

### **Greater Macarthur Partnership Forum**

Outcomes Report 1

**Client:** Campbelltown City Council **Date:** 16 April2019

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## 1 About the Forum

#### 1.1 **Purpose**

The Greater Macarthur Koala Partnership Forum builds on Campbelltown City Council's long-term commitment to koala care and conservation as well as Council's suite of koala friendly initiatives that promote the health, welfare and safety of the area's koala population. The Forum also provides a crucial mechanism to discuss and develop koala care and conservation strategies so that they can be considered as part of the future planning for the region's transport, housing, road and recreation infrastructure needs.

#### 1.2 **Overview**

The Forum was held on Wednesday, 6 March 2019, at the Campbelltown Arts Centre. Registration was at 10am for a 10.30am start and the Forum concluded at 2pm. Council issued Expressions of Interest to representatives from each of the identified key stakeholder groups. The number and composition of the Forum was then managed via invitation to optimise diversity of representation and opportunity for meaningful participation.

54 people attended the Forum, representing each of the key stakeholder groups - the first time these groups have gathered together to discuss and collaborate around koala care and conservation within the Campbelltown LGA. Fittingly, the Forum's theme was *Local Issues, Collaborative Solutions*.

#### 1.3 Background

Koalas are listed as a threatened species under both State and Federal legislation, due to the significant decline in the population over past decades. Greater Macarthur region's koalas are important being one of the only chlamydia free population in the Sydney basin. South Western Sydney's koala's population considerably overlaps with the Greater Macarthur Priority Growth Area, which is targeted to accommodate an approximately 35,000 home in the long term. While a growing population means the national decline in koala numbers is not evidenced in Greater Macarthur, population and development growth is already impacting koala mortality rates which are now up to 10%.

On 13 March 2018, Council carried the following Motion:

- 1. That Council note the South Campbelltown Koala Habitat Study.
- 2. That Council staff continue to engage with the respective land owners in order to finalise the identification of appropriate primary natural asset corridors.
- 3. That Council note and acknowledge the comments within the South Campbelltown Koala Habitat Study, made in relation to ongoing land management practices on the subject lands are based on a presumption and all references to the same are to be removed from the report and study.
- 4. That Council write to the Minister for Planning seeking an urgent meeting in relation to the provision of koala overpasses, underpasses, wildlife exclusion fencing and koala grids along Appin Road and the provision of east-west natural asset corridors in future planning for South Campbelltown.

In September 2018, a one-off koala summit was held at Wollondilly.

Then on 9 October 2018 Council carried a further Motion to establish the Greater Macarthur Koala Partnership Forum:

1. Council collaborate with relevant stakeholders in supporting the creation of a 'Greater Macarthur Koala Partnership Forum' to further investigate:

a) the implementation of a natural assets corridor network for the Greater Macarthur Growth Area supporting the long term vision of future-proofing koala habitat and movement within the region. *b)* the feasibility of developing a koala care program for the Greater Macarthur region; and in doing so explore opportunities for the establishment of local facilities for a koala hospital and rehabilitation sanctuary (that could provide contingencies to further leverage eco-tourism and draw visitors to the area).

- 2. Council invite Wollondilly Shire Council, relevant community groups including representatives of WIRES and other local koala rescue groups, local veterinarians, relevant State and Commonwealth agencies, landowners within the Greater Macarthur Growth Area, local Members of Parliament and the Georges River Combined Councils' Committee (GRCCC) 'Riverkeeper' seeking their direct involvement in the Forum. The structure and membership of the Forum should allow for the addition of future relevant stakeholders as identified.
- 3. Council invites Wollondilly Shire Council to extend an invitation to interested landholders of the Wollondilly Shire, where their land holdings also exist within the Greater Macarthur Growth Area (Wollondilly) and form part of important koala corridors.

In December 2018, Elton Consulting was engaged by Council to support the development and delivery of the Forum. The Forum was held on Wednesday, 6 March 2019.

#### 1.4 **Forum theme and format**

The agenda and key messaging for the day were developed around the theme of *Local Issues, Collaborative Solutions.* This recognises that while the issues relating to the care and conservation of koalas are *regionally specific,* the actions required to address these issues are the *responsibility of a broad range of stakeholders*; both *within and outside the Greater Macarthur region*.

Following the opening and Welcome to Country, the agenda was divided into three key sessions:

- 1. Council studies, plans, policies
- 2. The community perspectives and activities
- 3. Workshop Activity

The Forum's opening section was led by Council to provide the context and framework for the day as well as give an overview of their koala friendly studies, plans, policies and programs. This was followed by presentations from community organisations operating in the Greater Macarthur region; giving them the opportunity to outline their activities, observations and concerns. Sessions 1 and 2 were followed by facilitated question and answer sessions. The third session saw the room break into groups for a workshop activity guided by table facilitators.

The Forum's agenda is at **Appendix A**.

## 2 Who was there?

Campbelltown City Council released Expressions of Interest for the Forum on 23 January 2019. Expressions of Interest were sent to a broad range of stakeholders to provide a diversity of voices; consistent with the Motion carried by Council in October 2018:

- » Mayors and Councillors for Campbelltown and Wollondilly
- » State and Commonwealth local members
- » Representatives from local, State and Commonwealth agencies
- » Community groups operating in the Greater Macarthur region
- » Researchers ecologists, environmentalists
- » Veterinarians
- » Landowners (inclusive of developers)

Wollondilly Shire Council were tasked with sending out their own Expressions of Interests to landowners within their local government area.

