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# Submission:
# Mt Gilead Stage 2 Residential Development – EPBC 2019/8587 Public Environment Report Exhibition

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## Introduction

NSW Wildlife Information and Rescue Service Inc (WIRES) welcomes the opportunity to provide a submission to the *Mt Gilead Stage 2 Residential Development – EPBC 2019/8587 Public Environment Report Exhibition*. WIRES' submission has a focus on two key issues — wildlife crossings at Appin Road, and habitat corridors linking the Georges and Nepean Rivers — and the impacts these will have on local wildlife, including the nationally important koala population, and their potential to thrive. Ensuring the protection of endangered ecological communities, key habitat for wildlife and connectivity with multiple east-west connections are a Matter of National Environmental Significance (MNES).

## About WIRES

WIRES is Australia's largest wildlife rescue organisation, and operates a dedicated Wildlife Rescue Office assisting wildlife and the community across Australia 24-hours a day, 365 days a year, providing rescue advice and assistance for over 130,000 animals annually. We have around 4,000 dedicated volunteers as well as a fleet of Wildlife Ambulances operated by full-time, professional Emergency Responders across NSW, South-East Queensland and Tasmania. These ambulances travel, on average, 40,000 kms per year and have responded to more than 11,000 rescues since October 2020.

In addition, WIRES trains hundreds of rescuers and carers annually, are dedicated to the ongoing recruitment of new volunteers and the continued training of existing volunteers. This growing network is critical for the rescue and rehabilitation of our unique native wildlife. WIRES has responded to more than 60% of all animals needing rescuing in NSW over the last 8 years. Across NSW the volunteer contribution is estimated to save the government approximately $27 million per annum and is growing.[1]

WIRES has developed partnerships and programs and provides forward-thinking national support to hundreds of projects which aim to see listed species' populations increase as a result of protection efforts. Since the 2019-2020 summer bushfires, we have had an increasing focus on supporting projects that protect and restore threatened habitats and provide for the long-term recovery of wildlife habitat and the preservation of native species in the wild.

[1] Department of Planning, Industry and Environment (2020) *NSW Volunteer Wildlife Rehabilitation Sector Strategy 2020-2023*, NSW Government.

# Executive Summary

Australia's wildlife, their habitats and overall biodiversity are already in a precarious state, which is continuing to decline. Protecting habitat, preventing further fragmentation and restoration programs are essential foundations for wildlife to survive and thrive, and building a nature positive Australia.

Many species are in crisis, with Campbelltown koalas precariously positioned as the only chlamydia free and growing population. Campbelltown's koalas are under direct pressure from increasing urbanisation across current and proposed projects as part of what the NSW Government has identified as the Greater Macarthur Growth Area.

Appin Road is deadly for koalas and other wildlife, presenting a key threat to the survival of this iconic and endangered species. Koalas are being killed on Appin Road on an almost weekly basis, across several blackspots. The number of koalas lost has doubled in the last year, which is close to 10% of the Campbelltown population. Habitat destruction and fragmentation has also led to a spike in the number of rescue calls WIRES receives, amounting to a staggering ~50% of the local koala population in the last year. Action needs to be taken urgently.

WIRES submission to the *Mt Gilead Stage 2 Residential Development – EPBC 2019/8587 Public Environment Report Exhibition* focuses on two key issues: wildlife crossings are essential infrastructure with the potential to dramatically reduce to loss of koalas on Appin Road towards zero; and the protection of critically endangered ecological communities and enhancement of habitat corridors linking the Georges and Nepean Rivers. The Mount Gilead area is key habitat for an array of species, and these are a Matter of National Environmental Significance (MNES).

## Broader environmental significance

The national environmental significance of the Mount Gilead area is evident across multiple ecological studies, surveys and reports.[2] It is home to remnant ecological communities including the critically endangered Cumberland Plan Woodland, Shale Sandstone Transition Forest and River Flat Eucalypt Forest on Coastal Floodplains. These ecological communities provide habitat to an array of species, including many listed as endangered and vulnerable, and identified by Department of Climate Change, Energy, the Environment and Water (DCCEEW, as DAWE) as likely to be impacted.[3]

Principles outlined in the NSW Office of Chief Scientist and Engineer (OCSE) report on protecting koala populations in the area include 'protected and connected – retain, increase, restore and protect koala habitat, reducing fragmentation and increasing connectivity.[4]

The loss of any further areas of critically endangered ecological communities is serious and irreversible, and a MNES.

