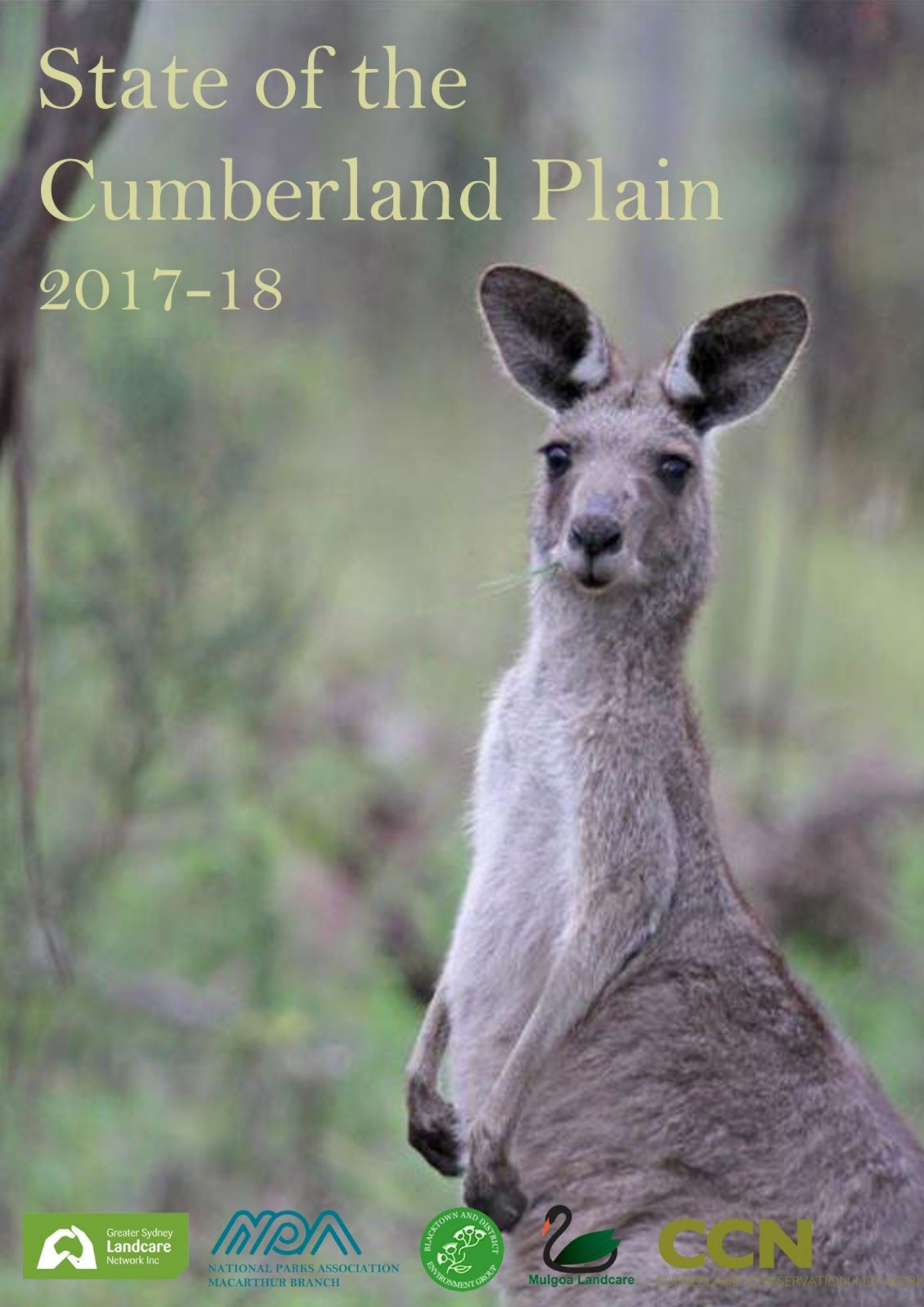
State of the Cumberland Plain

2017-18



Greater Sydney Landcare Network Inc

NATIONAL PARKS ASSOCIATION MACARTHUR BRANCH

BLACKTOWN AND DISTRICT ENVIRONMENT GROUP

Mulgoa Landcare

CCN CUMBERLAND CONSERVATION NETWORK

About this report

The Cumberland Plain, Western Sydney is our home - and it is in crisis. Government policy on population, planning and biodiversity are driving some of the highest rates of landclearing seen anywhere in the world and forcibly displacing entire rural communities. Our communities and our ecosystems are at breaking point: this is a war on people, community and the wild.

This report outlines the state of the natural environment of Cumberland Plain in 2018 in our own voices. The Cumberland Plain is more than just an ecosystem or a calculation of hectares conserved and lost: it is our home and the traditional lands of the Darug and Gundungurra people. This report presents a review of the state of the environment in Western Sydney from the voices of local experts and volunteers here on the ground.

The report has been published by the The Greater Sydney Landcare Network (GSLN), a membership-based community organisation that aims to support individuals and groups who are working to protect, restore and improve the natural environment of Greater Sydney.

The report has been developed collectively through the Cumberland Conservation Network (CCN), an informal network of over 80 local conservation-minded people in Western Sydney. The CCN brings together the local environment groups, community champions, Bushcare and Landcare leaders, teachers, ecologists and government staff to provide a common voice on issues we care about. A number of incorporated groups have also provided support to this report including:

- Greater Sydney Landcare Network
- National Parks Association - Macarthur Branch
- Blacktown & District Environment Group
- Mulgoa Landcare
- Razorback Environment Protection Society

Cover: Eastern Grey Kangaroos at Shanes Park. Photo Edwin Vella

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2018 Conservation Scorecard

Total bushland clearing ★☆☆☆ Terrible

Bushland clearing has dramatically increased over recent years and is exceeding 264 hectares per year in the Cumberland Plain alone.

Population Growth ★☆☆☆ Terrible

Population growth is the primary driver of biodiversity loss and remains at record high levels.

Public Open Space ★★☆☆ Poor

One in 10 Australians now live on the Cumberland Plain but we have less public open space than the CBD. Rather than expanding public open space government land in Western Sydney is actively being sold.

Legislation that delivers ★☆☆☆ Terrible

The current offset-based policy is delivering a decline in biodiversity and is opposed by the community and the government's own NSW Scientific Committee.

A real say in local futures ★☆☆☆ Terrible

Local communities have never had so little say in planning their own futures, with all effective rights removed over recent decades. The final word on planning decisions must be returned to local communities.

Offset double-dipping ★★☆☆ Poor

8% of offsets (BioBanks) are on existing conservation land including Western Sydney Parklands, Crown reserves, Council Reserves and Botanic Gardens. Re-labelling and re-funding existing reserves achieves nothing for the community and undermines the offset price making it impossible to protect new land for real biodiversity outcomes.

Funding for restoration ★★☆☆ Poor

Government investment in restoration has declined across the board including funding for National Parks & Nature Reserve management, NGOs, Landcare & Bushcare, and government grants (National Landcare Program & Catchment Action NSW).

New Public Reserves ★★☆☆ Poor

The RMS M7 offset program creating the new Colebee Nature Reserve is a great exception to otherwise bleak outcomes. Private BioBanking reserves deliver nothing for the Western Sydney community. New, large bushland reserves are needed via compulsory purchase of non-residential land. Opportunities include Shanes Park (for rewilding), Cobbitty Hills (1,200 ha unoccupied land) and the Campbelltown Koala corridor (Dept. of Planning land).

Conservation before revegetation ★★☆☆ Poor

Rigorous research demonstrates that revegetation of any technique is very poor replacement for intact and even damaged ecosystems. Increasing attitude of 'rape and reveg' is not supported by experts or the community.

Protecting key corridors ★★★☆ Moderate

The State Government has completely failed to protect corridors linking conservation lands. However the Federal government has provided fantastic support for corridor purchase through the Cumberland Land Conservancy and Conservation Volunteers Australia with good results.

Effective compliance ★★☆☆ Poor

There is now almost no effective compliance in planning, bushland protection or even BioBank sites in our region. Biodiversity will not improve until illegal clearing is taken seriously. The unauthorised draining of Bushells Lagoon - a public reserve - is a shameful example of the state of compliance in our region.

Safe roads and wildlife ★★☆☆ Poor

Roadkill is one of the key drivers of wildlife decline in the region and set to become even worse as more development encroaches. Proposals for Kangaroo underpasses on The Northern Road (Orchard Hills) and Forrester Road are positive signs, but far more action is needed. We urgently need a regional plan for safe roads, fence management and wildlife crossings with funding to deliver it.

State of the Cumberland Plain - 2018 Summary

The Cumberland Conservation Network (CCN) is an informal network of over 150 local conservation-minded people providing a common voice on biodiversity for Western Sydney.

This summary outlines the state of the natural environment of Cumberland Plain in 2018 from the voice of experts and community living and working here in Western Sydney.

Western Sydney has a public open space crisis. The City of Sydney LGA has almost three times as much open space as Western Sydney, and Camden LGA has just 3% public open space compared to 14.8% for the city. Explosive population growth and development are driving appallingly poor outcomes for our environment and community.

Independent mapping by the CCN shows that just 33,124 hectares of native vegetation (12%) remains in western Sydney and just 9,797 hectares (7.8%) of the critically endangered Cumberland Plain Woodland. Of this just 4.4% total and 2% of the Cumberland Plain Woodland is protected - almost all of this in National Parks.

Our independent mapping shows that in the last decade at least 1,290 hectares of vegetation have been destroyed (3.7%). Biodiversity 'offsetting' policy has delivered a net loss of approximately 38-39% to biodiversity values over the period, largely attributed to low offset ratios, high rates of illegal clearing and a high proportion of offset double-dipping. Double-dipping by using existing offsets and public reserves as offsets is driving impossibly low offset prices and locking landowners out of the scheme.

Despite continuing government failure the community continue to make strong contributions to our local environment. Approximately 58 Bushcare & Landcare groups are presently active in bushland reserves and on private land to restore and protect our region.

The Cumberland Land Conservancy has filled the vacuum left by Department of Planning by identifying and purchasing key wildlife corridors for conservation. This local community group has now purchased five properties (49 hectares) which are owned and managed by local volunteers. This has been made possible by assistance from the Commonwealth Government and by corporate land donations.

National Parks and Nature Reserves remain the cornerstones of conservation in the Cumberland Plain. The NSW Roads & Maritime Services M7 biodiversity offset program has compulsorily acquired 137 hectares of non-residential bushland for NPWS reserve additions and new reserves in the Cumberland Plain over the last decade. Sadly this successful program has been replaced by voluntary biodiversity offsetting with greatly diminished outcomes.

Priorities for Real & Effective Change

We call on government at all levels to address the real concerns of Western Sydney residents for their natural environment:

- ***Legislation that delivers:*** The current offset-based policy is delivering a decline in biodiversity and is opposed by the community and the governments own NSW Scientific Committee.
- ***A real say in local decisions:*** The final say on planning decisions must be returned to local communities.
- ***No offsetting on public land:*** including Western Sydney Parklands, Crown reserves, Council Reserves and Botanic Gardens. Re-labelling existing reserves achieves nothing for us and undermines the offset price making it impossible to protect new land for real outcomes.
- ***Restore funding for public land & Landcare:*** including the National Landcare Program, Catchment Action NSW and NPWS funding.
- ***New public reserves:*** Private BioBanking areas deliver nothing for the Western Sydney community. New, large bushland reserves are needed through compulsory purchase of non-residential land as per the successful M7 offset program. Opportunities include Shanes Park (for rewilding), Cobbitty Hills (1,200 ha unoccupied land) and the Campbelltown Koala corridor (Dept. of Planning land).
- ***Conservation before revegetation:*** extensive local research demonstrates that revegetation of any technique is very poor tool at recreating ecosystems. The priority for our region now is protecting existing bushland.
- ***Protecting key corridors:*** without serious corridors our wildlife will be lost forever. Corridors must be continuous (not cut by roads) woodland (not creeklines) and sufficient (>500 m wide where possible). Corridors won't save themselves: this requires targeted protection through planning & purchase of land.
- ***Real compliance:*** there is now almost no effective compliance in planning, bushland protection or even BioBank sites in our region. Biodiversity will not improve until illegal clearing is taken seriously.
- ***Safe roads and wildlife connectivity:*** Roadkill is one of the key drivers of wildlife decline. We need a regional plan for safe roads and wildlife crossings with funding to deliver it.

Contents

Introduction

This report is the first health card for the natural environments of the Cumberland Plain[1] in Western Sydney. It has been prepared by an open and informal coalition of local community groups and individuals known as the Cumberland Conservation Network. Our aim is to document the alarming and rapid decline of the environment in the region we live and work in, through our own eyes, and recommend the solutions which we see deliver real results that work here.

Our data shows that the rate of clearing of Cumberland Plain Woodland has increased since this ecosystem was listed as critically endangered and is amongst the highest rates of land clearing globally. Nonetheless government is reducing protections. The management of the Cumberland Plain is in open violation of our international treaty obligations for the protection of biodiversity. The Cumberland Plain in many cases symbolises what is fundamentally broken in our present government and institutions.

The Cumberland Plain is an area of outstanding biodiversity in its own right but it is also a 'litmus test' for NSW and Australia. Western Sydney is the place where new policies are typically tested before being rolled out across the state - as seen with biodiversity offsetting - and is home to almost 10% of our nation's population. As our environmental problems have increased over the last decade, government reporting on biodiversity targets and outcomes has been reduced[2]. This has resulted in the need for an independent and evidence-based health card for the region.

The Department of Planning & Environment is currently developing the Cumberland Plain Conservation Plan. This is larger, broader in scope and longer than any of the previous plans for our region - but it shares with them a conspicuous shortage of local community and expert voices (even on the Community Reference panel). The expertise in the Cumberland Plain is not found in government managers. The knowledge of our region is found in the bush regenerators, community leaders, volunteers, and teachers of Western Sydney. The CCN seeks to capture this expertise and give it a voice.

As well as documenting the loss of vegetation from the Cumberland Plain we also highlight the wins, and offer a range of solutions which if implemented would make a dramatic difference to the biodiversity and habitat values of the Cumberland Plain. These gains would not only support local native flora and fauna but also contribute hugely to its

[1] For the purposes of this report the Cumberland Plain is defined by the IBRA subregion unless indicated otherwise.

[2] A key example is the reduced reporting requirements for State of Environment (SOE) Reports. Neither SOE Reports nor OEH publish regular land-clearing data for the Cumberland Plain

human residents, who only stand to benefit from access to healthy natural environments.

The Facts

About the Cumberland's Woodlands

The Cumberland Plain is made up of over a dozen native vegetation types. All are listed under either state or federal threatened species legislation due to historic and ongoing clearing. The following table lists the vegetation communities of the Cumberland Plain and the conservation status of each.

Table: Vegetation communities of the Cumberland Plain and their conservation status

Vegetation Community Name	**Conservation Status**
Cumberland Plain Woodland	Critically endangered under NSW and Federal threatened species legislation
Shale/sandstone Transition Forest	Critically endangered under NSW and Federal threatened species legislation
Sydney Coastal River-flat Forest	Endangered under NSW threatened species legislation
Swamp Oak Floodplain Forest	Endangered under NSW and Federal threatened species legislation
Elderslie Banksia Scrub	Endangered under NSW threatened species legislation
Western Sydney Dry Rainforest	Endangered under NSW and Critically endangered Federal threatened species legislation
Castlereagh Swamp Woodland, Castlereagh Scribbly Gum Woodland	Endangered under NSW threatened species legislation

Agnes Banks Woodland	Endangered under NSW threatened species legislation
Cooks River/Castlereagh Ironbark Forest	Endangered under NSW threatened species legislation
Moist Shale Woodland	Endangered under NSW and Critically endangered Federal threatened species legislation
Shale Gravel Transition Forest	Endangered under NSW and Critically endangered Federal threatened species legislation
Coastal Floodplain Wetlands of the Sydney Basin Bioregion	Endangered under NSW threatened species legislation

The dominant vegetation type in the region is Cumberland Plain Woodland which covered the vast majority of the region prior to European settlement. It was uplisted to critically endangered on 5th March 2010 due to government failure to halt its destruction. Since being listed as Critically Endangered there has been continued destruction of the ecological community. There has not been any successful intervention to halt this decline by any level of government and rates of clearing have *increased* since 2008.