54 people attended the Forum, representing each of the stakeholder groups:

#### Table 1Overview of attendance

Stakeholder group	Organisation	Number
Mayors and Councillors	» Campbelltown City Council	7
	» Wollondilly Shire Council	
State and Commonwealth local	» Federal Member for Macarthur	2
members	» Member for Campbelltown	
Local, State and Commonwealth	» Campbelltown City Council	17
agencies	» Wollondilly Shire Council	
	» Department of Planning and Environment	
	» Office of Environment and Heritage	
	» Roads and Maritime Services	
Community groups	» National Parks Association of NSW	11
	» Save the Wildlife and Bushlands in Campbelltown	
	» Sydney Wildlife	
	» Total Environment Care	
	» WIRES	
Researchers	» Biolink	3
	» Cumberland Ecology	
	» EMM	
Veterinarians	» University of Sydney, Centre for Veterinary	2
	Education	
Landowners (inclusive of	» Lendlease communities (Mount Gilead)	12
developer)	» Mir Group	
	» Presquartz Pty Ltd	
	» Individual landowners	

High profile participants included:

- » Government
  - > Cr George Brticevic, Mayor of Campbelltown
  - > Cr Matthew Deeth, Mayor of Wollondilly
  - > Mr Greg Warren MP, State Member for Campbelltown
  - > Dr Mike Freelander MP, Federal Member for Macarthur
- » Subject matter experts:
  - > Dr Stephen Phillips, Managing Director Biolink and ecological consultant for Campbelltown Council
  - > Dr David Phalen, Veterinarian and Associate Professor, University of Sydney Centre for Veterinary Education

The complete list of attendees is at Appendix B.

## 3 What we heard

#### 3.1 Session 1 - Council presentations

#### 3.1.1 Cr George Brticevic, Mayor of Campbelltown

Cr Brticevic welcomed participants and delivered the introduction and opening address, including underscoring the Forum's theme by asking participants to:

... focus on collaboration and the opportunity for government, community organisations, politicians, landowners and developers to come together to work towards local solutions...

Cr George Brticevic, Mayor of Campbelltown, 6 March 2019

# 3.1.2 Fletcher Rayner, Executive Manager of Urban Release and Engagement

Fletcher gave an overview of Council's koala friendly initiatives, including their Koala Management Plan, acknowledging the contributions of all in attendance and peppering his presentation with potential priorities for the Forum's consideration:

- Koala connectivity and movement
- Habitat diversity and sustainability
- Advocacy
- East/west connections
- Koala care program and hospital

Implementation requires all Forum members (to be) on board and working collaboratively.

Fletcher Rayner, Executive Manager of Urban Release and Engagement, Campbelltown City Council

#### 3.1.3 Dr Steve Phillips, Ecological Consultant

Dr. Phillips is the Principal Research Scientist and Managing Director for Biolink Ecological Consultants and was the final speaker in Section 1. Steve has worked with Council on a range of initiatives, including the *Draft Comprehensive Koala Plan of Management 2016*. In addition to outlining research around koala occupancy, dispersal and habitat connectivity, Dr Phillips presented evidence pointing to an ongoing increase in Campbelltown's koala population over the last three generations.

The commitment from Council is long standing... with ongoing work on field assessments, connectivity, vegetation mapping as well as analysis and review of historical records.

Koala occupancy levels across the region are nearing optimal levels and are at optimal levels in places like Kentlyn and Wedderburn.

Further research is needed to inform ecologically sustainable planning and development; reducing the impact of roads, making use of established corridors and preserving habitat.

Steve Phillips, Ecological Consultant, Campbelltown City Council

#### 3.2 Summary of facilitated Q&A session -Steve Phillips & Fletcher Rayner

The following text is not verbatim.

#### Q:

Mike Freelander (Federal Member for Macarthur):

- Can there be solution for protecting the local population without land bridges?

#### A:

Steve Phillips:

- We have looked at Appin Road and have assessed what structures can go where. We have identified three key areas needed for connectivity purposes and one of those will require a land bridge

#### Q:

Paul Amos (Roads and Maritime Services):

We can see some great work that's been done by both Professor Close and Steve Phillips, is there a
process in place to incorporate this into one data set, and inform the work RMS is doing in the local area?

#### A:

Steve Phillips:

- Through the 'Saving our Species' program under the OEH there needs to be a state-based standard for all road construction so there is no discussions or argument. I am more than happy to engage in conversations about specifications.
- We have seen very good practical examples of how this is being done elsewhere in Queensland and North NSW.

#### 3.3 Session 2 – Community presentations

Providing opportunity for community organisations to talk about their work in the region not only served to recognise their valuable contributions to the care and conservation of koalas but allowed the structured presentation of concerns and issues ahead of the facilitated discussion that would take place in Session 3.

#### 3.3.1 **WIRES**

Session 2 began with a presentation from WIRES volunteer, **Vickii Lett**. Underscoring the theme of collaboration, Vickii referred to the work performed by WIRES and Sydney Wildlife to care for koalas across the region and NSW. Vickii talked about the importance of quarantining koala habitat as a strategy to prevent the introduction of disease and outlined a number of other priorities for the area, including:

- Good vet care and increased support for the Koala Health Hub
- Food and access to habitat trees
- Research into treatment options
- Working cooperatively across all sectors
- Healthy, connected release sites
- Habitat connection and protected areas
- Information for the community to access

Good planning and the community will make the difference.

We need to work cooperatively across all sectors.

Vickii Lett, Volunteer, WIRES

#### 3.3.2 Help Save the Wildlife and Bushlands in Campbelltown

Through his work **Ricardo Lonza** has observed an increase in incidents requiring koala rescue. Ricardo attributed this to the increasing numbers of humans and koalas in the region resulting in a greater potential for intersection. Ricardo considers road fatalities, urban development and dog attacks as the major threats to the koala population and identified habitat connectivity as key to addressing these issues.