### The further loss of critically endangered ecological communities

Lare scale and longitudinal research undertaken by award winning scientists at UNSW over more than two decades have sought to investigate re-establishment Cumberland Plan Woodland in land previously cleared for agriculture.[5] Whereas important areas of vegetation and habitat have been re-established, these new plant communities are not characteristic of Cumberland Plan Woodland, rather comprise a different ecosystem. At best, it would require tens of millions of dollars in investment over more than 100 years for restoration works to come close to recreating areas of critically endangered ecological communities. Any re-created areas will not replace what is already lost and those proposed to be cleared. Any loss would be serious and irreversible, with nature negative outcomes.

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[2] See, for example, Biolink (2023) Sydney Basin Bioregion: Koala habitat and population assessment, report to Total Environment Centre; EDO (2023) Protecting koalas in the Sydney Basin bioregion, Feburary; Transport for NSW (2022) *Brian Road Intersection Upgrade: Review of Environmental Factors*, NSW Government; DAWE (2022) National Recovery Plan for the Koala, Phascolarctos cinereus, March, NSW Government; Biolink (2021) Koala Occupancy/Population Assessment, Final Report, March, Campbelltown City Council; OCSE (2021) *Advice regarding the protection of koala populations associated with the Cumberland Plain Conservation Plan*, NSW Government; DPIE (2020) Inquiry into koala populations and habitat in New South Wales: NSW Government Response, December; Predevac (2016) NSW koala population case studies.

[3] See Eco Logical (2023). *Mt Gilead Stage 2 Preliminary Documentation EPBC 2019/8587*, prepared for Lendlease Communities (Figtree Hill) Pty Limited.

[4] OCSE (2021). *Advice regarding the protection of koala populations associated with the Cumberland Plain Conservation Plan*, NSW Government.

[5] UNSW (undated). *Cumberland Plain Woodland restoration* https://www.unsw.edu.au/research/ecosystem/our-research/conservation-practice/cumberland-plain-woodland-restoration

## Wildlife crossings

Appin road is deadly for wildlife. The number of animals impacted by road trauma is increasing, and clearly evidenced in the deaths of koalas. Over the past year, the recorded number of koalas killed on Appin Road has doubled. This equates to close to 10% of the Campbelltown population – the only chlamydia free and growing population in NSW – and indictive of the urgent need for wildlife crossings. The number of koalas killed is likely under-reported, with several studies inferring that as many as 50% may go unreported.[6]

Wildlife crossings must be designed with wildlife in mind and be fit for purpose. The concept design for an elevated roadway and wildlife underpass at Beulah is illustrative of effective infrastructure, and the minimum standard for wildlife-centred design.[7]

The Beulah concept design is starkly juxtaposed to the current proposal by Transport for NSW (TfNSW), wholly compromising a concreate pipe passing under the entire width of an expanded Appin Road.[8] Concrete pipes are not fit for purpose for wildlife use, do not reflect public expectations, and do not meet than standard for MNES.

WIRES understands that TfNSW has specified similar designs for Lendlease at Noorumba/Glen Lorne and for a temporary structure at Beulah.[9] Even more concerning, the concrete pipes TfNSW have specified Beulah have a diameter of 1.2m. Such a small size would make it physically impossible for Macropod species to use, and do not provide a naturalised or otherwise appropriate environment for wildlife. These designs are indicative of inadequate planning rather than part of a comprehensive planning and design process. In conjunction with the wildlife and koala fencing along the length of Appin Road, these inadequate structures will prevent several species from accessing their habitat.[10] Their inadequacy becomes even more stark in light of the impacts of Appin Road on local koalas, with the survival of the population being a MNES.

