

INQUIRY INTO KOALA POPULATIONS AND HABITAT IN NEW SOUTH WALES

Organisation: Total Environment Centre

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Submission -

Inquiry into Koala populations and habitat in New South Wales

Koala protections with the Gilead housing development - a case study

Submission by **Total Environment Centre** to the **Planning and Environment Committee of the Upper House of the NSW Parliament**

August 2019

Koala Survival Lessons from Gilead

Importance of Koalas in Macarthur

The Campbelltown/Macarthur area in south-western Sydney contains the only population of koalas listed in NSW by McAlpine et. al. (2015)¹ as likely to be growing and could be the only chlamydia free colony in Australia². Current estimates are that there are at least 500 koalas in this area³. From a scientific, ecological, community and tourist/economic perspective, the koalas of Campbelltown are priceless.



However, their long-term survival is being directly threatened by the level and speed of urbanisation projected for Campbelltown and the Greater Macarthur area. In addition to major housing growth over the last few years, the Greater Sydney Commission has set a target of an additional 143,000 dwellings in the next 20 years to be built in south-western Sydney⁴. The NSW

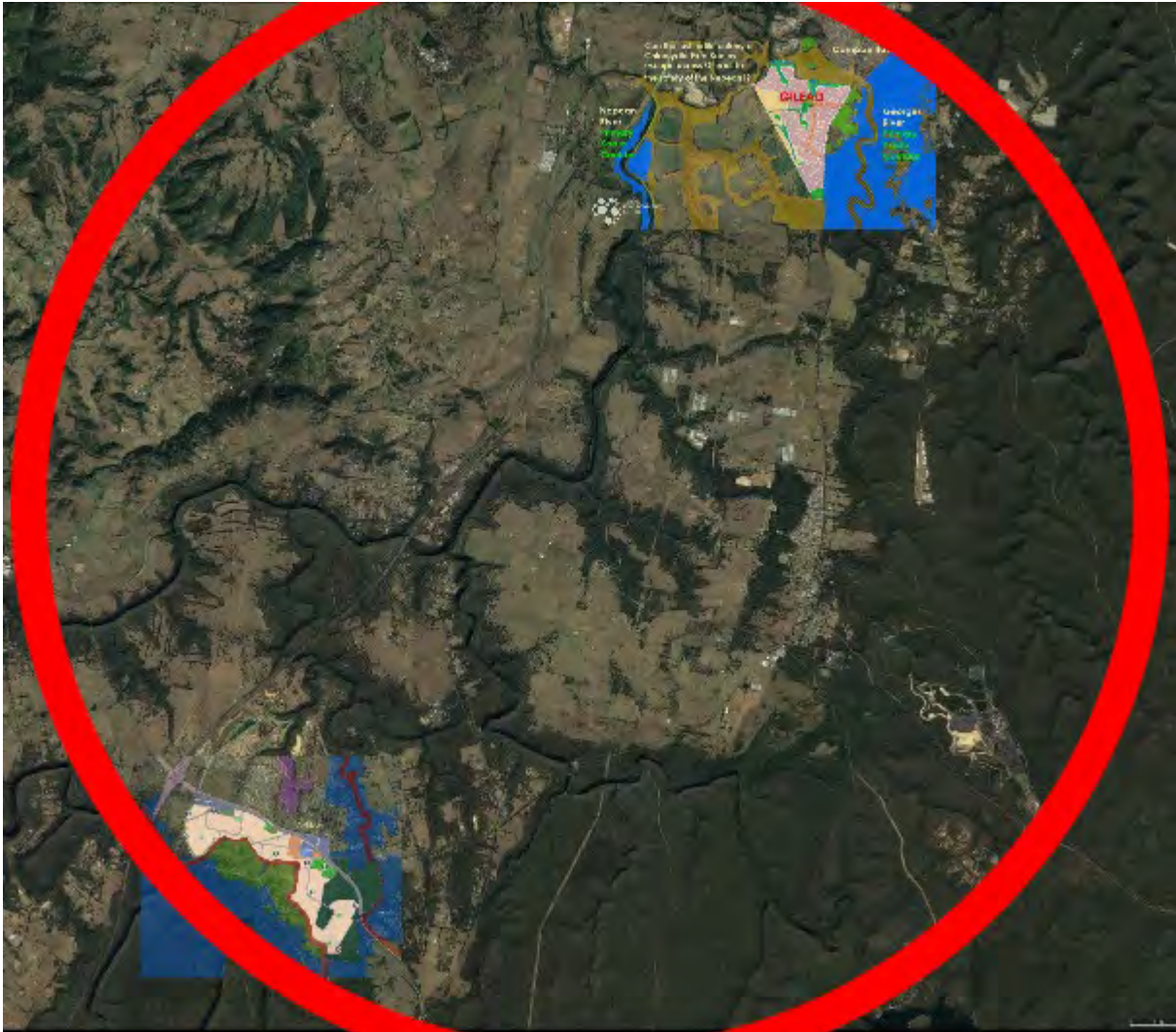
¹ McAlpine et. al. 2015. Conserving koalas: A review of the contrasting regional trends, outlooks and policy challenges. Biological Conservation 192 226-236.

² Conversation Rob Close 2018

³ 'Saving Our Species: Campbelltown Koala update', OEH 5 November 2018.

⁴ <https://www.greater.sydney/digital-district-plan/992>

Government's proposed Greater Macarthur Priority Growth Area will deliver 33,000⁵ - including on land home to important Koala corridors. The areas that have come to the Total Environment Centre's interest are Gilead (the northern site in the image below) and Wilton (the southern site) - they both bookend the area slated for development. We will focus on Gilead.



Few, if any, other major urban areas on earth can claim to support a species as globally recognised and valued as the koala. The koalas of Holsworthy Army Base survived near extinction in the 1930s and there is DNA evidence that as few as only 22 may have been left alive. From the mid-1980s they were spotted once again and have since been steadily recovering, and are now re-populating the surrounding Sydney suburbs that used to be their preferred habitat. In the last three years as their presence as roadkill along Appin and Picton roads has increased, their plight has come to wider attention.

⁵ <http://www.planning.nsw.gov.au/Plans-for-your-area/Priority-Growth-Areas-and-Precincts/Greater-Macarthur-Priority-Growth-Area>

Koalas have a unique European heritage connection to Greater Macarthur. It was in this area in 1798 - 10 years after settlement - that John Price was the first European to “discover” the koala, and it is quite likely that the word ‘Koala’ is derived from a local indigenous Darug word, ‘Koolah’ meaning ‘no water’.

For a region with one of the lower socio-economic indicators for Sydney, the presence of a wild Koala colony in Campbelltown is an economic jackpot on which a new and lucrative tourism industry can be founded. Combined with the new Western Sydney international airport, and Campbelltown’s colonial frontier landscapes, the potential for Campbelltown to be re-imagined as an international tourist destination is ripe. An hour train trip from Sydney is a long daily commute, but a short journey for an international tourist.

