

# **Preliminary investigation into the status of koalas in the Upper Wingecarribee Shire, NSW with recommendations for future work.**



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On behalf of the Office of Environment and Heritage and  
Wingecarribee Shire Council  
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## Background

The Wingecarribee district and surrounds has had a long history with koalas. The first ever report of a koala came from the Bargo region in 1798. And the word 'Colo' is recognised as a local indigenous word meaning koala.

Historically it has been determined that at the time of European settlement, there was an established koala population present in the greater Campbelltown, Bargo and Nattai areas (Lunney *et al*, 2010). Habitat clearing, degradation and fragmentation have all been prime drivers of population decline across the range of the koala.

In addition to these threats the Wingecarribee population has suffered historical declines due to hunting for pelts and outbreaks of Chlamydia. Tilley and Uebel (1990) recount reports from early residents of a disease that decimated the population around what is now the Upper Nepean Catchment in the 1910's. After this, sightings were not made until the 1970s with a steady increase noted since (Tilley and Uebel, 1990).

Bush fires pose a significant threat to koalas both through direct mortality and indirectly through temporary loss of habitat and the increased risk of misadventure due to vehicle strike and dog attack as they flee fires. Charlotte Stahl of 'Craigenbrae' Canyonleigh postulates that the 1939 bushfire at Canyonleigh was sufficiently devastating as to reduce the local population to a point where it only started to show signs of recovery in the 1990s. Given the significant time post-fire the potential for other causes of decline such as a potential Chlamydia outbreak can not be ruled out.

Tilley and Uebel (1990) remark on the 1977 severe bushfire which impacted most of the known koala habitat within the Upper Nepean SCA. Unlike the situation in Canyonleigh, though, they report a population recovery within several years. More recently the spring fire of 2013 also burnt out large sections of the North-east part of the Upper Nepean SCA as well as quite extensively within crown land on the Bargo River. The extent of the damage to the koala population at this stage is still to be determined. Wingecarribee councils Environmental Projects Officer Joe Stammers reported road kill koalas on the Hume Hwy at the time of the 2013 fire. During this study, koala searches (including spotlighting) on the western boundary of the Upper Nepean SCA where the fire was most severe failed to locate any koalas although 8 individuals were located elsewhere in unburnt parts of the SCA.

As has been demonstrated elsewhere, koala populations are known to recover following historic decline. A prime example is with the nearby Campbelltown koala population. Following an extensive fur trade until the 1920's the koalas were thought lost from the area until rediscovered in 1986. (Sheppard, 1990; Ward and Close, 2004; Lee *et al*, 2010.) Since then much collaborative work has been carried out in the local community and the population is healthy and increasing (Reed *et al*. 1990),

Habitat modelling has shown that high quality koala habitat occurs in the Wingecarribee Shire, although it is naturally patchy and further fragmented by farming and urbanization (DECC, 2007 and Lunney *et al*, 2010b). Existing reserve systems within the shire, specifically the Upper Nepean SCA, Nattai National Park and the Bargo SCA encompass areas of high quality habitat and provide refuge to existing koala populations. Wildlife Atlas records in addition to regular community reports show that the population appears to be in reasonable numbers within the Wingecarribee Shire (Stammers pers comm., Atlas Records 2014).

The reserves of Nattai NP, Bargo SCA and the Upper Nepean SCA are narrowly connected across the northern end of the shire although the Hume Hwy functions as a major impediment to movement between these reserves. How reserves elsewhere within the shire facilitate connectivity and movement for koalas across the landscape is currently unknown. Given the importance of connectivity in the landscape, particularly for such mobile and vulnerable animals as koalas, the northern section of Wingecarribee Shire is crucially important as it is ultimately a junction between the two great reserve systems of the Greater Blue Mountains and forests of the South Coast. Protecting and providing habitat for koalas will inadvertently provide habitat and movement corridors for other wildlife species thereby making the koala an important umbrella species for conservation. Furthermore the health status, population size, home range size, and overall movements of Wingecarribee koalas are yet to be ascertained. This information is essential if we are to better understand and secure the population into the future

## Aims

The presence of koalas in the northern half of Wingecarribee shire is well known, particularly from the suburbs of Hilltop, Yerrinbool and Alpine as well as the reserve systems of Nattai NP and the Upper Nepean SCA. The intention of this survey was to assess the potential likelihood and search for the occurrences of koalas, particularly within vacant crown land, council reserves, private land and less surveyed parts of existing reserve systems including Joadja NR and certain sections of the Upper Nepean SCA. In undertaking this exercise it was envisaged that potential movement corridors along with threatening processes could also be determined.