Wildlife crossings along the entire length of Appin Road must build on the Beulah concept design. They must be fit for purpose with wide and open spaces, include a combination of different features, and accommodate different species – such as glider/possum bridges and glider poles. Reflecting habitat corridors (see below under *Habitat Corridors*), they should be designed with multiple pathways, ingress and egress points, and include natural features.

Extending beyond the Gilead Stage 2 proposal, the inadequate number of identified sites for wildlife crossings on Appin Road (three in total) will further fragment populations and restrict

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[6] Philips et al (2015). *Koala population survey – Woolgoolga to Ballina Pacific Highway Upgrade Section 10 (Wardell to Collgardie)*. Report to NSW Roads and Maritime Services.

[7] Lendlease (2022) *Koala Conservation at Gilead*.

[8] See Figure 3-3, page 33, Transport for NSW (2022). *Brian Road Intersection Upgrade: Review of Environmental Factors*, NSW Government.

[9] Mark Anderson, Lendlease, personal communication, 30 August 2023.

[10] Whereas fencing is an important element for reducing wildlife road trauma and death, fencing increase the impacts of habitat destruction and fragmentation. They exacerbate the barrier that Appin Road has created and will increase with its widening, and will further restrict movement and habitat connectivity.

movement. Existing data is directly indicative of other locations where wildlife repeatedly cross Appin Road, are killed in far too high numbers, and where the addition of safe crossing infrastructure is of national environmental significance.

All road projects should be replicating world-best designs to increase protections for our iconic and endangered species, and ensuring local populations can move across habitat and thrive. Crossing that are designed with wildlife in mind and be fit for purpose should be a minimum requirement for any upgrades to existing roads and new road works — a MNES.

## Habitat Corridors

The Mount Gilead Stage 2 proposal will fragment existing wildlife corridors, and protection of key areas is essential for thriving and resilient populations, including the Campbelltown koala colony. Ensuring endangered and vulnerable species can thrive is a MNES. Corridors as habitat reflets recommendation of the OCSE: 'corridor should not be misinterpreted to mean that its only function is a thoroughfare and the provision of connectivity'.[11] A minimum width along a corridor's entire length is required to ensure viability, in contrast to average minimum widths.

Revegetating corridors will assist in increasing viability and effectiveness, noting that revegetation cannot compensate for any further loss of critically endangered ecological communities and habitat – which would lead to serious and irreversible nature negative outcomes. Revegetation in addition to retention and protection of all remaining ecological communities and habitat provides for potential nature positive outcomes.

To ensure viability of all corridors, reflecting the recommendations of the OCSE, an absolute minimum corridor width 390-415m is essential. A reliance on average widths will render sections of these corridors as not fit for purpose and directly impact on their effectiveness and the ability of local wildlife to thrive. Corridors need to be significantly wider to reduce fragmentation, increase connectivity and the potential for nature positive outcomes.

The proposed Menangle Creek, Woodhouse Creek and Nepean Creek corridors converging in a single location is a significant concern. Convergence directly contrasts with the recommendations of the OCSE.[12] To ensure habitat is protected and connected, the principles outlined by the OCSE include multiple connections. The corridors provide only <u>one</u> pathway between the Georges and Nepean Rivers and will restrict wildlife movements, including the local koala population.

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[11] OCSE (2021). *Advice regarding the protection of koala populations associated with the Cumberland Plain Conservation Plan*, NSW Government.

[12] OCSE (2021). *Advice regarding the protection of koala populations associated with the Cumberland Plain Conservation Plan*, NSW Government.

Multiple pathways and connectivity are possible with changes to the Nepean Creek Corridor. The corridor is currently nonviable and terminates with a dead end – contrasting with the principles of the OCSE report. Necesary changes include:

- Widening the corridor to the Upper Canal (east)
- Retaining existing vegetation, including critically endangered ecological communities (west and south)
- The open space currently identified as 'koala accessible land' (south) be included in the area registered as biobank and proposed stewardship sites.[13]

Ensuring the viability of the Nepean Creek Corridor enables further strategic planning at a larger scale, including future linkages with Leafs Creek and Mallaty Creek, whose intersection with Appin Road is a recorded koala movement hotspot.

