INQUIRY INTO KOALA POPULATIONS AND HABITAT IN NEW SOUTH WALES

Organisation: Date Received: Koala Recovery Partnership 1 August 2019



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1/8/19

Dear Sir/Madam,

RE: Parliamentary Inquiry into Koala Populations and Habitat in New South Wales

Introduction

The Hastings-Macleay Region, on the Mid North Coast of NSW, has been recognised as an "Area of Regional Koala Significance" (ARKS) by the NSW Government. The Region supports an (historically) large koala population comprised of a number of genomes- an important factor in disease resilience. The Region supports the Port Macquarie Koala Hospital (now Koala Conservation Australia), which together with other koala-related ventures within the Region, annually contribute more than \$60 million in tourism revenue. The two Councils comprising the ARKS (Kempsey Shire Council and Port Macquarie-Hastings Council) recognise the cultural and economic value of koalas to the region.

The "Koala Recovery Partnership" is a new venture of which two of the funding partners, the Mid North Coast Joint Organisation (MNCJO) (Kempsey Shire Council, Port Macquarie-Hastings Council and Bellingen Council) and Koala Conservation Australia formally make this submission. The Partnership undertakes projects that seek to reverse declines to koalas within the ARKS. The Project is hosted and governed by the MNCJO, is overseen by an Advisory Committee comprised of the funding partners and employs a full-time Koala Ecologist.

Terms of Reference Comments and Recommendations

(a) the status of koala populations and koala habitat in New South Wales, including trends, key threats, resource availability, adequacy of protections and areas for further research

Status of Koala Populations: Population Viability Analysis modelling ('VORTEX') conducted by the Koala Recovery Partnership, using 2012 data supplied from koala population monitoring in the Port Macquarie region, and admissions data from the Port Macquarie Koala Hospital, revealed declines in koala populations on the coastal floodplain of c. 26%, which equated to functional extinction within fifty years. This data was independent of those 26% decline rates outlined in the NSW Koala Strategy. Our monitoring assumed: 1. No further habitat loss; 2. No increase in natural disasters (such as catastrophic wildfire events) and 3. That all individuals of breeding age could do so. All of these assumptions are flawed as 1. Koala Habitat continues to be legally cleared; 2. The incidence and severity of widlfires is predicted to increase in our Region with a drier, hotter climate and 3. Many koalas in our Region are infected with Chlamydia and have become infertile. Therefore the true rate of decline of koalas in this Region is much higher than the modelling indicated. Given the logistic curve associated with population decline, we estimate we have a window of 3-5 years to effect positive change for koalas, after which time the populations will be almost unrecoverable.





Currently, there is no good evidence surrounding koala populations:

- At the <u>State Level</u> (the figures in the NSW Koala Strategy are coastally-derived. There are concerns that koalas in western areas may be declining even faster due to drought/ disease).
- At the <u>Regional Level</u>, which would greatly inform strategic planning.
- At the Local Level, which could inform individual developments. For instance, it is currently virtually impossible to defend the notion of a "Significant Impact" from a development when it is unknown how many koalas are likely to be impacted by development and what proportion of a local population is impacted (and therefore whether such a decline would render the local population unviable). As a result, even when it is anticipated that a significant impact may be likely, many resource-limited Councils may be unwilling to take matters to the Land and Environment Court given the difficulties associated with providing evidence (particularly when faced with the 'Experts' hired by the development agency).

Recommendations re Status of Koala Populations:

- Major investments need to be made into regional koala monitoring programs. Such monitoring needs to be undertaken annually, appropriately stratified and use methods with demonstrated detection rates (current SAT methods result in a high non-detection rate).
- Monitoring, using genetic methods, needs to be undertaken to determine population viability and to understand likely sustainable population sizes.
- Such monitoring programs are best undertaken at a regional level (but using methods that can be drawn together to yield state-wide population trends). Such monitoring should be based on "real-world" plots (not modelling which repeatedly has proved unreliable in our region). This will not be cheap but is imperative to appropriate guide koala recovery.

