

Our ref: DOC22/1029797

Your ref: Ref-1831/PP-2022-3979

Neala Gautam
Specialist Planning Officer, Metro West
Department of Planning and Environment
4 Parramatta Square, 12 Darcy Street
Parramatta NSW 2150

Subject: Planning Proposal - Appin (Part) Precinct (Ref-1831/PP-2022-3979)

Dear Ms Gautam

I refer to your email received on 21 November 2022 requesting comments from the Department of Planning and Environment (DPE) Environment and Heritage Group (EHG) regarding the Appin (Part) Precinct Planning Proposal (Proposal). EHG understands that the Proposal will amend *State Environmental Planning Policy (Precincts - Western Parkland City) 2021* (WPC SEPP) to facilitate the development of approximately 12,000 dwellings.

EHG previously provided advice on an earlier draft of the proposal on 24 August 2022 and in September 2022. In its advice, EHG raised concerns regarding zoning of Koala corridors for development, inappropriate land uses proposed for the Koala corridors, inconsistencies with the *Office of Chief Scientist and Engineer Advice on the protection of the Campbelltown Koalas* and follow up reports (OCSE advice), and inadequate consideration of flooding impacts.

EHG has reviewed the exhibition documents for the Proposal and considers that these issues have not been addressed. Furthermore, EHG raises concerns that the exhibition materials do not clearly describe what is proposed and that the proposed rezoning relies on a future modification to the *Cumberland Plain Conservation Plan* (CPCP). EHG does not recommend proceeding with the proposed amendments to the WPC SEPP without first seeking a modification to the CPCP, as to do so would pre-empt the decision of the Minister for Environment and Heritage under Part 8, Division 6 of the *Biodiversity Conservation Act 2016* (BC Act).

EHG's detailed comments on biodiversity and flooding are at Attachment 1.

If you have any queries, please contact Susan Harrison on Susan.Harrison@environment.nsw.gov.au or 02 9995 6864.

Yours sincerely,



Louisa Clark
Director Greater Sydney
Biodiversity and Conservation

Attachment 1 – EHG comments on Planning Proposal for Appin (Part) Precinct

Exhibition materials and threatened species consultation

EHG notes that there are a number of inconsistencies between what is outlined in the Gateway determination report – PP-2022-3979 Appin (Part) Precinct November 22 prepared by DPE (Gateway report), the *Planning Proposal to Rezone the Appin (Part) Precinct for Urban Development* (PP report) prepared by Walker Corporation dated 14 November 2022, and the rest of the exhibition materials.

EHG considers that the exhibition of the Proposal would have benefitted from an Explanation of Intended Effect (EIE) pursuant to section 3.30 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), as is usual practice for amendments to State Environmental Planning Policies. An EIE would have assisted in explaining:

- consistency with the Greater Macarthur Growth Area Structure Plan November 2022 (GMGA Structure Plan), including the Proposal's changes to the alignment of the Outer Sydney Orbital 2 Corridor
- consistency of the Proposal with the *Office of Chief Scientist and Engineer (OCSE) Advice on the protection of the Campbelltown Koalas* and follow up reports (OCSE advice)
- the rationale for the SP2 Infrastructure zoning dissecting the Koala corridor and C2 Environmental Conservation land in the north of the Precinct, but not through the same categories of land at Elladale Creek or the Cataract River
- inconsistencies with the CPCP biodiversity certification and Ministerial Direction 3.6 Strategic Conservation Planning in relation to zoning part of the Strategic Conservation Area (SCA) and Avoided land to SP2
- approval pathways for the Proposal, noting that the proposed zoning relies on a modification to the CPCP certification which is yet to be made. Finalisation of the zoning as proposed would pre-empt a decision of the Minister for the Environment to agree to modification of the certification
- which Additional Permitted Uses will be allowed in C2 Environmental Conservation land on the Additional Permitted Uses Map, as these are not provided
- whether the land to which Additional Permitted Uses may be carried out is meant to include Koala corridors (per the Additional Permitted Uses Map) or not (per the Gateway report, p.5)
- whether the Koala corridors on the Clause Application Map are consistent with the OCSE advice, as well as 'Protected Koala Habitat' and 'Potential Restoration for Protected Koala' identified by the CPCP.

Special consultation procedures concerning threatened species

If the Planning Secretary has formed the opinion that critical habitat or threatened species, populations or ecological communities, or their habitats, will or may be adversely affected by the proposed SEPP amendment, consultation with EHG is required in accordance with s.3.25 of the EP&A Act.

Biodiversity

Office of Chief Scientist and Engineer Advice on the protection of Campbelltown Koalas

Throughout the Appin Technical Assurance Panel (TAP) process EHG advised the TAP that the final planning proposal for the Precinct must be consistent with the OCSE advice. This was reiterated in EHG's written advice dated 24 August 2022 (see Attachment 2).

Based on the information provided in the Gateway report and exhibition documents, EHG considers that the Proposal is inconsistent with the OCSE advice, and that EHG's previous comments have not been addressed.

Cumberland Plain Conservation Plan

The CPCP biodiversity certification applies to the Precinct. Across the site, there are different land categories under the CPCP, some of which facilitate urban development (Certified-urban capable) and others which were not proposed to be developed and are for the conservation of biodiversity (SCA and Avoided land).

The CPCP also identifies the SCA/avoided land in the Precinct as 'Protected Koala Habitat' and 'Potential Restoration for Protected Koala'.

The Cumberland Plain Conservation Plan: A conservation plan for Western Sydney to 2056 (DPE 2022) identifies the SCA as the 'area of greatest strategic value to deliver long-term conservation outcomes in the Cumberland subregion and which can offset the biodiversity impacts addressed by the plan' (p.2). The CPCP avoided lands comprise 'important biodiversity areas that are not certified and where development will be limited' (DPE 2022, p.1). As the SCA, Avoided lands, and Excluded lands are not certified, they do not benefit from the CPCP biodiversity certification, meaning they are still subject to BC Act requirements for biodiversity assessment and approvals. Land for development which has been certified by the CPCP does not require an assessment of biodiversity impacts at development application stage under Part 7 of the BC Act.

Consistency with the CPCP

While the Gateway report (pp.6-7) states that the proposed zoning (p.11 and shown at Figure 1 below) complies with the CPCP, EHG notes that SP2 Infrastructure zoning for a road will dissect the C2 Environmental Conservation land and Koala corridor. As this SP2 Infrastructure zoning is within the SCA/Avoided land (Figures 2 and 3 below), it is EHG's view that the CPCP would require modification in order for the proposal to proceed. This land is also identified by the CPCP as 'Protected Koala Habitat' and 'Potential Restoration for Protected Koala' (Figure 4 below). As such, EHG does not agree that the Proposal is consistent with the CPCP.