## Methods

The presence of koalas was investigated through active searches along fire trails on both private, vacant crown land and council/state reserves. This involved searching for distinct scratches on trees, scat searches as well spotlighting. Given limitations on time and access, areas with fewer records were prioritised. Where possible, leads and recent sightings from the public were followed up.

Survey areas were also assessed for their potential as koala habitat based on the presence of primary and secondary feed tree species, general connectivity and the presence of recent nearby records.

**Table 1.** Native tree species including known feed species recorded during the survey.

Scientific Name	Common Name	Primary Feed Species	Secondary Feed Species
<i>Eucalyptus agglomerata</i>	Blue-leaved Stringybark	Yes*	Yes
<i>Eucalyptus bridgesiana</i>	Apple Box		Yes
<i>Eucalyptus cinerea</i>	Argyle Apple		Yes
<i>Eucalyptus dives</i>	Broad-leaved Peppermint		
<i>Eucalyptus elata</i>	River Peppermint		
<i>Eucalyptus globoidea</i>	White Stringybark		Yes
<i>Eucalyptus macrorhyncha</i>	Red Stringybark		Yes
<i>Eucalyptus mannifera</i>	Brittle Gum		Yes
<i>Eucalyptus ovata</i>	Swamp Gum		Yes
<i>Eucalyptus piperita</i>	Sydney Peppermint		Yes*
<i>Eucalyptus punctata</i>	Grey Gum	Yes	
<i>Eucalyptus quadrangulata</i>	White-topped Box		Yes
<i>Eucalyptus racemosa</i> (= <i>sclerophylla</i> )	Scribbly Gum		
<i>Eucalyptus rubida</i>	Candlebark		Yes
<i>Eucalyptus sieberi</i>	Silver-top Ash		
<i>Eucalyptus tereticornis</i>	Forest Red Gum	Yes	
<i>Eucalyptus viminalis</i>	Ribbon/Manna Gum	Yes	
<i>Corymbia eximia</i>	Yellow Bloodwood		
<i>Corymbia gummifera</i>	Red Bloodwood		Yes

\* Possibly

**Table 2.** Areas searched and assessed during the study.

Area Surveyed	Land Tenure	Specific Areas Searched
Bargo SCA	NPWS Estate	Boronia Firetrail
Bargo Firetrail	Crown Land	Fire Road No P3
Wombeyan Caves Road	Crown Land	Eucalyptus Lane Black Springs Road Wanganderry Road Soapy Flat Road
Joadja NR	NPWS Estate	Joadja Firetrail Joadja Creek near 'Woodlands'
428 Diamond Fields Road, Mittagong	Private Property	Crooked Creek
'Fiorentine' 18 Old South Road, Alpine	Private Property	Driveway Boundary with Old South Road
Aboriginal Community Cultural Centre, Rainbow St, Mittagong	Private Property	Property itself Iron Mines Oval

Area Surveyed	Land Tenure	Specific Areas Searched
Mt Alexandra Reserve	Council Reserve	Nattai River Sixty Foot Falls Track Forty Foot Falls Track Box Vale Walking Track Gibbergunyah Creek Big Rock Firetrail Kells Creek, Near 'Stone Ridge' Scar Fire Trail Rubbish Tip Firetrail Mt Alexandra Ridgetop Firetrail Katoomba Lookout
Upper Nepean SCA	NPWS Estate	Fire Road No 3 Firetrail 3A, 3B, 2, 2A, 2C, 2D, 2E, 2G, 1
'Craigenbrae' 1020 Tugalong Road, Canyonleigh	Private Property	Fossil Point Waterfall Creek Black Bobs Creek Lookout Internal Firetrails Craigenbrae Driveway Theophosical Property Driveway
Gibbergunyah Reserve	Council Reserve	Gang-gang Firetrail Boundary Firetrail Link Road Galah Circuit
Mt Gibraltar Reserve	Council Reserve	Oxley Drive

### Habitat Assessment Results

Waterways provide habitat for wildlife and serve as movement corridors throughout both fragmented and intact landscapes. Within the study area high quality habitat was identified primarily along creek lines due to the dominant presence of the primary feed species Ribbon Gum, *Eucalyptus viminalis*. In addition creek lines were often structurally intact, and provided connectivity to other reserve systems in the greater area. Prime examples of this included Gibbergunyah Creek and the Nattai River within the Mt Alexandra Reserve. These two creeks are particularly significant as they undercut the Hume Hwy from the south and provided a direct link to Nattai NP in the north.