Other matters outlined for Point A are covered in sub-headings below.

(b): the impacts on koalas and koala habitat from: (i) the Coastal Integrated Forestry Operations Approvals and Regional Forest Agreements, (ii) the Private Native Forestry Code of Practice, (iii) the old growth forest remapping and rezoning program, (iv) the 2016 land management reforms, including the Local Land Services Amendment Act 2016 and associated regulations and codes

We will focus this discussion on subpoints (ii) and (iv).

Subpoint (ii) the Private Native Forestry Code of Practice:

Many hundreds of hectares of private native forestry licences have been issued in the Hastings-Macleay Region on areas of extremely important koala. Current self-assessment codes fail to identify koala habitat. Furthermore, the management prescriptions that do apply on lands identified as koala habitat further fail to protect koalas. Koala detection is notoriously difficult (even for trained experts). Koalas are extremely difficult to spot, and scats can be very difficult to detect, particularly after rainfall events or during periods of high leaf drop and bark decortication. Formal detection rates for any koala survey method have never been determined- and yet we know that there is an extremely high rate of non-detection. Asking non-trained experts, with a vested interest, to identify koala presence (or other threatened species) is fraught with problems. Even where scats are identified, the Code states that more than 20 scats must be found to warrant protection. Even in extremely high quality koala habitat with high occupancy rates, it would be difficult for a trained expert to find that many scats under one tree. Furthermore, koalas 'partition' their home range across the year- only occupying part of it at any given point in time. Examples are moving to higher ground during the colder months and moving to wetter areas during summer. This means that valuable parts of a koala's home range could be determined to be 'non-habitat' with one-off surveys.





Only areas formally identified as 'core' koala habitat under a registered Koala Plan of Management have restrictions placed on them from Private Naïve Forestry. Due to the difficulties associated with mapping core koala habitat, many, even progressive Councils, such as Port Macquarie-Hastings Council, do not yet have Comprehensive Koala Plans of Management (CKPOMs). Other Councils, such as Kempsey Shire Council, have CKPOMs which are now many years old, and for which it is realised that the associated mapping, did not fully identify the types of habitat preferred by koalas in the region. Knowledge about koala habitat preferences are particularly limited in the hinterland and records (eg as on BioNet) are virtually non-existent or non-published (thus under predicting presence). As a result, many Councils have not extended their CKPOM mapping into the hinterland environment (these areas are also more remote from the types of development a CKPOM seeks to regulate). Therefore registered CKPOMs are not the best mechanism by which to identify koala habitat and regulate Private Native Forestry activities. Alternative methods are required.

Not withstanding all of the above, it is interesting to note that Point A of the Private Native Forestry code actually states "(a) Forest operations are not permitted within any area identified as 'core koala habitat' within the meaning of State Environmental Planning Policy No. 44 – Koala Habitat Protection". SEPP 44 Core Koala Habitat legally means that the area is "potential koala habitat" (ie >15% Schedule 1 feed trees present) which is occupied. The legal definition of Core Koala Habitat under SEPP 44 therefore extends outside those areas mapped in a CKPOM and therefore the Code has been incorrectly interpreted for PNF. Furthermore, SEPP 44 demands that the surveys must be done "from a person with appropriate qualifications and experience in biological science and fauna survey and management". SEPP 44 therefore determines that self-assessment codes are insufficient.

Scribbly Gums (*Eucalyptus racemosa/signata*) are not listed as either a Primary or Secondary Feed Tree for Koala Management Area 1 and yet are widely used.

There is no requirement for specialists to undertake pre-harvest inspection of koalas present. Given the difficulties in spotting a koala, concerns about ethics and direct koala mortality are valid. There are no regulations surrounding what should be done if a koala is injured during operations.