Figure 1. Extract of the Proposal's WPC SEPP Land Use Zoning map
Source: Gateway report, p.7

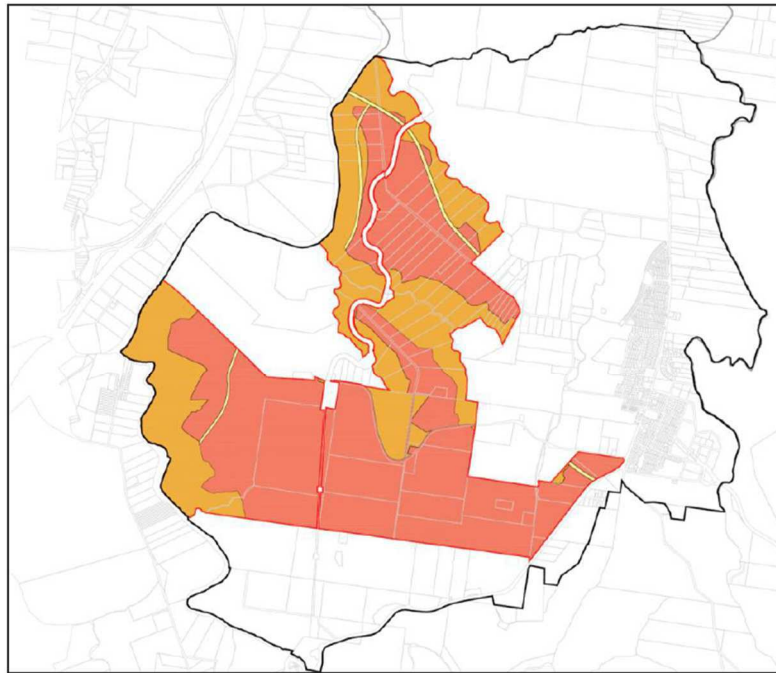


Figure 9 Version 1: Proposed zoning map complying with the CPCP

Land Zoning

- C2 Environmental Conservation
- UD Urban Development
- SP2 Infrastructure

Figure 2. Extract of CPCP mapping showing Avoided (green), Urban Capable (pink) and Excluded (yellow) lands

Source: [CPCP Viewer](#)

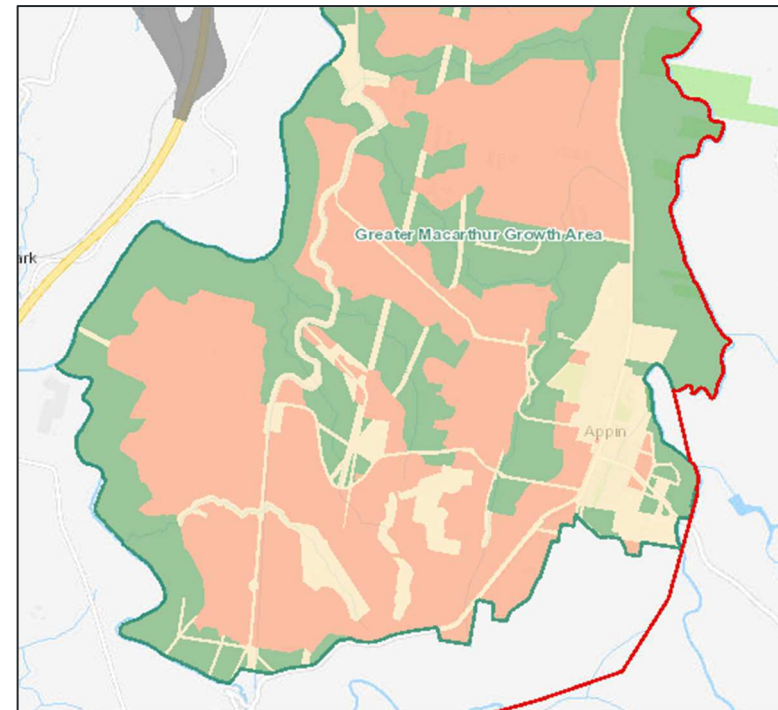


Figure 3. Extract of CPCP mapping showing Avoided (green) and Strategic Conservation Area (purple hatching)

Source: CPCP Viewer

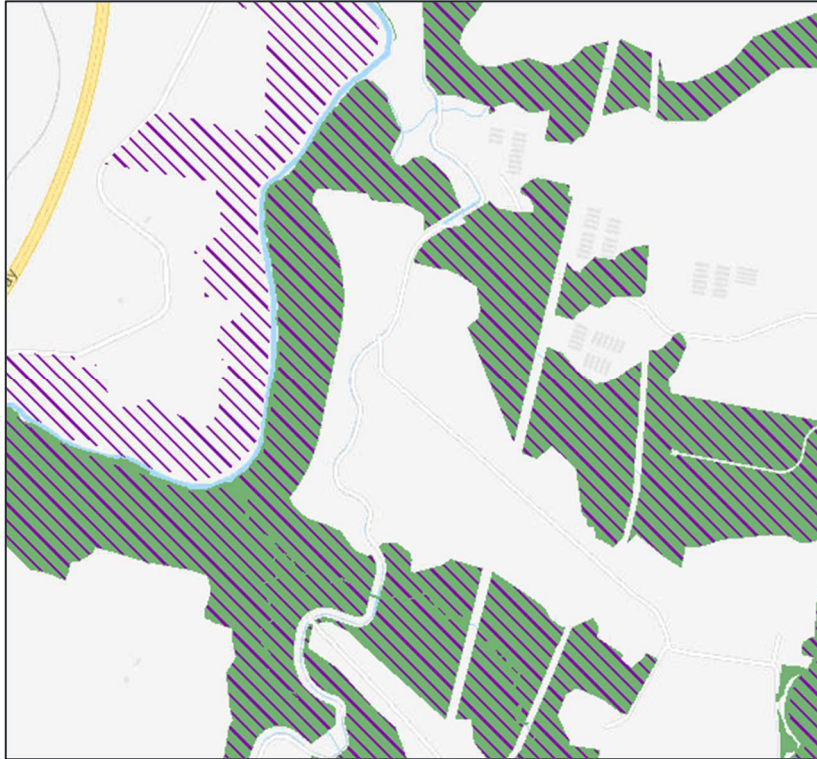
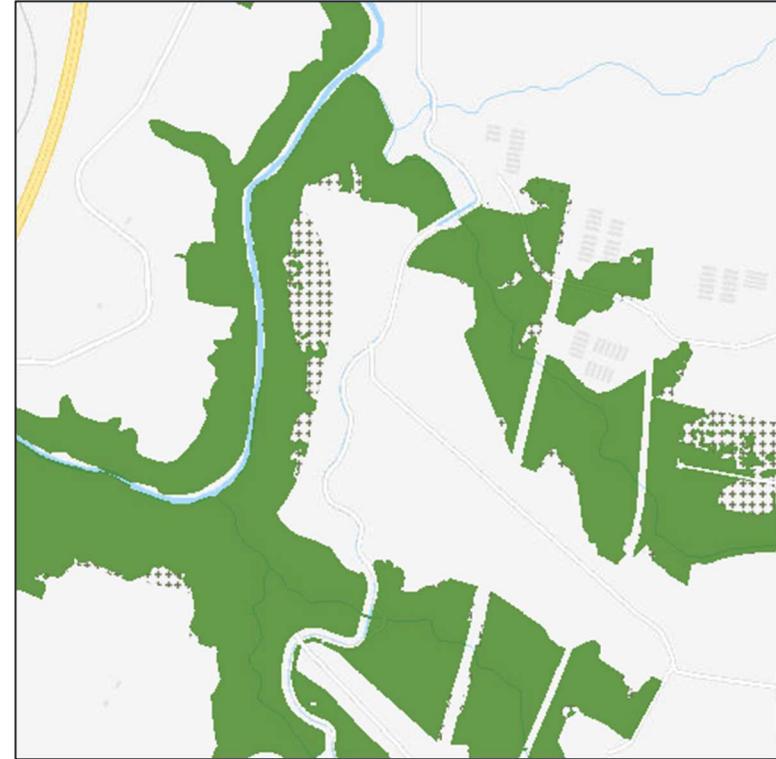