Within the study area *E. viminalis* was mainly present (although not restricted) along most creek lines. Its propensity to occur along creek lines had the added benefit of providing food along likely movement corridors. This was highlighted on the property at 428 Diamond Fields Rd, Mittagong. *E. viminalis* was dominant in Crooked Creek, where significant signs of koala, including scratchings and scats were found. Additionally the landowner Cheryle Mills reports regular observations of koalas in this vicinity.

Elsewhere in the study area *E. viminalis* was found within the Upper Nepean SCA, Box Vale Walking Track Reserve and Joadja NP, particularly, but not exclusively, along creeks and rivers. The presence of this species, particularly along creek lines in areas of good connectivity, significantly contributed to an area as being regarded as high quality.

The greater Mt Alexandra Reserve including the Box Vale Track varied in habitat quality but did not identify as high quality habitat overall. This was due to the low abundance of feed species present particularly as you moved away from the creek lines. The ridge tops and upper slopes of Mt Alexandra and surrounds were predominately Scribbly Gum, *E. racemosa* (=sclerophylla), Peppermint gums, *E. piperita* and Silvertop Ash, *E. sieberi*. None of these are feed species although *E. piperita* may potentially be consumed. Having said that, interspersed at low density were Grey gums, *E. punctata*, a known primary feed species. The Box Vale walking track reserve is well connected to Nattai NP in the east yet Mt Alexandra is cut off to the north by the Hume Hwy. The main connections between Mt Alexandra and Nattai NP would be via Gibbergunyah Creek and the Nattai River. Recent koala sightings do exist from within this reserve system although there are not many. Initial assessments indicate that if koalas are here then it would be at a low to moderate density.

A cursory search at Gibbergunyah Reserve revealed *E. punctata* as the main feed species present although it was not abundant. Although a reasonably sized reserve it is cut off to the north by the Hume Hwy and shares the rest of its boundaries with farmland and suburbia. Gibbergunyah Creek leads into the reserve though and is a potential source of outside recruitment. Therefore Gibbergunyah Reserve has reasonable potential as koala habitat despite no recent nearby records.

Mt Gibraltar, although containing a sub dominant presence of *E. viminalis*, was relatively isolated from other nearby reserves. It is bounded to the south by the town of Bowral and to the north and east by Nattai and Mittagong respectively. A major road and train line to the north and west also impede connectivity. Only one recent (2008) record of a road kill animal exists nearby. Therefore the likelihood of koalas occurring there is low.

The crown land north of the Bargo SCA along the Bargo fire trail did not appear to contain many koala feed species other than patchy stands of the Blue Stringybark, *E. agglomerata*. Furthermore this area was substantially burnt in the recent 2013 spring fire. No recent records exist from the immediate area. Consequently the crown land section of the Bargo River was regarded as low quality habitat. Due to time restrictions the Bargo River itself was not checked and so the possibility remains that more suitable tree species may exist there, helping facilitate movement along the river corridor. Records exist on either side of this area so the river may play an important role in landscape connectivity but this is yet to be determined. At the time of this study the river corridor was savagely burnt out.

Of the eight koalas observed during this survey all were found within the Upper Nepean SCA. The western boundary of the SCA following Fire Trail NO 3 from Avon Dam Rd south towards Yerrinbool was burnt out. Ample epicormic growth was evident but no koalas were found during either day or night searches. There was a good presence of *E. punctata* and several secondary feed species including Red Stringybark, *E. macrorynhca*, Blue Stringybark, *E. agglomerata* and Red

Bloodwood, *Corymbia gummifera*. Connectivity to the rest of the SCA is excellent and many records from the boundary exist, particularly around the township of Yerrinbool even though the Hume Hwy is a significant barrier to the west. It is possible that animals which fled the recent fire may have not yet returned.