It is unknown whether the retained tree schedule is sufficient to support koala populations at similar rates post-harvest compared to pre-harvest. The abundance of required feed trees is likely to vary with soil nutritional values (ie koalas may be able to cope with fewer feed trees on fertile sols but require greater 'pick' on poor quality soils). Increasingly there is recognition that koalas need more than just feed trees for good quality habitat. Vegetation that offers good opportunities for thermoregulation is vitally important (eg cool, shady areas with closed canopies for hot weather refuges). The role of PNF in modifying the thermal properties of vegetation is unknown. The role of post-harvest burns in impacting koala health or mortality is unknown, as is the role of wild dog predation following clearing which ensures that koalas are required to spend more time on the ground, as opposed to moving through the canopy (as they can in good-quality undisturbed habitat).

The concept of PNF being a 'sustainable' industry has not been tested. There is insufficient compliance to undertake follow-up monitoring to determine whether areas are allowed to regenerate (or whether the context is changed post-harvest to a grassed, grazed areas with scattered trees). If PNF truly is sustainable, mandated controls must be placed on licenced areas-stipulating that the area must be allowed to regenerate for 50-100 years without further clearing or grazing. Many rural areas in our Region have had PNF licences applied ahead of rezoning





applications for urban development. Such clearing reduces the levels of credits required under the Biodiversity Conservation Act and the likelihood of encountering threatened species, such as Koalas.

<u>Subpoint (iv) the Local Land Services Amendment Act 2016 and associated regulations and codes:</u> The Land Management (Native Vegetation) Code 2018: Part 3: Pasture Expansion gives no regard to the maintenance of koala food trees in suitable proportions or DBHs (it only states trees above 90 cm DBH must be retained). Similar concerns are held as outlined for PNF above (notably ethics/mortality caused by the absence of pre-clearing koala surveys, sufficiency of koala feed postharvest, quality of koala habitat caused by canopy thinning (thermoregulation and movement)).

Great concerns are held over the term 'regrowth' with the date being fixed to 1990. Many such areas are now entering prime koala browse status (most koala feed trees take c. 10-20 years to reach browse status and ultimately decline in use with increasing age of the tree as it starts dying back). Such areas, while they may be 'regrowth country' and not contain multiple other habitat values (eg hollow-bearing trees for hollow-obligate species) they may still be vitally important for koalas, particularly where they occur in moister, more fertile parts of the landscape. There is no requirement to maintain a set percentage of the regrown trees- all can be legally cleared, resulting in immediate and total loss of habitat for any koalas that may be using such regrowth country.

The Land Management (Native Vegetation) Code Part 5 (Equity) Division 3 allows the removal of 'small' areas (1 ha) on an annual basis. One hectare of koala habitat in the coastal zone is still a significant amount (ie 10% of a female's home range). The incremental loss over time is significant.

The Set Aside concept is fraught with issues as for koalas. Farmers will preferentially clear the wettest, moistest parts of the landscape. Such areas are also the most preferred koala habitat (particularly as times become drier and hotter). "Set aside" areas located on steeper 'backblocks' do not provide the same carrying-capacity habitat (if at all). More notably, the area required for a "Set Aside" area can be reduced by 50% if it comprises an Endangered Ecological Community. In the coastal zone, much of the best koala habitat comprises "Swamp Sclerophyll Forest on the Coastal Floodplain" EEC. This habitat type has the highest activity levels and repeatedly performs as "Primary" Habitat. As such, slashing the required Set Aside area by 50% is entirely inappropriate. Set Aside areas are deemed to be those of lower habitat quality that can restored. As such, potentially high quality in-tact habitat is being traded on a regular basis for poorer-quality habitat.

Regulated and Vulnerable Land considered under the Code does not accurately reflect koala habitat (see the comments in the Private Native Forestry section about the inadequacies of CKPOMs in the hinterland environments and also the underperformance of existing models and datasets).