This vegetation also supports a range of threatened plants and animals, some of them endemic and found nowhere else on earth. This includes over 14 species of flora, 11 bird species, a dozen mammal species (including the only wild population of chlamydia-free koalas) , the Cumberland Land Snail and the Green and Golden Bell Frog.

Extreme transformations, Oran Park. Photo supplied

How much bushland remains?

The last accurate estimate of the extent of native vegetation remaining on the Cumberland Plain was undertaken a decade ago in 2008 by the NSW National Parks & Wildlife Service.

CCN members analysed present-day data and vegetation mapping and determined that just 33,124 hectares of native vegetation (12% of original extent) remain in western Sydney and only 9,797 ha (7.8%) of the critically endangered Cumberland Plain Woodland specifically remains. See table below.

Table: Vegetation loss in western Sydney since European settlement

	1788[3]	1998[4]	2007	2017/18
All Vegetation	273,972 ha	35,916 ha (13.1%)	34,414 ha (12.5%)[5]	33,124 ha[6] (12.0%)
Cumberland Plain Woodland	125,446 ha[7]	11,054 ha (8.8%)	10,546 ha[8] (8.4%)	9,797 ha (7.8%)

How much bushland is protected?

A total of just 5,720 hectares of the region is protected in reserves or biodiversity offset sites, of which less than 2,000 hectares is Cumberland Plain Woodland. The total area protected in the region is just 4.4% (2% for Cumberland Plain Woodland). This is comprised of the following (in hectares):

- National Parks: 3,100
- Western Sydney Parklands[9]: 1,056
- Council-managed Reserves[10]: 1,000 (approx)
- BioBank Sites[11]: 478
- Private conservation[12]: 86

[3] Tozer 2003; the Cumberland Plain IBRA subregion of 275,693 ha includes 1,721 ha of water
[4] Tozer 2003 (The native vegetation of the Cumberland Plain, western Sydney. Cunninghamia 8, 1-75) using 1997 - 1998 data
[5] CCN Mapping based on 2000 randomly allocated data points
[6] CCN Mapping based on 2000 randomly allocated data points
[7] Tozer 2003.
[8] NSW Scientific Committee & C. C. Simpson (October 2008) Change in the distribution of Cumberland Plain Woodland. (2007 data); matches CCN mapping figures
[9] Western Sydney Parklands Biodiversity Strategy 2012-2020
[10] Figure extrapolated from average of LGAs with available data
[11] Excluding existing public reserves
[12] Including Cumberland Land Conservancy, VCAs and court-imposed covenants

How much open-space do we have?

Over the last decade Western Sydney has absorbed Sydney's rapidly increasing population along with an unprecedented proportion of heavy industry with almost no planning or infrastructure support. Of particular concern for bushland and public health is the state of government investment in public open space which has been steadily declining.

Between 1970 and 1990 over $300 million was spent compulsorily acquiring public open space and bushland to form the Western Sydney Green Belt - the area proposed as the boundary to the city's westward expansion[13]. In the three decades that followed to date our population has grown by over half a million people and one in 10 Australians now live on the Cumberland Plain[14]. However unlike the investment of the 1970s-1990s, the last three decades have seen the government sell at least five times as much public land as it has purchased[15]. Far from being expanded, Western Sydney's government land is being sold at the time we most need it.

Our city's CBD has ***more public bushland*** than Western Sydney. Furthermore, the City of Sydney LGA has almost three times as much open space as Western Sydney.

Rather than addressing this crisis the Greater Sydney Commission[16] and others have sought to mask these figures by including the Blue Mountains World Heritage Area when reporting on public space for Western Sydney[17].

Some comparisons of public open space by region include:

Council Area	Total open space	Bushland reserves
City of Sydney	14.8%	1.2%
Northern Suburbs	52.0%	48.5%
Penrith[18]	5.7%	3.1% (highest in region)
Camden[19]	3.9%	0.9% (lowest in region)

[13] Today this forms the bulk of the Western Sydney Parklands
[14] The Center for Western Sydney: Community Profile: https://profile.id.com.au/cws/population-estimate
[15] No official figures are released. The best available data suggest that State & Federal governments have generated in excess of $500 M profit by selling public land including ADI St Marys and other properties while spending less than $100 M in land acquisition (mostly the northern additions to Western Sydney Parklands).
[16] Greater Sydney Commission Open Space Audit 2016
[17] Western Sydney regions were extended west into the Burragorang, Blue Mountains and Wollemi to hide the appallingly low open space data. This artificially inflated the ~6,000 hectares of open space in Western Sydney by approximately 500% (0.3 Million hectares).
[18] Penrith council 2007 Open Space Plan; NPWS Plans of Management
[19] Camden Council Open Space Asset Management Plan 2016

How fast is the native vegetation of the Cumberland Plain being destroyed?

CCN identified a critical need for data on vegetation loss in our region[20]. CCN members undertook a study to determine how much Cumberland Plain Woodland and other vegetation was being lost and where.

Different vegetation maps give different estimates of vegetation extent depending on what vegetation they choose to map (how small and how degraded it can it be). We focused on the rate of vegetation loss and for this reason worked from existing mapping undertaken in 1998 and 2007. We allocated 2,000 random points throughout this and inspected each to ascertain which still remained and which had been removed. This gives us very accurate assessment of the rate of loss over time and by region and ecological community.

Since 2007 at least 1,290 hectares of vegetation have been cleared (a loss of 3.7%) of which 749 hectares was Cumberland Plain Woodland (a loss of 7.1%)

The rate of clearing is not equal across the region as shown below. The highest rate of clearing (blue bars) is occuring in the gazetted Growth Centres in Blacktown, The Hills Shire and Campbelltown LGAs. However the large shires of Penrith and the Hawkesbury contribute the greatest overall to losses of vegetation (red bars). The vegetation destroyed in Penrith and Hawkesbury in particular cannot be fully explained by the relatively small number of approved developments and clearly includes a considerable volume of illegal clearing.

[20] DP&E have undertaken vegetation mapping of the Cumberland Plain however this has not been released. The NSW Scientific Committee are also planning to engage a 2018 update of the Cumberland Plain Woodland mapping with the advantage of using the same methodology as undertaken in 1998 and 2008. The NSW Scientific Committee was not advised of the DP&E vegetation mapping.

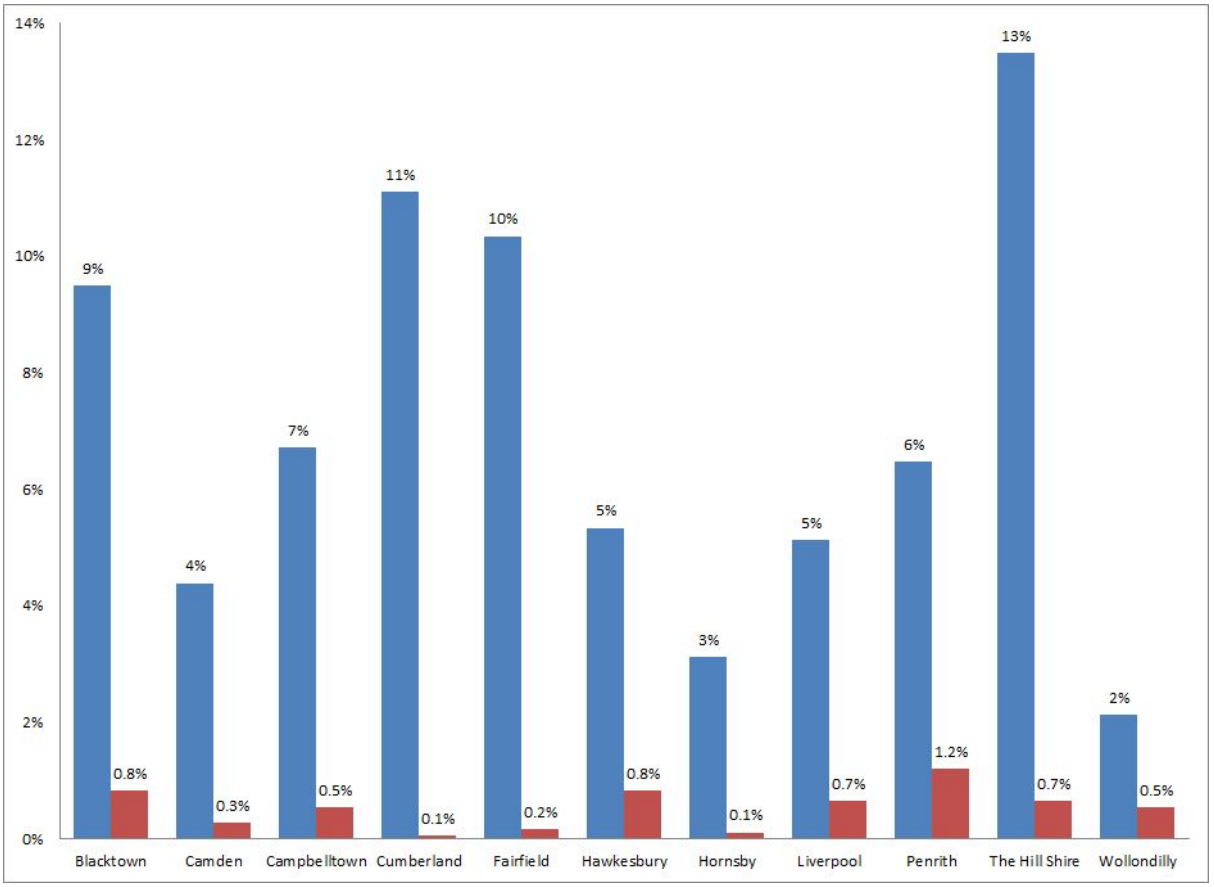


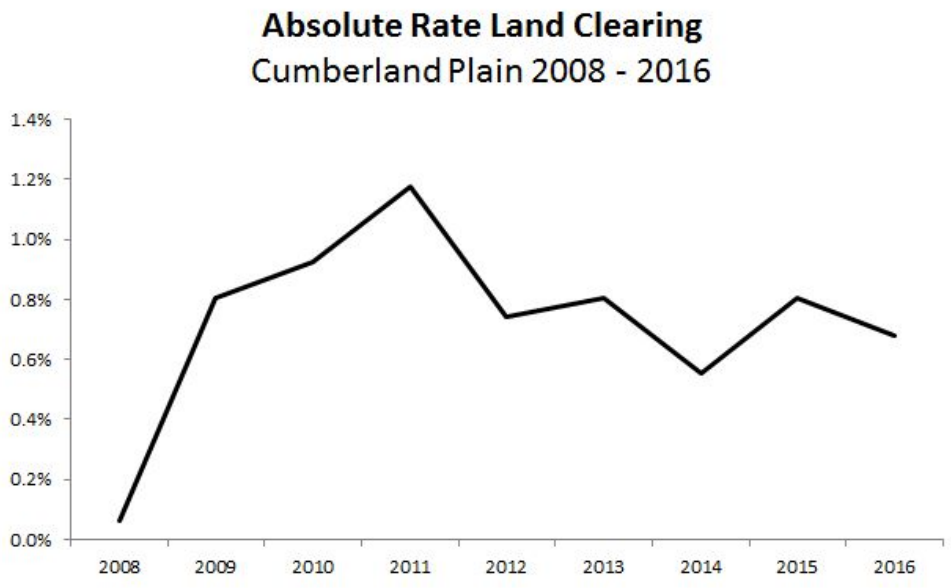
Figure 1: Clearing by Council Area[21]: 2006/7 - 2016/7. Blue Bars: % of vegetation within LGA cleared. Red Bars: % of regional vegetation lost.

Broad-scale clearing for the Growth Centre precinct at Oran Park. Photo Supplied.

[21] Based on 2018 shire boundaries; calculations are for portion of LGA within Cumberland Plain IBRA region only. LGAs with limited extent inside the IBRA and those with negligible clearing are not shown: Bayside, Canterbury-Bankstown, Georges River, Ku-Ring-Gai, Lane Cove, Parramatta, Ryde, Sutherland, Willoughby

Vegetation clearing by year

The rate of clearing per year (below) has remained relatively stable at 0.8%/annum since a major increase in 2008-9 which correlates to the introduction of biodiversity offsetting (clearing of Western Sydney Growth Centres). It is important to note the time lag between policy and planning decisions and the subsequent impact on ground.



Biodiversity offsetting

The Cumberland Plain has been the testing ground of Biodiversity Offsetting policy since this was first formalised in NSW by the Threatened Species Conservation (Biodiversity Banking) Regulation 2008 and continued under the new Biodiversity Conservation Act 2016.

The use of Biodiversity Offsetting is contentious. It remains opposed almost unanimously by the scientific community and by OEH's own elected NSW Scientific Committee[22]. Among the NSW Scientific Committee many objections is the 'substantial evidence that the best biodiversity conservation outcomes are achieved by the reservation and protection of intact communities and that rehabilitated sites rarely approach the biodiversity values of intact, or even degraded nature communities'.

An independent international meta-analysis of global offset programs (including NSW) found '*inherently large time lags, uncertainty, and risk of restoration failure require offset ratios that far exceed what is currently applied in practice. Restoration offset policy therefore leads to a net loss of biodiversity and represents an inappropriate use of the otherwise valuable tool of ecosystem restoration*[23].'

Not surprisingly there has been no government assessment of the outcomes of offsetting policy in NSW. The OEH were required to provide a review of the legislation in 2014 and released a *Statutory Review Report*, however this did not provide any data on the schemes actual performance [24]. As offsetting is presently the only conservation measure for our region this requires an independent assessment of its impact at our local scale.

How is offsetting meant to work?

The principle of offsetting is that loss of habitat at one site (the development site) can be 'offset' by actively improving biodiversity values through restoration at another site (see graph below). This was originally introduced under the legislative standards of 'maintain or improve', however offsetting cannot possibly deliver this[25]. Once offsetting had been firmly established the legal benchmark was scrapped and other concessions including offset discounting have changed the targets and objectives of offsetting.

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[22] NSW Scientific Committee 2014. Submission to: Draft NSW Biodiversity Offset Policy for Major Projects

[23] Curran M & Hellweg S (2014) Is there any empirical support for biodiversity offset policy? Ecological Applications, 24(4), pp. 617–632

[24] Both expert and public submissions to the review were almost universally negative; the Report summarised the feedback under the odd heading 'Support for Policy' in a summary which failed to disclose the overwhelming objection of expert submissions.

[25] To restore enough habitat to mitigate the impact of total destruction would require offset sites between 20 and >100 times the size of the development site. This was clearly untenable.

What is offsetting delivering in practice?

Offsetting is delivering an overwhelming net loss of biodiversity in our region and has accelerated rather than slowed declines. The reasons for this are explained in the following sections.

Net loss of habitat

During the period of approximately 10 years a total of 1,290 ha of bushland has been destroyed through both approved and illegal clearing[26]. During this period a total of 932 hectares has been 'offset' - however excluding sites purchased through non-offset funds (109 ha) and existing public reserves (75 ha) the actual figure is approximately 748 ha of bushland offset. The total land conservation outcome is a net loss of 1,290 hectares.

Biodiversity is declining on offset sites

As previously explained, restoration is inherently inferior to conservation, and very large areas indeed are required to balance even small-scale landclearing (i.e. large offset ratios are required.)

In the Cumberland Plain restoration outcomes at BioBank sites are modest and many sites are actually going *backward* (see 'Compliance & Offsets').

