the enclosed JBA Planning Report is provided below.

Riparian

The site is not identified in the Riparian Constraints Land Map in the Draft Strategic Review as having a riparian zone or buffer in Category A or B. There is no riparian zone running through the subject site or adjoining land of such special environmental significance or value as to preclude an R2 Low Density Residential Zone or warrant an E3 Environmental Management Zone over the site.

A specialist Engineering Assessment of Constraints and Opportunities for Rezoning prepared for the site by the engineers Patterson Britton and Partners Pty Ltd supports the enclosed JBA Planning Report and includes a comprehensive water management strategy. This specialist assessment demonstrates the site is capable of supporting new housing in an R2 Low Density Residential Zone in a way which can improve water quality and quantity conditions and conservation outcomes on the overall Cromer Golf Club land including both on the subject site and existing golf course.

Significant vegetation

The subject site is not identified as containing a threatened or rare community in the Significant Vegetation Constraints Land Map in the Draft Strategic Review.

A specialist Flora and Fauna Assessment prepared by Cumberland Ecology for the surplus Cromer Golf Club land and used in the enclosed JBA Planning Report provides a detailed evidence base and survey of flora and fauna on the land. It identifies the following vegetation communities on the land:

- woodland communities on the eastern lower slopes and western upper slope ridge top;
- scrub and low woodland communities on the central mid-slope.

Biodiversity / ecological value –The specialist Flora and Fauna Assessment finds that there is:

- no threatened flora species or EECs on the subject site;
- no evidence of threatened fauna on the subject site;
- limited habitat significance on the subject site given the above and the extent to which the vegetation communities are represented in the area.

The Significant Vegetation Constraints Land Map in the Draft Strategic Review and the specialist Flora and Fauna Assessment demonstrate that the vegetation on the subject site does not exhibit any special ecological, scientific, or biodiversity value that precludes an R2 Low Density Residential Zone or that particularly warrants an E3 Environmental Management Zone.

Visual landscape / aesthetic value – A visual landscape analysis in the enclosed JBA Planning Report finds that the subject site is:

- not visible from the west or south;
- not visible from the north other than from within a relatively narrow view corridor across Narrabeen Lagoon; and
- visible, but not prominent, in views from the east in the suburb of Wheeler Heights.

The visual landscape analysis in the enclosed JBA Planning Report demonstrates that the subject site does not have any special visual landscape or aesthetic value that warrants an E3 Zone or precludes an R2 Zone for detached housing.

Wetland buffers

The subject site does not contain any wetland or wetland buffer that constrains an R2 Low Density Residential Zone or that warrants an E3 Environmental Management Zone.

Slope (erosion hazard)

The topography of the subject site is described in the enclosed JBA Planning Report as a central mid-slope bench with a predominantly gentle to moderate 5^0 to 10^0 slope.

A specialist Geotechnical Assessment prepared by Douglas Partners supporting the enclosed JBA Planning Report finds there is no evidence of landslide, cliff line collapse or slope instability on the subject site. The assessment notes that the site has rock close to the surface with a high potential for erosion of the shallow sandy soil profile, and housing is developable with appropriate engineering practices.

The topography and geotechnical conditions of the subject site on a predominantly gentle to moderate 5^0 to 10^0 slope are not prohibitive to an R2 Low Density Residential Zone for new housing, and do not pose any special environmental significance or hazard to warrant an E3 Zone.

Designated wildlife corridor or core habitat

As noted above, a specialist Flora and Fauna Assessment prepared by Cumberland Ecology specifically for the surplus Cromer Golf Club land and used in the enclosed JBA Planning Report finds that there is:

- no threatened flora species or EECs on the site;
- no evidence of threatened fauna on the site;
- limited habitat significance on the subject site given the above and the extent to which the vegetation communities are represented in the area.

Flooding

The subject site does not contain any flood prone land that constrains or poses a risk to housing in an R2 Low Density Residential Zone or that warrants an E3 Environmental Management Zone.

Acid sulphate soils

The subject site has no evidence of acid sulphate soils that would constrain an R2 Low Density Residential Zone or warrant an E3 Environmental Management Zone.

Threatened species habitat

As mentioned above, the subject site is not identified as containing a threatened or rare community in the Significant Vegetation Constraints Land Map in the Draft Strategic Review, and further the specialist Flora and Fauna Assessment prepared by Cumberland Ecology for the site finds that there is no threatened flora species or EECs on the site, no evidence of threatened fauna on the site, and limited habitat significance on the site. The specialist Flora and Fauna Assessment demonstrates that the vegetation on the subject site does not exhibit any special ecological, scientific, cultural or aesthetic value that warrants an E3 Zone or precludes an R2 Low Density Residential Zone.

2.2 Assessment of Secondary Environmental Constraints, Infrastructure and Planning Considerations

The secondary environmental constraints and planning considerations methodology used in the Strategic Review includes the following:

- Isolated and constrained;
- Physical and human infrastructure;
- Cultural Heritage;
- Bushfire;
- Proximity to centres;
- Proximity to public transport;
- Availability to connect to water, sewer and electricity;
- Telecommunications buffer;
- Riparian corridor;
- Significant vegetation;
- Wildlife Corridor and Core Habitat;
- Threatened Species;
- Flooding; and
- Wetland Buffers

An assessment of the secondary constraints and considerations relating to the subject site based on the detailed findings in the specialist environmental planning studies supporting the enclosed JBA Planning Report is provided below.

Isolated and constrained

The subject site is adjacent to an established residential zone and associated infrastructure, and it is not isolated to warrant an E3 Zone. The location of the subject site adjacent to an existing residential neighbourhood is suitable for an R2 Low Density Residential Zone.

Physical and human infrastructure

The subject site is adjacent to the physical and human infrastructure in the established residential suburb of Cromer and the northern beaches as described in the enclosed JBA Planning Report which shows the community infrastructure in the area including schools, child care, parks, beaches, clubs and community centres, police stations and medical facilities. The location of the subject site with its proximity to physical and human infrastructure in the locality is suitable for an R2 Low Density Residential Zone.

Cultural Heritage

A specialist aboriginal archaeological assessment of the subject site prepared by Mary Dallas supports the enclosed JBA Planning Report and finds that there are no aboriginal sites or objects found in field survey or documented on the subject site to warrant an E3 Zone or preclude an R2 Low Density Residential Zone.

Bushfire

A specialist Bushfire Assessment prepared by BES for the subject site supports the enclosed JBA Planning Report and was updated in 2009. The assessments demonstrate that the bushfire hazard in bushland to the north is not prohibitive to an R2 Low Density Residential zoning on the subject site, and that appropriate bushfire protection measures can be implemented to support housing on the site and also provide better bushfire protection for adjacent residential properties.

Proximity to centres

The subject site is located on the edge of the residential suburb of Cromer approximately 1.5km from two neighbourhood centres and the industrial zone at Cromer, and 4km from the Dee Why major centre. The location of the subject site with its proximity to centres is suitable for an R2 Low Density Residential Zone in the same way as the existing R2 Zone on adjacent land.

Proximity to public transport

The subject site is identified within 400m of a bus stop in the Proximity to Public Transport Infrastructure Map in the Draft Strategic Review. The bus stops are for the 178 and E78 bus routes at Cromer which provide direct bus route to and from Dee Why town centre, Warringah Mall shopping centre and Sydney City. The location of the subject site with its proximity to public transport is suitable for an R2 Low Density Residential Zone.

Availability to connect to water, sewer and electricity

The specialist Engineering Assessment of Constraints and Opportunities for Rezoning prepared by the engineers Patterson Britton and Partners Pty Ltd and used in the enclosed JBA Planning Report finds that the full range of utility services (water, sewer, gas, electricity and telecommunications) are available adjacent to the subject site and can be extended to service housing on the site, particularly as the site is contiguous with an existing urban area. The availability of utility infrastructure contributes to the suitability of the subject site for an R2 Low Density Residential Zone.

Telecommunications buffer

The subject site is not known to be in any telecommunications buffer that would warrant an E3 Zone or preclude an R2 Low Density Residential Zone.

Riparian corridor

As mentioned in Section 2.1 above, the subject site is not identified in the Riparian Constraints Land Map in the Draft Strategic Review as having significant riparian zone or buffer that warrants an E3 Zone or precludes an R2 Low Density Residential Zone.

Significant vegetation, Wildlife Corridor and Core Habitat, and Threatened Species

As mentioned in Section 2.1 above, the subject site is not identified as containing a threatened or rare community in the Significant Vegetation Constraints Land Map in the Draft Strategic Review. Further, the specialist Flora and Fauna Assessment prepared by Cumberland Ecology supporting the enclosed JBA Planning Report finds that there is no threatened flora species or EECs on the subject site, no evidence of threatened fauna on the subject site, and limited habitat significance on the site given the extent to which the scrub and woodland communities are represented in the area. The assessment demonstrates with detailed specialist evidence that the vegetation on the subject site does not exhibit any special ecological, scientific, or biodiversity value or natural landscape value that precludes an R2 Low Density Residential Zone or that particularly warrants an E3 zone.

The visual landscape analysis in the enclosed JBA Planning Report demonstrates that the subject site on the mid-slope bench with scrub and low woodland does not have any special visual landscape or aesthetic value that warrants an E3 zone and is not prohibitive to an R2 Low Density Residential Zone.

Flooding

The subject site does not contain any flood prone land that constrains or poses a risk to housing in an R2 Low Density Residential Zone or that warrants an E3 Environmental Management Zone.

Wetland Buffers

The subject site does not contain any wetland or wetland buffer that constrains an R2 Low Density Residential Zone or that warrants an E3 Environmental Management Zone.

4. SUMMARY AND CONCLUSION

This submission and the enclosed JBA Planning Report demonstrate with an evidence base of detailed specialist environmental planning studies that approximately 4.5ha. of the surplus Cromer Golf Club land is suitable for low density housing, and we request this subject site be zoned R2 Low Density Residential in Warringah LEP 2011. The subject site is not found to exhibit any 'special ecological, scientific, cultural or aesthetic value' or significant 'natural landscape' value to meet the objectives of the E3 Environmental Management Zone. The site is physically capable of supporting housing development without unreasonable environmental impacts or risks, and is in a location with existing infrastructure and a level of accessibility to centres and public transport suitable for low density urban housing.

The proposed R2 Low Density Residential Zone on the subject site is consistent with the adjoining land to the south which had more significant constraints and was previously rezoned by the NSW Government for low density housing in the 1990's. The proposed R2 Zone on the subject site would facilitate the development of new detached houses to make a modest, but not insignificant, contribution to the supply of housing choices on the northern beaches of Sydney to meet housing demand. It would also facilitate continued environmental management on Cromer Golf Course including substantive water conservation measures and formalised public access around the foreshore of Narrabeen Lagoon.

The table on the following page provides a summary of findings from the specialist environmental planning studies used in the enclosed JBA Planning Report against all of the primary and secondary environmental constraint criteria in the Draft Strategic Review demonstrating the merit of an R2 Low Density Zone on the subject site and its limited environmental value for an E3 Zone.

If you have any queries about this submission or would like to discuss it further, please contact me on awplanning@outlook.com or on 0412 575 942.

Yours sincerely

Andrew Wilson
PIA Certified Practising Planner

Environmental Constraint Criteria used in Draft Strategic Review	Summary of Findings for Subject Site in Specialist Environmental Planning Studies Used in Enclosed JBA Planning Report
Primary Constraint	
Riparian	No riparian zone or buffer.
Significant vegetation	No threatened flora species or communities and no evidence of threatened fauna. Limited habitat significance as vegetation is well represented in the area. No special visual landscape or aesthetic quality due to limited visibility of land from surrounding areas.
Wetland buffers	No wetlands or buffers.
Slope	No steep slope or evidence of land instability.
Designated wildlife corridor / core habitat	No threatened flora species or communities and no evidence of threatened fauna. Limited habitat significance as vegetation is well represented in the area.
Flooding	No flood prone land.
Acid sulphate soils	No evidence of acid sulphate soils.
Threatened species habitat	No threatened flora species or communities and no evidence of threatened fauna. Limited habitat significance as vegetation is well represented in the area.
Secondary Constraint	
Isolated and constrained land	Site is adjacent to an established urban area and is not isolated.
Physical and human infrastructure	Physical and social infrastructure available in the surrounding urban area.
Cultural Heritage	No Aboriginal sites or objects found in field survey or documented, and no known European heritage.
Bushfire	Bushfire hazard is not prohibitive to housing with appropriate bushfire protection measures.
Proximity to centres	Proximity to centres is commensurate with low density housing.
Proximity to public transport	Public transport within 400m is suitable for housing.
Availability to connect to water, sewer and electricity	Utility services are available from adjacent residential neighbourhood.
Telecommunications buffer	No known telecommunications buffer.
Riparian corridor	No riparian zone or buffer.
Significant vegetation Wildlife Corridor and Core Habitat Threatened Species	No threatened flora species or communities and no evidence of threatened fauna. Limited habitat significance as vegetation is well represented in the area.
Flooding	No flood prone land.
Wetland Buffers	No wetlands or buffers.

Submission Number: 49

Andrew Nicholls, French Forest

Dear Sir/Madam

The Oxford Falls area is a unique part of the Northern Beaches region. It is the 'green lungs' of Sydney, adjoining national parks and recreational areas. It is a place of natural beauty and tranquillity enjoyed by locals and visitors alike. There are very few cities in the world with such bucolic ambience such a short distance from the Central Business District. It needs to be preserved for future generations.

We support the proposed preservation of this area with low impact uses and support the approach in the Strategic Review.

Andrew & Sarah Nicholls

Submission Number: 50

Stuart Davey, Oxford Falls

To Whom it may concern,

I am writing with regards to the Draft Oxford Falls and Belrose North Strategic Review. My family and I have been residents of Oxford Falls for 10 years. I have several objections with regards to how this process has been developed for E3 zoning.

Site Analysis.

The recent site analysis that was done on my property and neighbouring properties is flawed. The vegetation component of my property is more like 85 - 90% cleared not 70%. The use of site is rural and not residential as noted .I also have farm buildings which is deemed to be agricultural not domestic as noted. I have horses on adjustment along with stables ect. It seems to me that the analysis is trying to be in favour of residential and not rural which the area has been for 100 years or so.

I believe that the environmental constraints with regards to my property have also been changed. In the Non-Urban Land Study of 2000 we were considered as no significant constraint on development. This has since been changed.

How can Terrey Hills have a zoning of RU4 Primary production of small lots which are houses on 5acre lots. These properties are considered rural. Oxford Falls is exactly the same as Terrey Hills, small acreages close to bushland etc. but is considered residential.

E3 zoning in Oxford Falls with have a myriad of effects

- loss of property values
- result in our properties being used as vegetation buffers
- possible rehabilitation of land cleared more than 100 years ago
- restrict what land owners will be able to do with our properties
- affect our property rights

It seems to me Warringah council and NSW Planning and Infrastructure are trying to make Oxford Falls residential instead of the suburbs true identity rural / agricultural to help push E3 through. Therefor I strongly object to the zoning of E3. I also believe enough time was not given for residents to formulate objections.

Kind Regards

Stuart Davey

Friends of
Narrabeen Lagoon
Catchment

P.O. Box 845, Narrabeen NSW 2101

7th August 2013

Department of Planning and Infrastructure, GPO Box 39 SYDNEY NSW 2001

ofbn-review@planning.nsw.gov.au

Oxford Falls Valley and Belrose North Strategic Review

ENVIRONMENTAL ZONE

The outcome of the Strategic Review is that much of the land within the study area is recommended to be zoned E3 Environmental Management in WLEP2011. This is consistent with the Draft WLEP2009 translation, apart from specific sites or areas proposed for RU4, R5, R2 or SP2.

An environmental zone, E3 or E2, is supported as an appropriate translation of the Oxford Falls Valley Locality and Belrose North Locality in WLEP2000. Environmental clauses in the desired future character of WLEP2000 provide a threshold test for development in these non-urban Localities and should be adopted as key land use objectives in the standard zone in WLEP2011.

Permissibility of seniors housing

The current SEPP (Housing for Seniors or People with a Disability) does not apply to land that is zoned for environmental protection. This exemption avoids land use conflicts resulting from development that is not compatible with the environmental values of non-urban land.

It is acknowledged in the report that the LEP2000 incorporated the provisions of an earlier SEPP 5 (Seniors Living) and was not updated to include more restrictive controls that exclude seniors housing on environmentally sensitive land. The environmental zone provides this update.

NSW PLANNING REFORMS

The proposal to merge the E3 zone with rural landscape and transition to become RURAL may not provide adequate protection for environmental values within the non-urban land. Instead, non-urban land that is to be protected should be zoned E2 for environmental protection.

ABORIGINAL LANDS

The E2 zone should be also applied to protect Aboriginal heritage land. If the land is protected under the NPW Act, the E1 should apply.

E3 ZONE

Additional Land Use Objectives

WLEP2000 – Desired Future Character

The Oxford Falls Valley Locality currently includes the following clauses:

- "*There will be no new development on ridgetops …* "
- "*Development in the locality will not create siltation or pollution of Narrabeen Lagoon and its catchment*."

As part of the translation, the E3 zone should include similar objectives, such as:

- To protect the scenic amenity of Narrabeen Lagoon Catchment
- To protect catchments, waterways and aquatic habitat

Supporting Reasons for additional clauses:

- Catchment protection is highly relevant.

- The clauses are consistent with specific requirements relating to Narrabeen Lagoon Catchment that were incorporated into WLEP2000
- The clauses replicate WLEP2000 Clause 60: '*To maintain and enhance watercourses and aquatic habitat*.

Primary Environmental Constraints include wetland buffers and other natural features. Protection should be afforded to these areas PRIOR to the development assessment phase. To achieve this outcome, the protection of wetland buffers (and other natural features) could be included as an objective in the zone.

It is preferable to incorporate the planning controls into WLEP2011, as the development controls in the WDCP are considered as guidelines.

R5 (LARGE LOT RESIDENTIAL) ZONE

An R5 Large Lot Residential Zone is recommended for properties that are currently utilised for such a purpose and that are generally located at the interface of environmentally sensitive land along one boundary and urban land along the other.

The R5 zone has not yet been adopted in Warringah. The R5 zone is generally located at the interface of environmentally sensitive land and urban land. However, the sites proposed for R5 also contain land with environmental values.

<u>Forest Way East</u>

The southern portion has the following features:

- Very steep slopes at the rear
- Existing vegetation, particularly on the slopes
- Prominent ridge and vegetated slopes that contribute to scenic amenity
- Proximity to wetland buffer

In the proposed R5 zone the land falls away very steeply. The planning controls should ensure that development is set back from steep, visually prominent areas and existing vegetation retained. For these portions of land the E3 zone would be more

appropriate. As the report states: E3 can also be applied as a 'transition area' between high conservation areas and intensive land uses.

Wyatt Avenue (Belrose North)

- High bush fire hazard
- Interface with environmentally sensitive area
- Located on prominent slope and ridge
- Rear overlaps riparian constraints

Residential sites along the north of Wyatt Avenue contains cleared land. However, the land is very steep at the rear upstream of a waterway. These sites have environmental values by virtue of their location within Middle Harbour Catchment and environmentally sensitive areas.

In WLEP2000 Belrose North Locality, a minimum of 50% of the site is to be retained as bushland or landscaped with local species: Bushland setting*: A minimum of 50 per centre of the site area is to be kept as natural bushland or landscaped with local species.*

In WLEP2011 this requirement should be retained in the Belrose North Areas as part of the translation of WLEP2000. The requirement is particularly relevant where the rear of the lots have a steep gradient and adjoin natural areas.

The objectives in R5 and RU4 should be just as strong as the desired future character in WLEP2000.

Site Compatibility Certificate

A particular concern is that the R5 allows for an application for a Site Compatibility Certificate for Seniors Housing. The R5 zone would potentially allow seniors housing on the whole site. However, areas that contain steep slopes should set aside for the purpose of providing setback and buffer areas, or protecting scenic amenity.

RU4 ZONE (Belrose North)

Area 11 (Land west of Forest Way)

The Additional Uses in Schedule 1 would apply to a large area with a range of existing land uses such as dwellings, plant nurseries and schools. The Additional permitted uses include more intensive land uses compared with the existing and RU4 permitted uses. This does not appear to be an accurate translation of WLEP2000 and could change the low intensity use of the land.

WLEP2011

Clause 5.3: Development near zone boundaries

This clause does not apply to the E3 zone. However, it would apply to R5 (which is not currently included in WLEP2011) unless the clause is amended. This clause helps to prevent 'development creep' from occurring in the E3 zone where it adjoins urban areas. For the same reason, the R5 zone should also be excluded.

Clause 6.6: Erection of dwelling houses in Zone E3 Environmental Management

This clause should continue to apply to non-urban land within the study area, as it "applies to both localities in their entirety under WLEP2000". Clause 6.6 also contains land use objectives:

- *to protect and enhance the ecological values of natural watercourses and natural bushland in the zone,*
- *to maintain and enhance the scenic quality of the zone including landforms and vegetation,*
- *to minimise siltation and pollution of Narrabeen Lagoon and its catchment.*

NSW PLANNING REFORMS

The White Paper (page 95) shows:

Existing zones in the Standard Instrument LEP - *together with* - Indicative zones in the Local Plan

In the NSW planning reforms:

- The E3 could merge with rural landscape and transition to become rural.

- The R5 could be included in a broad residential zone together with general, low and medium residential.
- The E2 could combine with E1 (National Parks and Nature Reserves) and W1 (Natural Waterways) to become environmental protection and hazard management.
- The RU4 zone could merge with primary production and forestry to become resource.

The introduction of an additional R5 zone into WLEP2011 contradicts the proposal in the planning reforms to reduce the number of standard zones.

ATTACHMENT

Re Narrabeen Lagoon Catchment

There are concerns about the implications of the proposed E3 Environmental Management zone for non-urban land within the Narrabeen Lagoon Catchment. Some of these concerns are listed below:

- The E3 zone includes areas that are more suitable for environmental protection and therefore warrant an E2 zone. If not zoned E2, how will these important natural areas be protected from development?

- Even with a minimum lot size of one dwelling per 20 hectares, the potential environmental impacts of development within natural areas is considerable: Extensive clearance of bushland would be required for bushfire hazard reduction, and associated infrastructure such as roads, services would mean the inevitable fragmentation of habitat.

- The approval of dwellings in natural areas would result in land use conflicts e.g. between recreational use, construction, and access for private vehicles.

- Exempt and complying development would be permitted in the E3 zone. The only exception is for land where 'environmentally sensitive area for exempt or complying development' applies e.g. land identified with a prescribed hazard rating relating to landslip, acid sulphate soils or flooding. Also, importantly, areas identified for heritage or conservation in the LEP.

- The proposed E3 zone in the draft LEP does not adequately protect biodiversity or prevent the fragmentation of bushland areas.

- The natural and cultural heritage value of non-urban areas is not adequately protected under the E3 zone.

Natural areas within the Narrabeen Lagoon Catchment area protect biodiversity, habitat and waterways and are a regionally significant resource. A specific concern is that the proposed E3 zoning will not achieve adequate protection for bushland areas within the Catchment.

The E2 Environmental Protection zone would be more appropriate for core habitat and other areas that should be protected from development.

Yours sincerely,

Tony Carr
President

Hon Brad Hazzard
office@hazzard.minister.nsw.gov.au

RE: Inaccurate rezoning of Oxford Falls Valley to E3 zone.

In previous correspondence to you (email dated September 3, 2011) I have welcomed your common sense approach when suggesting local council works with local landowners to determine appropriate land use. I also welcomed your support on the issue. Again I need to ask for your support as the process of working with landowners seems to have a very one sided approach.

Warringah Council investigated local land holdings to perform a "Site Analysis" on our land, without us as landowners, being present. This analysis was used to determine the proposed zoning of E3 on our land. I bring to your attention the inaccuracy of this assessment which has been used to make an inaccurate assessment of E3 zoning on our land. The re-assessment appears to have been completed by the same body that originally assessed the area. This demonstrates a lack of transparency, lacking an independent review. Obviously the reassessment cannot be impartial as they would be inclined to vindicate their original findings.

I've attached a copy of the Site Analysis Sheet for your reference (figure 4). I disagree with the analysis of my property for the following reasons;

1. **Adjoins Bushland** – incorrectly noted on the Site Analysis.
    a. Our property, Lot 1 Wearden Road is bound by private property on 3 boundaries (E,W,&N) and fronts Wearden Road. Our boundaries do not adjoin bushland .
    b. Our rear vehicular access to our property/ right of way over driveway adjoins Oxford Falls Peace Park. The Peace Park seems to have escaped the E3 zoning yet our rear boundary forms part of the peace park? This is inconsistent and indicates that Council itself does not want the restricted use of E3 zoning on its own infrastructure/land. The Council should treat their own assets in the same manner as they treat private individuals. There cannot be two separate rules.
2. **Vegetation** – incorrectly noted as 80%, cleared paddocks.
    a. The percentage cleared indicates that our property has 20% of natural bushland on it. This is incorrect. The property only has scrappy scrub at the rear of the property and the rest of the property is cleared to the boundaries. Removing this from the equation leaves our property around 95% cleared.
        i. Our property has rear vehicular access, approved in our DA which is to be a cleared roadway, removing any scrub for use of this land.
        ii. The scrub that is there consists of Lantana, Privet, Blackberry amongst other weeds scheduled for removal, leaving the small number of trees in place.
        iii. Inspectors may have noted bushland along the Western boundary in their considerations. I note that the trees are in the Western neighbours boundary and do not belong to our property.
    b. Cleared paddocks – I note that the cleared paddocks are horse paddocks. They are fenced, gated and the horse float parked in our front yard is a clear give-away for this, which was not noted on the analysis. Please refer to point 5:a below.
3. **Proximity to telecommunications**. – Incorrectly noted to be 1000-1500mtrs away.
    a. Our closest telecommunications point is less than 500 metres from our property and is located at the front of Oxford Falls Peace Park.
4. **Environmental Constraints** Incorrectly noted 100% moderate.
    a. I refer to previous research performed by Warring Council, Figure 3 Oxford Falls Valley Limitations/Restricted Areas map, Planning Assessment Commission 2009. This map indicates that our property has no environmental constraints on it. See map Figure 3.

5. **Site Visit Analysis** – Use of site.
    a. The form indicates our property is residential use. This is incorrect. Our property is used for rural use as we run horses here. I've previously indicated this in point 2:b above.

On this matter I bring to your attention that we have DA approval for horse stables on our land. Our builder went bust during the HIH Insurance crash and we haven't recovered enough to build them yet, but intend to soon. E3 Environmental Management prohibits Seniors Housing and even granny flats which are currently permissible under the B2 locality. This is a serious reduction of landholders land use rights not even to be able to have a granny flat which is permissible in B2 or to be able to look after your own parents or parent in-law's.

As you can see the assessment made of our property is extremely inaccurate and should not form the basis of council's assessment of E3 zoning. Use of this analysis indicates failure in due process on Councils behalf.

I bring to your attention the inaccuracies of the draft land use analysis map as attached and in figure 1.

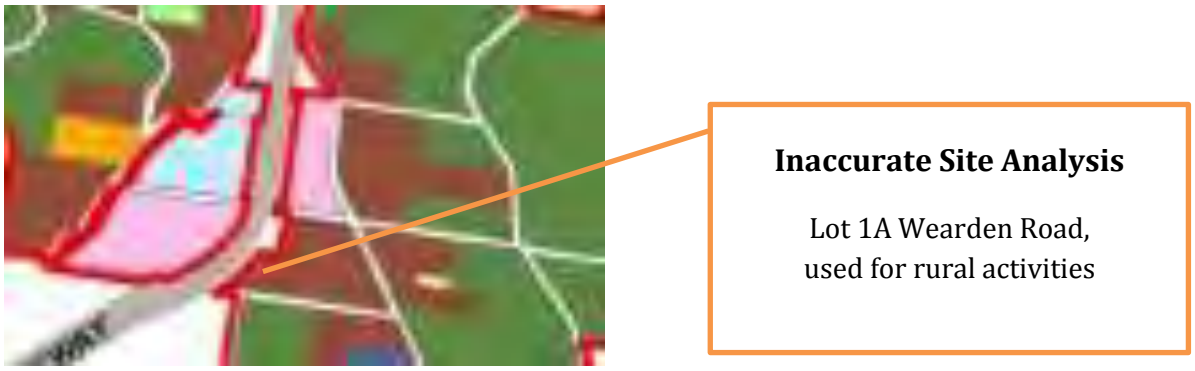


Figure 1 Warringah Council Map 3_Landuse Analysis.pdf, Draft Oxford Falls Valley and Belrose North Strategic Review document

This map indicates that properties are residential dwelling only. Below I point out the inaccuracies of this assessment.

a. Our property on Wearden Road is shaded brown to indicate it is a dwelling only. This is not correct. Our paddocks are used for equine activities including agistment and should be referred to as dwelling-rural use as per similar properties with equine usage.
b. The properties on our Easter, Western & Northern boundaries are inaccurately evaluated as they are also used for equine activities and should also be referred to as dwelling-rural use (R2 or R4).
c. The aerial image below indicates equine related land use in the area. I highlight of these alterations in orange.

Figure 2 Equine Usage around Wearden Road

Previous Research by council.

The below map indicates evaluation of the Oxford Falls Area, in 2009 which indicates our property has previously been assessed as showing no significant impact on the environment. Map attached and below. The land use has not changed in the last 5 years since this evaluation. A change in your evaluations begs the question why Council see fit to rezone areas to suit themselves, especially as the decision is being made on inaccurate findings and contradicting information.

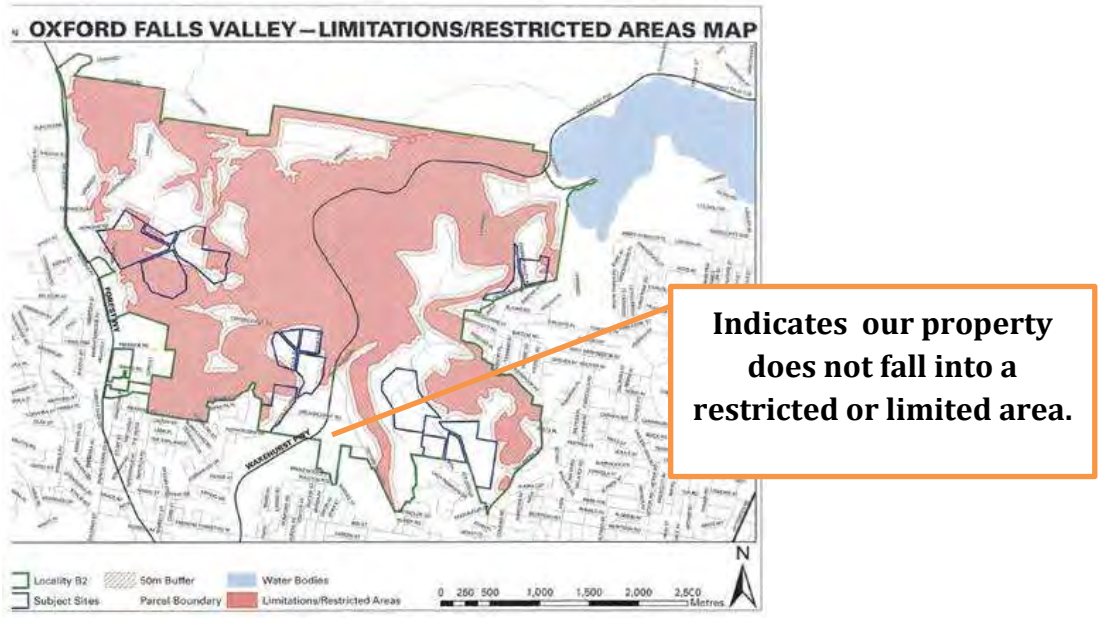


Figure 3 Oxford Falls Valley Limitations/Restricted Areas map

There has been some discussion at Council gatherings regarding zoning of IDO51 in Belrose. I point out that the minimum lot size of 50 acres was devised to stop a subdivision by Hawker-Siddeley, which is now known as the Garigal National Park and in a land swap, created Austlink Business Park. This decision is being used as an evaluation point in the E3 rezoning discussion which is not relevant to this area. The IDO51 is no longer appropriate on the land and holds no bearing in the E3 rezoning discussions. The landowners ask that the IDO51 should be removed and our zoning be similar to Terrey Hills and Duffy's Forest as the land has similar attributes and usage as the Oxford Falls Valley.

Based on the findings of the Non-Urban Land Study in prepared by PPK Consultants in 1998, the area is considered relatively unconstrained and has the potential for higher intensity development, including for example residential or at the very least rural-residential subdivision. We note and generally concur with the recommendations of the submission by the Warringah Urban Fringe Association dated 2nd December 2012 particularly with regards to Precinct 12 (Oxford Falls Road South East). It states the preference of residents in this area is for a rezoning to R5 (Large Lot Residential), with a minimum lot size of 2,000m2.

I also point out that following the public meetings, council officers implied that residents are satisfied with the findings and zonings. I can speak for many others when I say that this is a misconception. I am not satisfied with my property use being restricted with an E3 zoning. I am particularly dissatisfied with the zoning and the process of analysis.

I make note that in the Department of Planning Practice note,PN09-002, page 7, as attached, indicates that E3 zoning is generally not intended for clear land and that councils should choose uses that do not have an adverse effects on the values of the land. The document goes so far as to direct councils to choose a rural zone rather than an E3 zone as it is more appropriate.

I make note in regards to my parent's property on the corner of Wearden & Oxford Falls Road that it has also fallen victim to incorrect rezoning and include it in my request. As I've previously mentioned in my letter in 2011, my Grandfather moved onto this land in 1911, occupying the lands now represented by our property, our Eastern neighbours and my parents property. My Grandfather ran

many agricultural activities on this land and when he got too old for these activities he excavated/quarried for loam which has removed the top layer of the property. Like many other surrounding land owners in the 1960's. It is very hard to see how the land as it is today could have any significant environmental effect.

In summary, I request that my land and other properties in my area be rezoned to the appropriate R2 or R4 zone as;

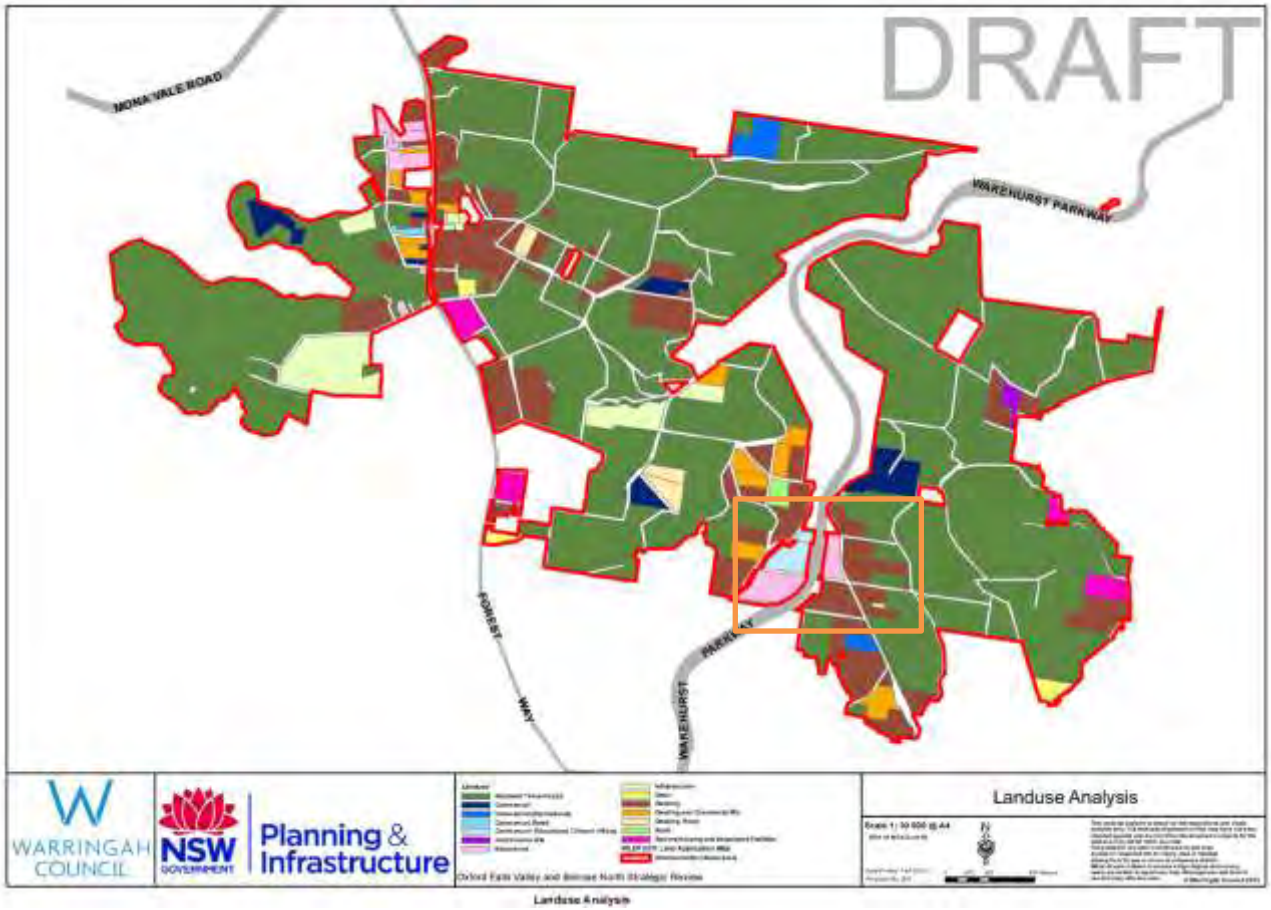
- There are no significant environmental restraints on or around my property
- The site analysis is incorrect on many accounts
- The land use map is incorrect

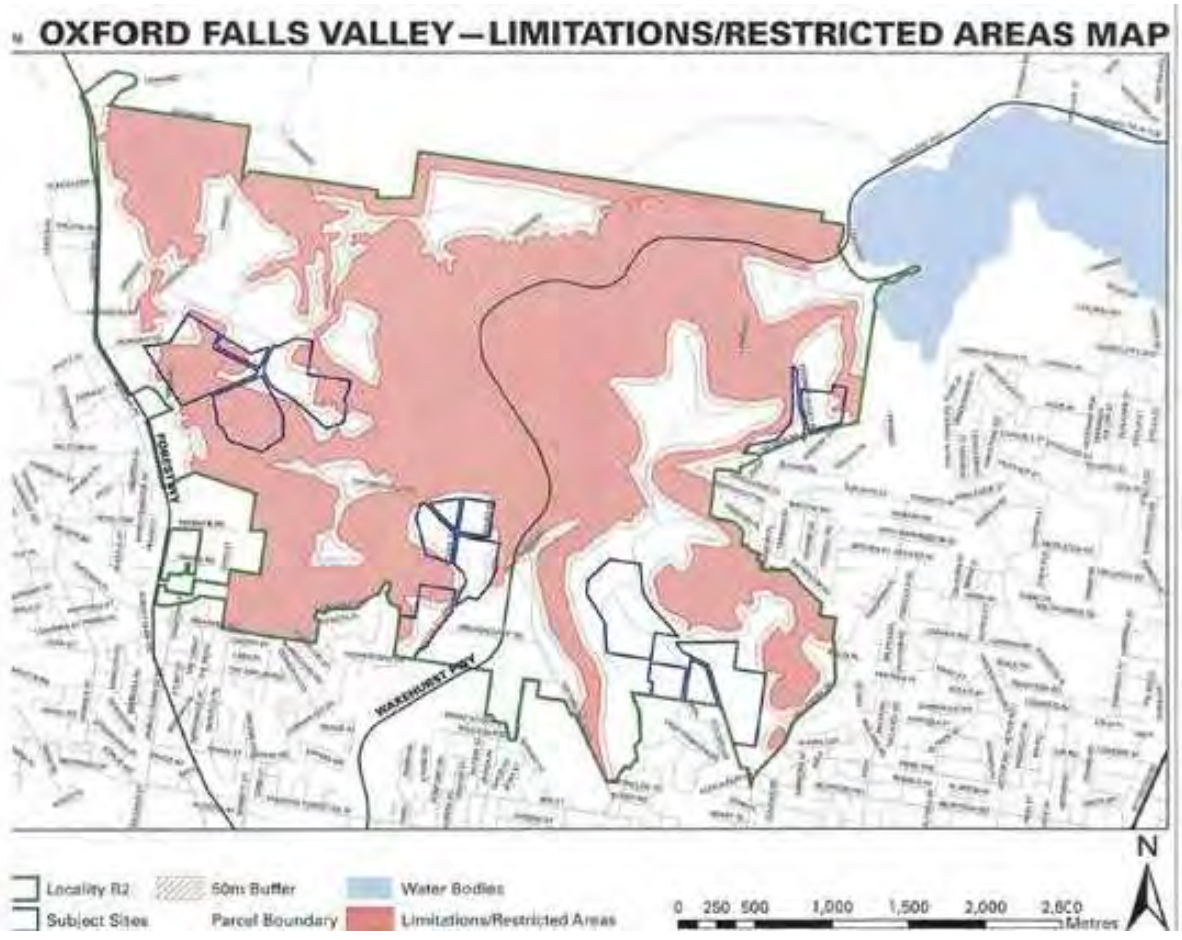
I feel this is a David & Goliath situation and again, we rely on your support to be the voice of the people in this ongoing battle to retain our land uses and values the way they were when we purchased the land as you would or any other reasonable person would expect for their property.

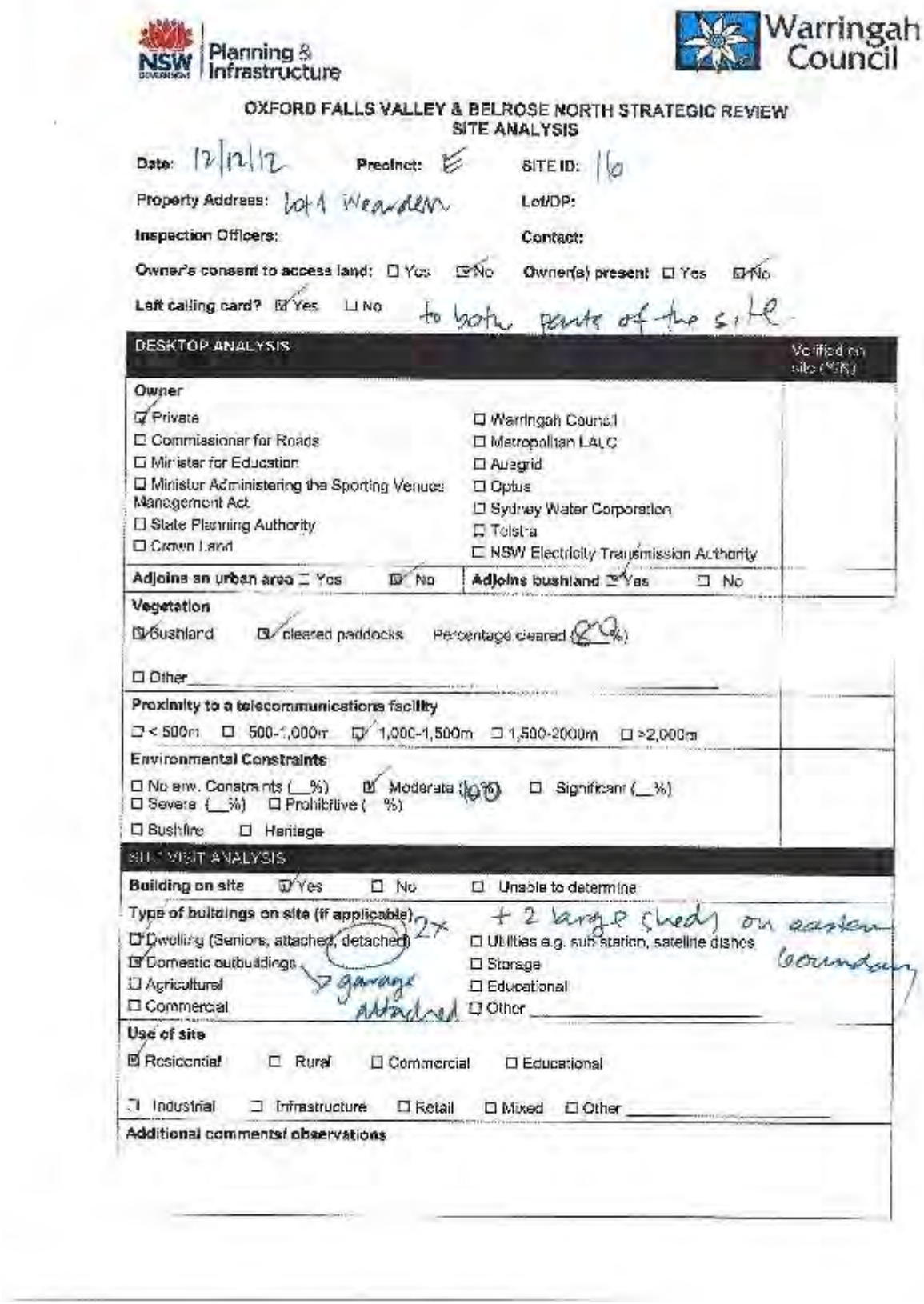
Regards,

Geoff MacGregor
0414-551-502

Attachments







NSW Planning & Infrastructure

Warringah Council

OXFORD FALLS VALLEY & BELROSE NORTH STRATEGIC REVIEW
SITE ANALYSIS

Date: 12/12/12 Precinct: E SITE ID: 16

Property Address: lot 1 Wearden Lot/DP:

Inspection Officers: Contact:

Owner's consent to access land: ☐ Yes ☑ No Owner(s) present ☐ Yes ☑ No

Left calling card? ☑ Yes ☐ No to both ends of the site.

DESKTOP ANALYSIS — Verified on site (Y/N)

Owner

- ☑ Private
- ☐ Commissioner for Roads
- ☐ Minister for Education
- ☐ Minister Administering the Sporting Venues Management Act
- ☐ State Planning Authority
- ☐ Crown Land
- ☐ Warringah Council
- ☐ Metropolitan LALC
- ☐ Ausgrid
- ☐ Optus
- ☐ Sydney Water Corporation
- ☐ Telstra
- ☐ NSW Electricity Transmission Authority

Adjoins an urban area ☐ Yes ☑ No | **Adjoins bushland** ☑ Yes ☐ No

Vegetation

☑ Bushland ☑ cleared paddocks Percentage cleared (20%)

☐ Other

Proximity to a telecommunications facility

☐ < 500m ☐ 500-1,000m ☑ 1,000-1,500m ☐ 1,500-2000m ☐ >2,000m

Environmental Constraints

☐ No env. Constraints (__%) ☑ Moderate (100%) ☐ Significant (__%)
☐ Severe (__%) ☐ Prohibitive (%)

☐ Bushfire ☐ Heritage

SITE VISIT ANALYSIS

Building on site ☑ Yes ☐ No ☐ Unable to determine

Type of buildings on site (if applicable)

- ☑ Dwelling (Seniors, attached, detached) 2x
- ☑ Domestic outbuildings → garage attached + 2 large sheds on eastern boundary
- ☐ Agricultural
- ☐ Commercial
- ☐ Utilities e.g. sub station, satellite dishes
- ☐ Storage
- ☐ Educational
- ☐ Other

Use of site

☑ Residential ☐ Rural ☐ Commercial ☐ Educational

☐ Industrial ☐ Infrastructure ☐ Retail ☐ Mixed ☐ Other

Additional comments/ observations

Figure 4 Site Analysis

Submission Number: 53
Confidential

Mr Luke O'Dwyer
Project Manager
Oxford Fals Valley and Belrose North Strategic Review
NSW Department of Planning and Infrastructure

7 August 2013

Dear Mr O'Dwyer

I am writing as the owner of the property located at [redacted] to lodge an official objection to the proposed zoning of our property as E3 following the release of the Draft Oxford Falls Valley and Belrose North Strategic Review Report.

Our understanding is that Warringah Council was asked to update their existing LEP 2000 to conform with standard documentation issued by the State Planning Department. In doing so, the Council suggested an E3 zoning for a large area of Oxford Falls and Belrose, which many residents affected objected to. The Council agreed that the zoning of those properties should be reviewed and deferred from the LEP 2009 (now LEP 2011) pending a review. Following the review our property is still being recommended for an E3 zoning.

This is unfair and illogical and will cause a reduction in property value without compensation. Our property is virtually identical in all respects to the many properties in Terrey Hills which were zoned RU4 in the draft LEP 2009 and are now officially RU4 under LEP2011. Our property consists of cleared land with a residence and facilities for horse riding and horse adjistment . In the past it has been used for a myriad of rural purposes. The NSW Planning Department has issued practice notes and PN 09-002 clearly says that E3 zoning is not intended for cleared lands. The Cleared Land Map issued by Warringah Council 2006 clearly shows that our property is cleared land. Whilst the E3 zoning may be appropriate for the uncleared land recommended for E3 zoning under the draft plan, it is not appropriate for cleared land such as mine as directed by the Planning Department.

Council has conceded that initially when translating the existing LEP 2000 into the LEP 2009 that properties were grouped together and agreed to address anomalies. These have clearly not been addressed as an E3 zoning is still being suggested for properties such as mine. In the commercial world, this would be unacceptable and should be viewed as unacceptable in government. Whilst under the review some properties have had their suggested zoning amended from E3 to RU4, a large number of similar properties have not.

In addition, the Site Analysis of my property is incorrect in a number of its conclusions. The percentage of my property which is cleared is at least 95% not the 80% as indicated in the Site Analysis (again I refer to the Cleared Land Map issued by Warringah Council in 2006). Whilst there are no definitions within the Environmental Constraints, they appear inconsistent with the land and its use. The Environmental Constraint Land Map issued by Warringah Council 2206-07 classifies the majority of our property as No Significant Environmental Constraints to Development. There are

currently stables and other buildings used to house a tractor and other pieces of rural equipment so the Types of Buildings on the Site Analysis should also include Agricultural. The Use of the Site is classified as Residential and Commercial and the Additional Comments/Observations make note of horse stables and hence Rural should also be ticked as one of the uses of the site. The Additional Comments/Observations refer to a horse stable but should also include horse riding, training and breeding facilities as well as fully fenced paddocks for housing animals. My husband is a primary producer and each breeding season uses the property for raising calves as part of his business.

The zoning of our property as E3 takes away existing rights and reduces the future uses of our property and its value. Council has as yet not suggested it is willing to compensate land owners for the reduction in property value as a result of the rezoning. There has been some suggestion that Council has used this process to limit development in the area. The Development Application process is already in place for Council to control overdevelopment of the area. Using the opportunity to implement updated documentation should not be an excuse or opportunity for Council to downzone the existing rights of land owners. Council has the responsibility to act in the best interests of its land owners and not degrade and devalue their rights.

In September 2012 the Minister for Planning and Infrastructure Brad Hazzard MP refused to endorse the use of E2 and E3 environmental zones on land that is clearly rural in LEP's on the Far North Coast. The Minister for the Far North Coast Don Page said "These proposed zones and overlays have the potential to limit existing agricultural and other rural uses without a valid evidence base. There are also very strong concerns that these restrictive controls could reduce the value of existing properties. The NSW Government will act to ensure the rights of existing landholders are protected." The issues raised by Hazzard and Page on the Far North Coast are no different to those affecting my property and Warringah Council should respect my property rights and existing uses of my land.

I also note that the Draft Oxford Falls Valley and Belrose North Strategic Review Report was released at the start of the school holidays when I was away and therefore I request an extension so that I can obtain legal advice in regards to the report. I would also appreciate if you could provide me with the following information:

1. An explanation as to why my property has been zoned differently to similar properties in the Council (ie the similar large rural residential blocks in Terrey Hills)
2. The legislation that enables Council to amend the zoning of properties which results in a downzoning and removal of existing rights of the property owner without compensation
3. With regards to 2 above, I would appreciate specific examples where this has been a practice in the past of Council, particularly in situations similar to ours, and whether or not Council was required to defend its actions in a court of law and the legal outcome if so
4. The definitions used in the Site Analysis for the Environmental Constraints and the Use of Site
5. An explanation of why the practice note issued by the Planning Department in regards to an E3 zoning not being intended for cleared lands is being ignored

In summary, I reject and object to the zoning of my land as E3. I also would like to note the amount of time and effort that has been required by the residents to understand what has happened and defend their existing rights is ridiculous. The NSW Department of Planning and Infrastructure needs to consider how it can monitor Councils to ensure they are following the Department's guidelines particularly when they are changing zoning rights of residents in a significant way. I believe a great deal of time and expense by all parties involved could have been spared had Council followed the Department guidelines initially.

Your sincerely

[redacted]

Submission Number: 53
Helene Adams, Cromer

OxfordFalls and Belrose North Strategic Review Submitted by Helene Adams

I HAVE COMPILED THIS DOCUMENT TO BE SUBMITTED BY THE DUE DATE.

CONSIDERING MY INFORMATION WAS ONLY RELEASED A SHORT TIME AGO I RESERVE THE RIGHT TO AMEND OR ADD TO MY SUBMISSION OR SUBMIT A REPORT FROM A QUALIFIED PROFESSIONAL

Please find following my concerns regarding this review process.

I attended a meeting with Neil McGaffin on Friday 10th July 2013 to discuss our issues regarding the release of the Draft report. At this time no additional information had been released. All attendees appreciated Neil meeting with us. It became apparent at this meeting that the review process was a biased review with solely Warringah Council instead of a joint review with the Department of Planning as promised by you at our earlier meeting.