Finally, careful consideration must be given to properties zoned rural that now exist within the urban context. "Allowable Activities" and other forms of clearing permitted by the Code have been used to undertake pre-emptive development clearing to reduce the likelihood of threatened species presence and species and offsets credits required under the Biodiversity Conservation Act. Within our Region, a rural-zoned property that supported extremely high koala habitat values and koala occupancy was legally cleared (while a subdivision application was being considered by Council). Council were aware of the koala habitat values of this property and were considering the subdivision layout to reduce impact to koalas. In the interim, clearing was undertaken using the LLS Codes. This is likely to occur on a frequent basis in the Coastal Zone and requires legal controls.





Recommendations re Forestry and Rural Land Clearing:

- Self-based assessment for determination of koala habitat must be removed. Formal surveys must be undertaken using ecologists (as legally required under SEPP 44).
- Recognise that 'core koala habitat' under SEPP 44 is more than that declared in a Comprehensive Koala Plan of Management. The PNF Code has been incorrectly applied.
 CKPOMs are entirely lacking in hinterland environments- where most PNF occurs.
- Koala habitat identification must not be undertaken using the Koala Likelihood Model or DPI Koala Habitat Model (or the intersection thereof). Both of these models perform poorly in our Region. One example is an area south of Crescent Head for which the Koala Likelihood Model rates a '0' likelihood of koala presence and surrounding grids equally indicate non-presence. Fifty-four koalas were identified in this area during searches in late 2017, making this a 'hotspot' of koala activity. This is just one example, but there are many more areas where one or both models have performed poorly. This is not to say that these models do not have value for regional patterns- just that nothing can substitute for undertaking good on-ground surveys, particularly when there is still so much we are learning about koala habitat preferences, detection and movements.
- Set-aside areas following clearing under the LLS Act must be 'like for like' in terms of soil fertility, moisture content and composition of koala feed trees. Farmers will preferentially clear the wettest, moistest parts of the landscape. Such areas are also the most preferred koala habitat (particularly as times become drier and hotter). "Set aside" areas located on steeper 'backblocks' do not provide the same carrying-capacity habitat (if at all).
- Remove the 50% discount rate for Set Aside Areas if the area being cleared is an EEC. If anything, such areas should have an inflationary value applied to account for their scarcity.
- Change legislation to prevent pre-emptive development clearing on rural lands.

(c)the effectiveness of State Environmental Planning Policy 44 - Koala Habitat Protection, the NSW Koala Strategy and the Biodiversity Conservation Act 2016, including the threatened species provisions and associated regulations, in protecting koala habitat and responding to key threats,

SEPP 44:

SEPP 44 regularly fails to identify, or protect, koalas or koala habitat. Reasons for this include:

- Identification of 'Potential' Koala Habitat.
 - The list of trees identified as "Koala Browse Trees" in Schedule 1 does not capture all koala feed tree species in our Region. Examples include, but are not limited to, Small-fruited Grey Gum (*Eucalyptus propinqua*), White Stringybark (*E. globoidea*) and Red Mahogany (*E. resinfera*). State-wide reviews of koala feed trees 'average' use and therefore fail to capture species which may be widely used at the regional scale. Important koala habitat may therefore not be captured as 'potential' habitat.
 - There is no firm criteria for application of a method for determination of Potential Habitat. This is problematic at both the individual development scale and even more problematic at the scale of a Comprehensive Koala Plan of Management. For example, we have seen consulting ecologist's reports that sample across the entirety of a development site and take a broad average. Thus failing to identify patches of 'Potential Koala Habitat' within areas of 'non Potential Koala Habitat'. We have also seen consulting ecologist reports that sample a small area and deem the development does not trigger SEPP 44 when placement of the plot in a slightly different location on the site would ensure that SEPP 44 Potential Habitat criteria are met. At the Comprehensive Koala Plan of Management scale, taking SEPP 44





criteria and trying to apply it at the landscape scale is extremely problematic. Council's have been faced with legal threats, over capturing areas within a CKPOM as 'core koala habitat' when they have never been surveyed. This has held some Council's back from preparing or releasing CKPOMs. Firm criteria from the NSW Government would ensure a consistency of approach and certainty for Councils.