The Campbelltown community are completely behind their koala population, there has been some peaceful protesting but hopefully through partnerships with different groups, there won't be a need for this moving forward.

The most effective initiatives have been those resulting from direct collaboration between community volunteers and Council.

Let's work together to make the Greater Macarthur area a success story!

Ricardo Lonza, Volunteer, Help Save the Wildlife and Bushlands in Campbelltown

# 3.3.3 Exploring the health of koalas in the Greater Macarthur region

The final presentation of the day was delivered by Dr David Phalen and Jessica Hagan from University of Sydney's Centre for Veterinary Education. David began by speaking about the Wildlife Health and Conservation Centre at Camden, explaining it was established in 2007 to provide veterinary care and education as well as undertake research. The Centre has treated 7500 wildlife cases, 162 of which have been koalas from the Campbelltown region. The Centre receives no external funding for the treatment of wildlife. Jessica provided the year on year admission numbers for Campbelltown koalas since the Centre's inception, showing a substantial increase in admission numbers since 2015. Of the top 3 reasons for hospital admissions, over 40 per cent are caused by vehicle collisions, almost 15 per cent are for reasons 'unknown' and over 10 per cent are the result of dog attack. Other key points included:

Hospital admissions data:

- The rate of 'hit by car' admissions has increased substantially since 2014.
- The first admission for reasons of dog attack was in 2014.
- The first admission resulting from koalas in an 'unusual location' was in 2014.
- Though under-represented in the Campbelltown region, males are more likely to be the subject of vehicle collision or dog attack than females (dispersal being at the core of this).

#### Health:

- Connectivity within the region to support population dispersal is important however, connectivity beyond the region threatens the population's chlamydia-free status.
- The population is more genetically diverse than originally thought.
- Congenital diseases suggest localised inbreeding.
- The population is chlamydia free and other diseases are rare and often only in older animals.

Testing and care costs money. The University of Sydney Wildlife Hospital has provided these services since 2007 at no cost to carers or the general community. This may not be sustainable. Financial support to guarantee long-term services needs to be considered.

Based on all health and ecological studies, this is a healthy, growing population.

The population is chlamydia free. Can it stay that way when there is widespread infection in the Southern Highlands?

David Phalen and Jessica Hagan, Sydney University's Centre for Veterinary Education

The full program, including presentations, can be found at **Appendix C.** 

#### 3.4 Summary – facilitated Q&A session

The following text is not verbatim.

#### 3.4.1 **Community organisations**

**Q:** Cr Brticevic (Campbelltown Mayor)

There has been discussion of moving the University hospital to Elizabeth Macarthur. Is there potential to include a planned facility in Campbelltown either through government funding or philanthropy with a 24-hour care service?

A: David Phalen

At this stage nothing has been set in stone about moving. Building a facility which could accommodate further care and rehabilitation services would assist in the handover (of animals) between vets and carers. There is a big emphasis on the need for facilities that can support this rehabilitation and recovery phase.

As far as hospital staffing goes, under our current funding, it is simply not viable to ensure 24-hour care. Examples of koala hospitals used for tourism, like the Macquarie Koala hospital, have a far higher volume of animals per year, however it is possible to implement this model on a smaller scale in the region.

Q: Cr Brticevic (Campbelltown Mayor)

We would like to see a care centre in the Campbelltown LGA. Establishing such a facility within the Campbelltown LGA is particularly important as it would assist in quarantine efforts. Council want to apply koala exclusions west and east of Appin Road, including three bridge passes so koalas can traverse east to west within these reserves.

A: David Phalen

There has been some interesting research regarding population cross over the Nepean River, but there is still a real gap about what we know about koalas. We are not sure how far north chlamydia has spread. What we do know is that the Campbelltown population are incredibly healthy and are expanding rapidly. However, this is also presenting its own challenges in keeping the Campbelltown population quarantined and disease free.

If a care centre was located in this area, we would have to consider how the release of koalas would be managed against the need to maintain the population's chlamydia-free status.

A: Nea Makowski (Help Save the Wildlife and Bushlands in Campbelltown), from the floor

At the moment Appin Road is its own barrier. The reality is that chlamydia is present south of Appin Road. We are unsure what impact that is having on the population. However, we do know that in Mittagong the population is suffering.

**Q:** David Robertson: (ecologist)

Have you explored the possibility of seeking funding under the new biodiversity conservation act?

A: David Phalen:

KHH (Koala Health Hub) just put out a tender for research related projects to support the testing services provided within the Centre. At the moment KHH conduct chlamydia testing for the whole of NSW at no cost and have been able to do so thanks to the support of government (in conjunction with funding from Southern Highlands and Wingecaribee).

Students have been able to piggyback onto those studies and expand the scope. We are hoping to get more funding through government research support.

## 4 Workshop Activity

Following the lunch break, Forum members participated in a workshop activity at their tables. Table allocations were carefully curated by Council to ensure diverse representation across each stakeholder group. The list of table allocations is at **Appendix D**. This approach ensured a broad range of views and ideas would be generated and shared, fostering collaboration, promoting shared ownership of actions and widening the opportunity for innovation through constructive challenge and debate.

Each table was allocated a facilitator to:

- » Guide discussion as required and encourage a focus on collaboration and solutions
- » Encourage participants to reflect on what they had heard throughout the day and identify any priorities
- » Keep the discussion constructive
- » Help record the discussion using the provided templates

The templates used to facilitate discussion are at **Appendix E**.

The groups were given 50 minutes to work on three questions developed around the Forum's theme of *Local Issues, Collaborative Solutions*.