When Neil asked David Pitney why the Department had made these maps with errors, the reason David gave was that Warringah Council had produced them.

If you look on page 3-5 of the attached document, named:

2013-7-19 Determination GIPA 201213- John Holman, this is confirmed.

No scientific information was used. Maps and selected studies were supplied and produced by Warringah Council.

Other more positive and independent studies were not used (such as PKK Non urban Land Study, stage one and two or Department of Lands Assessment of Crown Lands Oxford Falls and Belrose). All crown land around Spicer rd Oxford falls was designated as " investigate disposal" as shown on included map)

Previous strategic reviews make public the review boards names and positions. Despite a GIPPA application only the positions held was released. Where is the transparency ? Why is this information being concealed?

If these same constraint map criteria were considered on other areas of the Warringah LGA then Terrey Hills, Duffys Forest, the new hospital site at Frenchs forest (which we actively support), the proposed AWT site at Kimbriki and many residential areas would be zoned E3. Instead rural and residential zones are permitted with DCP maps and guidelines to provide the necessary controls.

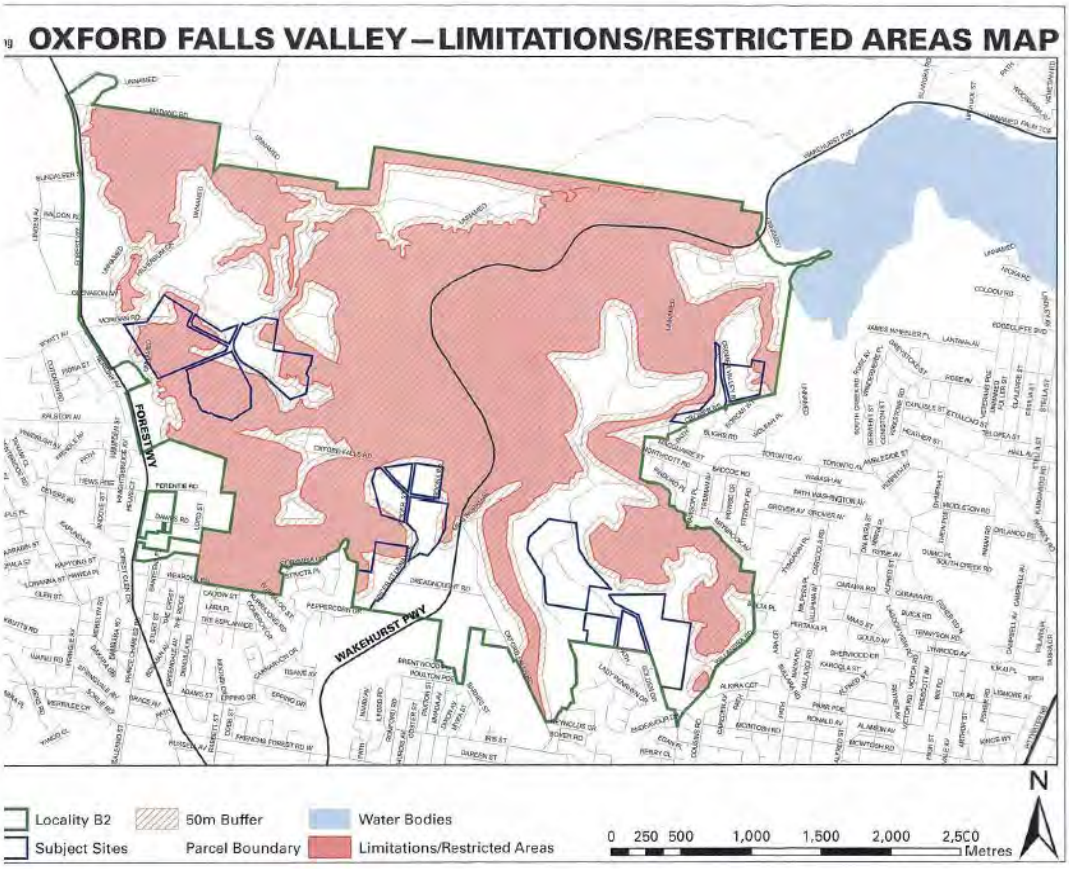
Why was Terrey Hills and Duffys Forest with similar environmental constraints and similar locality statements afforded a rural zoning?

No properties at Duffys Forest pay commercial council rates, with only the Myoora Rd area on a commercial rating.

The majority of the rural zoned properties in Duffys Forest or Terrey Hills do NOT participate in rural activities, instead are large residential properties.

Planning Assessment Commission Report 2009

On page 18 of the Report in the Conclusion it states " together with the sustainability studies carried out by the Department of Planning and Warringah Council, indicate that there are areas that do not have significant environmental constraints on urban development, see the Department of Planning's map on the next page indicating limitations and restricted areas within Oxford Falls Valley".



As the map above shows all cleared land in Cromer, Oxford falls Rd East, Spicer Rd area, and parts of Belrose north **DO NOT** have limitations to development.

2.0 STRATEGIC PLANNING FRAMEWORK (Page 6 of the OFBN Draft Report)

"2.1 NSW 2021

Finally, the Plan's goal is to place downward pressure on the cost of living. Although the strategic review will not increase the development potential of land in the study area, it will ensure that the supply of land for housing is not reduced."

E3 Environmental Management prohibits Seniors Housing and granny flats which are currently permissible under the B2 locality This is a reduction in housing.

Site Analysis Inaccuracies of 66 Northcott rd Cromer

1. Land adjoins 7 residential properties (not noted)
2. Owner – Private (not noted)
3. Vegetation Bushland ticked percentage cleared 10% indicated (inaccurate closer to 80% cleared)
4. Environmental constraints (incorrect evaluation. 5 year outdated maps used)
5. Building onsite- none (nothing ticked, ignores the fact that there are two buildings on site).
6. Use of site- none(nothing ticked, this site was a quarry up until 1985 and DA/BA for two dwellings)

We believe 80% of our site analysis is incorrect.

It should also be noted that the PAC reports indicates 95% of this property has no limitations to development.

On perusal of other site analysis documents we can see similar inaccuracies including:

Site Constraints analysis

Land uses- rural activities on site, Development applications approved, yet a large majority of Site analysis reports state Dwelling only or bushland

Sites include Oxford falls Rd, Spicer Rd, Hilversum Cres, Weardon Rd, Willandra Rd

Using the same map constraints and data in both primary and secondary site analysis?

Using information that has not been to Council or endorsed see Appendix 6, page65-66 of the Draft review.(Attachment 2 Extract from Strategic Review Report.)

Constraint 2,4,5,8.

Map 8 states that * Land containing a 'threatened community in Australia',a 'threatened community in Warringah', a 'local habitat'habitat' does not occur in the study area.

Yet all of the OFV B2 locality has been weighted as known or potential habitat.

A/374720 Oxford Falls Road FRENCHS FOREST NSW 2086

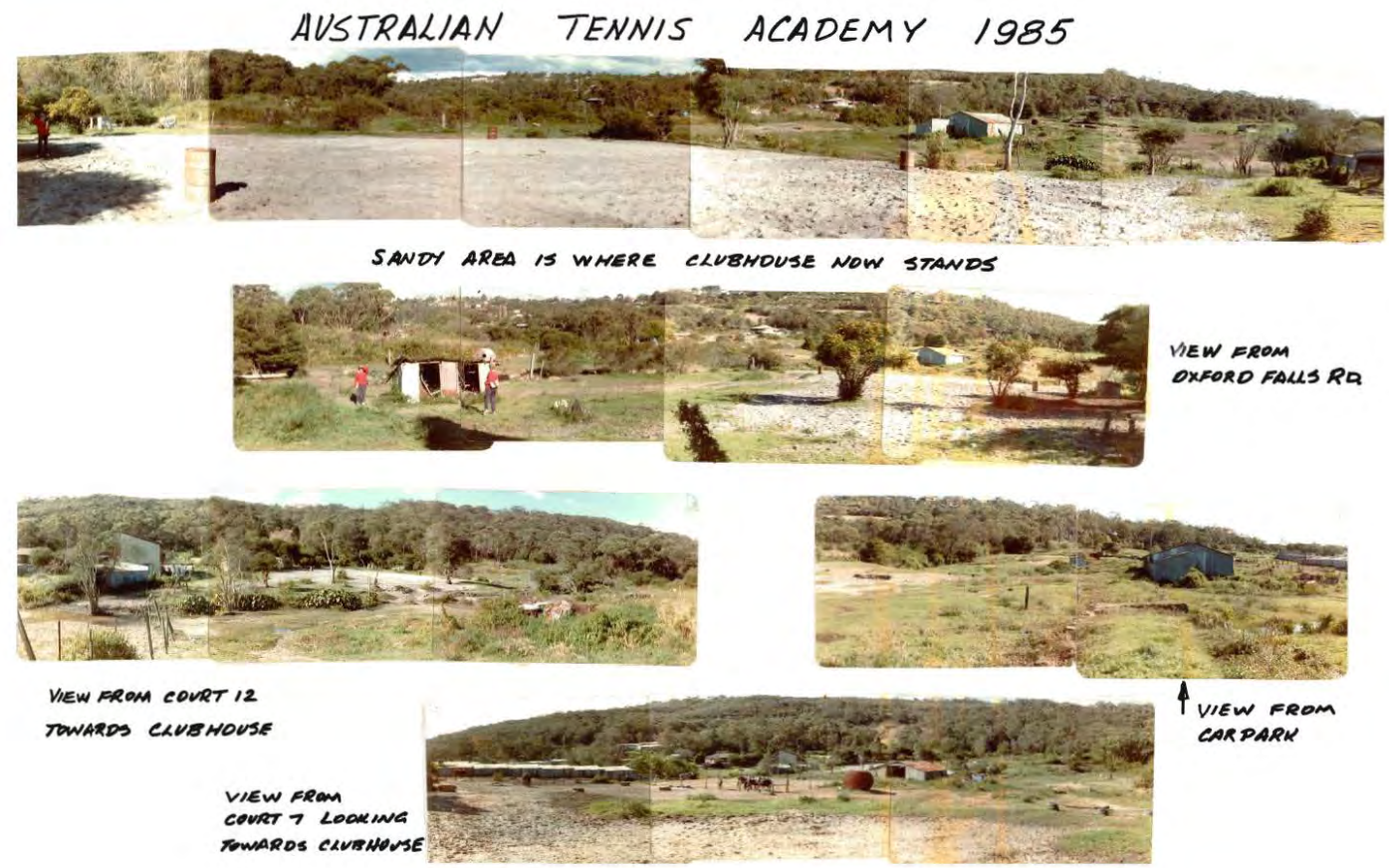
This site owned by Mr Walter Macgregor. His family has owned and lived on this property and adjoining properties for over one hundred years. Part of their adjoining family land was revoked and became the Oxford falls school and grounds. This land was later subdivided and resold by the Department of Education, where Mr Macgregor's two sons repurchased part of the subdivision building a dual occupancy.

Walter Macgregor has run an agistment boarding horse stables over more than 50% this site for over 60 years. To date this occupation continues.

The Site Land use Map for this property states land use as DWELLING ONLY

THE FALLS RETREAT TENNIS ACADEMY

The bus stop outside this property has not been identified.



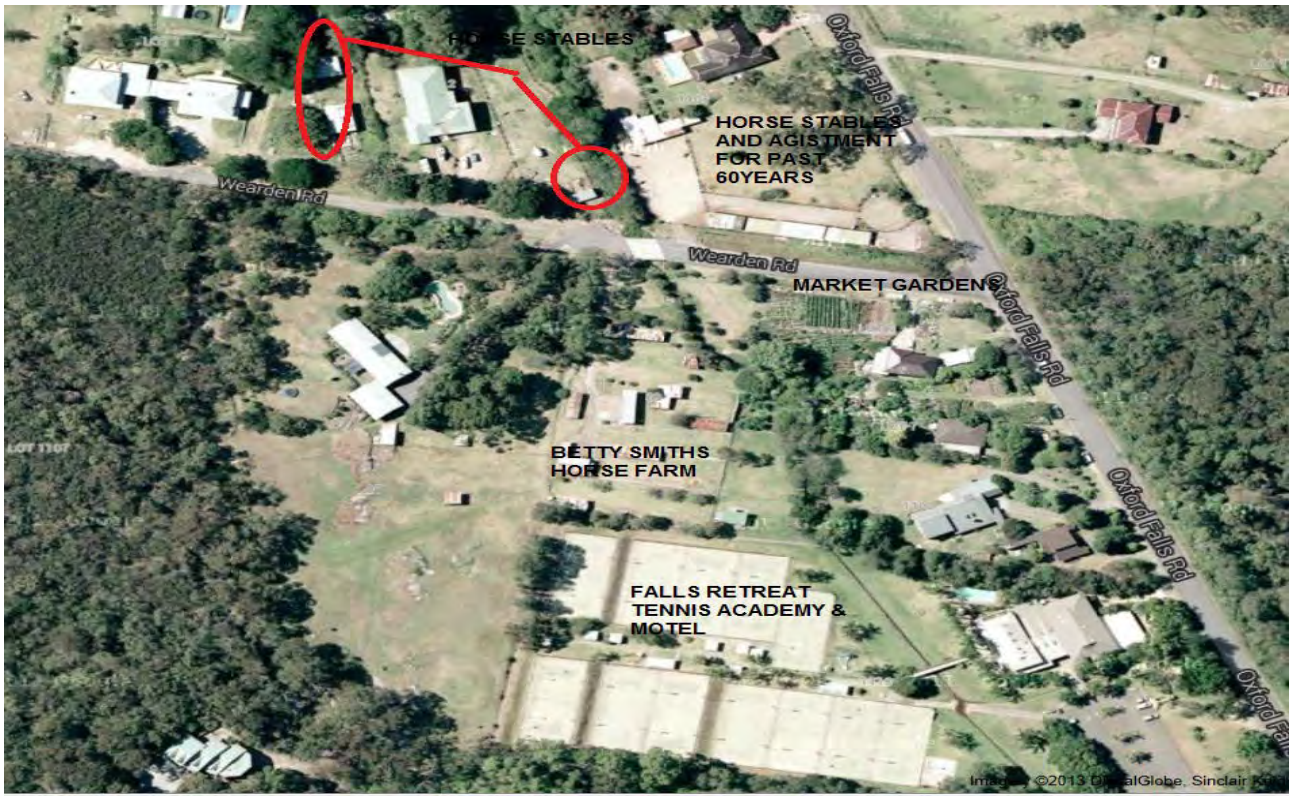
The photograph above shows the condition of this property in 1985

As you can see it has no environmental value, being used as a horse riding training school and previously denuded of topsoil and loam.

This properties present beauty is only a result of investment in time and money by the current owners.

If this property had been left in its 1985 condition and the E3 zoning was now imposed, the E3 zoning would only permit an increase of the shed by a maximum of 10%(Existing Uses) and leave it for eternity in its derelict condition.

Where is the public benefit in that? There is something wrong with this methodology.



IMPROVED ENVIRONMENTAL PRACTICES AND CREEK REHABILITIAN WAS UNDERTAKEN BY THE OWNERS OF THE TENNIS ACADEMY AND MOTEL

SITE ANALYSIS STATES 100% MODERATE CONSTRAINT. What constraints?

NOW AN ENVIRONMETNAL ZONE IS PROPOSED WHERE NO RENMANT BUSH EVER OCCURED

Councils Core Habitat strategy states

In addition, various Locality Statements contain clauses in the Desired Future Character Statement that aim to protect areas of natural habitat. These clauses may refer to cross-hatching as well as WLEP 2000 mapping provisions. The following locality statements give an indication of the approach taken by WLEP 2000 to habitat protection:

A2 Locality NOW zoned RU 4

Statement *(includesDuffys Forest)*

The desired future character of this area includes the statement:

'Emphasis will be given to protecting and where possible enhancing the natural landscape, including landforms and vegetation. The increased planting of indigenous canopy trees will be strongly encouraged.'

B2 LocalityStatement (*includescentral core bushland area of Oxford Falls*)

The desired future character for this area includes the statement:

'The natural landscape including landforms and vegetation will be protected and, where possible, enhanced. Buildings will be located and grouped in areas that will minimise disturbance of vegetation and landforms whether as a result of the buildings themselves or the associated works including access roads and services. ….A dense bushland buffer will be retained or established along Forest Way and Wakehurst Parkway…. Development in the locality will not create siltation or pollution of Narrabeen Lagoon and its catchment

and will ensure that ecological values of natural watercourses are maintained.'

C11 Locality

Statement

(includes Belrose Road Corridor)

The desired future character for this area includes the statement:

'In order to provide for fauna movements through the locality… an ecological corridor, as shown cross-hatched on the map, will be rehabilitated and preserved as a bushland corridor….. Future

development other than for the purposes of bushfire hazard reduction and water quality devices is to be excluded within the cross-hatched area….The relationship of the locality to the

surrounding bushland will be reinforced by protecting and enhancing the spread of indigenous tree canopy and preserving the natural landscape, including rock outcrops, remnant bushland and

natural watercourses.

D3 Locality

Statement *(includes Collaroy EscarpmentFootslopes)*

The desired future character for this area states that: ‘Development (in the immediate footslopes of the Collaroy Escarpment) will be integrated with the natural landscape including rock outcrops and

remnant bushland and topography.’

D4 Locality

Statement *(includes Collaroy Escarpment)*

The desired future character for this area states that: ‘Development in (the crests and sideslopes of the Collaroy escarpment) must integrate with the landscape and topography …. Rock outcrops and indigenous tree canopy will be integrated with new developmentwhere possible.’

G3 Locality NOW RESIDENTIAL

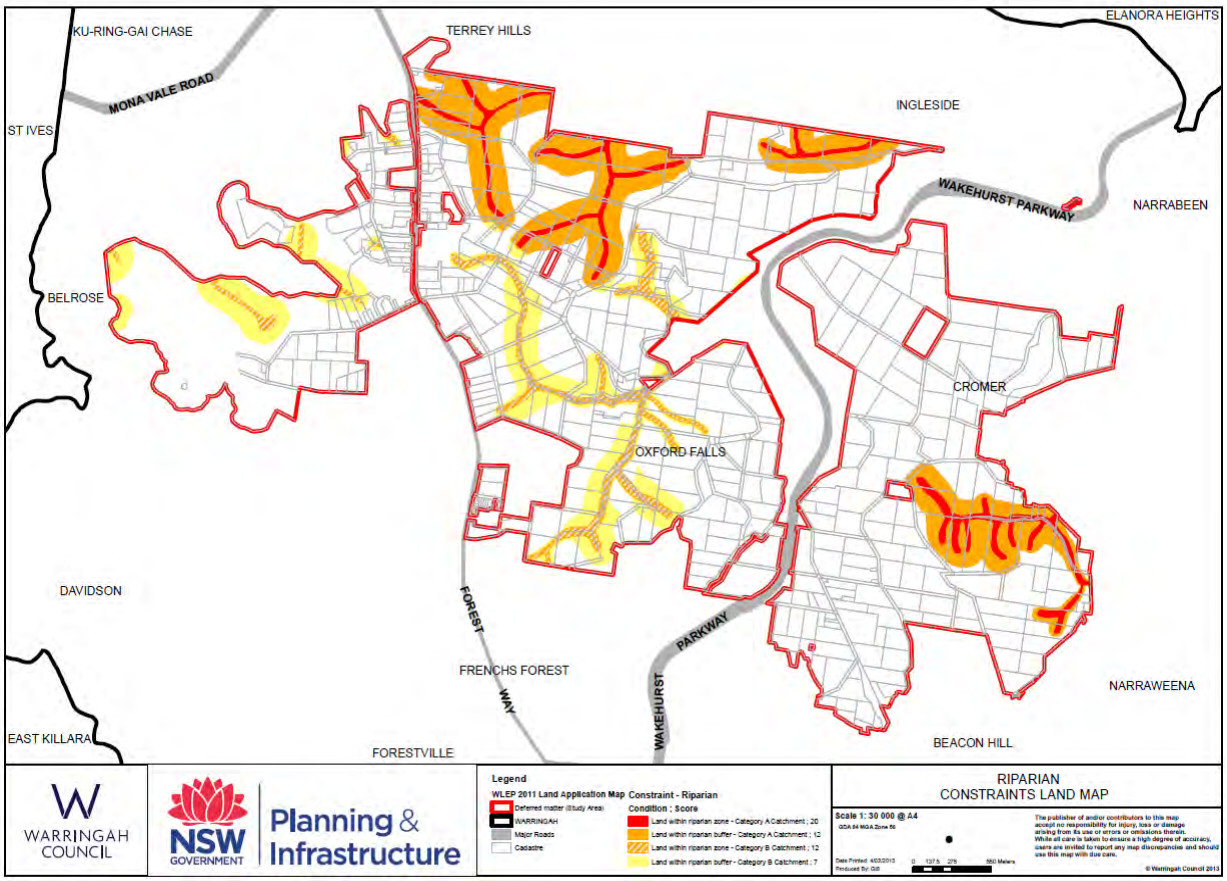
Statement *(includes Allambie Heights)*

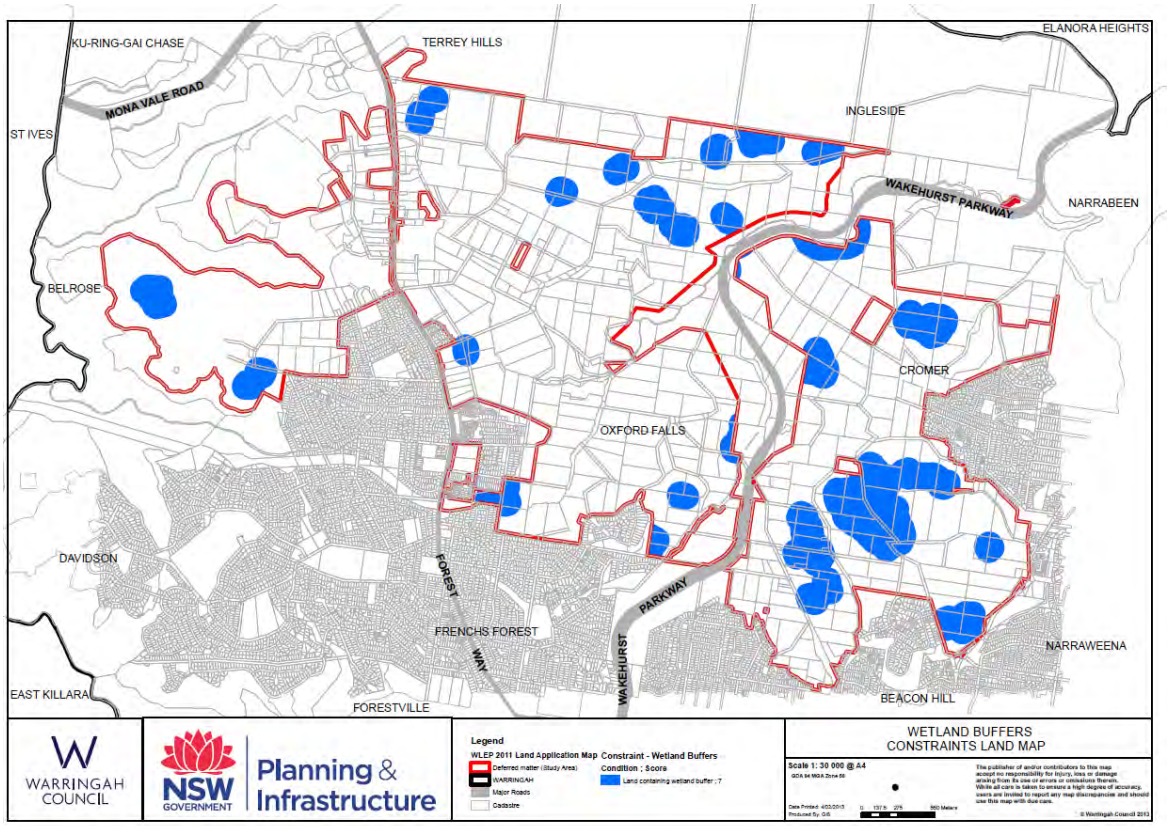
The desired future character for this area includes the statement:‘The relationship of the locality with the surrounding bushland will be reinforced by protecting and enhancing the spread of indigenous tree canopy and preserving remnants of the natural landscape such as rock outcrops, bushland and natural watercourses.’

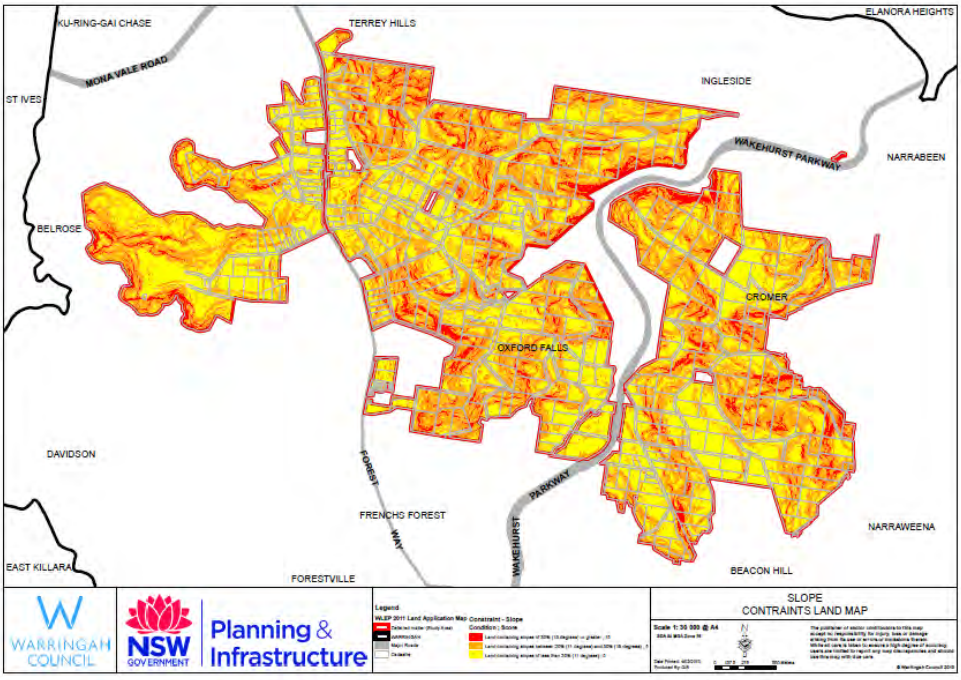
THE ABOVE LOCALITY STATEMENTS SHOW SIMILIAR DESIRED CHARACTER STATEMENTS TO B2.

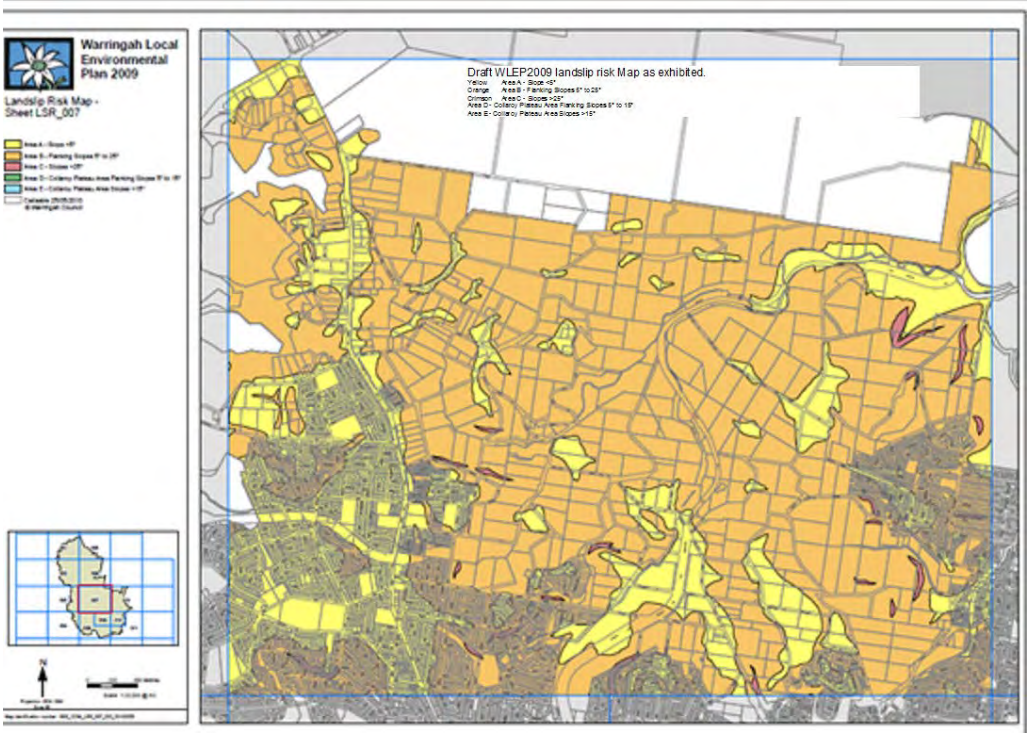
HOWEVER THESE ARE AFFORDED RESIDENTIAL AND RURAL ZONINGS WITH DCP OVERLAYS SUCH AS ENDANGERED SPECIES, WETLAND ,RIPARIAN ZONES TO PROTECT AND CONTROL DEVELOPMENT.

Constraint maps used in primary constraints Assessment of the Draft Review







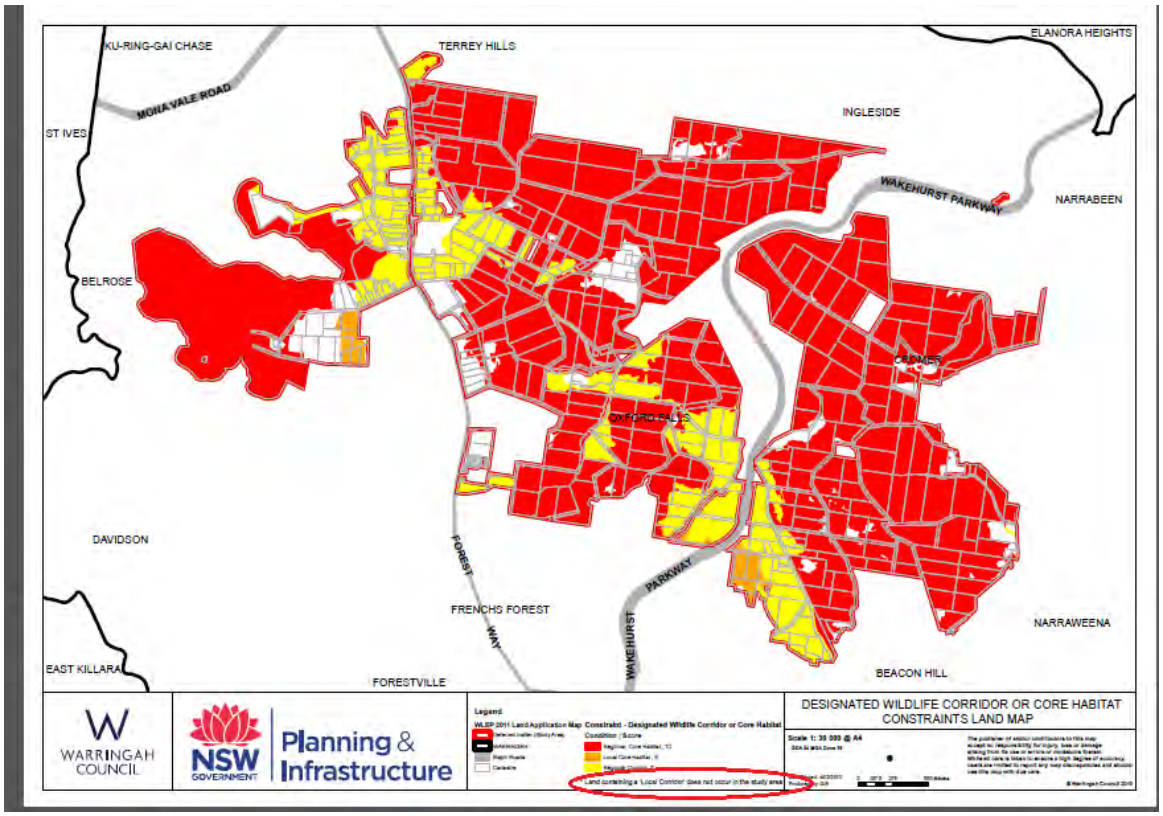


AS SHOWN ON THIS DRAFT WLEP 2009 MAP OXFORD FALLS LOCALITY HAS THE SAME SLOPE CONSTRAINTS AS ADJOINING RESIDENTIAL ZONING.

HOWEVER AN ALTERNATIVE SLOPE CONSTRAINTS MAP WAS PRODUCED BY WARRINGAH COUNCIL FOR THE REVIEW WEIGHTING THE AREA DIFFERENTLY TO THE CURRENT AND PREVIOUSLY EXHIBITED LANDSLIP RISK.

IT SHOULD ALSO BE NOTED THAT ALL THE LAND RELEASES BY GOVERNMENT OVER THE LAST DECADE HAS HAD GREATER OR SIMILIAR LAND SLIP RISK.

(CROMER, CARNAVON DR FRENCHS FOREST, LANDCOM BELROSE)



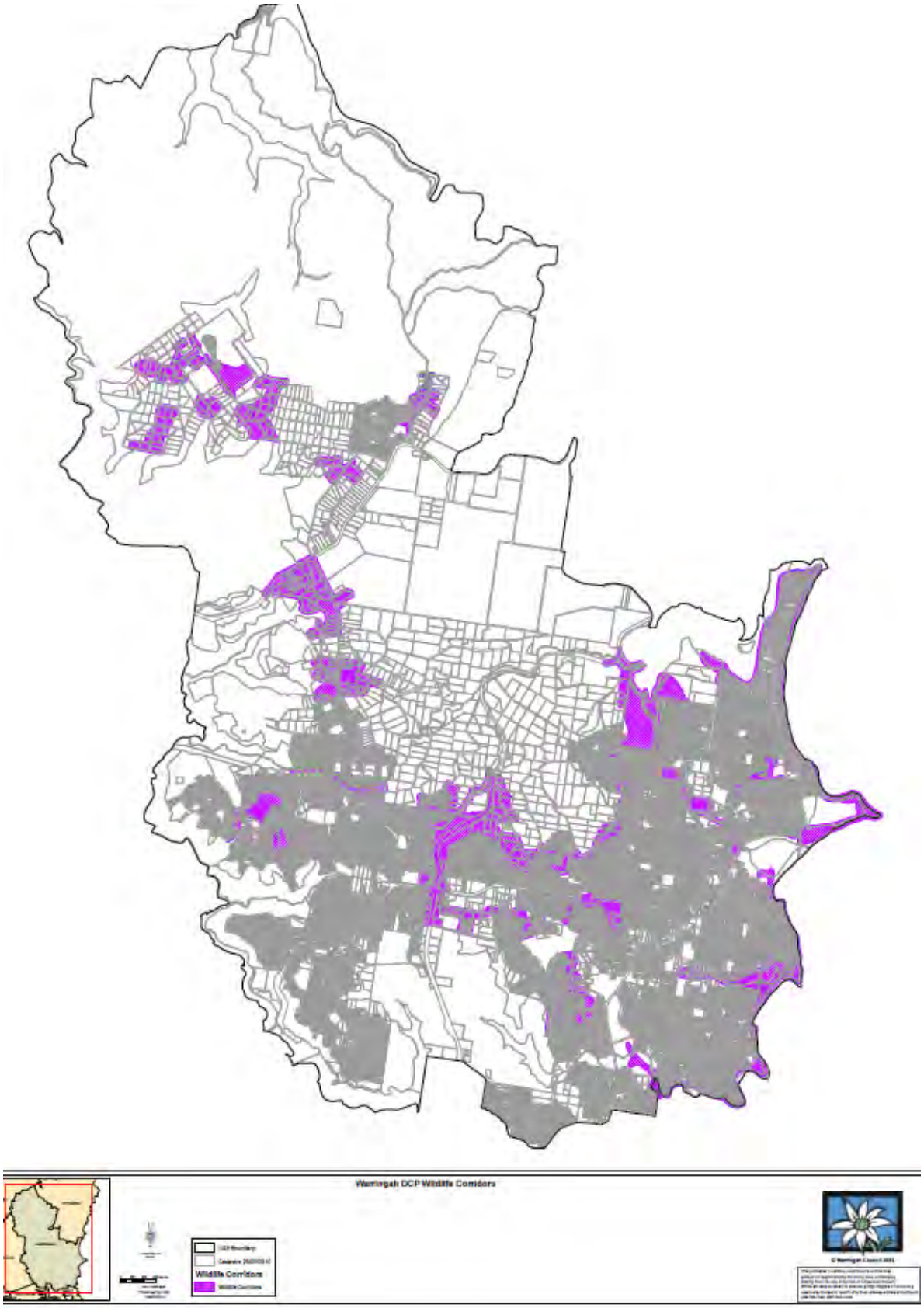
* Land containing a 'Local Corridor' does not occur in the study area

Designated Wildlife corridors or Core Habitat

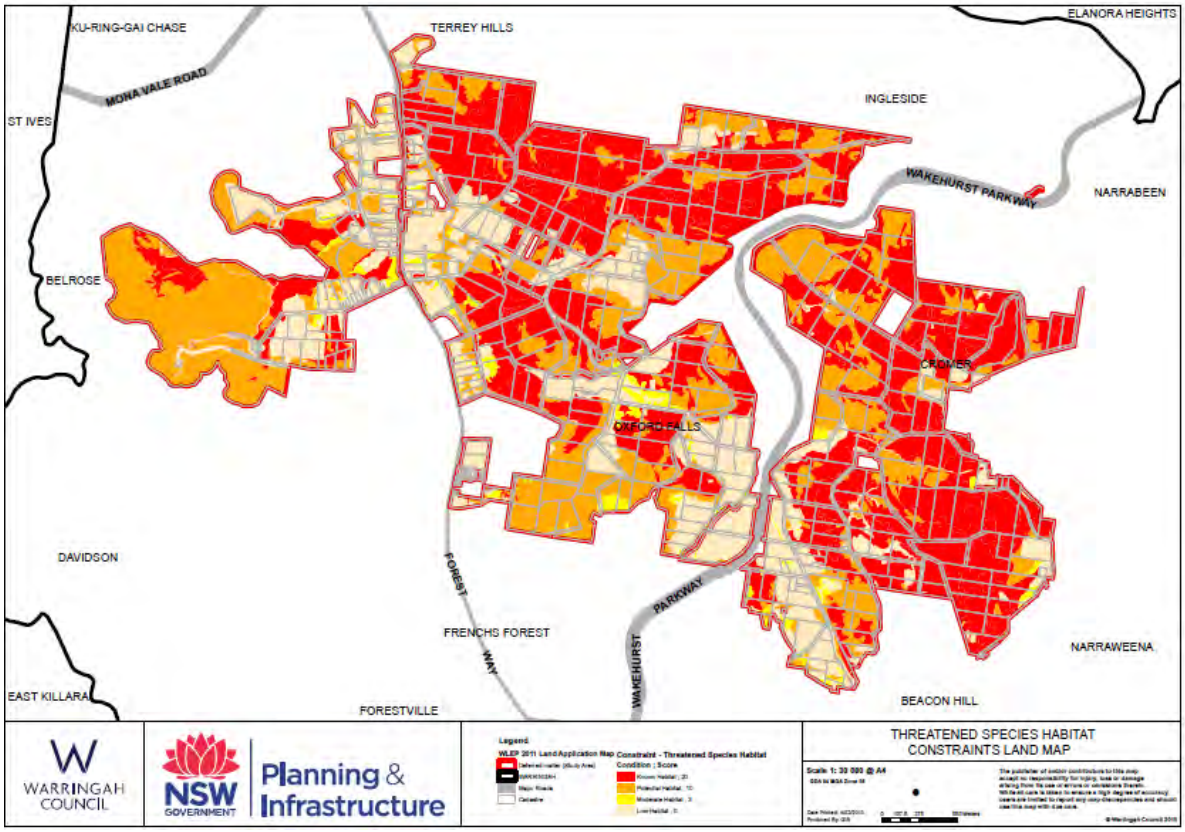
Both the Draft DCP Wildlife Corridor 2009 and the current DCP 2011 as displayed on the Council website and copied below does not include Core Habitat.

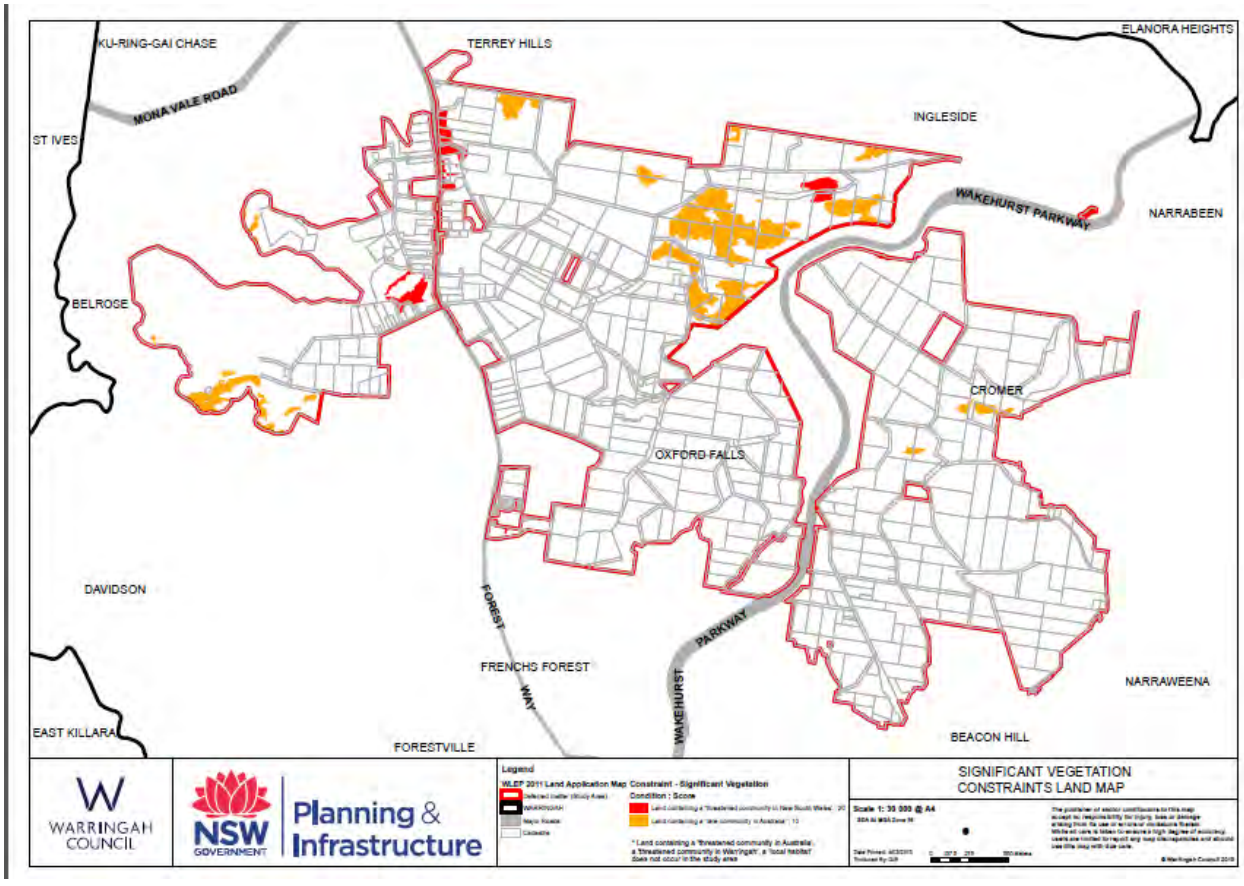
Appendix 6 Notes that this report or mapping has not been presented to Council and the mapping of core habitat is a desktop application in which Council has mapped vegetated land in B2 and C8 localities as core habitat.

This heavily weighted desktop mapping process weighting core habitiat10,5,5 in additional to the Threatened species habitat mapping weights of 20,10,3 effectively constrains all land in these localities despite their mapping notes stating that there is no Local corridor or threatened species within the study area.

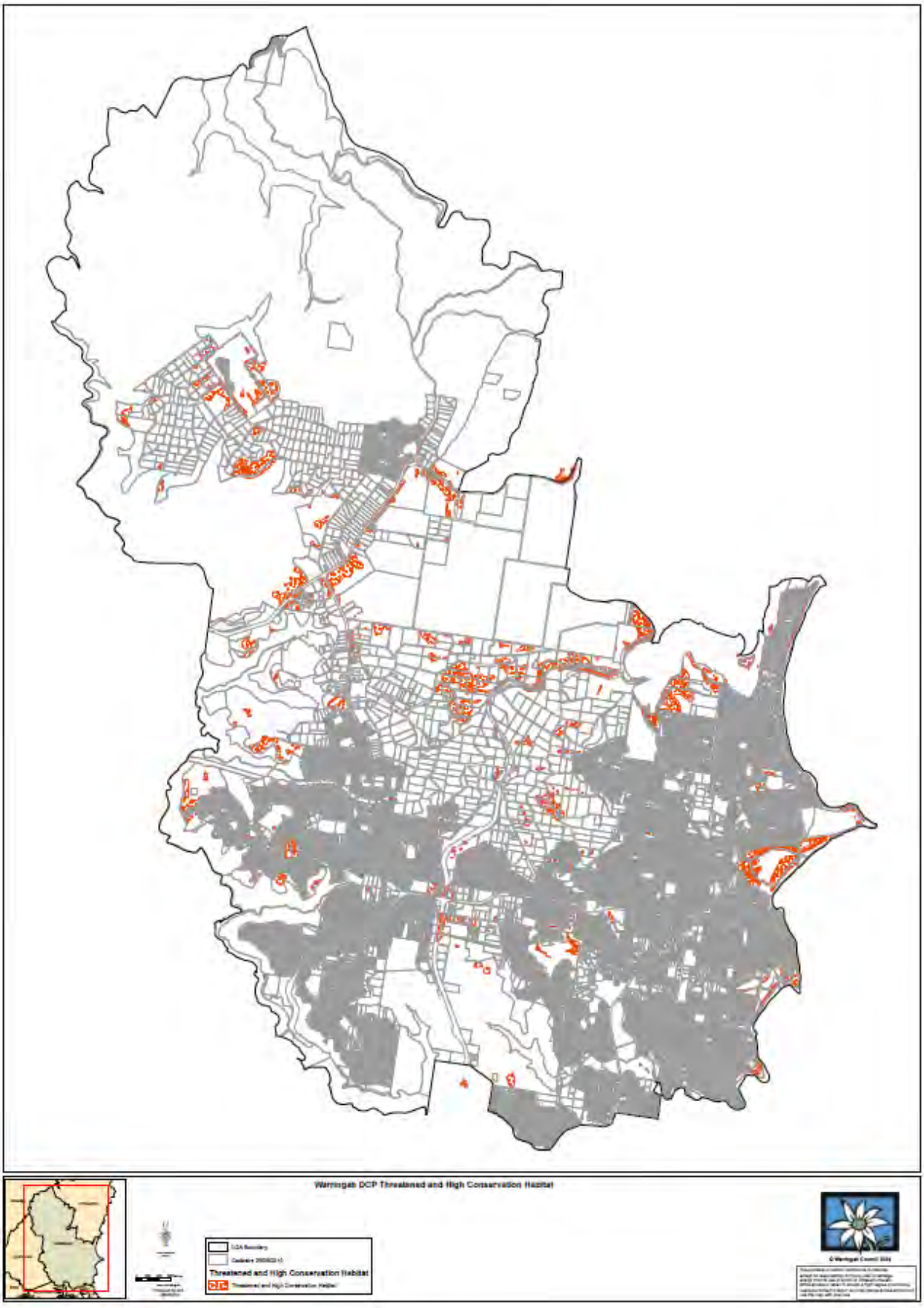


Draft WLEP 2009 DCP Map Wildlife Corridors as exhibited.