Figure 4. Extract of CPCP mapping showing Protected Koala Habitat (green) and Potential Restoration for Protected Koala (dotted)

Source: CPCP Viewer



Proposed modification

The Gateway report (p.6) states that a CPCP modification is required to facilitate a revised road layout at the northern section of the site. However, Figure 4 'Modified zoning map subject to CPCP amendment' of the Gateway report (p.7) and the PP report (pp.16, 205-206) demonstrate that the changes are not limited to the road layout but will also “swap” Certified-Urban Capable land with Avoided and Excluded land (Figure 5 below). This may reduce the width of the Koala corridor so that it does not meet the OCSE’s average minimum width (390 to 425m) requirement.

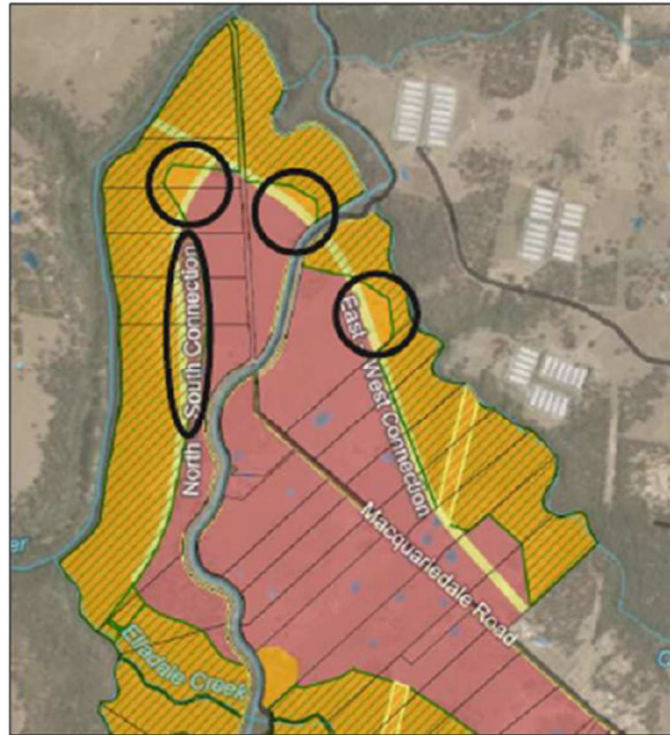


Figure 5. The proponent’s proposed future amendment to WPC SEPP Land Use Zoning

Source: Gateway report, p.7

The PP report (p.205) indicates that the modifications are required to provide efficient and orderly development and will not have cumulative impacts on biodiversity. However, the *Appin (Part) Precinct Version 1 Plan - Biodiversity Assessment* prepared by Niche Environment and Heritage and dated 10 October 2022 (Biodiversity Assessment) identifies that the road layout changes alone could result in impacts to:

- 4.29 ha of impacts to Cumberland Plain Woodland and Shale Sandstone Transition Forest critically endangered ecological communities (CEECs) (p.45)
- 9.56 ha of Koala corridor (p. 46).

EHG notes that increased impacts to CEECs may mean additional conservation measures are required under the CPCP.

The Biodiversity Assessment (p.10) flags that ‘a formal biodiversity impact assessment, including targeted field surveys would need to be completed for all areas of impact that extended outside of the certified land’. In addition, EHG advises that any modification to the CPCP must comply with Part 8, Division 6 of the BC Act, including that the application must be:

- made by a party to the approved certification (i.e., the Minister for Planning in the case of the CPCP), and
- accompanied by a biodiversity certification assessment report.

EHG will provide a full assessment of the biodiversity impacts when an application to modify the strategic biodiversity certification of the CPCP is received by the Minister for Environment and Heritage.

Proposed SEPP provisions

Consistency with Ministerial Directions

EHG notes that the Gateway report states that the Proposal is consistent with Ministerial Direction 3.6 Strategic Conservation Planning (p.22). However, the proposed SP2 Infrastructure zone applies to land identified in *State Environmental Planning Policy (Biodiversity and Conservation) 2021* (Biodiversity SEPP) as SCA/avoided which contradicts Ministerial Direction 3.6 Strategic Conservation Planning (emphasis added):

(3) A **planning proposal must not rezone land identified as avoided land** in the *State Environmental Planning Policy (Biodiversity and Conservation) 2021* to:

(a) a rural, residential, business, industrial, SP1 Special Activities, **SP2 Infrastructure**, SP3 Tourist, RE2 Private Recreation, or equivalent zone.

(4) A **planning proposal must not rezone land identified as a strategic conservation area** in the *State Environmental Planning Policy (Biodiversity and Conservation) 2021* to:

(a) RU4, RU5, RU6, residential, business, industrial, SP1 Special Activities, **SP2 Infrastructure**, SP3 Tourist, RE2 Private Recreation, or equivalent zone.

The Gateway report does not address this inconsistency with the Ministerial Direction. Moreover, the alignment of the SP2 zoning in the Proposal relies on a future modification to the CPCP. EHG cannot support the zoning proposed as it pre-empts the decision of the Minister for Environment and Heritage in relation to a modification the CPCP to certify this land for development.

Clause Application Map

EHG notes that the Clause Application Map shows 'land that forms part of a Koala corridor' (Gateway report, p.5) but does not state whether this is consistent with the CPCP 'Protected Koala Habitat' and 'Potential Restoration for Protected Koala' or OCSE advice. EHG understands that SEPP provisions are proposed which will require the agreement of the head of the Planning Department 'prior to consent being granted to development within the mapped [Koala] corridors' (Gateway report, p.27) on the Clause Application Map.