Koalas are not currently used in Campbelltown Council tourist promotional material. In March 2019, Campbelltown Council appeared to appreciate the significance of having this iconic animal arrive on their doorstep, and held a ‘Koala Forum’ where all the stakeholders were in agreement, that we had, ‘One chance at getting this right for a recovering Koala colony’.

Unfortunately Campbelltown Council has put all its faith in Lendlease for development, a property developer that has only one tool in its tool box for ‘development’ - housing. Lendlease looks set to kill Campbelltown’s nascent Golden Goose (or Koala) at birth. As we speak Lendlease have set up a local extinction plan for Koalas in Gilead, and has deliberately subverted any measures to ensure their survival on their land. There is no sign of ‘Koala habitat enhancement’ for Gilead that Lendlease’s CEO Steve McCann promised at their last AGM.

Issue: Leaders are not held accountable for the actions that threaten wildlife.

Recommendation: CEOs have a corporate responsibility for extinction threats, brought upon by their own projects.

Threat to Koalas In Gilead

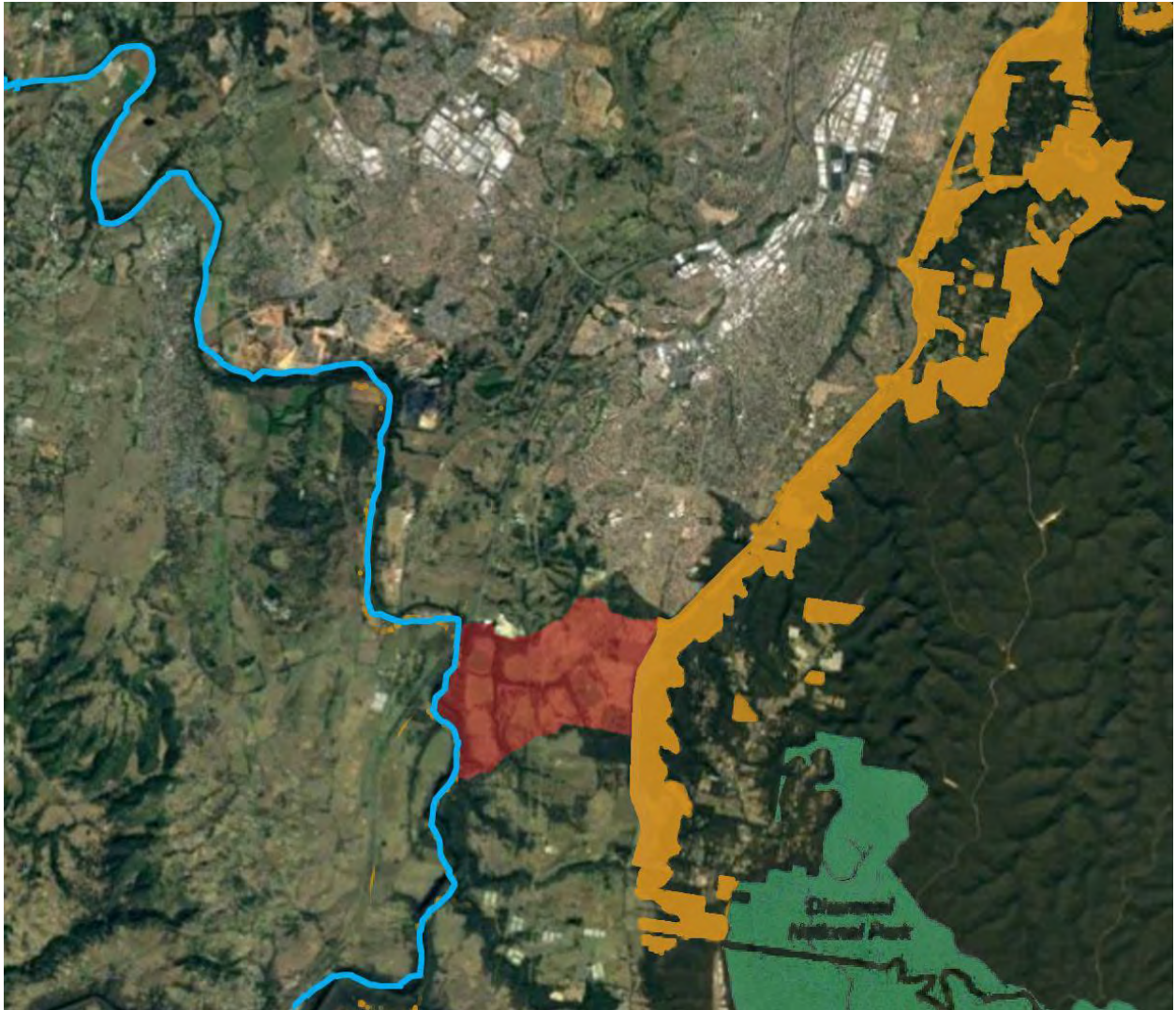
In 2018, the NSW Department of Planning and Environment (DPE) approved Campbelltown Council’s rezoning application for the colonial era farm property known as ‘Gilead’, west of Appin Rd. Just before Christmas 2018 the federal Department of the Environment and Energy, conditionally approved (EPBC 2015/7599) a state application for Biocertification (Development Allowance) of Gilead. On July 5th this year, A Biodiversity Stewardship Agreement for Gilead was gazetted by the DPE. Title for Gilead was then exchanged between the historic Macarthur-Onslow family and Lendlease, and on the 26th of July approval for earthworks was granted by the Campbelltown Local Planning Panel.

Issue: Planning Panels appear myopic to strategic significance of removing Koala's from the landscape.

Recommendation: They should be required to fully consider strategic and environment protection issues on an equal footing.

Importance of Gilead

Gilead is of national significance because of the near confluence of two of Sydney's major rivers, the Georges and the Nepean/Hawkesbury (Deerrubin). Gilead is the shortest most northern bridge between these two extensive, and long riparian zones of natural wildlife corridors. It ensures the eventual connection between the Campbelltown/Holsworthy Koala colony and the Blue/Mountains/Hawkesbury Koala colonies - essential for their long term survival. For a developer like Lendlease, Gilead is no different than any other block of land across Sydney, in fact worse, as it's not near transport or amenities.



A whole of landscape proposition to accommodate Koalas at this critical juncture is vital, before the piecemeal rezoning of Greater Macarthur ensures the slow eradication of Koalas in this area, and their possible local extinction and with it a long term, sustainable, tourism asset. In the image below the blue area is primary Koala corridor as identified by OEH and the yellow secondary Koala corridor.



Perhaps, if better designed Gilead and greater Macarthur can point to some of the solutions to the problems we have identified. At the moment we have a land clearing system that financially punishes good land carers and rewards bad.