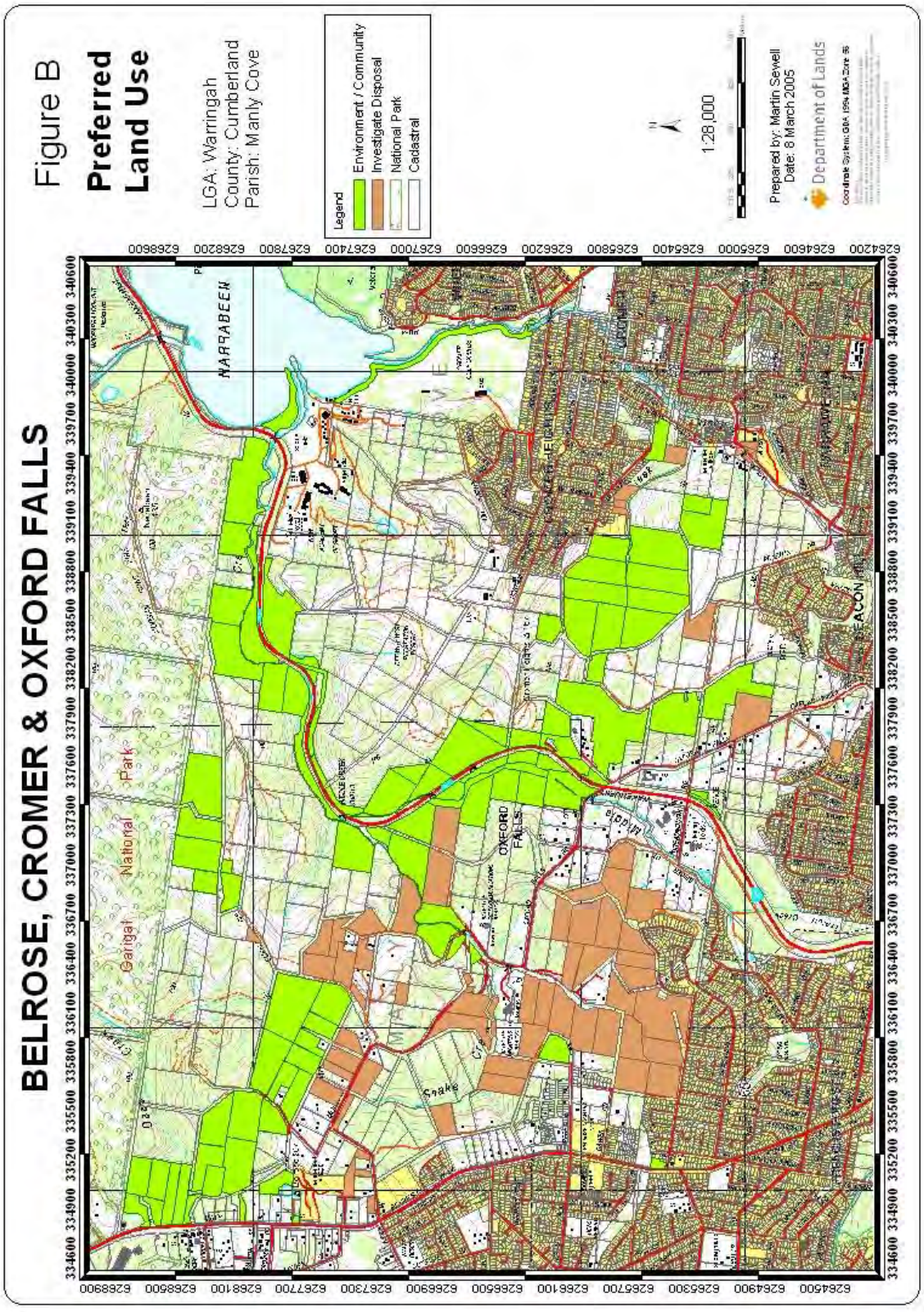




* Land containing a 'threatened community in Australia',a 'threatened community in Warringah', a 'local habitat'habitat' does not occur in the study area

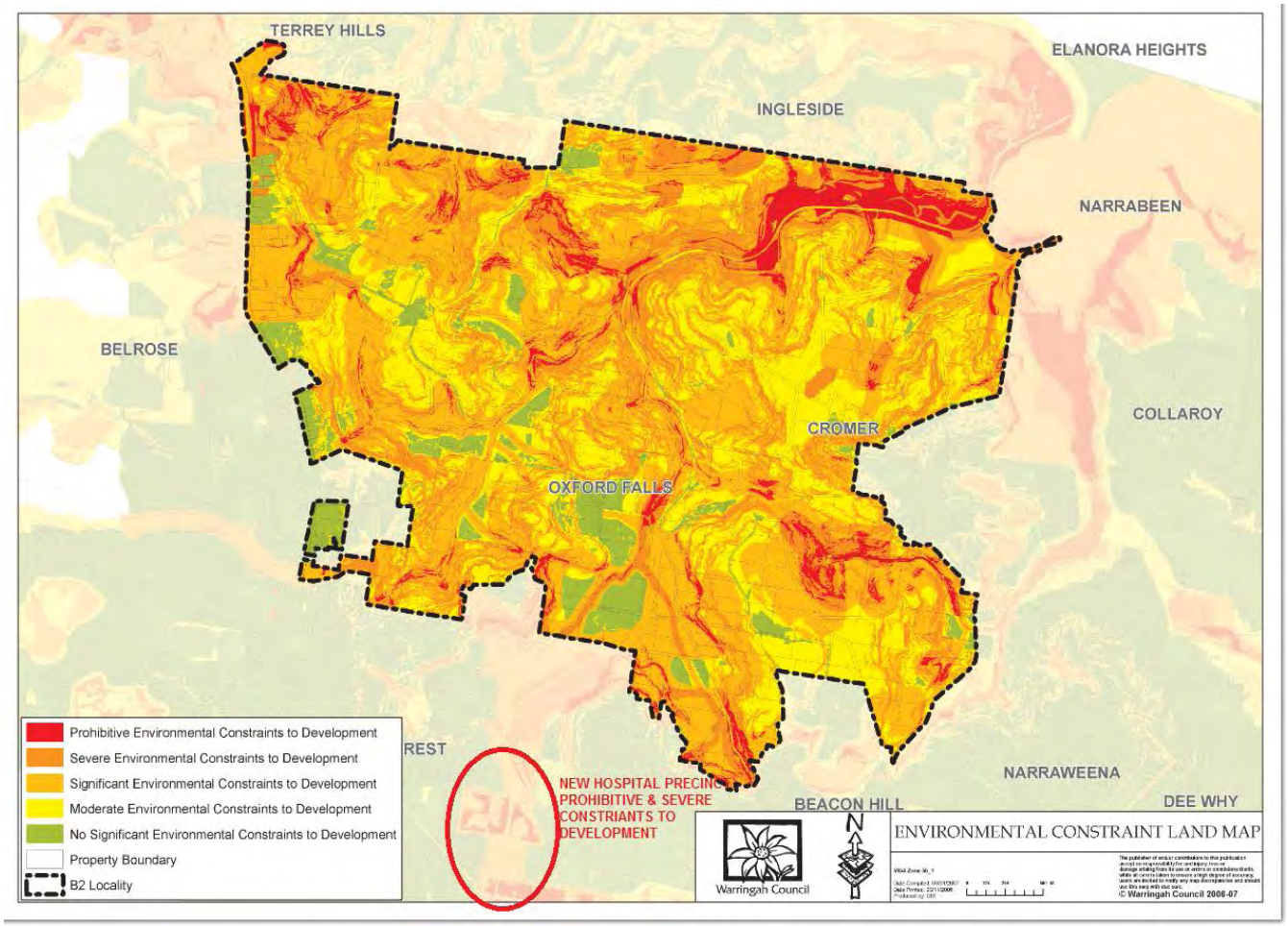


Warringah DCP 2009 Threatened and High Conservation Habitat

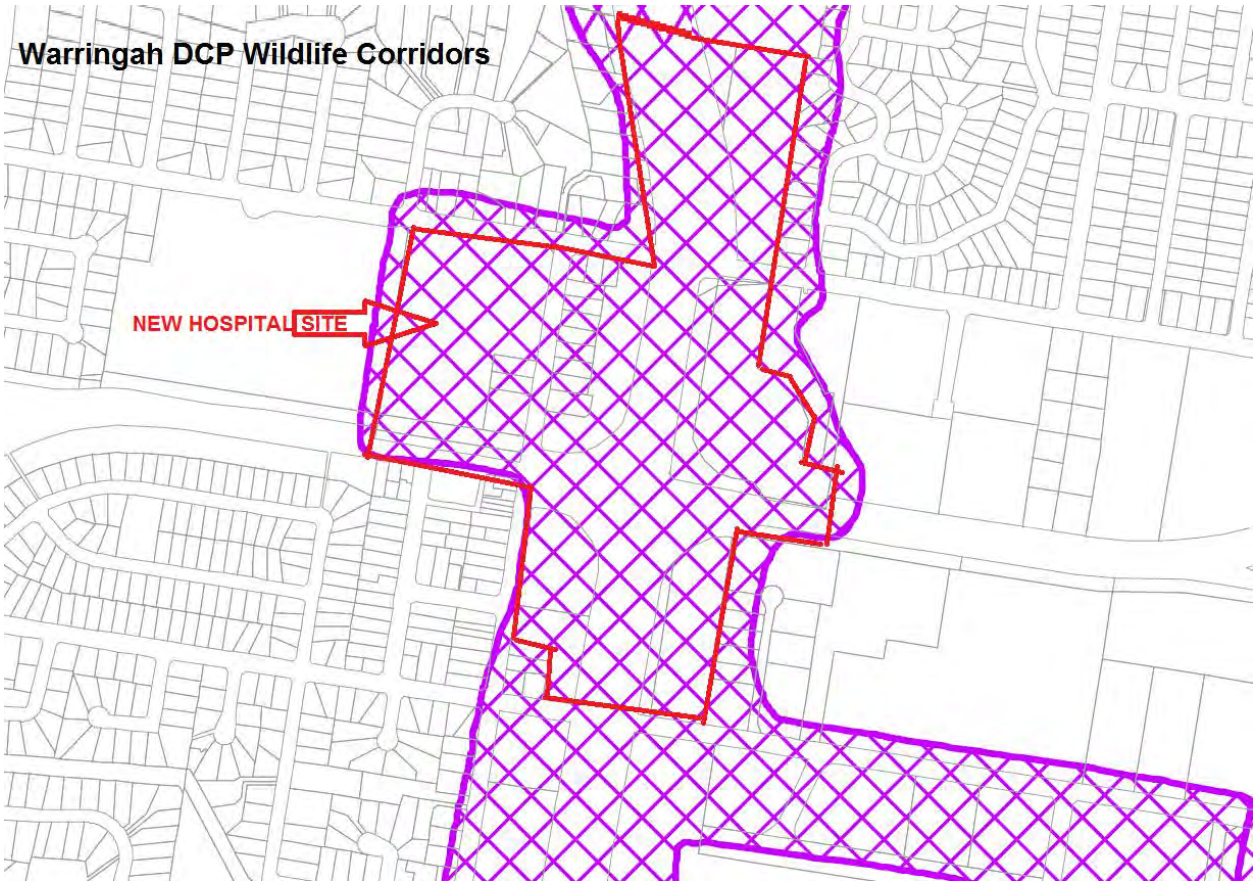


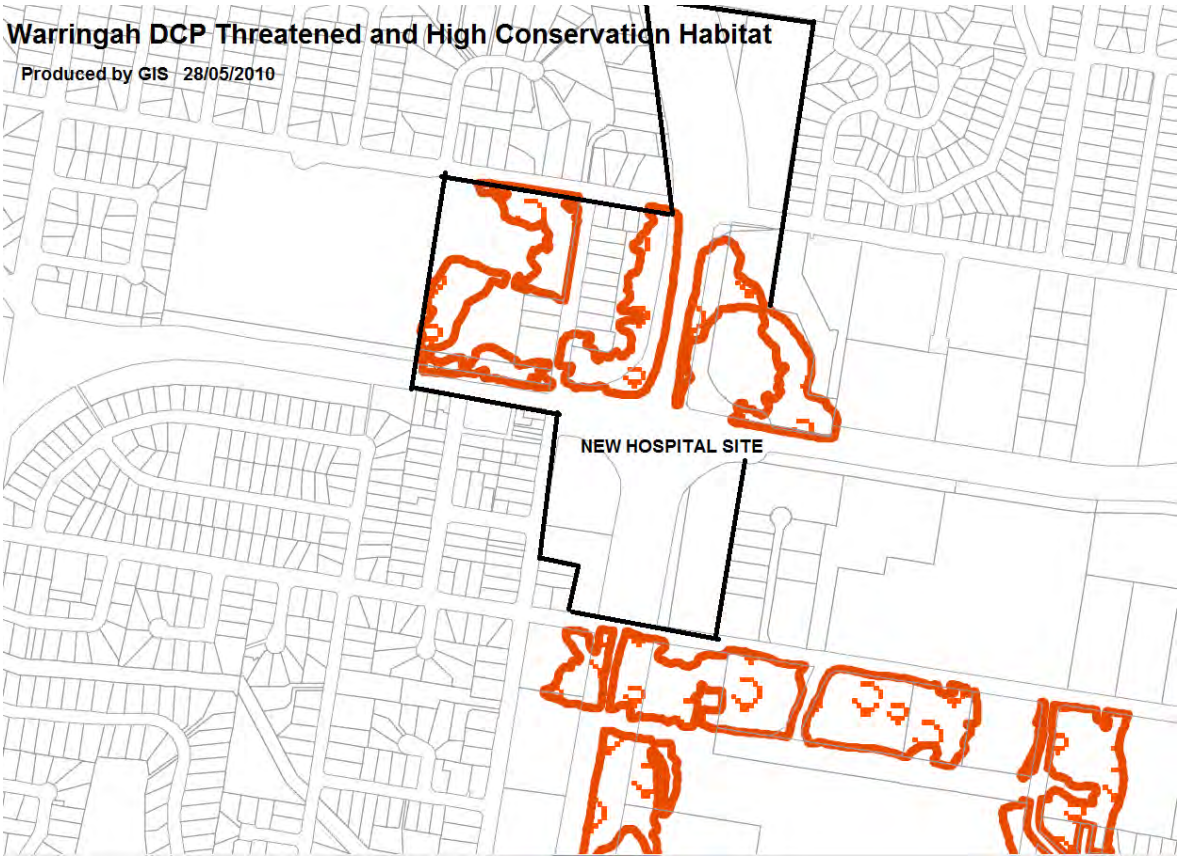
Department of Lands Preferred Use Map

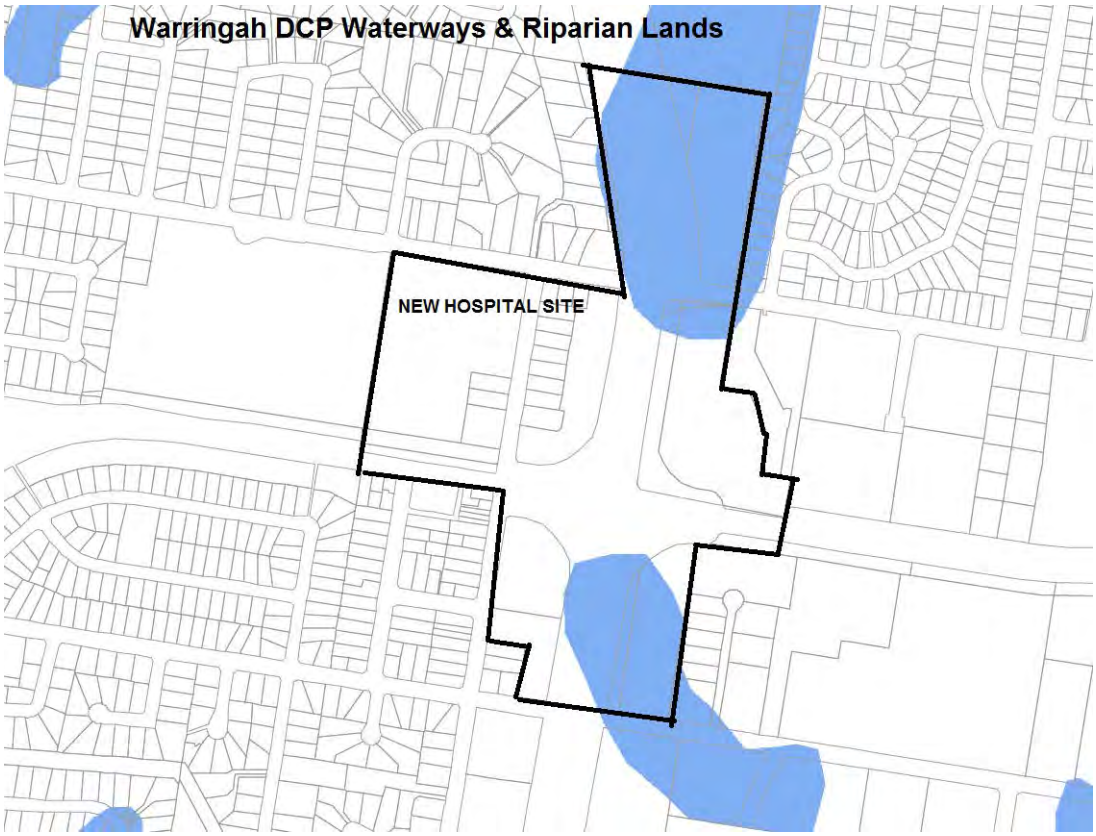
USING THE REVIEW ANALYSIS THE NEW HOSPITAL SITE HAS GREATER CONSTRAINTS THAN OXFORD FALLS, SCORING GREATER THAN 49, BEING PROHIBITIVE TO DEVELOPMENT

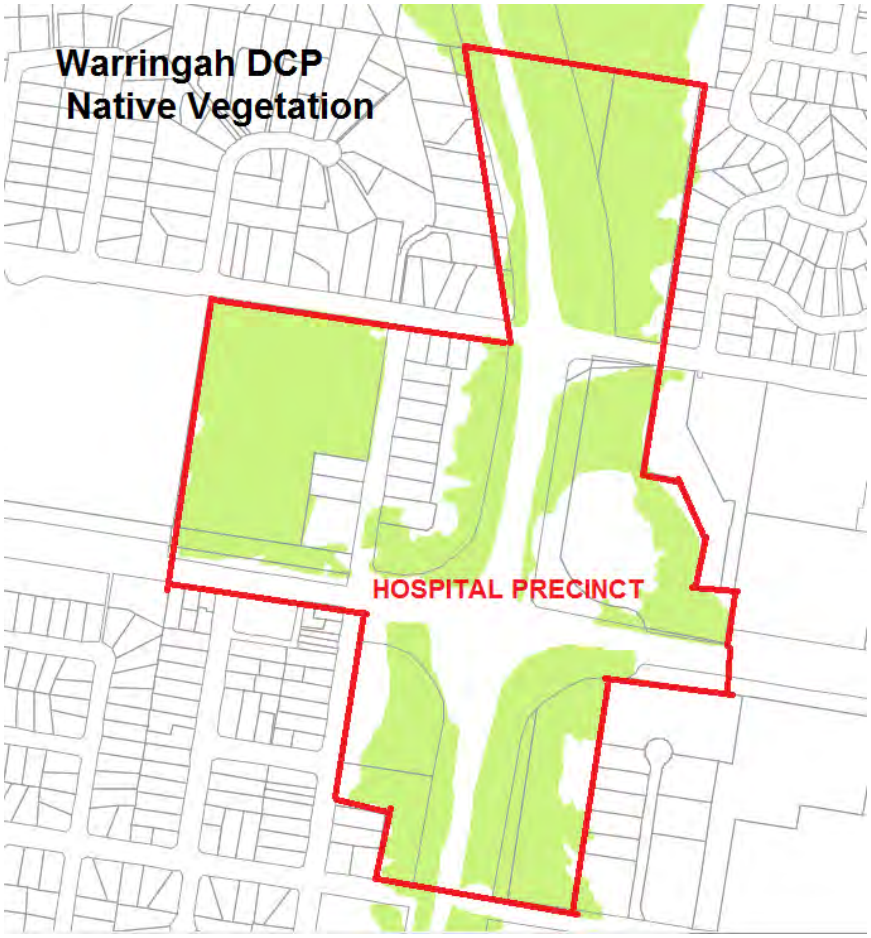


Declared Hospital Site


Warringah DCP Wildlife Corridors
NEW HOSPITAL SITE


Warringah DCP Threatened and High Conservation Habitat
Produced by GIS 28/05/2010
NEW HOSPITAL SITE


Warringah DCP Waterways & Riparian Lands
NEW HOSPITAL SITE


Warringah DCP
Native Vegetation
HOSPITAL PRECINCT

Appendix 6

Primary Environmental Constraints Assessment and Weighting

As with the 2006 review, the assessment methodology uses a weighted scoring system to consider the relative sensitivity of specific environmental constraints and the corresponding level of impediment to development. A breakdown of this methodology is provided in Table 4. Further detail of the rational for each environmental constraint is provided in **Appendix 7**. Specifically, Table 2 highlights;

- the environmental constraints considered
- the environmental data which was utilised to determine the weighted score; and
- provides a weighted score for each environmental constraint considered.

Table 4 – Primary Environmental Constraints Assessment and Weighting

CONSTRAINT	DATA SOURCE/DATA LAYERS	DATA DETAILS	CONDITION	WEIGHTED SCORE
1. Riparian	Warringah Creek Management Study 2004 adopted by Council in 2004 and used for planning controls as part of Council's Development Control Plan. - WDCP2011	ouncil's existing GIS layer 2004 (combination of topographical maps, groundtruthing, desktop analysis) LPMI 1:25,000 topographic maps Desktop analysis using stereoscopy, aerial photographs and 2m contour lines Ground-truthing Community feedback	Land within riparian zone – Category A Catchment	20
			Land within riparian buffer - Category A Catchment	12
			Land within riparian zone – Category B Catchment	12
			Land within riparian buffer - Category B Catchment	7
			Land outside riparian buffer	0
2. Significant Vegetation	Data has not been presented to Council for adoption and does not form part of Council's development controls. Data was updated as part of the 2009 Warringah Natural Area Survey and further refined since this time.	Removal of areas of egetation based on dentified mapping anomalies iscovered using 2009 aerial hotography. eveloped primarily via esktop assessment and igitisation using aerial hotography Some field assessment undertaken to clarify vegetation type and condition.	Land containing a 'threatened community in Australia'	20
			Land containing a 'threatened community in New South Wales'	20
			Land containing a 'rare community in Australia'	10
			Land containing a 'threatened community in Warringah'	7
			Land containing a 'local habitat'	7

CONSTRAINT	DATA SOURCE/DATA LAYERS	DATA DETAILS	CONDITION	WEIGHTED SCORE
			Land not containing any of these communities	0
3. Wetland Buffers – No amendments suggested to the criteria used in 2006	Warringah Natural Area Survey 2005. This data is used for development controls via the WDCP2011.	Aerial photo interpretation Some field validation Limited field validation on private property.	Land containing wetland buffer	7
			Land outside wetland buffer	0
4. Slope	Data produced in March 2007. 2m contours mapping determined from Digital Elevation Model (DEM) derived from Light Detection and Ranging (LIDAR). This is an optical remote sensing technology that can measure the distance to a target by illuminating the target with light, using pulses from a laser.	Data produced in March 2007. 2m contours mapping determined from Digital Elevation Model (DEM) derived from Light Detection and Ranging (LIDAR). This is an optical remote sensing technology that can measure the distance to a target by illuminating the target with light, using pulses from a laser.	Land containing slopes of 30% (19 degrees) or greater	15
			Land containing slopes between 20% (11 degrees) and 30% (19 degrees)	5
			Land containing slopes of less than 20% (11 degrees)	0
5. Designated Wildlife Corridor or Core Habitat	Developed for the update of the *Warringah Natural Area Survey: Vegetation History and Wildlife Corridors Update 2009* prepared by P and J Smith Ecological Consultants The report has not been presented to Council for adoption and is not used as part of Council's Development Control Plan.	Uses desktop vegetation mapping to develop categories of core habitat based on size, and categories of wildlife corridor based on existing vegetation and connectivity. The majority of vegetated land in the B2 and C8 localities is mapped as core habitat.	Regional Core Habitat	10
			Local Core Habitat	5
			Regional Corridor	5
			Local Corridor	3
			None	0
6. Flooding	Data for this comes from a data layer prepared for WLEP 2011. The source data was not adopted	Source data comes from the Middle Creek Flood Study prepared by Worley Parsons in 2009.	Land within Flood Planning Level (FPL) area	12
			Land outside Flood	0

7. Acid Sulfate Soils	Acid Sulfate Soils Planning Maps are supplied by NSW Department of Urban Affairs and Planning. These maps are utilised in the WLEP2000 and WLEP 2011 Acid Sulfate Soils Map		Land containing Class 1 acid sulfate soils	5
			Land containing Class 2 acid sulfate soils	4
			Land containing Class 3 acid sulfate soils	3
			Land containing Class 4 acid sulfate soils	2
			Land containing Class 5 acid sulfate soils	1
			Land not containing acid sulfate soils	0
8. Threatened Species Habitat	Threatened species data sourced from the Atlas of NSW Wildlife, and Council records. Council records have not been presented to Council for adoption. The records from the NSW Atlas are managed by the Office of Environment and Heritage.	Point data collated and reviewed – records excluded include vagrant species, historical records, and records with limited accuracy. Threatened species records collected by Council have been done using best practise survey methodology, and in accordance with survey guidelines.	Known Habitat - known flora and fauna records in vegetated habitats, and mapped endangered ecological communities.	20
			Potential habitat – intact vegetation, thought to be potential habitat for threatened species.	10
			Moderate Habitat - disturbed native vegetation and weeds - vegetation mapped as 'c', 'b' or 'e',	3
			Low Habitat - areas mapped as 'x' or those containing no mapped	0

NSW GOVERNMENT | Planning & Infrastructure

People, Culture & Business

Contact: David Watson
Phone: (02) 9228 6116
Fax: (02) 9228 6120
Email: patiunit@planning.nsw.gov.au

Our ref: GIPAA 2013/14-001

Mr John Holman
PO Box 125
BELROSE NSW 2085
president@warringahurbanfringeassociation.org.au

Dear Mr Holman

I refer to your application, under the *Government Information (Public Access) Act 2009* (*GIPA Act*), to obtain the following information:

1. The names and qualifications of the people on the Project Control Group
2. A copy of all of the submissions that were considered by the Project Control Group
3. Maps of each of the attributes that make up the Primary Environmental Constraints Assessment and Weightings used by the study (ie Riparian, Significant Vegetation, Wetland Buffers, Slope , Designated Wildlife Corridor or Core Habitat, Flooding, Acid Sulfate Soils, Threatened Species Habitat)
4. Maps of each of the Secondary Infrastructure and Environmental Constraints Assessment and Weighting used by the study (ie Cultural heritage, Bushfire , Proximity to centres , Proximity to public transport , Availability to connect to water and sewer and electricity , Telecommunications Buffer , Riparian Corridor , Significant Vegetation , Wildlife Corridor and Core Habitat , Threatened Species , Flooding , Wetland Buffers) and the final category score received for all areas of land covered by the Review
5. Any independent scientific verification that has been carried out on the accuracy of the above maps (ie items 3 & 4 above)
6. *Middle Creek Flood Study* prepared by Worley Parsons, 2009 (referenced on page 69 of the report)
7. *A* copy of the completed Site Analysis form for each parcel of land that was visited in the December 2012 site visits

Your application is due for decision by 31 July 1013.

Under section 9(1) of the *GIPA Act*, you have a legally enforceable right to be provided with access to the information sought, unless there is an overriding public interest against disclosure of the information. In making such a determination, agencies must apply the public interest test under section 13, which provides that there will only be an overriding public interest against disclosure where public interest considerations in favour of disclosure are, on balance, outweighed by those against disclosure. Under section 5 of the *GIPA Act*, there is a presumption in favour of disclosing government information. It is to be conclusively presumed that there is an overriding public interest against disclosure of any of the government information described in Schedule 1 to the GIPA Act.

The information covered by the terms of your application is not information described in Schedule 1 of the GIPA Act.

In a phone conversation on 15 July we discussed the possibility of providing you with documents about which there was no question of need for third party consultation by Friday 19 July. I have identified such documents. Of this subset, some contain sensitive information about aboriginal heritage.

I have decided the best way to process your application in order to meet this timetable is to make two decisions, the second dealing with information that requires 3rd party consultation regarding personal information or may otherwise suggest an overriding public interest against disclosure. Before I proceed to a second decision however I will ring you and discuss the scope and nature of the information with a view to narrowing the scope considerably because of its extensive size. I will deliver an account for this application with the second decision.

The table below details the terms of your application and how each point will be dealt with:

Terms of application 13/14-001	**First Decision**	**Second decision, subject to negotiations on extensive size and possible overriding public interest against disclosure**
1. The names and qualifications of the people on the Project Control Group	Position names within organisations provided – agreed in conversation of 15 July that this would be sufficient.	
2. A copy of all of the submissions that were considered by the Project Control Group		To be decided after negotiations
3. Maps of each of the attributes that make up the Primary Environmental Constraints Assessment and Weightings used by the study (ie Riparian, Significant Vegetation, Wetland Buffers, Slope , Designated Wildlife Corridor or Core Habitat, Flooding , Acid Sulfate Soils, Threatened Species Habitat)	All maps provided, except for those already on website or containing aboriginal heritage information - see below.	To be decided - those maps containing aboriginal heritage information.

4. Maps of each of the Secondary Infrastructure and Environmental Constraints Assessment and Weighting used by the study (ie Cultural heritage, Bushfire , Proximity to centres , Proximity to public transport , Availability to connect to water and sewer and electricity , Telecommunications Buffer , Riparian Corridor , Significant Vegetation , Wildlife Corridor and Core Habitat , Threatened Species , Flooding , Wetland Buffers) and the final category score received for all areas of land covered by the Review	All maps provided, except for those already on website (s.s 58(1)(c)&59(1)) or containing aboriginal heritage information – see below. Final category score – two tables provided.	To be decided - those maps containing aboriginal heritage information.
5. Any independent scientific verification that has been carried out on the accuracy of the above maps (ie items 3 & 4 above)	The Department does not hold such a document - No independent scientific verification has been carried out on the above maps.	
6. *Middle Creek Flood Study* prepared by Worley Parsons, 2009 (referenced on page 69 of the report)	The Department does not hold a copy of this document because the Draft Oxford Falls Valley and Belrose North Strategic Review is a joint publication with Warringah Council and Council authored the content on flooding.	
7. *A* copy of the completed Site Analysis form for each parcel of land that was visited in the December 2012 site visits	Copies with personal information deleted provided	Personal information – to be decided after negotiations

Maps already on website

Please go to http://www.planning.nsw.gov.au/planning-reviews-and-panels and then to the "Oxford Falls and Belrose North strategic review, Warringah" heading. You can access the following maps under the "Additional Maps" sub-heading, or on the electronic version of this letter Ctrl+click on the title to follow the link:

Acid Sulfate Soils Constraints Land Map
Bushfire Constraints Land Map
Core Habitat Constraints Land Map
Flood Planning Level Constraints Land Map
Proximity to Public Transport Infrastructure Map
Riparian Constraints Land Map
Significant Vegetation Constraints Land Map
Slope Constraints Land Map
Threatened Species Habitat Constraints Land Map
Wetland Buffers Constraints Land Map

I have decided under s.58(1)(c) and s.59(1)(b) that the above maps are already available to you.

Other maps

Please note that the Department used the maps emailed to you today as internal working documents. The Department did not prepare them for publication on its website. You will notice the difference between them and the maps published on the website. These maps were used to assist in providing scores during the analysis of constraints.

Decision

Under section 12 of the GIPA Act, I have considered the public interest considerations in favour of disclosure of those of the documents listed in Column Two above which are held by the Department. They include, but are not limited to, there being reasonable expectations that disclosure of the information would enhance Government accountability, contribute to positive and informed debate on an issue of public importance, and inform you about the operations of the Department. It is a right of citizens to monitor the Government, and in a free and democratic society, a Government agency should be open, accountable and responsible.

Public interest considerations against disclosure are provided in the table to section 14(2) of the GIPA Act. I do not consider there are any public interest considerations against disclosure of this information.

On balance therefore there are no overriding public interests against disclosure. Consequently you have a legally enforceable right to be provided with access to those of the documents listed in Column Two above which are held by the Department. Under section 58(1) of the GIPA Act I have decided to provide you with access to that information. It is attached to the same email to which this letter is attached, and perhaps to subsequent emails, depending on file size.

As to the information described at points 5 and 6 of your application I have decided under s.58(1)(b) that the information is not held by the Department.

Cost

Under section 64(1) of the GIPA Act I have decided to impose a processing charge for dealing with this application. I will provide an account detailing the charge, to meet the requirements of section 62 of the GIPA Act, in my second decision.

Your rights of review

If you are aggrieved by my decision, you may have a right of review under Part 5 of the GIPA Act. Before you do seek a review, I would encourage you to call me and discuss your concerns.

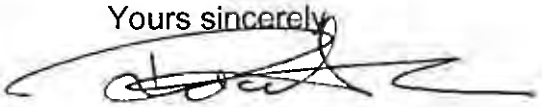
For your information, there are three avenues of review: internal review by another officer who is not less senior than myself, external review by the Information Commissioner or external review by the Administrative Decisions Tribunal ("Tribunal").

Attached to this notice is a brochure published by the Information and Privacy Commission, entitled *Your review rights under the GIPA Act* which details your rights of review under the GIPA Act.

You should note that the time for seeking an internal review is 20 working days or, for external review, 40 working days, from 19 July 2013, the day this decision was posted to you by email. Further information about your rights under the GIPA Act is available by contacting the Information and Privacy Commission on freecall 1800 INFOCOM (1800 463 626) or at the following website: www.ipc.nsw.gov.au.

If you have any queries about this notice or require further information, please do not hesitate to contact David Watson on 9228 6116.

Yours sincerely



David Watson
Manager
Public Access to Information & Privacy
19 July 2013

information and privacy commission
new south wales

Your review rights under the GIPA Act

fact sheet
May 2013

The right to information system in New South Wales aims to foster responsible and representative government that is open, accountable, fair and effective.

You have the right to request a review of certain decisions made by government agencies about the release of information under the *Government Information (Public Access) Act 2009* (GIPA Act):

a) a decision that an application is not a valid access application

b) a decision to transfer an access application to another agency, as an agency-initiated transfer

c) a decision to refuse to deal with an access application (including such a decision that is deemed to have been made)

d) a decision to provide access or to refuse to provide access to information in response to an access application

e) a decision that government information is not held by the agency

f) a decision that information applied for is already available to the applicant

g) a decision to refuse to confirm or deny that information is held by the agency

h) a decision to defer the provision of access to information in response to an access application

i) a decision to provide access to information in a particular way in response to an access application (or a decision not to provide access in the way requested by the applicant)

j) a decision to impose a processing charge or to require an advance deposit,

k) a decision to refuse a reduction in a processing charge

l) a decision to refuse to deal further with an access application because an applicant has failed to pay an advance deposit within the time required for payment

m) a decision to include information in a disclosure log despite an objection by the authorised objector (or a decision that the authorised objector was not entitled to object).

You generally have three review options.

1. Internal review

You have **20 working days** from the time the decision is sent to you to ask for an internal review by the agency that made the decision.

If a Minister or their personal staff, or the principal officer of an agency made the decision, you cannot ask for an internal review, but you can ask for an external review (see below).

The review must be carried out by an officer who is no less senior than the person who made the original decision. The review decision must be made as if it was a fresh application.

There is a $40 fee for an internal review application. No fee applies for an internal review if the decision is a 'deemed refusal' because the agency did not process your application in time; or if the internal review is conducted because the Information Commissioner has recommended the agency reconsider its decision under section 93 of the GIPA Act. In this case, you cannot be charged any review fee.

The agency must acknowledge your application within **five** working days of receiving it. The agency must decide the internal review within **20** working days (this can be extended by **10** working days if the agency has to consult with a third party, or by agreement with you).

2. External review by the Information Commissioner

If you disagree with any of the decisions listed above, you can ask for a review by the Information Commissioner.

If you are the person applying for access to information, you do **not** have to have an internal review of the decision before asking the Information Commissioner to review it.

If you are not the access applicant, the decision must be internally reviewed before you can apply for review by the Information Commissioner. However, if an internal review cannot be sought (if a Minister or their personal staff,

or the principal officer of an agency made the decision), you can seek a review by the Information Commissioner.

You have **40 working days** from the time the decision is sent to you to ask for a review by the Information Commissioner.

On reviewing the decision, the Information Commissioner can make recommendations about the decision to the agency.

Note: You cannot ask the Information Commissioner to review a decision that has already been reviewed by the Administrative Decisions Tribunal.

3. External review by the Administrative Decisions Tribunal

If you disagree with any of the decisions listed above, you can ask for a review by the Administrative Decisions Tribunal (ADT). You do not have to have the decision reviewed internally, or by the Information Commissioner before applying for review by the ADT.

You have **40 working days** from the time the decision is sent to you to apply to the ADT for review. However, if you have applied for review by the Information Commissioner, you have **20 working days** from being notified of the Information Commission's review outcome to apply to the ADT.

For more information

Contact the Information and Privacy Commission:

freecall: 1800 472 679
email: ipcinfo@ipc.nsw.gov.au
website: www.ipc.nsw.gov.au

Submission Number: 55

Ken White, Belrose

I commend the review team and the Planning Minister for the detailed analysis of the E3 imposition issue and the resulting finding with respect to Belrose North: a RU4 zoning with additional permissible uses consistent with " Booralie Road " . I would like to make a submission with respect to property A29 (Belrose North) : that the Significant Constraint Rating of 65% be reduced to 35% which will be both appropriate and compatible with adjoining site ratios of 0,5,35% . To do otherwise is , in my opinion , a denial of natural justice and a continuation of the predation of the site by flooding from both Forest Way and the road adjacent to the site and which has resulted ,over a 50 year period, in the " highly degraded condition of the vegetation " (Warringah Shire Council assessment , March 2000) . The application of a significant development constraint as appropriate for an E3 zoning would appear to be based on the premises that a land area possesses a level of environmental significance relevant to the objective of E3 zoning and the Desired Future Character for Belrose North (3.62 /page 30 of the review draft) . I respectfully dispute both premises as applied to property A29.

Yours Sincerely , Ken White Belrose

Submission Number: 56

Judith Bennett, Beacon Hill

I note that the majority of the land in the study is proposed to be zoned E3. There is a proposal for most of the land to be included in the new Gai-mariagal National Park so therefore a more appropriate zoning is E1.

Please either designate the proposed Gai-mariagal National Park land as E1 now or defer the changes to the LEP until the National Park is gazetted.

Thank you.

Submission Number: 57

Land Assets and Facilities / Network Service & Operations
Telephone: (02) 9284 3015
Our Contact: Timothy Cowdroy
Our Ref.: 2013/3123

ABN 19 622 755 774

201 Elizabeth Street (cnr Park St)
PO Box A1000 Sydney South
New South Wales 1235 Australia
Facsimile (02) 9284 3456
Telephone (02) 9284 3000
Web http://www.transgrid.com.au
DX 1122 Sydney

7 August, 2013

Department of Planning and Infrastructure
Sydney Region East
GPO Box 39
SYDNEY NSW 2001

Attn: Ms Juliet Grant (Regional Director)

Dear Ms Grant,

Draft Oxford Falls Valley and Belrose North Strategic Review Report

We refer to the Department of Planning and Infrastructure's notification dated 17 June, 2013 in respect of the abovementioned matter and to which TransGrid makes this submission.

TransGrid has the following easements and infrastructure within the land area of the subject review:

Energy Infrastructure	Feeder	Transmission Structure(s)	Operating Voltage
Sydney East Substation			330kV
Sydney North to Sydney East No.1 330kV	27	52 - 59	330kV
Sydney North to Sydney East No.2 330kV	28	47 - 51	330kV
Sydney North to Sydney East No.3 330kV	92Z & 959	45 - 50	132kV Double Circuit

Please find attached a plan identifying TransGrid's infrastructure within the Warringah Local Government Area and a plan of the infrastructure within the Oxford Falls Valley and Belrose North Strategic Review area (see **Annexure 'A'**). It is requested that any proposed development remain outside of the existing easements that pertain to TransGrid's abovementioned electricity transmission infrastructure. This transmission infrastructure forms part of the State's greater electricity network and will be required indefinitely.

Future development activity, including subdivisions, should be planned taking into account the recommendations documented in the report by The Right Honourable Harry Gibbs', titled '*Inquiry into Community Needs and High Voltage Transmission Line Development'*, that being a policy of "prudent avoidance" in practical terms. This means designing Transmission Lines with regard for their capacity to produce magnetic fields and siting them having regard to their proximity to houses, schools, work sites and the like. Prudent avoidance should also apply to the planning of subdivisions and other land development.

Horizontal Clearances

Please ensure that a minimum 20 metre horizontal clearance is maintained from the nearest part of TransGrid's transmission towers, at ground level. There are several reasons for this horizontal clearance, such as public safety and to protect the earthing straps situated below the surface of the ground, which extend approximately 15 metres from each leg of the stanchion. The 20 metre horizontal clearance is also required to prevent collision damage to the stanchion and to ensure there is a safe working platform around the transmission tower in order for maintenance and repair works to be undertaken by TransGrid. Please find attached a pictorial example of the horizontal clearance required for a working platform (see **Annexure 'B'**).

Encroachments

Please ensure that all development is designed to prevent encroachment onto TransGrid easements. Further, please ensure any drainage proposed does not impact on TransGrid's easement or infrastructure therein. TransGrid must be consulted in respect of any proposed encroachment and may refuse or otherwise approve with restrictions, a proposed encroachment.

Easement Guidelines

In making this submission, TransGrid seeks that appropriate development controls be applied to any proposed development where works are proposed within the vicinity of TransGrid's easement and the electricity infrastructure situated therein. In order to accommodate future TransGrid infrastructure development, to ensure ongoing access to and security of existing infrastructure, and to ensure the safety of adjoining developments, it is recommended that *TransGrid Easement Guidelines for Third Party Development* (**Guidelines**) are followed when assessing proposed development applications that may affect land within the vicinity of TransGrid's infrastructure. It is recommended that these Guidelines are followed in order to provide an appropriate buffer to existing infrastructure and appropriate width for the placement of additional infrastructure/lines which may be required in the future.

The Guidelines (shown in **Annexure 'C'**) are not an exhaustive list of matters to be taken into consideration when building near electricity infrastructure and therefore, where there is any doubt concerning a particular activity within an easement, please do not hesitate to contact TransGrid for further information or advice.

Could you please confirm receipt of this correspondence and its inclusion in the Oxford Falls Valley and Belrose North Strategic Review. Should you require any further information in respect of this submission, please contact Timothy Cowdroy on (02) 9284 3015 or Timothy.Cowdroy@transgrid.com.au.

Yours sincerely,

Timothy Cowdroy
Land Economist | Land Assets and Facilities
TransGrid

Annexure:

A. *TAMIS plans of subject location and TransGrid's infrastructure*
B. *Pictorial Example of a TransGrid Transmission Tower Working Platform.*
C. *TransGrid Easement Guidelines for Third Party Development.*

Annexure

A

TransGrid Plans:

- Warringah Local Government Area; and

- TransGrid Infrastructure in the Land Area pertaining to the *Oxford Falls Valley and Belrose North Strategic Review.*

SYDNEY EAST 330 kV

0km 0.8km 1.6km 2.4km 3.2km

Legend

- Substation
- TransGrid Land Interest
- TransGrid Easement
- TransGrid Easement
- Easement Access

TransGrid

Warringah Local Govt Area

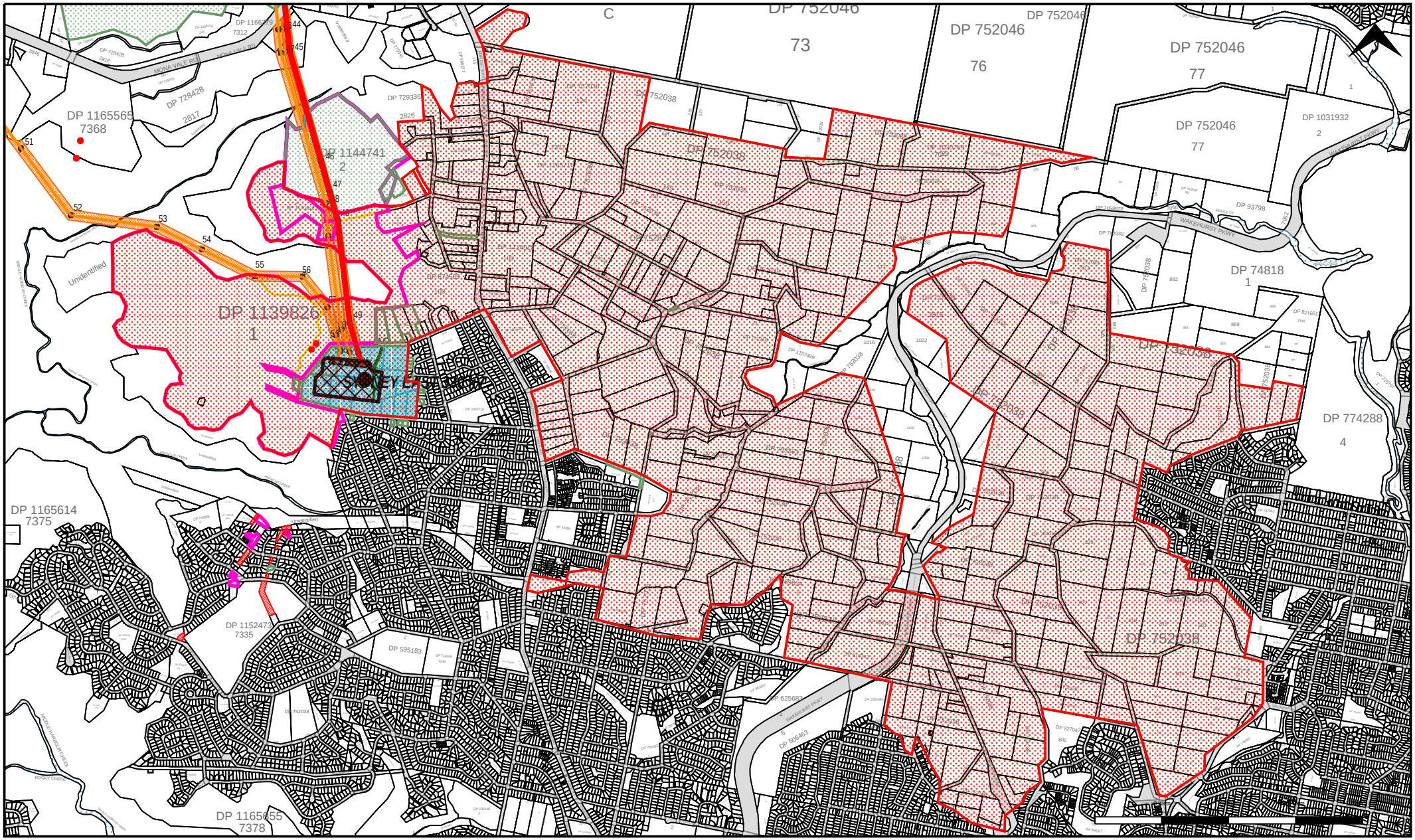
PRODUCED FROM TAMIS

Scale: 1:60000

A3

07/08/2013 13:38:09

Created by: p86665



Legend

- Transmission Line 132 kV
- Transmission Line 330 kV
- Transmission Line 500 kV
- Structure
- Substation
- TransGrid Land Interest
- TransGrid Easement
- TransGrid Easement
- Easement Access

TransGrid

Oxford Falls Valley &

Belrose North Strategic Review

PRODUCED FROM TAMIS

Scale: 1:30000

A4

07/08/2013 13:49:10

Created by: p67912

Annexure

B

Pictorial Example of a TransGrid

Transmission Tower Working Platform.

Example of Required Working Platform for Transmission Tower Maintenance

330kV Transmission Tower Maintenance

Annexure

C

TransGrid Easement Guidelines
for Third Party Development.

TRANSGRID EASEMENT GUIDELINES FOR THIRD PARTY DEVELOPMENT

Background

Transmission Line (TL) and cable easements are acquired by TransGrid to provide adequate clearance along the route of a transmission line for construction and maintenance work and also to ensure that no work or other activity is undertaken under or near the TL or cable which could create an unsafe situation either for persons or for the security of the TL or cable. The easement area contributes to the *prudent avoidance* of exposure by persons to EMF (Electric and Magnetic Fields).

The TL or cable easement area and its ongoing maintenance are control measures that cannot be compromised. The easement is established to prevent and mitigate against the following electrical safety risks:

- Infringement of electrical safety clearances e.g. due to an activity or vegetation growth.
- Electrical Induction e.g. due to parallel conducting materials.
- Step and touch potentials under fault conditions e.g. due to lightning or bushfire.
- Failure of structures or line equipment e.g. due to third party vehicle or plant impact.
- Transfer off easement of dangerous voltages, e.g. by services installed within the easement area.
- Blowout of a conductor under high wind (or blow in of vegetation) e.g. into an adjacent structure.

Safety to people and property is of paramount concern. TransGrid is also bound to maintain its infrastructure efficiently and cost effectively. TL and cable easements along with accesses thereto have been designed to facilitate effective operational maintenance.

Development Approval Process

Where the Environmental Planning and Assessment Act 1979 makes Local Councils the consent authority for development applications, proponents to a proposed development on land are to prepare a development application and submit same to the Local Council for development consent.

The *State Environmental Planning Policy (Infrastructure) 2007* (SEPP), which commenced on 1 January 2008, requires local councils to consult with Electricity Network Operators before granting development consent for proposals that might adversely affect:

- existing electricity infrastructure;
- easements for electricity purposes, even if no infrastructure has yet been constructed in the easement.

Local Councils must give written notice to the network operator of any proposals for development:

- within or immediately adjacent to an easement for electricity purposes;
- immediately adjacent to a substation;
- within 5 metres of an exposed overhead power line;
- involving excavation within 2 metres of an underground power line or a pole or within 10 metres of a tower;
- involving a swimming pool within 30m of a transmission tower or within 5m of an overhead line.

Any comments made by the Electricity Network Operator within 21 days of receiving Local Council's written notification must be taken into consideration by the Local Council before it determines the development application.

The *proponent* is required to consult with TransGrid in accordance with the *State Environmental Planning Policy (Infrastructure) 2007* (SEPP); the *NSW Occupational Health and Safety Act 2000,* and; the *NSW WorkCover Code of Practice for Working Near Overhead Power Lines 2006*.

TransGrid Approval

The approving statutory authority will require written approval from TransGrid for all proposed activities within an easement area in accordance with Section 45 of the *State Environmental Planning Policy (Infrastructure) 2007 (SEPP)*.

To assess and respond to an approving statutory authority, TransGrid will require the following information from the development proponent. TransGrid will object to any development where the development proponent has not provided the following information to TransGrid prior to Local Council's notification:

- Detailed specifications and plans drawn to scale and fully dimensioned, showing property boundaries and other relevant information.
- An *Impact Assessment* of the development on TransGrid infrastructure and associated interests (including easements). Further, details as to how any impacts thereto are proposed to be managed, mitigated or resolved (see below – *Impact Assessment*).

Upon receipt of the abovementioned documentation, the proponent's proposed development will be assessed in relation to its impact on TransGrid infrastructure, easements and means of access thereto. The proponent should note that for complicated proposals the consultation process will be iterative and the proponent should allow sufficient time for this process (see *Timeframes* below).

General *Development Proposal* Guidelines

1. Prohibited Activities and Encroachments

A number of activities and encroachments are not permitted within the easement area. These are detailed in the "TransGrid Easement Guide" (see Appendix 1 - *Prohibited Activities*).

Any *Development Proposal* should be designed in such a way that:

- It does not involve these activities, nor introduce these encroachments; and
- Does not to encourage other parties to undertake such activities or introduce such encroachments in the future.

2. Development

The *Development Proposal* should be planned with the adoption of The Right Honourable Harry Gibbs Report (*Inquiry into Community Needs and High Voltage Transmission Line Development*) recommendations, that being a policy of "*prudent avoidance*".

This report placed recommendations on the design of new transmission lines having regard to their proximity to houses, schools, work sites and the like and is equally valid when considering new developments proposed in proximity to existing powerlines and associated easements.

Electric and Magnetic Field (EMF) strength rises from the easement edge to beneath the conductors and the most practical way to achieve the *prudent avoidance* policy is to keep the development entirely outside the easement area.

If it is desired to place any part of a development within an easement the proponent shall, in conjunction with the *Development Proposal*, undertake an *Impact Assessment* to be provided to TransGrid that covers the changes in risk and mitigation measures proposed.

Relocating Infrastructure and Interruption to Transmission

The developer will be liable for any costs involved in having to relocate TransGrid infrastructure as part of any proposed development. Further, the developer will also be liable for any costs and penalties incurred as a consequence of interruptions to TransGrid's transmission operations arising from the development, whether planned or inadvertent.

Impact Assessment

An *Impact Assessment* shall be completed and is to accompany the development proposal when it is submitted to TransGrid for consideration.

The *Impact Assessment* shall cover:

1. Detailed description of the development
2. Health and safety risk assessment and control measures
3. Operational risk to the TL or cable due to the development
4. Maintenance risk to the TL or cable due to the development
5. Design and construction risk to the TL or cable and associated with the proposed development
6. Physical impact risk to the TL (vehicle collision, vegetation or other impact)
7. Risk to TransGrid's rights and entitlements
8. Impact of the proposed development re TransGrid's access to the easement and along the easement.

Checklist

The following checklist may assist in the completion of the *Impact Assessment.* A template is provided in *Appendix 3*.

Refer also to *Appendix 1* and *Appendix 2* for guidance on prohibited activities and TransGrid's requirements for developments and subdivisions.

1. **Detailed Description of the Development**

- Street Address;
- Land and Title references;
- Physical proximity of the proposed development to TransGrid's easement boundary (distance dimensions to be provided on a scaled plan); and
- Horizontal and vertical clearances of the proposed development to TransGrid's Infrastructure and associated easements

2. **Health and Safety Risk Assessment**

- **Safety Risk to General Public**

i. Have ground levels been changed that would compromise design clearances?
ii. Has the easement been altered in any way that would encourage prohibited activities to occur within the easement?
iii. Has the easement or the nature of the land in the vicinity of the easement, been altered in any way that would encourage prohibited encroachments to occur within the easement?
iv. Is it possible for proposed structures to transfer voltages off easement, or bring remote earths into the easement?
v. Has development been proposed that increase step and touch potential hazards, or that would encourage people to congregate within the step/touch potential zone of a structure?

- **Safety Risk to Non-electrical Workers and Emergency Service Personnel**

i. Has infrastructure been proposed that can be climbed compromising design clearances?
ii. Has infrastructure been proposed that can be accessed by maintenance persons using Elevated Work Platforms (EWPs) compromising design clearances?
iii. Has infrastructure been proposed that can bring remote earths onto the easement?
iv. Has infrastructure been proposed that is a fire hazard, or that would encourage the storage or use of flammable material on the easement?
v. Has infrastructure been proposed that would require emergency workers (such as fire fighters) to come near, or their equipment to come on or near high voltage conductors?

- **Safety Risk to TransGrid Employees & Contractors**

  i. Has access around any TransGrid structure been altered preventing EWPs, crane or other plant access or introduced other risks to maintenance staff?
  ii. Has the proposed development complied with TransGrid's horizontal clearances?
  iii. Has access to the easement been altered that would introduce risks to personnel, including although not limited to asset inspectors or patrol staff?

- **Health Risk to the General Public**

  i. Have public spaces been proposed *within the easement* that would encourage persons to congregate for lengthy periods of time?
  ii. Have facilities been provided outside of the easement but immediately adjacent thereto that would encourage persons to congregate within the easement?

3. Operational Risk

- Have any ground level developments been proposed (including roads, driveways, parking lots and turning bays etc) that would expose TransGrid transmission structures and lines to impact risk?
- Has change in water flows or drainage been proposed that could impact on the foundations of any TransGrid structure (or guy)?
- Are excavations or surface activities proposed that would impact a TransGrid structure's foundations, stability or earthing systems?

4. Maintenance Risk

- Have roads, driveways or landscaping been proposed that would prevent or hinder TransGrid maintenance, or increase maintenance costs, for the above or below ground components of the transmission line structure?
- Has access to the easement or within the easement, been obstructed, restricted or altered?
- Have access roads, bridges, crossings and the like been designed to cater for the weight and size of TransGrid maintenance plant (EWPs and Cranes)?
- Does the development encourage the placement of obstructions that would prevent access for routine or emergency works?

5. Development Design and Construction Risk

- Has the development been designed so that during the construction phase TransGrid is not restricted from undertaking normal maintenance and inspection activities?
- Has the development been designed so that during the construction phase prohibited activities or encroachments are not required in the easement area?
- Has the design health and safety risk assessment taken into account the requirements of the NSW WorkCover Code of Practice for *Working Near Overhead Powerlines* 2006?

6. TransGrid's Rights

- Have TransGrid's existing rights been preserved?
- Has TransGrid been exposed to new maintenance costs (e.g. landscaping or other development changes impacting easement access, use and maintenance)?
- Does a new deed of easement need to be negotiated?

Post Construction Compliance Statement

The development proposal shall include as-built plans of the final construction that must be provided to TransGrid. The as-built drawings must be accurate, scaled and display distances/measurements, demonstrating compliance to the agreed plans and implementation of agreed control measures.

Timeframes

TransGrid will respond to a Local Council notification of a proposed development within 21 days as required in the SEPP, however that response may not be an approval (or disapproval). If the development proposal does not meet the requirements of these Guidelines, or in the event further detailed engineering analysis is required, TransGrid will require the development proposal to be revised and resubmitted.

Developers are advised to consider TransGrid's requirements early in the process (and not as an afterthought that could result in project delays).

Further Assistance

For any further development enquiry assistance please contact the Development Enquiry Services Coordinator on Telephone (02) 9620 0777.

TRANSGRID EASEMENT GUIDELINES FOR THIRD PARTY DEVELOPMENT

APPENDIX 1

Prohibited Encroachments and Activities

TransGrid will use its powers under the Electricity Supply Act, involve WorkCover or take other legal action as required to prevent or halt prohibited activities.