OEH monitor vegetation quadrats at BioBank sites however this data is not publicly available, was not included in the scheme's review and is known to be heavily biassed[27]. Even on the best sites the real improvements are a generous 10-15% improvement to vegetation coverage over a maximum of 30% of the site. Factoring in sites which have substantially declined (including very large areas bulldozed and drum-mulched) it is likely that overall flora values have experienced a net *decline* across offset sites to date.

Fauna values are not monitored by OEH. Where independent data is available for BioBank sites these shows a decline in fauna values[28]. Offset sites rarely have significant action for fauna recovery (pest predator control is infrequent and ineffective) and large-scale removal of woody weeds is

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[26] We included illegal clearing and clearing that doesn't require offsetting in our assessment - these are part of the broader offset policy. It is important to include compliance failings & exemptions when assessing how a policy delivers in the real world. It is interesting to observe that offsetting policy has driven a decline in public acceptance of conservation as a requirement not an entitlement, which is another driver in the observed rise in illegal clearing. As the full implementation of the Biodiversity Act approaches *further* exceptions are being introduced including discounting for politically-favored projects such as Warragamba Dam, encouragement to offset using existing conservation land and advocacy for a reduction in the costs of offsets (i.e. reducing the land conserved and the quality of restoration). Our 2008-2018 figures are therefore likely to be more favorable than future offsetting scenarios.

[27] As Bush Regeneration contractors joke these small monitoring quadrats are clearly marked and it would be a naive contractor who did not ensure that the monitoring area was given special attention. The OEH vegetation monitoring results are therefore of limited value in assessing actual restoration results.

[28] GS LLS (2018) *Fauna Monitoring - Mulgoa BioBanks*

known to benefit exotic species over natives, so these results are not unexpected.

Compliance & Offsets

OEH run 'showcase' visits to a select number of BioBank sites to show government & other stakeholders the success of the scheme. The management on these sites is generally of a high caliber. However these sites are the exception to the rule.

Out of sight from the public eye the management of many BioBank sites is frankly appalling.

Repeated complaints by staff and community are defensively ignored. There is now no effective compliance of the scheme and this has generated a culture of free reign. Increasingly BioBanks are being established or purchased by the opposite type of person we would wish to be responsible for our wild places.

Beyond the showcase sites what is actually happening on our BioBank sites is shameful:

- **Illegal clearing.** This ranges from medium scale (e.g. construction of dirt bike trails) all the way to 'restoration by bobcat' clearing large areas of BioBank sites, frequently under the guise of 'restoration'.
- **Illegal grazing.** Illegal grazing by stock is so frequent as to be the norm rather than the exception in some parts.
- **Illegal dumping.** While illegal dumping on their land is a real difficulty for some landowners, others are passively encouraging (and possibly profiting from) the practice. Some landowners have refused to take basic steps such as repairing fences to stop dumping.
- **Shooting native wildlife.** Shooting of native wildlife has been confirmed on a number of BioBank properties. OEH have declined to investigate reported instances.
- **Release of pest animals.** At least one BioBank has been the site of deliberate release of Feral Pigs by persons known to and permitted access by the landowner.

The open refusal by OEH/BCT to deliver BioBanking compliance is undermining those landowners who are committing their lives and properties to restoring a better future for our environment.

Abuses of offsetting

- **In-house trading.** People close to the offset scheme are investing in the decisions they or their mates make. Much of the current BioBank property is now owned by current or ex-staff and consultants directly involved in the scheme.

- **Monopolies.** OEH and DP&E are not allowing an open market. Instead government are engaging one of their two preferred consultancies to deliver entire precincts of BioBanking, allowing a duopoly to control the market. There is a revolving door of staff between these consultancies and government positions, and interested landowners are frequently turned away by consultants with vested interests.

- **Public scrutiny.** OEH are notorious for their refusal to share even the most basic information about the BioBanking scheme. All financial details are redacted from public documents and no map of BioBanked areas is regularly published. The BioBanking public register has been out of date by at least 12 months for the last 3 years and BioBanked properties are being sold to buyers who are not even able to confirm the fact on the public register.

- **Grab & run.** OEH have watched as some landowners pocket the first few years management funding (the large 'primary' restoration payments) without undertaking necessary works, stripping the money from the scheme and on-selling the site. Other site managers have pocketed years of funds and now paying year 2 works out of year 3 payments. Others sign contracts to lock-in future landowners to their mates dodgy land management businesses

- **Empty Credits.** OEH allocate new 'species credits' for discovery of threatened species on existing or new biobank sites without any additional management obligations. Other proponents are felling large weeds (e.g. Olive) to increase their 'woody debris' credit score and generate more profit. (Exotic woody debris does not provide a benefit to biodiversity in the way that natural woody debris does)

- **Drum mulching.** Drum mulching is being used to clear ('restore') very large areas of woody weeds on some offset sites. The thick mulch created by this practice suppresses weeds and natives alike for at least 10 - 20 years, after which huge weed plumes regenerate. OEH are certifying drum mulching as the completion of primary management, leaving land with no native cover and an enormous management debt when weed plumes emerge over the next two decades, long after all significant management funding is gone.

Offsetting existing reserves

An abhorrent trend which merits individual attention is the strong push by OEH to use existing reserves as offsets.

OEH have *actively encouraged* this practice for some time, beginning with the *Linking Landscapes through Local Action* project in 2012[29]. This program paid councils to BioBank operational and community reserves through the BioBanking scheme, and succeeded in generating demand from Councils.

The use of existing reserves including Council reserves, Western Sydney Parklands, and Botanic Gardens for biodiversity offsets has insidious effects. The most obvious is that it removes the conservation outcome from offsetting - no new bushland is protected.

The practice also overwhelmingly undercuts the offset market. Since there is no need to buy or protect developable land these offsets come at a fraction of the cost of real offsets. One result is that *landowners and farmers can no longer afford to protect their land through offsetting*. This is already occurring, with local offset prices at a fraction of real land values.

Just as offsetting undermines the public commitment to bushland conservation, offsetting existing reserves undermines the government commitment to funding bushland management. This has already occured locally with the Western Sydney Parklands expected to self-fund their management through BioBanking and commercialisation.

Councils receiving funding for BioBanking are simply pocketing the extra funds. These funds are not limited to restoration funds: Council Reserves being biobanked often include a cash profits (part B payments) which Council staff report have been directed into general revenue, not restoration..

To date the Federal Government are the only agents to have maintained their integrity and have not approved offsets on existing reserves.

Noorumba Reserve is presently proposed as an offset for the clearing of koala habitat by developers in Cambelltown. This is an existing reserve, fully funded and restored under an existing Plan of Management. The community are watching closely to see if the Federal Government will agree to the use of this site as an offset.

If the practice of offsetting on existing reserves continues it is likely to herald the end of offsetting on private land, and the loss of any biodiversity outcomes from the scheme.

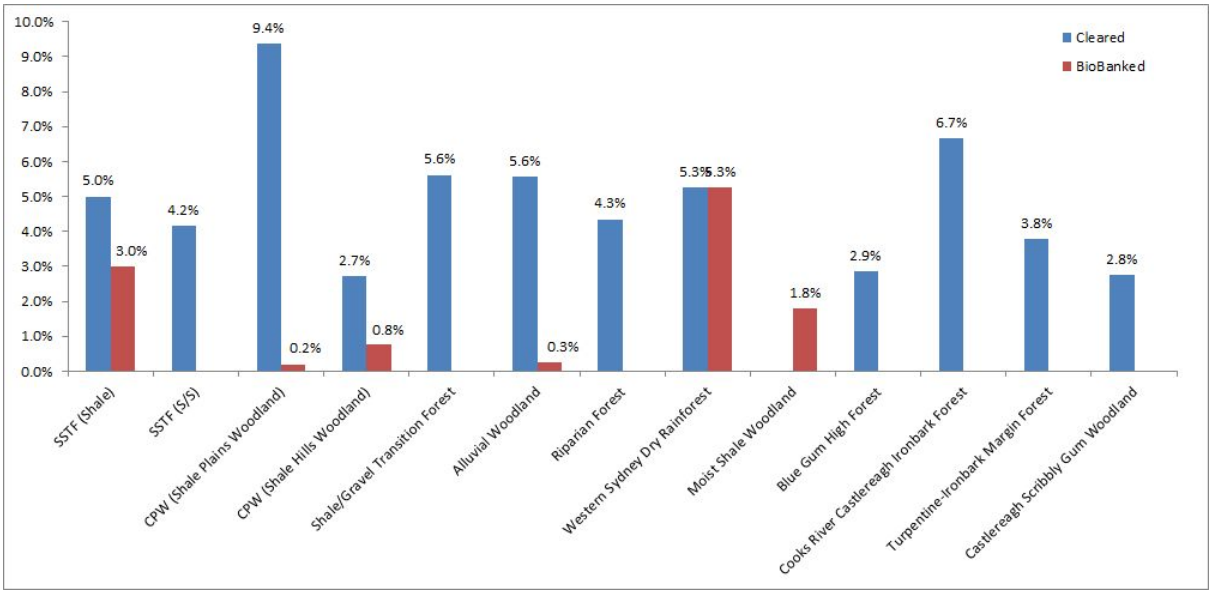
[29] The project was so-named in order to divert funds from the $40 million Green Corridors program which was meant to protect new habitat in key conservation corridors

Is offsetting delivering like-for-like?

Offsetting over the period 2010-2016 has not targeted the ecosystems experiencing loss (below). In general the good country (flat and fertile in the eastern Cumberland Plain) is being cleared and the marginal country such as valley slopes in Razorback used as offsets.

We are losing Shale Plains Woodland and Castlereagh Ironbark Forest at an alarming rate with almost no offsets in these ecosystems. These are the most fertile ecosystems and are particularly vital to endangered fauna including the Regent Honeyeater and Swift Parrot.

The strong pressure by DP&E (on behalf of developers) to drive down offset costs is the key driver in this failure. It is not possible to support like-for-like offsetting without substantially increasing the current credit price to match developable land values.



Above: percentage cleared vs biobanked of different vegetation types

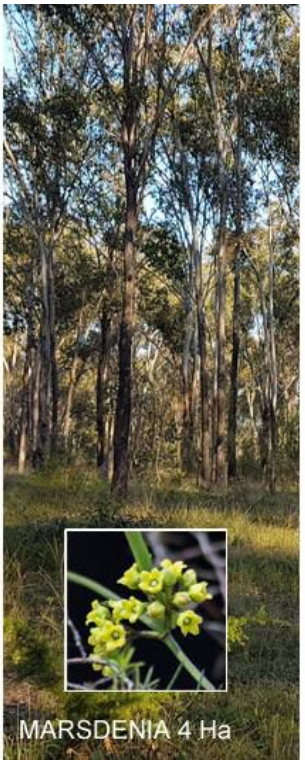
The Wins

Cumberland Land Conservancy

The Cumberland Land Conservancy (CLC) is a not-for-profit whose core purpose is the acquisition of land for conservation. The 85 members of CLC collectively own their property and undertake some of the best conservation land management and restoration in the region. The CLC have acquired four properties (49 hectares) with support from the Australian Government and from direct land donations.

The CLC was formed to solve the critical gap in purchase of key wildlife corridors in the Cumberland Plain. Biodiversity offsetting is not securing these key links. As these links are lost the reserves of the Cumberland Plain become isolated and wildlife populations are lost. CLC solves this issue by direct purchase of key conservation links.

The property 'Wombat' is a key link between the Blue Mountains National Park and Mulgoa Nature Reserve, 'Marsdenia' a key link between Wianamatta Regional Park and Wianamatta Nature Reserve, and 'Thornbill' a key link between the Castlereagh and the Ham Common (Western Sydney University). These links are now owned under covenant by the membership of CLC to protect and restore our native flora and wildlife forever.



NPWS Reserves

The period 2008 - 2018 has been a difficult one for the NSW National Parks & Wildlife Services with on-going staff and organisational restructures debilitating many regions' abilities to get on with the work of managing our conservation reserves. The new Draft National Parks System Directions Statement (2017) does not include any new reserves for Western Sydney. Critical reductions to rehabilitation funding and staff have seen the management of Cumberland Plain reserves fall well below best practice standards.

Nonetheless National Parks and Nature Reserves remain the cornerstones of conservation in the Cumberland Plain and the expansion of reserves and creation of new reserves (with appropriate management funding) remains an urgent priority.

A number of new reserves and reserve additions have been created through the NSW Roads & Maritime Services biodiversity offset program which has compulsorily acquired 137 hectares of key non-residential bushland for NPWS reserve additions and new reserves in the Cumberland Plain[30]. This program was highly successful but was shut down at the direction of the OEH[31] and replaced by voluntary biodiversity offsetting.

THURSDAY, AUGUST 24, 2017 | PENRITHPRESS.COM.AU NEWS 07

KEMPS CREEK

Above, from left, the masked owl, Cumberland Plain land snail and the speckled warbler will all benefit from the parcel of land being protected in Kemps Creek.

Vital bushland saved

State government buys up land for conservation to offset the M7

Marissa Georgopoulos

VAST parcels of western Sydney land are now protected, safeguarding at-risk flora and fauna species as the region tries to keep up with the development boom.

In a bid to offset the M7 motorway, the Office of Environment and Heritage has bought 14.5ha, which backs on to Kemps Creek Nature Reserve, and 3ha next to Western Sydney Regional Park.

Mulgoa Valley Landcare Group's Lisa Harrold applauded the announcement.

"By extending the site of the Kemps Creek Nature Reserve, you are building on the wildlife habitat opportunity that already exist," Mrs Harrold said.

She said the species-rich parcel, which includes critically endangered Cumberland Plains woodlands, now had the chance to grow its young eucalyptus trees to produce vital hollow habitats.

"There would be a wealth of reptiles in there and macrofauna, kangaroos and wallabies," she said.

Mrs Harrold said more land should be secured.

The state government is required to buy and conserve land in line with development under legislation.

Mulgoa state Liberal MP Tanya Davies said endangered animals, such as the masked owl and speckled warbler, "now have a better chance of survival for future generations".

"The NSW Government is investing $100 million over five years to implement the Saving our Species program," she said.

"In 2017-18, $24 million has been committed to implement at least 300 threatened species projects under Saving Our Species."

Protected sites

- More than 17ha of land in the region has been secured by the Office of Environment and Heritage
- The aim is to offset the construction of the M7
- The sites have critically endangered Cumberland Plains woodlands

Mulgoa Valley Landcare Group's Lisa Harrold is pleased the State Government is protecting fauna and flora. Picture: David Swift

[30] www.rms.nsw.gov.au/about/environment/protecting-biodiversity/offsets-sydney.html
[31] www.rms.nsw.gov.au/about/environment/protecting-biodiversity/index.html

Bushcare, Landcare & volunteering

The Cumberland Plain has a strong volunteer base which continues to grow despite limited administrative support and declining small-grant assistance.

Approximately 58 Bushcare & Landcare groups presently volunteer in local bushland reserves and on private and corporate properties, contributing thousands of volunteer hours every year. The region also has a growing contingent of wildlife care and rehabilitation volunteers with WIRES and Sydney Wildlife. Other volunteer groups involved in environmental restoration include local Mens' Sheds creating wildlife nest boxes, wildlife survey groups and independent volunteers.

Large numbers of volunteers also participate through organised volunteer programs. Conservation Volunteers Australia (CVA) has a strong presence in the Cumberland Plain operating dozens of volunteer and community programs every year. The CVA also manage their own conservation reserve at Londonderry Woodlands. Greater Sydney Local Land Services (GS LLS) and Landcare Australia also provide support and events through the Cumberland Plain Landcare program and Intrepid Landcare, a youth leadership program in bushland restoration.

Left: CLC Landcare Group volunteers work with corporate sponsor Sydney Helicopter installing logs for wildlife habitat at Mulgoa Nature Reserve.