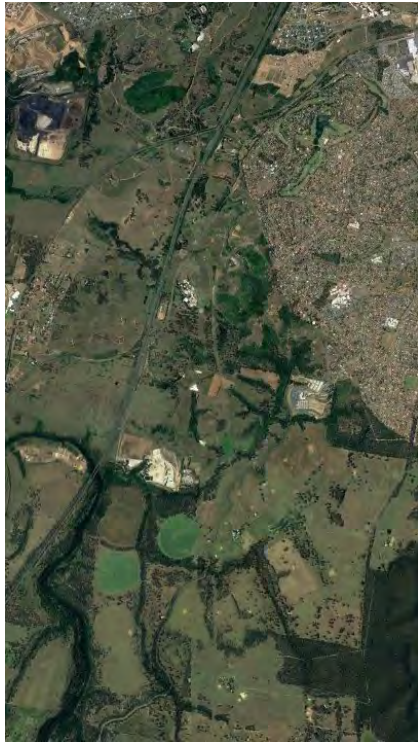
Landscape Goals and Major Obstacles

We need to secure a **long term regional plan of wildlife corridors across western Sydney** and indeed NSW, before development occurs. There are three essential elements to this: **long term, landscape scale**, with a **connectivity goal**. This submission will look at what has failed, to evolve what might work.

1. **Long Term:** eternal enforceability is good governance. Simplicity over complexity, peer driven by acceptance of legal and best practice approaches.
2. **Landscape Scale:** Historically the tree and site analysis for site specific assessments have been the focus – losing sight of the larger landscape scale.
3. **Connectivity Goal:** The problem with site approvals is that it does not take into account how important a site is at the connectivity scale.

See South West Sydney - Historical, ongoing and planning stage – below as what has gone wrong.

Historical



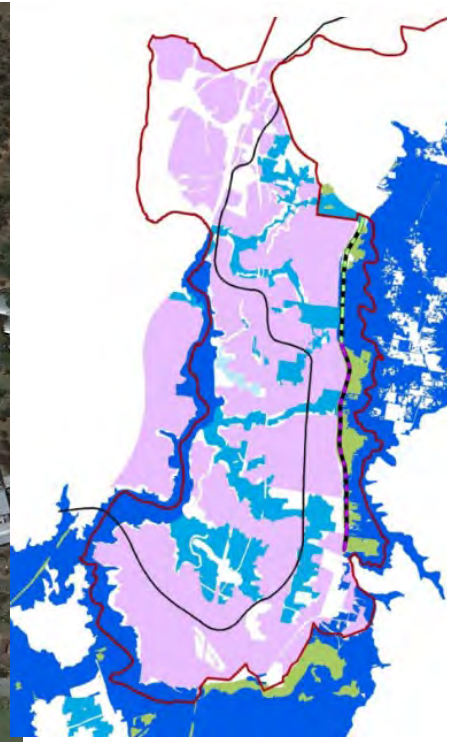
Rosemeadow - Gilead interface: The peri-urban edge was a clear and decisive greenbelt marker, but not now. *A migrating greenbelt is no Greenbelt.*

Ongoing



Airds: Deane Park along Smith Creek wildlife corridor being turned into Subdivisions. *Historically connectivity not protected.*

Planning



Greater Macarthur: Exclusion fence shown dotted above will remove Koala connectivity from the light blue and pink areas. *Connectivity destruction shouldn't serve developer expediency*

Two Available Processes for Development Approval

The Koala is a federally designated vulnerable threatened species under the EPBC Act. So at Gilead there are two avenues that could be followed to obtain development approval.

1. The **site by site approval process**. This is currently available and approved by Council or State under the NSW Threatened Species Act - if needed it goes to the Federal EPBC for approval.
2. A process under a **Federal-State Biocertification Agreement** signed by the state and federal governments for a large area assessed under a *Cumberland Plain Conservation Plan*, after which federal approval for development would deemed to have been approved.

Lendlease has followed the first process. It relies on offsets and biobanking to provide most of the 'protection' for threatened wildlife. There are real concerns about biobanking as the main crutch to rely upon for protection.



Figure 3: Mt Gilead Biodiversity Certification Assessment Area and location of existing conservation areas (including the Noorumba Council Reserve, and proposed Biobank sites within the BCAA), and potential Biobank sites outside the BCAA

There is nothing in Lendlease's master plan that says "Koala habitat" or acknowledges its important bridging location, it's a very ordinary subdivision. Where we see the complete disdain for Koala conservation is expressed in its Biobanking regime. There are four issues important to biobanking that have been undermined:

1. **Proximity:** If Lendlease was serious it would have used the land it has east of Appin Rd near the site as a biobank, not Fernhill 40 km away. Preference must be for on-site, then adjacent sites, then at least biobanks within the Macarthur Growth Area.
2. **Zoning :** The Macarthur Onslow - Mt Gilead and Noorumba - Mt Gilead biobanks have been zoned Public Recreation RE1 and Rural RU1 rather than Environmental E2. This has allowed Lendlease to include water detention basins, play equipment, etc, within them. Their primary purpose has been subverted to provide infrastructure needed for subdivisions.
3. **Additionality:** Campbelltown Council reserve Noorumba is a state biobank, a Council site that is already a Bush Reserve maintained by volunteers which provides no additional Koala habitat protection to replace Koala habitat that will be removed on site.
4. **Shape:** The green avoidance areas are vegetation islands, not connected to anything. All biobanks need to be connected and part of wildlife corridors between a minimum of 100m (see: EPBC – Koala corridor rule) to at least 425m (see: Biolink Ecological Consultants - habitable width) wide.

If offsets and biobanks are islands and are determined by developer convenience rather than a committed landscape structure. It results in an offset process that will not result in one extra tree being planted or one extra tree being preserved, despite many trees and Koala connectivity being removed.

Issue: Biobanks being subverted of genuine biodiversity value

Recommendation: **Biobanks conditions**

1. **Proximity:** Preference must be for on-site. If not, then adjacent areas (here on the East side of Appin Road.)
2. **Zoning :** Biobanks are generated for biodiversity benefit, they must be zoned E2 - Environmental.
3. **Additionality:** Offsets are to replace Koala habitat that have been removed they must therefore provide an additional replacement protection.
4. **Contiguous shape :** All biobanks need to be connected and part of wildlife corridors between 100m (EPBC - corridor) and at least 425m (Biolink - habitable width) wide.