1. Transmission Lines

Activities and encroachments that are **prohibited** within a Transmission Line (TL) Easement include, but are not limited to *(Note 2)*, the following:

- The construction of houses, buildings, substantial structures, or parts thereof.
- The installation of fixed plant or equipment.
- The storage of flammable materials, corrosive or explosive material.
- The placing of garbage, refuse or fallen timber.
- The planting or cultivation of trees or shrubs capable of growing to a height exceeding 4 metres.
- The placing of obstructions other than timber boundary fences within 15 metres of any part of a transmission line structure or supporting guy.
- Camping or the permanent parking of caravans or other camping vehicles.
- The parking or storage of flammable liquid carriers or containers.
- The installation of site construction offices, workshops or storage compounds.
- Flying of kites or wire controlled model aircraft within the easement area.
- Flying of any manned aircraft or balloon within 30m of any structure, guy or conductor.
- Flying of remote controlled or autonomous aerial devices (such as UAVs) within 30m of any structure, guy or conductor.
- Placing any obstructions on access tracks or placed in the easement area that restricts access.
- Any vegetation maintenance (such as felling tall trees) where the vegetation could come within the *Ordinary Persons Zone* – refer to the NSW WorkCover '*Working Near Overhead Powerlines - Code of Practice 2006'.*
- Any substantial excavation within 7 metres of a pole or supporting guy or guy foundation or within 16 metres of a tower
- The climbing of any structure (*any development that encourages or facilitates climbing will not be permitted).*
- Any change in ground levels that reduce clearances below that required in AS7000.
- The attachment of any fence, any signage, posters, or anything else, to a structure, or guy.

  Note: Interference to electricity infrastructure is an offence under the Electricity Supply Act.
- The movement of any vehicle or plant between the tower legs, within 5m of a structure, guy or between a guy and the pole.
  Note: Any damage to electricity infrastructure is an offence under the Electricity Supply Act.
- The storage of anything whatsoever within the tower base or within 5m of any tower leg.

- Any structure whatsoever that during its construction or future maintenance will require an *Accredited* person to access. *Note: The final structure may meet AS7000 clearances, but may be accessible* (e.g. by EWP) by Ordinary Persons within the Ordinary Persons Zone.
- Any work that generates significant amounts of dust or smoke that can compromise the TL high voltage insulation.
- The erection of any structure in a location which could create an unsafe situation work area for TransGrid staff.
- Any activity by persons not *Accredited* or not in accordance with the requirements of the WorkCover *'Working Near Overhead Powerlines - Code of Practice 2006'* that is within *(Note 1)*:
    - 3m of an exposed 132kV overhead power line
    - 6m of an exposed 220kV or 330kV overhead power line
    - 8m of an exposed 500kV overhead power line

  Note: Distances quoted are to the design conductor position (i.e. maximum sag and blowout)

The following activities may be approved with conditions. TransGrid's prior written consent is required. The proponent will have to demonstrate (using the *Impact Assessment* process) that the risks associated with the activity have been satisfactorily mitigated. Guidance on how to achieve this is provided in Appendix 2.

- Burning off or the lighting of fires. Lighting of fires directly under energised conductors will not normally be approved.
- Operation of mobile plant or equipment having a height when fully extended exceeding 4.3 metres.

  Note: Approval would be based on the need to maintain adequate clearance between the equipment and the line, having regard to the particular situation. Note that plant may require trailing earths and supervision by TransGrid staff.

- *Temporary* parking of caravans and other large vehicles in the outer 3m of the easement area, subject to a 4.3 metre height restriction and metallic parts being *earthed*.
- The erection of flagpoles, weather vanes, single post signs, outdoor lighting, subject to a 4.3 metre height restriction and metallic parts being *earthed*.
- The erection of non-electric agricultural fencing, yards and the like.

  Note: Fencing that exceeds 2.5 metres in height or that impedes would not be approved. Metallic fencing may require earthing and will generally not be approved if located within 15 metres of any part of a transmission line structure or supporting guy or within 4 metres of the vertical projection of the overhead conductors.

- The erection of electric fencing provided that the height of the fencing does not exceed 2.5 metres and provided that the fence does not pass beneath the overhead conductors.

  Note: Approval may be given for a portable electric fence to pass underneath the conductors provided that it is supplied from a portable battery-powered energiser that is located remotely

from frequented areas. Where it is necessary for a permanent electric fence to pass beneath the overhead conductors, or where an extensive permanent electric fencing system is installed in proximity to a transmission line certain additional safety requirements may be required.

- The installation or use of irrigation equipment inside the easement.

  NOTE: An irrigation system will not be approved if it is capable of coming within 4 metres of the overhead conductors; exceeds 4.3 metres in height; consists of individual sections of rigid or semi-rigid pipe exceeding 4.3 metres; and/or is capable of projecting a solid jet of water to within 4 metres of any overhead conductors.

- The installation of *low voltage* electricity, telephone, communication, water, sewerage, gas, whether overhead, underground or on the surface.

  Note: Services that do not maintain standard clearances to the overhead conductors that are within 15 metres from the easement centre-line, 16 metres from any part of a transmission line supporting structure or are metallic and within 30 metres of any part of a structure will not be approved. TransGrid may impose additional conditions or restrictions on proposed development.

- The installation of high voltage electricity services, subject to there being no *practicable* alternative and provided the standard clearances are maintained to the supporting structures.

  Note: Where extensive parallels are involved certain additional safety requirements may be imposed by TransGrid, depending on the particular case and engineering advice.

- Swimming pools, subject to TransGrid's strict compliance criteria.

  Note: Above ground pools will not be approved. In-ground pools will not be approved if there is a practicable alternative site clear of the easement area. If there is no practical alternative site, in-ground pools including coping will not be approved if it encroaches more than 4.5 metres, or is less than 30 metres away from a transmission line structure.

- Detached garages, detached carports, detached sheds, detached stables, detached glass houses, caravans, site containers, portable tool sheds, pergolas and unroofed verandahs attached to residences. (Easement encroachments of more than 3m will not be approved).
- Prefabricated metal (garden) sheds. TransGrid approved sheds must be earthed.

  Note: Sheds exceeding 2.5 metres in height, with a floor area exceeding 8 m^2, encroaching more than of up to 3 metres or within 15 metres of any part of a transmission line structure will not be approved. Connection of electric power will not be approved.

- Single tennis courts.

  Note: Tennis courts that hinder access, are for commercial use or do not provide adequate clearances shall not be approved.

- Sporting facilities and open recreational areas.

  Note: Facilities associated with the use of firearms and public sporting venues are discouraged.

- Subdivisions. See ***Appendix 2*** requirements.

- Roads, subject to horizontal and vertical clearances. Restrictions and other conditions on consent may also apply.

  Note: Roads located within 15 metres of any part of a transmission line structure will not be approved.

  Where it is proposed that a road passes within 30 metres of a transmission structure or supporting guy, TransGrid may refuse consent or impose restrictions and other conditions on consent. Where a road passes within 30 metres of a transmission structure or supporting guy, the structure's earthing system may require modification for reasons including, but not limited to, preventing fault currents from entering utility services which may be buried in the road. The option of raising conductors or relocation of structures, at the full cost of the proponent, may be considered.

- Cycleways, walking tracks and footpaths, provided *standard clearances* are maintained and the proposal does not alienate large sections of the easement area.
- Excavation – subject to restriction criteria.

  Note: Substantial excavations located within 7 metres of a general purpose pole structure or supporting guy, or within 15 metres of any part of a steel tower or major pole structure and exceeding a depth 3 metres will not be approved.

- Quarrying activities, earthworks, dam or artificial lake construction.
- Mining. Approval would be based on the merits of the proposal and any related circumstances.
- Use of explosives.
- Vehicle access or parking facilities.

  Note: Vehicle access and/or car parking facilities will not be approved if within 30 metres of a TL structure without adequate precautions provided to protect the structure from any accidental damage.

Note 1: An encroachment or activity that is located outside the prohibited distance of the infrastructure but still within the easement will not necessarily be permitted. It will generally need to be addressed in the Impact Assessment and remains subject to TransGrid prior consent.

Note 2: The above list is not exhaustive and if there is any uncertainty as to whether an activity or encroachment is acceptable within an easement, please contact TransGrid.

2. Cables

The activities listed below are prohibited within cable easements:

- The storage of flammable liquids or explosives.
- The planting or cultivation of trees or shrubs with extensive root systems.
- The construction of houses, buildings or substantial structures.
- The installation of fixed plant or equipment.
- The placing of garbage, refuse or fallen timber.
- Vertical boring directly over the cable lay (eg. the installation of fencing or safety railing).
- The raising or lowering of existing ground surface levels.
- Any excavation within *2m* of an underground cable.

The following activities may be approved with conditions. TransGrid's prior written consent is required. The proponent will have to demonstrate (using the *Impact Assessment* process) that the risks associated with the activity have been satisfactorily mitigated. Guidance on how to achieve this is provided in Appendix 2.

- Parking of vehicles.

  Note: Parking will be prohibited if the surface is not capable of supporting the vehicles likely to be parked, risking the crushing of the cable/ducts or erosion of the ground.

- The operation of mobile plant and equipment.

  Note: Such operations will be prohibited if the surface is not capable of supporting the vehicles likely to be parked, whereby risking the crushing of the cable/ducts or erosion of the ground.

- The erection of structures spanning the easement.
- Excavation.
- Concrete driveways.
- The installation of metal pipes, metal fences, underground or overhead cables.
- Road-boring in the vicinity of a high voltage cable.

TRANSGRID EASEMENT GUIDELINES FOR THIRD PARTY DEVELOPMENT

APPENDIX 2

General Requirements for Developments and Subdivisions

The following list of current general requirements is provided for your information. It should be noted that the list is not exhaustive and, where there is any doubt concerning a particular activity within the easement area advice should be sought from TransGrid.

1. Completed Works

The completed works shall provide for the following considerations:

- A safe unobstructed working platform shall be preserved around the transmission line structures for access by EWP, cranes as well as other large plant and equipment. No obstructions of any type shall be placed within 30 metres of any part of a transmission line structure.
- Roads, streets etc (including kerb to property boundaries) and intersections shall not be located within 30 metres of any TL structure.
- Roads crossing the easement require 12 metre clearance between the finished road surface and the conductor at it's maximum operating temperature.
- Roads paralleling the transmission line are not to be within the easement area.
- Proposed roadway locations shall also take into consideration any street lighting requirements to ensure that statutory clearance requirements are followed. The design clearances should include future maintenance safety issues. TL outages will not be provided for street light maintenance.
- Details of the levels of proposed roadways where they cross the easement shall be submitted to TransGrid for written approval prior to construction to ensure that adequate clearances to the TL conductors are maintained. It should be noted that formal approval will not be given to the subdivision if such clearances are not maintained.
- Access to the TL and its structures shall be available at all times for TransGrid plant and personnel. In this regard a continuous and unobstructed access way shall be retained along the easement.
- Where fences are required for security purposes access gates will be installed in an agreed location and a TransGrid lock will be fitted.
- All underground services installed more than 16 metres but within 30 metres of a TL structure shall be non-metallic. Utility services (including street lighting), whether above or below ground, shall not be installed without prior written approval of TransGrid.
- Excavation work or other alterations to existing ground levels shall not be carried out within the easement area without the prior approval of TransGrid. Approval will not normally be granted for such work within 16 metres of any supporting structure.
- Fenced boundaries for all new properties in the subdivision shall not be within 30 metres of any TL structure.
- A "Restriction-as-User" (88B Instrument) shall be placed on the titles of the lots affected by the TL easement. Any proposed activity within an easement area will require the prior written approval of TransGrid (appropriate wording will be advised when required).
- Any proposed development does not impact on TransGrid's costs of inspecting, maintaining or reconstruction the transmission lines.
- Vegetation Control
  In order to comply with its statutory responsibilities to maintain adequate clearance between the conductors and any forms of vegetation. TransGrid maintains its easements as follows:

- Tall growing species likely to infringe safe clearances are to be removed regardless of existing height at time of construction.
- Trees likely to fall onto conductors or towers are also to be removed whether on the easement or off the easement (ref. Sec 48 of the Electricity Supply Act 1995).
- Shrubs and other vegetation of lower mature height within the easement will be reduced and managed, generally by slashing with ground level retained.
- Vegetation management will aim to reduce available fuel and subsequent bushfire risks in accordance with NSW Rural Fire Service Bush Fire Environmental Assessment Code, which sets out requirements for hazard reduction strategies such as Asset Protection Zones and Strategic Fire Advantage Zones
- Removed vegetation will be mulched or chipped and removed from site or retained on site in accordance with owner/stakeholder requirements and
- Other works considered necessary in order to provide a safe working environment for maintenance staff, contractors and for the property owner/manager will be undertaken.

Proposed vegetation plantings, such as Riparian corridors, within the transmission line easements shall be compatible with the above maintenance requirements.

2. Construction

During construction, the development plans shall also provide for the following considerations:

- Vehicles, plant or equipment having a height exceeding 4.3 metres when fully extended shall not be brought onto or used within the easement area without prior TransGrid approval.
- Where temporary vehicular access or parking (during the construction period) is within 16 metres of a transmission line structure, adequate precautions shall be taken to protect the structure from accidental damage. Plans need to be submitted to TransGrid for prior approval.
- The easement area shall not be used for temporary storage of construction spoil, topsoil, gravel or any other construction materials.

3. Costs

The Developer shall bear all costs of any reconstruction or modification of the transmission line, including consultation and design required to maintain clearances due to proposed ground level changes; road crossings within the easement; or due to any damage to the TL arising from the development.

TRANSGRID EASEMENT GUIDELINES FOR THIRD PARTY DEVELOPMENT

APPENDIX 3

Impact Assessment Template

Detailed Description of the Development

Risk Type	Aspect	Drawing Reference	Assessment	Risk Level	Control Measure	Residual Risk
Health and Safety						
Operational						
Maintenance						
Design and Construction						
Rights and Entitlements						

Compliance plan

Submission Number: 58

Confidential

I support the zoning of the Cromer North area as E3.

Submission Number: 59

Graeme Stevenson, Ingleside

I object to the proposed zoning of my land on the basis that the methodology used to zone my land as E3 is not consistent with the translation that was done from LEP2000 for other properties in the Warringah Local Government area. The area should be zoned as RU4, or SP2, the same as the land owned adjacently by WSC.

I have attached an extract of the Warringah Urban Fringe Association Inc. (WUFA) submission that relates to my property.

I believe that the process used by WSC is floored and has prejudicial components, if not criminal in the decision making with reference to the protection of the zoning of the recycling depot, and maybe these decisions should be investigated by ASIC or other legal body.

Submission Number: 60

Jane Wrightson, Belrose

We are with the R5 zoning of our property.

Submission Number: 61

Garth Jones, Belrose

We agree with proposed zoning on our land

198 Forest Way

Belrose. 2085

Submission Number: 62

Philip & Fran Bloom, Belrose

Dear Sir, we are writing to say that we agree with your zoning of our land as R5.

Yours sincerely

Philip & Fran Bloom

Submission Number: 63

Tai Irwbin, Belrose

Yet another submission I believe we should be included in the zone of R U 4 as said many times before it is beyond belief how we are considered e3 when our lands are fully cleared private property. Please take the time to inspect ours and all concerned property before making this decision.

Kind regards

Tai Irwin

Submission Number: 64

schmidt - liermann

local government, property and commercial law

Our Ref: JSL:13/0091

6 August 2013

Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

By On-line Electronic Submission

Dear Sir/Madam,

Submission to Draft Oxford Falls Valley & Belrose North Strategic Review

1 I act for Numeve Pty Limited, the registered proprietor of land identified as Lot 100 in DP 1023183 (**Land**), being situated in the Oxford Falls Valley of the Warringah Council local government area (**Warringah LGA**).

2 I am instructed to make the following submission on behalf of my client in direct response to an invitation to my client to comment on the Oxford Falls Valley and Belrose North Strategic Review (**Strategic Review**) jointly released by the Department of Planning and Infrastructure (**Department**) and the Warringah Council (**Council**) on 21 June 2013.

3 The purpose of this submission is to object to:

3.1 specific aspects of the methodology and process adopted by the Project Control Group (**PCG**) in preparing and delivering the Strategic Review; and

3.2 the outcome of the Strategic Review as detailed in the application of the E3 Environmental Management Zone to the Land.

Background

4 My client is on the record as having expressed its objection to the making of the draft Warringah LEP 2011 (**Draft Plan**) as exhibited from 12 October to 30 of December 2009.

5 As a consequence of numerous submissions made to the Minister for Planning and Infrastructure (**Minister**), the Department and the Council, objecting to the proposed E3 Environmental Management zoning for land within the Oxford Falls Valley and Belrose North localities of the Warringah LGA, the Minister announced that he intended to defer the areas of Oxford Falls Valley and Belrose North localities from the Warringah LEP 2011. On

Schmidt-Liermann Pty Ltd
www.schmidt-liermann.com.au
PO Box 146
St Ives NSW 2075, Australia
T (02) 8095 7977 • **M** 0420 904 111 • **F** (02) 8095 7979
E mail@schmidt-liermann.com.au
ABN 11 147 193 404

9 December 2011, when the Warringah LEP 2011 was made, both the Oxford Falls Valley and Belrose North localities were deferred, meaning that planning controls under the Warringah LEP 2000 continued to apply to the aforementioned localities which included the Land.

6 In objecting to the making of the Draft Plan where this intended to zone the Land as E3 Environmental Management, my client relied, inter alia, on the following grounds:

6.1 my client's previous reliance, in good faith, on the representation of the previous Minister in his communications with the Warringah Council expressing the view that the '*most appropriate option is to defer Oxford Falls Valley from the draft LEP until Council has undertaken the studies recommended by the Commission. Upon completion of the studies, Council will be in a better position to determine the appropriate areas to be zoned for conservation and if appropriate, any areas suitable for urban development'*.

6.2 the failure of the Warringah Council's planning staff to properly translate the provisions of the WLEP 2000 to the Draft Plan resulting in the imposition of new planning controls over land proposed to be zoned E3 Environmental Management;

6.3 the failure of the Warringah Council's planning staff to correctly interpret and apply the E3 Management Zone to a substantial number of 'cleared' properties within the Warringah Council local government area;

6.4 the Warringah Council's failure to comply with important procedural aspects relating to the preparation and notification of the Draft Plan;

6.5 the Warringah Council's refusal to give adequate consideration to community opposition to the Draft Plan;

6.6 the Warringah Council's resolution not to undertake a public hearing in response to matters raised in submissions to the Draft Plan; and

6.7 the failure of the Warringah Council to take appropriate steps to address admitted deficiencies in the Draft Plan prior to its submission to the Minister, thereby imposing an unnecessary and inequitable financial burden on affected ratepayers who will be required to seek an amendment of the Draft Plan once made (if made) should they wish to have the procedural and substantive errors in the Draft Plan corrected.

6.8 legal advice given to my client by me that my client:

(a). had standing before the Land & Environment Court to object to the making of the Draft Plan pursuant to s20(1)(b) of the *Land & Environment Court Act 1979* for the purpose of seeking orders to have the Draft Plan, or parts thereof, declared invalid if it were to have been made by the Minister in its then present form; and

(b). had reasonable prospects of successfully arguing that the Draft Plan, or parts of it, be declared invalid if it were to have been made by the Minister in its then present form,

on the basis that the Council has failed to adequately discharge its statutory obligations in the process of preparing the Draft Plan.

7 Regrettably, some of the critical reasons for my client's original objections to the Draft Plan remain relevant to my client's present objections to:

7.1 the outcome of the Strategic Review in recommending that the Land be zoned E3 Environmental Management; and

7.2 the process that has been followed by the PCG in reaching the conclusions identified in the Strategic Review.

8 I now turn to highlighting the basis of my client's present objections and respectfully invite both the Department and Council to consider this submission and to reconsider the conclusion reached with respect to the proposed E3 Environmental Management zoning of the Land.

Key issues for consideration

Has the E3 Environmental Management zone been correctly applied to the Land?

9 It is my client's contention that the E3 Environmental Management zone has again been incorrectly applied to the Land as a result of a flawed translation process that has sought to translate the B2 Oxford Falls Valley zone under the WLEP 2000 to a new LEP applying the standard instrument format for LEP's

Flaws in the Process

Incorrect interpretation of zoning definition

10 The purpose of the Strategic Review is stated on page 26 of the Strategic Review "*to apply planning controls that most closely reflect existing planning controls*", the authors of the strategic review comment that "*whilst value of land is not a planning consideration, the strategic review did examine a best fit zone having regard to the* ***character statements*** [my emphasis] *of the two localities under LEP 2000*".

11 It is respectfully suggested that such a basis of translation is fundamentally flawed as it fails to take into consideration the categorisation of permissible land uses (and importantly almost entirely discounts the category 3 land uses) that were identified in the zoning under the LEP 2000 for locality B2 Oxford Falls Valley.

12 Such an approach serves only to reinforce the original error of the Councils Planning Staff when arguing that the Draft Plan was intended to represent '*as close as possible to a translation of the provisions under WLEP 2000'* and that the *'draft LEP provisions for the*

Oxford Falls valley ***are a translation of the existing provisions within the Warringah LEP*** [my emphasis]', having regard for the outcome of Strategic Review so far as it relates to the Land.

13 It is submitted that just as the Council staff made a substantive error in the manner in which the E3 Environmental Management zone was applied to a significant number of properties when attempting to translate the provisions under WLEP 2000 the approach adopted by the PCG serves only to replicate this fundamental error.

14 It is simply not possible to seek to extract one aspect of the original definition of the B2 Oxford Falls Valley zone and seeks to apply this in isolation of the remaining components of the definition of that zone when looking for a similar zoning match under the standard instrument format for LEP's.

15 Simply put, the attempt of translating a place-based plan such as the Warringah LEP 2000 to the standard instrument format, is ill served by an approach that seeks to pay more attention to one aspect of the definition of the relevant zone (the desired future character statement) at the expense of an equally important aspect of the definition detailed in the categorisation of permissible land uses.

Inconsistent and flawed analysis of land

16 The fundamental flaw in the translation process is further reinforced in the current Strategic Review by the staged approach taken in analysing land as to its suitability for the E3 Environmental Management zone with a highly predictable outcome given the framework for analysis.

17 This is exemplified by considering the process adopted by the PCG when analysing the Land as documented in the Strategic Review.

18 **Stage 1:** Involves an analysis of the use of the Land which (with the benefit of site visits) is originally identified as "*commercial*" (Map 003 Land Uses). So much is agreed.

19 **Stage 2:** Applies a cumulative level of environmental constraint filter which identifies the Land as being subject to "*moderate environmental constraints to development*" (Map 004 - Cumulative level of environmental constraints). So much is agreed.

20 **Stage 3:** Applies a further filter in the analysis of the appropriate zoning for the Land which involves a zoning recommendation based on the consideration of primary environmental constraints which defines the Land as having "*no environmental constraints to development*" (Map 005 - Outcome Of The Primary Environmental Constraints Analysis) subject to further assessment being required to determine the zoning. Again so much is agreed.

21 **Stage 4** (the catch all stage): Despite having identified the Land as having "*no environmental constraints to development*" " the fourth stage of the land analysis involves a further 4 stage analysis identified on pages 32 and 33 of the Strategic Review which can only be interpreted to serve one purpose and that is to overwhelmingly force a conclusion that the majority of land be zoned as E3 Environmental Management on grounds that

completely ignore the first three stages of land analysis including importantly its present use and the pre-existing definition applied to the zoning of the Land under the B2 Oxford Falls Valley zone.

22 Simply put it is not rational to adopt a process of land analysis that through its application ultimately ignores one of the most important and fundamental stages involving the analysis of the use of the land.

Existing uses

23 To suggest that the "*small number of nonconforming land uses* [that arise] *as result of the recommended zoning*" be dealt with through reliance on existing use rights under the *Environmental Planning and Assessment Act 1979* and the *Environmental Planning and Assessment Regulation 2000* is simply not an adequate response to what clearly amounts to an effective down zoning of the permissible use of the Land and a flawed process having regard for the current categories of available land uses noted in the B2 Oxford Falls Valley zone and the availability of alternative zoning outcomes.

Integrity of the process – a comparison with Kimbriki

24 It is inevitable that one should question why the process of translating the WLEP 2000 should result in a particular zoning outcome (SP2) for land owned and controlled by the Council in relation to the operations of the Kimbriki Waste operations, which notably involves a land use not dissimilar to the current use of the Land by my client as a concrete recycling facility, but interestingly enough has resulted in an entirely different zoning outcome for the Land in question both in the regional Draft Plan and as an outcome to the Strategic Review.

25 Indeed such an outcome and the inferences that may be drawn from it invites further criticism of the process and begs a response to the question "Why is it that the development potential of the land owned by a competitor of Kimbriki, namely the Land owned by my client should be so compromised by the application of a process that should surely be neutral in its application?"

Continued resistance to accountable decision making

26 Regrettably, despite assurances about transparency and accountability and the desire for appropriate community consultation and engagement, the actions to delay access to certain information again invites criticism. The lack of availability of information to enable the formulation of appropriate submissions and comment on the Strategic Review has again undermined the process of public engagement. Indeed it is noted with considerable reservation that information underpinning the process and methodology used to analyse land within the Oxford Falls Valley and Belrose North localities was only made available following a GIPA application made by the Warringah Urban Fringe Association Incorporated.

Concluding remark

27 The Department, the Council and the PCG are urged to take this submission into account when proceeding to finalise recommendations with respect to the zoning of my clients Land and are specifically invited to reconsider zoning my clients land in a manner that more appropriately reflects and takes into account the approved uses of the Land which are otherwise prohibited under the E3 Environmental Management zone. A potential and appropriate solution may be to recognise the approved uses of the Land by their inclusion in Schedule 1 to the WLEP 2011 when amended to incorporate the deferred areas.

Yours sincerely,

Joerg Schmidt-Liermann

Direct: 02 8095 7978
Email: joerg@schmidt-liermann.com.au

Submission Number: 65

Confidential

I object to the proposed zoning of my land on the basis that the methodology used to zone my land as E3 is not consistent with the translation that was done from LEP2000 for other properties in the Warringah Local Government area.

Submission Number: 66

Kamaroi
RUDOLF STEINER SCHOOL

Oxford Falls Valley & Belrose North Strategic review Committee,

Council Civic Centre,

Dee Why NSW 2099.

Dear Committee,

In your draft review we note that Kamaroi School, including our property at 224 Forest Way, is in Area 11 and proposed for RU4 zoning.

Having been part of this consultation process, Kamaroi School is very pleased to know that our concerns were taken seriously. We were particularly pleased with the level of community input allowed and the fact that you visited sites in the review areas. My meeting with a team headed by Juliet Grant was conducted in a very professional and congenial manner. I felt a genuine listening and exchange occurred and thank the team for that.

A very pleasingly result of your review is that we can develop the school (with consent) in order to meet growing demand in our area. Furthermore we are delighted that our medium term strategic community and educational objectives, involving greater environmental awareness and repair work, remain alive. We look forward to the possibility of taking greater care of our local bushland environment and potentially working with local enterprises who have expressed sympathy with this strategic goal.

Kamaroi School wishes to express our support for the draft review on the above basis.

Kind regards

John Forman

Business Manager *02 9479 0503*

P: 02 9450 1651
F: 02 9450 1109
E: kamaroi@kamaroi.nsw.edu.au

220 Forest Way Belrose NSW 2085
www.kamaroi.nsw.edu.au

Submission Number: 67

Mark Shipley, Belrose

In the latest plan my property has been zoned E3 and I object to the proposed zoning on the basis that the methodology used to zone my land as E3 is not consistent with the translation that was done from LEP2000 for other properties in the Warringah Local Government area.

My property is cleared land and is no different from many other properties receiving totally different zoning. My neighbours are mainly commercial and anything BUT environmentally worth protecting.

Submission Number: 68

Richard Bystrzynski, Belrose

I object to the proposed zoning of my land on the basis that the methodology used to zone my land as E3 is not consistent with the translation that was done from LEP2000 for other properties in the Warringah Local Government area.

Submission Number: 69

Chih-Neng Chang, French Forest

Given that Duffys Forest and Terrey Hills under the similar zoning and character statements to our land in LEP 2000. In LEP2000, agriculture is the first permissible use under Category 2 for our land. The LEP 2011 E3 zone has no mention of agriculture or primary industry in the objectives of E3.

We bought this land in May 2013 because we plan to experience rural life style. Now the new E3 zone makes the land literally a park land and any rural improvement will likely be to be rejected under E3.

We agree with Duffys Forest, Terrey Hills and Belrose West's RU4 RU5 zoning and we believe our area should be considered RU4 or RU5.

Our land is at least 70% cleared and mostly manicured lawn; the site inspection on Dec 2012 did not reflect the true use of the land.

The minimum lot size for B2 (LEP2000) and E3(2011) are way too big. It has not been revised since 1974. We believe half an acre or 1 acre lot minimum lot size will have very small impact to the environmental and outlook of the Oxford Falls valley. Hence RU4 or RU5 zoning on our land achieves a good balance of meeting council's objective and protecting the environment for the generations to come.

Page 26 of the draft report states the density control was developed in 1974 under an Interim Development Order 51 to respond to the water quality issues of the Narrabeen Lagoon Catchment impacted on by the residential development in the 1960s and 1970s within the study area. Revising the density control within the study area is therefore premature until water quality impacts for the catchment is considered in details.

Three issues:

1) A lot of this land does not drain to Narrabeen Lagoon.

2) Why spend all of this time and effort doing a strategic review if you don't revise the density controls (which were meant to be revisited in 6 months from 1974)

3) The Water Quality Study has been done (The report is titled Warringah Non-Urban Lands Study Stage 2 â Narrabeen Lagoon Water Quality Analysis Appendix E of

this submission).

The conclusion of the Water Quality Study was:

CONCLUSIONS

It has been determined that development of the areas identified as suitable from Stage 1 of the NULS (PPK, 2000), which drain to Narrabeen Lagoon, can be undertaken without a subsequent reduction in water quality in Narrabeen Lagoon, and in most cases an increase in water quality can be achieved.

The minimum lot size for all land in the deferred area must properly addressed.

Submission Number: 70

Anthony Ng, Oxford Falls

I disagree with the proposed E3 zoning of my property.

I object to the proposed zoning of my land on the basis that the methodology used to zone my land as E3 is not consistent with the translation that was done from LEP2000 for other properties in the Warringah Local Government area.

Submission Number: 71

Douglas Laing, Belrose

I object and disagree to the proposed zoning of my land as the system used to zone my land as E3 is not consistent with the original LEP 2000 which was for other properties in the Warringah local government area.

Submission Number: 72

Elsie Berkeley, Belrose

I object to the proposed Zoning of my two properties, on the basis that the methodology used to zone the properties was not consistent with the transition that was done from LEP2000 for other proper tie within the Warringah Local Government Area.

Submission Number: 73

7 August 2013

Director General
Department of Planning and Infrastructure
GPO Box 39,
SYDNEY NSW 2001

Dear Sir,

Draft Oxford Falls Valley and Belrose North Strategic Review Submission in Relation to 70 Willandra Road, Beacon Hill

We are writing on behalf of Lipman Properties Pty Ltd, the owner of 70 Willandra Road, Beacon Hill (the 'site') to object to the zoning of the site proposed under the *Draft Oxford Falls Valley and Belrose North Strategic Review* (the Strategic Review). Specifically, we object to the proposed 'E3 Environmental Management' zoning of the site under the draft, and submit that the site should properly be included in the 'R2 Low Density Residential' zone.

1 The Site

The site is commonly known as 70 Willandra Road, Beacon Hill and is legally defined as Lot 806, DP 752038. It slopes down from west to east and comprises a series of naturally formed rock terraces. It also contains sandstone outcrops and trees interspersed amongst heath vegetation.

The site has an area of 2.6 hectares and is bounded by:

- Lady Penrhyn Drive and the suburb of Red Hill to the south and west;
- Willandra Road and the suburb of Beacon Hill to the east and;
- Lot 807 DP 752038 and Lot 808 DP 752038 to the north, which are both undeveloped, with topography and vegetation similar to the site.

A substantial brick and tile dwelling is situated at the north-west corner of the site, addressing Lady Penrhyn Drive. The curtilage of this dwelling above the adjacent escarpment, and a significant area below the escarpment has been almost entirely cleared of natural vegetation.

SYDNEY
GPO Box 5278 Sydney 2001
Tower 2, Level 23, Darling Park
201 Sussex Street
Sydney NSW 2000 Australia

t 02 8233 9900 f 02 8233 9966 e info@urbis.com.au w urbis.com.au Urbis Pty Ltd ABN 50 105 256 228

FIGURE 1 – AERIAL PHOTOGRAPH OF THE SITE

FIGURE 2 – EXISTING DWELLING HOUSE ON THE SITE

2 Development Approved on the Site

0n 30 December 2010 the NSW Land & Environment Court (*Lipman Properties Pty Ltd v Warringah Council* Matter Nos. 10973 & 10974 of 2009) granted development consent for:

> *"32 self contained dwellings for use as 'Housing for Older People Or People With A Disability', provided in a cluster of 8 detached buildings, each comprising four dwellings of 2 - 3 bedrooms"*

FIGURE 3 – COURT APPROVED TWO STOREY HOUSING

Notwithstanding Council's environmental constraints mapping, considered further below, and the identification of threatened *pimelia curviflora sp*. on the site, subject to various conditions the Court found that these constraints were suitably managed within the proposed development.

The Court granted 'deferred commencement' consent. The deferred commencement conditions were satisfied as confirmed by correspondence dated 13 March 2012 and the consent commenced on 13 March 2012.

Unless 'physically commenced', the consent will lapse on 13 March 2017.

3 The Strategic Review

The Strategic Review was jointly exhibited by the Department of Planning and Infrastructure (DPI) and Warringah Council (Council) from 21 June to 7 August 2013. Its purpose is to consider the development controls that currently apply to land under Warringah Local Environmental Plan (LEP) 2000 and recommend suitable land use zones for the area. Recommendations from the review will allow this land to be brought into Warringah LEP 2011.

Key references to the site are considered below.

3.1 MAP 03 – LAND USES OBSERVED DURING SITE VISITS (MAP 003 - PAGE 24)

This map identifies the majority of land within the Strategic Review study area as being 'Bushland', but acknowledges some sites as 'Dwelling' and other as 'Seniors Housing and Associated Facilities' (including Willandra Village to the north of the site), in addition to a dozen other categories of existing use.

Notwithstanding the existing substantial dwelling on the site, and the current court approval for senior's housing development, the site is identified as 'Other'. That is, it is not recognised as 'Dwelling' or 'Seniors Housing and Associated Facilities'.

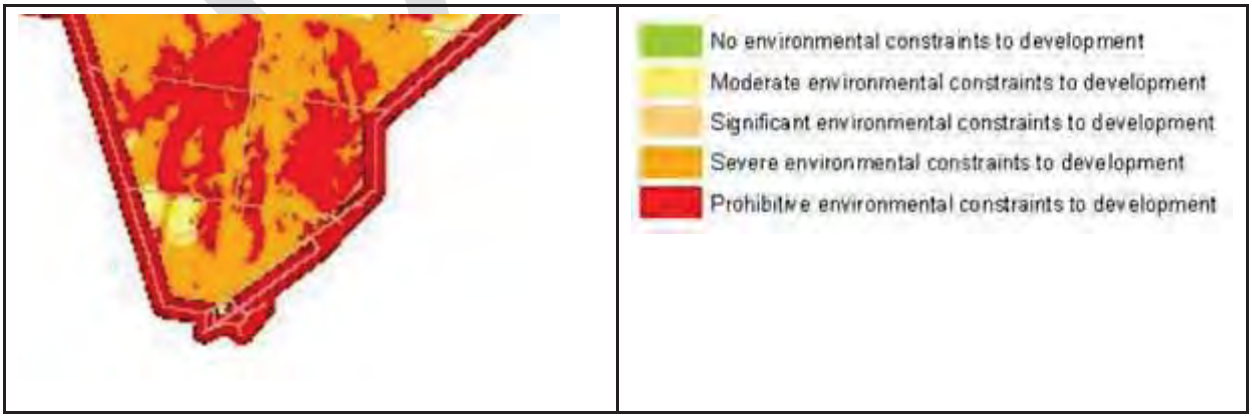
3.2 ENVIRONMENTAL CONSTRAINTS MAPPING (MAP 004 – PAGE 29)

The review includes Council's former five-tiered mapping classification of Environmental Constraint and at page 26 states:

> *" **Protection of the Environment***
>
> *The PCG agreed to use the most recent available data on environmental constraints as part of this review to ensure that land with prohibitive, severe or significant environmental constraints was appropriately considered when translating the land into LEP 2011."*

However, as previously demonstrated in *Lipman Properties Pty Ltd v Warringah Council*, this mapping was undertaken at a very broad scale, resulting in inaccuracies at a site level. Specifically, while the mapping identifies most of the site as having 'severe' environmental constraints, with pockets of 'moderate' and 'prohibitive' constraint, previous ground proofing has demonstrated that most of the site has only 'moderate' constraints, with small pockets of 'severe' constraint.

FIGURE 4 – EXTRACT: MAP 004 OF STRATEGIC REVIEW



On the basis of the above mapping, the recommendation of the Strategic Review that the site be included in zone 'E3 Environmental Management' has prima facie appeal. However, this same mapping was presented to the Court in *Lipman Properties Pty Ltd v Warringah Council* and scrutinised by various environmental experts. On the basis of this very detailed and site specific expert analysis, the Court found that the environmental constraints of the site should not preclude development, and development consent was granted as detailed above.

3.3 USE OF E3 ENVIRONMENTAL MANAGEMENT ZONE ON CLEARED LAND (PAGE 27)

The Strategic Review acknowledges that cleared land should not be included in the E3 Environmental Management Zone:

> ***"****A number of submissions presented a view that the E3 Environmental Management zone is not appropriate for cleared land or land adjacent to existing residential areas. LEP Practice Note 09-002 outlines where the E3 Environmental Management zone may be applied and also indicates that it is generally not intended for cleared lands".*

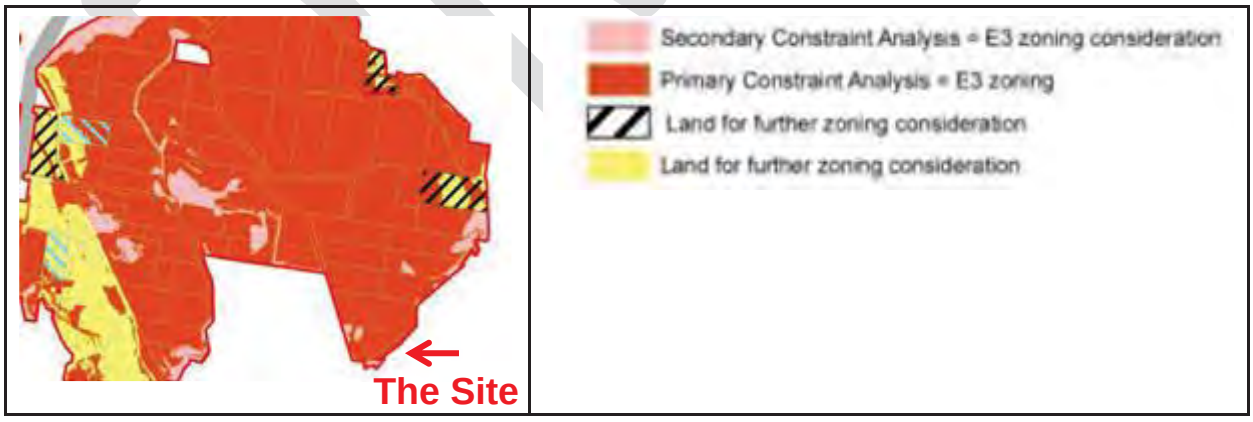
Notwithstanding the above, and the fact that a significant part of the site has been totally cleared of original vegetation, both around the existing dwelling house and below the adjacent escarpment (see Figure 1) the entire site is proposed to be included in zone 'E3 Environmental Management'.

3.4 SECONDARY ENVIRONMENTAL CONSTRAINTS ANALYSIS (MAP 006 – PAGE 34)

The DPI has rationalised Council's former mapping (above) and taken account of their own review and site inspection. However, while Willandra Village and other existing retirement villages have been hatched on Map 006 as "Land for Further Zoning Consideration", the site has been mapped as mainly "Primary Constraint Analysis = E3 Zoning", with only the existing dwelling site and cleared area mapped partly as "Secondary Constraint Analysis = E3 Zoning".

The failure to recognise the approved development on the site within this mapping has presumably informed the recommended zoning discussed below.

FIGURE 5 – EXTRACT: MAP 004 - STRATEGIC REVIEW



While the approved senior's housing development on the site has not been constructed, Lipman Properties Pty Ltd have expended significant resources securing the development consent and satisfying the deferred commencement conditions, including Council approval of the Environmental Management Plan (Consent Condition No. 10) and retention and protection of the threatened *pimelia curviflora sp* on the site (Consent Condition No. 11). We therefore submit that the Strategic Review should take into account the approved development on the site.

Rezoning the site to constrain the permissibility of the approved range and intensity of uses on the site would merely create the prospect of the approved development becoming a non-conforming use, triggering the 'existing use rights' provisions of the EP&A Act.

3.5 RECOMMENDATION OF REVIEW

The Strategic Review zones the majority of the locality 'Zone 3 Environmental Management', including:

> *"land that is significantly constrained by environmental and infrastructure factors. This also includes land that is isolated, does not adjoin urban areas and/or would cumulatively have a significant impact if zoned to an alternative zone without first undertaking studies recommended by the PAC."*

In these regards:

- The Court has found that the site is not sufficiently constrained by environmental factors to preclude development.
- All urban infrastructure is available to the site.
- The site is not isolated, but directly adjoins established urban areas on three sides.
- An alternative zoning of the site that permitted urban development would not lead to any cumulatively significant impacts.

Other potential zonings include:

- Zone R2 Low Density Residential
- Zone R5 Large Lot Residential
- Zone RU4 Primary Production Small Lots
- Zone SP2 Special Purpose

The recommendation of the Strategic Review states that, in addition to the Dawes Road Precinct, the R2 Low Density Zone is proposed to apply to:

> *"Seniors Housing – there are several existing seniors housing sites within the strategic review area. Whilst it is unlikely these will be redeveloped in the near future, the proposed R2 Low Density Residential zone acknowledges the existing use of these sites and ensures that the current use for seniors housing is not non-conforming".*

However, the review adopts Councils constraints mapping and therefore does not acknowledge the approved senior's housing development, and includes the site within the E3, rather than the R2 zone.

FIGURE 6 – EXTRACT: MAP 007 - STRATEGIC REVIEW

4 Conclusion

The Strategic Review does not account for the existing clearing and weed infestation of part of the site, the existence of a significant dwelling house on the site, or the approval through the Court of a comprehensive redevelopment of the site for 32 senior's housing apartments. It also generally adopts Council's environmental constraint mapping, which on detailed examination in the Court was found not to be a sufficient basis to preclude comprehensive redevelopment of the site.

As detailed above, the site does not fulfil the stated criteria of the Strategic Review for an E3 Environmental Management zoning.

While the approved senior's housing development on the site has yet to be commenced, the approval is valid until 13 March 2017, and any down zoning of the site is only likely to increase the prospect of that consent being acted upon, thereby establishing a non-conforming use. This is an outcome that the Strategic Review explicitly seeks to avoid.

In view of the above we strongly submit that the site should be included in the R2 Low Density Residential Zone, not the E3 Environmental Management Zone, as currently proposed in the Strategic Review.

Yours sincerely,

Ian Cady
Associate Director

Submission to the draft report for the E3 Strategic Review

[redacted]

Submission Date: 7 August 2013

[redacted]

[redacted]

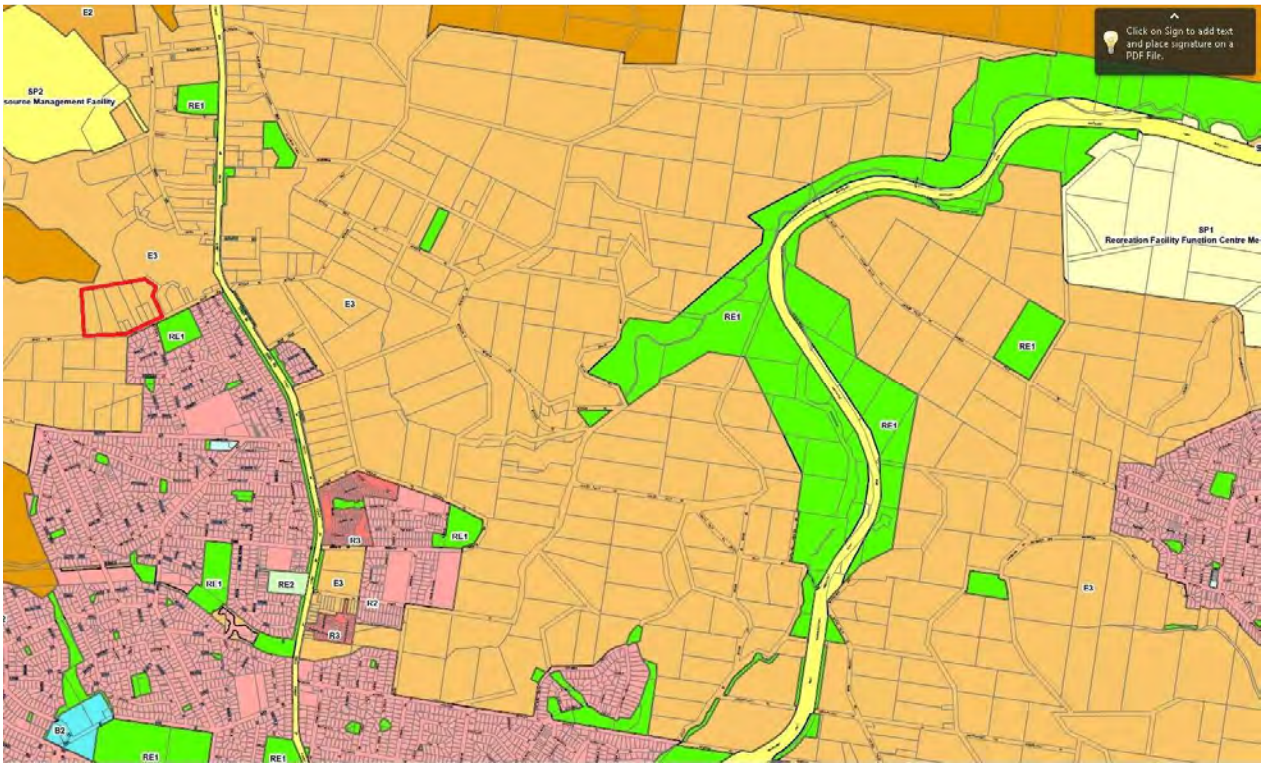
Overview

This submission is made on behalf of the following owners of land in [redacted]

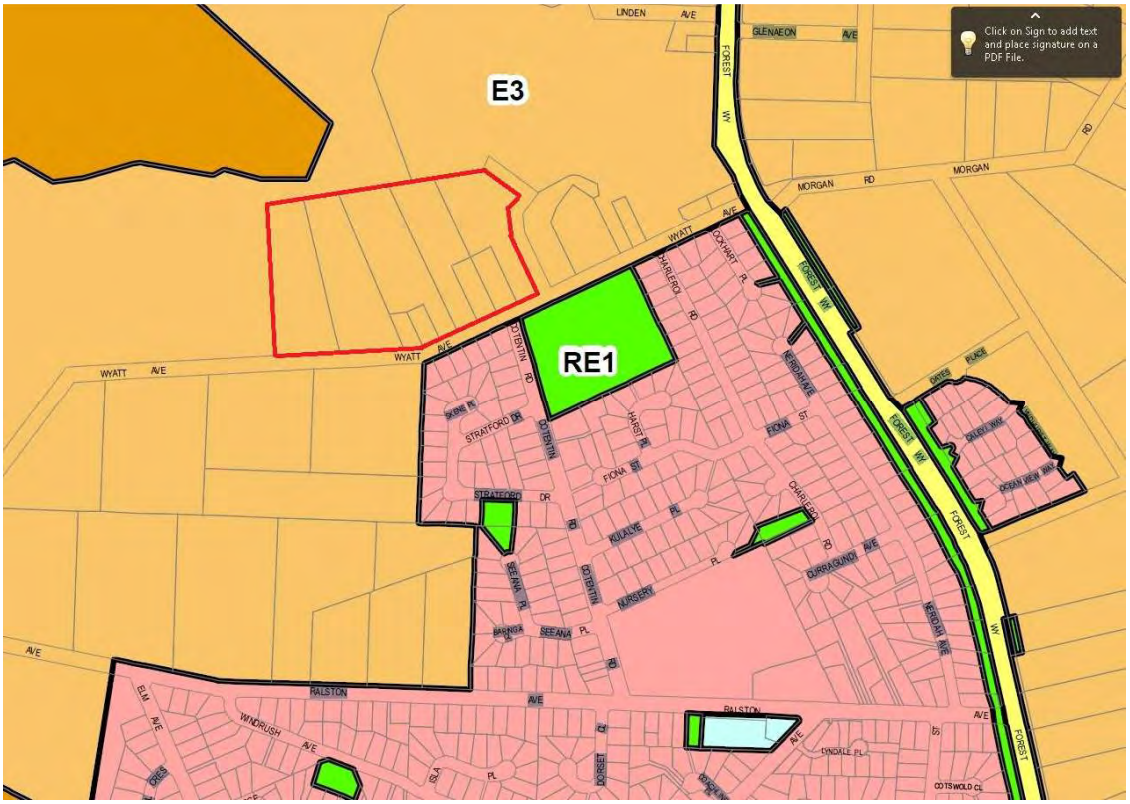
Land Owner	Address	Land Area (m^2)
[redacted]	[redacted]	9,687
[redacted]	[redacted]	2,403
[redacted]	[redacted]	2,276
[redacted]	[redacted]	9,333
[redacted]	[redacted]	12,713
[redacted]	[redacted]	1,214
[redacted]	[redacted]	1,214
[redacted]	[redacted]	13,780
[redacted]	[redacted]	13,270
Total Area		65,890

The Subject Land:

The map below shows the subject land outlined in Red:



The map below shows the subject land outlined in Red (zoomed in):



The subject land is all located on the Northern side of [redacted] Belrose. It is adjacent to well established residential land (currently zoned R2). The Sydney East Substation is located on the Southern side of the Western end of Wyatt Ave [redacted] The subject land is approximately 80% cleared. The subject land drains to Bare creek which flows into Middle Harbour. Wyatt Ave is a tar sealed road which intersects with Forestway at a set of traffic lights. Wyatt Ave is 2.5km from Mona Vale Rd and 3.4km from Warringah Rd. Wyatt Ave is 2.1 km from the key employment centre, Austlink Business Park (The Warringah Community Strategic Plan lists Austlink as one of three key employment centres in Warringah). Wyatt Ave is less than 1km from Covenant Christian School, Belrose Public School, John Colet School and Kamaroi School. There are currently several residents of Wyatt Ave who walk/ride to Covenant Christian School and Austlink Business Park for school and work.

Our Comments on the Draft Report

The points we would like to raise are:

1) We agree with the zoning of our land as R5 (Large Lot residential) in stage 1 of this strategic review.
2) The minimum lot size has not been addressed and must be addressed.
3) Our properties must be considered for further zoning consideration in Stage 2 of the E3 Strategic Review.

Further information on these points is below.

2) Minimum Lot Size:

The minimum lot size of one house per 50 acres (200,000m^2) was put in place with IDO51 in 1974 as a temporary measure. Land owners were advised in 1974 that this temporary measure would be lifted in 6 months time. Our land ranges in lot size from 1,214m^2 to 13,780m^2. A minimum lot size of 200,000m^2 is ridiculous.

The draft report states:

"The density control was developed in 1974 under an Interim Development Order 51 to respond to the water quality issues of the Narrabeen Lagoon Catchment impacted on by the residential development in the 1960s and 1970s within the study area. Revising the density control within the study area is therefore premature until water quality impacts for the catchment is considered in detail." (Extract from Page 26)

Three points to do with this issue:

1) Our land does not drain to Narrabeen Lagoon.
2) Why spend all of this time and effort doing a strategic review if you don't revise the density controls (which were meant to be revisited in 6 months from 1974)
3) The Water Quality Study has been done by Warringah Council is titled "Warringah Non Urban Lands Study Stage 2 – Impacts on Water Quality of Narrabeen Lagoon" and is 66 pages long.

The conclusion of the Water Quality Study was:

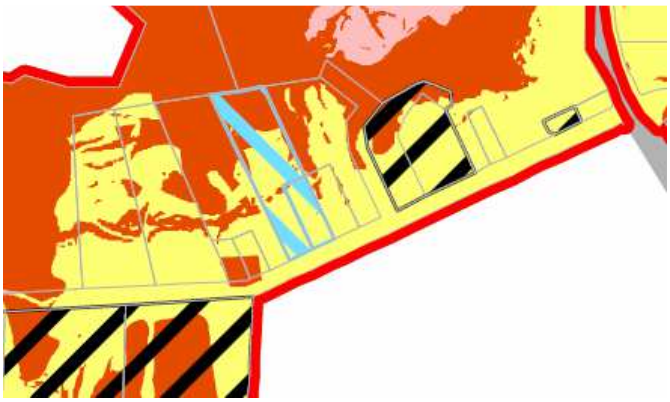
"**CONCLUSIONS**
It has been determined that development of the areas identified as suitable from Stage 1 of the NULS (PPK, 2000), which drain to Narrabeen Lagoon, can be undertaken without a subsequent reduction in water quality in Narrabeen Lagoon, and in most cases an increase in water quality can be achieved."

We ask that the minimum lot size for all of the land proposed to be R5 on the Northern side of Wyatt Ave is 1,000m^2. This request is based on the smallest current lot size being 1,214m^2 ([redacted]) for these parcels of land.