All the koala records from this survey came from deeper within the SCA. The koala observations complemented the presence of high quality habitat. Although patchy, high quality habitat was found throughout the SCA (specifically around the No 2 series of fire trails) due to the presence of primary feed species such as *E. viminalis* and *E. punctata* and a selection of secondary species including *C. gummifera*, *E. macrorhyncha*, *E. agglomerata* and White Stringybark, *E. globoidea*.

The habitat within the Upper Nepean SCA northeast of Alpine, specifically Fire Trails No 3A and 3B, were also of high quality with *E. viminalis* and *E. punctata* present along with *C. gummifera*. A large cluster of records occurs around the nearby junction of Old South Rd and the Old Hume Hwy and is further substantiated by the recent council survey via social media. This suggests that this is an important area for koalas.

The broader area along Old South Rd (including sections of Range Rd) also appears to have significant potential for koalas, given its proximity to the Upper Nepean SCA. Scattered patches of primary feed species, including *E. viminalis*, Forest Red Gum, *E. tereticornis* and possibly Cabbage Gum, *E. amplifolia* occur on either side of Old South Rd in paddocks running the length of the road.

Quality habitat within Joadja NR was patchy. Despite the presence of good quality feed species, including *E. viminalis*, *E. punctata* and *E. agglomerata*, no koalas were found during diurnal or nocturnal searches. Of note was a distinct lack of scratches on primary feed species such as *E. punctata*. Connectivity within this reserve is good and recent reliable records exist. Joadja Creek could very likely serve as a significant movement corridor, considering its connection to the nearby Wingecarribee River. Along the creek the feed species *E. viminalis*, Swamp Gum, *E. ovata* and Apple-topped Box, *E. bridgesiana* were all present. Further surveys in this area would be worthwhile considering that a significant population at nearby High Range in Nattai NP exists.

Crown land along Wombeyan Caves Road particularly along Eucalyptus Lane, Soapy Flat Road, Black Springs Road and Wanganderry Road were searched for the presence of koalas. Despite none being found and the paucity of records the habitat was still regarded as at least moderate. Soapy Flat Road in particular is well connected to Nattai NP in the north which contains a known population of koalas at High Range. Discussions with local farmers revealed occasional records from this vicinity. A good selection of feed species was also present including (in patches) *E. viminalis*, *E. punctata*, *E. agglomerata*, and Candlebark, *E. rubida*.

The property 'Craigenbrae' at Canyonleigh identified itself as excellent habitat quality. The property owner Charlotte Stahl reports increasing number of koalas over the last two decades following an initial absence of roughly 15 years when she first moved in the early 1970's. The property has been gazetted as a wildlife



refuge since 1997 and the vegetation has been allowed to regenerate following clearing. The extent of previous land clearing is unknown but given the availability and selection of a range of feed species it is postulated that a serious outbreak of Chlamydia may have previously occurred in the area which served to crash the local population as it did in the Upper Nepean SCA.

No koalas were observed but ample signs of habitat utilisation were evident, including scratches on trees and plenty of scats. The feed species present included *E. viminalis*, *E. punctata*, *E. agglomerata*, *E. tereticornis*, *E. macrorhyncha*, Argyle Apple, *E. cinerea* and Brittle Gum, *E. mannifera*.

### A Note on Feed Species

The diets and preferred feed species of koalas vary regionally and by population (Moore and Foley, 2000). The master list of preferred primary and secondary species of koalas in the Southern Tablelands was derived from the NSW Koala Recovery Plan (NSW DECC, 2008). Of note, the Grey Gum, *E. punctata* is not mentioned as a primary feed species. Sluiter *et al* (2002) report that *E. punctata* is a preferred feed species in the Campbelltown population. Likewise the author's experience has also identified *E. punctata* as an important koala feed species elsewhere. Given the number of koalas reported from and the significant number of sign associated with *E. punctata* I have chosen to regard *E. punctata* as a primary feed species within the study area.

Of interest, Sluiter *et al* (2002) also reported the Blue Stringybark, *E. agglomerata* as a significant browse species within the Campbelltown population. Scratches from stringybarks are significantly harder to identify than from smooth barked Eucalypts. Without cuticle analysis from a large selection of koala scats from the study area it will be very difficult to ascertain the extent to which *E. agglomerata* is utilized as a feed species. Given that *E. agglomerata* is widespread throughout the study area its potential regional importance can not be underrated.

Likewise the Sydney Peppermint Gum, *E. piperita* may also be utilised more than is presently appreciated (Pahl *et al*, 1990).