Lendlease Influence on Appin Road Exclusion Fencing Subverts Koala Corridors

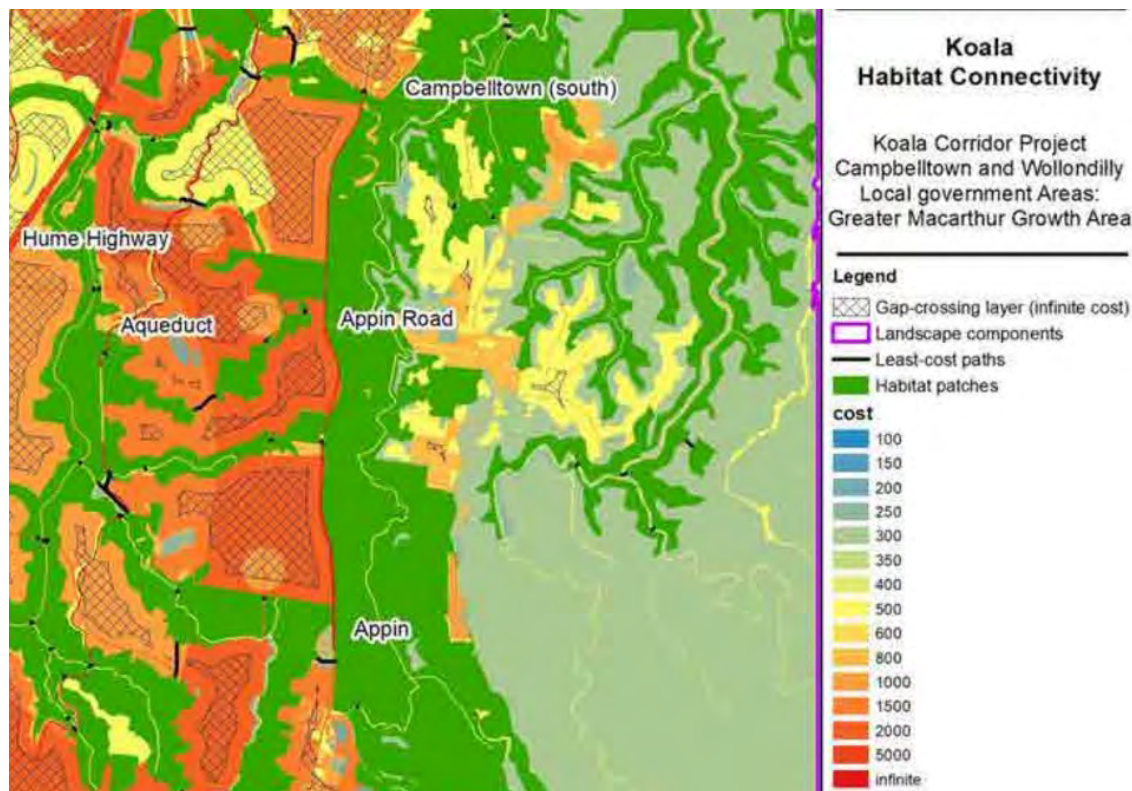
The **2016 Campbelltown Koala Plan of Management** including Gilead and looked at the whole of Campbelltown that referenced crossings and corridors. When the Gilead proposal did not meet the goals set out in this report, the DPE in 2018 commissioned its own internal report that removed

the need for crossings and corridors (see *January 2018 **Conserving koalas in Wollondilly and Campbelltown LGAs***) which it then relied upon later in approving a Biodiversity Stewardship Agreement for Gilead certifying the land for development. Biolink an independent expert who participated in the first report, wrote another report after OEH's (**October 2018 - Koala Corridor Project Campbelltown City Council & Wollondilly Local Government Areas: Greater Macarthur Growth Area**) that again emphasized the importance of **strategic linkage areas**, that is east - west connections across Gilead, and Appin Road at both Noorumba and Beulah (and Mallaty Creek and Appin).

Issue: Agency capture - how do you stop DPE compromising to suit large developers?

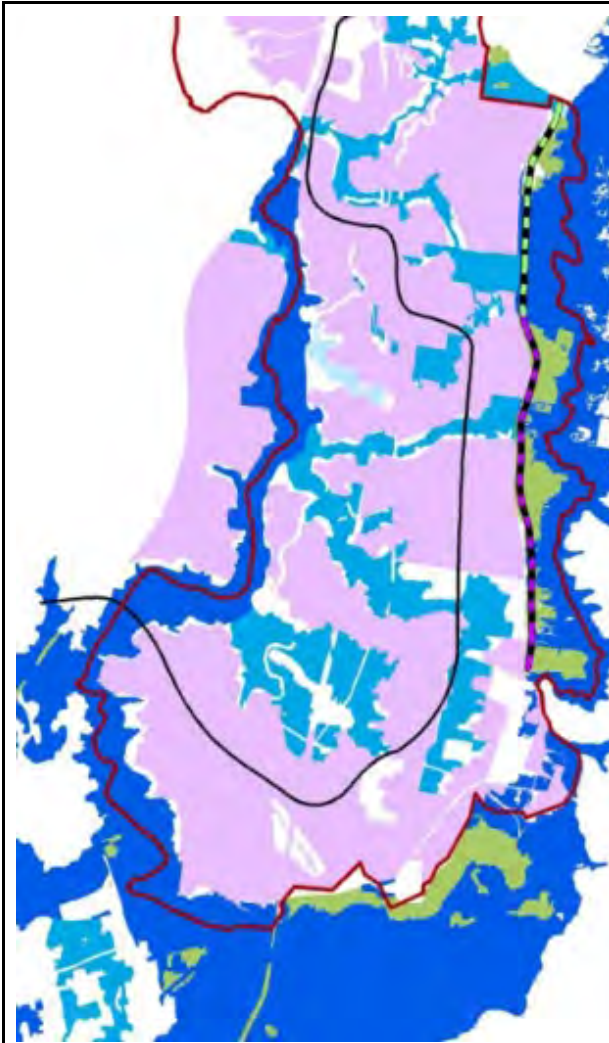
Recommendation: Have at least some unavoidable - objective, measurable and transparent biodiversity requirements that are obligated on all sites, no matter who owns them.

An image from a Biolink study below identifying necessary crossings:



Together with RMS and DPE, Lendlease has been heavily involved in the Appin Road upgrade (their VPA agreement will fund it). Not surprising then, that the new road design will be of great benefit to Lendlease as its 'exclusion fencing' will run the length of Appin Road from Rosemeadow to Appin, and will thus remove Koalas from Lendlease's Gilead site west of Appin Road. It is thus literally enabling a '**localized Koala extinction plan**'. The cost will likely be the long term survival of the Campbelltown Chlamydia free Koala colony, as:

1. It will accelerate contact with the Chlamydia infected Koalas further south in the Southern Highlands.
2. There will be no east-west escapes/exits for Koalas in case of a large fire or other Koala threats emanating from the Holsworthy Army Base.
3. It dramatically reduces the connectivity options for Koala movements and funnels them into one super Koala highway that could face any number of unforeseen blockages, obstacles, complications and certain to increase Koala stressors, a cause of Chlamydia.