The solutions

Legislation based on science

Legislation and policy are the primary drivers of the appalling conservation outcomes in Western Sydney. The current offset-based policy is delivering a sharp decline in biodiversity outcomes and is opposed by the governments own NSW Scientific Committee. The key changes necessary for new, effective biodiversity laws have been detailed by the NSW Scientific Committee, Environmental Defenders Office and Nature Conservation Council.

It is also critical that the final say in local planning is returned to local communities. The past two decades have seen all democratic planning control taken from local communities.

CCN strongly support the urgent need for evidence-based legislation sufficient to meet our international obligations with input from the local community.

This includes the need for a democratic population policy supported by science and the community.

Making offsets work

We recognise the pragmatic need to improve offsetting policy so long as it continues in place. Offset practice may be relatively new but it is in critical need of basic reforms. Priority issues include:

- Restore a diversity of conservation offset mechanisms - not just Stewardship Agreements. Mechanisms available should including targeted land acquisition for management by NPWS and not-for-profit conservation land managers.
- Break the duopoly and reinstate a functional offsetting market. Cease the current practice of allocating offsets for regions to single corporations (GHD/ELA) who are turning away landowners seeking to conserve priority bushland
- Cover assessment costs for landowners with priority vegetation and in priority areas (e.g. corridors) especially for owners of Cumberland Plain Woodland on lots <50 ha (these landowners make up the bulk of CPW remaining however assessment costs make offsetting cost prohibitive)
- Increase (not decrease) the price of credits to reflect real land values across the Cumberland region. This will improve the ability for truly like-for-like offsetting. Presently almost all good habitat (flat & fertile)

is unable to access the market due to artificially deflated prices. Price correction would require:

- Increased pressure for local and like-for-like offsetting
- Improved management plans & increased land management funding
- A halt to 'offsetting' on existing public reserves and offsetting through restoration activities. These items do not require land conservation and severely undercut the credit market (see 'Conservation before restoration')

Respect existing offsets (double-dipping & additionality)

Double-dipping by offsetting on existing conservation estate is rife and actively encouraged by OEH and supported by the so-called 'additionality' criteria & calculator. The community and independent experts strongly object to this.

Our public land has been hard won. At colonisation almost the entire Cumberland Plain was allocated as private land. The little public land we own today has been purchased back at great cost to taxpayers over generations. This includes Crown Land leased to Universities and other institutions. Many people dedicated their lives to the legislation & policy which is meant to protect this public bushland as an obligation.

Each time public land is used as biodiversity offsets it:

- undermines conservation and builds a new paradigm where public bushland conservation becomes an opportunity not an obligation
- severely undercuts the offset market making it impossible to purchase private land to genuinely offset bushland loss; and
- Undermines government responsibility to support land management and restoration of public lands

Existing public bushland is protected under regulation and should not be used as offsets. This includes: Western Sydney Parklands, Mt Annan Botanic Gardens, Western Sydney University (a wildlife refuge on public land) and Council Reserves.

CCN support development of a public-access government register of existing conservation offsets. This should include the many offsets created prior to BioBanking scheme which are frequently threatened by offset double-dipping. The CCN maps enclosed in this report include a few of the larger offset sites known to the public.

CCN support a public map viewer showing the boundaries of Stewardship Agreements. Biodiversity offsets are outcomes of the NSW Planning system and should be treated as public data - not confidential. This is critical to accountability and public faith in any biodiversity offset scheme.

Funding restoration of non-offset lands

The introduction of offsetting was predicted to generate a false sense of success and result in a reduction in funding for existing conservation initiatives and responsibilities. This prediction has been fulfilled with approximately 10% decline per year in state & federal funding of NRM projects since the major expansion of offset policy.

Much of the Cumberland Plain's best habitat can't be used as offsets. Our National Parks, Bushcare & Landcare Groups and much private land (e.g. Community Title Estates) are excluded from offsetting. These lands rely on government funding and grants to make biodiversity restoration possible. Funding cuts are resulting in major declines in these lands and a loss of public trust in the system.

Funding must be urgently restored to basic programs including:

- Council managed Bushland Reserves
- Landcare & Bushcare
- GS LLS grants (including to Community Title and other landowners)

Most importantly a restoration of NRM assistance is required to support the many landowners who support conservation and not offsetting. Those landowners who support the environment the most are being denied the support they deserve.

Building public reserves

- Honor the National Parks estate as the cornerstone of conservation in the region by expanding & buffering existing reserves and creating targeted new reserves

- Provide the necessary staff and funding to undertake core bush regeneration and pest control operations on National Parks estate.

- Restore the use of compulsory acquisition of non-residential land to expand the region's National Parks & Nature Reserves following the successful RMS model.

- Secure the Cobbitty Hills Reserve proposal. This 1,200 hectares of unoccupied corporate land is the largest unreserved patch of Cumberland Plain Woodland. The land includes the Aboriginal quarry of Cubbitch Barta[32] (after which 'Cobbitty' and 'Cut Hill' are named) sacred to the Dharug and Gundungurra peoples and the heritage 'Native Vineyard' of Western Sydney Dry Rainforest.

[32] Cubbitch Barta ('the place of plentiful white ochre') is an Aboriginal quarry of ceremonial significance to the Dharug and Gundungurra peoples located on 'Cut Hill' (a reference to traditional quarrying). The nearby town of 'Cobbitty' also takes its name from this site. Without intervention this key cultural landmark will be developed. N.B. This site should not to be confused with local reserves named in it's honor (e.g. in Camden South and Wollondilly).

- Secure the Bargo-Nepean National Park proposal protecting southern Sydney's iconic Bargo River Gorge and upper Nepean River.
- Land for conservation should be managed for conservation and additional to active recreational space requirements. New lands should be secured as Nature Reserves and National Parks - not Regional Parks.

No more jigsaw reserves

- The last 10 years have seen a rise in 'jigsaw pieces' reserves including at Harrington Park, Wianamatta Regional Park (ADI) and elsewhere.
- These small, fractured and isolated reserves are useless for biodiversity. Far greater outcomes could have been achieved by reserving the same total area of habitat in one large area.
- Reserves should be designed with science: they should be large, well connected, and not fragmented by concrete trails or roads. We do not want any more jigsaw reserves.

Space for passive recreation

- Planning in Western Sydney is increasingly double-dipping between bushland and recreational space. Our community needs more bike trails and dog parks and fitness stations and cafes - but not in bushland.
- Where can we go to escape the ever-present concrete and noise and bulldozers? Now more than ever our communities need wild places to find quiet and nature and peace. Natural areas offer outstanding recreational opportunities but only when respected as natural areas: we need more earth, not concrete.
- Bushland areas should be big, connected, quiet, passive and free of concrete trails, bikes and cafes. This style of bushland reserve is just as necessary in Western Sydney as in Canberra or the Northern Suburbs - but a critically rare resource in our region and alarmingly absent in the planning vision for our region.

Rewilding Shanes Park

The Shanes Park property presents a unique opportunity to restore the native wildlife of the Cumberland Plain and bring back animal species that have been lost from this habitat, and in some cases from mainland Australia.

Western Sydney University, Rewilding Australia, Conservation Volunteers Australia and the Cumberland Conservation Network have partnered in a proposal to 'rewild' this jewel.

Shanes Park is a single remnant of 550 hectares of grassy woodland and no other site on the Cumberland Plain has sufficient scale for this type of restoration. Rewilding this reserve by establishing a feral-proof fence would allow for the survival of many species (such as the Speckled Warbler, below) and the reintroduction of species already lost in Western Sydney including the Bush Stone-Curlew, Bettong and Brush-tailed Phascogale.

Further details are available at: www.shanespark.com/Rewilding.html

Compulsory acquisition of non-residential land

- Compulsory acquisition of ***non-residential*** land must be available to ensure sensible planning for future reserves. Until recently the RMS M7 offset program operated a highly successful compulsory acquisition program which created Colebee Nature Reserve and expanded public reserves at Bents Basin, Kemps Creek and Rouse Hill.

Conservation before revegetation

- The growing '*rape then revegetate*' approach to our landscape is not acceptable. Entire suburbs and precincts (for example Oran Park) are being cleared without retaining so much as a single tree.
- The research is very well established demonstrating that any revegetation technique is a very poor replacement for conservation of existing bushland. This is supported by the NSW Scientific Committee. Policy must follow science in prioritising conservation of existing habitat - whether old paddock trees or entire bushland remnants - over revegetation.
- Previous revegetation (e.g. Western Sydney Parklands) has occured on a large scale despite scientific advice that this would not deliver

the biodiversity outcomes claimed[33]. The poor results predicted have now been retrospectively demonstrated.

- New techniques offer improvements in revegetation outcomes including scalping. However these still present very poor outcomes compared to conservation[34]. The mistakes of the past should not be repeated and the focus of offsetting must remain on the conservation of intact and even degraded natural systems. As NSW Scientific Committee have noted the science is clear: 'the best biodiversity conservation outcomes are achieved by the reservation and protection of intact communities and… rehabilitated sites rarely approach the biodiversity values of intact, or even degraded natural communities'[35].

Protecting key corridors

- Corridor identification and conservation remains one of the highest conservation needs of the region.
- Offsetting results in islands of green and does little to improve corridor protection. Direct intervention is needed. Previous programs have been highly effective in this regard including the RMS program (providing NPWS land) and the Department of Environment & Energy Cumberland Corridors Program (purchasing smaller corridor lands for conservation NGOs).
- Many corridors in the Cumberland Plain are 'paper corridors' of little use for wildlife. Corridors must be continuous (not bisected by roads or rail), like-for-like (woodland must be linked by woodland not riparian areas), and sufficient (>500 m wide unless already developed). Existing and new road & rail infrastructure must incorporate *effective* wildlife crossings such as underpasses (minimum 2.7 m clearance for macrofauna) or vegetated land bridges.

Protecting old growth

- It is difficult to convey the value and scarcity of old growth in the Cumberland Plain. Less than 50 hectares (0.04%) of old growth remains with just one major patch each of Cumberland Riverflat Eucalypt Forest, Cumberland Plain Woodland and Castlereagh Scribbly Gum Forest. Without urgent intervention the irreplaceable

[33] For example Nichols et al (2010) Testing a facilitation model for ecosystem restoration: Does tree planting restore ground layer species in a grassy woodland?
[34] Cuneo et al (2018) Restoring grassy woodland diversity through direct seeding: Insights from six 'best-practice' case studies in southern Australia. This paper includes the weed couch in monitoring data and uses non-random transect placement. CCN monitoring shows 'good' sites have 14-21% native cover after 2 years and 30-58% exotic cover. This is greatly superior to results from tree planting, however it remains greatly inferior to land conservation.
[35] NSW Scientific Committee 2014. Submission to: Draft NSW Biodiversity Offset Policy for Major Projects

ecological, historical and Aboriginal Cultural significance of these sites will be destroyed forever.

- Macarthur Forest: Almost the entire fertile section of the Nepean River was cleared in the 1800s and what remains today is regrowth. However some 30 hectares of old-growth Cumberland Riverflat Eucalypt Forest was saved and hedged from stock by the second generation of settlers. The amazing trees (including 'Mr Fat') loved by the local community are subject to a sand mining licence. Government buy-back of the sand mining licence should be pursued.

- Douglas Park: This 4 hectare of corporate land includes over 20 old-growth Cumberland Plain Woodland trees including some of the most stunning in the region. This site has high significance to the Dharawal Aboriginal community.

- Londonderry: The 1,000 hectares of Castlereagh Scribbly Gum Forest in northwest Sydney looks impressive on maps however almost the entirety of this vegetation is young regrowth from laterite strip mining in the 1920s. The largest patch of old-growth known covers approximately 10 hectares where 71 old-growth trees provide the bulk of nesting hollows for the region, supporting endangered Squirrel Glider, Yellow-bellied Glider and large forest Owls. The Deerubbin Local Aboriginal Land Council are considering development of this site.

Real compliance

- There are no solutions for the Cumberland Plain without compliance. The last 10 years have witnessed compliance almost completely abandoned in the region.

- Compliance in offset schemes requires urgent improvement. The misuse of offset sites including Fernhill and Emerald Hills have undermined the delivery of actual biodiversity improvements at these and other sites.

- Government agencies must be given the resources and incentive to undertake compliance and be held to account for failure to adequately implement compliance. Recently OEH attended an illegal clearing case at the largest population of an endangered species and provided the landowner approval to continue the clearing. In 2018 at Bushells Lagoon (a public wetland reserve) both Hawkesbury Council and the Natural Resources Access Regulator declined to take action when adjoining landowners trespassed on the reserve, excavated the natural wetland and drained the entire wetland dry for personal use - one of them without even a water licence to extract from this waterbody.

- Planning decisions must cease to approve development on illegally cleared land. Some developers are clearing illegally and openly paying fines - some as little as $1 per endangered plant - and subsequently being given development approval for the areas illegally cleared. The community are fed up by authorities taking a blind eye to even the most blatant breaches of law.

Suitable riparian protections

The revised NSW Office of Water '*Guidelines for riparian corridors on waterfront land*' are insufficient to maintain habitat and water quality in the region.

Generally the riparian corridors provided are approximately half that required, and would be rectified by applying the mandated Riparian Zones one stream order higher. The provision allowing infrastructure in the top 50% of corridors should also be removed.

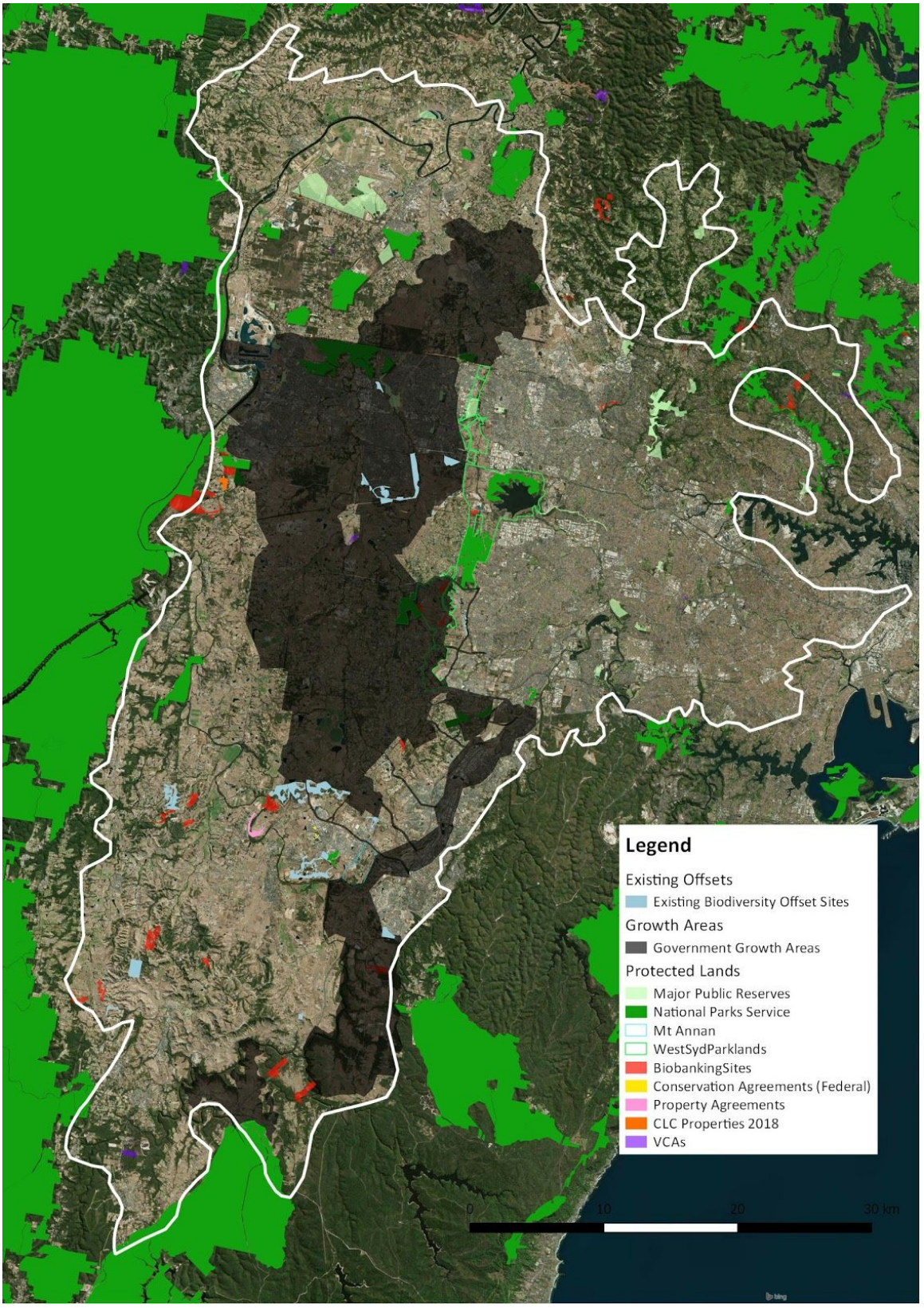
Safe roads for people & wildlife

- Roadkill is one of the key drivers of fauna declines in the Cumberland Plain.
- Terrestrial species (and those travelling by land) are the most impacted. Roadkill is one of the primary sources of mortality for the Koala populations in Wollondilly, Campbelltown, Liverpool and in Hawkesbury, Blacktown and Penrith.
- The loss of non-endangered species is also a major problem in the Cumberland Plain. 'Common' wildlife including Wombats and Eastern Grey Kangaroos are vital to maintaining a healthy woodland. As the Cumberland Plain becomes urban and new linear infrastructure is developed there is a very high risk that even these species are permanently lost. It is estimated that just 2% roadkill per year will lead to extinction of the once common Eastern Long Neck Turtle on the Cumberland Plain[36].
- An evidence based, comprehensive roadkill reduction strategy is urgently needed for the region. This should be integrated into the planning (both development and road-and-rail) and adequately resourced for implementation in new infrastructure and as retrofit solutions. This plan should cover threatened species (e.g. Koala) as well as ecosystem engineers (e.g. wombats, Eastern Grey Kangaroo).