EHG notes however that:

- the Clause Application Map (Gateway report Figure 17, p.15) excludes the SP2 land within the Koala corridors, and
- as the SP2 land is excluded from the application of the clause, the agreement of the Planning Secretary would not be required to clear these parts of the Koala habitat.

EHG suggests that the mapping does not reflect the intent of the SEPP amendment and should be reviewed.

Additional Permitted Uses

EHG understands that an Additional Permitted Uses clause will allow extra development in the C2 Environmental Conservation zone where those areas do not form part of a Koala corridor and are mapped on the Additional Permitted Uses map (Gateway report, p.5). EHG notes however that the Additional Permitted Uses map (Figure 14, p.14) includes land mapped on the Clause Application Map as a Koala corridor.

EHG notes that the list of additional uses has not been provided in the material on exhibition, but advises consistent with the OCSE advice that the following uses would be unsuitable in the C2 zone and Koala corridors:

- roads

- outdoor recreation areas (including playgrounds, picnic areas, amenities, sports fields, dog exercise parks)
- water detention basins
- Asset Protection Zones (APZs)
- building identification and business identification signage
- ecotourism facilities
- information and education establishments
- childcare centres
- car parks
- batters.

Future management of SCA

It is critical that the land use planning process resolves the future ownership and management of the SCA across Greater Macarthur. EHG recommends that there be ownership and management arrangements established for the SCA in the Precinct as part of the rezoning of the land. The arrangements should address in perpetuity:

- who will own and manage the land
- protection and restoration of biodiversity values, including restoration of koala habitat
- formal mechanisms for ensuring the management of the land for conservation.

EHG recommends the following mechanisms be investigated for the management of the SCA:

- Biodiversity Stewardship Agreement (BSA)
- conservation agreement
- public ownership managed for biodiversity conservation
- funded vegetation management plan under a voluntary planning agreement.

Development controls

EHG notes that the Proposal will be supported by a draft GMGA Development Control Plan (DCP), which will outline detailed design guidelines and controls for development of the Precinct. EHG recommends the development controls in the DCP include:

- Koala protection measures consistent with the OCSE advice and the CPCP
- encouragement to retain existing vegetation where possible within the development for amenity and urban cooling
- open space and landscaping sited within the development land
- native plants and soil with seedbank obtained from the development land are reused on site
- plants used for landscaping are species which are endemic to the area
- buffers to conservation land are provided via a perimeter road, shared cycle/pedestrian paths or open space in the development area
- aquatic ecosystems are protected from pollution and development impacts on waterways are reduced through improved stormwater management approaches
- stormwater and effluent systems do not discharge into existing or proposed conservation land
- APZs are sited wholly on development land.

Floodplain risk management

EHG considers that floodplain risk management (FRM) has not been adequately addressed in the Proposal. As such, EHG's previous comments provided in September 2022 are still relevant. A flood impact and risk assessment (FIRA) should be prepared to guide decisions on the development of the Precinct. The FIRA should assess existing and developed flood behaviour for the full range of flooding up to and including the full range of flooding for both mainstream and overland flow flooding. EHG's previous comments are reiterated below.

The *Wollondilly Shire Wide Flood Study 2021* (Wollondilly Flood Study) identifies flood affected area for the full range of flooding up to and including the probable maximum flood (PMF). Flood information for the site is available on Council's online mapping system which can be accessed at <https://www.wollondilly.nsw.gov.au/council/mapping/>

Consultation with Council is required to obtain the flood information for the full range of flooding including flood behaviour, risk, and constraints. If the site is flood affected a flood impact and risk assessment would be required.

The FIRA should:

- outline existing flood behaviour that is compatible with Council's abovementioned flood study
- identify developed flood behaviour. The developed scenario should include the proposed development with key details of the final proposal, including development type and density changing runoff characteristics, infrastructure and proposed modification to waterways or floodplain landform or vegetation
- identify the impacts of the proposed development on the flood behaviour and on flood risk to the existing community
- identify the impacts and risks of flooding on the development and its users
- identify how these impacts can be managed to minimise the growth in risk to the community due to the development. This includes details of any management measures to be implemented to minimise the impacts and risks posed to the existing and future community due to development
- provide an assessment of the residual impacts of the project (that management measures cannot manage) on and off the site.

Comments on Proposal

Section 4.1.4 of the Gateway report (p.27) includes the following statement on flooding:

In the Appin (Part) Precinct, the flood mapping shows that the flood extents are contained in the creeks traversing the Site.

The [Wollondilly] Flood Study mapping shows that the majority of flooding within the catchments is contained within the Cataract and Nepean Rivers riparian corridor. The proposal notes this suggests that the development of the Appin (Part) Precinct will not be impacted during the major flood event. As such, it was considered that post-development hydraulic flood assessment is not required.

The Water Cycle Management Strategy report supporting this proposal assessed the catchments across the Appin (Part) Precinct in developed conditions and determined that most of the catchments are likely to be less than 40 ha before discharge. However, there are two catchments greater than 40 ha along Rocky Ponds Creek and Ousedale Creek. Consideration will be required in the detailed design of the road layouts and associated street drainage infrastructure so that these catchments are limited to approximately 40 ha'.

EHG advises that the Proposal has not adequately addressed flooding for the following reasons:

- the full range of flooding must be considered, not just the 'majority'. It is unclear which flood events have been considered
- by limiting consideration of flooding to the Cataract River and Nepean River mainstream flooding, local and overland flooding has been overlooked. The Wollondilly Flood Study identifies the flood affected area for the full range of flooding up to and including the PMF for local creeks and overland flow. It should be noted that this represents the existing flood behaviour in the site and does not represent the developed condition flood behaviour for the Precinct

- the Gateway report does not explain how it was determined that there will be no change in flood behaviour post development to support the conclusion that a post-development hydraulic assessment is not required.

Water cycle management

EHG has reviewed the *Water Cycle Management Strategy Report - Walker Corporation Appin (Part) Precinct* prepared by J. Wyndham Prince dated October 2022 (WCM report) and has the following advice:

- Flood behaviour is not limited to the peak flow, depth and extent. In the developed condition the flood volume will increase even if basins are used for flow attenuation, the rate of rise and velocity will be faster and flood duration will be longer. The WCM report did not assess developed precinct flood behaviour as it limited its consideration to the hydrology (peak flow) in the 50% AEP and the 1% AEP which does not provide sound understanding of flood behaviour or flood risk.
- The WCM report scope of work does not accommodate FRM issues. WCM relates to water management such as stormwater quality and quantity, water harvesting, etc. FRM relates to decisions on how to manage the floodplain and reduce risks to the community occupying the floodplain. FRM also relates to the management of risks (existing, future and continuing) to the community in the short and long term. Flood risk and FRM is potentially affected by any changes in the floodplain, including development.