#### 4.1 **Outcomes**

#### 4.1.1 **Overview**

The workshop activity evidenced a degree of consensus about the opportunities and issues for koala care and conservation in the region. Identified action areas included:

- 1. Consolidation of all available **data** and **research** about the local koala population from across government, community organisations and research institutions.
- 2. Strong **contingency planning** for local koala populations to **mitigate risk** from **natural disasters** such as **bushfire**.
- 3. Additional funding for community care and conservation groups, including training and education.
- 4. Reducing **vehicle strike rates** by implementing deterrents such as **fencing**, **bridges** and **over/under passes** and, where possible, **natural features** such as **creeks** and **hills**, for example.
- 5. Improving **natural habitat corridors** and **connectivity**.
- 6. Expanding local **habitat trees** for koalas.
- 7. Furthering **quarantine** efforts to ensure the local population remains **disease free**.
- 8. Developing further **care initiatives** and **expanding current facilities** such as the Koala Health Hub.
- 9. Collaring and tracking local populations to build on knowledge and research of local populations.
- 10. Developing a **national tourism park** to **raise awareness** and **generate funding** for education, care and conservation.
- 11. **Improving development provisions** and **communication** between Councils, developers and landowners to achieve better koala conservation outcomes.
- 12. Differing views around the sustainability of coexistence between koalas and humans:
  - a. Do we separate koalas and humans through establishing wildlife parks and reserves, for example, to protect the population from significant edge effects such as dog attacks and vehicle strikes?
  - b. Or does human behaviour need to change to accommodate koalas?

#### 4.1.2 Key insights - Question 1

Question 1. Reflecting on what we have heard today, what are the key areas of koala care and conservation in the Greater Macarthur Region that we need to build on?

Asking the groups to reflect on what they have heard reinforces the learnings from the day and focuses attention on the opportunities, issues and priorities identified by the expert speakers.

*The profile of our koala population is growing, they are now of international significance.* Table 5



We need to build on the **research** and **data** collected to date. Data and other information must be collated and all data added to OEH's NSW Bionet. Tables 2, 3

*Our koalas are healthy and the population is growing, we need to continue to build on this through collaboration* between the people we have in the room. Tables 1, 5, 6 & 7

The continued **conservation**, **rehabilitation** and **increase** of **koala habitat** is key. These are the koala friendly considerations for a **planned** and **sustainable** approach to development in the area. Tables 2, 3 & 6

#### 4.1.3 Key insights - Question 2

Question 2. Thinking about the long-term future of koala's in the Greater Macarthur region, what are the biggest issues that we need to address?

This question gives the groups a final opportunity to download around any residual concerns, issues or barriers to koala care and conservation, ahead of moving to the final question that breaks down the opportunities.

*Chlamydia* and *other diseases* are risks. We need to identify *safe release areas* and look at options to *quarantine* the population. Table 1, 3, 4



*Development* and *planning* are critical issues. The interface between **urban** and **habitat spaces** needs to be better managed. We need **novel solutions** that include open space opportunities. Tables 1, 3, 4

There needs to be **more funding** and **resources** directed to **koala care** and **education**. This includes **veterinary treatment**, **after-hours support** and **carer training**. Tables 1, 2, 3, 4, 6

There needs to be **more research** around **koala connectivity** and **natural asset corridors**. We also need to look at **fences**, **underpasses** and **overpasses** as means to avoid **vehicle strikes** and **dog attacks**. Tables 1, 2, 3, 4, 5 & 6

#### 4.1.4 **Opportunities, Actions and Responsibilities - Question 3**

Question 3. Again, thinking about the care and conservation of Greater Macarthur's koala population, let's further explore the opportunities.

This question then moves the groups back to thinking positively about solutions.

To promote the opportunity to identify key actions and accountabilities against each issue, Question 3 was further broken down to ask:

a)	Opportunities – What we would like to see?
b)	Actions – What needs to be done?
c)	Responsibility – Who needs to be involved?

This question and sub-questions gave participants the opportunity to further discuss and flesh out the key points made against questions 1 and 2. Breaking down the questions gives a framework to further discussion and has participants thinking about the 'what, how and who' aspects of future steps.

#### Table 2Top 5 responses to Question 3

Opportunities/Issues	Actions	Responsibilities
Research, information sharing and collation	<ul> <li>Hub to tie in funding with research and development</li> <li>Increase accessibility and transparency of information</li> <li>Use apps to facilitate data capture and storage</li> <li>Community education</li> </ul>	<ul> <li>Council</li> <li>DPE</li> <li>RMS</li> <li>Researchers</li> <li>Community</li> </ul>
Connectivity to allow dispersal within the region balanced with keeping the koala population healthy	5	<ul> <li>All levels of government</li> <li>RMS</li> <li>Community</li> <li>DPE</li> <li>OEH</li> <li>Environmental groups</li> </ul>
Managing the impacts of urban and infrastructure development	<ul> <li>Community education</li> <li>Formalise corridor planning in local &amp; state legislative controls (SEPPS &amp; LEPS)</li> <li>Incorporate koala conservation principles in development and planning legislation</li> </ul>	<ul> <li>DPE</li> <li>Councils</li> <li>OEH</li> <li>Greater Sydney Commission</li> <li>Developers</li> <li>Landowners</li> </ul>
Strategic habitat management	<ul><li>Strategic planting of habitat trees</li><li>Hazard burning</li></ul>	<ul> <li>DPE</li> <li>Councils</li> <li>Community</li> <li>RFS</li> <li>Developers</li> </ul>
Koala care – funding for future delivery and	<ul><li> 24-hour vet assistance</li><li> Support for wildlife services providers</li></ul>	<ul><li>Veterinarians</li><li>Councils</li></ul>