[36] Spencer et al (2017) Critically evaluating best management practices for preventing freshwater turtle extinctions

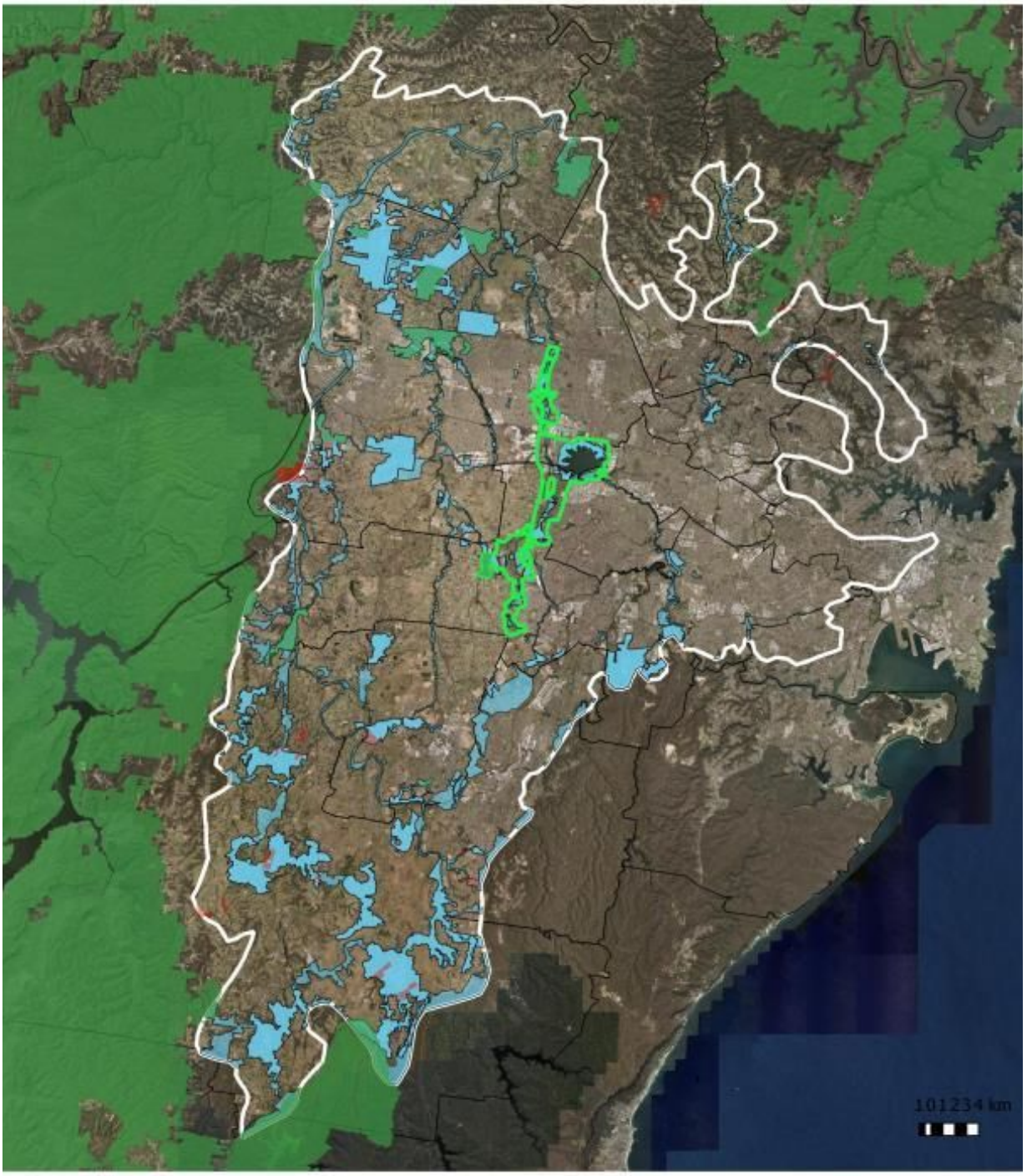
Maps

Cumberland Plain - Conservation, Offsets & Growth Areas



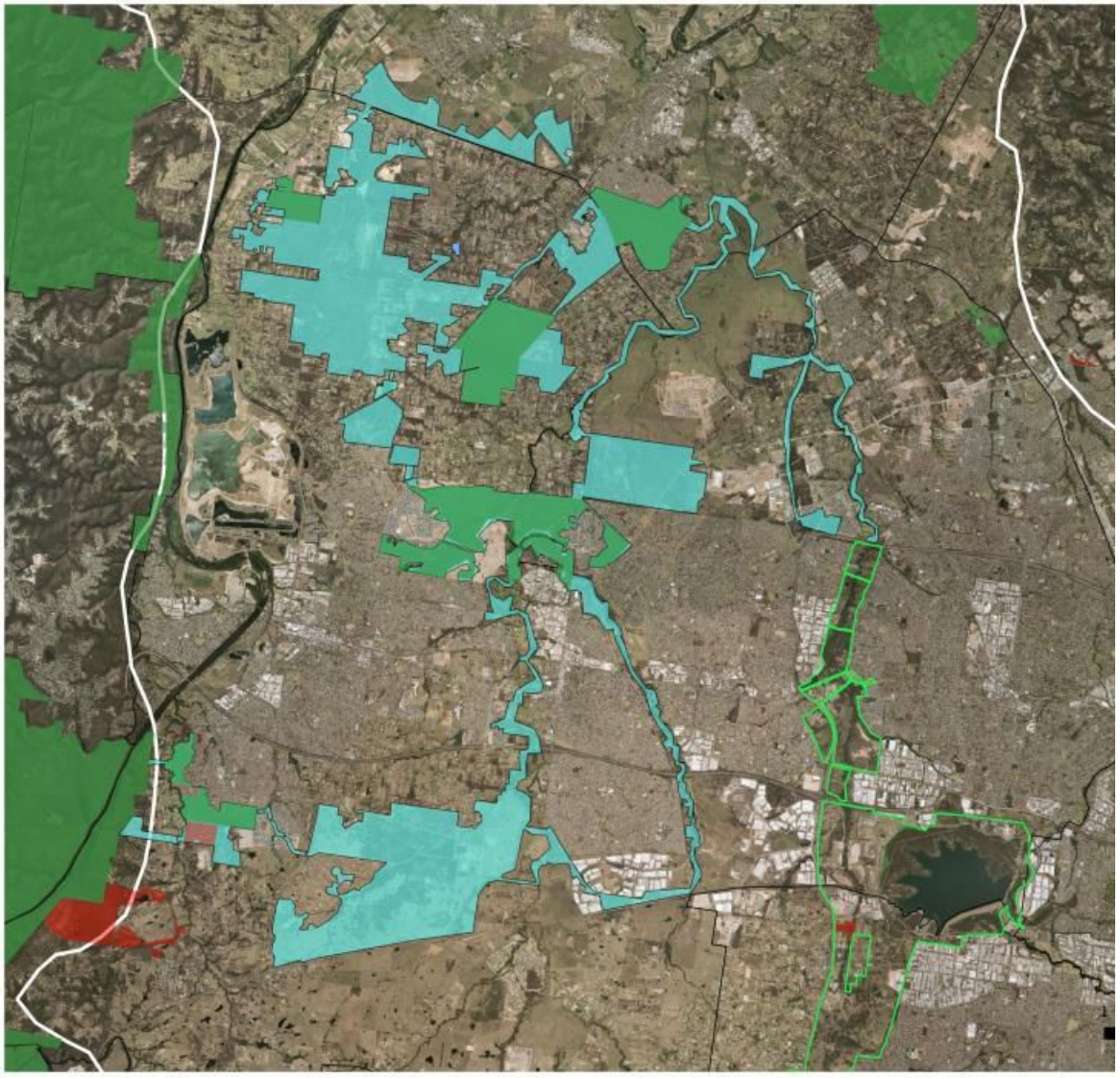
The pointless 'scattergun' results of offsetting compare starkly against the vast release of coordinated Growth Areas

Biodiversity Investment Opportunities Map (OEH Corridors)

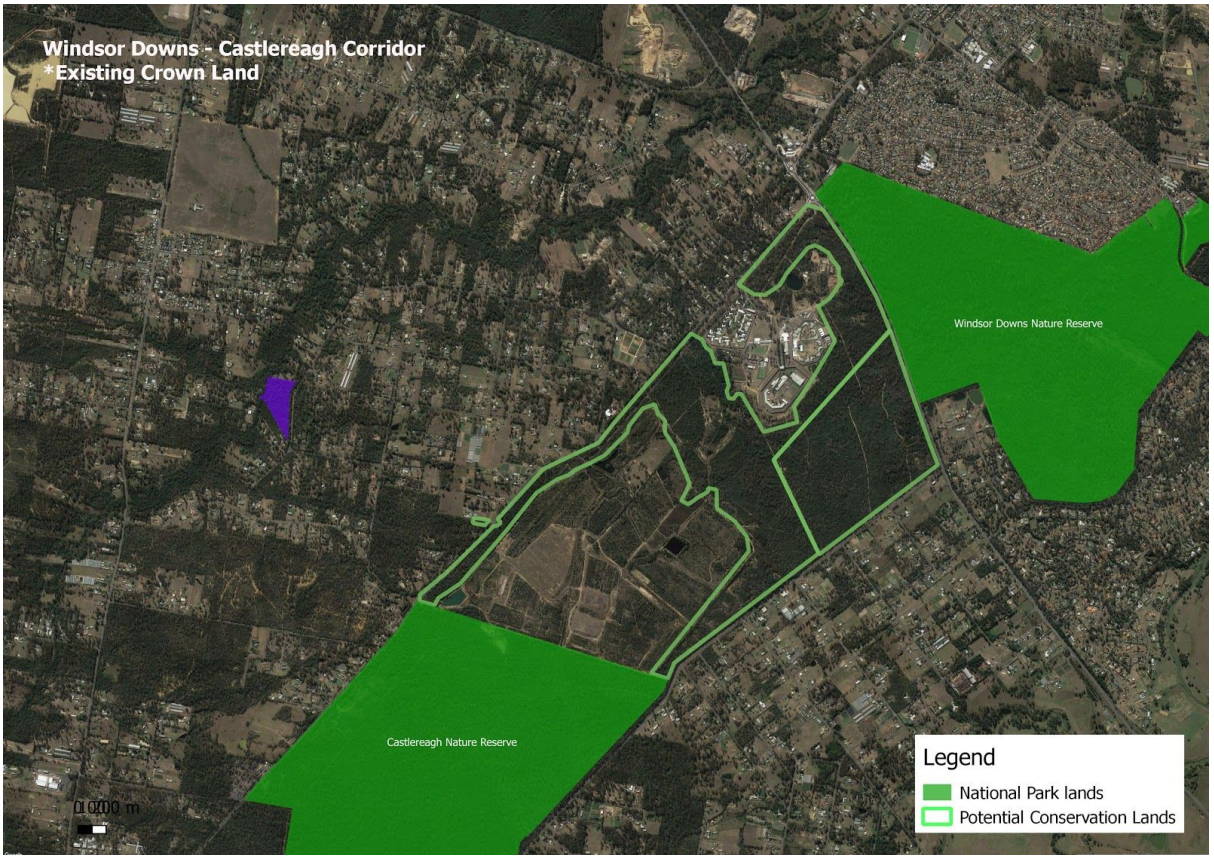


The Biodiversity Investment Opportunities (BIO) Map was a multi-million dollar corridor identification project by OEH. This initiative came with no funding or implementation measures. The CCN and our partners have pioneered the acquisition of corridors through the work of the Cumberland Land Conservancy (CLC) and Conservation Volunteers Australia (CVA) to buy-back key linkages in the landscape.

Cumberland Conservation Corridor - North (CCN proposal)



Windsor Downs - Castlereagh Corridor



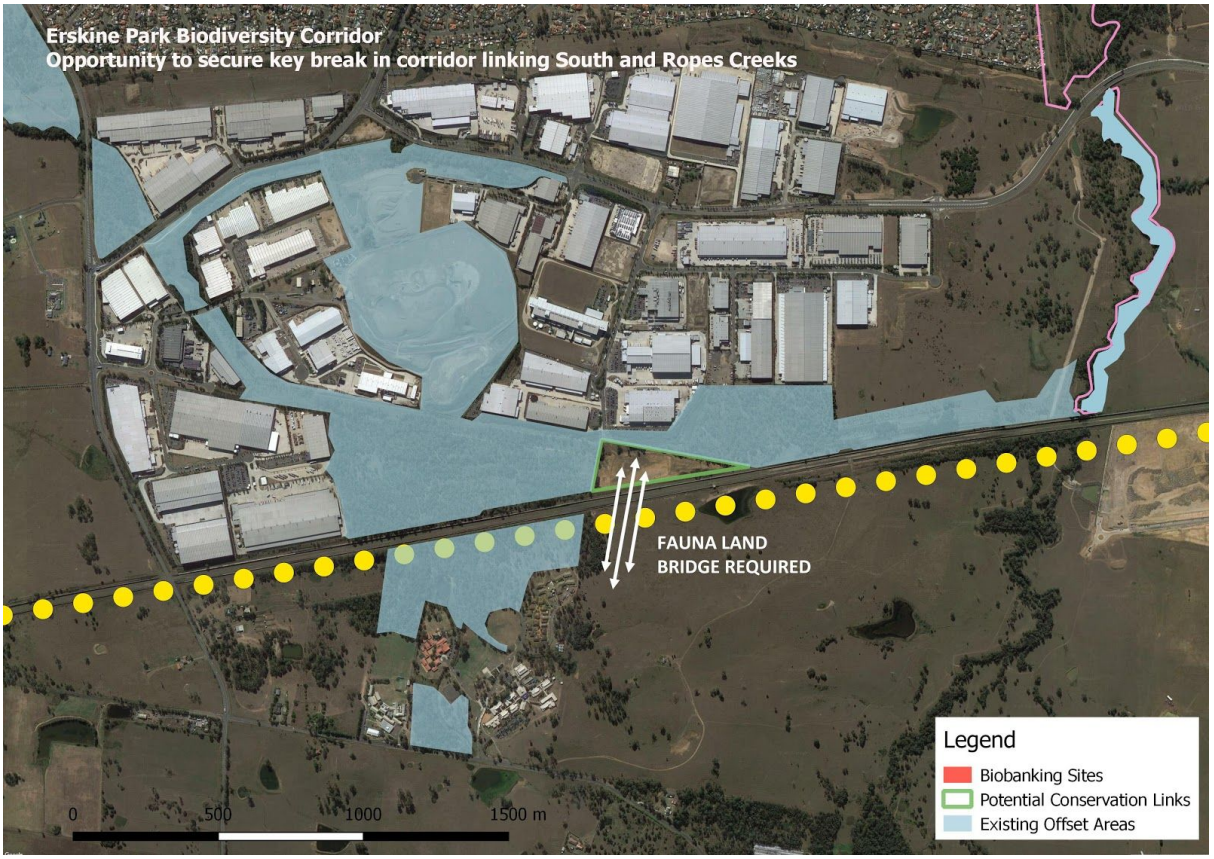
The Crown Lands surrounding the John Moroney Correction Centre and Castlereagh Liquid Waste Centre (above) form the vital link between Windsor Downs and Castleragh Nature Reserves.