3) **Our properties must be considered for further zoning consideration:**

The Secondary Constraints analysis map in the draft strategic review (see below) shows our land as having three classifications:

1) Light Blue Cross hatched: This is inconsistent with the Environmental Values found for our properties by the Non Urban Lands Study (refer to Appendix A).
2) Red (Primary Constraints): This is inconsistent with the Environmental Values found for our properties by the Non Urban Lands Study (refer to Appendix A).
3) Yellow cross hatched: The Yellow and Black Cross Hatched areas are ambiguous. All of the land which has been proposed by the draft report as being R5 should be unambiguously marked as "Land for further zoning consideration".

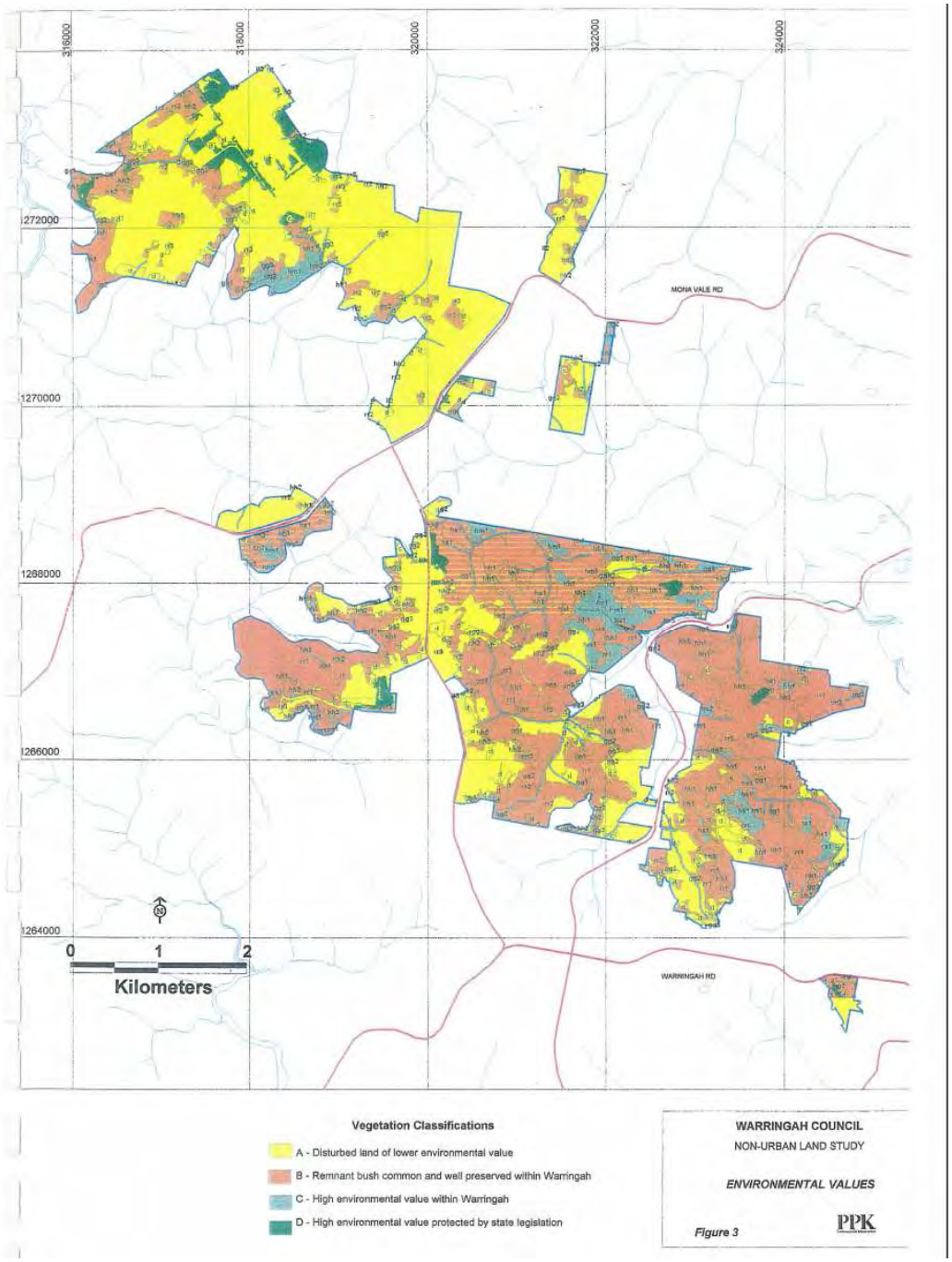


Oxford Falls Valley and Belrose North Strategic Review

The Non Urban Lands study showed our land as having potential for higher intensity development (Refer to Appendix B).

We request that our land is considered for further zoning consideration in stage 2 of the E3 Strategic Review.

Appendix A – Environmental Values from the Non Urban Lands Study



Class A - Disturbed land of lower conservation value.

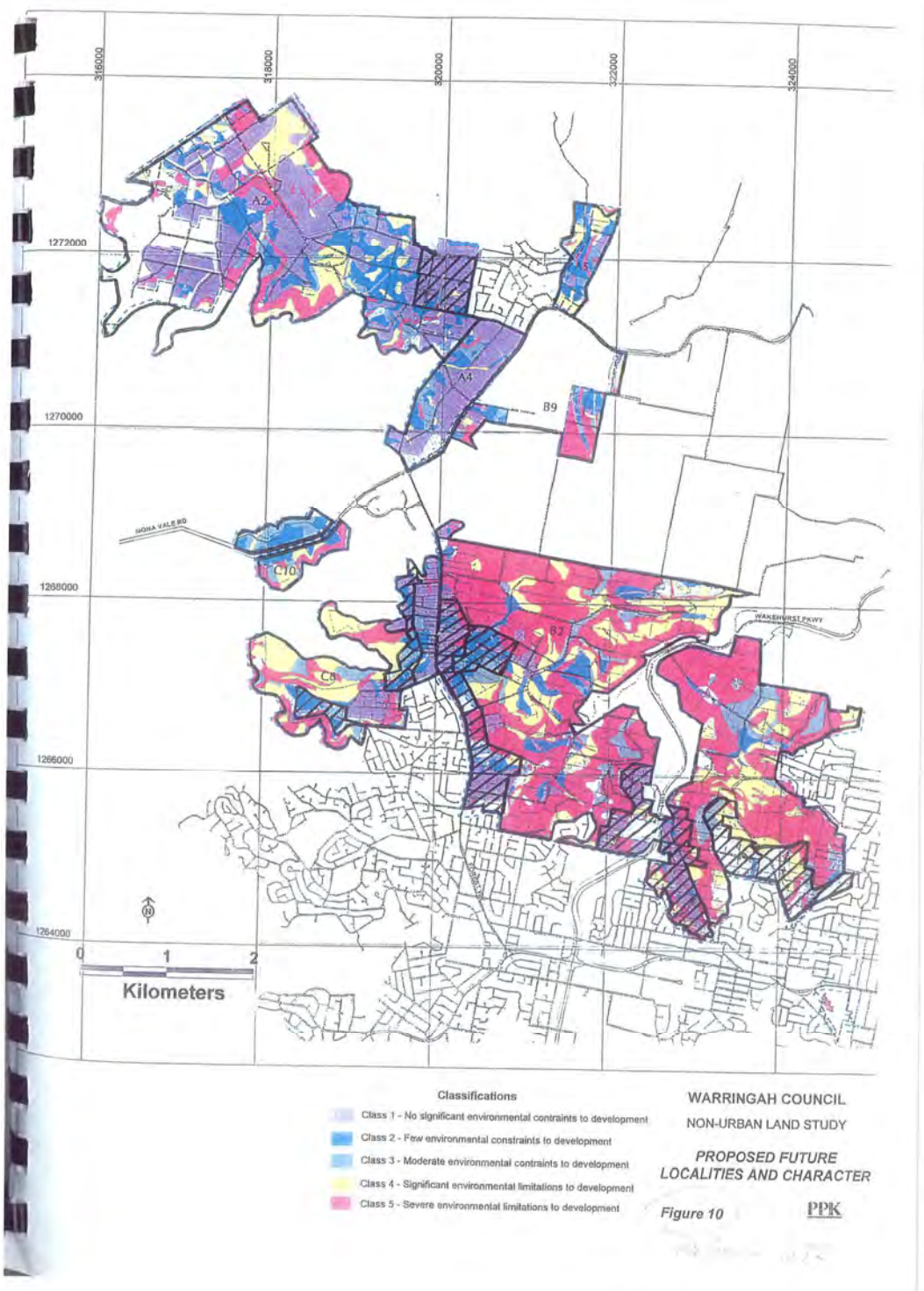
Areas where the existing land is highly disturbed, cleared of native vegetation or where vegetation is degraded to the point that environmental values have been severely degraded. Environmental values are therefore a minor consideration when planning to develop provided that appropriate planning controls have been satisfied. Approximately 41 percent of the land within the study area were categorised into class A.

Class B - Remnant bush which is common and well preserved within Warringah.

Areas with remnant native vegetation communities which are well represented throughout Warringah and in National Parks. These areas include vegetation communities identified by Smith and Smith (1998) as being of third priority for conservation. Provided that appropriate planning controls have been satisfied and an ongoing management plan is adopted to ensure the sustainability of the proposed activity these lands could support a moderate level of development in terms of potential environmental impact. Approximately 49 percent of the land within the study area was categorised as being in Class B.

Appendix B – Land identified by the Non Urban Lands Study as having potential for higher intensity development

Below is an extract from the Non Urban Lands Study showing our land as cross hatched. The cross hatched area was identified as having potential for higher intensity development.



Recommendation 3: *That the hatched areas identified in Figure 10 as having potential for higher intensity development and land uses (as outlined in Chapter 11), be further investigated with particular regard to the respective areas' :*

- *transport and sewerage infrastructure* constraints;
- *bushfire hazard constraints*;

Submission Number: 75

7 August 2013

The Chairperson
Oxford Falls Valley & Belrose North Strategic Review
Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Sisters of the Good Samaritan
of the Order of St Benedict

Good Samaritan
Congregational Offices
Postal address:
PO Box 876
Five Dock NSW 2046

1A Harris Road
Five Dock NSW 2046

Tel (61 2) 8752 5300
Fax (61 2) 8752 5333
Email gsoffices@goodsams.org.au
www.goodsams.org.au

Dear Sir/Madam

Sisters of the Good Samaritan – Oxford Falls Valley Strategic Review submission

The proposed down zoning of our land to E3 Environmental Management is of grave concern to our Congregation. The proposed action, if implemented, would have serious implications for our Congregation. In the light of such a threat, I am duty bound to take all possible actions to protect our current rights a private land owner.

Property and Ownership

Since 1951 the Sisters of the Good Samaritan (SGS) have owned and been a local rate payer in respect of Lots 808, 809, 812,813 and 817 in DP 752038. These Lots are sometimes referred to as 70A and Lot 817 Willandra Road notwithstanding their street frontage is to Lady Penrhyn Drive.

The lots are identified in the attached map in Appendix 1.

Information supplied to the review

We have conducted extensive studies of our property and have a wealth of very current and very accurate information relating to the property. All of this information was offered to the review but no requests for information were received.

We have produced a species impact statement and also received a biobanking statement in respect of our property, both indicating that development of our property is possible without having a significant impact on threatened species. We provided this information in electronic form to the review on an unsolicited basis. It appears that this information has not been used in the review.

Submission

We have a number of issues with the review process and the way we have been treated as a private land owner in the area. Warringah Council has demonstrated specific intent to limit any future development potential in respect of our land for more than 15 years and such inherent bias should not be promoted as independence.

We submit that our land should be zoned RU6 Transition or R5. All zones achieve a translation of the existing provisions that apply to the site. All zones are available to be used under the standard instrument. We do not consider a subjective choice not to use zones available for this purpose to be acceptable in the context of the strategic review.

In respect of the Draft review report we submit the following key points.

1. *Seniors living* – the need for more appropriate accommodation for seniors is undeniable and limiting the ability for any land to participate in a merit assessment process will exacerbate supply problems that already exist.

    - Limiting future potential of accommodation for seniors is inconsistent with the Metropolitan Strategy and not in the broad interests of the community. Seniors accommodation plays an important role in co-locating for more affordable care and services delivery in the home and also facilitates urban renewal and modernisation as older dwellings are updated and redeveloped for improved supply of residential accommodation.

    - Application of E3 and relationship to SEPP Seniors Living 2004(Housing for Seniors and People with Disability)(SEPP SL) is an incorrect recollection of history. The principle argument of the draft report in its justification for removing the permissibility of seniors housing is one of 'administrative oversight' as we understand it. It proposes that had the revisions to the SEPP SL in 2004 been adjusted in WLEP2000 then seniors living would not have been permissible. This logic is intended to support the stripping of a current permissible use as being a reasonable translation.

      This could only be true if the land was considered Environmental Protection land at this time (which it was not). To assume it was makes this a self-fulfilling prophecy. The proof that it was not is evidenced in the WLEP2000 Environmental Protection map layer that was exhibited with the draft WLEP2000 (Attached at Appendix 2).

      Our land was explicitly **excluded** from classification as Environmental Protection land on this exhibited map.

      If the 'higher standards' of the SEPP SL that were updated in 2004 were actually in effect earlier in 2000 then a very clear conclusion could be drawn based on this Environmental Protection map, they would NOT have applied to our property and therefore seniors housing would have remained a permissible use. Refer Appendix 3 for timeline and supporting mapping.

      The argument prescribed to the contrary by the Draft report can only survive using the presumption that the land would have been zoned E3 at the time the new provisions were introduced which clearly based on the WLEP 2000 map it was not.

      Importantly, following the exhibition of the Draft WLEP2000 this proposed Environmental Protection map layer WAS NOT supported by the Department for the reason that it unnecessarily limited the future development potential of the land. Please refer to your records on this matter and you will note that the Department has already opposed the very actions that are behind this review.

    - **Site compatibility threshold** - Seniors Living potential development will be required to get site compatibility under an R5, RU4 or RU6 zone. All of these zones represent a better translation than E3 of the current provisions applicable to our land.

      The current situation under WLEP2000 is that some land, including our land, is not required to get a site compatibility certificate because it is a permissible use under the WLEP2000 and there CL 24(1A) of SEPP SL applies. This will change if translated as R5, RU4, RU6. Not having permissibility under another planning instrument will require a Site Compatibility Certificate to be sought and received prior to any development application being submitted.

There are suitable checks and balances in the system as it stands to not require an E3 zone to be applied to limit seniors housing potential. Allowing an appropriate translation of current permissible uses WILL NOT result in greater chances of seniors living development happening that is not strongly supported on a merit basis by the Department and with the involvement of Council.

2. *Translation methodology* – is it translation or reassessment of zoning? What role do constraints play in a translation when there are applicable zones available in the Standard Instrument LEP? The language used throughout the report such as 'upzoning' suggests that in parts, the review is more than a pure translation exercise as has been previously communicated. That said, some aspects of the controls that apply to the land have been selectively avoided such as density controls temporarily derived in 1974 that have no currency or relevance.

    - The constraints assessment is not indicative of a translation exercise and should be completely disregarded at this stage. It is appropriate to consider under Phase 2 when the PAC studies are undertaken.

    - The constraints information is out dated and not grounded in current reality. Therefore completely inappropriate for the purpose of assessing site by site development potential (which is beyond the scope of this review anyway).

3. *Planning system review* – has the planning system review been adequately included in this review.

    - The review of the planning system is likely to present a framework that this review should be mindful of. By the time the next steps in this process are undertaken we are likely to have a planning system being implemented which may remove the relevance of some of the actions being taken in this review, such as the E3 zone.

    - What will be the status of E3 and other zones under the new system – this should be considered in detail to ensure the outcomes of this review and the subsequent planning process remain relevant.

4. *Independence of Council*
    - Our land has been consistently focussed on by Council and we believe that the historic actions taken by Council prevent them from being able to be independent regarding our property.

    - These actions include writing to the Minister prior to the deferral of our land from WLEP2011 and specifically requesting it (and only two other sites) be zoned E3 and the rest deferred. This specific targeting is neither reasonable nor indicative of the independence that this review purports to, and must have.

    - For this reason, we request that the Department ensures that this bias does not contribute to the outcomes of this review by limiting the participation of Council representatives directly involved in past actions or by taking a more active position to ensure the promised independence is realised.

Summary

We respectfully request that the Department gives full consideration of our submission with a focus on:

- WLEP2000 Environmental Protection layer exhibit – the Department opposed this map and approach once and we request that the Department revisits the sound reasons for doing this;

- Allowing seniors living to be merit assessed within the system that exists; and

- Ensuring that a translation rather than reassessment is the outcome of the review. As it stands the Draft report tries to do a little of both and that is inconsistent with the scope of the review.

We would welcome the opportunity to discuss further our concerns. We have limited our submission to the current report themes rather than technical errors and inconsistencies and our offer to supply historic information and context will always remain.

Yours faithfully

Sister Clare Condon SGS
Congregational Leader

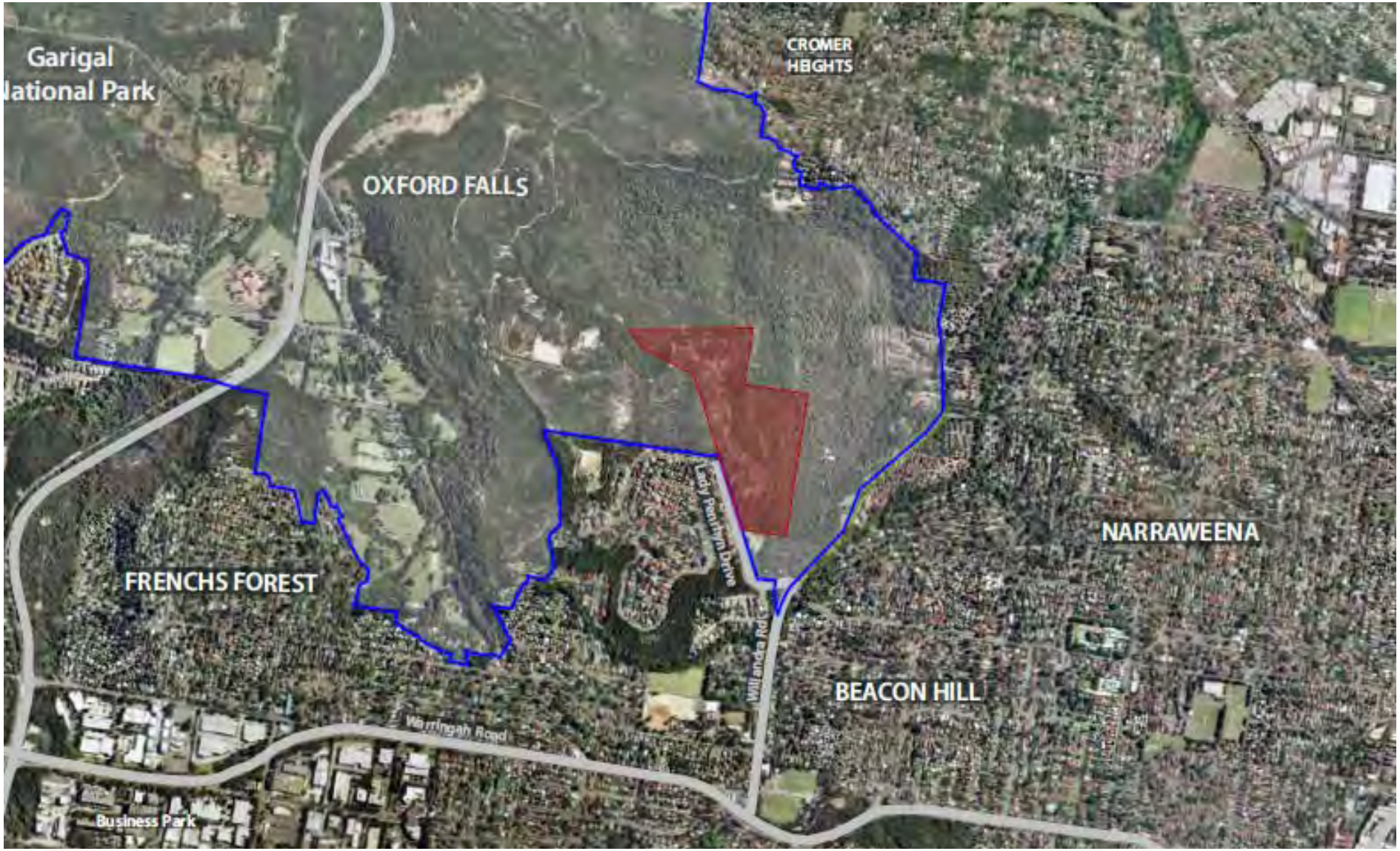
Appendix

1 Identification of SGS owned land
2 WLEP2000 Environmental Protection exhibited map
3 Timeline and supporting maps
   a. Increased constraints assessed from same base data
   b. Release potential to significantly constrained without doing any studies
   c. Explicit exclusion as Environmental Protection land

APPENDIX 1

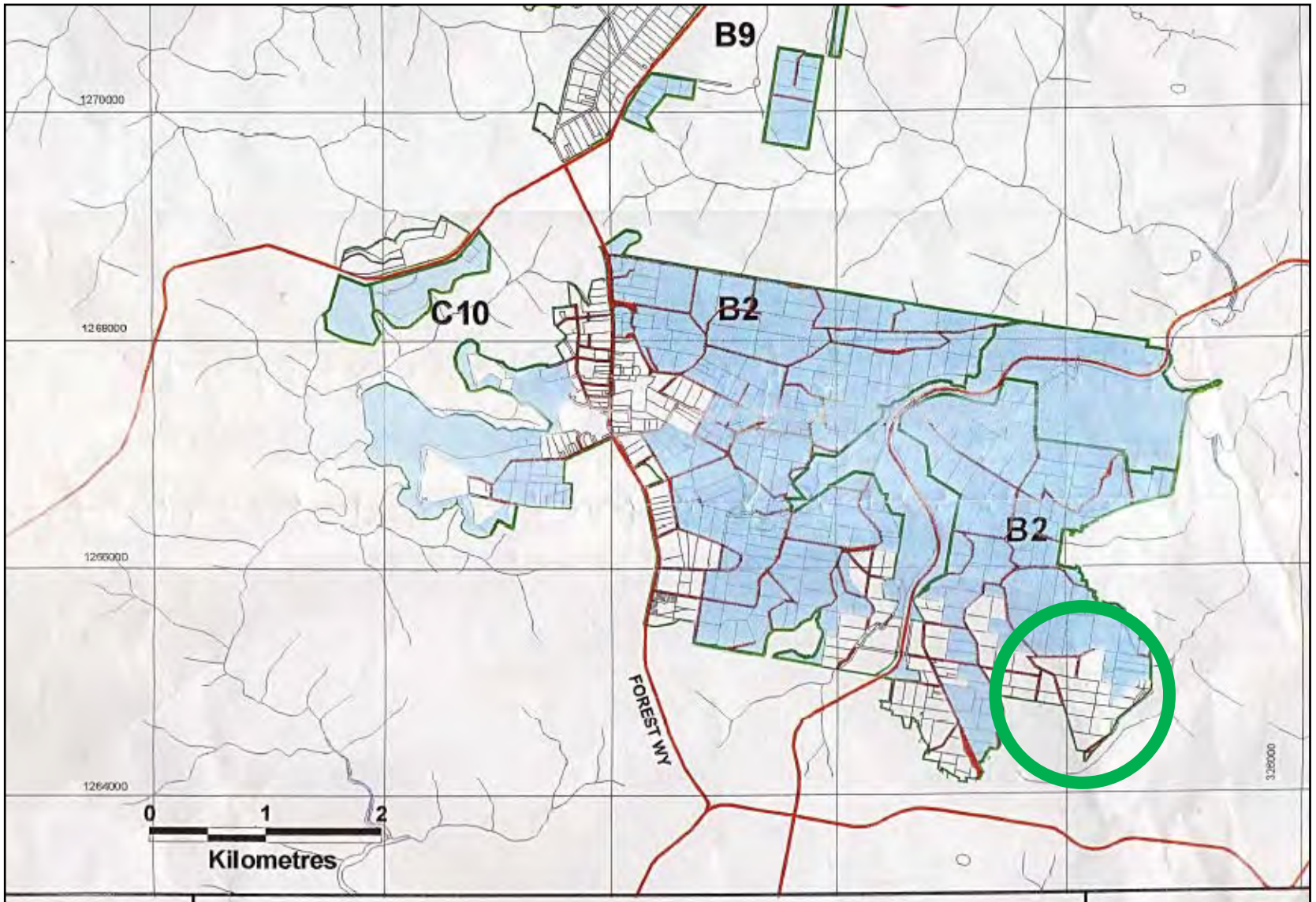
Identification of SGS Owned Land

LAND OWNED BY SGS



APPENDIX 2

WLEP2000 Environmental Protection Exhibited Map



ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

WARRINGAH LOCAL ENVIRONMENTAL PLAN 2000

ENVIRONMENT PROTECTION

Certified in accordance with the Environmental Planning and Assessment Act, 1979
Date :

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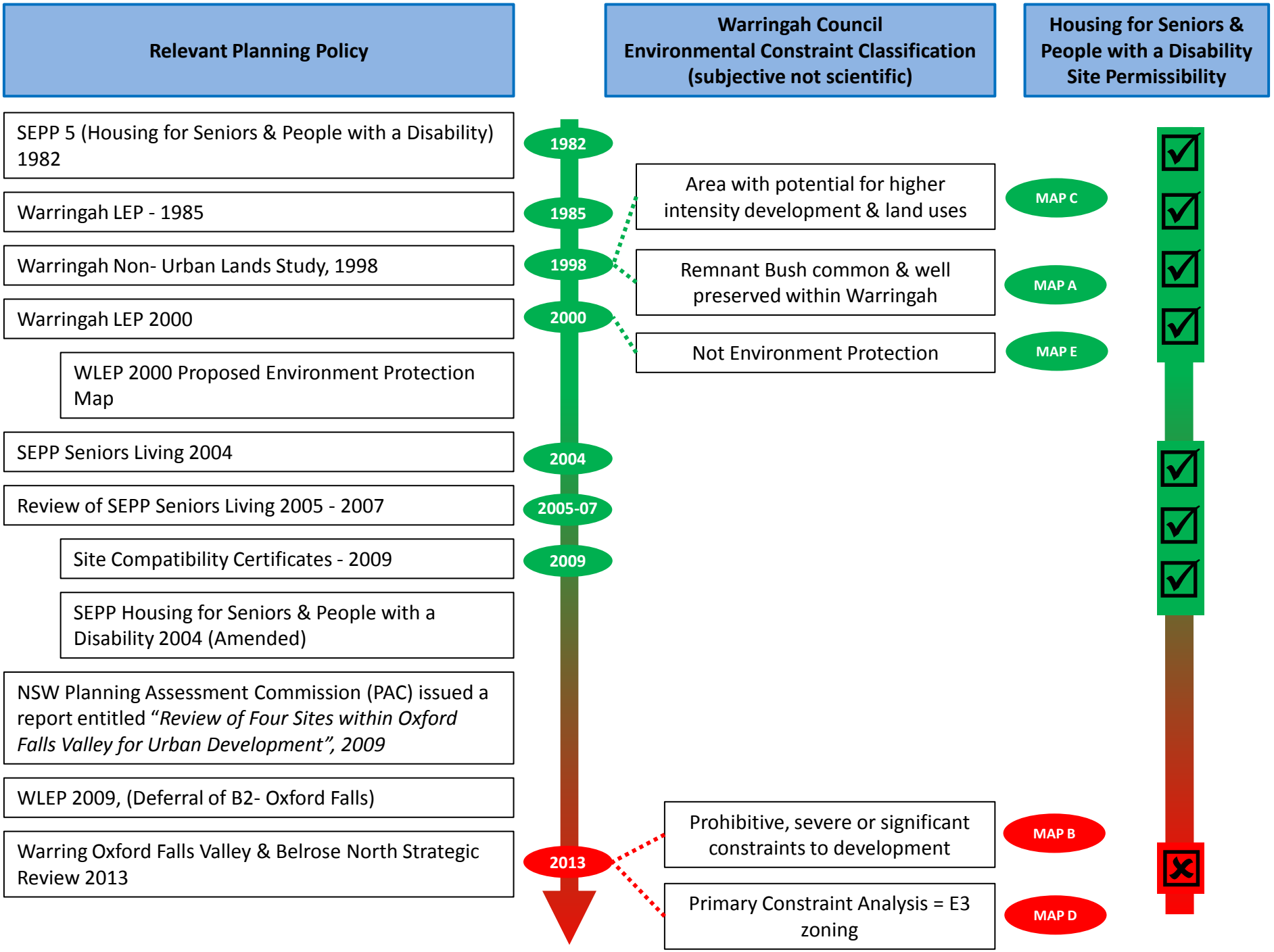
Environment Protection

APPENDIX 3

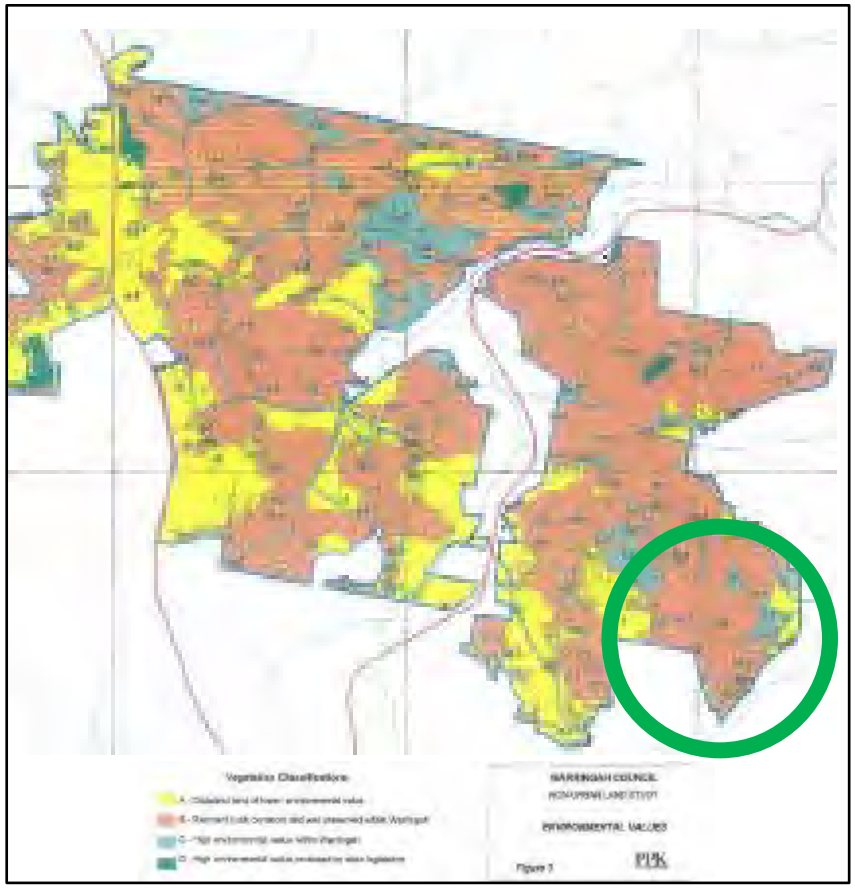
Timeline
Map A
Map B
Map C
Map D
Map E


Relevant Planning Policy
Warringah Council Environmental Constraint Classification (subjective not scientific)
Housing for Seniors & People with a Disability Site Permissibility
SEPP 5 (Housing for Seniors & People with a Disability) 1982
Warringah LEP - 1985
Warringah Non- Urban Lands Study, 1998
Warringah LEP 2000
WLEP 2000 Proposed Environment Protection Map
SEPP Seniors Living 2004
Review of SEPP Seniors Living 2005 - 2007
Site Compatibility Certificates - 2009
SEPP Housing for Seniors & People with a Disability 2004 (Amended)
NSW Planning Assessment Commission (PAC) issued a report entitled "Review of Four Sites within Oxford Falls Valley for Urban Development", 2009
WLEP 2009, (Deferral of B2- Oxford Falls)
Warring Oxford Falls Valley & Belrose North Strategic Review 2013
1982
1985
1998
2000
2004
2005-07
2009
2013
Area with potential for higher intensity development & land uses
MAP C
Remnant Bush common & well preserved within Warringah
MAP A
Not Environment Protection
MAP E
Prohibitive, severe or significant constraints to development
MAP B
Primary Constraint Analysis = E3 zoning
MAP D

MAP A

WARRINGAH COUNCIL
NON URBAN LAND STUDY (2002)

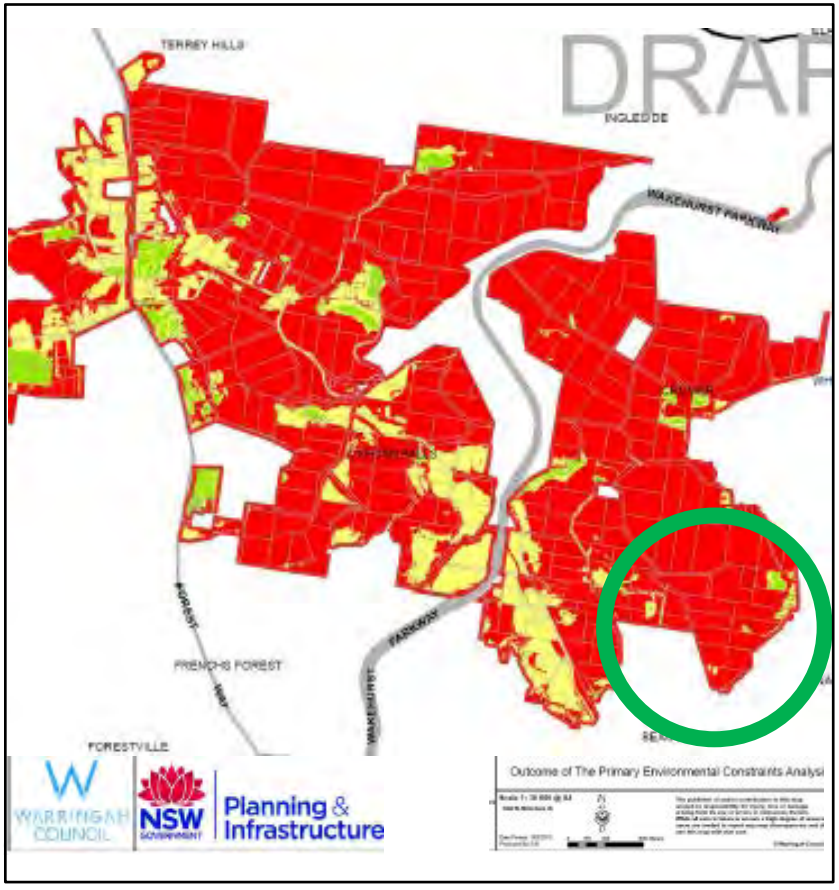
- Disturbed land of lower environmental value
- **Remnant bush common and well preserved within Warringah**
- High environmental value within Warringah
- High environmental value protected by state legislation



MAP B

WARRINGAH COUNCIL
OUTCOME OF THE PRIMARY ENVIRONMENTAL CONSTRAINTS ANALYSIS (2013)

- No environmental constraints to development
- Moderate environmental constraints to development
- **Prohibitive, severe or significant constraints to development**



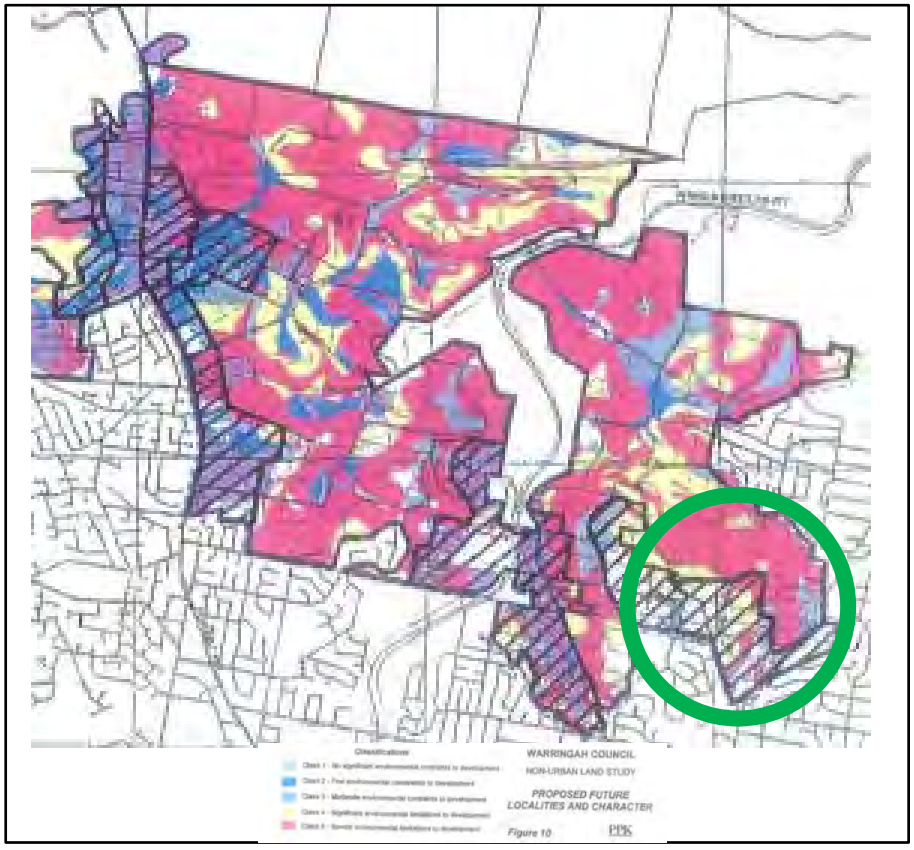
MAP C

WARRINGAH COUNCIL

NON URBAN LAND STUDY (1997-2001)

PROPOSED FUTURE LOCALITIES & CHARACTER

- Class 1 – No significant environmental constraints to development
- Class 2 – Few environmental constraints to development
- Class 3 – Moderate environmental constraints to development
- Class 4 – Significant environmental limitations to development
- Class 5 – Severe environmental limitations to development
- **Area with potential for higher intensity development and land uses**

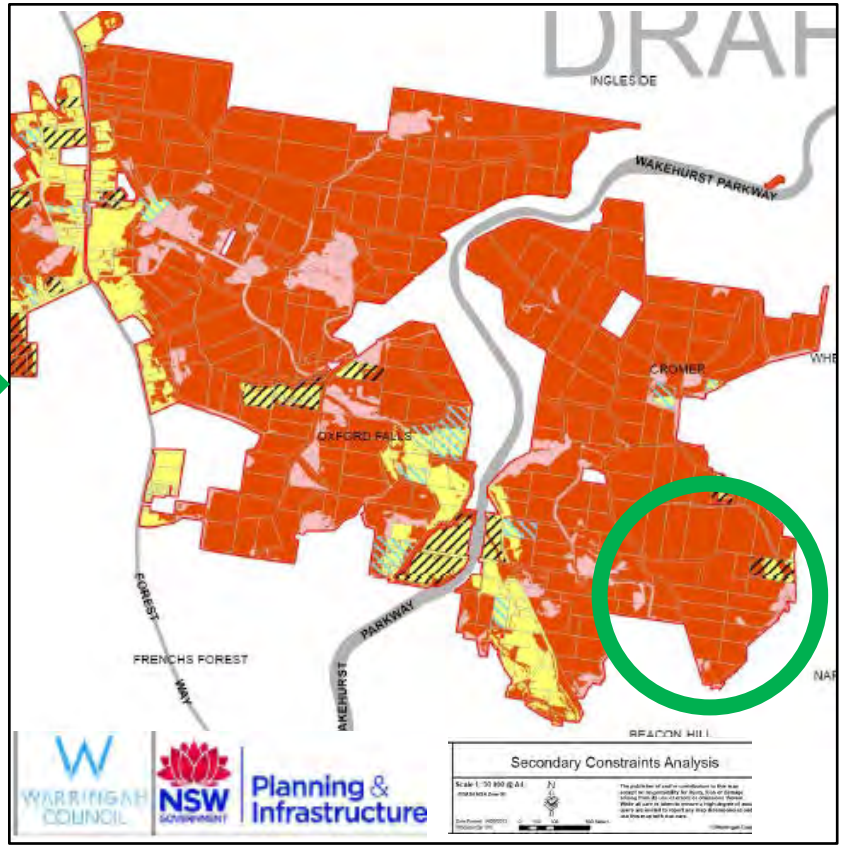


MAP D

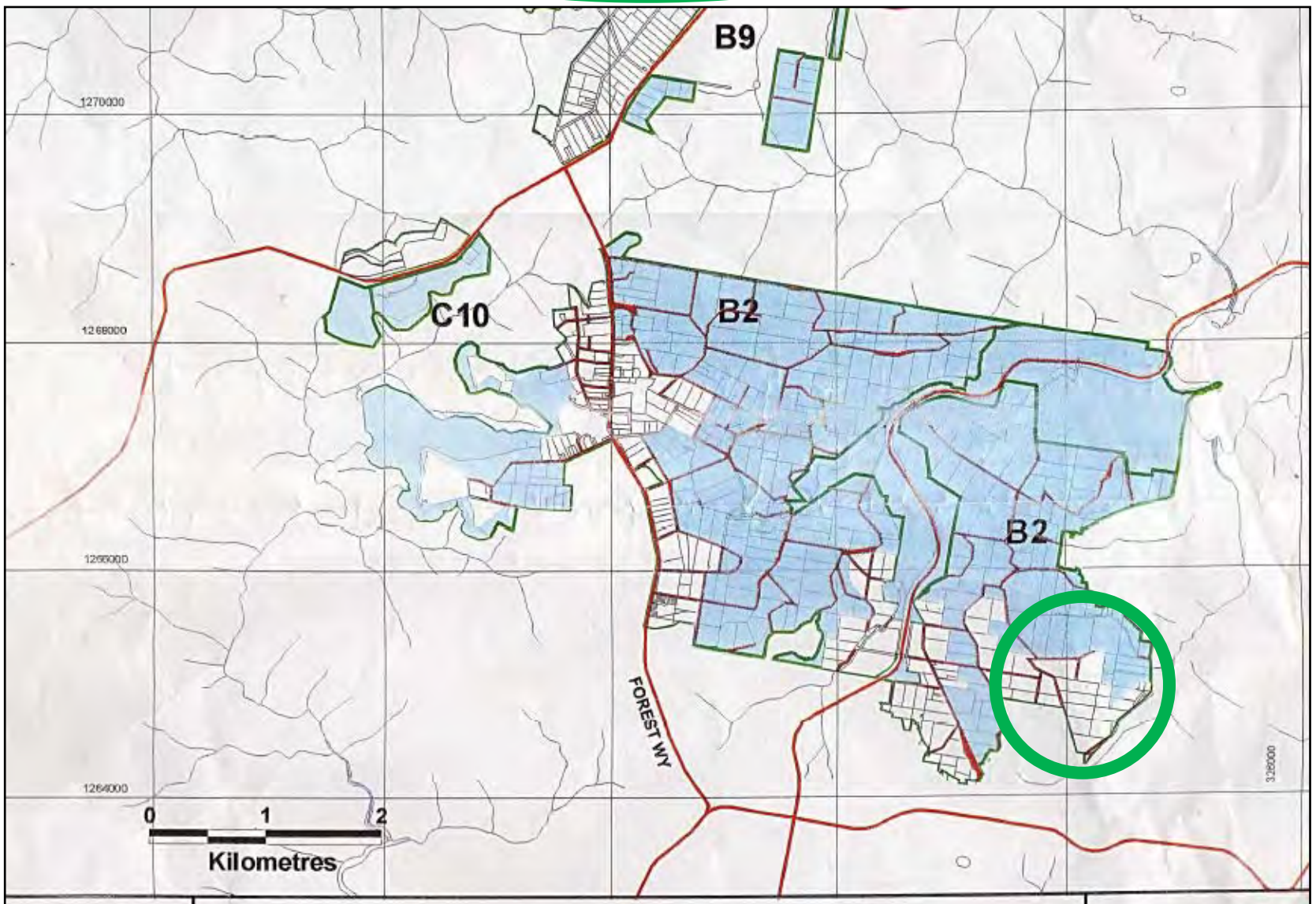
WARRINGAH COUNCIL

SECONDARY CONSTRAINTS ANALYSIS (2013)

- Secondary Constraint Analysis = E3 zoning consideration
- Secondary Constraint Analysis = E3 zoning consideration
- **Primary Constraint Analysis = E3 zoning**
- Land for further zoning consideration
- Land for further zoning consideration



MAP E



Certified in accordance with the Environmental Planning and Assessment Act, 1979
Date :

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

WARRINGAH LOCAL ENVIRONMENTAL PLAN 2000

ENVIRONMENT PROTECTION

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Environment Protection

Submission Number: 76

Oxford Falls Valley & Belrose North Strategic Review
Department of Planning and Infrastructure
GPO Box 39
Sydney NSW 2001

6 August 2013

Dear review panel members,

Oxford Falls Valley and Belrose North Strategic Review

We are engaged by local land owners the Sisters of the Good Samaritan ('SGS') to assist with the review process and provide our professional comments on the content of the draft review report.

The location of the SGS owned land is shown as Appendix 1

Our comments on the draft review report themes are as follows.

1. ***Seniors living*** – the approach adopted seems to be unnecessarily limiting to the possibilities of seniors accommodation on selected sites. The need for more appropriate accommodation for seniors is undeniable and limiting the ability for any land to participate in a merit assessment process will exacerbate supply problems that already exist locally.

    - Limiting future potential of accommodation for seniors is inconsistent with the Metropolitan Strategy and not in the broad interests of the community. Seniors accommodation plays an important role in co-locating for more affordable care and services delivery in the home and also facilitates urban renewal and modernisation as older dwellings are updated and redeveloped for improved supply of residential accommodation.

    - The rationale provided in the report regarding the application of the proposed E3 zone and relationship to SEPP Seniors Living 2004(Housing for Seniors and People with Disability)('SEPP SL') presents a logical flaw. The rationale that had the revisions to the SEPP SL in 2004 been adjusted in WLEP2000 then seniors living would not have been a permissible use is not supported by the relevant history that applies to many of the sites impacted including the land owned by SGS. The logical flow of the rational provided requires the presumption that the land was definitely worthy of an environmental protection zone at that time.

      The evidence that may support this is the WLEP2000 Environmental Protection map layer that was exhibited with the draft WLEP2000 (Attached at Appendix 2).

      The SGS land was explicitly **excluded** from classification as Environmental Protection land on this exhibited map and is therefore counter to, rather than supportive of, the rationale provided in the report.

PricewaterhouseCoopers, ABN 52 780 433 757
Darling Park Tower 2, 201 Sussex Street, GPO BOX 2650, SYDNEY NSW 1171
T: +61 2 8266 0000, F: +61 2 8266 9999, www.pwc.com.au

We attach a timeline of the permissibility of seniors housing on the SGS property incorporating the published environmental and constraints status of the property (Appendix 3).

2. ***Site compatibility threshold*** - Seniors Living potential development will be required to get site compatibility under an R5, RU4 or RU6 zone. All of these zones represent a more accurate translation of existing provisions than E3. We note that all options are available to be used as part of this review. No reasons are presented in the review report explaining why these available options are not being considered.

   WLEP2000 currently supports some land, including the SGS property not requiring a site compatibility certificate because it is a permissible use under the WLEP2000 and therefore CL 24(1A) of SEPP SL applies. This will change if translated as R5, RU4, RU6. Not having permissibility under another planning instrument will require a Site Compatibility Certificate to be sought and received prior to any development application being submitted.

   The Department and Warringah Council can be assured that suitable checks and balances in the system to ensure only appropriate and supported development will occur. Neither the Department nor Council should require an E3 zone to be applied to limit seniors housing potential.

3. ***Translation methodology*** – The review report uses inconsistent language and, in parts, an inconsistent methodology to deal with what is reported as a translation. Examples of the language used throughout the report such as 'upzoning' suggests that in parts, the review is more than a pure translation exercise as has been previously communicated. That said, some aspects of the controls that apply to the land have been selectively avoided such as density controls temporarily derived in 1974 that have no currency or relevance.

   - The constraints assessment is not indicative of a translation exercise and it is difficult to see its relevance to a translation exercise. It is appropriate to consider under Phase 2 when the PAC studies are undertaken.

   - The translation of other property from WLEP2000 to WLEP2011 was not affected by the same constraints based methodology used in this review. This presents an inconsistency based on the timing of transition to WLEP2011.

   - The source and quality of the constraints information is not able to be assessed. It is being used to make decisions that have serious ramifications and will therefore need to be supported by accurate and objective studies.

   - The constraints information presents with consistency against previous desk top information held by Warringah Council and it is not clear what involvement the Department has had in verifying this information. We suggest the Department addresses this in the final report and provides transparency over the source and quality and its understanding of how the constraints information is derived. This should be done for its use in Phase 2 of the required PAC studies.

4. ***Planning system review*** – we have been presented with new information regarding the review of the NSW planning system that was not available when this review commenced. Given that such information is now available on public record, we believe it is appropriate for it to be considered as part of this review. Specifically:

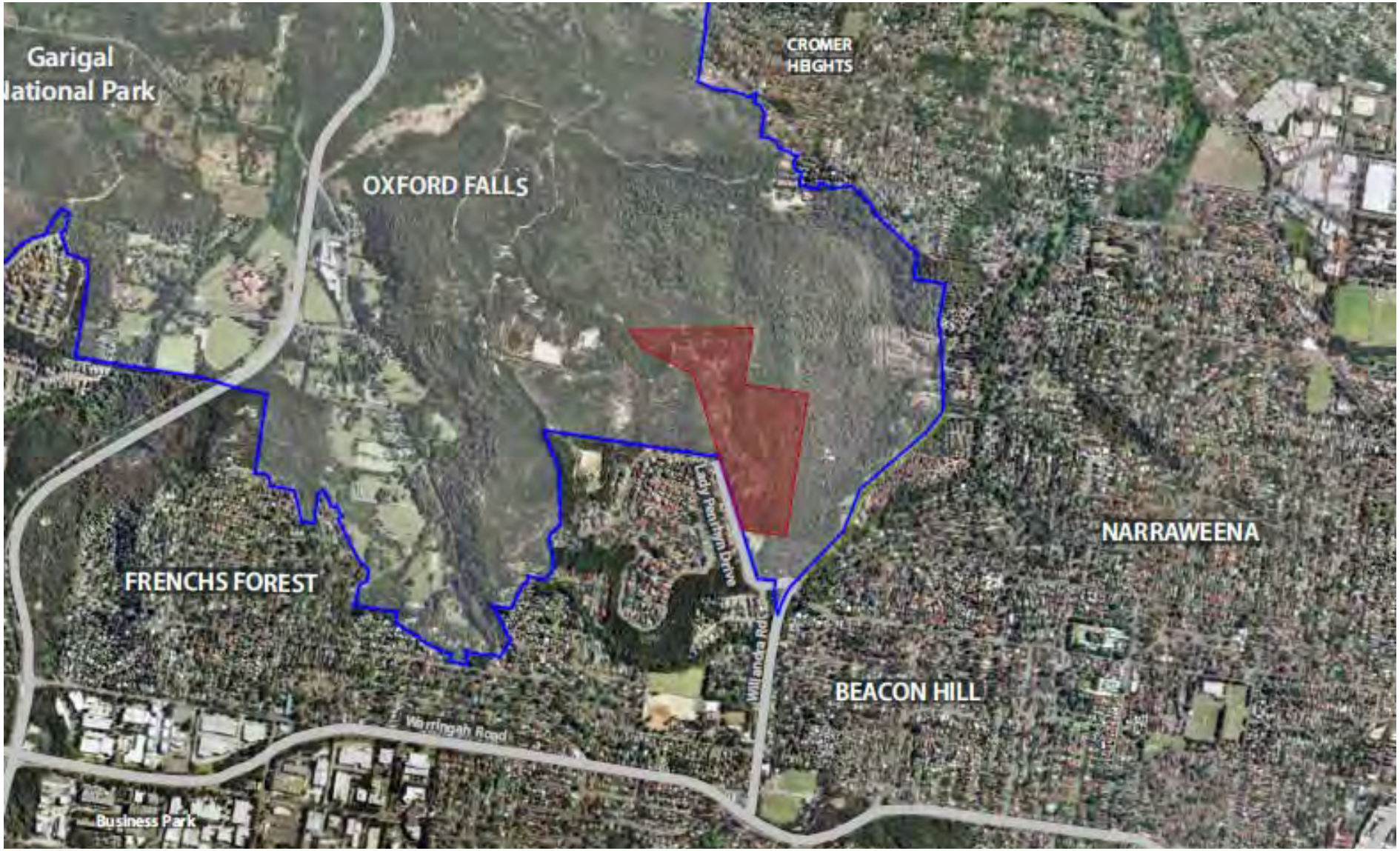
    - Timing - the next steps in this process are likely to be undertaken when we will have a new planning system being implemented which may remove the relevance of some of the actions being taken in this review, such as the E3 zone.

    - Status of zones and SEPP's – this should be considered in detail to ensure the outcomes of this review and the subsequent planning process remain relevant. Refer Appendix 2 extracted from the White Paper.