END OF SUBMISSION

Attachment 2 – EHG comments on Appin Technical Assurance Panel (TAP) draft proposal package dated 24 August 2022

Our ref: DOC22/679522

Your ref: Appin TAP final

Adrian Hohenzollern
Director Western District
Department of Planning and Environment
4 Parramatta Square, 12 Darcy Street
Parramatta NSW 2150

Subject: Appin Technical Assurance Panel (TAP) draft proposal package

Mr Hohenzollern

I refer to your email received on 25 July 2022 requesting comments from the Department of Planning and Environment (DPE) Environment and Heritage Group (EHG) in regard to the draft proposal package prepared by Walker Corporation for the Appin Vale Rezoning proposal including Appin Vale Release Area 1.

EHG understands that the draft proposal package for the Appin Vale Rezoning is the final package of information provided to agencies on the TAP for review and that DPE Planning will collate the comments received and prepare a response for the TAP chair to provide to Walker Corporation.

EHG has reviewed the relevant documents provides comments in Attachment 1 in regard to biodiversity and flooding.

If you have any queries, please contact Susan Harrison on Susan.Harrison@environment.nsw.gov.au or 02 9995 6864.

Yours sincerely,

A handwritten signature in black ink, appearing to be "Louisa Clark".

Louisa Clark 24/08/2022
A/Director Greater Sydney
Biodiversity and Conservation

Attachment 1 – EHG comments on Appin TAP draft proposal package

Biodiversity

Cumberland Plain Conservation Plan

EHG understands that DPE Resilience and Urban Sustainability Division will provide advice regarding the consistency of the proposal with the Cumberland Plain Conservation Plan (CPCP).

Office of Chief Scientist and Engineer Advice on the protection of the Campbelltown Koalas

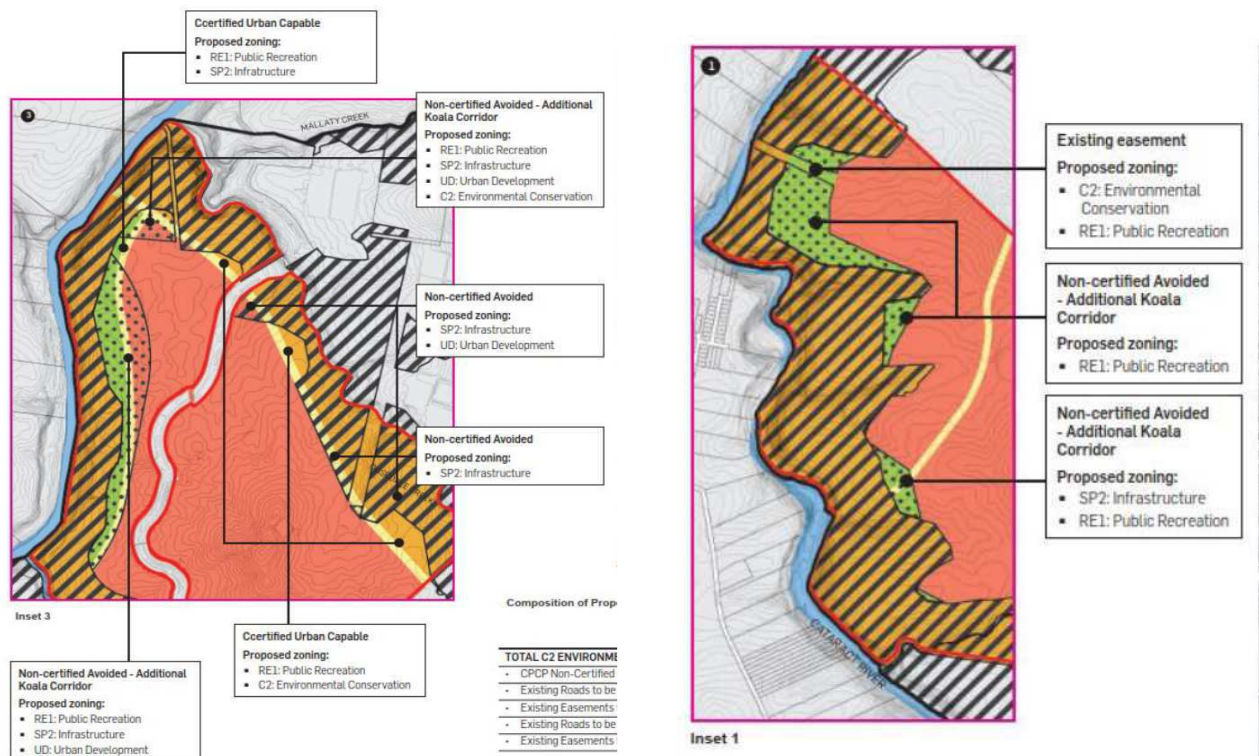
As DPE Planning is aware, throughout the TAP process EHG has advised that the final proposal must be consistent with the *Office of Chief Scientist and Engineer (OCSE) Advice on the protection of the Campbelltown Koalas* and follow up reports. Based on the information provided however, it appears that the draft proposal is inconsistent with the advice and recommendations of the OCSE as discussed below.

Koala corridors

The structure plan for Appin Vale sub-precinct, land zoning map and 'Draft Proposal Structure Plan for the Appin Precinct, Precinct Plan for the Appin Vale Sub Precinct and Indicative Layout Plan for Release Area 1' (draft Proposal Report) show that the mapped CPCP Koala corridors required to meet the OCSE average minimum width (390 to 425 m) requirement are proposed to be zoned:

- RE1 Public Recreation
- SP2 Infrastructure
- UD Urban Development
- C2 Environmental Conservation

For example, the below excerpts from the draft Proposal Report (figure 80) show the CPCP *Non-Certified Avoided-Additional Koala Corridor* is proposed to be zoned RE1, SP2 and UD. It is understood that the *CPCP Non-Certified Avoided - Additional Koala Corridor* land forms part of the mapped Koala Corridor to meet the OCSE average minimum width requirement.



Regarding the Koala corridors, the OCSE *Advice on the protection of the Campbelltown Koalas* includes the following advice and recommendations:

- c) *Habitat within identified corridors should be:*
 - o *protected (especially from development creep)*
 - o *widened through revegetation (average size 390 to 425 m)*
 - o *include a buffer on either side of the corridor habitat that is at least 30 m wide from the corridor to the exclusion fence with feed trees permitted in this buffer area*
 - o *include, between the buffer area and the urban areas, koala proof fencing to prevent the movement of koalas out of the corridor into urban areas (with trees more than 3 m from the fencing to avoid damage) and the movement of domestic dogs (amongst other potential threats) into the corridor.*
- *The Panel recommends the establishment of exclusion fencing to separate koalas from threats associated with urban development, particularly from dogs and cars.*
- *Buffer zones provide a mechanism to minimise edge effects – they reduce interactions between koalas and the urban environment. The Panel notes that buffer zones should:*
 - o *provide separation between the built environment and other associated infrastructure (including roads).*

The follow up OCSE report *Response to questions about advice provided in the Koala Independent Expert Panel Report 'Advice on the protection of the Campbelltown Koala population'* provides the following comments and advice regarding buffer zones including allowable activities within these zones. It is important to acknowledge that if these activities are not allowed within the buffers then they are not allowed within the entirety of the Koala corridor.