See adjacent, the exclusion fence shown dotted along Appin road will remove Koala habitability and connectivity from the light blue and pink areas. The top light blue area 'secondary corridor' is Noorumba reserve connecting into Menangle Creek. The next light blue area down is Beulah connecting into Waterhouse Woodhouse Creek. The next light blue area down is Mallaty - Ousedale Creek. All these creeks will be sterilized not only of Koalas but other terrestrial wildlife such as macropods and possibly gliders.



Issue: **Financial reliance on a developer** and thus road design influence

Recommendation:

1. RMS (now under transport NSW) must be under a **legislated obligation to re-connect any wildlife corridor they cut** with roads or rail. Wildlife needs a 'right of passage'.

2. *Specifically at Campbelltown east - west corridors across Appin road at Noorumba, Beulah and Appin must be re-connected.*

The **exclusion fencing** that removes Koalas from their habitat makes redundant the existing Koala Biobanking credits west of Appin, that Lendlease relies on to retire their Koala credit obligations. Thus the biobanks for Koalas of **Macarthur-Onslow Mt Gilead, Noorumba-Mt Gilead** and **Noorumba Bush Reserve** are meaningless. (It also devalues other Biobanks sites to the north and south such as 'Beulah' & 'Noorumba that currently provide habitat, refuge and corridors for Koalas).

The situation is worse because the federal Department of the Environment and Energy has been ignored. It conditionally approved Gilead (EPBC 2015/7599) but rejected the NSW's DPE's use of an existing council bush reserve 'Noorumba' as a Koala biobanking credit and has asked for a Koala Management Plan (KMP) before proceeding. NSW Biodiversity Credits as per the Earthworks DA 3868/2017/DA-CW condition 21b must conform with condition 5 of the EPBC 2015/7599 for approval.

However the NSW DPE have approved Campbelltown Council's Noorumba Bush Reserve as a Biobank under the **Biocertification Stewardship Agreement** (gazetted on July 5th this year (n2019-1900) see BioBanking agreement ID number: 239)

The retirement of credits under a **Biodiversity Stewardship** site listed on the public register:

1. 104 HN556 Biodiversity Credits, and 85 Koala species credits, from **Macarthur-Onslow Mt Gilead** - ID 208.
2. 28 HN528 Biodiversity Credits, and 48 Koala species credits, from the **Noorumba-Mt Gilead** - ID 209.
3. 151 Koala species biodiversity credits from **Campbelltown Council's Noorumba Bush Reserve** - ID 239.

The EPBC approval specifically negates the use of the 'Noorumba Bush Reserve' as there is no additionality (it's an existing bush reserve) and because the exclusion fencing makes it meaningless as a Koala Species Credit (no Koala can get there). And the onsite biobanks also have no Koala credit function if Koalas can't reach them. Condition 5 of the EPBC 2015/7599 states a site in West Appin must be secured to retire these Koala credits.

"5. To compensate for impacts on Koala, the approval holder must acquire or retire no less than 150 Biodiversity credits for the Koala from the Appin West offset site prior to the commencement of the action."

Condition 21b of the Gilead Earthwork DA states prior to the commencement of works the following must be provided to Council:

“21b. Evidence of the retirement of biodiversity credits as per Condition 3-5 of the approval issued under the EPBC Act (Mt Gilead residential development EPBC 2015/7599), dated 21 December; “

The Biocertification Stewardship Agreement - **ID 239** uses Noorumba, not West Appin as a required Koala Credit per condition 5 of the EPBC. Yet the DA requires the EPBC to be met.

Issue: Ignoring EPBC Biobank requirements

Recommendation: With no third party ability to take the DPE, DoEE or Lendlease to Court - the EPBC Act is made redundant, and in fact undermines the ‘rule of law’. An appeal to an **ombudsman** to enforce conditions would be a simpler mechanism.

Limited Effectiveness of Lendlease Written Koala Management Plans

Under **State Environmental Planning Policy 44** - Koala Habitat Protection, a Koala Plan of Management is meant to be implemented for the site in question - this has never happened for Gilead. There appears to be a lack of enforceability at the state level. The EPBC 2015/7599 approval also requires a KMP. The current Earthworks DA recognizes this under condition 21c.

“21c. Evidence that the Federal Environment Minister has approved a Koala Plan for Management as per Condition 7 of the approval issued under the EPBC Act (Mt Gilead residential development (EPBC 2015/7599) dated 21 December 2018).”

However this KMP is prepared solely by Lendlease and will not be made public before it is approved at the federal level (if then). A Koala Plan of Management must be approved by the Federal Minister, and the Koala Recovery Team - before works begin. As Condition 7 of the EPBC 2015/7599 states

*“7. Prior to the commencement of the action, the approval holder must prepare and Implement a **Koala Management Plan** for the proposed action area **to the satisfaction of the Minister**. This must include provisions for the approval holder to contribute at least \$50,000 each year for five years to fund activities outlined in the plan. **The approval holder must provide the Department with evidence of the Koala Recovery Team's endorsement of the Koala Management Plan** prior to the commencement of the action. The first year's contribution must be made within 20 business days from the commencement of the action.”*

Issue: Koala Management Plans - how effective are they?

Recommendation:

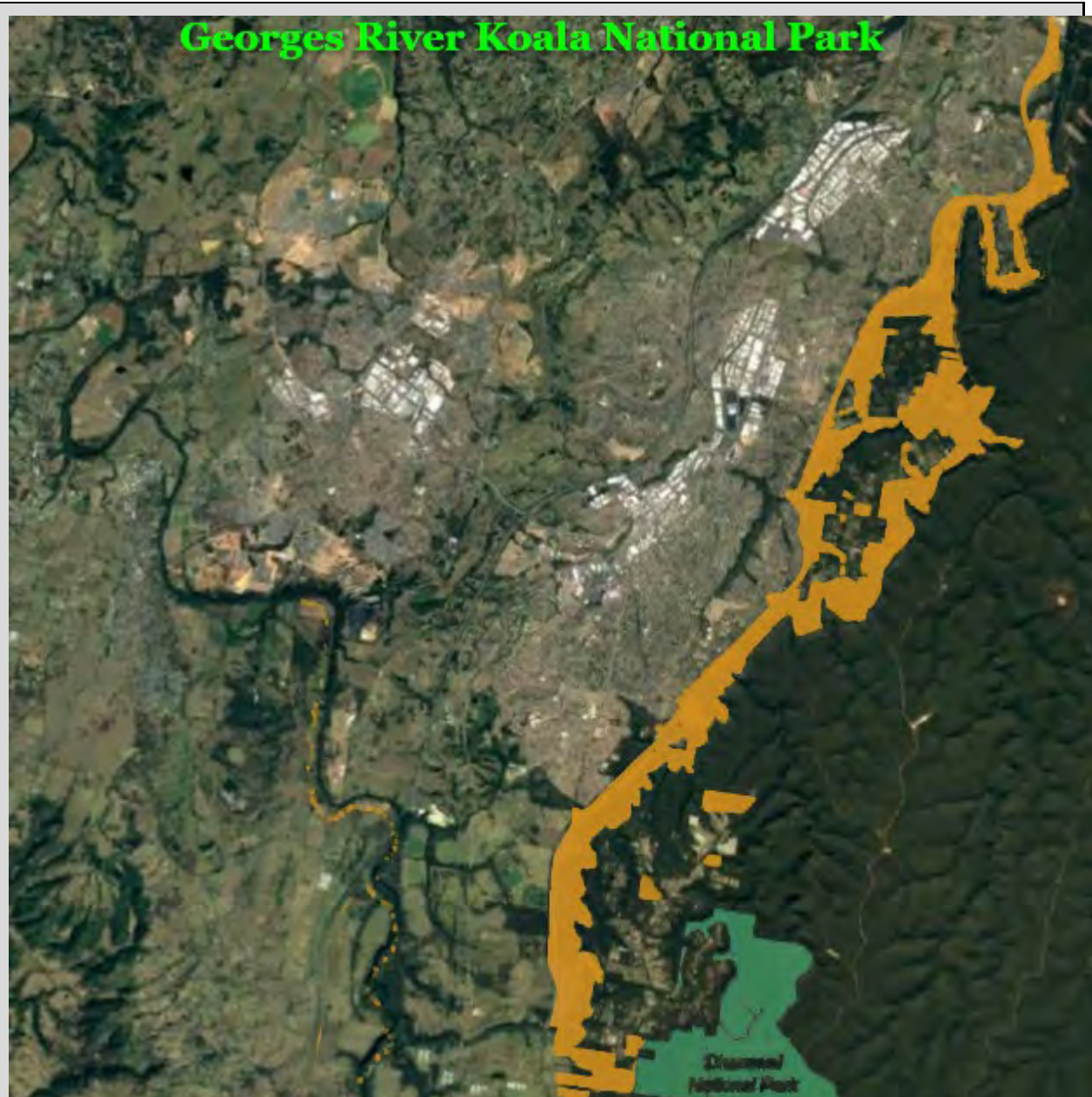
1. **SEPP 44 enforceability:** A third party must be able to take a Council or State to court or Ombudsman to ensure a KMP for a site is written and implemented.

Issue: Lendlease writes its own secret KMP for Gilead.

Recommendation:

1. The federal, state and council should write the relevant KMP, and this should be made publically available before it is signed.

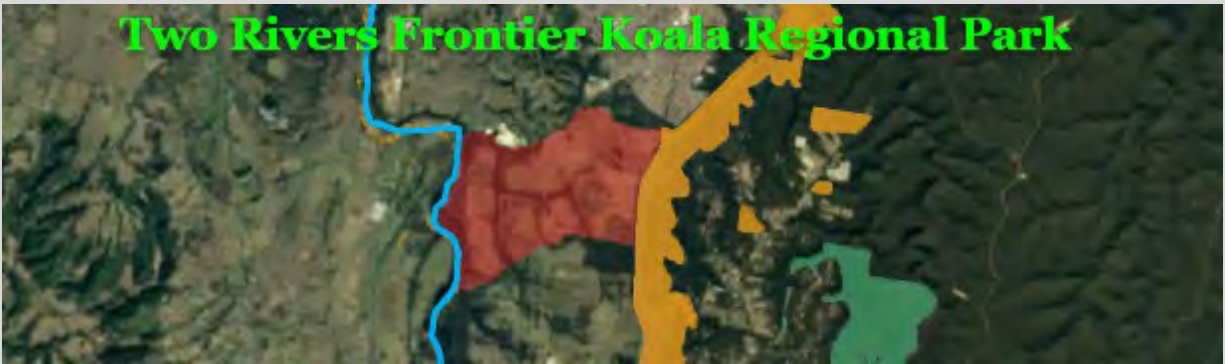
Gilead crosses a vital corridor and unfortunately all the mechanisms in place to ensure Koala survival on Gilead and the surrounds have been subverted and undermined and we now have in place a 'local extinction plan' for Koalas in Gilead.



*Recommendation: **Georges River Koala National Park***

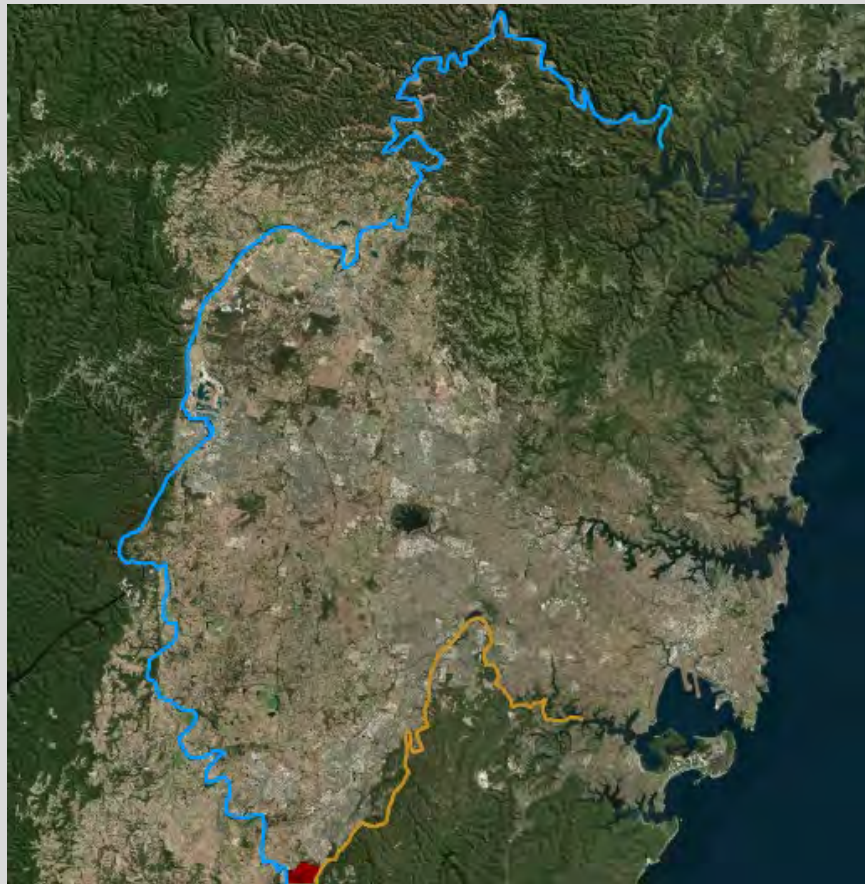
The reasons a Georges River Koala National Park is so important is that it:

1. Allows North - South Koala movement along the Georges River.
2. Protects the West bank of the upper Georges River.
3. Removes the threat of the planned Georges River Parkway (motorway), instead used to establish the National Park. It also removes future infill subdivision threats.