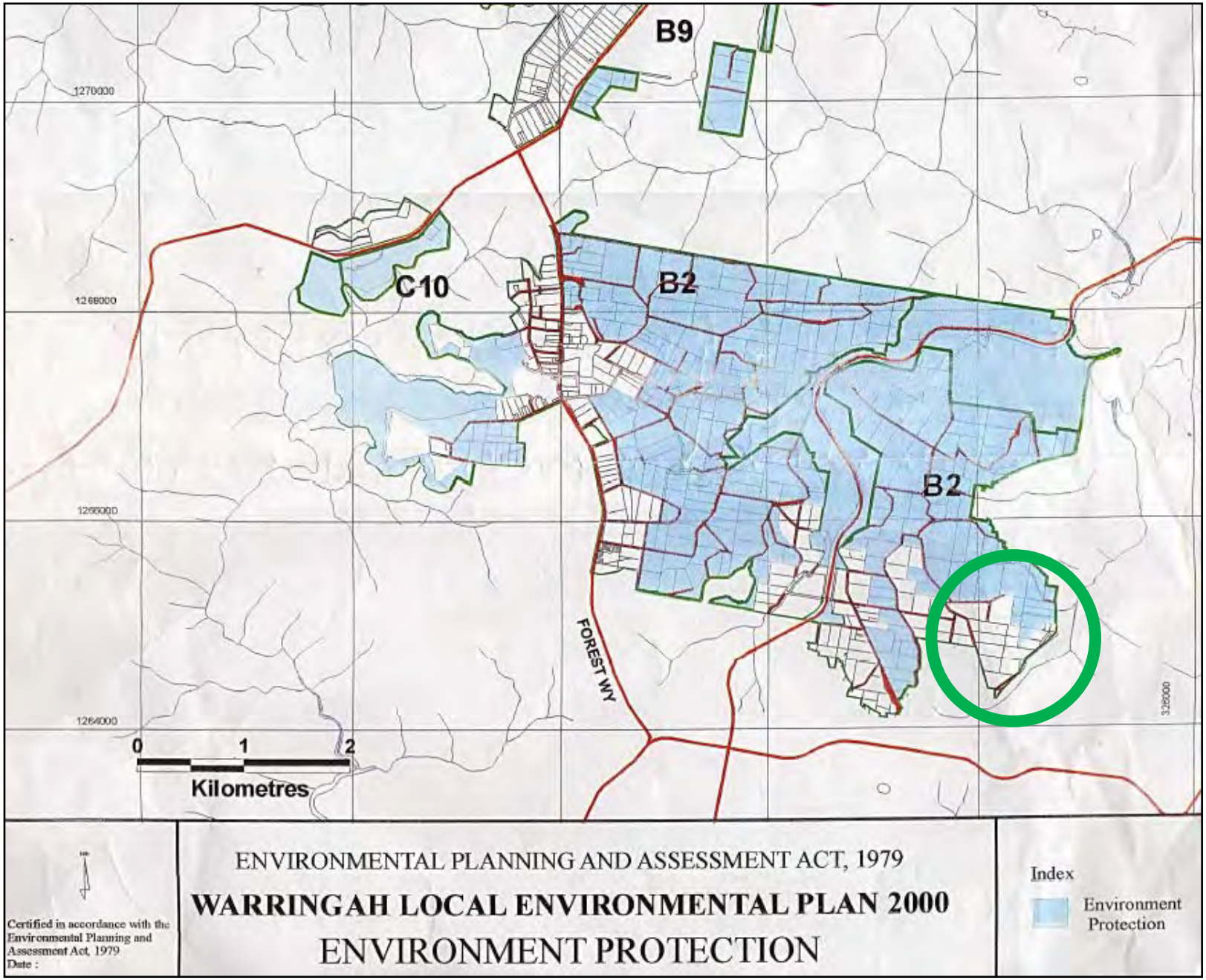
Yours sincerely

Adam Somerville
Managing Director
PwC Real Estate Advisory

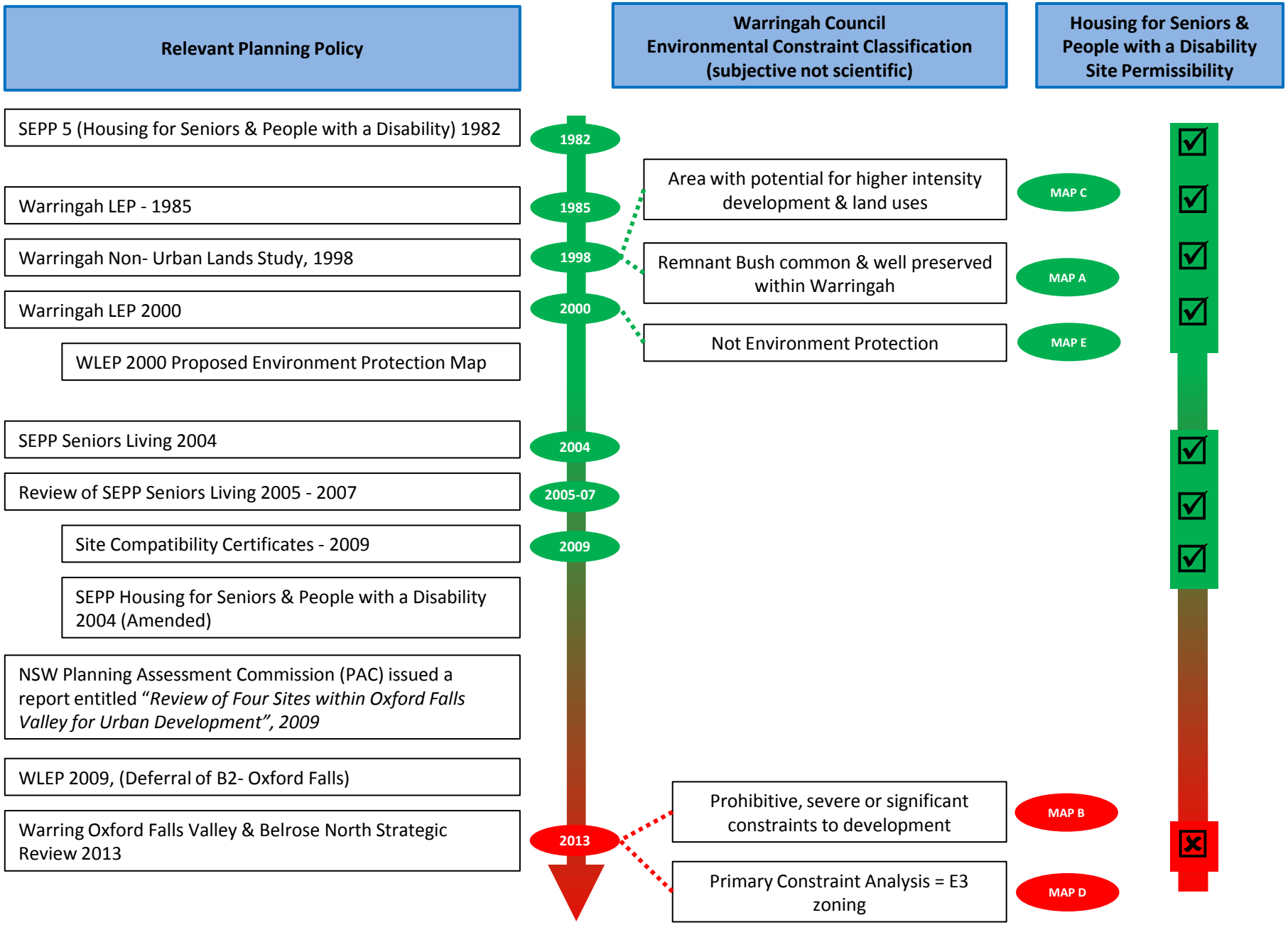
APPENDIX 1 - LAND OWNED BY SGS



APPENDIX 2 – ENVIRONMENT PROTECTION



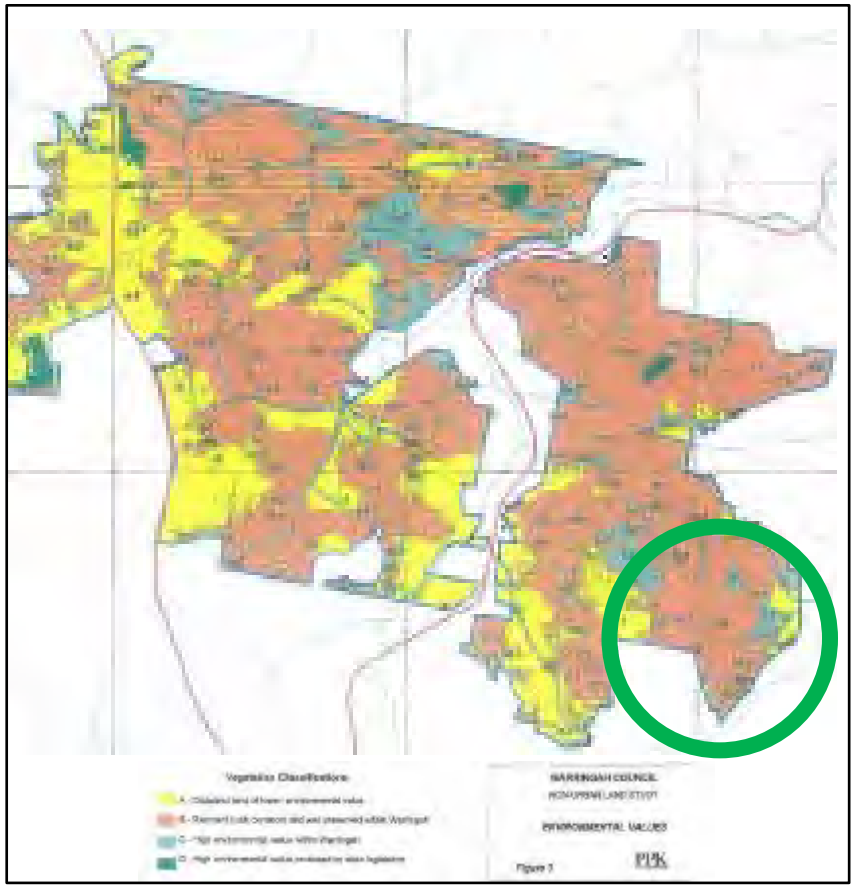
APPENDIX 3 – TIMELINE



MAP A

WARRINGAH COUNCIL
NON URBAN LAND STUDY (2002)

- Disturbed land of lower environmental value
- **Remnant bush common and well preserved within Warringah**
- High environmental value within Warringah
- High environmental value protected by state legislation



MAP B

WARRINGAH COUNCIL
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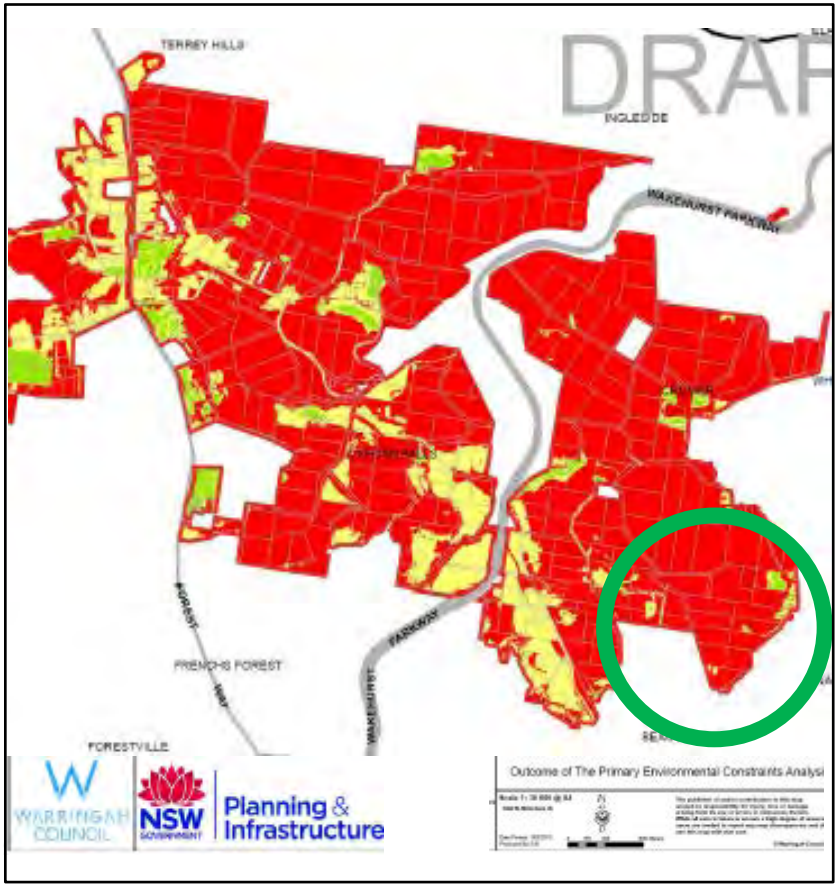

MAP C

WARRINGAH COUNCIL

NON URBAN LAND STUDY (1997-2001)

PROPOSED FUTURE LOCALITIES & CHARACTER

- Class 1 – No significant environmental constraints to development
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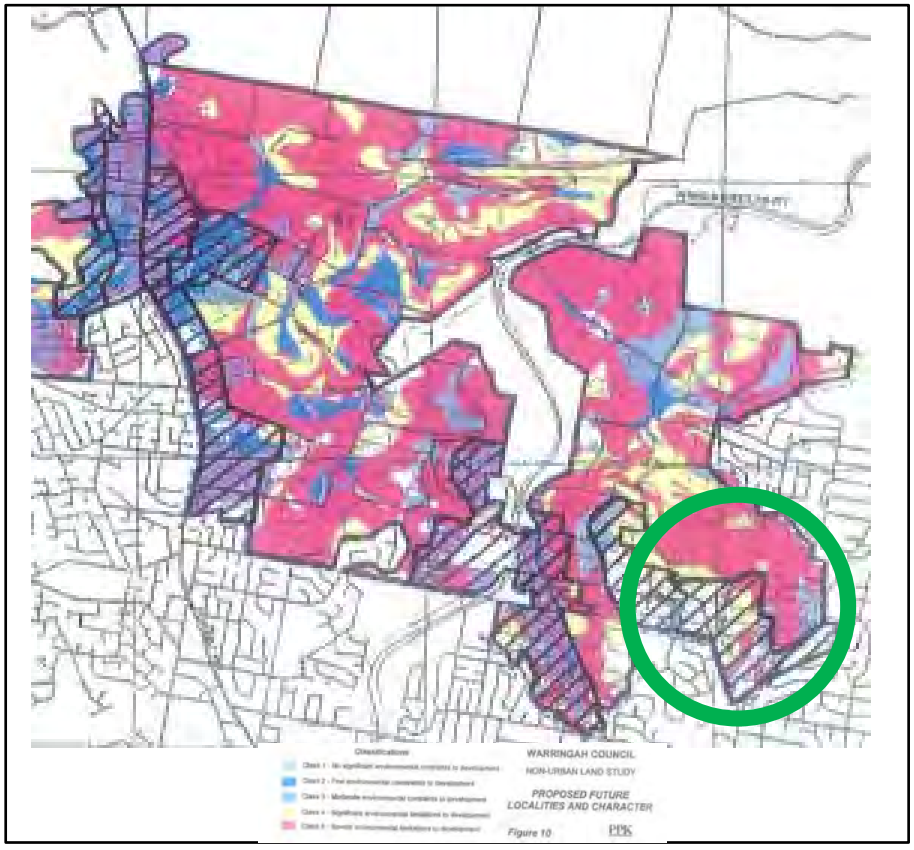
- Class 5 – Severe environmental limitations to development
- **Area with potential for higher intensity development and land uses**

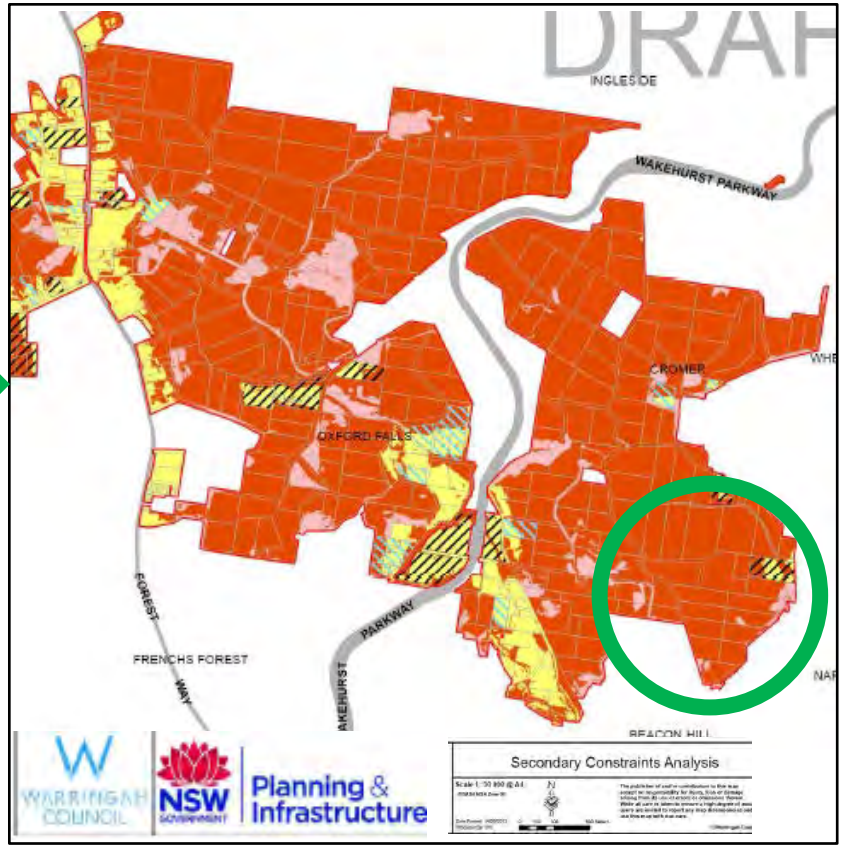


MAP D

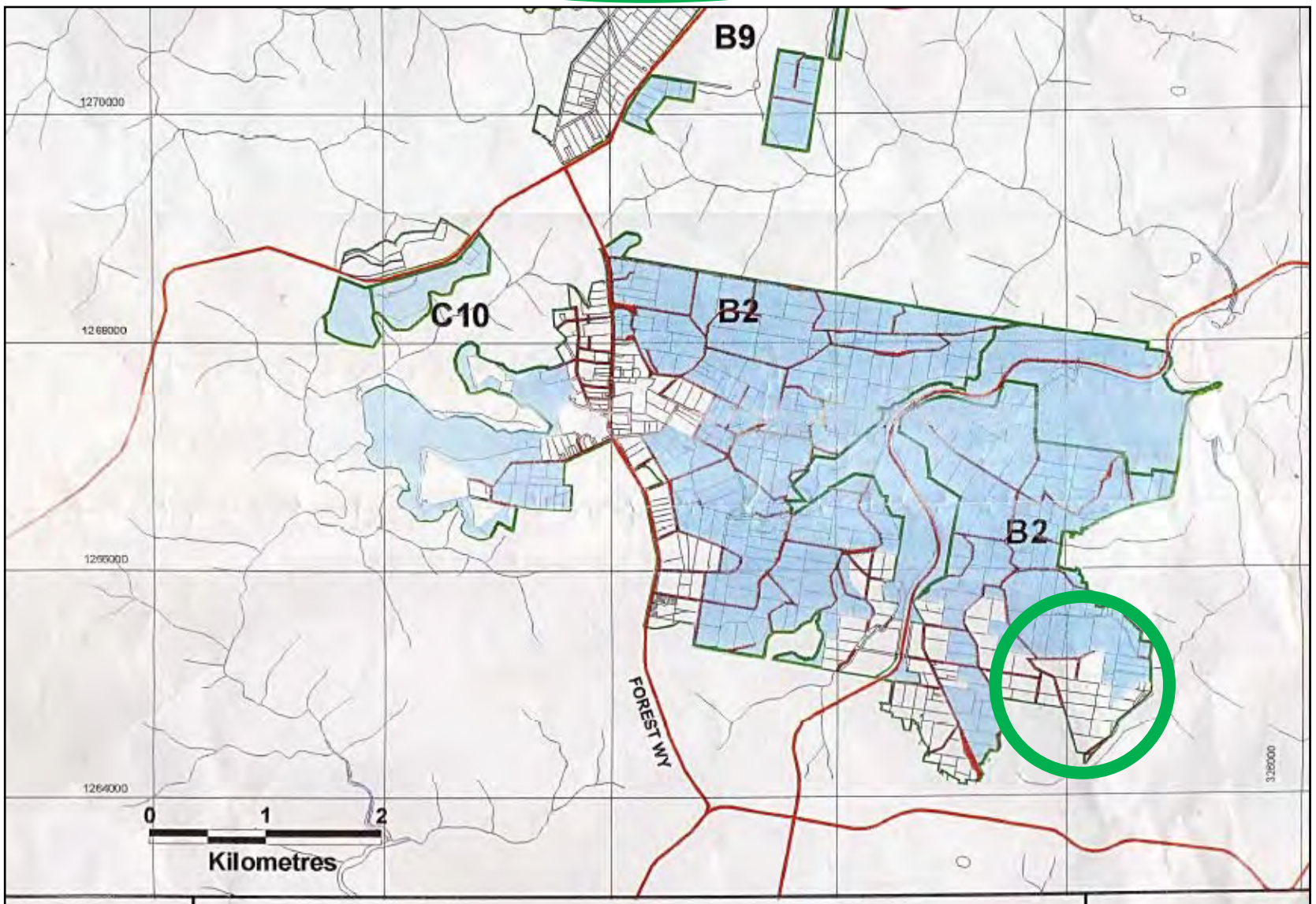
WARRINGAH COUNCIL

SECONDARY CONSTRAINTS ANALYSIS (2013)

- Secondary Constraint Analysis = E3 zoning consideration
- Secondary Constraint Analysis = E3 zoning consideration
- **Primary Constraint Analysis = E3 zoning**
- Land for further zoning consideration
- Land for further zoning consideration



MAP E



Certified in accordance with the Environmental Planning and Assessment Act, 1979
Date :

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

WARRINGAH LOCAL ENVIRONMENTAL PLAN 2000

ENVIRONMENT PROTECTION

Index

Environment Protection

Submission Number: 77

The Arbour Berry

Oxford Falls Valley & Belrose North Strategic Review
Department of Planning and Infrastructure
GPO Box 39
Sydney NSW 2001

Dear Review Panel,

I am the owner of two retirement villages in NSW. The Arbour, Berry (www.thearbourberry.com.au) and Wivenhoe Village (www.wivenhoevillage.com.au) are both leading examples of how modern design from an advancing industry can have a profoundly positive effect on the lives of seniors.

I am concerned with the proposal in the review report to limit the application of planning instruments that consider seniors housing requirements. As a society we need more options and availability for purpose built seniors accommodation.

I disagree with the proposed zoning of E3 Environment Management to much of the subject land. I feel that the zone is being applied to achieve the limiting purpose for seniors housing when in fact we should be seeking to achieve the opposite.

The industry has changed significantly since the introduction of SEPP 5 and it is time for Council's and consent authorities to do the same. As an industry we are still working through some of the less than ideal village outcomes generated from historic planning schemes but there is no recent evidence to suggest that the villages being approved and built today (and managed in accordance with the Retirement Village Act) are having anything but a positive impact on our ageing population and society.

We need to leave the past behind and embrace an industry trying hard to deal with the undeniable demand that will be required of it in the near future.

The planning system has evolved considerably and with the introduction of appropriate controls such as the Site Compatibility Certificates there is no need to limit the permissibility of seniors housing at a zoning level.

Removing the opportunity for any land to be considered for appropriate and supported seniors living development is completely at odds with what our future needs will dictate.

I submit that the proposed zoning will have deep ramifications for the ageing residents of the northern beaches and our state and request that the Department of Planning and Infrastructure sees the proposed zoning for what it is and does not allow it to be supported in the final report.

Yours sincerely

John Leo
The Arbour, Berry

Submission Number: 78

Joseph and Helen Earl

Lot 1108 Wearden Road

Oxford Falls, 2100

Email: joe_earl@bigpond.net.au

Re: Oxford Falls Valley and Belrose North Strategic Review

In regard to Lot 1108 DP 752038 – Site id E19

To whom it may concern,

We are the owners of Lot 1108 Wearden Road, Oxford Falls (DP 752038) and would like to make a submission in regard to the above mentioned strategic review. We object to the land being re-zoned to E3 and have joined with a number of other landowners to engage CBRE to prepare a more detailed submission, however, we would like to point out some issues which pertain in particular to our property.

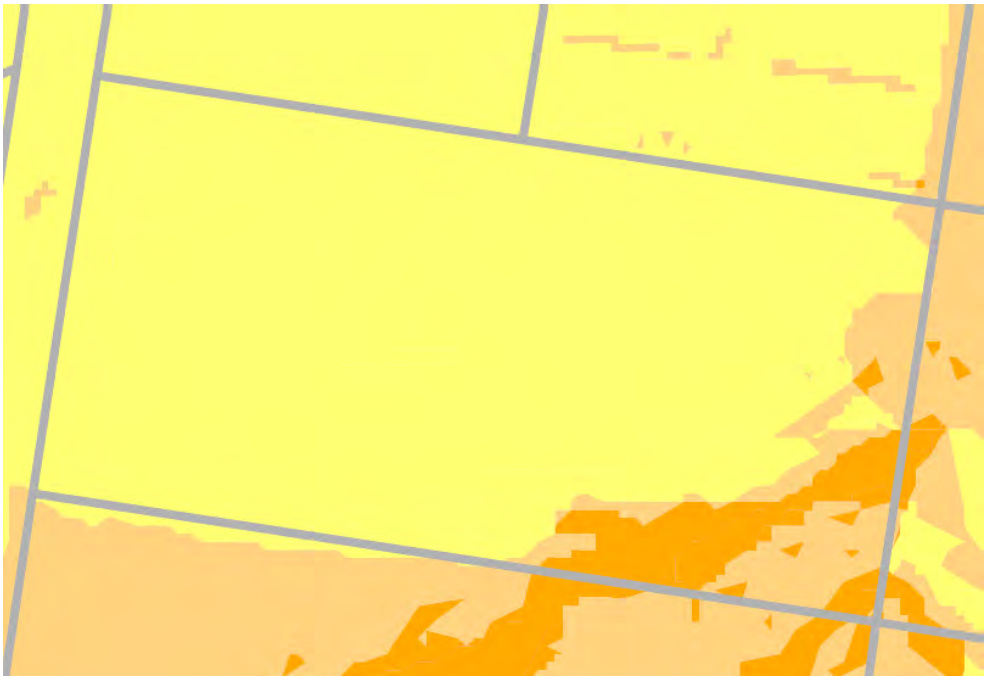
The site is situated close to and within approximately 150 metres of existing urban development in Beacon Hill/Frenchs Forest East with public transport (State transit bus services) available along Iris Street.

Upon reviewing the site analysis which was undertaken for our property (as detailed in document "r_SI_Forms_Part7.pdf" – site id E19), we have found what we consider to be significant errors. The site analysis states the following percentages in regard to environmental constraints:

- Moderate = 80%
- Significant = 5%
- Severe = 15%

Based on the extract below from the document "Map 4_ Cumulative Level of Environmental Constraint.pdf" of the site we believe the following percentages to be more accurate:

- Moderate = 85%
- Significant = 7%
- Severe = 8%



I am also particularly concerned that the site has been rated as category 3 (blue hatched) under the secondary constraints analysis as detailed in "Map 6_ Outcome of the Secondary Environmental Constraint Analysis.pdf".

This appears to imply that the site will not be considered for any further zoning consideration in the second stage of the above study. We have reviewed the document "Secondary_Constraints_Analysis_Record_Table_-_Version_1_-_All_constraints_greater_than_50__impacted.pdf" and noted that our site received a cumulative score of 12, Rating 1 = A and Rating 2 = B. Many of the surrounding sites had scores of 11, A and B and were rated as category 4. We have identified 3 areas where the site has not been correctly rated in our opinion as follows:

- Heritage – Rated 1 – There is no information and no maps showing any heritage areas in the study, therefore, given the lack of information, we fail to see how the study can claim that our property is adjacent to a heritage area - this score should be zero;
- Transport – Rated 2 – A significant part of the property is within 400 m of a bus stop as identified in the document "Warringah_Secondary_Constraints_Busstop_buffer.pdf" so we believe this rating should be one; Also, there is a bus stop outside the Australian Tennis Academy within 200 metres of our entire property which was not included in the bus stop map (see photo below of the bus stop outside the Australian Tennis Academy)

- Infrastructure – Rated 3 – Appendix 8 of the study says that a rating of 3 is for "Land not serviced by water, sewer", while the property is not sewered, it is serviced by electricity, water and tele-communications, furthermore the adjoining property (Australian Tennis Academy Lot 1110, DP 752038) is serviced by sewer - the infrastructure rating should be a one at the most;

Assuming these inaccuracies are corrected; this would give our property a cumulative score of 8 which is well below the score required for blue hatching, we sincerely hope that this will be addressed in the final study.

While we appreciate council's desire to maintain the rural atmosphere of the Oxford Falls valley, we believe that a better zoning for this land would be R5 large lot residential. Having lived here for nearly 40 years while raising a family and working full time, we know how hard it is to adequately maintain large blocks of land. Half to one acre blocks would maintain the rural atmosphere and council could then enforce existing regulations to ensure that noxious weeds were controlled. At the moment most land owners have given up trying to control weeds as it is too overwhelming and council does not enforce regulations because so many of the weeds are on properties controlled by council. Smaller lots with stricter weed control would, we believe, provide a better environmental outcome than the current blanket E3 zoning.

We thank you for the opportunity to make comment during the strategic review process. Should you have any questions please do not hesitate to contact us.

Sincerely Joseph and Helen Earl

PS As a member of the Warringah Urban Fringe Association, We also agree with and support their submission on our behalf

Submission Number: 79

Warringah Urban Fringe Association Incorporated (WUFA),
PO Box 125,
Belrose, 2085
Ph: 0419 777 502
www.warringahurbanfringeassociation.org.au

Submission to the E3 Strategic Review draft report by Warringah Urban Fringe Association

7 August 2013

Table of Contents

Executive Summary

This is a generalised submission being submitted on behalf of WUFA's 152 members.

The Warringah Urban Fringe Association (WUFA) agrees with the proposed zonings of over 90% of the land in the deferred area in the draft Oxford Falls Valley and Belrose North Strategic Review.

WUFA disagrees with:

1) The methodology used which zones privately owned rural land (which is predominantly cleared) at Belrose East, Cromer, Oxford Falls and Frenchs Forest (BECOFFF) as E3.
2) Not having addressed the minimum lot size (that was put in place in 1974 as a temporary measure).
3) The twelve properties in Ingleside and Terrey Hills that were zoned as E3, not having been included in the Strategic Review.

We feel the strategic review has correctly zoned the properties shown as SP2, RU4 and R5, but has incorrectly zoned some properties as E3 which should have been RU4.

Appendix A of this submission contains the original zoning map (map 7) from the draft report which has been amended to show WUFA's proposed zonings (ie only a small area of E3 to be changed to RU4).

Earlier Submission

Included with this submission and forming part of it, is a copy of the submission made to the Strategic Review team by WUFA when the Strategic Review was first setup (ie prior to the draft report being produced). We have included this earlier submission with this submission because we would like it on the public record and it provides a very good summary of the situation and factual account of what the residents want. This earlier submission forms Appendix F of this report.

Background of WUFA

On 27 July 2011 there was a community meeting where all owners of land were invited to attend and discuss the proposed zoning of their land as E3. Our Local Member of Parliament, Local Councillors, staff from the Department of Planning, staff from Council and land owners affected by the E3 zoning were invited to attend. John Holman presented a summary of the E3 issues and then Malcolm Ryan (Deputy General Manager, Environment, Warringah Council) presented Council's position, followed by a presentation by Juliet Grant (Regional Director - Sydney Region East, Department of Planning). There were 150 landowners that attended this meeting. After all of the presentations, a vote was taken and 98% of landowners voted that E3 was not an appropriate zoning for their land.

Warringah Urban Fringe Association (WUFA) was formed soon after this meeting in August 2011. WUFA advocates for the views of all owners of land in the E3 area to be taken into consideration in deciding the correct zoning for all land in the proposed E3 area.

More Information on the points WUFA's disagrees with:

1. Methodology generally flawed

The Strategic Review states that its purpose is to carry out a translation from LEP2000, however a different methodology has been used to the original translation.

We find the fact that Duffys Forest and Terrey Hills have been translated to RU4 and Belrose East, Duffy's Forest, Oxford Falls, Cromer, Frenchs Forest (BECOFFF) have been translated to E3 inconsistent and inequitable.

Below we address various aspects of this issue:

a) Desired Future Character

A large part of the justification for zoning BECOFFF as E3 appears to be the fact that the "Desired Future Character Statements" from LEP2000 for these areas refer to protecting the Environment. One fact that appears to have been overlooked is the "Desired Future Character Statement" from LEP2000 for Duffys Forest and Terrey Hills is similar to that of BECOFFF (refer to Appendix B for the Locality Statements for the areas). The area of Duffys Forest and Terrey Hills that is zoned as RU4 is surrounded by National Park and appears far more suitable for an E3 zoning than BECOFFF. We ask that should this review continue to push with the flawed methodology, then the review must carry out the same evaluation process on the land at Terrey Hills and Duffys Forest as has been done on the deferred area.

b) Objectives of E3 not followed

The methodology used does not relate to the objectives of the E3 zoning. The current objective for E3 is "To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values." (refer to Appendix C). The primary and secondary constraints used in the draft Strategic Review are not all "special ecological, scientific, cultural or aesthetic values".

c) Translation not based on LEP2000 – Agricultural focus missed

Agriculture is the first permissible use under Category 2 in LEP 2000 (Refer to Appendix B for the Locality Statements) for the BECOFFF area. The E3 zone has no mention of agriculture or primary industry in the objectives (Refer to Appendix C). RU4's first objective is "To enable sustainable primary industry and other compatible land uses". Either R5 or RU4 zonings are a more closely aligned zoning to the LEP2000 zoning for the BECOFFF area.

d) Seniors Housing not translated properly

Seniors housing was a permissible use under Category 2 in LEP 2000 on land that adjoins urban areas. Seniors housing is prohibited under E3. The report states "Although the strategic review will not increase the development potential of land in the study area, it will ensure that the supply of land for housing is not reduced". This is factually incorrect as Seniors housing goes from permissible to prohibited for land that adjoins urban areas for all E3 zoned areas.

e) Environmental Constraints not applied logically

Below lists the Primary and Secondary Constraints used in the report's analysis:

Primary Environmental Constraints Assessment

- Riparian
- Significant Vegetation
- Wetland Buffers
- Slope
- Designated Wildlife Corridor or Core Habitat
- Flooding
- Acid Sulfate Soils
- Threatened Species Habitat

Secondary Infrastructure and Environmental Constraints Assessment

- Cultural heritage
- Bushfire
- Proximity to centres
- Proximity to public transport
- Availability to connect to water and sewer and electricity
- Telecommunications Buffer
- Riparian Corridor
- Significant Vegetation
- Wildlife Corridor and Core Habitat
- Threatened Species
- Flooding
- Wetland Buffers

The constraints in Red above were used in both the primary and the secondary analysis. This means the weighting applied is effectively used twice providing an illogical outcome.

f) Inaccuracy of Constraints

The information used to carry out the Environmental Constraints is inaccurate. As an example of the inaccuracy of data, when Warringah Council put a riparian land report on public exhibition in 2010, the author noticed his land was shown as having riparian land on it. At the author's request Adrian Turnbull, Senior Environment Officer Natural Environment, Warringah Council carried out a site visit on 1st September 2010. Adrian inspected the property and concluded there was no

riparian land on the author's property. He advised that the Riparian Land map would be amended as soon as possible. The author's property (Site ID: A5) is still shown on the maps as having Riparian land on it. It has been given a Riparian rating of 3 instead of zero. This caused the author's land to be cross hatched in light blue on the secondary constraints analysis map.

Despite this inaccuracy the author's land was correctly zoned as R5, but this information shows the inaccuracy of the base data used.

g) Inaccuracy of the Site Analyses

Many of the site analyses are inaccurate. As an example, the site analysis for 66 Northcott Rd, Cromer has the following inaccuracies (refer to Appendix D for the Site Analysis for this property):

1. Land adjoins seven residential properties (not noted)
2. Owner – Private (not noted)
3. Vegetation Bushland - ticked, percentage cleared listed as 10% (inaccurate as it is closer to 80% cleared)
4. Building onsite- none (nothing ticked, ignores the fact that there are two buildings on site).
5. Use of site- none (nothing ticked, this site was a quarry up until 1985 and currently has two dwellings on it)

A large number of properties in BECOFFF areas are used for Agriculture, but very few of the Site Analyses reflect this fact.

h) Data used has not been presented to Council or adopted

Page 64 of the draft report, when outlining the status of the data source for the constraints used in the analysis, states "Data has not been presented to Council for adoption and does not form part of Council's development controls". This is the same for the following constraints:

- Significant Vegetation
- Designated Wildlife Corridor or Core Habitat
- Threatened Species Habitat

These constraints all carry a very high weighting in the analysis. Information that has not been presented to Council or does not form part of Council's development controls must not be used to draw conclusions from.

i) Data not based on scientific research

WUFA requested from the Department of Planning (using GIPA) that the scientific basis for the various constraints used in the draft report be provided. No information has been provided by the Department of Planning, leaving us to draw the conclusion that there is no scientific basis for the constraints used in the report.

j) Data not from robust data sources and analysis

LEP practice note for Standard Instrument for LEPs issued by the Department of Planning – Standard Zones (PN 09–002; 30 April 2009) identifies that:

"Prior to applying the relevant zone, the environmental values of the land should be established, preferably on the basis of a strategy or from an environmental study developed from robust data sources and analysis. This is particularly important where land is identified as exhibiting high ecological, scientific, cultural or aesthetic values outside national parks and nature reserves"

As outlined in points f, g, h & i above, the environmental values have not been established "*from an environmental study developed from robust data sources and analysis"*, so cannot be used as a basis for an E3 zoning.

k) Proximity to Key Centres

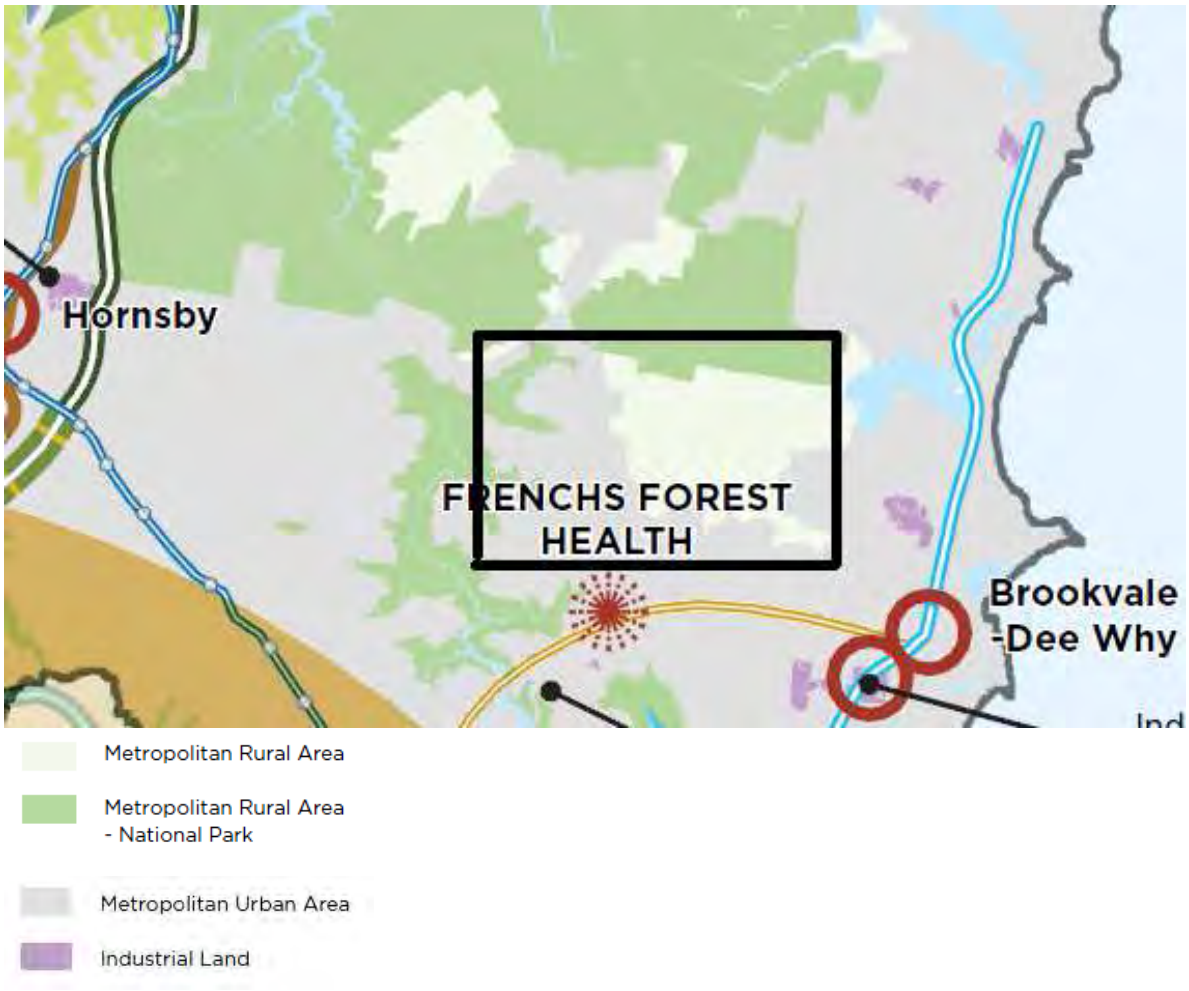
Page 7 of the draft report states "Although the aim of this strategic review is to identify development controls that most closely reflect existing planning controls for the area, it is important to note that the area is relatively isolated from key centres which provide jobs and services". This is untrue.

One of Warringah Council's three key employment hubs within the Warringah Local Government area is Austlink Business park which is located in Belrose and adjoins the deferred area. The new Northern Beaches Hospital will be located approximately 2 kilometres from the deferred area. Contrary to this statement, the deferred area is very close to key centres, and as stated in the draft report this fact "is important to note".

l) Land identified as non-urban in the Draft North East Subregional Strategy

Page 7 of the draft report states “Oxford Falls Valley and Belrose North are identified in the draft Strategy as non-urban land”. This is not true

Below is the map from the Draft North East Subregional Strategy (the Black rectangle represents the Map 7 region):



The whole of Belrose North and other large areas of the deferred area are classified as “Metropolitan Urban Area” in the Draft North East Subregional Strategy.

It is interesting to note that all of Duffys Forest and some of Terrey Hills is classified as “Metropolitan Rural (ie Non –Urban) in the Draft North East Subregional Strategy.

m) Proximity to Telecommunications buffer used as a secondary constraint

Proximity to telecommunications facilities was not used in the translation process from LEP2000 to LEP2011, and we can find no justification for using it now.

n) The draft report has worked backwards to achieve the zoning that Warringah Council sought

It appears that this report has found a methodology that suits the outcome that Warringah Council was after (ie zoning the BECOFFF area as E3), rather than apply a consistent and logical methodology to the Strategic Review to provide fair and equitable zonings for all properties.

The submission by WUFA dated 2 December 2012 (Appendix F of this submission) outlines the process Warringah Council has gone through to try and have the Oxford Falls Valley and Red Hill Areas zoned as E3. It can be seen from this history that Warringah Council is driven to have these areas zoned as E3 without any justification for it. Residents of the BECOFFF areas are relying on the integrity of this Strategic Review process to ensure zoning is done in a factual, consistent, equitable manner which has integrity.

2. Minimum Lots Sizes

The report states:

Page 26 of the draft report states “The density control was developed in 1974 under an Interim Development Order 51 to respond to the water quality issues of the Narrabeen Lagoon Catchment impacted on by the residential development in the 1960s and 1970s within the study area. Revising the density control within the study area is therefore premature until water quality impacts for the catchment is considered in detail”.

Three issues:

1) A lot of this land does not drain to Narrabeen Lagoon.
2) Why spend all of this time and effort doing a strategic review if you don’t revise the density controls (which were meant to be revisited in 6 months from 1974)
3) The Water Quality Study has been done (The report is titled “Warringah Non Urban Lands Study Stage 2 – Impacts on Water Quality of Narrabeen Lagoon” and forms Appendix E of this submission).

The conclusion of the Water Quality Study was:

“**CONCLUSIONS**
It has been determined that development of the areas identified as suitable from Stage 1 of the NULS (PPK, 2000), which drain to Narrabeen Lagoon, can be undertaken without a subsequent reduction in water quality in Narrabeen Lagoon, and in most cases an increase in water quality can be achieved.”

The minimum lot size for all land in the deferred area must properly addressed.

3. Ingleside and Terrey Hills

When the Minister for Planning (Brad Hazzard) deferred the E3 area from LEP2009, we believe the whole E3 area should have been deferred. Instead only the localities of Oxford Falls Valley and Belrose North were deferred. This left approximately 12 properties in Ingleside and Terrey Hills that were zoned E3 in WLEP2011 where property owners did not want to be zoned E3.

We believe this was either a simple oversight because the E3 area is often referred to as affecting Oxford Falls and Belrose North, or an active attempt to devalue the properties so Warringah Council could purchase them (Some of the properties in the area at Ingleside have already been purchased by Warringah Council to allow expansion of Kimbriki Tip). This issue effects the following properties:

- five (5) lots along the Southern side of Mona Vale Road, Terrey Hills
- two (2) lots in Kamber Road, Terrey Hills and
- five (5) lots in Kimbriki Road, Ingleside.

Below is a map showing that the two sides of Kimbriki Road are zoned differently (SP2 for Council owned land and E3 for privately owned land):

The above properties should be analysed for correct zoning as part of the E3 Strategic Review process.

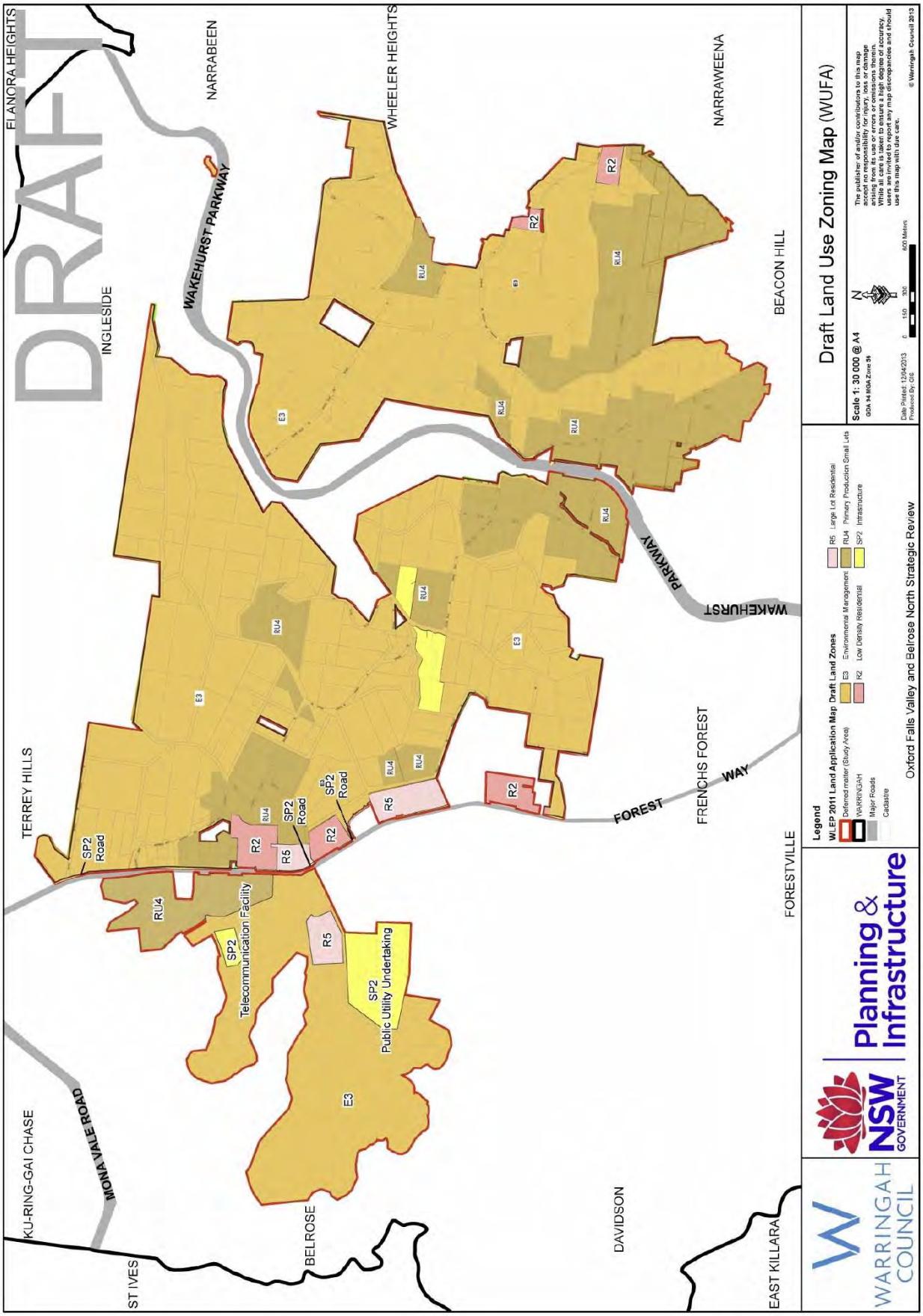
Public Consultation and Transparency

The draft report for the E3 Strategic Review for Oxford Falls and Belrose North was on public exhibition from 22 June to 7 August 2013. On 23 June 2013, WUFA requested further information be made available (This information included the maps of environmental constraints and the site analysis of the properties which were used in the draft report). Rather than provide this information through either public or informal disclosure, the Department of Planning advised WUFA that we had to apply through GIPA (Government Information [Public Access] Act 2009, the replacement of the Freedom of Information Act)**.** WUFA formally applied for this information through GIPA and received the first of it on Friday 19 July 2013 (4 weeks after we first asked for the information). Some of the information (the environmental constraints maps and the site analysis) that we requested was subsequently publicly exhibited on the Department of Planning's website. All of the information that WUFA requested is of public interest and seeks only to increase the transparency of the process.

The fact that source documents used to formulate the report had to be requested, they took so long to be supplied, and there was no extension granted to the exhibition period are all a poor reflection on the transparency and integrity of the process.

We have not had adequate time to review the information and have been unfairly disadvantaged by the source documents being released four weeks after the draft report.

Appendix A - Original zoning map (map 7) from the draft report which has been amended to show WUFA proposed zonings.



Appendix B – Locality Statements from LEP 2000

B.1 Locality Statement from LEP2000 for Terrey Hills and Duffys Forest

LOCALITY A2 BOORALIE ROAD

DESIRED FUTURE CHARACTER

The Booralie Road locality will remain a non-urban area consisting of detached style housing in distinctly non-urban settings and occasionally low intensity, low impact business or community uses that are compatible with non-urban nature of the locality and predominant scale of existing development.

The impact of new development on views from the adjacent National Park will be minimised by the use of articulated building forms, generous landscaped spaces around buildings and building materials that blend in with the colours and textures of the natural landscape.

Emphasis will be given to protecting and where possible enhancing the natural landscape, including landforms and vegetation. The increased planting of indigenous canopy trees will be strongly encouraged.

LAND USE

Category One

Development for the purpose of the following:

- housing
- agriculture

Category Two

Development for the purpose of the following:

- animal boarding or training establishments
- child care centres
- community facilities
- health consulting rooms
- housing for older people or people with disabilities (on land described in the initial paragraph (b) under the heading "Housing density" below)
- retail plant nurseries
- veterinary hospitals
- other buildings, works, places or land uses that are not prohibited or in Category 1 or 3.

B.2 Locality Statement from LEP2000 for Oxford Falls Valley

LOCALITY B2 OXFORD FALLS VALLEY

DESIRED FUTURE CHARACTER

The present character of the Oxford Falls Valley locality will remain unchanged except in circumstances specifically addressed as follows.

Future development will be limited to new detached style housing conforming with the housing density standards set out below and low intensity, low impact uses. There will be no new development on ridgetops or in places that will disrupt the skyline when viewed from Narrabeen Lagoon and the Wakehurst Parkway.

The natural landscape including landforms and vegetation will be protected and, where possible, enhanced. Buildings will be located and grouped in areas that will minimise disturbance of vegetation and landforms whether as a result of the buildings themselves or the associated works including access roads and services. Buildings which are designed to blend with the colours and textures of the natural landscape will be strongly encouraged.

A dense bushland buffer will be retained or established along Forest Way and Wakehurst Parkway. Fencing is not to detract from the landscaped vista of the streetscape.

Development in the locality will not create siltation or pollution of Narrabeen Lagoon and its catchment and will ensure that ecological values of natural watercourses are maintained.

LAND USE

Category One

Nil

Category Two

Development for the purpose of the following:

- agriculture
- housing
- housing for older people or people with disabilities (on land described in paragraph (c) under the heading "Housing density" below)
- other buildings, works, places or land uses that are not prohibited or in Category 1 or 3.

B.3 Locality Statement from LEP2000 for Belrose North

LOCALITY C8 BELROSE NORTH

DESIRED FUTURE CHARACTER

The present character of the Belrose North locality will remain unchanged except in circumstances specifically addressed as follows.