<b>Opportunities/Issues</b>	Actions	Responsibilities
infrastructure requirements	<ul> <li>International tourism opportunity – create a park</li> <li>Raise awareness of hospital</li> <li>Improve training for vets and carers</li> </ul>	<ul> <li>State government</li> <li>University</li> <li>Community</li> <li>National Parks</li> <li>Developers</li> <li>Landowners</li> </ul>

A full summary of outcomes of the workshop activity is at **Appendix F.** 

## 5 Next Steps

#### 5.1 **Building on Forum outcomes**

The Forum represents a first and highly positive step in identifying regional priorities for koala care and conservation. Despite this being an initial opportunity for discussion, there was considerable consensus around key opportunities and the issues facing Campbelltown's koalas. However, the record of workshop outcomes evidence that more work needs to be done to:

- Confirm a shared understanding of the key terminology (e.g. habitat connectivity, sustainable development, corridor planning). This will make sure Forum members are working towards the same outcomes.
- Further explore and:
  - Confirm priorities and their relative importance
  - o Identify the clear and specific actions required to achieve identified priorities
  - Assign timeframes to each action
  - o Allocate responsibility to each action

#### 5.2 **Post-Forum feedback**

Following the conclusion of the Forum, Dr. David Phalen provided Council with feedback on the care and conservation initiatives that were discussed throughout the day. Dr. Phalen's feedback can be found under Appendix G. These comments are important for the Council to consider when developing future initiatives as they provide additional insight into the practicality of implementing recommendations.

#### 5.3 Key actions for Council

The Forum evidences that we have the good will and energy needed to collaborate around the opportunities and issues facing koalas in the Greater Macarthur Region.

It is important to maintain momentum and continue to drive the actions necessary to deliver a strong and sustainable future for the region's koala population. Stakeholders welcomed the opportunity to engage, share information and discuss issues with critical government agencies. Additionally, the initiative taken by Council to convene the inaugural forum was seen as a milestone in further care and conservation initiatives.

As part of a long-term commitment to further care and conservation of the Campbelltown koala population, Council are now tasked with the challenge of considering the outcomes from this report and developing further options for discussion and implementation.





#### Campbelltown Council

Project	Gre	ater Macarthur Koala Forum	Date	6 March 2019
Venue	Campbelltown Art Centre Time		10am-2pm	
Purpose	<ul> <li>Share information about the current koala care and conservation activities, studies, plans policies operating in the Greater Macarthur Region</li> </ul>		ctivities, studies, plans and	
	• I	dentify priorities and next steps for koala care and con	servation ir	n the region
Time	Item	Discussion Point		Presenter
10:00am	1.	Registration		
10:30am	2.	Opening and Welcome to Country		Aunty Glenda Chalker Brendan Blakeley Facilitator
10:35am	3.	Overview of agenda and purpose		Brendan Blakeley
10:40am	4.	Introduction from the Mayor		Cr George Brticevic Mayor of Campbelltown
10:50am	5.	The Council and Koalas <ul> <li>Studies</li> <li>Plans</li> <li>Policies</li> </ul>		Fletcher Rayner Campbelltown Council
11:00am	6.	<ul><li>Koalas in the Greater Macarthur Region</li><li>» Introducing relevant local studies</li><li>» Some ideas for consideration</li></ul>		Steve Phillips Campbelltown Council
11:15am	7.	Facilitated Q&A		Brendan Blakeley
11:20am	8.	10-minute break		
11:30am	9.	Introduction of next sessions – regional koala care ac community perspectives and developing a koala care	,	Brendan Blakeley
11:35am	10.	Koala Care in Greater Macarthur		Vickii Lett Leanne Taylor WIRES
11:45am	11.	Community perspectives		Ricardo Lonza Save the Wildlife and Bushlands in Campbelltown
12:00am	12.	Exploring the health of koalas in the Greater Macarth	ur Region	Dr David Phalen Jessica Hagan Centre for Veterinary Education University of Sydney

12:15am	13.	Facilitated Q&A	Brendan Blakeley
12:20pm	14.	30-minute lunch break	
12:50pm	15.	Workshop activity <ul> <li>» Local issues and collaborative solutions</li> </ul>	Brendan Blakeley
1:40pm	16.	Table by table report back » Thinking about what we have heard today	Brendan Blakeley
1:55pm	17.	Close out and next steps	Brendan Blakeley & Fletcher Rayner