Recommendation: *Two Rivers Koala Frontier Koala Regional Park*

1. Allows East-West Koala movement from the Georges River to the Nepean River at the shortest and most northerly point.
2. Provides connection between the Blue Mountains and Holsworthy colonies.
3. Secures the most important colonial landscapes within Campbelltown
4. Removes the private interest, trying to block the wildlife connection.
5. Provides Tourism focus for Koala - Colonial history.

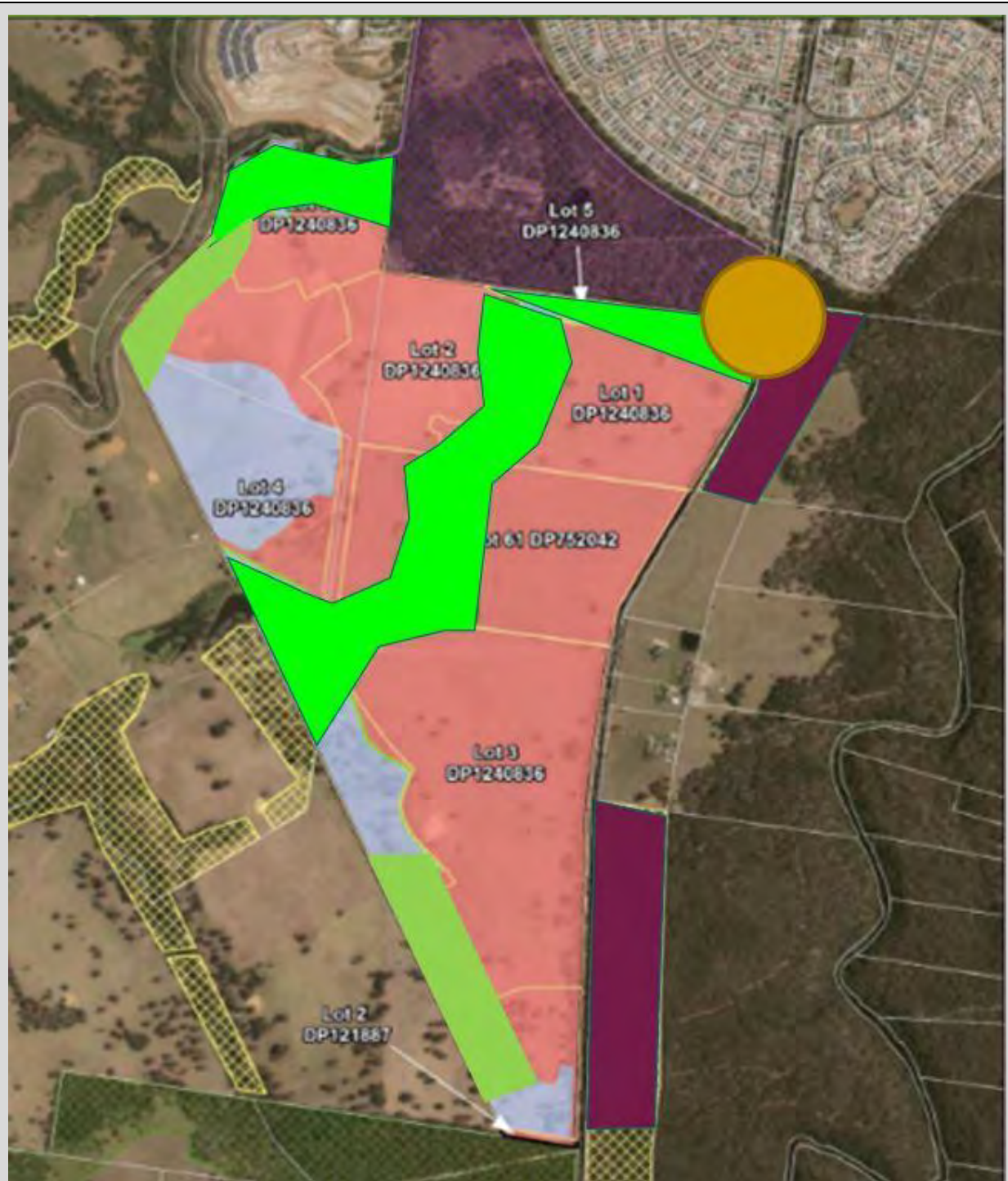


*Recommendation: **Moratorium on Spot Rezoning***

1. Their needs to be a moratorium on rezonings until a whole of wildlife landscaping idea, has been first agreed.

*Recommendation: **Two Rivers Koala Frontier Koala Regional Park***

6. Allows East-West Koala movement from the Georges River to the Nepean River at the shortest and most northerly point.
7. Provides connection between the Blue Mountains and Holsworthy colonies.
8. Secures the most important colonial landscapes within Campbelltown
9. Removes the private interest, trying to block the wildlife connection.
10. Provides Tourism focus for Koala - Colonial history.



Issue: effecting unavoidable Wildlife Corridors

Recommendation: Numerical setbacks decided off watercourses, boundary lines and road reserves. The Koala Blue, Red, Grey - Green Grid. With infill red flagged areas connected back to the grid. These principles applied roughly to Gilead.

Landscape Vision

PROPOSAL: 'An Obligation to Landscape - The Blue-Grey-Red: Green Grid'

A planning system that creates an **"Obligation to Landscape"** that is simple, fair and easily enforceable across all public and private landholders. A system that uses existing 'lines' in the landscape that are universally acknowledged on which to build a green grid - wildlife corridors. We identify these lines: **riparian, road/rail and property boundaries**. A blue - grey - red framework on which to graft the green grid. **The green is a 'vegetated setback' off these landscape lines.**

The goal of such a Green Grid is to create contiguous veined wildlife corridors across the landscape enclaving subdivisions (and other land uses). Using primarily riparian zones with a specific wildlife setback. This creates a method that is assessable on site to the layperson (and developer), non-negotiable and transparent.

So in application in South West Sydney it would look like.

Macroscale Connectivity: North - South & East - West - Strategic Linkage Areas.

Georges River Koala National Park

The Two Rivers Koala Frontier Regional Park

Mid - Large Wildlife Corridors/Habitat (Biolink 425m) & Water Catchment protection

Blue-Green Grid – Setbacks based off Watershed/Riparian structure. Similar to Water NSW Riparian setbacks but bolstered for Wildlife protection.

East -West over/underpasses

Biodiversity Hotspot protection - integration into Green Grid.