Regrettably both institutions have installed security fencing around the surrounding public bushland rather than around their actual institutions. This completely isolates these reserves. John Moroney have also taken over management of the South Windsor Reserve, the crown trust for managing the easternmost bushland block.

This presents an ideal opportunity for government to assist in relocating fencing to the boundaries of the institutions, allowing wildlife free movement and dedicating the surrounding crown land for conservation.

The tiny crown reserve adjoining 331 Northern Road has been similarly taken over by adjoining landowners. It retains one of the last east-west linkages from The Northern Road and is vital for maintaining future corridor options. This land should be incorporated with the reserve.

Erskine Creek Corridor opportunities (WS Freight Line)

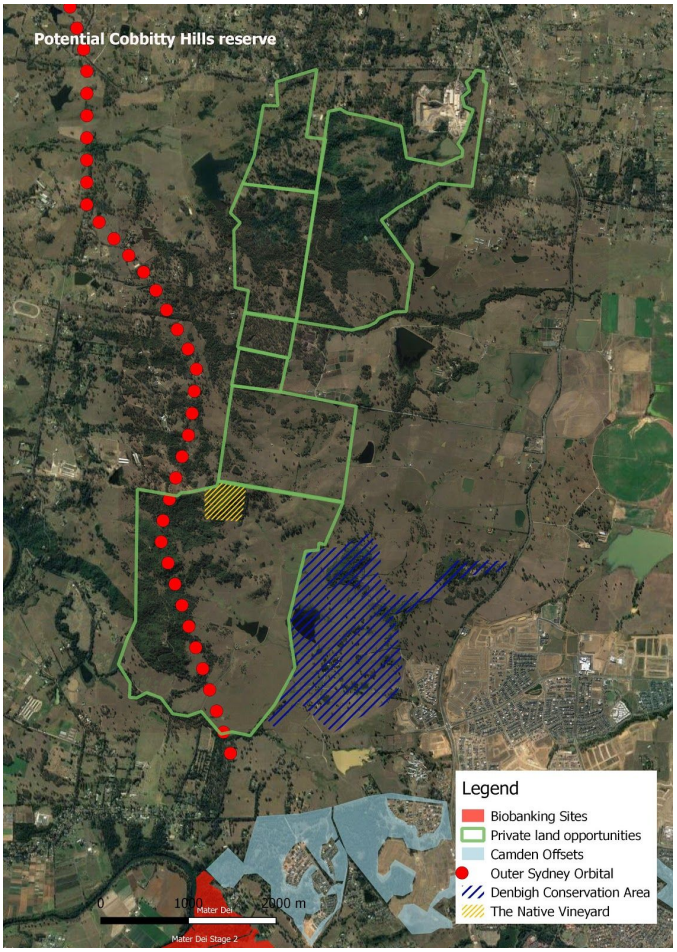


The hole (above) in the Erskine Creek Biodiversity Corridor comprises the entire corridor linking Ropes and South Creek. This small property is an obvious and immediate priority for conservation.

This land is zoned for industrial uses and currently undeveloped.

The adjoining proposed rail corridor offers an opportunity to compulsorily acquire this property. The rail corridor will completely cut off the existing wildlife corridor to the Emmaeus Biodiversity Offset area. A wildlife land bridge will be required here as part of the rail development..

Proposed Cobbitty Hills Reserve

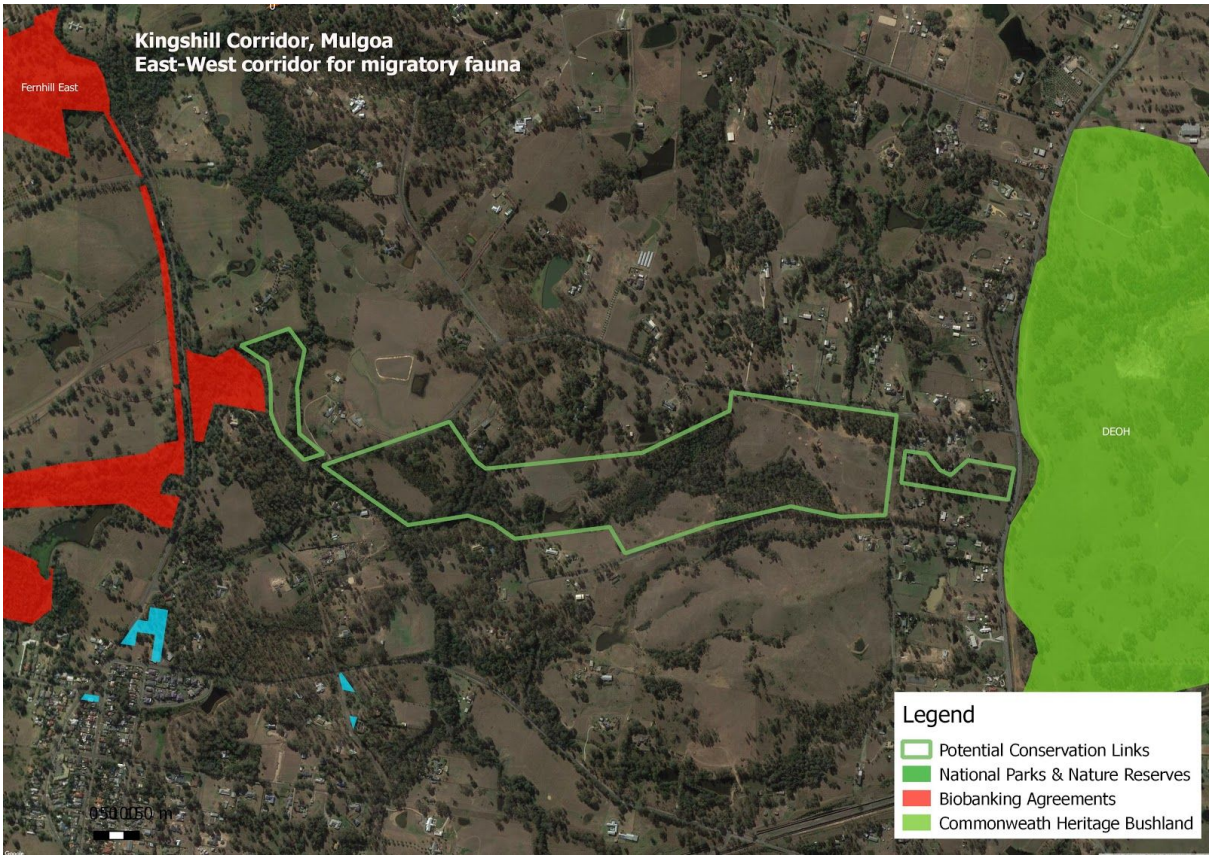


The Cobbitty Hills proposal area includes 'The Native Vineyard' (right) a patch of Western Sydney Dry Rainforest of historical and botanical significance as well as 'Cut Hill' a Dharug and Dharawal ochre ('Cubbitchy') quarry.

The large commercial holdings of Cobbitty provide one of the last opportunities to create a large public reserve.

Unoccupied and unfarmed portions of seven investment properties contain a total area of 1,200 hectares, predominantly Cumberland Plain Woodland and grasslands. These properties are impacted by the proposed Outer Sydney Orbital and could be compulsorily acquired.

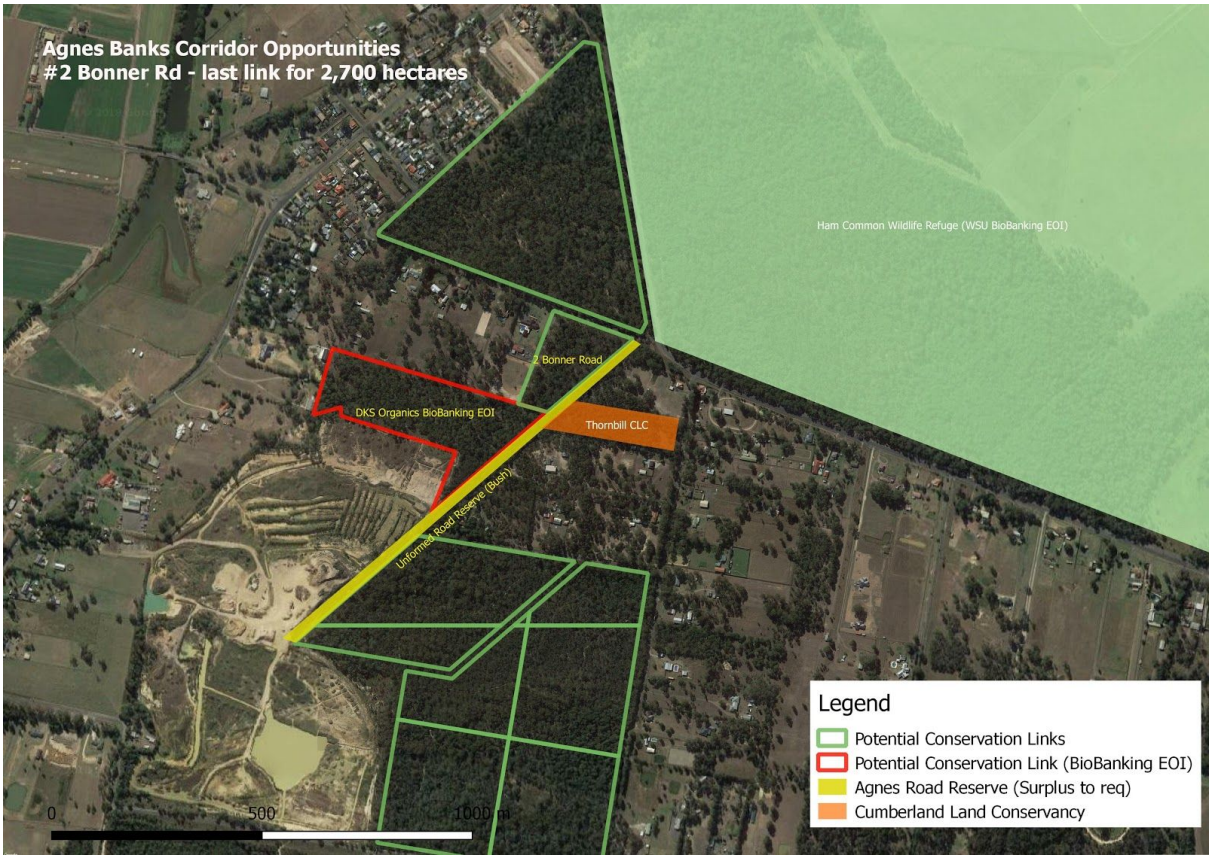
Kingshill Migratory Fauna Corridor



Threatened migratory fauna including the Scarlet Robin (left) and Flame Robin rely on east-west corridors connecting their Summer habitats in the Blue Mountains and Winter habitats in Cumberland Plain Woodland.

Almost all these links are now destroyed. Kingshill Road offers one of the last opportunities to secure a decent connection, linking the large areas of woodland at Defence Establishment Orchard Hills with the Blue Mountains.

Agnes Banks Corridor



The two largest areas of vegetation remaining in the Cumberland are linked by a small corridor near Bonner Road at Agnes Banks. This corridor is actively used by native fauna including Kangaroos, Sugar Gliders and Echidna to move between the Ham Common Wildlife Refuge (crown land now managed by Western Sydney University) and the large areas of crown and ex-crown land of Castlereagh to the south.

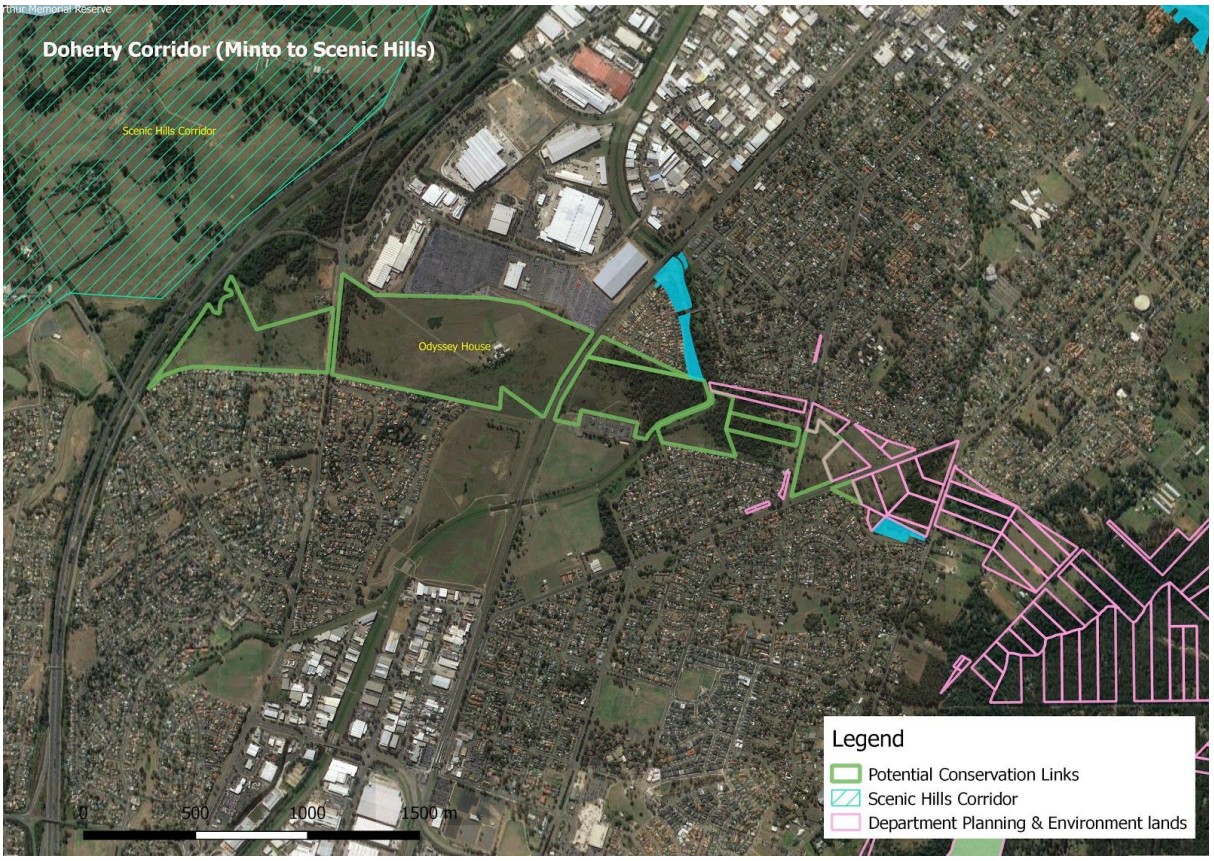
A single property - No. 2 Bonner Road - is the only option to preserve this link and even construction of a single dwelling would irrevocably isolate 2,700 hectares of vegetation. This property should be acquired as an urgent priority. Other private lands should also be approached. An unformed road reserve should also be acquired: this has the support of neighbouring landowners.