## B Attendees

Name	Organisation	Stakeholder group	Position
Dr. Mike Freelander	Federal Member for Macarthur	Commonwealth government	Federal Local MP
Barry Durman	National Parks Association of NSW	Community	Volunteer
Patricia Durman	National Parks Association of NSW	Community	Volunteer
Ricardo Lonza	Help Save the wildlife and Bushlands in Campbelltown	Community	Volunteer
Fabian Yu	Help Save the wildlife and Bushlands in Campbelltown	Community	Volunteer
Nea Makowski	Help Save the wildlife and Bushlands in Campbelltown	Community	Volunteer
Renee Faron	Sydney Wildlife	Community	Volunteer
Saul Deane	Total Environment Care	Community	Volunteer
Tracey Maguire	WIRES	Community	Volunteer
Vickii Lett	WIRES	Community	Volunteer
Gerry Beasley	Walker Corporation	Developer	Executive Planner
Oliver Roborgh	Walker Corporation	Developer	Senior Development Manager
Steve Cenaciempo	Kyluk Pty Ltd.	Landowner	n/a
			*
Kevin Montier Mark Anderson	Lendlease Communities (Mount Gilead) Lendlease Communities (Mount Gilead)	Landowner Landowner	Regional Development Manager Regional development Manager
Sam Mir	Mir Group General	Landowner	General Manager
Cheryl Harrison	n/a	Landowner	n/a
Kevin Fenton	n/a	Landowner	n/a
Leslie Harrison	n/a	Landowner	n/a
Peter Dow	n/a	Landowner	n/a
Adrian Abbott	Presquartz Pty Ltd.	Landowner	Landowner
Alexandra Cave	Campbelltown City Council	Local government	Senior Environmental officer
Amanda King	Campbelltown City Council	Local government	Executive Officer
Angela Taylor	Campbelltown City Council	Local government	Senior Environmental Officer
Belinda Borg		Local government	
Cr Karen Hunt	Campbelltown City Council Campbelltown City Council	Local government	Co-ordinator for Urban Release Councillor
Cr Margaret Chivrers	Campbelltown City Council	Local government	Councillor
Cr Meg Oates	Campbelltown City Council	Local government	Councillor
Cr Rey Manoto	Campbelltown City Council	Local government	Councillor
Cr. Warren Morrison	Campbelltown City Council	Local government	Councillor
Fletcher Rayner	Campbelltown City Council	Local government	Executive Manager of Urban Release and Engagement
George Brticevic	Campbelltown City Council	Local government	Mayor
Ian Andrews	Campbelltown City Council	Local government	Executive Manager of Open Space
Jim Baldwin	Campbelltown City Council	Local government	Director of City Development
Lindy Deitz	Campbelltown City Council	Local government	General Manager
Michaela Beattie	Campbelltown City Council	Local government	Campbelltown Council
Mitchell Clark	Campbelltown City Council	Local government	Campbelltown Council
Steve Phillips	Campbelltown City Council	Local government	Ecological consultant
Mathew Deeth	Wollondilly Shire Council	Local government	Mayor
Stephanie Clark	National Park Association of NSW	Community	National Parks Association of NSW
Dr. David Roberston	Cumberland Ecology (on behalf of Presquarts Pty Ltd.	Researcher	Director
Steve Ward	EMM	Researcher	Ecological Consultant
Catherine Van Laeren	Department of Planning and Environment	State Government	Acting Executive Director of Planning and Design
Fiona Morrison	Department of Planning and Environment	State Government	Commissioner of Open Space and Parklands
Gina Metcalfe	Department of Planning and Environment	State Government	Manager for Land Release
Thomas Watt	Department of Planning and Environment	State Government	Executive Planning Officer
Greg Warren	Member for Campbelltown	State Government	State Local MP
Liza Schaeper	Office of Environment and Heritage	State Government	Senior Team Leader, Ecosystems and Threatened Species
Penny Vella	Office of Environment and Heritage	State Government	Principle Policy Officer
Michelle Dickson	Roads and Maritime Services	State Government	Communication and Stakeholder Engagement
Paul Amos	Roads and Maritime Services	State Government	Project Development Manager
Rhonda Phillips	Sydney Wildlife	Community	Macarthur Koala Coordinator
Dr. David Phalen	The University of Sydney Centre of Veterinary Education	Veterinarian	Associate Professor
	The University of Sydney, Centre for		

## C **Presentation**

# Greater Macarthur Koala Partnership Forum



6 March 2019

# Welcome to Country

Local elder- Aunty Glenda Chalker



Campbelltown City Council

## Purpose

# 01

Share information about the current Koala care and conservation activities, studies, plans and policies operating in the Greater Macarthur Region



Provide an overview of Council's work to date and confirm Council's commitment to protecting the region's unique Koala population 03

Identify priorities and next steps for Koala care and conservation in the region



Campbelltown City Counc

# Agenda

- Session 1: The Council and Koalas
- Introduction Mayor George Brticevic
- The Council and Koalas- Fletcher Rayner
- Koalas in the Greater Macarthur Region Steve Phillips
- Facilitated Q&A
- Session 2: Community perspectives
- Koala care in Greater Macarthur Vickii Lett (WIRES)
- Save the Wildlife and Bushlands in Campbelltown Ricardo Lonza
- Koala Health Hub Dr. David Phalen
- Facilitated Q&A
- Session 3: Workshop activity
- Identifying strength, opportunities and aspirations for further koala conservation



# Introduction from the Mayor of Campbelltown:

# Clr. George Britcevic



Campbelltown City Council

# Greater Macarthur Koala Partnership Forum

Fletcher Rayner Executive Manager Urban Release and Engagement





### Purpose:

To collaborate with relevant stakeholders to further investigate:

- implementation of a natural assets corridor network and future-proofing koala habitat and movement within the region
- feasibility of developing a koala care program for the Greater Macarthur region







 Comprehensive Koala Plan of Management (CKPoM) awaiting approval

Plan addresses:

- ✓ Planning controls
- ✓ Rehabilitation
- ✓ Education
- ✓ Monitoring & Research
- ✓ Koala Management Committee





 2017: Natural Asset Corridor Policy Position Adopted

Purpose:

- ✓ To engage with Agencies and landowners
- ✓ Inform Strategic Bio-Certification
- ✓ Planning principles





• 2018: South Campbelltown Koala Habitat Connectivity Study

#### Purpose:

- ✓ Evaluate usage and occupancy
- ✓ Feasibility of connections
- ✓ Management strategies





Submissions and advocacy:

- RMS Appin Road REF submission
- Macarthur 2040: An interim Plan for the Greater Macarthur submission
- Mayoral representations for koala care
- Food tree planting days
- Education and signage







### Thank you for your participation
### Steve Phillips - Koalas in the Greater Macarthur Region

- Introducing relevant local studies
- Ideas for further consideration



What does the future hold for Campbelltown's Koalas?