[13] See Figure 32, page 101, Eco Logical (2023). *Mt Gilead Stage 2 Preliminary Documentation EPBC 2019/8587*, prepared for Lendlease Communities (Figtree Hill) Pty Limited.

# Conclusion

Appin Road is a known koala hotspot – for all the wrong reasons. The reported number of koalas killed each year has doubled, edging towards 10% of the local population. A population which is chlamydia free and growing. Alongside Appin Road being a barrier to movement between the Georges and Nepean Rivers, habitat destruction and fragmentation due to increased urbanisation are significantly impacting the population. For example, in the last year, WIRES has responded to 115 rescue calls involving koalas, approximately 50% of the local population. This is a MNES, and action needs to be taken immediately.

WIRES submission to the *Mt Gilead Stage 2 Residential Development – EPBC 2019/8587 Public Environment Report Exhibition* has a focus on two key issues: wildlife crossings on Appin Road and the protection of east-west corridors linking the Georges and Nepean Rivers.

Appin Road is a treacherous barrier for wildlife movement and habitat connectivity, including the local koala population. The proposed fences along its length, whilst potentially reducing the number of animals killed, will further formalise Appin Road as bisecting habitat and preventing movement for many species. Wildlife crossings are urgently needed. The concept design for the raised roadway and wildlife underpass Beulah is indicative of designs which consider the needs of wildlife. It provides a wide and open space, which is accommodating and include natural features. Concreate pipes, as proposed by TfNSW, are restrictive and prohibitive, and cannot replicate natural features. They are not fit for purpose.

All road projects should be replicating world-best designs as a core component of all upgrades to existing roads, and any new road works. The proposed crossing at Noorumba/Glen Lorne provides a baseline for other locations along Appin Road and beyond. Increased protections for our iconic and endangered species are a MNES. Such designs must be fit for purpose and ensure local populations can access their habitat and move unrestricted.

East-west corridors linking the Georges and Nepean Rivers are habitat, and their minimum widths must be 390m to ensure their viability — including the Nepean Creek corridor. All remaining areas of critically endangered ecological communities must be protected. Any loss is serious and irreversible, having nature negative outcomes.

As outlined by the OCSE, corridors must have multiple pathways. Corridors must retain, increase, restore and protect habitat. They must reduce fragmentation through infill planting and increase connectivity. These are a MNES. A nature positive approach is crucial for ensuring both the survival of local koala population and increasing the potential for koalas – and other species — to thrive.

## Recommendations

1. Any approved residential and associated works at Mount Gilead Stage be nature positive, including wildlife safe designs.
2. All remaining areas of endangered ecological communities be retained and protected in perpetuity, including fragmented strands.
    a. The protection of all remaining areas of endangered ecological communities reflect the findings of longitudinal research which has found that restoration of ecological communities – if possible – will require approximately 100 years and tens of millions of dollars.
    b. Any clearing of endangered ecological communities will have irreversible and nature negative outcomes.
3. Wildlife crossings be installed on Appin Road as soon as possible.
    a. The concept design for the raised roadway and wildlife underpass at Beulah provide the minimum standard, including a wide and open space.
    b. Wildlife crossings address the preferences of all species.
    c. The number of wildlife crossings currently proposed between Campbelltown and Appin (three) be increased.
    d. The design of wildlife crossings reflect worlds-best practice.
    e. The use of concrete pipes as underpasses be entirely rejected as not fit-for-purpose.
4. Wildlife corridors are recognised as wildlife habitat,
    a. All corridors should have a minimum width of 390m, in contrast to an average minimum width.
    b. East-west must include multiple pathways, including linkages to the south of Mount Gilead Stage 2 (extending from Nepean Creek to Appin Road)
    c. The Nepean Creek corridor be widened to ensure viability and directly connect with the Nepean River corridor.
5. The wildlife corridors through Mount Gilead be recognised as <u>primary</u> corridors linking the Georges and Nepean River catchments.

Yours sincerely,

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