Micro - Subdivision Koala Habitability

Obligation to Landscape -

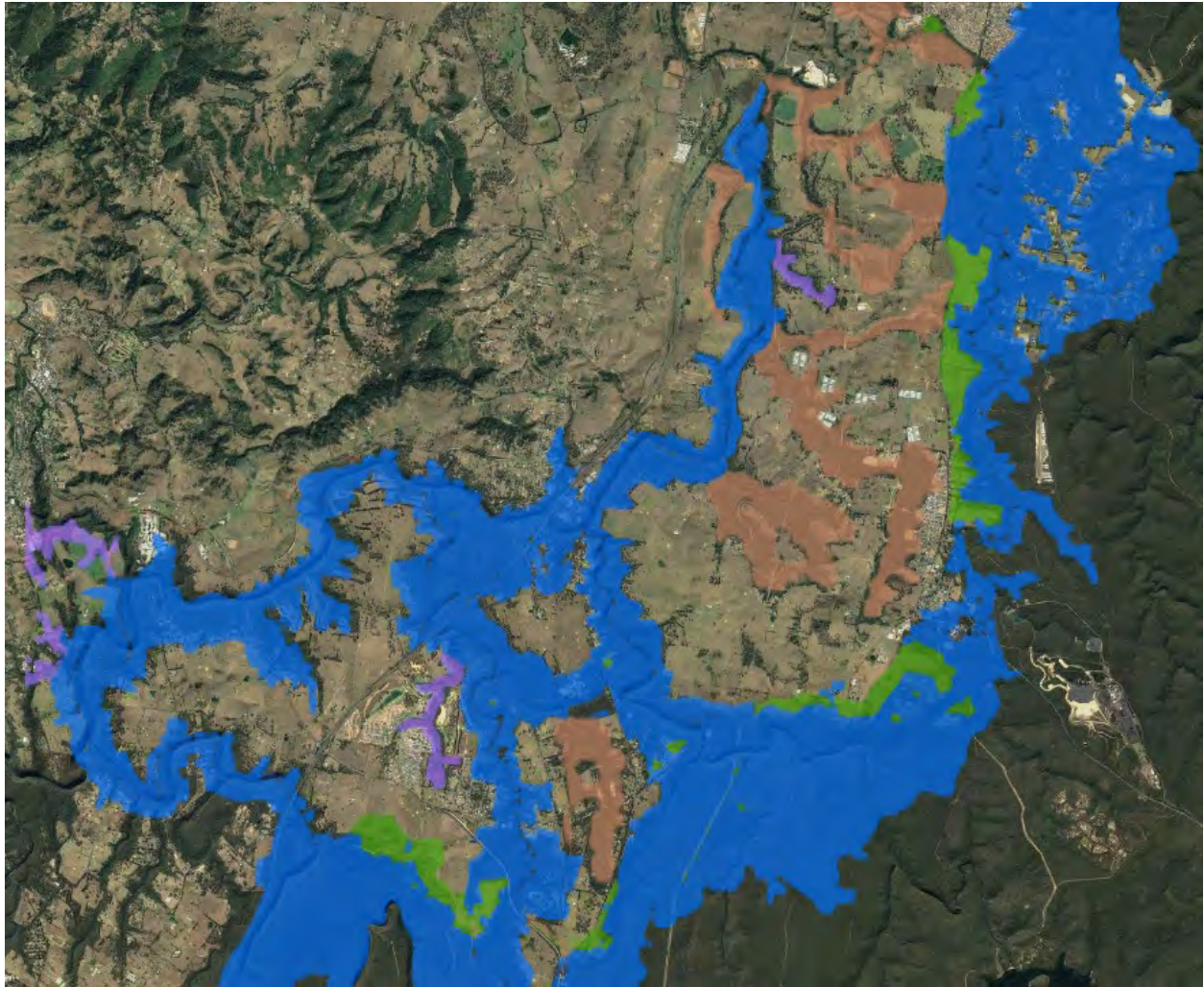
Road/Rail Setbacks - 30m bush reserves off major, and country roads.

Property Boundary Setbacks.

Green Coverage Min

Large Nature Strips – Native Trees

Biobanking and offsets are used to enforce the Green Grid within an unalterable shape configured on site. We can see within the OEH mapping of Koala corridors below (blue - primary, orange - secondary) that riparian zones correlate closely with existing wildlife corridors.



Vegetated Riparian Zones - establishes a setback zone, the primary 'line framework' for establishing wildlife corridors. The Water Management Act pre-determined and standardised first, second, third and fourth order watercourses with vegetated setbacks. See diagrams below.

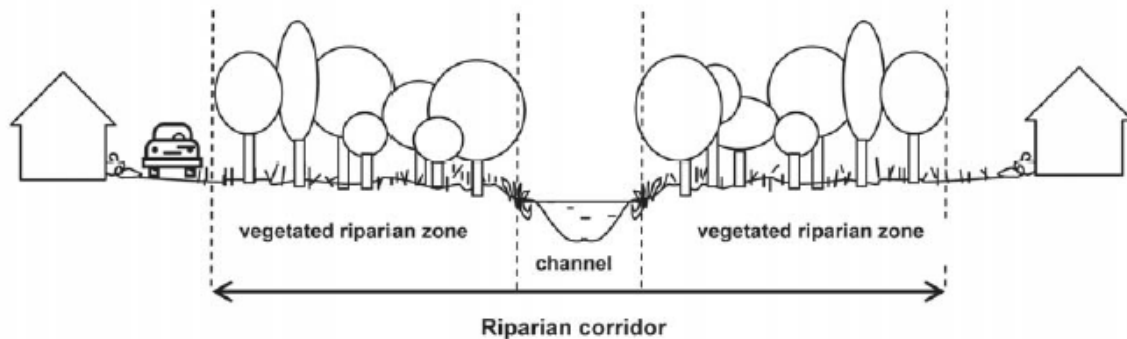


Figure 2. The Strahler System

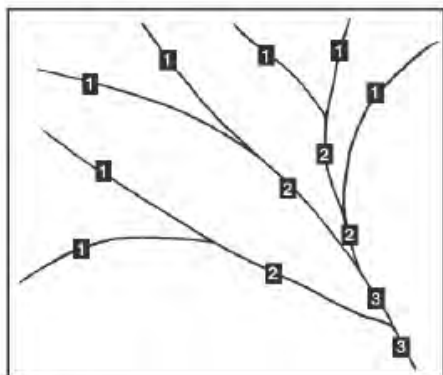


Table 1. Recommended riparian corridor (RC) widths

Watercourse type	VRZ width (each side of watercourse)	Total RC width
1 st order	10 metres	20 m + channel width
2 nd order	20 metres	40 m + channel width
3 rd order	30 metres	60 m + channel width
4 th order and greater (includes estuaries, wetlands and any parts of rivers influenced by tidal waters)	40 metres	80 m + channel width

The Koala Blue -(Grey-)Green Grid would be based on these Water Catchment Based Setbacks, with offsets and biobanking used to fill out the grid. So the hierarchy would be:

1. Rivers: 425m back from a riverbank (Biolink 2018, 450m OEH)
2. Creeks: 250m back from a creekbank
3. Hotspots & Ridge Connections (no untethered ends): 425m corridor back to Koala Grid.
4. Suburban & Arterial Road Reserve Curtilage: 5m & 30m wildlife refuge respectively.