Steve Phillips Campbelltown Koala Forum

6<sup>th</sup> March 2019



For those who came in late.....

Campbelltown's koalas have been the focus of community and scientific interest since the 1990s...

In recent years: Analyses and ongoing review of historical koala records Vegetation / Koala Habitat mapping Draft Comprehensive Koala Plan of Management Connectivity studies – field assessments and connectivity GAP CLoSR analyses.



### Background Info.....

#### Extent of Occurrence: ~ 9,500 ha.

Extent of Occurrence: ~ 14,800 ha.



Koala Records 1900 - 1994



#### Koala Records 1995 – 2012/17

### Area of Occupancy

<u>1949 – 1994 (n = 163):</u> 41.23 +/- 7.39% (SD)

<u>1995 – 2012</u> (*n* = 163 rsr<sub>s</sub>): 46.42 +/- 5.58% (SD)

AoO increase\* by ~ 5 % (*P* < 0.05) over last 3 koala generations, now at optimum levels in places like Kentlyn & Wedderburn.





### **Generational Persistence**



1977 - 1994

1995 – 2012 (expansion in southwestern corner 2012 – 17) **Koala Distribution and Population Status** 

Current Extent of Occurrence (EoO) = 14,800 ha

Current Area of Occupancy = 46% of available habitat within EoO

**Population trend over last 3 generations = recovery/increase** 

Population size (2015) = 177 =/- 12 (95% CI) individuals and increasing; low incidence/probability of disease.



#### Linkages

A conceptual network of habitat linkages were identified by the draft CKPoM, the intent of which was to enable both access within and egress from CCCLGA.

Focus on southwestern corner of CCC LGA. Why?





During the latter half of 2017/18, Council sought advice on habitat use by koalas within the previously identified linkage areas. Impetus based on:

Increased frequency of sightings in South Campbelltown area,

Increased numbers of koala vehicle-strikes,

Need to identify any potential development issues associated with koalas and future development, and

Consider results in terms of a pending upgrade of Appin Road from 2 – 6 lanes.



### Results

25 field sites surveyed at approximately 500 m intervals.

Koala activity recorded at 12 field sites (indicative occupancy estimate = 48% OAH).









#### Implications

Ongoing range expansion / recovery by Campbelltown koalas is continuing; koalas from Nepean and Georges Rivers catchments are now in contact and exchanging genetic material.

Colonisation of habitat areas formerly occupied by species in Campbelltown / on Cumberland Plain remnants offers opportunities to facilitate ongoing recovery and safeguard the population against future stochastic impacts such as fire.

Challenges arise as to how best to accommodate koala movement / connectivity / security in changing landscape.



#### The Greater Macarthur Plan 2040



Planning outcomes within this regionally significant connectivity hub are fundamental to the long-term Survivorship of the Campbelltown Koalas.

The challenges are <u>not</u> insurmountable, nor should they be subjugated for the sake of yield.

A sustainable planning outcome that commits to the key principles of ecologically sustainable development through informed planning IS entirely possible. Connectivity is a two-way thematic with a tidal flow that can (and will) change over time.

It is not just about NOW, but also about what the FUTURE may bring.

Proactive planning is about ensuring intergenerational equity..

... and its not just about koalas...







#### Roads & Koalas

As little as a 2 – 3% increase in annual mortality rates is sufficient to initiate and drive koala population decline.









What we learn from managing koalas and roads has application in Campbelltown.

### Getting it right.....







Twenty years ago we had ideas about how to save koalas .....

Today we have the knowledge and the answers ......

But do we have the political will to do what it takes?

I sincerely hope so..



Thankyou

# Facilitated Q&A

## Morning tea

### **Community Perspectives**

**Presenters:** 

WIRES - Vickii Lett

Save the Wildlife and Bushlands in Campbelltown - Ricardo Lonza

Exploring the health of koalas in the Greater Macarthur Region - Dr. David Phalen and Jessica Hagan

### **Greater Macarthur Koala - WIRES**



### Objective and Strategy

- Objective A respected and Protected Natural Environment.
- Strategy 2.5 Plan for and Ensure that Development in our City is Sustainable and Resilient.



Vulnerable status??: they are facing a high risk of extinction in NSW in the medium-term future, as determined by the criteria prescribed in the regulations

Key Threatening Processes

- Clearing and degradation of habitat.
- Anthropogenic Climate Change
- Forest Dieback BMAD/Psyllids
- High Frequency Fire
- Predation by Introduced species ie Foxes and Dogs.
- Disease





### Koalas Threatened Status: Vulnerable

- Inhabit eucalypt woodlands and forests.
- Feed on foliage of more than 70 euc. Species and 30 noneuc species.
- Inactive day moving and feeding mostly at night.
- Most arboreal but will travel across the ground.
- Home range varies
- Generally solitary but have complex social hierarchies.
- Females breed at 2 years and produce one young per year.
- Breeding time September- February.

## Campbelltown Population

- Not disease free but Chlamydia free
- Two Wildlife care groups service the Greater Macarthur area WIRES and Sydney Wildlife.
- WIRES and Sydney Wildlife have an Memorandum of Understanding (MOU).
- Work cooperatively to ensure best outcome for koala rescue, care and conservation.
- Protect chlamydia free status of Campbelltown population.
- Share resources and information





## HABITAT LOSS



## Koala Care Reasons

- Busiest times for rescue and care August November.
- Young animals dispersing with limited habitat options.
- Data Record of sightings
- Motor vehicle strike
- Unsuitable environment
- Dog attack
- Fighting in wild

## Koala Care Needs

- Trained Rescuers and Carers
- Good Veterinary Care and equipment
- Vet- Capacity both financially and time availability for comprehensive assessment of koala
- Facilities Intensive, Intermediate and Prerelease housing.
- Access to and easily accessible good quality leaf.
- Research into treatment options
- Access to research outcomes
- Healthy connected release sites.