The natural landscape including landforms and vegetation will be protected and, where possible, enhanced. Buildings will be grouped in areas that will result in the minimum amount of disturbance of vegetation and landforms and buildings which are designed to blend with the colours and textures of the natural landscape will be strongly encouraged.

Development will be limited to new detached style housing conforming with the housing density standards set out below and low intensity, low impact uses

A dense bushland buffer will be retained or established along Forest Way. Fencing is not to detract from the landscaped vista of the streetscape.

Development in the locality will not create siltation or pollution of Middle Harbour.

LAND USE

Category One

Development for the purpose of extractive industries (on land covered by Licence Number 64/193 Metropolitan, Belrose – Warringah Gravel and Stone Supplies).

Category Two

Development for the purpose of the following:

- agriculture
- housing
- housing for older people and people with disabilities (on land described in initial paragraph (b) under the heading "Housing density" below)
- other buildings, works, places or land uses that are not prohibited or in Category 1 or 3.

Appendix C - Land use for LEP2011 Zonings

Land use for RU4 Zoning

Warringah Local Environmental Plan 2011 » Land Use Table

Zone RU4 Primary Production Small Lots

1 Objectives of zone

- To enable sustainable primary industry and other compatible land uses.
- To encourage and promote diversity and employment opportunities in relation to primary industry enterprises, particularly those that require smaller lots or that are more intensive in nature.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To minimise the impact of development on long distance views of the area and on views to and from adjacent national parks and bushland.
- To maintain and enhance the natural landscape including landform and vegetation.
- To ensure low intensity of land use other than land uses that are primary industry enterprises.
- To maintain the rural and scenic character of the land.

2 Permitted without consent

Home-based child care; Home occupations

3 Permitted with consent

Animal boarding or training establishments; Aquaculture; Bed and breakfast accommodation; Building identification signs; Business identification signs; Child care centres; Community facilities; Dwelling houses; Environmental protection works; Extensive agriculture; Farm buildings; Home businesses; Home industries; Intensive plant agriculture; Landscaping material supplies; Plant nurseries; Recreation areas; Respite day care centres; Roads; Roadside stalls; Rural supplies; Veterinary hospitals

4 Prohibited

Any development not specified in item 2 or 3

Land use for E3 Zoning

Warringah Local Environmental Plan 2011 » Land Use Table

Zone E3 Environmental Management

1 Objectives of zone

- To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.
- To provide for a limited range of development that does not have an adverse effect on those values.
- To ensure that development, by way of its character, design, location and materials of construction, is integrated into the site and natural surroundings, complements and enhances the natural environment and has minimal visual impact.
- To protect and enhance the natural landscape by conserving remnant bushland and rock outcrops and by encouraging the spread of an indigenous tree canopy.
- To protect and enhance visual quality by promoting dense bushland buffers adjacent to major traffic thoroughfares.

2 Permitted without consent

Home-based child care; Home occupations

3 Permitted with consent

Aquaculture; Bed and breakfast accommodation; Building identification signs; Business identification signs; Community facilities; Dwelling houses; Emergency services facilities; Environmental facilities; Environmental protection works; Extensive agriculture; Farm buildings; Home businesses; Home industries; Horticulture; Recreation areas; Roads

4 Prohibited

Industries; Multi dwelling housing; Residential flat buildings; Retail premises; Seniors housing; Service stations; Warehouse or distribution centres; Any other development not specified in item 2 or 3

Appendix D – Site Analysis for 66 Northcott Rd, Cromer

NSW GOVERNMENT Planning & Infrastructure

Warringah Council

OXFORD FALLS VALLEY & BELROSE NORTH STRATEGIC REVIEW
SITE ANALYSIS

Date: 12/12/12 **Precinct:** F **SITE ID:** 5

Property Address: 66 Northcott **Lot/DP:**

Inspection Officers: **Contact:** No

Owner's consent to access land: ☐ Yes ☑ No **Owner(s) present** ☐ Yes ☑ No

Left calling card? ☑ Yes ☐ No

DESKTOP ANALYSIS	Verified on site (Y/N)
Owner ☐ Private ☐ Commissioner for Roads ☐ Minister for Education ☐ Minister Administering the Sporting Venues Management Act ☐ State Planning Authority ☐ Crown Land ☐ Warringah Council ☐ Metropolitan LALC ☐ Ausgrid ☐ Optus ☐ Sydney Water Corporation ☐ Telstra ☐ NSW Electricity Transmission Authority	
Adjoins an urban area ☐ Yes ☐ No **Adjoins bushland** ☐ Yes ☐ No	
Vegetation ☑ Bushland ☐ cleared paddocks Percentage cleared (10 %) ☐ Other Rock!	
Proximity to a telecommunications facility ☐ < 500m ☐ 500-1,000m ☐ 1,000-1,500m ☐ 1,500-2000m ☑ >2,000m	
Environmental Constraints ☑ No env. Constraints (3%) ☑ Moderate (53%) ☑ Significant (42%) ☑ Severe (49%) ☐ Prohibitive (1%) ☑ Bushfire ☐ Heritage	

SITE VISIT ANALYSIS	
Building on site ☐ Yes ☐ No ☐ Unable to determine Construction underway	
Type of buildings on site (if applicable) ☐ Dwelling (Seniors, attached, detached) ☐ Domestic outbuildings ☐ Agricultural ☐ Commercial ☐ Utilities e.g. sub station, satellite dishes ☐ Storage ☐ Educational ☐ Other	
Use of site ☐ Residential ☐ Rural ☐ Commercial ☐ Educational ☐ Industrial ☐ Infrastructure ☐ Retail ☐ Mixed ☐ Other	
Additional comments/ observations Rock outcrops throughout v.steep	

Appendix E - Warringah Non Urban Lands Study Stage 2 – Impacts on water quality on Narrabeen Lagoon

See separate attached document

Appendix F – WUFA's submission to the Strategic Review committee (prior to the draft report being created)

See separate attached document

Warringah Non-Urban Lands Study Stage 2: Impacts on Water Quality of Narrabeen Lagoon

Prepared For:	Warringah Council
Prepared By:	WBM Oceanics Australia

Offices

Brisbane
Denver
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Newcastle
Sydney
Vancouver

DOCUMENT CONTROL SHEET

WBM Oceanics Australia

Newcastle Office:

126 Belford Street
BROADMEADOW NSW 2292
Australia

PO Box 266
Broadmeadow NSW 2292

Telephone (02) 4940 8882
Facsimile (02) 4940 8887
www.wbmpl.com.au

ACN 010 830 421

Document:	R.N0595.001.00.doc
Title:	Warringah Non-Urban Lands Study Stage 2: Impacts on Water Quality of Narrabeen Lagoon
Project Manager:	Philip Haines
Author:	Scott Oakley
Client:	Warringah Council
Client Contact:	Adam Byrnes
Client Reference:	
Synopsis:	This report outlines expected pollutant load increases and suitable BMP's and BPP's that would be required to be implemented for two development scenarios in the western catchment of Narrabeen Lagoon to prevent further degradation of water quality. The outcomes are extrapolated to two other catchments within the Warringah Council area.

REVISION/CHECKING HISTORY

REVISION NUMBER	DATE	CHECKED BY		ISSUED BY	
0	23/4/01	PEH		SWO	
1	7/5/01	PEH		SWO	

DISTRIBUTION

DESTINATION	REVISION										
	0	1	2	3	4	5	6	7	8	9	10
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1 INTRODUCTION

In response to the increasing demand for residential land within the Northern Beaches area, Warringah Council commissioned a study to, amongst other objectives, determine the environmental carrying capacity of non urban land within Warringah Council Area (PPK, 2000). This study, known as Stage 1 of the Non Urban Lands Study (NULS), determined a number of areas within the western catchment of Narrabeen Lagoon that may be suitable for increased development densities, as shown in **Figure 1.1**.

The Narrabeen Lagoon Estuary Processes Study (WBM, 2001) identified that water quality within Narrabeen Lagoon was dominated by catchment runoff. This was particularly the case in the western basin, where tidal flushing is poorest, resulting in near eutrophic conditions. Further uncontrolled development within the catchment would inevitably increase these nutrient loads, resulting in further degradation of water quality in the western basin.

This investigation, recommended in Stage 1 if the NULS, aims to determine the water quality controls required within the areas identified as suitable for development, such that the water quality within Narrabeen Lagoon will not be further degraded, or will in fact be improved.

The scope of this study is to:

1. Rerun the existing AQUALM model that was set up as part of the Estuary Processes Study for Narrabeen Lagoon, to include the development scenarios proposed in Stage One of the Non-Urban Lands Study (NULS) and for a greater development density of 15 dwellings per hectare;

2. Identify and outline various stormwater design solutions that are feasible based on site constraints to maintain or enhance water quality in the western basin of Narrabeen Lagoon;

3. Prepare comprehensive analysis of construction and maintenance costs of the proposed stormwater design solutions over a fifty year period;

4. Provide a written form of a cost-benefit analysis that identifies the costs (impacts) on Narrabeen Lagoon and to Council to maintain the devices against the benefits of additional land being available for development; and

5. Extrapolate the above results to the Middle Harbour and Cowan Creek catchments of Narrabeen Lagoon and develop a similar cost-benefit analysis.

Item 1, above, was carried out by Lawson and Treloar. The remaining components of the study were completed by WBM Oceanics Australia.

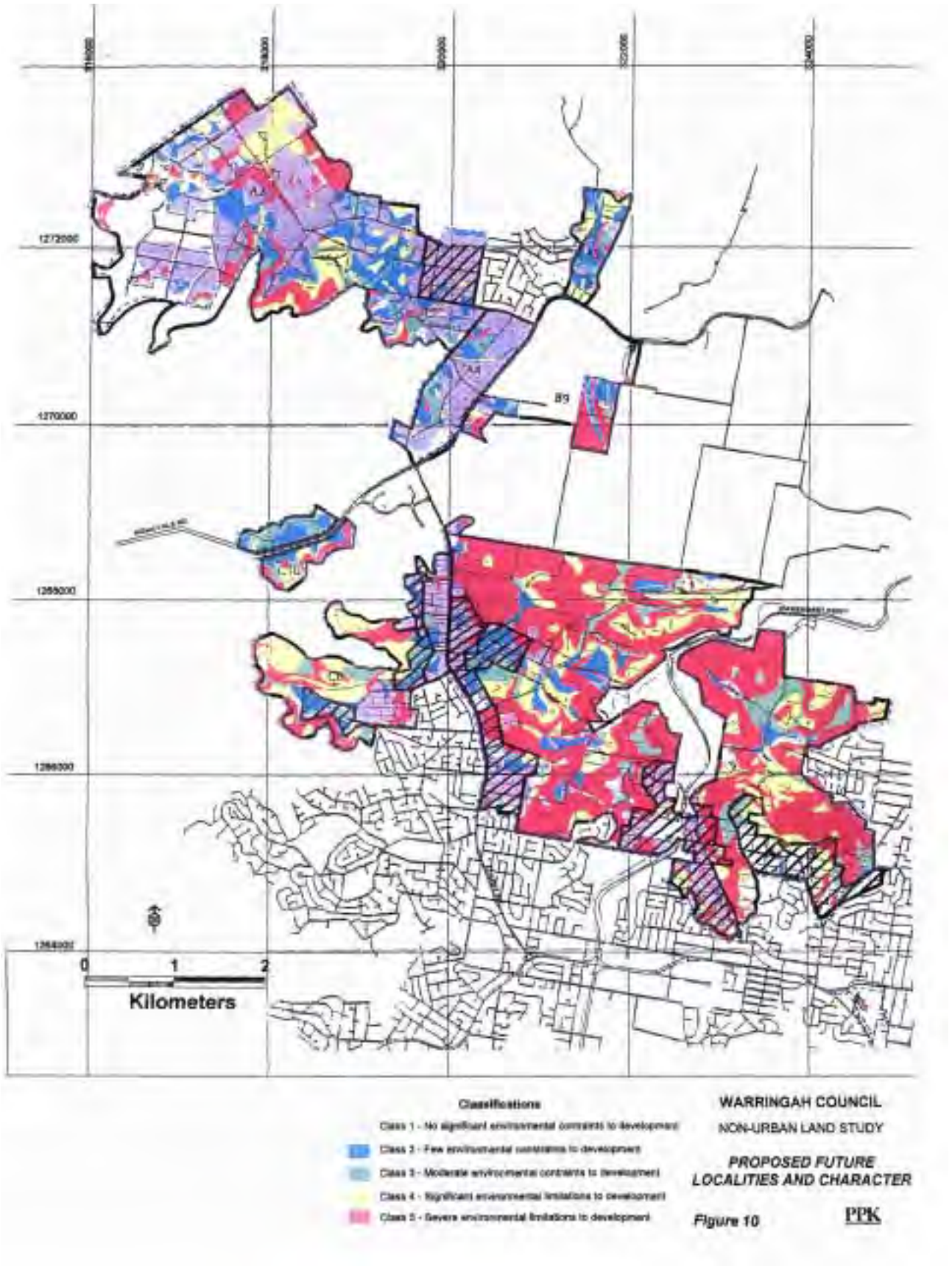


Figure 1.1 Proposed development areas – Stage 1 NULS (PPK, 2000)

2 AQUALM MODELLING

2.1 Narrabeen Lagoon as a Case Study

The Narrabeen Lagoon Estuary Processes Study, prepared by WBM Oceanics with assistance from Lawson and Treloar and Brown & Root Services (WBM Oceanics, 2001), involved the establishment of a catchment model of the entire catchment of Narrabeen Lagoon to a significant level of detail and accounts for land use, soil types, the existing drainage system and existing stormwater quality improvement devices (SQIDs).

As outlined in the Non-Urban Land Study (NULS) (PPK, 2000), to the west and the south-west of the Lagoon, 2,500 ha of the catchment was zoned Non-Urban 1(a1) under the 1985 Warringah LEP and is currently designated as B2 Oxford Falls Valley pursuant to the 2000 Warringah LEP.

The study considers that the primary threat to water quality in the catchment is urban development. The study outlines that further development of the catchment will need to be of a density and type consistent with the environmental capability of the land and will require appropriate management controls to ensure no significant impact on the Lagoon.

Thus, given the availability of a detailed model, the consideration of Narrabeen Lagoon as a case study was deemed appropriate as a means by which an assessment of the impacts of a change in landuse within the area might be made. The findings of the assessment of Narrabeen Lagoon have then been interpreted in consideration of other non-urban lands within the Middle Harbour and Cowan Creek catchments.

2.2 Modelling Objectives

The objectives of this section of the assessment are to:

- review the adequacy of the modelling undertaken for Narrabeen Lagoon for the purposes of this study through literature review and other desktop assessments;
- implement any changes required in the model to reflect the scenario's outlined;
- use the model to assess the land capability in terms of appropriate lot densities and the constraints of the environment (including the receiving waters) for Narrabeen Lagoon, Middle Harbour and Cowan Creek;
- make recommendations as to whether development at prescribed densities will cause unsatisfactory environmental degradation; and
- make recommendations as to the sustainable level of development, including appropriate lot densities.

2.3 Overview of Development Scenarios

2.3.1 Scenarios

The NULS (PPK, 2000) identified four areas for urban residential and rural residential development within the Oxford Falls Valley (identified as area B2 in the LEP, 2000) draining to Narrabeen Lagoon. These are outlined in **Table 2.1**. In addition to this, the table also contains the densities prescribed by the State Government applied to those same areas. Other areas identified that drain to other receiving waters are also shown in this table for completeness as well as reference later in this report.

There are two scenarios to be considered for their impact:

Scenario 1 - areas highlighted in Table 2.1 for potential release with density recommendations listed within the NULS (PPK, 2000) characterised by a predominance in rural residential areas and one urban residential area.

Scenario 2 - areas highlighted in Table 2.1 for potential release listed within the NULS (PPK, 2000) with density recommendations characterised by the State release rate of 15 dwellings per hectare.

The areas outlined in **Table 2.1** are shown in **Figure 2.1**.

2.3.2 Assumptions Derived from Existing Council Policies

Rural Residential Densities - Scenario 1

Minimum lot densities within the LEP (2000) vary from locality to locality. Actual densities relate to a minimum lot area for subdivisions, which are:

- Locality A2 1 dwg/2 ha
- Locality A4 1 dwg/2 ha
- Locality A5 1 dwg/2 ha
- Locality B2 1 dwg/20 ha
- Locality B9 1 dwg/20 ha
- Locality C8 1 dwg/20 ha
- Locality C10 1 dwg/20 ha.

For this assessment, the average lot density in the rural residential areas for Scenario 1 is assumed as 1 lot per 2 hectares as prescribed by the NULS (PPK, 2000).

Urban Residential Densities - Scenario 1 and 2

Within the category of urban residential development there are density variations with low density being referred to by the NULS (PPK, 2000) as being 600m^2 (i.e. 16.7 lots per ha) and medium density as being 450m^2 (i.e. 22.2 lots per ha). Thus the adopted 15 lots per ha as

prescribed by the Department of Urban Affairs and Planning (DUAP) is slightly less than the 'low' density definition.

Sewerage Management in Rural Residential Areas

It is understood that lots of 2 ha or greater are not required to have sewer connections whilst lots less than 2 ha are required to be connected to sewer. For this assessment, all rural residential areas are assumed not to be connected to the sewer and therefore have some type of on-site sewage management system.

Impervious Fraction of Various Land Use Types

Council's current policy is to ensure at least 40% of surfaces are pervious for urban residential development and it is assumed that 95% of surfaces are pervious for rural residential development. Council also has a comprehensive on-site detention policy to manage the issue of increase in peak flow levels as a resulting from urban development.

Number of Dwellings on Each Lot

It is assumed that each lot contains only one residence whether the lot be rural residential or urban residential.

Table 2.1 Proposed Release Areas and Density Details

Locality	Catchment**	Council Identifier	Area	NULS RECOMM. (PPK, 2000) Density and Land Use Type	STATE RELEASE RATE(DUAP) Density and Land Use Type	Estimated Number of Dwellings for Scenario's		Estimated Population*	
				Scenario 1	Scenario 2	NULS Scen. 1	DUAP Scen 2	NULS Scen. 1	DUAP Scen 2
Immediately adjacent Forest Way	Narrabeen Lagoon	Part of Area - B2	65 ha	15 dwg/ha Urban Residential	15 dwg/ha Urban Residential	975	975	2700	2700
Morgan Road area (near Forest Way)	Narrabeen Lagoon	Part of area - B2	25 ha	1 dwg/2ha Rural Residential	15 dwg/ha Urban Residential	25	375	70	1050
Either side of Wakehurst Parkway	Narrabeen Lagoon	Part of area - B2	92 ha	1 dwg/2 ha Rural Residential	15 dwg/ha Urban Residential	92	1380	258	3864
Adjacent Red Hill	Narrabeen Lagoon	Part of area - B2	58 ha	1 dwg/2 ha Rural Residential	15 dwg/ha Urban Residential	58	870	162	2436
Terrey Hills/Duffys Forest	Cowan	Part of Area - A2	38 ha	1 dwg/2 ha Rural Residential	15 dwg/ha Urban Res. 1 dwg/2 ha Rural Res.	38	570	106	1500
Belrose North	Middle Harbour	Part of Area - C8	100 ha 45 ha	1 dwg /20ha 1 dwg /20ha Both Rural Residential	1 dwg /20 ha Rural Res. 1 dwg /2 ha over 45 ha Urban Residential	23	675	65	1890

- Population calculated from an estimated occupation rate of 2.8 (PPK, 2000)
- dwg - dwelling
- **Narrabeen Lagoon Catchment modelled only and conclusions drawn in latter parts of this report are inferred from Narrabeen Lagoon model results.

2.4 Literature Review and Data Compilation

2.4.1 Background to Literature Review - Quantity and Quality

In general, to assess the load of pollutants being transported from an area there are two key aspects:

- the volume of runoff (generally related to the pervious/impervious fraction of an area), and
- the pollutant event mean concentration (EMC) or pollutant export/loading rate (generally related to the land use of an area).

The relationship with lot density of both the volume of runoff and EMC are also reviewed and discussed.

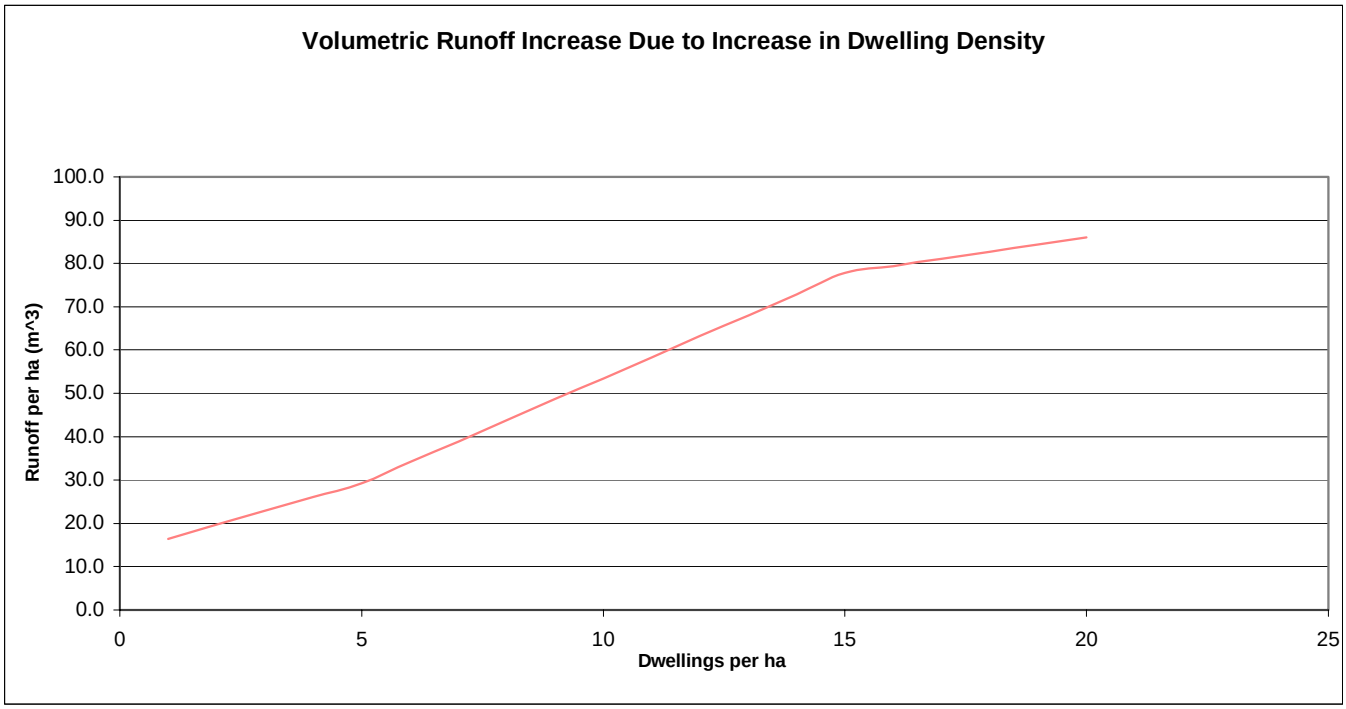
Volume of Runoff

A significant factor in the coupling of pollutant load and concentration is the calculation of runoff. The proportion of runoff is generally related to the impervious fraction of the area.

A simple relationship which can be quantified is that between impervious area and the volume of runoff. Lot density will affect the amount of pervious area.

To demonstrate this simple relationship, a plot of the increase in lot density for a fixed impervious area on each lot (an area of 400 m^2 impervious on each lot was assumed up to 15 lots per hectare and then 60% of the lot size impervious for lots greater than this value) versus the increase in the volume of runoff is shown as **Figure 2.2** for a 1 hour storm of 10 mm/hr intensity. This assumes no water sensitive urban design features are incorporated into a development. Volumetric runoff coefficients for pervious and impervious areas were adopted from assessments of data reported in EPA (1997).

Figure 2.2 Simple relationship between lot density and increase in runoff volume for a single rainfall event



Event Mean Concentration/Pollutant Export Rate

The other significant factor utilised is known as the Event Mean Concentration (EMC) for each pollutant type (e.g. Total Nitrogen, Total Phosphorus etc), which can be used to represent all of the processes occurring to contribute to the load of pollutant in the flow. The EMC is applied to the runoff calculated to determine pollutant loads and concentrations on an event basis. Loads are often reported as a total annual load (e.g. kg/year) or a annual load per unit area (e.g. kg/ha/year). A simple loading rate per land use can also be used as a more broad approach to the assessment of likely pollutant export rate.

The EMC and the annual pollutant export rates are known to be related directly to land use but relationships for each pollutant type are not well quantified and other influencing factors can play a part in the overall observed pollutant loads and concentrations. In catchment modelling, the EMC for various pollutant types is set as a specific value for each land use and these can generally be broadly categorised in a similar manner to land zonings such as:

- residential
- rural residential
- commercial
- industrial
- parks
- bushland

- specific uses where data is available or reasonable assumptions can be made (such as rubbish tips, schools, hospitals, golf courses etc).

Note that the influence of local roads is assumed within each land use types. Where significant portions of road are within a catchment then these can be assessed as separate areas.

Pollutant export rates have been reported in a number of documents as a single value or a range of values. For example, Brisbane City Council (2000) reports assumed pollutant export rates to be those shown in **Table 2.2** below. These are presented as a guide to demonstrate the difference between land uses of export rates.

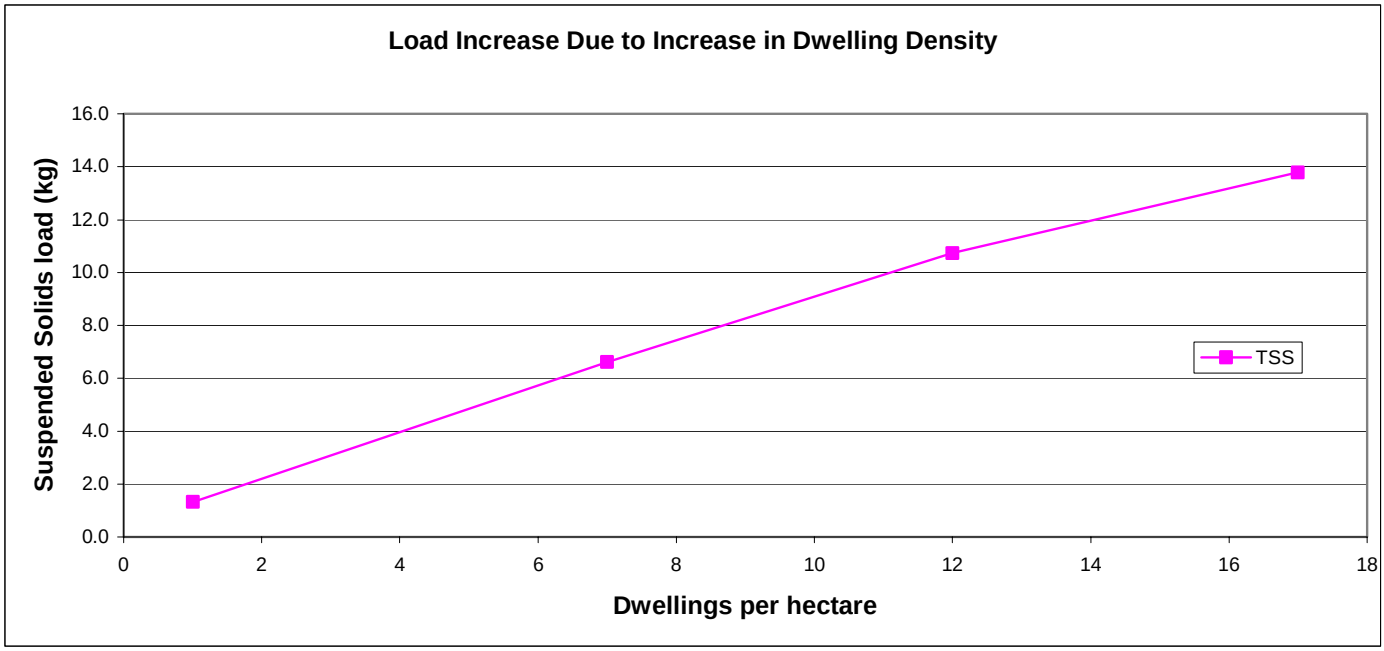
Table 2.2: Example Pollutant Export Rates (Brisbane City Council, 2000)

Land Use Type	Total Nitrogen (kg/ha/yr)	Total Phosphorus (kg/ha/yr)	Suspended Solids (kg/ha/yr)
Open Space and Parks	0.99	0.1	100
Rural Residential	4.10	0.68	150
Urban Residential	7.00	1.48	670

The relationship between lot density and EMC within each broad land use type is even more difficult to quantify and while values can be presented to reflect possible variations, there is limited Australian data to support these assumptions. A detailed search of literature was undertaken to identify any data or relationships developed in this regard.

Literature uncovered is described in detail in **Section 2.4.2**, however, to demonstrate the relationship between lot density and the associated increase in load, data uncovered in the literature review was applied to the same runoff event shown in **Figure 2.2** to generate a simple relationship between lot density and the increase in pollutant load. This approach utilised EMC's for varying levels of imperviousness from data collected for the City of Austin, Texas (1990). This is shown in **Figure 2.3**.

Figure 2.3 Simple Relationship between Lot Density and Increase in Suspended Solids Load for an Urban Residential Area



2.4.2 Literature Specific to Relating Lot Density and Pollutant Loads

A review of literature using a variety of sources including libraries, conference proceedings and journal articles was undertaken to assess existing literature regarding the relationships between residential lot density and pollutant export for both urban and non-urban areas.

Overall, there was very limited literature that relates specifically to the subject of lot density and pollutant export. Relevant documents were identified as outlined in **Table 2.3**.

Table 2.3: Relevant Literature Relating Lot Density and Pollutant Export

Jeliffe (1997)	An Australian method developed to estimate likely export of pollutants from unsewered developments (e.g. rural residential areas) with varying lot densities. Considered the use of the AQUALM-XP model. The method involves setting a target water quality objective for runoff as well as having information on the soil permeability, slopes, type of on-site sewage disposal system. Only a method is provided rather than any actual data.
Schueler (1987)	A US publication with calculated rates of pollutant export using the 'Simplified Method' for varying land use types and impervious cover and lot densities.
Environmental and Conservation Services Department (1990)	A US publication from the City of Austin, Texas, reporting results from a monitoring program of a number of urban residential sites of varying proportions of imperviousness to evaluate the presence of a first flush phenomena. General trend indicates an increase in imperviousness results in an increase in pollutant load and concentration however there is scatter in the data indicating other factors play a role. See **Table 2.4** for data.

NSW EPA (1997)	A NSW publication reporting differing pollutant export rates for differing land use types (listed as either urban or natural), but not specifically related to the lot density of an area.

Since the only reference that is based on actual data is that from the Environmental and Conservation Services Department (1990), this data has been utilised in the consideration of the Warringah case.

To draw some conclusions with these real data on the effect of the change of lot density of an area, an average area of 400 m^2 impervious on each lot was assumed up to 15 lots per hectare and then 60% of the lot size impervious for lots greater than this value, producing the first three columns in Table 2.4. An assumption was made to account for other impervious areas within the area (such as roads and footpaths) which is likely to produce conservative results. These were then coupled with the findings from the City of Austin, Texas for correlation with EMC's. This is shown in **Table 2.4**.

These data show no real trends between imperviousness (and therefore the assumed density differences) and EMC. For example, with the proportion of imperviousness increasing from 5% to 77%, where it would be expected (from simple trends calculated such as that shown in **Figure 2.3**) that the concentrations would generally increase, that the concentrations are low with low proportions of imperviousness but then peak, or plateau, at some mid-range of imperviousness. Specifically, the nitrogen species show a peak in the results at a fraction of 30% impervious but then lower at greater proportions of imperviousness (up to 70%). These observed trends, from a single site in conditions likely to be quite different to those of the Narrabeen Lagoon catchment make it difficult to draw conclusions about appropriate values to adopt for this study.

Table 2.4 Correlation with Lot Sizes and EMCs using data from the USA Considering a 1 ha area with a dwelling area assumed of between 400-500 m^2

Dwelling/ha	Lot size (m^2)	Percent of hectare impervious	Pollutant EMC's - City of Austin (mg/L)			
			BOD (mg/L)	NO_2+NO_3 (mg/L)	PO_4 (mg/L)	TSS (mg/L)
1	10000	5%	9	0.15	0.04	80
7	1429	30%	9	1.1	0.18	170
12	833	50%	9	0.35	0.18	170
14	714	77%	9	0.35	0.18	170

2.4.3 Review of Existing Lot Sizes of Existing Areas within Narrabeen Lagoon Catchment

Since the literature review did not uncover any conclusive trends, the validity of the adoption of the parameters derived for the local area for new development was assessed by considering lot sizes in the existing catchment area.

The cadastral boundaries GIS layer and the aerial photographs for Warringah Council were assessed for existing lot density within the Narrabeen Lagoon catchment in the south-western areas (such as

Cromer, Narrabeen and Frenchs Forest). A random sample of 50 lots was chosen as representative of the existing urban residential density.

The results of the assessment are outlined in **Table 2.5**.

Table 2.5 Average Lot Size from Random Sample of 50 Lots in Urbanised Areas

Statistical Measure	Lot Size (m^2)	Equivalent Lots per ha
Average Lot Size	726.3	13.8
Min Lot Size	421.5	23.7
Max Lot Size	1831	5.5
Standard Deviation	241.4	NA

The results in **Table 2.5** indicate that there is quite a range in the lot sizes (400 - 1800 m^2) in the existing residential areas. Overall, the average lot size of ~ 730 m^2 equating to a lot density of 13.8 lots per hectare is slightly lower than the 15 lots per ha required by a portion of Scenario 1 and Scenario 2.

However, the available data reported in **Section 2.4.2 (Table 2.4)** indicates limited variance in the pollutant EMC as it relates to impervious area. Since the lot sizes in the existing developed areas are of a similar magnitude to the proposed urban areas, it is assumed that the adoption of the AQUALM parameters derived for the urban areas within the Narrabeen Lagoon catchment for the Estuary Processes Study (WBM, 2001) are valid for the proposed urban development in both scenarios.

2.4.4 Literature Review of Urban Densities

Literature was sought to compare the lot sizes derived as outlined above in **Section 2.4.3** with other data collected for urban areas in Sydney for the purposes of determining whether results could be compared with other areas of Sydney.

George et al (1996) assessed 144 release areas ranging from 15 - 200 ha, which were developed between 1971 and 1992. This investigation found that the average lot size for the Sydney metropolitan area to be 618 m^2 corresponding to a density of 16.2 lots per hectare. In addition to this data, the proportions of each type of land use within an urban residential area were also assessed along with the proportion of impervious land. The averages are:

- 56% residential 40% impervious
- 19% roads 75% impervious
- 14% open space 5% impervious
- 11% special use 60% impervious.

This gives an overall proportion of 44% impervious area.

Other more specific areas assessed include an average lot size for Blacktown to be 588 m^2 corresponding to 17 lots per ha and an average lot size for Baulkham Hills to be 1075 m^2 corresponding to 9.3 lots per ha.

This data indicate that whilst 60% imperviousness may be allowed for in the design case, the impervious fraction of existing residential areas is likely to be an overall 44%. This means that the runoff volume from the newly developed urban residential areas may be higher than that of the existing areas and the use of the same hydrological parameters for the two areas may produce non-conservative results. However, the impervious fraction of the newly developed urban residential areas assumes the entire development area to be developed with no open space included in the land release. Given these uncertainties, the use of the same hydrological parameters is considered to be reasonable.

2.4.5 Conclusions

The main conclusions drawn from the results of the literature review are:

- the relationship between increase in impervious area and increase in the volume of runoff is clear. The implications for this assessment are that with a greater lot density in an area, a greater volume of runoff will be generated. Thus Scenario 2 will result in an increase in total runoff volume as compared to Scenario 1.

- the relationship between pollutant load and land use type has been demonstrated for other catchments (**Table 2.2**) but not specifically for the Narrabeen Lagoon catchment, given the scarcity of data and specific studies showing statistically valid trends for the local area, however general trends, such as those shown in **Figure 2.3,** show that with increased imperviousness there is an increase in load. This occurs even if the trends in EMC are not well documented since the increase in the impervious area will result in the volume of runoff increasing. As such, this means that land use types with greater impervious areas will generate more pollutant loads than others.

- for the urban residential case, adopting the same runoff coefficients and pollutant export relationships within the AQUALM model as those derived for the surrounding catchment areas (such as Cromer, Frenchs Forest) as part of the Estuary Processes Study (WBM, 2001) is reasonable given similar lot densities to those proposed was found for these areas

- for the rural residential case, adopting the same runoff coefficients and pollutant export relationships within the AQUALM model as those derived for the surrounding rural catchment areas is reasonable in the absence of published data to suggest otherwise.

Given the uncertainties in the available data, it is concluded that the parameters adopted for the areas to be developed should generally be the same as those values adopted for other established urban residential areas with the Narrabeen Lagoon catchment for both runoff and pollutants.

2.5 Modelling

The modelling tasks for this assessment included:

- a review of the existing model for application for this project;

- consider the model parameters to be adopted for the two scenario's based on the data and literature described in **Section 2.4**;

- establishing the model for the two scenarios; and
- production of results and a discussion of those results.

The recommendations from the modelling are presented in **Section 2.6**, which include preliminary design parameters for the assessment of water sensitive urban design options (including stormwater quality improvement devices).

2.5.1 Overview of Existing Model

The Narrabeen Lagoon Estuary Processes Study (WBM, 2001) involved the modelling of the entire catchment using AQUALM-XP Version (XP Software, 1995). This model uses a daily water balance to route runoff from catchments to the Lagoon, coupled with a pollutant export function to determine loads and concentrations of specified pollutants. The model was run using a daily timestep for an average year of rainfall (1995) considering four scenarios:

- Existing catchment conditions;
- Pre-European catchment conditions (i.e. assuming all areas as bushland);
- Developed catchment of areas identified in the NULS (PPK, 2000) but assuming similar urban densities to other existing developed areas within the catchment (somewhat similar to Scenario 2 described in **Section 2.2** of this report); and
- Completely developed assuming all areas not developed converted to urban residential except for National Park areas with similar urban densities to other existing developed areas within the catchment.

The parameters modelled included Total Nitrogen (TN), Total Phosphorous (TP) and Suspended Solids (SS). Further details regarding the establishment of the model can be found in the Narrabeen Lagoon Estuary Processes Study report (WBM, 2001).

General details include:

- **Existing land use** was determined from the 1985 Local Environment Plan (LEP) for Warringah along with aerial photography. Land uses in the catchment range from bushland areas to urban and include rural, rural residential, major roads and parks.
- **Proposed land uses** were determined by considering the future proposed developments from strategic planning documents from Warringah Council. The proposed areas lie within Oxford Falls and Oxford Heights area identified within the NULS (PPK, 2000) (a total of 275 ha with a conservative assumption for residential development of the entire area).
- **Model Schematisation** involves a series of nodes and links routing flow from catchments into the various creeks or directly into the Lagoon (for the foreshore catchments). The catchment was divided into 212 sub-catchments. Flow into the Lagoon is represented by a series of nodes at fixed points around the Lagoon edge, generally at the location of a stormwater pipe discharge.
- **Pollutant loads** were attributed to surface flow only.

- **Event mean concentration** approach was used for pollutant export estimation - this assumes that an unlimited supply of constituents is available on the catchment surface - a conservative approach that will over-estimate the pollutant loads and concentrations exported from the catchment.

- **Model calibration** was loosely undertaken by checking results to be reasonable against available data, firstly for stream flow and secondly stream water quality. Since the model is a daily flow model, it is less suitable for flows in the higher range (that is, for conditions worse than minor flooding conditions). To capture the dominant conditions within the model, the parameters were adjusted to suit the general range of conditions, with peak flows of large events not being simulated as well. This is considered acceptable given the duration of the simulations and the likelihood that the majority of the constituent loads delivered to the Lagoon system would occur during the lower, more frequent events. A similar approach to the check of the pollutant export aspects of the model was conducted by comparing the modelled concentrations with those measured within the Warriewood Valley.

2.5.2 Model Setup for the Two Scenarios Identified for NULS Stage 2

The model was updated to reflect better information on the boundaries of the proposed development areas and rerun for the existing case and then altered from the existing case to consider the two scenarios. Details of the model setup on an area basis can be found in **Tables 2.6** to **2.9** below for the four separate areas under consideration. Comparisons of the model areas and the reported areas are provided to demonstrate the model detail, and discrepancies are described where they occur.

Note that the areas for development fall within the Middle Creek and South Creek catchments of Narrabeen Lagoon, which discharge to the western basin of the Lagoon.

Table 2.6 Immediately adjacent Forest Way (Area B2)

Scenario	Model SC Identifier	Tributary	Area (ha)	Bushland (ha)	Rural Residential (ha)	Urban (ha)	Major Roads (ha)	Other
Existing	M8	Middle Ck	167.91	93.39	66.21	4.02	4.30	0
Existing	D13	Deep Ck	113.62	103.35	10.27			0
Existing	D14	Deep Ck	116.71	105.95	10.76			0
Scenario 1	M8	Middle Ck	167.91	81.08	19.30	63.24	4.30	0
Scenario 1	D13	Deep Ck	113.62	103.32	5.74	4.56		0
Scenario 1	D14	Deep Ck	116.71	105.95	6.90	3.86		0
Difference						+67.64*		
Scenario 2	M8	Middle Ck	167.91	81.08	19.30	63.24	4.30	0
Scenario 2	D13	Deep Ck	113.62	103.32	5.74	4.56		0
Scenario 2	D14	Deep Ck	116.71	105.95	6.90	3.86		0
Difference						+67.64*		

Scenario 1: 15 dwgs/ha Scenario 2: 15 dwgs/ha

*NULS reports a value of 65 ha instead of 67.64 ha. Measurement errors and map rectification likely to be the cause and inclusion of road areas in the bulk assessment. Some portions of this area proposed under the NULS were found not to be included in the detailed catchment map of the area at present and fall within the Middle Harbour catchment (approximately 5.5 ha). An arbitrary boundary has been assumed between this area and the area defined as being the 'Morgan Road Area (near Forest Way)' that gives appropriate proportions of land.

Model SC Identifier - Model Sub-Catchment Identifier.

Table 2.7 Morgan Road area (near Forest Way)

Scenario	Model SC Identifier	Tributary	Area (ha)	Bushland (ha)	Rural Residential (ha)	Urban (ha)	Major Roads (ha)	Other
Existing	M10	Middle Ck	30.02		23.84	5.10	1.09	0
Existing	M11	Middle Ck	36.12	8.08	3.78	24.26		0
Scenario 1	M10	Middle Ck	30.02		23.84	5.10	1.09	0
Scenario 1	M11	Middle Ck	36.12	6.55	5.31	24.26		0
Difference					+1.53			
Scenario 2	M10	Middle Ck	30.02		2.00	26.94	1.09	0
Scenario 2	M11	Middle Ck	36.12	5.79		30.33		0
Difference						+27.91*		

Scenario 1: 1 dwg/2 ha Scenario 2: 15 dwgs/ha

*NULS reports a value of 25 ha instead of 27.91 ha. Measurement errors and map rectification likely to be the cause and inclusion of road areas in the bulk assessment. An arbitrary boundary has been assumed between this area and the area defined as being the area known as 'Immediately Adjacent to Forest Way' to give appropriate proportions of land.

Table 2.8 Either side of Wakehurst Parkway

Scenario	Model SC Identifier	Tributary	Area (ha)	Bushland (ha)	Rural Residential (ha)	Urban (ha)	Major Roads (ha)	Other
Existing	M12	Middle Ck	61.90	56.59		3.44	1.87	0
Existing	M13	Middle Ck	59.00	20.59	38.41			0
Existing	M14	Middle Ck	65.23	40.93	17.98	1.64	1.75	3.0
Existing	M16	Middle Ck	36.62	18.60	7.08	7.24	1.11	2.59
Existing	M33	Middle Ck	28.07	6.52	21.55			
Scenario 1	M12	Middle Ck	61.90	52.15	4.44	3.44	1.87	0
Scenario 1	M13	Middle Ck	59.00	20.59	38.41			0
Scenario 1	M14	Middle Ck	65.23	22.13	36.78	1.64	1.75	0
Scenario 1	M16	Middle Ck	36.62	18.60	7.08	7.24	1.11	2.59
Scenario 1	M33	Middle Ck	28.07	6.52	21.55			
Difference					+23.24			
Scenario 2	M12	Middle Ck	61.90	52.15		7.88	1.87	0
Scenario 2	M13	Middle Ck	59.00	20.59	15.21	23.2		0
Scenario 2	M14	Middle Ck	65.23	22.13	3.68	37.67	1.75	0
Scenario 2	M16	Middle Ck	36.62	18.60		16.91	1.11	0
Scenario 2	M33	Middle Ck	28.07	6.52		21.55		
Difference						+94.9		

Scenario 1: 1 dwg/2 ha Scenario 2: 15 dwgs/ha

*NULS reports a value of 92 ha instead of 94.9 ha. . Measurement errors and map rectification likely to be the cause and inclusion of road areas in the bulk assessment. 'Other' areas are unrelated existing land uses that will not change within the catchments such as major roads.

Table 2.9 Adjacent Red Hill

Scenario	Model SC Identifier	Tributary	Area (ha)	Bushland (ha)	Rural Residential (ha)	Urban (ha)	Major Roads (ha)	Other
Existing	S13	South Ck	131.98	121.34		10.64		0
Existing	S16	South Ck	40.40	30.63		9.78		0
Existing	S18	South Ck	8.49	7.99		0.5		0
Scenario 1	S13	South Ck	131.98	84.30	47.68			0
Scenario 1	S16	South Ck	40.40	14.71	25.7			0
Scenario 1	S18	South Ck	8.49		8.49			0
Difference					+60.95			
Scenario 2	S13	South Ck	131.98	84.30		47.68		0
Scenario 2	S16	South Ck	40.40	14.71		25.7		0
Scenario 2	S18	South Ck	8.49			8.49		0
Difference						+ 60.95		

Scenario 1: 1 dwg/2 ha Scenario 2: 15 dwgs/ha

*NULS reports a value of 58 ha instead of 60.95 ha. . Measurement errors and map rectification likely to be the cause and inclusion of road areas in the bulk assessment.

2.5.3 Results

Results of the modelling for an average rainfall year with respect to the loads and volume of runoff delivered to the Lagoon from Middle Creek are shown in **Table 2.10**. Given the uncertainty in the modelling and the assumptions adopted in the modelling approach (e.g. an unlimited supply of pollutant exists on the surface of the catchment is available for export), use of the values as 'exact' reports of load and concentration is not recommended. These results are likely to be in the correct order of magnitude but are indicative only and are likely to be conservative due to the assumptions in the modelling. In the case of concentrations, whilst they are the appropriate order of magnitude, these are the least reliable results and are provided as an indication only; the load results and the runoff volume details are more reliable. This is in keeping with the load-based philosophy for the loading of the Western Basin and Narrabeen Lagoon. The relative difference in loads is the important aspect to consider between the Existing case, Scenario 1 and Scenario 2.

Table 2.10 Estimated Annual Loads for an Average Year of Constituents Delivered to the Lagoon by Middle Creek- Difference between Existing and Scenario 1 and Scenario 2*

Whole Catchment	Runoff	SS		TN		TP	
	(ML)	Load (tonne)	Peak Conc.	Load (kg)	Peak Conc.	Load (kg)	Peak Conc.
Middle Creek Existing	7700	950	340	4890	1.7	1160	0.40
Middle Creek Scenario 1	8000	1050	340	5490	1.7	1240	0.40
Total Increase Scenario 1	**300**	**100**	**0**	**600**	**0.0**	**80**	**0.00**
% Increase	**3.9%**	**10.5%**	**-**	**12.3%**	**-**	**6.9%**	**-**
Middle Creek Existing	7700	950	340	4890	1.7	1160	0.40
Middle Creek Scenario 2	8300	1200	340	6340	1.7	1300	0.40
Total Increase Scenario 2	**600**	**250**	**0**	**1450**	**0.0**	**140**	**0.00**
% Increase	**7.8%**	**26.3%**	**-**	**29.7%**	**-**	**12.1%**	**-**

* The results for these scenarios are 'worst case' as it has been assumed that no controls would be implemented as part of the development.

The results show the present load rates of Middle Creek contributing to the western basin to be in the expected order of magnitude and the increase of the loads due to either Scenario 1 or Scenario 2 is also within expected bounds.

The results indicate that uncontrolled development will have an impact on the downstream receiving waters. In terms of runoff volume, an increase in the volume of runoff to Middle Creek of 300 ML per year may have some minor impacts in terms of Lagoon flooding. However, the total volume of stormwater delivered to the Lagoon is of the order of 30,000 ML (WBM, 2001) in an average year and thus comparatively, this is a small increase (0.1%). Whilst not considered as part of this

investigation, the increase in peak flow during runoff events is likely to have some impact on stream erosion downstream.

The increase in sediment load is likely to contribute in a minor way to the progradation of the deltas observed at the outlet of Middle and South Creeks and an increase in turbidity in the Lagoon.

The increase in nutrient load of 600 - 1450 kg/yr can be compared against the total load of Nitrogen delivered to the Lagoon by stormwater, which is of the order of 21,500 kg/yr. This represents an increase of the order of 3 - 7% on the total stormwater load for the two Scenarios.

2.5.4 Translation of Results to Environmental Impacts for Narrabeen Lagoon

The overall impact as shown in **Table 2.10** and described in **Section 2.5.3** is an increase in the volume of flow and the load of pollutants delivered to the Lagoon. Scenario 2 results in an increase in loading to the Lagoon that is double the increase in loading for Scenario 1. This means that if the land use was to change to urban with no controls (Scenario 2) the result would be an increase in load which is double that for an uncontrolled rural residential development (Scenario 1).

A 10% increase on the existing load from the catchment of nitrogen and phosphorous is likely to have a substantial impact on the western basin. Given that elevated sedimentation rates and poor tidal flushing in the western basin of Narrabeen Lagoon (WBM, 2001), any increase in pollutant loads will only serve to further degrade the water quality and increase sedimentation.

However, since no such uncontrolled development is likely to occur given the planning and development controls instituted by Council, the results are indicative only.

2.5.5 Implication of Results for Non-Urban Lands within Middle Harbour and Cowan Creek Catchments

The Stormwater Management Plans for both Cowan Creek (Webb McKeown & Associates, 1999) and Middle Harbour (Willing and Partners, 1999) were reviewed in the preparation of this document. The Middle Harbour Plan indicated that whilst various objectives were listed for the tributaries associated with the area under consideration (Bare Creek and Frenchs Creek), no water quality data were available for these creeks. Similarly, the Cowan Creek Plan indicated that no data were available for the tributaries associated with the area under consideration (Kierans Creek and Neverfail Gully).

For the cases of the non-urban lands in these alternative catchments, it is important to note that the same approach applied to Narrabeen Lagoon may not be suitable. This is related to the fact that the existing catchment exports are likely to be degrading the receiving waters they drain to.

The existing condition of the areas proposed for redevelopment for Middle Harbour are similar to the existing conditions for those areas identified for Narrabeen Lagoon and Cowan Creek. Details are provided in **Table 2.11** on the preliminary assessment of land use proportions adopted for the areas.

Table 2.11 Preliminary Land Use Proportions for Cowan Creek and Middle Harbour Localities

LEP Area	Scenario	Tributary	Area Identified (ha)	Bushland (ha)	Rural Residential (ha)	Urban (ha)	Other (ha)
A2	Existing	Cowan Creek	45	-	45	-	-
A2	Scenario 1	Cowan Creek	45	-	45	-	-
A2	Difference				0		
A2	Scenario 2	Cowan Creek	45			45	
A2	Difference					+45	
C8	Existing	Middle Harbour	38	27	11	-	
C8	Scenario 1	Middle Harbour	38	-	38	-	-
C8	Difference			-	+27	-	-
C8	Scenario 2	Middle Harbour	38	-	-	38	-
C8	Difference					+38	

For Cowan Creek, the existing land use consists of a rural residential area (at a density of 1 dwelling per 2 hectares). The release of the land for rural residential development at a rate of 1 dwelling per 1 hectare (Scenario 1) will not result in a significant change in land use for Scenario 1. The rationale behind this assumption relates to the small increase in proportion of imperviousness overall being within the tolerances of the modelling process. For example, assuming dwellings are constructed with an impervious area of 400 m^2 (previously used as the assumed size of a dwelling, the other impervious areas on a rural residential lot are assumed to be minimal). If the existing rate of release, of 1 dwelling per 2 hectares is applied then the proportion of impervious land is 2%. If the rate increases to 1 dwelling per 1 hectare, the proportion of impervious land increases to only 4%. These increases are considered to be small.

Preliminary model runs were undertaken by adopting the same parameters for these areas as for the closest subcatchments within the Narrabeen Lagoon catchment. The results are shown in **Tables 2.12 and 2.13**. These results should be used with caution and the same discussion outlined in **Section 2.5.3** of this report applies to the results presented here.