### Potential Movement Corridors

The Upper Nepean and Bargo SCAs practically adjoin between the villages of Yanderra and Alpine in the north of Wingecarribee Shire. Here both reserves are separated by the Hume Highway. The highway serves as a major barrier to movement between both these reserves. Numerous records exist within this vicinity despite the proximity to suburbia, railway and the highway. How koalas may be moving through this area and whether their home ranges are bounded by the highway is yet to be determined. It is possible that following the 2013 spring fire that animals moved into this area from the Upper Nepean SCA to seek refuge. Consequently this highlights the northern villages as a potentially important refuge as well as movement corridor for the local koala population.



Elsewhere in the shire the Hume Highway forms a formidable barrier between Mt Alexandra Reserve and the southern section of Nattai NP. The few records that exist south of the highway in Mt Alexandra reserve may be from animals that were able to cross the highway. Given that Mt Alexandra reserve is bounded on both sides by the Nattai River and Gibbergunyah Creek, both of which contain the primary feed species *E. viminalis*, it is feasible that animals may have used both waterways as corridors to cross beneath the highway.

Interestingly, employees at the Aboriginal Cultural Centre, Rainbow Road, Mittagong report several resident koalas that live on the property and which are said to frequently cross the Old Hume Highway via a culvert. Despite installing a camera trap and several search efforts no koalas were observed in the vicinity during this survey.

Regular sightings exist and are reported from the southern end of the Upper Nepean SCA, particularly along Tourist Road in the areas of East Kangaloon and Mt Murray. Although this area was not investigated during this survey, it can be reasonably assumed that many of these sightings are from animals which could be originating from within the SCA. Whether these reports are of animals on excursions from the SCA or which have established home ranges outside of the SCA is yet to be determined. Both the Nepean and Burke Rivers run through this area and it is highly likely that animals could be using these waterways as movement corridors.

## Recommendations

### Studying Koala Movements through GPS Satellite Technology

As mentioned previously, the corridor linking the Upper Nepean SCA to Nattai NP is of significant conservation value given its potential to provide connectivity to the greater landscape. How koalas are utilizing this corridor is as yet unknown. Its potential as a movement corridor and refuge from fire has been highlighted by the recent 2013 bush fire.

With an ever increasing human population and spread of urban sprawl, this tenuous link in the landscape may be at grave risk before its importance, particularly to a threatened and iconic native animal is even established. A radio-tracking/ GPS collar monitoring program would help to determine how koalas are using the landscape. This information could then be used to highlight important vegetation pathways through the northern villages of Wingecarribee shire.

Given that much of this area falls into private property, radio-tracking through traditional means is both time consuming and requires a huge logistical effort with coordinating property access. The benefit of using satellite collars is that other than capturing the animal to initially fit and later remove the collar, little effort other than occasional welfare checks are required.

As the collars are quite obvious, members of the local community can be engaged to assist with the survey by phoning in sightings. This has the dual benefit of saving employees time on the ground whilst also garnering interest in the local community.

Home range size will also be determined, giving an insight into local population densities. Furthermore, when animals are captured, swabs for Chlamydia can be taken in order to assess the health of individuals. Animals should also be ear tagged, with the tissue collected being incorporated into a greater understanding of koala population genetics such as through the Australian Museum Koala Genome Project.

Once known movement corridors are established, management actions could be employed more effectively. This could include erecting signage in black spots along roads and possibly installing rope bridges across the highway or across other relevant barriers. Targeted planting initiatives could also be employed to create habitat where it would be most beneficial.

### Focus Areas to Track Animals

The most pertinent areas to track animals would be around the northern villages of Yerrinbool and Alpine as well as possibly Hilltop and Colo Vale as this is where the main corridor between reserves lies. One area in particular is in the vicinity of the junctions of Old South Road and the Old Hume Highway at Alpine where a cluster of sightings have been made. The property 'Fiorentine' (18 Old South Road, Alpine) is very close to there, has had animals observed on the property in recent weeks and has receptive and interested property owners who are willing to be involved in a future project. It would also be worthwhile to collar animals that are occurring on the fringe of the Upper Nepean SCA to determine how often they move between it and the peri-urban area.

Given that male koalas have larger home ranges it would be ideal to collar more of them, particularly young dispersing males without an established home range. This could be maximised by conducting surveys during the spring-summer season when males are more vocal and juveniles become weaned off their mothers.