Agnes Banks Nature Reserve additions

Almost all remaining Agnes Banks Woodland is located in the Agnes Banks Nature Reserve. The rear portions of two private properties create a major inclusion into the Nature REserve. These rear portions are protected by a heritage Order and were meant to be incorporated in the Nature Reserve, however they have never been acquired. Despite the heritage order the precious Agnes Banks Woodland on each property is rapidly degrading with illegal clearing, bike trails and dumping. These areas now threaten to erode the beauty and resilience of the surrounding Nature Reserve by introducing weeds and pests.

The Heritage Order portions of these properties should be purchased and incorporated into the Agnes Banks Nature Reserve as intended.

Doherty's Corridor - Minto to Scenic Hills



This corridor of public land has been identified since the 1970s 'Doherty' paper and links the Holsworthy-Campbelltown bushland (and koala corridor) with the Cumberland Plain Woodlands of the protected Scenic Hills. One property is currently under use with the historic 'Odyssey House' being used for community programs. The house and it's surrounds could continue under this arrangement while also securing this key landscape corridor.

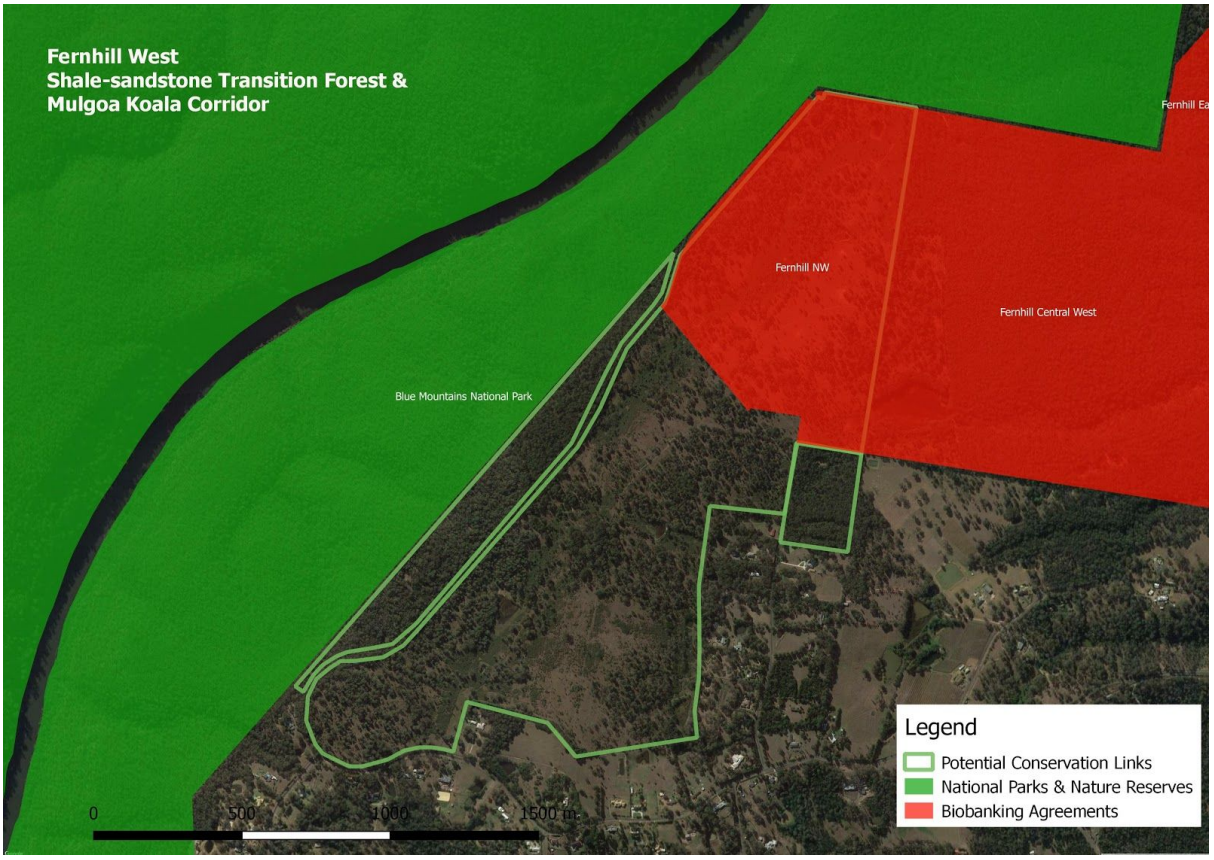
Fairlight Road

Lots 1 & 2 Fairlight Road remain undeveloped and protect 25 hectares of Cumberland Plain Woodland.

These properties adjoin the large Fernhill BioBank site on two sides and offer high strategic conservation value.

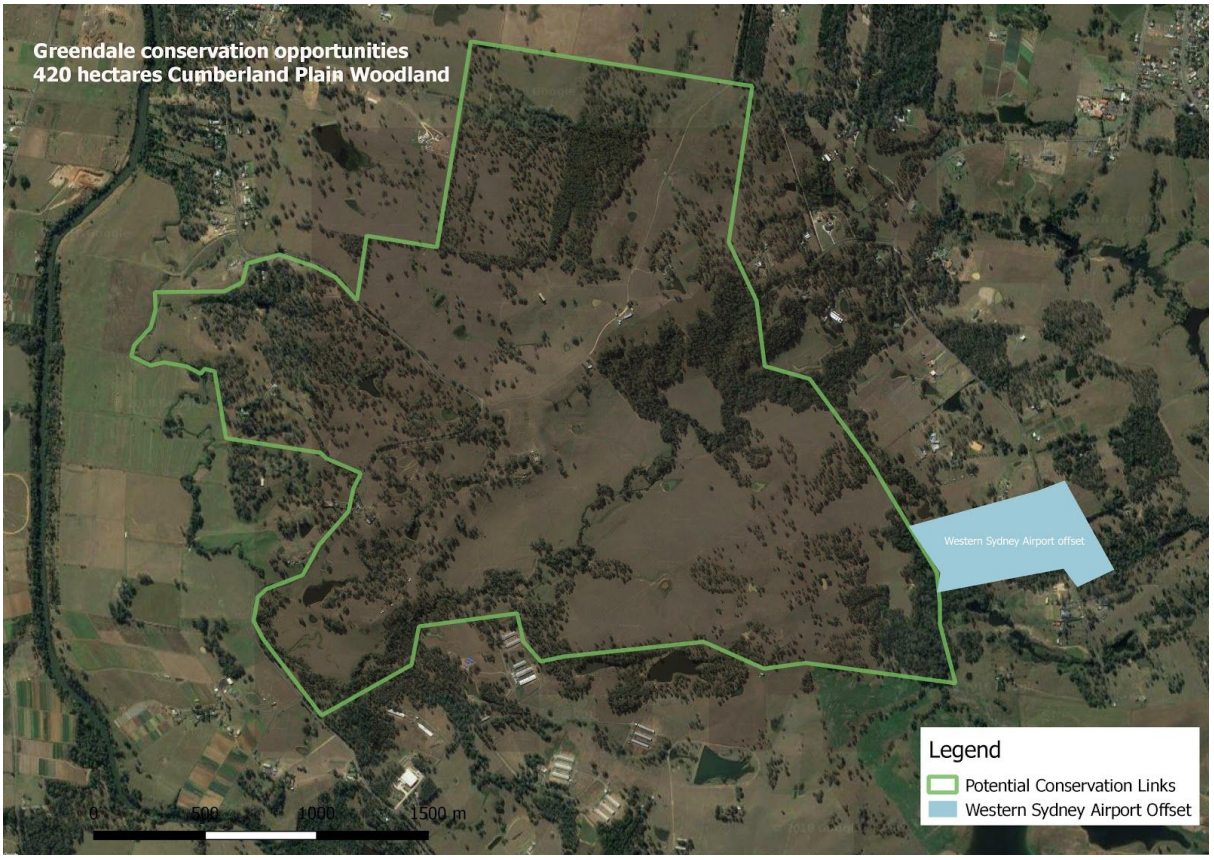
These properties are best suited to purchase. After purchase these lots may suit BioBanking and addition to the publicly owned section of Fernhill estate offering both conservation and passive recreation outcomes.

Fernhill West



The 'Western Precinct' of the historic Fernhill estate protects over 100 hectares of Shale-Sandstone Transition Forest regenerating after past illegal clearing. This is a core portion of the regional koala corridor. While the Mulgoa koala corridor has been recognised in OEH mapping there has never been a survey of the population. This site has outstanding strategic conservation value adjoining the Blue Mountains National Park and Fernhill BioBank sites.

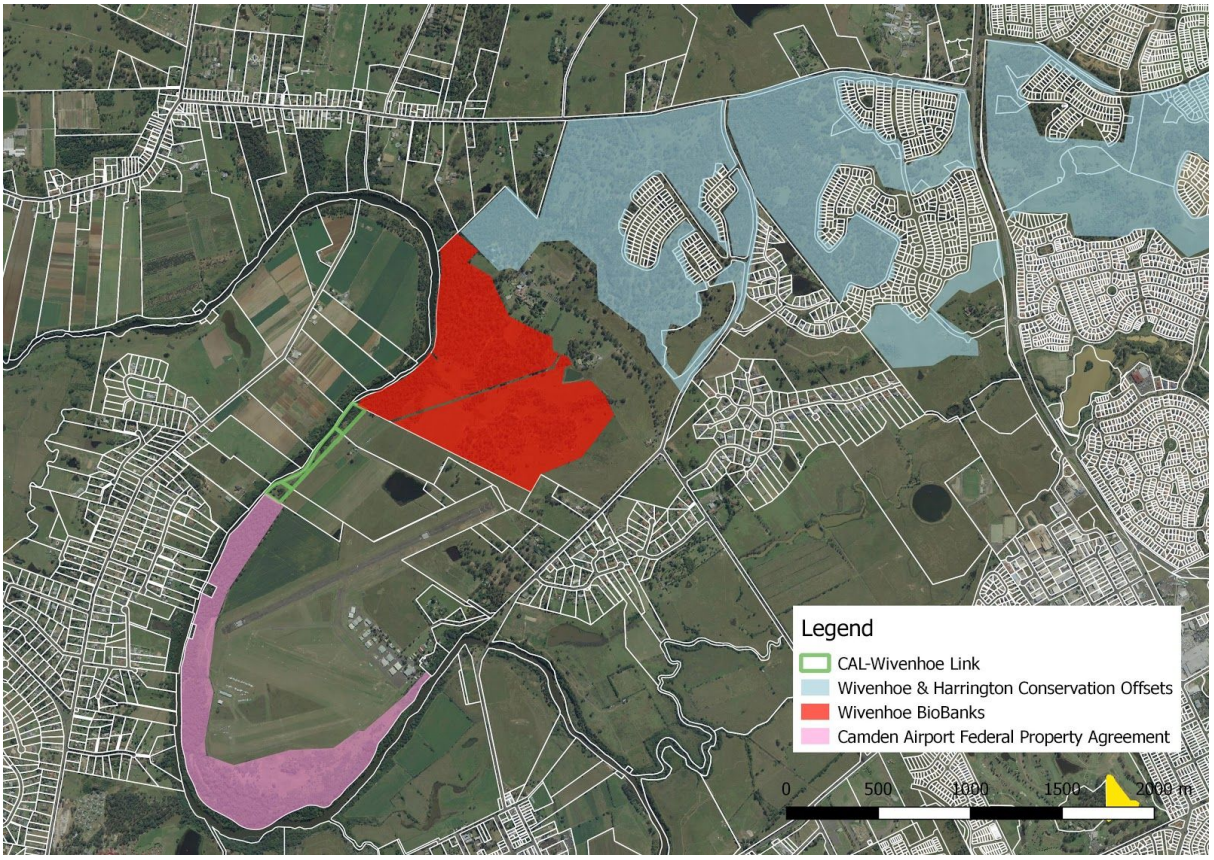
Greendale opportunities



Large private and corporate holdings at Greendale offer one of the few opportunities to secure large consolidated areas of Cumberland Plain Woodland. A total area of 420 hectares, most of it Cumberland Plain Woodland, is located across approximately seven holdings adjoining the proposed Western Sydney Airport offset site.

Serious conservation of the Cumberland Plain Woodlands as a functional ecosystem cannot be achieved without establishing large consolidated areas of this nature.

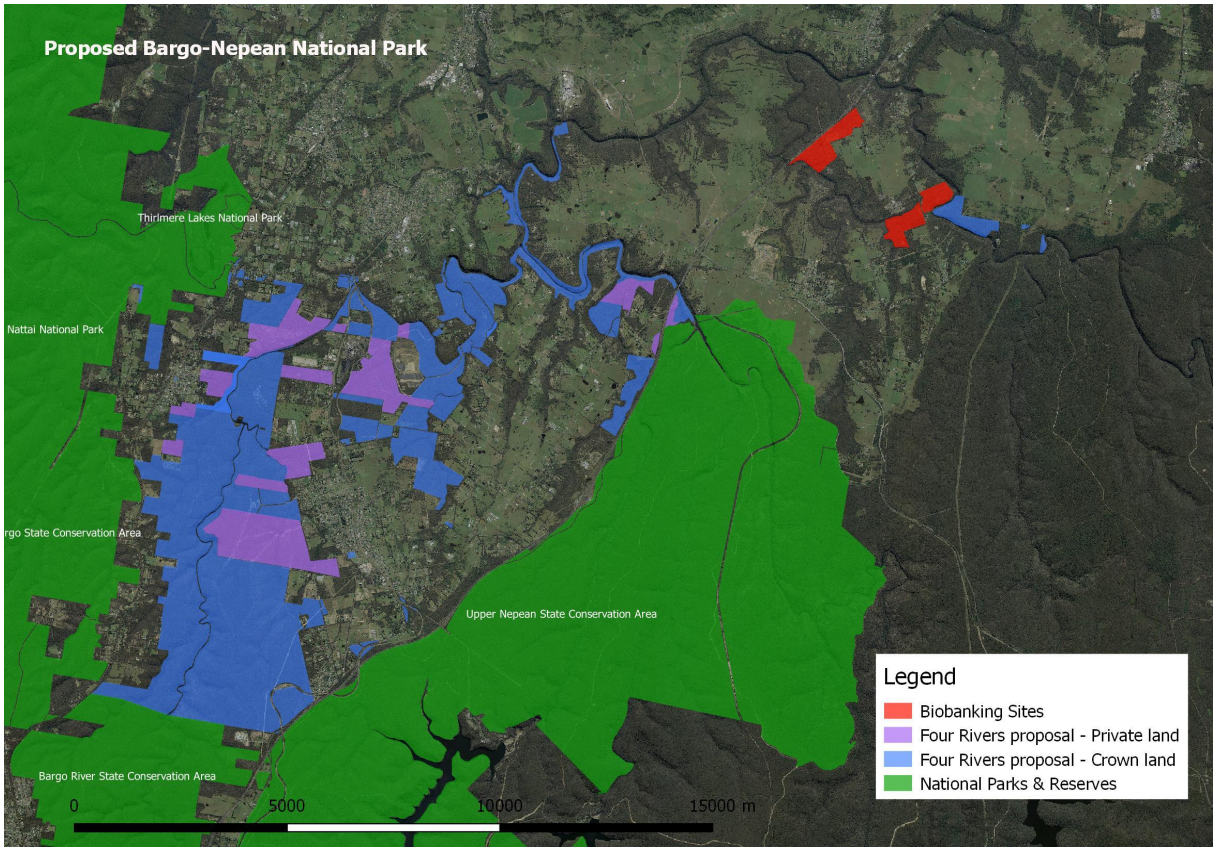
Camden Airport - Wivenhoe Conservation Link



The two largest conservation areas in Camden LGA are separated by just two private landholdings along the Nepean River. To the south the Environmental Zone (approx 55 hectares) of Camden Airport is protected by a Commonwealth Property Agreement while to the north is over 60 hectares of BioBank (at Wivenhoe) and the biodiversity offsets of Wivenhoe and Harrington Park.