- There is increasing recognition that koala habitat is more than just 'feed' trees. The relative % of koala feed trees required by koalas is likely to be a sliding scale with soil fertility/moisture etc (hence setting firm %s to identify habitat is fraught with problems). Similarly, mesic refuge areas are important parts of a koala's home range and yet would not be captured as "Potential Koala Habitat". Finally, in many areas, a koala's home range is likely comprised of 'feeding areas' and 'corridor' areas. Use of the Potential Koala Habitat approached fails to capture all koala habitat.
- Identification of 'Core' Koala Habitat.
 - As noted above, koala detection is notoriously difficult. Most survey methods result is extremely high levels of non-detection (ie assuming no koalas are present when in fact they are) and formal scientific monitoring to determine detection rates has never been undertaken. While areas may be identified as "Potential Koala Habitat", many occupied areas are not correctly identified as "Core" due to low detection rates. We have personally been to development sites that have been identified as "Potential" but not "Core" and then found koala scats. Alternatively, areas are identified as "Potential" but not "Core" and yet koala records are either anecdotally known from that site or exist formally on neighbouring lands (when koalas are in fact most likely to also use that development area as part of their home range).
 - The application of "Core Koala Habitat" at the landscape scale is problematic, and clear guidance on the methods to identify koala presence is required for the development of Comprehensive Koala Plans of Management.
- Preparation of Koala Plans of Management.
 - If land is deemed "Core Koala Habitat" a Koala Plan of Management must be created to protect the local koala population. Such Plans have notoriously failed to protect koalas from further declines due to the impacts of urban development including : 1. Immediate loss of habitat; and 2. The follow-on effects from urban development (notably road strike, dog attack, stress-induced disease, drownings in swimming pools etc).
 - 'Offsets' required under KPOMs to mitigate loss of habitats are fraught with problems as: 1. There is usually insufficient land in the immediate vicinity of the development to receive offset trees (such land is too valuable for people to sell for tree planting); 2. As a result offset trees are 'squeezed' into the development precinct (parks, roadsides, edges)- here they exist in a 'non-habitat' matrix and also are 'short-term' as they are not allowed to regenerate; 3. Alternatively, trees are placed remote from the development site: resulting in a true reduction of habitat in the development precinct; 4. In any instance, there is an immediate loss of trees in the development precinct which, even with the best offset program, results in a c. 10-15 year bottleneck in food availability until offset trees become established. This results in population decline.
 - The number of trees 'lost' as a result of the development are typically underestimated in KPOMs. For instance, many KPOMS consider that trees retained in APZs or backyards, are not lost- when such trees are not allowed to regenerate with time (mown under) or are no longer accessible to koalas (exclusion fencing) or represent a major threat to koalas (feed trees in backyards are a major risk factor for attack by domestic dogs).





- Koala Plans of Management are currently not written with SMART (Specific, Measureable, Achievable, Realistic, Time-bound) monitoring targets and initiatives. Too many contain 'motherhood' statements and 'could', 'would' 'possibly' statements. This makes follow-up for compliance very difficult without definite actions/times.
- Koala Plans of Management place a burden on Council for monitoring and compliance. Most Councils do not have the resources available to do this adequately.
- Koala Plans of Management cannot be considered to mitigate the impacts of the development. Five Part Tests should discuss impacts without consideration of a KPOM.
- Councils need to be pro-active in rezoning areas identified in KPOMs as retention areas/corridors etc to E2. Resources are required to help Councils undertake this.