- *Urban development in proximity to fauna has increased the potential 'edge effects' that species such as koalas experience.*
- *Edge effects can include both direct (i.e., vehicle strike and dog attacks) and indirect (i.e., light and noise pollution, urban storm runoff) impacts on fauna and flora, and can result in altered behaviour (for example, changes in home ranges or in how species disperse throughout a landscape) that can have longer term repercussions.*
- *There are a number of strategies and methods that can mitigate the impact on koalas, particularly at the interface of urban and native environments. This includes, but it is not limited to, vegetated buffer zones and managed habitat areas, koala exclusion fencing.*
- *The Panel views the buffer as a vegetated protection for koalas and their habitat from direct and indirect threats (i.e., 'edge effects').*
- *The buffer is designed to reduce the impact of direct and indirect impacts from humans, such as light and noise.*
- *Removing habitat from buffer areas should be avoided unless absolutely necessary.*
- *The key tenet is that the primary aim should be to maximise koala habitat and to protect that habitat. Whilst average corridor widths (390 m to 425 m) have been used, this should be the minimum average to aim for, with "...every opportunity to maintain or increase the width of corridors should be taken...". We have reflected this concept in the figures below (Figure 8). This should not lead to perverse outcomes or be to the detriment of current habitat (i.e., habitat should not be removed from the corridor/buffer unless absolutely necessary), but with a revegetated corridor and buffer designed to protect and increase this habitat.*

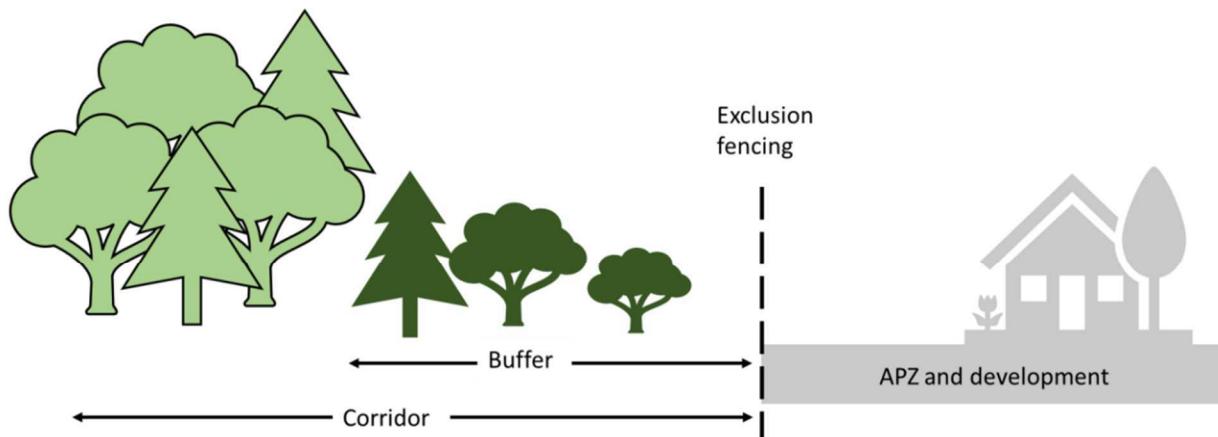


Figure 7: The separation of the vegetated buffer (which can include koala feed and shelter trees, with a bias towards the area adjacent to the corridor) and APZ

Source: OCSE *Response to questions about advice provided in the Koala Independent Expert Panel Report 'Advice on the protection of the Campbelltown Koala population'*, Figure 7

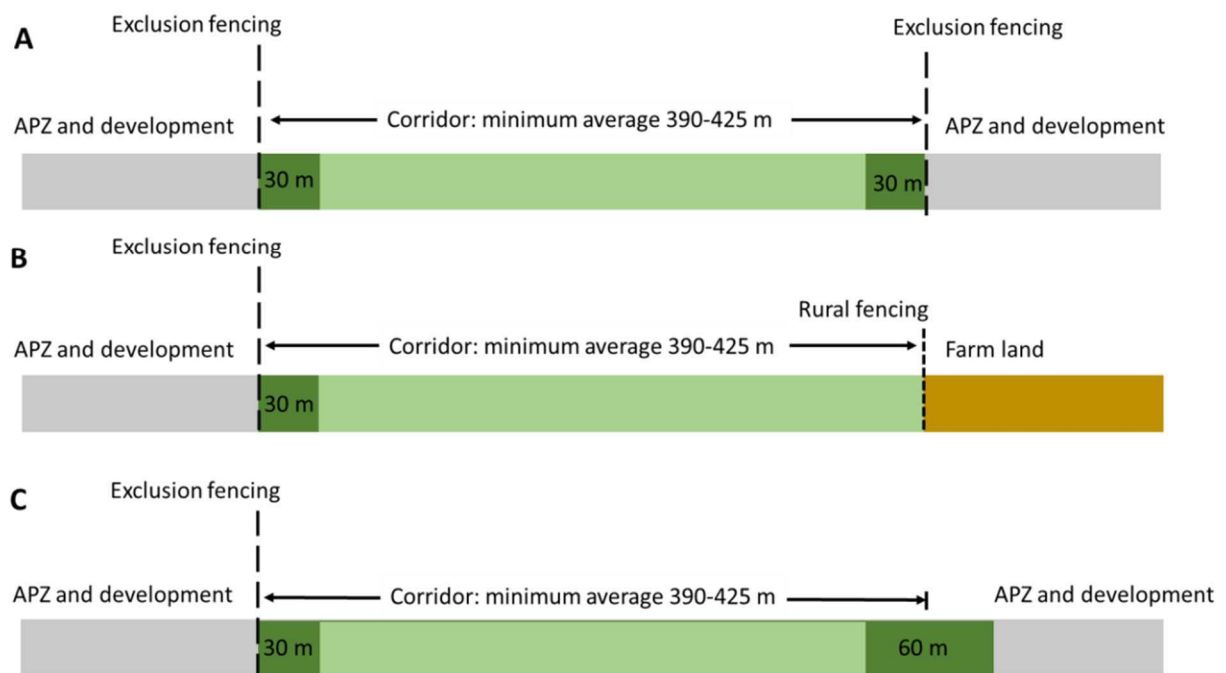


Figure 8: Recommendations for corridors. A) Development either side of the corridor, B) Development on one side and farmland on the other, C) Development on both sides, but with one side unable to be fenced.