Table 2.12 Preliminary Results of AQUALM Modelling for Cowan Creek*

Area for Release	Runoff	SS		TN		TP	
	(ML)	Load (tonne)	Peak Conc.	Load (kg)	Peak Conc.	Load (kg)	Peak Conc.
45 ha in Area A2 - Existing	291	12.6	150	170	2.0	51.0	0.59
Scenario 1	291	12.6	150	170	2.0	51.0	0.59
Total Increase Scenario 1	**0**	**0**	**0**	**0**	**0**	**0**	**0**
% Increase	**0**	**0**	**0**	**0**	**0**	**0**	**0**
45 ha in Area A2 - Existing	291	12.6	150	170	2.0	51.0	0.59
Scenario 2	401	87	300	576	2.0	87.0	0.59
Total Increase Scenario 2	**110**	**74.4**	**150**	**406**	**0**	**36**	**0**
% Increase	**37.8%**	**590%**	**100%**	**238%**	**0%**	**71%**	**0%**

* The results for these scenario's are 'worst case' as it has been assumed that no controls would be implemented as part of the development.

Table 2.13 Preliminary Results of AQUALM Modelling for Middle Harbour*

Area for Release	Runoff	SS		TN		TP	
	(ML)	Load (tonne)	Peak Conc.	Load (kg)	Peak Conc.	Load (kg)	Peak Conc.
38 ha in Area C8 - Existing	168	5	130	56	1.8	16	0.51
Scenario 1	280	14	150	182	2	54	0.59
Total Increase Scenario 1	**112**	**9**	**20**	**126**	**0.2**	**38**	**0.08**
% Increase	**67%**	**180%**	**15%**	**225%**	**11%**	**238%**	**16%**
38 ha in Area C8 - Existing	168	5	130	56	1.8	16	0.51
Scenario 2	375	82	300	539	2	82	0.51
Total Increase Scenario 2	**207**	**77**	**170**	**483**	**0.2**	**66**	**0**
% Increase	**123%**	**1540%**	**131%**	**427%**	**11%**	**413%**	**0%**

* The results for these scenario's are 'worst case' as it has been assumed that no controls would be implemented as part of the development.

Results listed in **Table 2.12** indicates that the complete change of land use will result in a considerable change in the pollutant loads.

In simple terms, a significant impact of uncontrolled urban development would be observed in both of these catchments as a result of Scenario 2 over Scenario 1.

Given the impact that existing loads are having on the creeks, a more suitable approach may be to consider the impact of setting a downstream water quality objective and back calculating the appropriate load that can be released to ensure this objective is met.

2.6 Recommendations from Modelling

Any development within a catchment, regardless of the density, will have some impact on the receiving waters. Given that the receiving waters are generally under significant pressure already (as outlined in the Stormwater Management Plans for Cowan Creek - Webb McKeown & Associates, 2000 and Middle Harbour - Willing and Partners, 2000 as well as the Narrabeen Lagoon Estuary Processes Study - WBM, 2001), the overall goal for any development should be a zero net impact on the receiving waters through the application of appropriate controls to ensure the pollutant loads do not exceed the present (refer **Section 4**). These controls will vary depending on the land use type and should generally be 'at source'. This approach is often used to assess developments which are distant from the receiving water. In some cases, where lands are degraded at present or have an existing land use which is likely to be more polluting than the proposed land use, an objective for the water quality in the receiving waters may be a more suitable approach. At present, the tools available for modelling of the Warringah system do not support this second approach.

Adopting purely economic considerations, the pragmatic approach from a developers perspective is likely to be the assessment of whether a development is viable in an economic sense given the level of controls required. There is likely to be some critical threshold of development, beyond which it is not economically viable to sell the lots to gain an appropriate rate of return as well as implement all the required water quantity and quality controls required to ensure a zero net impact. Thus, even if a density for development is set for an area, the rate of return may constrain development of that area.

2.6.1 Scenario 1 Recommendations

The rural residential development results in an increase in the pollutant loads and concentrations and these increases require mitigation such that the development has a zero net impact on the receiving waters. **Table 2.14** outlines the increases in the volume of runoff and the increases in the pollutant loads and concentrations on an annual basis that will occur as a result of the Scenario 1 development case. If development is to proceed then controls for these areas will need to be sized accordingly to treat these pollutant loads and concentrations and reduce these volumes of flow via retention techniques (such as stormwater reuse or infiltration).

The results in **Table 2.14** are presented on a subcatchment basis, as the control of additional loads is best managed on a local or 'at source' basis. It is recommended that, as a minimum, any control implemented be located at the catchment outlet (offline from the main tributary).

The management of the areas earmarked for rural residential development could be also served by considering an alternative method than that used in this assessment. A method similar to that

developed by Jeliffe (1997) could be used, which would provide an assessment of appropriate lot densities for these areas. However, this would involve taking an different philosophy in terms of concentration control over load control and is more appropriate for areas directly adjacent to main watercourses as opposed to the type of areas considered within this study located in the upper catchment areas. This approach also requires detailed consideration of all the other contributing areas to establish their effects on the downstream concentration. Overall the approach adopted in this study is consistent with the approach advocated by the NSW EPA and thus is considered to be a Best Practice approach.

Table 2.14 Design Annual Runoff Volume, Pollutant Loads and Concentrations Increases on Existing Case for Device Design for Part Urban/Part Rural Residential Case - Scenario 1

Development Area	Sub Catchment	Runoff	SS		TN		TP	
		(ML)	Load (tonne)	Peak Conc.	Load (kg)	Peak Conc.	Load (kg)	Peak Conc.
Immediately adjacent Forest Way	M8	200	109	0	615	0.00	59.9	0.00
Immediately adjacent Forest Way	D13	12	9	110	44	0.20	3.2	0.00
Immediately adjacent Forest Way	D14	10	7	100	37	0.20	2.7	0.00
Morgan Road area	M10	0	0	0	0	0.00	0.0	0.00
Morgan Road area	M11	10	1	0	10	0.00	3.4	0.00
Either side of Wakehurst Parkway	M12	14	2	0	13	0.00	4.0	0.00
Either side of Wakehurst Parkway	M13	0	0	0	0	0.00	0.0	0.00
Either side of Wakehurst Parkway	M14	70	6	0	77	0.00	23.1	0.00
Either side of Wakehurst Parkway	M16	0	0	0	0	0.00	0.0	0.00
Either side of Wakehurst Parkway	M33	0	0	0	0	0.00	0.0	0.00
Adjacent Red Hill	S13	114	9	0	111	0.10	34.0	0.13
Adjacent Red Hill	S16	49	4	0	48	0.10	14.6	0.08
Adjacent Red Hill	S18	22	2	0	23	0.20	6.8	0.26

Table 2.14 indicates that the total load for treatment from the four development areas ranges considerably from catchment to catchment and is dependent on the difference between the loading from the current land use. It should be noted that for zero net impact these loads would be the

minimum for treatment. However, should the opportunity arise, offset of loads into the Western Basin through treating a greater load than that listed would be encouraged.

For the case of Cowan Creek and Middle Harbour, the relevance of adopting the same approach is arguable (as outlined in **Section 2.5.5**). If the approach is adopted, then the loads to be catered for are outlined in **Section 2.5.5**.

2.6.2 Scenario 2 Recommendations

Full urban residential development of the areas identified also results in an increase in the pollutant loads and concentrations. In the same way as Scenario 1, these increases require mitigation such that the development has a zero net impact on the receiving waters. **Table 2.15** outlines the increases in the volume of runoff and the increases in the pollutant loads and concentrations on an annual basis that will occur as a result of the Scenario 2 development case. Accordingly, if urban development is to proceed then controls for these areas will need to be sized to treat these pollutant loads and concentrations and reduce these volumes of flow via retention techniques (such as stormwater reuse or infiltration).

Table 2.15 Design Annual Runoff Volume, Pollutant Loads and Concentrations Increases on Existing Case for Device Design for Urban Rural Residential Case - Scenario 2

Development Area	Sub Catchment	Runoff Inc.	SS Increase		TN Increase		TP Increase	
		(ML)	Annual Load (tonne)	Peak Conc.	Annual Load (kg)	Peak Conc.	Annual Load (kg)	Peak Conc.
Immediately adjacent Forest Way	M8	200	109	0	615	0.0	59.9	0.00
Immediately adjacent Forest Way	D13	12	9	110	44	0.2	3.2	0.00
Immediately adjacent Forest Way	D14	10	7	100	37	0.2	2.7	0.00
Morgan Road area	M10	55	37	70	207	0.0	15.8	0.00
Morgan Road area	M11	25	12	10	70	0.0	7.5	0.00
Either side of Wakehurst Parkway	M12	26	9	0	55	0.0	8.2	0.00
Either side of Wakehurst Parkway	M13	59	42	140	220	0.1	15.9	0.00
Either side of Wakehurst Parkway	M14	153	61	10	371	0.0	47.2	0.00
Either side of Wakehurst Parkway	M16	10	10	30	34	0.0	2.4	0.00
Either side of Wakehurst Parkway	M33	54	36	150	193	0.1	15.7	0.00
Adjacent Red Hill	S13	212	69	30	458	0.2	68.8	0.02
Adjacent Red Hill	S16	91	30	10	198	0.1	29.6	0.01
Adjacent Red Hill	S18	46	15	50	99	0.2	14.9	0.04

As for **Table 2.14**, **Table 2.15** indicates that the total load for treatment from the four development areas ranges considerably from catchment to catchment and is dependent on the difference between the loading from the current land use. As for Scenario 1, it should be noted that for zero net impact these loads would be the minimum for treatment. However, should the opportunity arise, offset of loads into the Western Basin through treating a greater load than that listed would be encouraged.

Similarly for Scenario 1, for the case of Cowan Creek and Middle Harbour, the relevance of adopting the same approach is arguable (as outlined in **Section 2.5.5**). If the approach is adopted, then the loads to be catered for are outlined in **Section 2.5.5**.

2.6.3 General Recommendations

For greater confidence in the model results it is recommended that detailed monitoring be undertaken to better ascertain the parameters to be adopted for modelling. Nonetheless, the results of the modelling carried out to date provide a good indication of the needs for future development within the Warringah shire.

It is recommended that monitoring sites be chosen in the areas of interest to better determine the current loads from the existing land use. It is recommended that monitoring also be undertaken in areas similar to those outlined in this report that have already been developed (e.g. areas such as the Peppercorn Ridge Estate at Oxford Heights) to consider the loads generated from these areas in the post-developed condition. Monitoring sites must be specific to a single land use and lot density in order to provide meaningful results to feedback into the modelling and multiple sites are required in order to cover a range of land uses as well as lot densities.

Given the absence of local data, the results presented in this report must be heavily qualified.

Should either Scenario 1 or Scenario 2 proceed, possible staging of the release to minimise the overall disturbance within the Narrabeen Lagoon catchment should be considered in the following order:

- Release Area 1 - Morgan Road area (given it is the least overall area to be developed and thus could be considered a pilot area for implementation of Water Sensitive Urban Design techniques)
- Release Area 2 - Red Hill (the next least area, draining to a separate tributary - South Creek)
- Release Area 3 - Forest Way
- Release Area 4 - Wakehurst Parkway Area (the largest release area).

3 IDENTIFICATION OF STORMWATER DESIGN SOLUTIONS

3.1 Site Constraints

A large number of Stormwater Best Management Practices (BMP's) are available for the treatment of urban runoff to varying degrees. Many of these BMP's are, however, constrained in some way by site conditions, such as permeability of the soil, availability of land and the grade of the site. In order to determine suitable Stormwater BMP's that can effectively treat stormwater, the site constraints of the land identified in Stage 1 of the NULS need to be determined.

Review of available literature, including the Stage 1 NULS report and Soil Landscape Maps, has identified the following site constraints:

1. Steep slopes of around 20-25% including large rock outcrops with vertical faces;
2. Shallow, highly erodable sandy soils underlaid by Hawkesbury Sandstone; and
3. High soil permeability.

The above constraints limit the construction of Stormwater BMP's that depend on the following conditions:

- Large above ground storages as the steep slopes and shallow sandy soils inhibit the construction of embankments;
- Large overland flow devices as the steep slopes generate high flow velocities creating potential hazard to the public. The high flow velocities would also create a high erosion potential;
- Detention of stormwater for extended periods such as constructed wetland as the high infiltration capacity of the soil would drain the BMP;
- Significant excavation due to the shallow soils, which are generally less than 50cm deep.

It is recognised that other localised site constraints may also be present within the study area including elevated groundwater levels and space limitation etc. These constraints do not, however, dominate the study area and therefore, they have not been considered when determining suitable BMP's.

3.2 Treatment Trains

As no single BMP treats all stormwater pollutants, BMP's may need to be placed in series to capture the full range of target pollutants that are contained in urban runoff. Treatment trains offer a number of advantages when treating urban stormwater as follows:

1. They often provide a more economical solution to stormwater treatment as a number of smaller BMP's may be less expensive than one large BMP;

2. They can potentially reduce the maintenance frequency of BMP's as pollutants that are not targeted by a certain BMP do not impact on its performance. For example a wetland requires less de-silting when a sediment trap is placed upstream;

3. Cost savings may be made when disposing of the collected materials as the different elements of the treatment train collect different pollutants. For example litter that is collected at source in say in-pit litter baskets can be easily separated for recycling, however, if this litter is captured in a GPT then it is often disposed of in landfill as it is mixed with the captured sediment.

For the reasons above, it is becoming more accepted that treatment trains offer far better stormwater quality management than the traditional approaches, which involves construction of large end-of-pipe devices.

Treatment trains also encourage the use of source controls to limit the pollutant load in stormwater at source. This is of particular importance in the study area, as end-of-pipe devices are constructed in downstream waterways to treat large catchment areas. This requires polluted stormwater to flow through numerous tributaries before being treated, therefore, degrading the minor tributaries through which it flows.

3.3 Available BMPs

To enable simplicity in reporting, the BMPs that have been listed in this report represent what are considered as the core BMPs. A number of variations on core BMPs exist, which are growing rapidly due to the growing community concern regarding stormwater quality issues.

Table 3.1 identifies a series of common Stormwater BMPs that have been effectively implemented within Australia. These BMP's have been divided as follows:

- **Lot Scale** – BMP's that are constructed on a lot-lot basis for the treatment of stormwater;
- **Neighbourhood Scale** – BMP's that are constructed to serve a small number of residential street blocks; and
- **Suburb Scale** – Large scale BMP's constructed to treat runoff from large areas.

Some devices that have been listed in **Table 3.1** have been included in two or more categories as they have the potential to be implemented at more than one scale. For example small scale grass swales can be constructed on a lot-by-lot scale to convey roof runoff to the street drainage system, this increases infiltration and adsorption of pollutants. Grass swales can also be effective on a neighbourhood scale where they are constructed along the roadside in lieu of a traditional kerb and gutter system to treat and convey direct road runoff before discharge to a downstream waterway.

Table 3.1 also identifies the BMP's that are limited by the site constraints as outlined in Section 3.1 and the target pollutants of each of the devices. From this table a series of devices on each of the scales can be selected.

Table 3.1 BMP's selection matrix

	Site Constraints			Target Pollutants		
BMP	**Steep Topography**	**Shallow Erodable Soils**	**High Soil Permeability**	**SS**	**TN**	**TP**
Lot Scale						
Rainwater Tanks	-	-	-	●	●	●
On-Site Detention Tanks	-	Low	-	●		
Infiltration Trenches	Low	Low	-	●	●	●
Filter Strips	Mod	Low	-	●	●	●
Grass Swales	Mod	Low	-	●	●	●
Neighbourhood Scale						
Grass Swales	Mod	Low	-	●	●	●
Filter Strips	Mod	Low	-	●	●	●
Sand Filters	Mod	Mod	-	●		
Infiltration Basins	Mod	Low	-	●	●	●
Proprietary Devices	Low	Low	-	●		
Sediment Traps	Low	Mod	-	●		
Constructed Wetlands	Mod	Mod	Mod	●	●	●
Suburb Scale						
Gross Pollutant Traps	Low	Low	-	●		
Proprietary Devices	Low	Low	-	●		
Constructed Wetlands	High	Mod	High	●	●	●
Dry/Wet Detention Basins	Mod	Mod	High	●	●	●

Low, Mod, High – Indicates the degree of impact from the particular site constraint ie high signifies a severe constraint that may make the BMP unable to be constructed

- ● Denotes Target Pollutant

3.4 Preferred BMPs

Based on the site constraints and other considerations such as cost effectiveness and maintenance issues, BMP's for each of the scales in **Table 3.1** have been selected as being most appropriate for the study location. Detailed descriptions of the preferred BMP's are provided below.

3.4.1 Lot Scale BMP's

3.4.1.1 Rainwater Tanks

Rainwater tanks reduce the amount of runoff by collecting and storing roof runoff for reuse. A study recently undertaken by the University of Newcastle (Coombes et al, 2000) determined that the use of rainwater tanks on a lot-by-lot basis reduces Suspended Solids, Total Nitrogen and Total Phosphorus loads by 70%, 50% and 70% respectively when compared to traditional stormwater disposal techniques. This estimation was based on the use of a $10m^3$ tank (ie approx. 2.5m diameter x 2m high) per lot. The tanks can be installed with an orifice plate approximately mid way up the tank to provide for On-Site Detention storage, should it be required of particular developments. This eliminates the common concern that often no storage is available in the tank as it is full. The estimated cost for the installation of a rainwater tank is approximately $1,500, per lot. Once installed, little maintenance is required.

Additional to providing storage volume for OSD purposes, stored water can be used for secondary household purposes including irrigation, hot water, laundry and toilet flushing. Using the stored water not only provides additional storage volume at the commencement of the storm but also reduces the demand for potable water with an associated cost saving. Coombes et al 2001, estimated that for an average lot with a 10kL tank, a total annual cost saving of $22.56 with reduced mains use of 46% or 78kL per year was achieved, if the tank dedicated half of its storage volume to OSD storage. A schematic of a typical rainwater tank water supply system is shown in **Figure 3.1**.

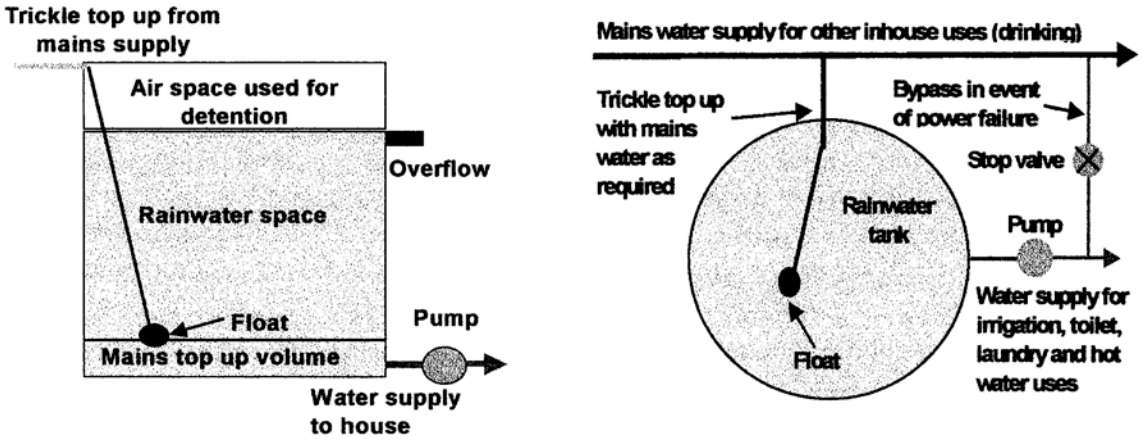


Figure 3.1 Schematic of typical rainwater tank supply system (Coombes et al, 2001)

3.4.1.2 Infiltration Trenches

Infiltration trenches also reduce the amount of runoff by infiltrating a significant proportion of the collected runoff but reductions in nutrient load are also achieved as they are adsorbed onto the underlying soil. Infiltration trenches are also quite versatile with various lot scale infiltration trench configurations available.

Infiltration trenches may be incorporated into a treatment train if overflows from rainwater tanks are conveyed to infiltration trenches along with lot runoff.

It is recognised that some sites may not be able to incorporate infiltration trenches due to rock being located on the surface. In such cases other measures such as swales or filter strips, which 'filter' stormwater through a vegetated area prior to being discharged, should be incorporated to promote infiltration of runoff.

The proposed cost per lot for installation of the proposed lot scale treatment has been estimated at $800 with ongoing maintenance costs being minimal (refer **Appendix A**).

3.4.2 Neighbourhood Scale BMP's

3.4.2.1 Grass Swales

As runoff generated from individual lots can potentially be treated at source, road runoff generated from roads is the primary source of stormwater that is required to be treated on the neighbourhood scale. Runoff from urban roads has been determined in numerous studies to contribute a significant proportion of the pollutant load in urban runoff.

The most cost effective method for the treatment of urban road runoff is through the use of Water Sensitive Urban Design (WSUD) techniques such as the provision of grassed swales instead of kerb and guttering to convey and treat/filter road runoff prior to discharge. Grassed swales promote infiltration of runoff but also provide a natural surface for pollutants such as oils and greases and heavy metals to bind too and be naturally broken down/assimilated, preventing them from entering downstream waterways.

Although site limitations such as steep topography provide some restriction to the use of grass swales these can be overcome be providing only short sections of grassed swale, which drain to stormwater pits to be piped. This ensures that large flows and hence high flow velocities are not conveyed by the swale while treatment of the stormwater is provided. **Figure 3.2** shows a typical grass swale used for the treatment of road runoff.

Figure 3.2 Typical roadside swale

The cost of constructing a water sensitive road runoff treatment system is difficult to estimate, however, a cost of approximately $16,000 per ha (of development) to construct grass swales has been assumed (refer **Appendix A**).

3.4.2.2 Constructed Wetlands

Grass swales on a neighbourhood scale offer a good first step in the treatment train of stormwater runoff, however, they would not be sufficient to treat runoff to a level consistent with the existing water quality. Neighbourhood scale constructed wetlands have been incorporated successfully into recent residential developments within the Warringah Council area.

As constructed wetlands, even on a neighbourhood scale, require significant quantities of both storage volume and planted area, some sites may not be suited and hence other measures will need to be taken. It is also important that a semi-permeant pool of water is contained within the wetland to prevent the drying out of aquatic plants. With the permeable nature of the soils this may require importing of impermeable fill material to prevent seepage from the wetland.

Constructed wetlands are typically expensive to construct with costs of neighbourhood scale wetlands (approx 200m^2 in size) ranging between $25,000-$35,000. Maintenance of wetlands is also quite expensive and is required generally on an annual basis, and annual costs typically of the order of 5% of the original construction cost.

3.4.2.3 Sediment Traps

Sediment Traps are another common BMP that have been constructed in the Warringah Council area. These sediment traps are often incorporated into detention basins that lower peak flows from the

catchment to pre-developed levels. Where the site does not permit the construction of a wetland, a sediment trap provides an alternative. To operate effectively sediment traps do not necessarily require a large area, only a sufficient volume, therefore they can be deep and cover a small surface area, which is often the method of constructing open water retention structures on steep slopes.

Sediment traps do not, however, target nutrients and trap only the fraction of nutrient that is adsorbed onto fine sediments that are trapped.

Sediment traps are generally less expensive to construct than constructed wetlands due to the limited planting that is required. Typical costs for sediment traps on a neighbourhood scale (ie 200m^2) are $20,000-$25,000. Maintenance of the sediment traps involves removing captured sediment, which is often performed on a three-monthly to annual basis, however, during the development phase of the catchment this may need to be performed more often as high sediment loads are expected.

3.4.3 Suburb Scale BMP's

3.4.3.1 Water Sensitive Urban Design

Site constraints generally limit the ability to construct large scale stormwater treatment BMP's as these BMP's generally require large, and flat areas, which unfortunately are not available within the proposed site. Some possible sites may be located along natural drainage lines at the base of the catchment, however, devices constructed along these drainage lines will be required to not only treat runoff from the proposed development area but other already established urban areas draining to the same location. There is also the issue of degradation of the natural drainage lines, which convey the untreated stormwater runoff to the suburb scale treatment device/s. Therefore, source control on a lot-by-lot and neighbourhood scale provides the most feasible BMP's for the effective treatment of stormwater pollutants.

A number of suburb scale BMP's such as proprietary devices and gross pollutant traps can generally be incorporated into the site, however, these devices are not specifically designed to removed the dissolved nutrient load and hence would only be effective in reducing the suspended solids load. Suburb scale devices are also expensive to construct and maintain, and as such, there is a general shift away from these devices in preference to less expensive source controls.

For the reasons outlined above, no specific suburb scale BMP's have been selected. Instead, the best approach to stormwater management on a suburb basis is to plan the proposed development in a water sensitive matter. This is known as a Best Planning Practice (BPP) and involves planning and designing a proposed subdivision to:

- Identify and set aside land from development to protect natural drainage lines, storage locations, remnant vegetation, recreation, cultural and environmental features and discharge points;
- Identify options for the reuse/conservation of water;
- Minimise road areas and encourage infiltration of road runoff;
- Locate lots that integrate with the drainage function of the open spaces and minimise lot sizes by reducing private open space areas to increase communal open space areas; and

- Integrate street scape design to reduce runoff and contain peak flows.

Figure 3.3 shows some typical WSUD techniques implement on a suburb scale.

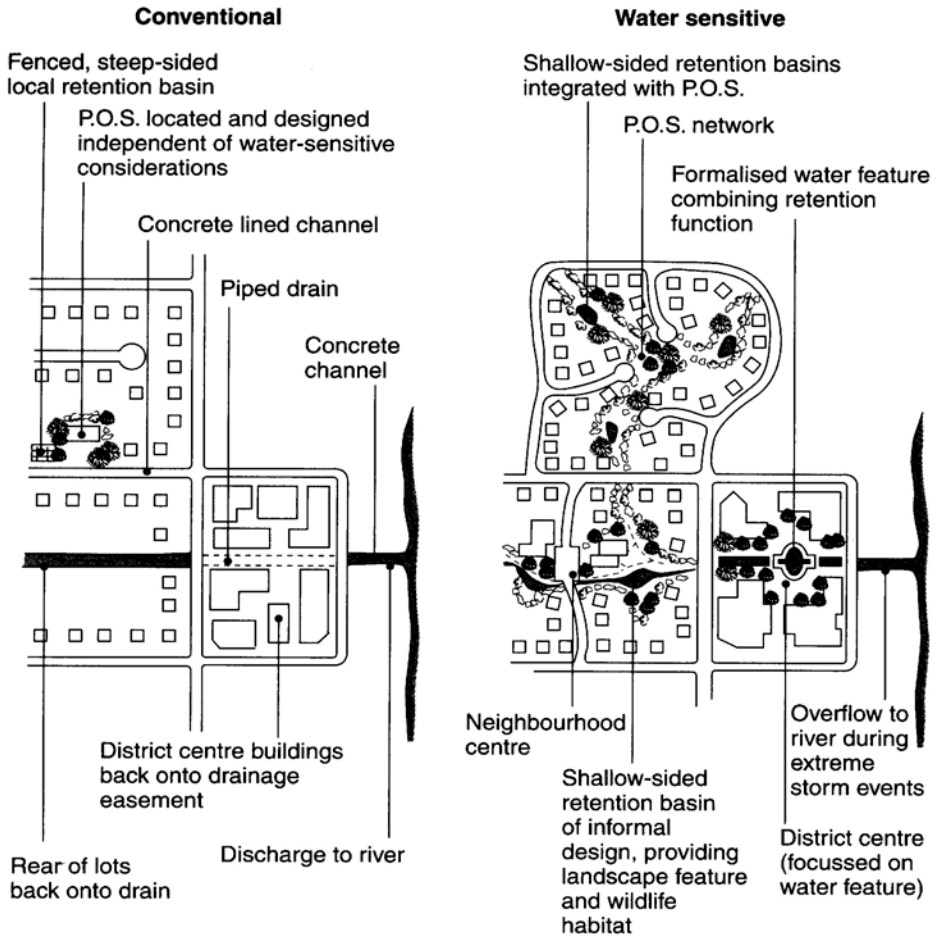


Figure 3.3 Water sensitive vs conventional urban lot layout (VicEPA, 1999)

This suburb scale WSUD methodology provides an opportunity to integrate the neighbourhood and lot scale BMP's recommended above. For example, constructed wetlands can be installed within open spaces set aside for natural drainage.

A study into the potential water quality benefits of WSUD for a residential subdivision in the Newcastle area (Coombes et al, 2000) determined that reductions of between 80 and 90% in the annual load of suspended solids, total nitrogen and total phosphorus was achievable.

Estimating the cost of designing and implementing water sensitive techniques on a suburb scale is difficult to estimate, however, an cost of $10,000 per hectare has been assumed.

3.5 Conclusions

The selected BMP's are all generally consistent with the principles of Water Sensitive Urban Design with no traditional stormwater BMP's being recommended based on site constraints or their limited treatment capabilities. There has been considerable discussion regarding the practically of WSUD techniques with only a few developments fully embracing the technology. This proposed urban development has the potential to be a show case development by incorporating a full suite of WSUD techniques from a lot to suburb scale, which optimises the reuse and treatment of stormwater and reduces pollutant loadings to the sensitive receiving waters of Narrabeen Lagoon.

Analysis of the AQUALM modelling data was undertaken to identify the required removal efficiency of the BMP's and BPP's that will result in 'no net increase in pollutants entering Narrabeen Lagoon'. The results of this analysis are presented in **Table 3.2**.

Table 3.2 Pollutant removal required for no net increase to Narrabeen Lagoon

	Pollutant	Reduction required for no net increase to Narrabeen Lagoon
Scenario 1	Suspended Solids	38 %
	Total Nitrogen	42 %
	Total Phosphorus	28 %
Scenario 2	Suspended Solids	49 %
	Total Nitrogen	52 %
	Total Phosphorus	31 %

The results in **Table 3.2** identify the pollutant removal efficiency required of the two development scenarios so as to limit the pollutant loads from the existing catchment to their current levels. It is interesting to note that the Narrabeen Lagoon Estuary Process Study (WBM, 2001) determined that Total Nitrogen and Total Phosphorus loads have increased by 45 and 80 times since European settlement.

It is also important to note that the above required removal efficiencies reflect only the areas that have been determined to be physically suitable for development in Stage 1 of the NULS, not the entire catchment area. Should further areas be opened up for development within the Narrabeen Lagoon catchment area (other than those areas identified in the NULS-Stage 1), additional modelling would need to be undertaken to determine the extents to which development could take place without impacting on water quality in Narrabeen Lagoon.

To determine the expected removal rate of stormwater pollutants, estimates of each of the preferred BMP's removal efficiency of the pollutants have been determined, as shown in **Table 3.3**.

Table 3.3 Approximate pollutant removal efficiency of BMP's and BPP's

	Pollutant Removal Efficiency (%)		
BMP	**SS**	**TN**	**TP**
WSUD (BPP)	20	20	20
Rainwater Tanks (R/T)	30	10	10
Infiltration Trenches (I/T)	60	30	30
Grass Swales (G/S)	50	20	20
Sediment Traps (S/T)	40	20	20
Constructed Wetlands (C/W)	60	30	30

Comparison of **Table 3.3** with **Table 3.2** shows that no one BMP has sufficient removal efficiency to remove all the simulated pollutants to result in a no-net increase in pollutant load to Narrabeen Lagoon. This justifies both the use of a treatment train and the adoption of a WSUD approach, as traditional treatment methods generally only involve the construction of one large scale end-of-pipe device, which in this case, has been shown to be ineffective at achieving the desired pollutant removal.

The total expected removal efficiency of six selected treatment trains have been determined and are shown in **Table 3.4.** The removal efficiency of the treatment train has been estimated by assuming that the second BMP in the treatment train, reduces the total remaining pollutant load by its treatment efficiency. For example, two devices are in series that each removal 50% of the suspended sediment load. The first device removes 50% of the sediment load while the second device removes 50% of the remaining 50% of the load (which is 25% of the total load). Therefore, the total sediment load is reduced by 50% + 25% = 75%.

Table 3.4 Pollutant removal efficiency of various Treatment Trains

	Removal efficiency of treatment train (%)		
Treatment Train	***SS***	***TN***	***TP***
WSUD + R/T + I/T +G/S + C/W	96	72	72
WSUD + R/T + G/S + C/W	89	60	60
WSUD + R/T + C/W	78	50	50
R/T + G/S + C/W	86	50	50
WSUD + R/T + G/S	72	42	42
R/T + C/W	72	37	37

- Treatment trains suitable for development scenario 1 (refer Table 3.2)
- Treatment trains suitable for development scenario 1 & 2 (refer Table 3.2)

From **Table 3.4** it can seen that five of the selected treatment trains would reduce stormwater pollutants to maintain or enhance water quality within Narrabeen Lagoon for development Scenario 1, while only two treatment trains are suitable for development Scenario 2.

The sixth treatment train in Table 3.4, which incorporates rainwater tanks and constructed wetlands only, although meeting criteria for suspended solids and total phosphorus, would not satisfy the criteria for nitrogen, and hence would not be suitable for the proposed development.

Table 3.4 also shows that **some** land area, additional to that identified as being suitable in the NULS-Stage 1, can be developed without reducing existing water quality within Narrabeen Lagoon. This is shown in the maximum removal efficiency of Total Nitrogen (the limiting pollutant) being 72% while the required removal efficiency for Scenario 2 is 52%. Therefore, it would be possible to increase the development area and/or density without detrimental environmental impacts. This increased treatment would, however, have an additional cost, which is considered in **Section 4**.

4 COST BENEFIT ANALYSIS

To allow developers and Council to determine the life cycle cost of each of the BMP's and BPP's over a 50 year design period, the capital and maintenance costs for each of the BMP's and BPP's were estimated (refer **Tables 4.1** and **4.2)**. Costs have been presented as a total cost per additional lot that the land will be able to support for each of the development scenarios.

Table 4.1 Scenario 1 capital and 50 year maintenance costs

BMP	Construction Cost	Per	Total Capital Cost	Annual Maintenance Cost	50 yr Maintenance Cost	Total life Cycle Cost	Additional Lots	Total 50 yr Cost per Lot	Annual Cost per Lot
WSUD	$10,000.00	ha	$1,540,000			$1,540,000	1150	$1,339.13	$26.78
Rainwater Tanks	$1,500.00	Lot	$1,725,000		$1,725,000	$3,450,000	1150	$3,000.00	$60.00
Infiltration Trenches	$900.00	Lot	$1,035,000		$1,035,000	$2,070,000	1150	$1,800.00	$36.00
Grass Swales	$17,300.00	ha	$2,664,200	$133,210	$6,660,500	$9,324,700	1150	$8,108.43	$162.17
Constructed Wetlands	$34,500.00	ha	$2,656,500	$132,825	$6,641,250	$9,297,750	1150	$8,085.00	$161.70
Sediment Traps	$24,800.00	ha	$1,909,600	$95,480	$4,774,000	$6,683,600	1150	$5,811.83	$116.24

Total number of Lots 1150 Lots
Total developed area 154 ha
Assume:
1. Half catchment served by wetland and half by sediment trap
2. Maintenance of Rainwater Tanks and Infiltration Trenches assumes replacement once in 50 years

Table 4.2 Scenario 2 capital and 50 year maintenance costs

BMP	Construction Cost	Per	Total Capital Cost	Annual Maintenance Cost	50 yr Maintenance Cost	Total life Cycle Cost	Estimated Lot	Cost per Lot	Annual Cost per Lot
WSUD	$10,000.00	ha	$2,510,000	-	$0	$2,510,000	3600	$697.22	$13.94
Rainwater Tanks	$1,500.00	Lot	$5,400,000	-	$5,400,000	$10,800,000	3600	$3,000.00	$60.00
Infiltration Trenches	$900.00	Lot	$3,240,000	-	$3,240,000	$6,480,000	3600	$1,800.00	$36.00
Grass Swales	$17,300.00	ha	$4,342,300	$217,115	$10,855,750	$15,198,050	3600	$4,221.68	$84.43
Constructed Wetlands*	$34,500.00	ha	$4,329,750	$216,488	$10,824,375	$15,154,125	3600	$4,209.48	$84.19
Sediment Traps*	$24,800.00	ha	$3,112,400	$155,620	$7,781,000	$10,893,400	3600	$3,025.94	$60.52

Total number of Lots 3600 Lots
Total developed area 251 ha
Assume:
1. Half catchment served by wetland and half by sediment trap
2. Maintenance of Rainwater Tanks and Infiltration Trenches assumes replacement once in 50 years

Table 4.3 provides a cost comparison for each of the treatment trains detailed in **Table 3.4**. The costs in **Table 4.3** represent the total life costs on an annualised basis and include capital and maintenance costs. This is not annual maintenance costs incurred by Council, which will be discussed later.

Table 4.3 Annual life cycle cost per additional Lot for various Treatment Trains

	Removal efficiency of treatment train (%)			*Expected annual cost per additional Lot*
Treatment Train	***SS***	***TN***	***TP***	
1. WSUD + R/T + I/T +G/S + CW	96	72	72	Scenario 1 –$562.89 Scenario 2 –$339.09
2. WSUD + R/T + G/S + CW	89	60	60	Scenario 1 –$526.89 Scenario 2 –$303.09
3. WSUD + R/T + C/W	78	50	50	Scenario 1 –$364.72 Scenario 2 –$218.65
4. R/T + G/S + C/W	86	50	50	Scenario 1 –$500.11 Scenario 2 –$289.14
5. WSUD + R/T + G/S	72	42	42	Scenario 1 –$248.95 Scenario 2 –$158.38
6. R/T + C/W	72	37	37	Scenario 1 –$337.94 Scenario 2 –$204.71

- Preferred treatment train for development scenario 1

- Preferred treatment train for development scenario 2

From **Table 4.3** a treatment train can be selected for each of the development scenarios based on the expected pollutant removal efficiency and annual cost per additional lot that the land will support. The preferred treatment train for development Scenario 1 is option 5 (WSUD + rainwater tanks + grass swales) as it provides sufficient treatment to maintain water quality in Narrabeen Lagoon for least cost, whilst utilising environmentally sensitive technologies.

Option 2 (WSUD + rainwater tanks + grass swales + constructed wetlands) is the preferred treatment train for development Scenario 2 due to its cost savings over option 1 (the only other option that achieves the necessary pollutant removal efficiencies). Option 2 is also considered more favourable as infiltration techniques on a lot scale often fail due to a lack of maintenance and understanding of how the device operates by individual landowners.

Both options 2 and 5 also have other associated cost benefits, such as grass swales providing cost savings on the supply and installation of piped drainage systems to convey stormwater.

To assist in the comparison of traditional stormwater treatment techniques and WSUD, an estimated cost per person using traditional stormwater treatment measures has been prepared and is based on a

standard piped drainage system and a large scale wetland/s for treatment. The total annual costs per additional person have been estimated at $406.49 and $211.64, respectively for Scenarios 1 and 2. These compare favourably for Scenario 1, but traditional stormwater treatment measures are somewhat less expensive than the WSUD measures adopted for Scenario 2, although as discussed in **Section 3**, the traditional stormwater treatment measure adopted does not treat stormwater to the desired degree and therefore, direct comparison is difficult.

Table 4.4 shows a summary cost-benefit analysis of the selected treatment trains.

Table 4.4 Summary cost-benefit analysis for development scenarios 1 & 2

Development Scenario	Capital and Environmental Costs	Benefits
Scenario 1	• Total life cycle cost of stormwater BMP's and BPP's over 50 years of $14,315,000 (refer **Table 4.1**), which equates to approximately $250 per annum per additional lot that the catchment can support. • Estimated annual maintenance costs of $120 per additional lot to be borne by Council	• Addition population capacity of 3,190 • Reduced demand for potable water estimated at 76ML per year • Reduced costs when compared to 'traditional' stormwater treatment measures, which is estimate to cost $400 per additional lot • No additional nutrient load and a reduction of approximately 90t/annum of suspended sediment load to Narrabeen Lagoon.
Scenario 2	• Total life cycle cost of stormwater BMP's and BPP's over 50 years of $54,556,000 (refer **Table 4.2**), which equates to approximately $300 per annum per additional lot that the catchment can support. • Estimated annual maintenance costs of $160 per additional lot to be borne by Council • Increased cost when compared to 'traditional' stormwater treatment measures, which is estimated to cost $210 per additional lot. However, traditional methods do not treat stormwater to the desired level.	• Additional population capacity of 10,050 • Reduced demand for potable water estimated at 248ML per year • Reductions of 208t/annum, 238kg/annum and 138kg/annum of SS, TN and TP respectively to Narrabeen Lagoon.

5 EXTRAPOLATION OF RESULTS TO MIDDLE HARBOUR AND COWAN CREEK CATCHMENTS

Non-urban land areas within the Warringah Shire, which drain to Middle Harbour and Cowan Creek, were also considered during Stage 1 of the NULS (PPK, 2000). Although these sites are located in different catchments, some site characteristics are similar to those identified for the land draining to Narrabeen Lagoon and hence similar site constraints exist for possible BMP's and BPP's to be constructed to serve the land areas.

Based on the similar features of the site, the results for this study undertaken for the Narrabeen catchment can be extrapolated directly to these additional areas located outside the Narrabeen Lagoon catchment based on the proposed developed area and capital and maintenance costs estimated for the Narrabeen Lagoon catchment areas. As little is known about the water quality processes within these waterways, it is difficult to quantify actual impacts in terms of environmental degradation to the catchment waterways. Nonetheless estimates can be made on the increases of pollutants expected from the proposed development within these catchments based on the proposed development area and lot density.

Pollutant load for each of the catchments were estimated using AQUALM-XP and are shown in **Table 5.1**.

Table 5.1 Pollutant loads for Cowan and Middle Harbour

	Pollutant Loads			Removal efficiency required (%)		
Catchment	**SS**	**TN**	**TP**	**SS**	**TN**	**TP**
Cowan						
Existing	12.6 t	170 kg	51 kg	-	-	-
Scenario 1	12.6 t	170 kg	51 kg	0	0	0
Scenario 2	87 t	576 kg	87 kg	86	71	42
Middle Harbour						
Existing	5 t	56 kg	16 kg			
Scenario 1	14 t	182 kg	54 kg	65	69	70
Scenario 2	82 t	539 kg	82 kg	94	90	80

The Cowan Scenario 1 results indicate a no net increase in pollutants from the site, due to the existing developed nature of the catchment. The insignificant increase in developed area results in an insignificant increase in pollutant load, and as such, no stormwater treatment is required for this development scenario. Scenario 2, however, requires BMP's and BPP's to be implemented to maintain or enhance stormwater runoff quality.

The Middle Harbour development scenarios also show that stormwater is required to be treated prior to discharge to maintain existing water quality within the catchment.

Based on the required pollutant removal efficiencies shown in **Table 5.1**, the most cost effective treatment trains have been selected and the life cycle cost determined in a similar method as was prepared for the Narrabeen Lagoon catchment areas. The following treatment trains (as shown in **Table 4.3**) were selected for each of the development scenarios:

- Cowan – Development Scenario 1 Non required
- Cowan – Development Scenario 2 Treatment Train 1
- Middle Harbour – Development Scenario 1 Treatment Train 1
- Middle Harbour – Development Scenario 2 Treatment Train 1 + extra treatment

Due to the existing large proportion of bushland in the Middle Harbour catchment, there is only a relatively small load of pollutants. Therefore, when considering the developed scenarios, high removal efficiencies are required and even when implementing Treatment Train 1 (the treatment train with the highest removal efficiency), development scenario 2 is unable to remove enough Total Nitrogen to reduce the levels to the 'adjusted existing' case. Therefore, incorporation of other treatment measures into the treatment train would need to be considered. Given the lengths required to ensure 'no net increase' in loads to Middle Harbour, Council may wish to reconsider the applicability for Scenario 2 development (ie 15 dwellings / ha). A lower density development could be treated by Treatment Train 1.

Table 5.2 shows the summary of cost-benefits for the Cowan and Middle harbour catchments with the life cycle cost sheets presented in **Appendix B**.

Table 5.2 Cost-benefit analysis for Cowan Creek and Middle Harbour catchments

Catchment / Development Scenario	Capital and Environmental Costs	Benefits
Cowan Creek - Scenario 1	• Total life cycle cost of stormwater BMP's and BPP's over 50 years of $0 as no stormwater controls are required to maintain existing pollutant loads.	• Addition population capacity of 106 • No additional pollutant load to the downstream catchment. • Reduced demand for potable water estimated at 2.6ML/yr
Cowan Creek - Scenario 2	• Total life cycle cost of stormwater BMP's and BPP's over 50 years of $9,360,000 which equates to approximately $315 per additional lot that the catchment can now support • Increased cost when compared to 'traditional' stormwater treatment measures, which is estimated to cost $77 per additional lot. However, traditional methods do not treat stormwater to the desired level.	• Additional population capacity of 1500 • Reduced demand for potable water estimated at 37ML/year • Reductions of 9t/annum, 8kg/annum and 26kg/annum of SS, TN and TP respectively below the existing pollutant load.
Middle Harbour - Scenario 1	• Total life cycle cost of stormwater BMP's and BPP's over 50 years of $4,820,000 which equates to approximately $4000 per additional person that the catchment can now support • Increased cost when compared to 'traditional' stormwater treatment measures, which is estimated to cost $1260 per additional lot. However, traditional methods do not treat stormwater to the desired level.	• Additional population capacity of 65 • Reduced demand for potable water estimated at 1.6ML/year • Reductions of 5t/annum, 5kg/annum and 1kg/annum of SS, TN and TP loads respectively.

Middle Harbour - Scenario 2	• Total life cycle cost of stormwater BMP's and BPP's over 50 years of $9,860,000 which equates to approximately $100 per additional person that the catchment can now support • Increase of 95kg/annum and 7kg/annum of TN and TP loads respectively. • Increased cost when compared to 'traditional' stormwater treatment measures, which is estimated to cost $60 per additional lot. However, traditional methods do not treat stormwater to the desired level.	• Additional population capacity of 1890 • Reduced demand for potable water estimated at 47ML/year • Reduction in costs associated with installation of a piped stormwater drainage system estimated at $74 000/ha or $2,812,000 over the total development area • Reduction of 2t/annum of SS load.

6 CONCLUSIONS

It has been determined that development of the areas identified as suitable from Stage 1 of the NULS (PPK, 2000), which drain to Narrabeen Lagoon, can be undertaken without a subsequent reduction in water quality in Narrabeen Lagoon, and in most cases as increase in water quality can be achieved.

Traditional treatment methodologies involving large end-of-pipe devices have been determined as unsuitable for stormwater treatment to the desired level. Therefore, to prevent detrimental effects associated with increased stormwater flows and pollutant loads, a treatment train has been suggested that incorporates a series of treatments on a lot and neighbourhood scale and incorporates the principles of Water Sensitive Urban Design (ie Best Planning Practice) on a suburb scale.

Treatment costs have been estimated at $250 and $300 per additional lot that the land can support for Scenarios 1 and 2 respectively. This compares with costs for traditional stormwater treatment measures of $400 and $210 for scenarios 1 and 2, however, the traditional approach does not treat stormwater to the desired level and as such direct comparison should not be made.

Maintenance costs for Council on an annual basis have also been calculated and total $120 for Scenario 1 and $160 for Scenario 2 per additional lot.

Additional benefits of the WSUD design were also identified including the reduced demand for potable water, as rainwater stored in tanks could be used for secondary household uses including watering, hot water and toilet flushing. It has been estimated that a reduction in potable water demand of 76ML/yr and 248ML/yr respectively for Scenario 1 and 2 is achievable.

Based on the existing condition of the catchments and there relative areas, it is recommended that if the land were to be opened for development that it be released in the following order:

- Release Area 1 - Morgan Road area (given it is the least overall area to be developed and thus could be considered a pilot area for implementation of Water Sensitive Urban Design techniques)
- Release Area 2 - Red Hill (the next least area, draining to a separate tributary - South Creek)
- Release Area 3 - Forest Way
- Release Area 4 - Wakehurst Parkway Area (the largest release area).

Extrapolation of the results for the Narrabeen Lagoon catchment into the Cowan and Middle Harbour catchments determined that a treatment train approach was required to provide a no net increase in pollutants entering the downstream waterways. However, development scenario 2 for the Middle Harbour catchment would require additional treatment to that identified in the treatment trains, or should be reconsidered for applicability to urban development (at 15 dwellings / ha). The cost of stormwater management per additional lot have also be estimated for these catchments and are shown in **Table 6.1**.

Table 6.1 Annual costs for stormwater management – Cowan and Middle Harbour

	Capital and Maintenance Cost $/lot/yr	Annual Maintenance Costs $/lot/yr
Cowan		
Scenario 1	$0	$0
Scenario 2	$320	$160
Middle Harbour		
Scenario 1	$4000	$2750
Scenario 2	$280	$130

The relatively high cost of development scenario 1 in the Middle Harbour catchment is attributed to the large area being utilised but only being sparsely populated. Although scenario 2 offers a far more economical development scenario it also contributes an increased Total Nitrogen load to the downstream catchment. Therefore, it is recommended that some alternative development scenario be determined to optimise both the cost and degree of stormwater treatment required.

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8 QUALIFICATIONS

The use of the XP-AQUALM model follows on from the use of this model established for and accepted by Council for the Narrabeen Lagoon Estuary Processes Study (WBM, 2001). The model was updated with additional information provided by Council on the non-urban lands for assessment.

The results presented rely on limited data presented in literature and caution is required when relying on results from overseas investigations. Thus, there is a definite need for monitoring as outlined in the recommendations of this report.

The AQUALM modelling has some limitations and readers should familiarise themselves with the modelling system in order to fully understand these limitations.

The model was prepared relying on :

- topographic data (2m LIC contours) supplied by Warringah Council for the Processes Study;
- stormwater infrastructure information supplied by Warringah Council for the Processes Study;
- cadastral boundaries supplied by Warringah Council for the Processes Study;
- aerial photography supplied by Warringah Council for the Processes Study;
- non urban land areas identified for assessment were those described in the Non-Urban Lands Study by PPK (2000) and digitised from available paper plans provided by Council.

The accuracy of the model is reliant on the accuracy of these inputs.

APPENDIX A: BMP, BPP COST ESTIMATES

APPENDIX B: COWAN AND MIDDLE HARBOUR LIFE CYCLE COSTS

Cowan Scenario 2

BMP	Construction Cost	Per	Total Capital Cost	Annual Maintenance Cost	50 yr Maintenance Cost	Total life Cycle Cost	Additional Lot	Total 50 yr Cost per Lot	Annual Cost per Lot
WSUD	$10,000.00	ha	$380,000			$380,000	570	$666.67	$13.33
Rainwater Tanks	$1,500.00	Lot	$855,000		$855,000	$1,710,000	570	$3,000.00	$60.00
Infiltration Trenches	$900.00	Lot	$513,000		$513,000	$1,026,000	570	$1,800.00	$36.00
Grass Swales	$17,300.00	ha	$657,400	$32,870	$1,643,500	$2,300,900	570	$4,036.67	$80.73
Constructed Wetlands	$34,500.00	ha	$655,500	$32,775	$1,638,750	$2,294,250	570	$4,025.00	$80.50
Sediment Traps	$24,800.00	ha	$471,200	$23,560	$1,178,000	$1,649,200	570	$2,893.33	$57.87

Total number of Lots 570 Lots
Total developed area 38 ha
Assume:
1. Half catchment served by wetland and half by sediment trap
2. Maintenance of Rainwater Tanks and Infiltration Trenches assumes replacement once in 50 years

Middle Harbour - Scenario 1

BMP	Construction Cost	Per	Total Capital Cost	Annual Maintenance Cost	50 yr Maintenance Cost	Total life Cycle Cost	Additional Lot	Total 50 yr Cost per Lot	Annual Cost per Lot
WSUD	$10,000.00	ha	$270,000			$270,000	23	$11,739.13	$234.78
Rainwater Tanks	$1,500.00	Lot	$34,500		$34,500	$69,000	23	$3,000.00	$60.00
Infiltration Trenches	$900.00	Lot	$20,700		$20,700	$41,400	23	$1,800.00	$36.00
Grass Swales	$17,300.00	ha	$467,100	$23,355	$1,167,750	$1,634,850	23	$71,080.43	$1,421.61
Constructed Wetlands	$34,500.00	ha	$465,750	$23,288	$1,164,375	$1,630,125	23	$70,875.00	$1,417.50
Sediment Traps	$24,800.00	ha	$334,800	$16,740	$837,000	$1,171,800	23	$50,947.83	$1,018.96

Total number of Lots 23Lots
Total developed area 27ha
Assume:

1. Half catchment served by wetland and half by sediment trap
2. Maintenace of Rainwater Tanks and Infiltration Trenches assumes replacement once in 50 years

Middle Harbour - Scenario 2

BMP	Construction Cost	Per	Total Capital Cost	Annual Maintenance Cost	50 yr Maintenance Cost	Total life Cycle Lot	Estimated Lots	Cost per Lot	Annual Cost per Lot
WSUD	$10,000.00	ha	$380,000	-	$0	$380,000	675	$562.96	$11.26
Rainwater Tanks	$1,500.00	Lot	$1,012,500	-	$1,012,500	$2,025,000	675	$3,000.00	$60.00
Infiltration Trenches	$900.00	Lot	$607,500	-	$607,500	$1,215,000	675	$1,800.00	$36.00
Grass Swales	$17,300.00	ha	$657,400	$32,870	$1,643,500	$2,300,900	675	$3,408.74	$68.17
Constructed Wetlands*	$34,500.00	ha	$655,500	$32,775	$1,638,750	$2,294,250	675	$3,398.89	$67.98
Sediment Traps*	$24,800.00	ha	$471,200	$23,560	$1,178,000	$1,649,200	675	$2,443.26	$48.87

Total number of Lots 675 Lots
Total developed area 38 ha
Assume:

1. Half catchment served by wetland and half by sediment trap
2. Maintenance of Rainwater Tanks and Infiltration Trenches assumes replacement once in 50 years