Recommendations re SEPP 44:

- There is no guidance as to the plot size, the need for targeting prime areas of Potential Habitat or other criteria that would ensure Potential Habitat is identified. Firm criteria from the NSW Government about the field methodology to properly identify Potential Koala Habitat is required and would ensure a consistency of approach and certainty for Councils.
- A formal scientific study of detection rates for different koala survey methods is required. Using programs such as PRESENCE would then dictate the number of repeat surveys that are required to identify non-presence with a level of accuracy (as opposed to the current system where one-off surveys are undertaken which probably have about a 10% chance of detection, particularly as koalas move about their home range seasonally).
- Any koala record within a certain distance of a property considered "Potential Koala Habitat" should automatically render that site as "Core Koala Habitat", rather than trying to survey the property with high non-detection rates. Where no records exist for the surrounding areas (as is common in the hinterland environments), surveys are still required.
- Adequate resourcing is required to monitor and ensure compliance with Koala Plans of Management. Most in our Region have failed to achieve their objectives.
- Koala Plans of Management need to be written with SMART (Specific, Measureable, Achievable, Realistic, Time-bound) monitoring targets and initiatives. A Koala Plan of Management template prepared by the NSW Government could greatly help with this.
- The SEPP 44 feed tree list requires revision to capture all koala feed trees used locally.
- Support needs to be given to Councils to zone retention lands in KPOMs to E2 (or even stronger protection). Similarly, these areas should be listed in the Biodiversity Values Map.

The Koala Strategy:

The Koala Strategy is a great document outlining a range of mechanisms to protect koalas into the future. The reality though is that a three-year time frame for projects is insufficient. To build relationships with stakeholders and deliver, and monitor, key projects takes much longer. Projects need to be delivered on a 10 year basis minimum if we are serious about the delivery of quality projects to reverse the decline to koalas. Adequate funding will be required.

Recommendations for the Koala Strategy:

- Extend the delivery timeframe and incorporate meaningful projects with a 10 year time frame. Ensure funding over this period to enable certainty of planning and delivery.
- Recognise the importance of the Regional level for Project delivery. This best captures local knowledge, local stakeholders and local nuances with koala habitat and threats while still being at an appropriate level for investment, strategic planning and working with the State.





The Biodiversity Conservation Act:

Legal Clearing:

- The Biodiversity Conservation Act legally facilitates the clearing of important areas of koala habitat. It fails to stop the cumulative impact of clearing of koala habitat, particularly on the coastal floodplain, in areas of the best koala habitat where development pressure is highest. It is resulting in the loss of koalas and their habitat on a daily basis. We already have an iconic species, of great social, economic and cultural value in decline, with models indicating functional extinction in 50 years. Legally-facilitated clearing does not help this decline.
- The 'thresholds' for clearing established by the Biodiversity Conservation Trust legally facilitate the clearing of small areas without consideration of the offset scheme. For koalas, such clearing, cumulatively, presents a significant impact when home ranges may be < 10 ha. *Identification of Development Sites Supporting Koalas:*
 - We have concerns about which Plant Community Types (PCTs) will trigger 'ecosystem' credits for koalas. Regional/ Local experts must participate in this exercise to ensure that all occupied Plant Community Types are identified. State-wide models and Plans may fail to identify all local nuances (see our Crescent Head 'hotspot' example above).
 - We have great concerns about identification of koala presence at a site (see our comments above about the difficulty of properly identifying koalas). Formal survey methodology is required (which considers detection rates and the number of repeat surveys required).
 - The Biodiversity Values Map does not identify all areas of koala habitat (only those identified in a registered CKPOM)- see comments above about the inadequacy of existing CKPOMs to identify all koala habitat and the fact that many Councils do not have a CKPOM).

Offsetting of Koala Habitat:

- Koalas are already at risk of functional extinction. Offsetting does not increase populations.
- We have great concerns about the way that offsetting is done at the Keith Class level rather than the Plant Community Type level, particularly for koalas as an 'ecosystem species'. For koalas, this is highly inappropriate as the number or presence of koala feed trees varies greatly between PCTs (even within a Class level). One example is PCTs dominated by Swamp Mahogany (*E. robusta*). This is a highly favoured feed tree representing primary habitat. Communities dominated by this tree are often aligned with the "Coastal Swamp Forests" Keith Class. Other communities in this class are almost entirely dominated by Broad-leaf Paperbark and contain virtually no koala feed trees. PCTs dominated by Broad-leafed Paperbark are typically within the 1:100 year flood level, or governed by Coastal SEPP, and hence have little chance of development yield. They are therefore more readily available for offsets than those PCTs dominated by eucalypts (which would be good koala offsets).
- Koalas are currently an "Ecosystem Credit Species". This means that they can be offset in any compatible ecosystem. Not withstanding the points raised above (which show that receiving ecosystems may not support koala habitat), a greater concern is that no surveys are required to determine whether the offset site even supports koalas. This is greatly out-of-sync with SEPP 44, which requires a two-step process to identify koala habitat (ie Potential and then Core). This is precisely because it is recognised that, even when the habitat is correct, koalas may still not be present. We strongly suspect that many 'receiving' offset sites do not even support koalas as a result of the above factors. Surveys for koala presence are required.
- The offsetting approach does not give regard to carrying capacity/population densities.
 Areas of habitat on the coastal floodplain (i.e. those being lost for development) usually have much higher soil fertility, moisture and koala feed trees than those in offset areas (ie)





wetlands as noted above or steep, hilly 'back country' in the hinterland). This is effectively taking large koala populations and replacing them with much smaller ones.

Koalas are a 'species' credit species for 'breeding individuals'. The chances of identifying 'breeding individuals' at a site is negligible. Even if kolas were offset as a "Species Credit" species, this is not a good thing as it means the credits can go anywhere in the State (rather than in the Bioregion). We have huge concerns about this approach for several reasons: 1. Genetic diversity. The importance of different genomes for koalas is widely understood for disease resistance. Offsetting at the State level will therefore fail to protect genomes in areas of high development pressure. 2. Resistance to Climate Change. Papers have shown that koalas on the coastal floodplain will be much more resistant to climate change than koalas in other areas (eg western NSW). If koalas can be offset anywhere in the State, most would be offset to 'cheap lands' (not valued for development) in western areas where their viability is much lower than on the coastal floodplains. 3. Community Value. Our community greatly value their koalas and do not want to see them offset away from our Region.

Monitoring and Compliance:

-Councils are required to assess BDARs. Few staff have had BAM training to enable proper scrutiny of credit generation. This makes scrutiny of development applications very difficult. *Serious and Irreversible Impacts:*

- There is a chance that across NSW as a whole (ie including the Western Divisions), that Koalas have declined at rates approaching 80% (particularly given logistic curves associated with population decline which may mean steeper declines in recent years). If this was true (as revealed by a State-wide monitoring program), the species could be given consideration for "Serious and Irreversible Impacts" and thus much greater protection given.
- Even without SAII status, consideration must be given as to whether SAII status should be afforded already, with modelling already showing functional extinction within 50 years.

Recommendations re the Biodiversity Conservation Act:

- Make koalas a species credit species: but mandate that offsets are applied at the local level.
- Make koala credits be offset at the PCT level, rather than the Keith Class level.

- Surveys need to be undertaken to ensure that the receiving offset site for koalas really does support them, and more importantly, does so at levels commensurate with, or higher, than the development site. It is unlikely that koala presence will increase with many of the management actions proposed (eg weed control of ground storey species) as koala abundance is tied more to other factors (such as soil fertility, moisture and abundance of koala feed trees).

- An Independent Auditing Program (by the State Government) is required to determine whether consulting ecologists are trying to 'discount' credits through improper application of the BAM or inadequate survey effort to properly determine threatened species, including koala, presence.

- Councils need on-going support for development applications and BAM accreditation of staff.
- Councils need to have a say in receiving offset sites to ensure that they do not conflict with other strategic planning matters. For instance, it is futile to put a koala offset in a location which is about to become adjacent to a major road. Councils know where is appropriate and where is not.
-Involve local/ Regional experts in the process of identifying which PCTs will require koala credits (once the PCT process is finalised). Failure to do so will result in local habitat being lost.