Source: OCSE *Response to questions about advice provided in the Koala Independent Expert Panel Report 'Advice on the protection of the Campbelltown Koala population'*, Figure 8

Table 1: A non-exhaustive list of activities allowed within the various buffer zones

	Exclusion fencing (30 m buffer)	No exclusion fencing (60 m buffer)	Rural fencing on homestead
Members of the public	Acceptable; access via appropriate gates in koala exclusion fencing	Acceptable	N/A
Dogs	No dogs allowed within buffer	No dogs allowed within buffer	Proponent discuss with Homestead management about approach to managing farm dogs to prevent access to corridor.
Roads	No roads within buffer, unless required to cross corridor. Requires appropriate mitigation devices (raised, fenced, cattle grid etc)	No roads within buffer, unless required to cross corridor. Requires appropriate mitigation devices (raised, fenced, cattle grid etc) Reduced speed limits (40km/h) on adjacent roads to buffer with traffic calming devices	In discussion with the Homestead manager, roadways that cross corridors would require appropriate mitigation devices within the corridor (raised, fenced, cattle grid etc)
Playgrounds	No playgrounds within buffer	No playgrounds within buffer	N/A
Picnic Areas	No picnic areas within buffer	No picnic areas within buffer	N/A
Koala feed trees	Koala feed trees should form part of the buffer, ensuring that no large tree is within 3 m of the buffer	Koala feed trees could form part of the vegetation within the 30 m closest to the corridor; noting that there should be minimal koala feed/shelter trees in the outer 30 m (i.e. adjacent to the APZ and development) to discourage koala movement into these areas	N/A

Source: OCSE *Response to questions about advice provided in the Koala Independent Expert Panel Report 'Advice on the protection of the Campbelltown Koala population'*, Table 1

Based on the advice provided by the OCSE including Table 1 above, picnic areas, playgrounds and roads (unless required to cross corridor) are not allowed within the Koala corridors including the buffers. Furthermore, Figures 7 and 8 above show that development and asset protection zones (APZs), which would include infrastructure required to support urban development, must also be located outside of the Koala corridors (i.e. on the development side of the exclusion fence within the development footprint).

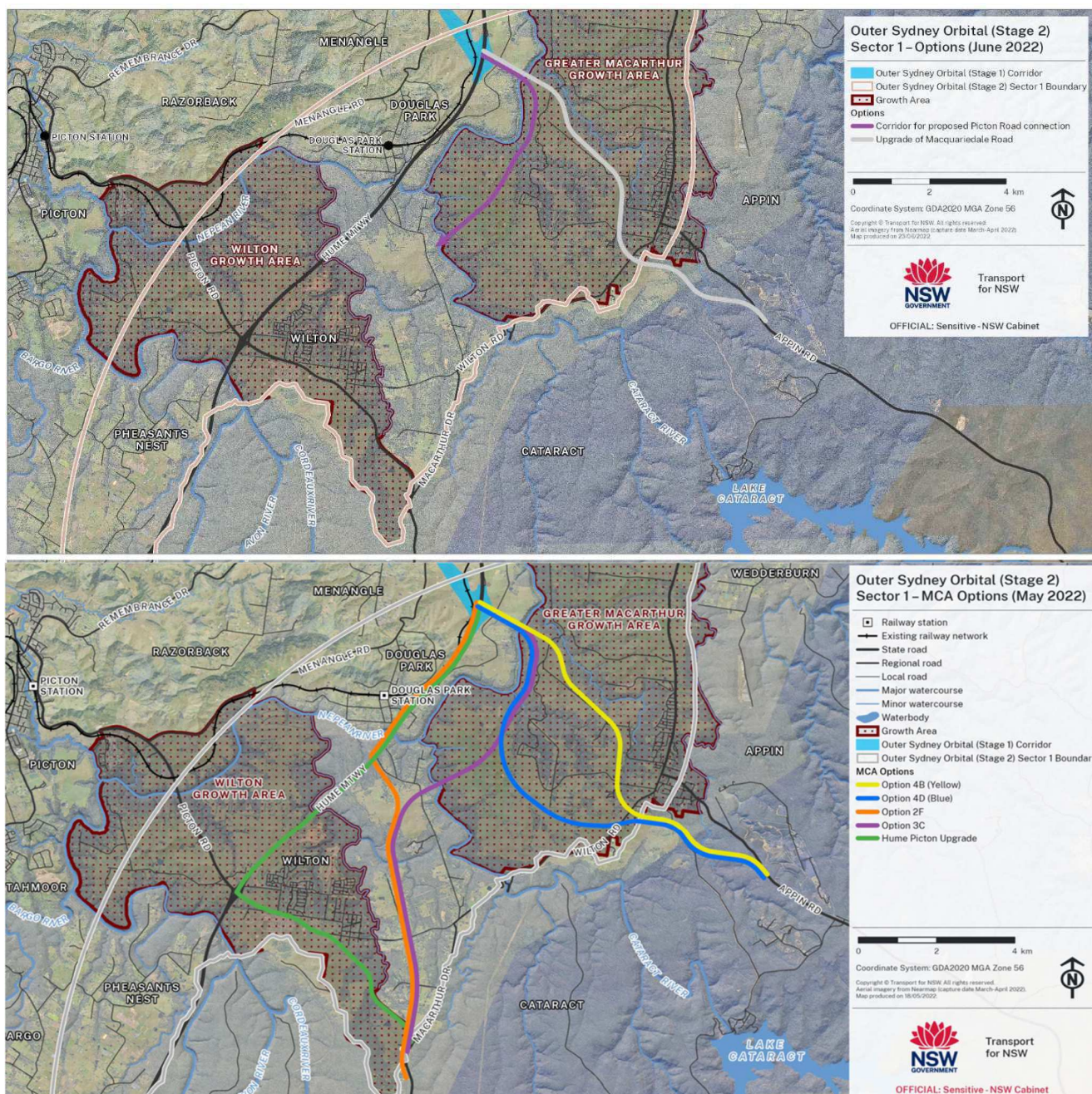
Considering the above, EHG does not support the proposed land use zoning of the Koala corridors to RE1, SP2 and UD as these zones permit uses that are inconsistent with the advice and recommendations of the OCSE. EHG is of the view that the entire area of the Koala corridors required to meet the OCSE requirements should be zoned C2 Environmental Conservation with permitted uses restricted to those consistent with the OCSE advice.

Retention of native vegetation within certified land

EHG recommends that all opportunities to maximise the retention of native vegetation on certified land be explored. The retention and revegetation of existing ecological communities will not only enhance biodiversity outcomes within the sub-precinct and the broader growth area, it will also assist in delivering a more liveable precinct by contributing to local amenity and urban cooling by helping to address the urban heat island effect.