Linking these existing conservation areas along the river would create one of the largest conservation areas of the Cumberland Plain.

Bargo-Nepean National Park proposal



The Crown Lands of the Bargo River catchment are presently afforded no protection and are declining as a result of damage by 4wd, arson & dumping. They offer outstanding passive public recreation opportunities especially along the Bargo River Gorge and at Mermaids Pool.

The National Parks Association, Macarthur Branch, has long been proposing a national park for these lands, known as the Bargo-Nepean proposal. Progression of the proposal also provides the opportunity for long-overdue resolution of Aboriginal land claims. Resolution of these claims may see portions of the proposal area converted to private land or an Aboriginal management agreement for a National Park.

Blaxland Creek Corridor

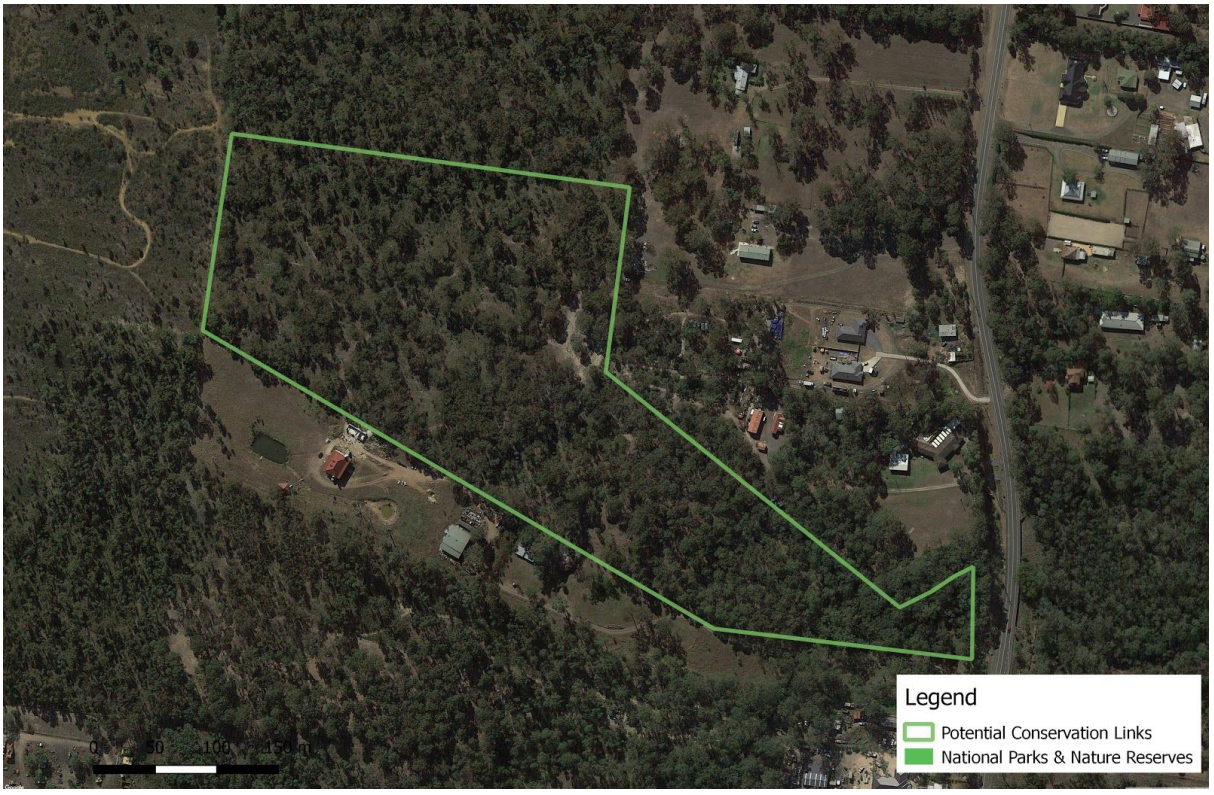
Western Sydney's most pristine creek, Blaxland Creek (below, in DEOH) is impacted by the proposed North-South Rail Line (orange) and Outer Sydney Orbital (Red; above). Two properties (green) connect the Defence Establishment Orchard Hills with the South Creek corridor and are obvious opportunities for conservation & restoration.

Northern Road Corridor

While considerable vegetation remains in the Castlereagh-Londonderry region the opportunities for retaining connectivity between existing reserves is extremely limited due to the development of narrow residential lots along Northern and Londonderry roads.

Lot 5//223798 Northern Road and other private lots presents opportunities for connectivity if the owners are interested; these would require subdivision of existing dwellings from the unoccupied portion of the property.

Londonderry Road Corridor



Like Northern Road the Londonderry Road retains very few opportunities for securing corridors linking Rickaby's Creek with existing conservation reserves.

Lot 2//10743 Londonderry Road is a private unoccupied lot which presents the best opportunities for connectivity if the owners are receptive.

Proposed Upper Georges River NP

Southwest Sydney is home to the only disease-free colony of Koalas in NSW.

Much of this habitat is not presently protected, and most of this land is owned by the people of NSW under the Department of Planning & Environment. Other land is owned by developers who have applied to the Department to clear key Koala habitat.

For decades the NPA and local community have been campaigning for protection of this koala corridor as the proposed Upper Georges River National Park.

Planning Proposals threaten this corridor

The fate of koalas and some of the best bushland in western Sydney rests in the hands of the Department of Planning & Environment over the coming months as government assess development proposals in this area.

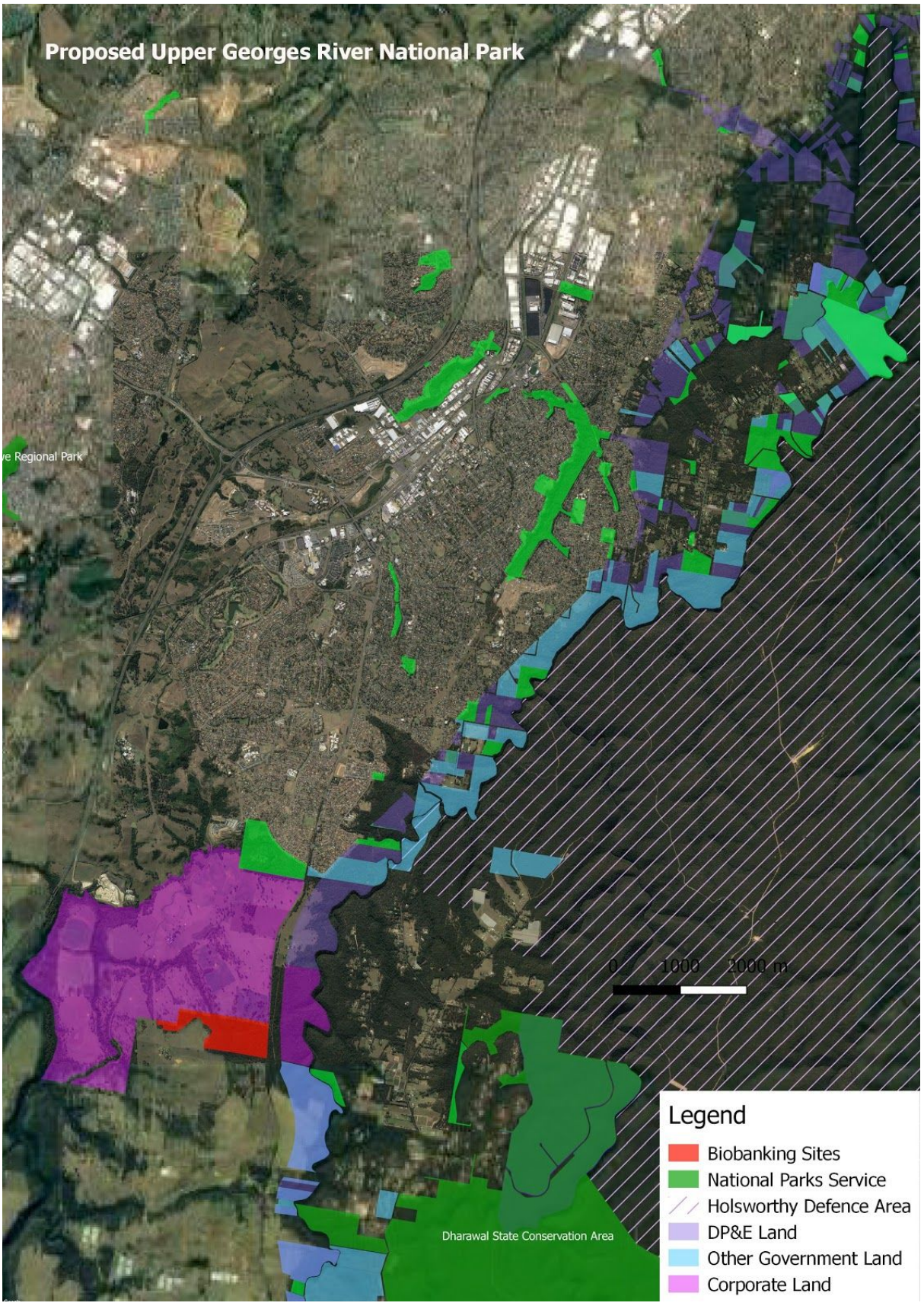
Proposals for development of iconic Gilead and Appin bushland have no social licence with the local community.

It is not acceptable to fence Appin Road and isolate the koala population trapped on the western (Gilead) side where they will eventually die. However it is equally unacceptable to install crossing structures while approving development of habitat on the west of the road - this would act as a 'sink' area into which koalas enter only to die from lack of sufficient habitat, dogs and other threats.

The opportunity

The Department of Planning & Environment and other government agencies own almost all remaining koala habitat on the east side of Appin Road. This presents an opportunity to readily secure the proposed Upper Georges River National Park. Just one corporate, unoccupied property east of Beulah requires acquisition in order to secure a functional wildlife corridor for our iconic wildlife.

A map of this koala corridor & proposed reserve follows.


Proposed Upper Georges River National Park
Regional Park
0 1000 2000 m
Dharawal State Conservation Area
Legend
Biobanking Sites
National Parks Service
Holsworthy Defence Area
DP&E Land
Other Government Land
Corporate Land

Old-Growth - Whitegates Road

Very little mature vegetation remains in the region. The largest known area of old-growth is this patch of Castlereagh Scribbly Gum Forest at Whitegates Road.

These trees are understood to be the primary breeding habitat for the local population of Yellow-bellied Glider (the last in the Cumberland) as well as the endangered Squirrel Glider.

This irreplaceable forest is corporate land and under threat of development.

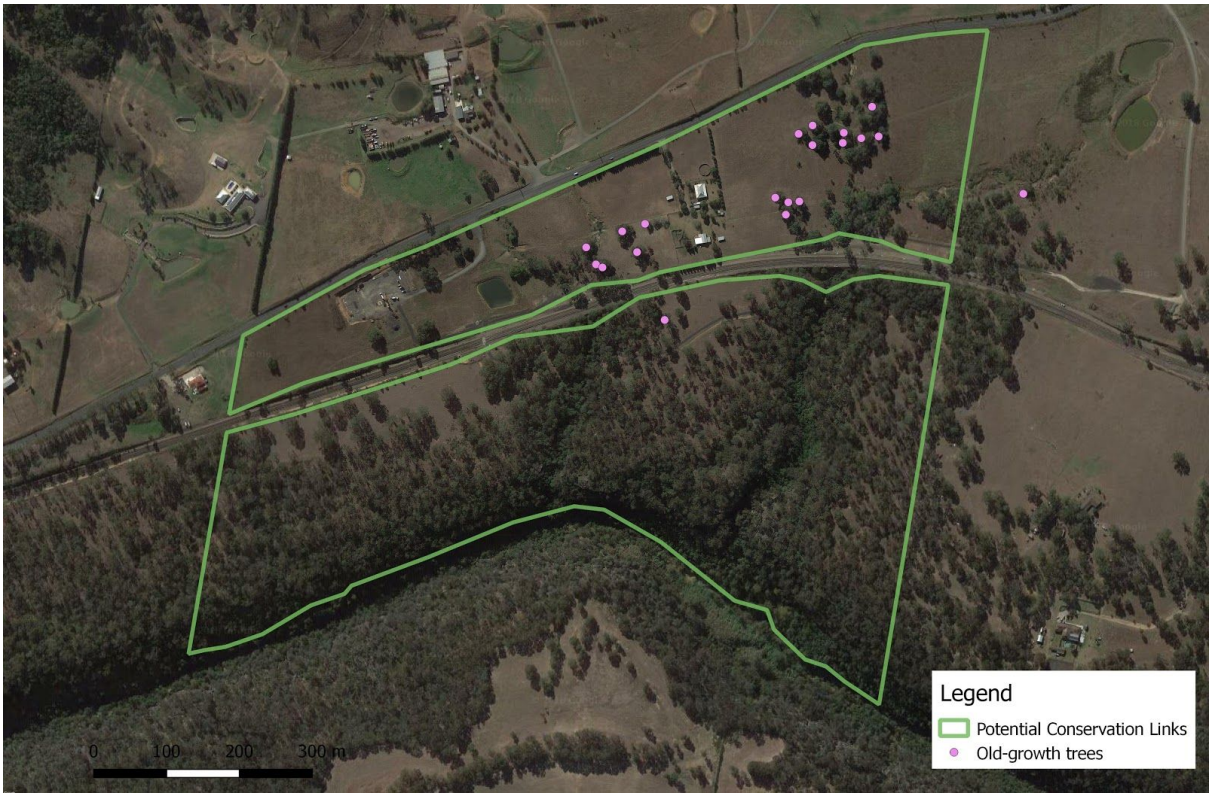
Old-Growth - EMAI:

The 'Macarthur Forest' at Elizabeth Macarthur Agricultural Institute is a popular site accessed by a mountain bike trail.

This majestic old-growth was protected by the early Macarthur family in the early 1800s by a hedge fence (still standing).

This forest is threatened by a sand mining licence. CCN support the buy-back of this sand mining licence to conserve this heritage.

Old-Growth - Menangle Road



The magnificent old-growth at Lot 2//747563 Menangle Road is the only known patch of old-growth Cumberland Plain Woodland remaining and a sacred site for the Dharawal Aboriginal community.

This site is owned by corporate mining company and leased for private uses. The old-growth has been suffered heavy damage from grazing with a number of trees now ringbarked. The landowner has now worked to fence off and restore a selection of trees on the property.

'The Karadji' (left) is a single tree from which the central trunk has been lost to fire and age; the remaining sections of trunk each exceed 1.5 m diameter.

CCN strongly support intervention to save this heritage before it is lost forever.

Old-Growth Barkers Lodge Road

This rural lot retains the second known old-growth Cumberland Riverflat Forest remnant. Six trees have been retained from sandmining, leaving them standing on small mounds.

While not as intact as the forest at EMAI the Barkers Lodge Road trees remain a key and irreplaceable resource. The site is also significant to the Dharawal people as a traditional camping ground.

This property is presently unoccupied and is not used for agricultural purposes. The landowner may be amenable to conservation.