Depending on funding, the scope of the project could be expanded to investigate how koalas use the broader environment and surrounds. Another area of interest is around Tourist road to the south of the Upper Nepean SCA where regular sightings are made. This is another potential area where koalas could be spreading to southern reserve systems through a fragmented agricultural landscape.

Likewise it could also be insightful to ascertain the home range sizes and habitat use of koalas deeper within the Upper Nepean SCA in a more natural setting to see how they compare to their more urban cousins. Similarly, the koalas at 'Craigenbrae', Canyonleigh could also be studied to the same effect.

## Koala Genetics Project

A study by Lee *et al.* (2010) showed that despite their close proximity, the Campbelltown and Southern Highlands population were distinct. Historical genetic bottlenecks were elucidated from the Campbelltown population and insights gained into population trends over time. Gene flow between both populations was inferred as low, but interestingly most likely due to contemporary post-European barriers such as roads and habitat fragmentation. The Lee *et al.* (2010) study only sampled 16 animals from the Southern Tablelands, most of which came from the western side of the Hume Highway. Sampling animals from the eastern side could help reveal further insights into the Wingecarribee population. Assessing whether the highway is acting as a significant gene flow barrier could be assessed given that the same study suggested that few koalas safely crossed the road between the Southern Tablelands and Campbelltown populations and hence resulted in little effective gene flow.

## Community Engagement

Harnessing the power of the local community can be a great asset when it comes to both studying and protecting a local koala population as has been demonstrated through the work of Professor Rob Close and the Campbelltown koala colony. Upon the rediscovery of koalas in the Wedderburn area, huge local opposition was aroused to appeal against a proposed development which was ultimately scrapped. Studies of the koalas were then initiated and over the course of 20+ years over 3000 sightings were made and reported by the local community, which resulted in 167 animals being ear tagged (Campbelltown/Macarthur Advertise, 2013).

A similar program could be instigated in the Wingecarribee Shire with the establishment of a dedicated koala hotline to take in sightings from members of the public. It would also be possible to follow up on these sightings by capturing animals where feasible and then ear tagging individuals with unique colour combinations. Therefore in addition to the more expensive GPS collar program, the movements and home ranges of other non collared individuals could also be determined by incorporating the help of the local community. Insights into longevity of individuals would also be obtained. Once more a project like this could instil pride and a sense of partnership within the local community.

A planned community talk is highly recommended in order to inform local residents about the proposed collaring project. Dr Mathew Crowther could be inveigled to present a talk on the merits of GPS collar tracking from recent work carried out in Gunnedah (Lunney *et al.*, 2012; and Crowther *et al.*, 2013). Likewise Professor Rob Close could present his experiences as to the merits of community collaboration with a scientific study.

As koalas can be difficult to locate, the establishment of a hotline and enrolment of keen residents could make the task of locating koalas when it came time to collaring a lot less time consuming. Enlistment of local media, through

newspapers, local radio, social media and posters in strategic areas such as shopping centres could also help spread awareness. Personal invitations could also be made to relevant community groups such as the Mittagong Bushwalkers Club.

### Student Involvement

As with many studies, more questions than answers will invariably be raised. Student involvement, particularly from postgraduates, could be a worthwhile avenue of support. In particular the Wildlife Health and Population Management Masters degree run through the University of Sydney may produce ideal candidates. This course has a long history of students who have worked on a diversity of projects including koalas. This could be an effective way to save money and implement components of the study that funding may not be available for. All whilst contributing to our broader understanding of the local koala population.

### Road Signs

Given the reasonable and regular number of sightings from around Old South Road and the Old Hume Highway it may be prudent to erect signage to warn drivers to the presence of koalas. It has been shown however that signs are of limited value in areas of speed zones of 80 km/hour and above, with both Old South Road and the Old Hume Highway being 80 km/hr roads (Recovery plan 2008). The records of koala care groups show that speeds greater than 60 km/hour are considered incompatible with drivers being able to safely see a koala crossing the road and taking evasive action (DECC, 2008). If it is feasible, the local speed limits could be reduced.

Signage could still provide a useful function in that they still raise awareness to the presence of koalas. Furthermore adding the number to the local koala hotline and wildlife care groups will provide people with the necessary information to report sightings and injured wildlife.

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