Outer Sydney Orbital Stage 2

EHG notes that zoning map and the structure plan for Appin Vale sub-precinct shows a 'North-South Connection' which appears to be the 'Corridor for proposed Picton Road connection' (purple route on the two maps below from the TAP package) that was identified during the Outer Sydney Orbital Stage 2 multi criteria assessment (MCA) process.



During the MCA process EHG raised significant concerns about the impacts of the proposed purple route option on biodiversity values. In particular, EHG advised that the purple and orange routes (shown in above map provided in the TAP package) that run parallel to the two growth areas would result in the most significant impacts to primary koala corridors and habitat and biodiversity values generally of all the options presented. EHG also noted that Koala were up listed in NSW to endangered. The location of the primary and secondary Koala corridors are shown in the figure below from the ‘Conserving Koalas in the Wollondilly and Campbelltown Local Government Areas’ report.

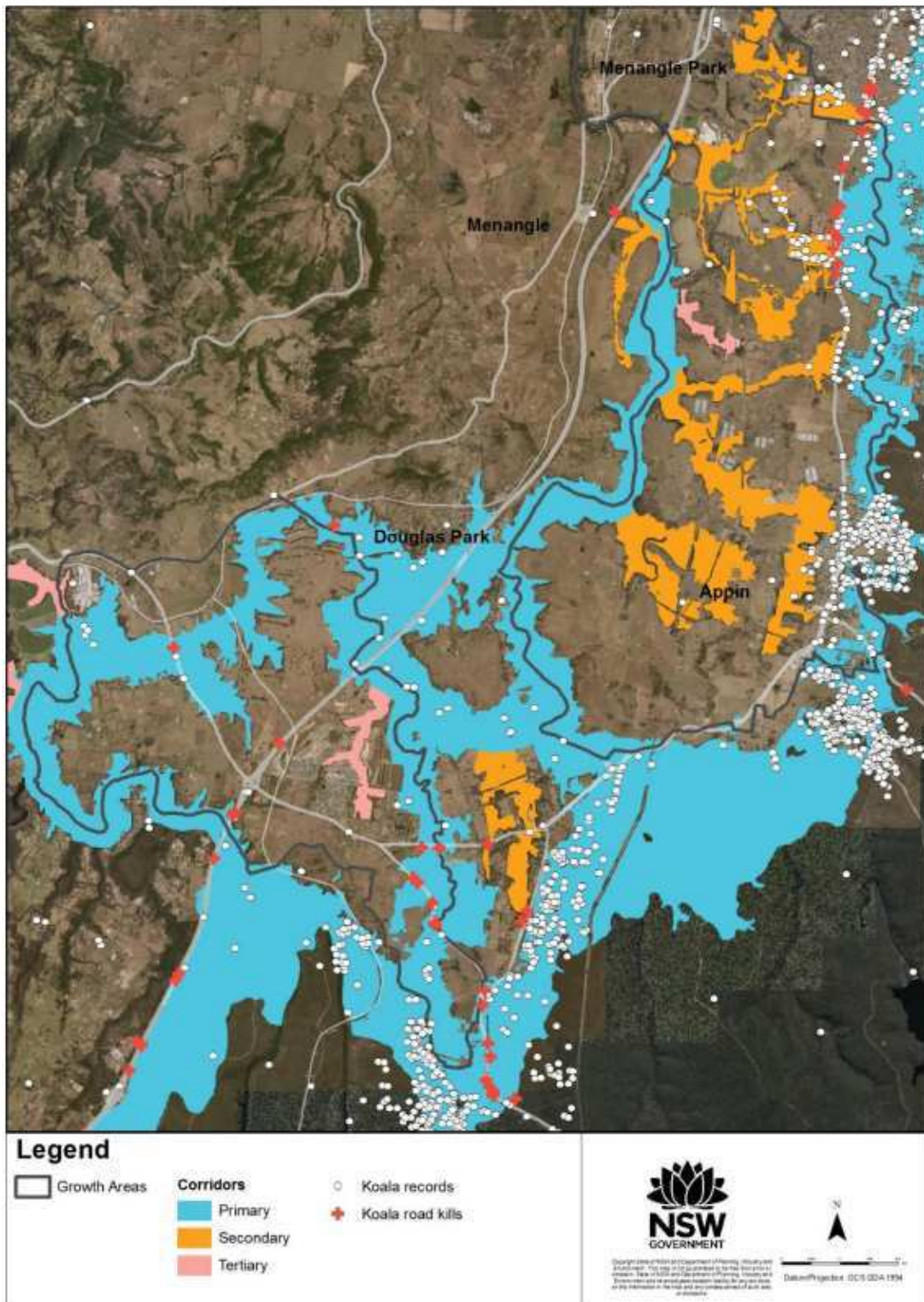


Figure 4 Rankings for koala corridors across the Wilton and Greater Macarthur Growth Areas. Note that koala records shown are sightings and do not indicate koala densities.

Source: Conserving Koalas in the Wollondilly and Campbelltown Local Government Areas, Figure 4

EHG also advised that the Cumberland Subregion Biodiversity Investment Opportunities Map identifies large portions of land between the two growth areas as “core areas” which are large remnants where management will be of greatest benefit to the conservation of key state and

regional biodiversity values within a region. EHG noted that it is likely the vegetation between the two growth areas is mainly Cumberland Plain Woodland and Shale Sandstone Transition Forest and these are both critically endangered ecological communities under both NSW and Commonwealth legislation.

In addition, EHG also raised concern that the location of the purple route may cause additional development pressure between the two growth areas resulting in further impacts to the high biodiversity values.

It should be noted that these concerns remain.

Flood risk management

EHG notes that the draft package does not include any flood modelling or mapping.

Prior to exhibition, EHG recommended that a flood assessment be prepared to support the proposal, including pre and post development flood modelling and mapping (1% AEP and PMF, as a minimum). The flood assessment should be informed by Wollondilly Shire flood studies. Flood information for the site is available on Council's online mapping system <https://www.wollondilly.nsw.gov.au/council/mapping/>. Consultation with Council in this regard is recommended.

In addition, EHG also recommends the following:

- Discussion of flood emergency management is required. This should include a preliminary assessment of the flood emergency classification of communities on a precinct scale. Care should be taken not to unintentionally create areas that become isolated in flood events, even where they remain elevated above floodwater (high flood islands). Consultation with the SES should be undertaken.
- A geomorphological impact assessment should be prepared for any basins proposed to be located in the 1% AEP flood extents.
- Batters surrounding any raingardens or basins should be properly estimated.
- The stream erosion index should be calculated at relevant locations and not for the site as a whole.

END OF SUBMISSION