- Consider whether offsetting 'koala habitat' really does mitigate loss and whether this can be justified given the existing declines occurring to this iconic and greatly-valued species.

- As mentioned above, a formal scientific study of detection rates for different koala survey methods is required. Using programs such as PRESENCE would then dictate the number of repeat surveys that are required to identify non-presence with a level of accuracy (as opposed to the current system where one-off surveys are undertaken which probably have about a 10% chance of detection).





(d) identification of key areas of koala habitat on private and public land that should be protected, including areas currently at risk of logging or clearing, and the likely impacts of climate change on koalas and koala distribution,

Identifying key areas of koala habitat on private and public land that should be protected, including areas currently at risk of logging and clearing is fundamentally important. In this regard, there is nothing like local knowledge, such as that held by Local Councils or Regional Council groups, as to where the important areas, and most at risk areas are. As previously mentioned, experience in our area shows that State-wide models frequently fail to identify key areas of koala habitat.

The Koala Recovery Partnership is working closely with the Biodiversity Conservation Trust to try to protect important areas of koala habitat on private property through either acquisition (through the Revolving Fund or other avenues) or in-perpetuity protection through covenants on title. We have a strong interest from local landholders in our area to enter 'offset' schemes to receive financial assistance for managing their properties for conservation outcomes. The Koala Recovery Partnership, with its expert knowledge, is helping to promote properties for sale on the open market, and through working directly with landholders, to the Biodiversity Conservation Trust. We feel that this is a really good working model for achieving habitat protection, as it uses local knowledge and local relationships with landholders coupled with a State-wide mechanism. This model for private land protection is being replicated in the Wingecaribee and Tweed Regions.

Recommendations re Protection of Habitat on Private and Public Land:

- It takes time to develop trusting working relationships with private landholders. We hope that the three programs which seek to encourage protection of koala habitat on private land can be extended beyond the initial three year timeframe for maximum success.
- Find ways under the Biodiversity Conservation Trust to financially reward landholders wishing to undertake extensive koala habitat plantings on their properties (and to place covenants on such areas for in-perpetuity protection). Currently the Biodiversity Conservation Trust only deals with existing habitat and yet there is interest for replantings.

(e) the environmental, social and economic impacts of establishing new protected areas to conserve koala habitat, including national parks, and

There are many positive environmental, social and economic values of establishing new protected koalas to conserve koala habitat. Our Region is a tourism hot-spot and koalas are a major draw-card. Many tourists do not want to see a koala in a zoo, but want wild-living koalas. Our community are highly engaged with the koala and its conservation and would value additional protected areas.

The main challenge will be finding those areas with the highest carrying capacities, lowest threats at the lowest cost. The Koala Recovery Partnership is brining properties that meet such criteria, which are available on the open market, within the Hastings-Macleay Region to the attention of the Biodiversity Conservation Trust and the National Parks Acquisition Team and providing supporting evidence about the biological value of these properties, particularly for koalas.





Conclusion

On behalf of the Koala Recovery Partnership (specifically the Mid North Coast Joint Organisation and the Port Macquarie Koala Hospital (now Koala Conservation Australia)), and our community members, who care deeply for koalas and the environment, we thank you for your time to undertake this Inquiry and to consider our Submission. Our main points are that:

- 1. Current legislation fails to protect koalas or their habitat and requires review,
- 2. Monitoring of koala populations is desperately required. This will require investment.
- 3. Investment at the Regional level maximises local knowledge and stakeholder interest.
- 4. Funding cycles need to be longer than 3 years to ensure delivery of meaningful programs.

We would be happy to participate in any follow-up regarding this Inquiry.

Yours faithfully,

Dr Rebecca Montague-Drake Koala Ecologist Koala Recovery Partnership Mid North Coast Joint Organisation (submission approved by the MNCJO Executive Officer and the Koala Hospital Clinical Director) (We are happy for this submission to be made publicly available with names, but no contact details)