### Let them Eat Cake

### Koala Conservation

- Habitat protection, enhancement and expansion.
- Connectivity i.e. Functioning Wildlife Corridors.
- Community Education
- Viable crossing across major roads
- Maintain Chlamydia free status whilst allowing for genetic diversity.



## RESEARCH

- Ear-tagging and Radio tracking
- Scat collect and analyze.
- DNA
- Monitor disease status KHH
- Effective treatments drug efficacy research.
- Mapping Where are they now?
- Map koala habitat tenure blind



lf we get this wrong!



Disease Campbelltown Chlamydia free status is important!

# Animal Pain and Suffering

Cysts and uterine infection in Chlamydia affected female koala



Good planning and Comunity will make the difference



Help Save the Wildlife and Bushlands in Campbelltown:

**Ricardo Lonza**


Richard Lonza Greater Macarthur Koala Forum 6<sup>th</sup> March 2019

## How it all began – Love at first sighting!

- Facebook page set up in 2013 Save the Wildlife and Bushlands in C'town
- Strong need for advocacy group to represent the interests of the community and koalas in the Macarthur region
- Steady increase in koala related incidents requiring rescues – direct result of increasing number of people moving into the Campbelltown area, and a recovering koala population



## Koalas in Campbelltown

- The only known chlamydia free population in the Sydney basin
- Estimated 400 + koalas in the greater
  Campbelltown area but without updated
  studies to find out the exact amount it will
  just be a guessing game
- Their diet here differs from koalas in other areas. Our koalas love grey gum (*Eucalyptus punctata*) and Stringybarks (particularly *Eucalyptus agglomerata*)



## Major threats to our koala population

- Road fatalities: Major road corridors that intersect areas of core koala habitat are one of the major threats to our local koala population
- Urban development: Loss of koala food trees and habitat is seeing koalas utilising man-made structures in heavily urbanised areas
- **Dog attacks**: Dog attack incidents in suburbs that overlap with areas of koala habitat are on the rise



## **Road fatalities**

- A number of opportunities exist to better develop road upgrade designs eg Appin Road
- The community wants good planning outcomes for biodiversity from State Government, not bandaid solutions



### Urban development

- Loss of preferred koala food trees and koala habitat
- Increasing number of koalas navigating man-made structures in urbanised areas
- Resulting in exposure to more threats on ground eg cars and dogs



#### Dog attacks

- Majority of dog attacks take place inside backyards, and occur at night
- 96% of attacks on koalas are by dogs > 10kg; and 80% of koalas die from injuries sustained from dog attacks
- Keeping dogs inside at night, on a verandah or a dog-proof yard would prevent a lot of these attacks





## **Corridor systems – connectivity is key**

- Connectivity is important for the future survival of our koala colony
- Broken connectivity is a major problem for our koala colony
- We need a balance between future developments and the conservation of existing corridors in order to sustain wildlife populations into the future
- Case Study: Smiths Creek Reserve, Leumeah





## **Campbelltown community and Koalas**











## **Community expectations**

- Committed to ensuring that we get better environmental outcomes for the Campbelltown area, including for koalas and their habitat
- This can be achieved through better planning decisions and engineering solutions
- Let's work together to make the Greater Macarthur area a success story!









Exploring the health of Koalas in the Greater Macarthur Region -Dr. David Phalen and Jessica Hagan

#### Exploring The Health Of Koalas In The Greater Macarthur Region





Associate Professor David Phalen Masters Student Jessica Hagan



#### **Hospital Background**





- Wildlife Health and Conservation Centre
- Est 2007
- Receives no external funding for the treatment of wildlife
- Veterinary care, education, research
- Treated ~ 7500 wildlife cases
- 162 koalas from Campbelltown region alone since

#### **Close & Ward Long Term Study**

24 year community assisted
 radiotelemetry study 1990-2014





- Investigating home-range, diet, longevity, dispersal, reproductive capacity and causes of mortality
- Relied on community and dedicated volunteers

#### **Hospital Admissions by Year**



#### **Reasons for Hospital Admission**



#### **Hospital Admissions over Time**



#### **Sex Biased Mortality**



#### **Hospital Admissions by Month**



#### **Dog Attack Locations**



#### **Hit By Car Locations**



Appin Rd

 Heathcote Rd (near Deadmans Creek)

 Junction & Peter Meadows Rd

• Wedderburn Rd

### Factors Associated with Road-Based Mortality





Where road dissects koala habitat

Heavy traffic flow

• Higher speed limits

Dispersal routes

#### **Rates of Survival**



#### Lymphoma

- Lymphoma
  - Most common form of neoplasia in koalas
  - Free-living & captive koalas
  - QLD/NSW/VIC
  - 7 Campbelltown koalas since 2009
  - Potential link to koala retrovirus (KoRV) under investigation



B-cell lymphosarcoma (Connolly et al. 1998)

#### **Sarcoptic Mange**

- Sarcoptes scabiei
- 3 confirmed cases, 3 additional 'likely' cases
- Likely to be opportunistic
- All adult/aged, debilitated animals, two with lymphoma





#### Micro-ophthalmia and strabismus (left) normal for comparison (right)





#### **Campbelltown Koalas: Genetics**

- Genetics: Lee et al., Kjeldsen et al., Phalen Unpublished
  - Population extends across the Army Range to the Coast
  - Isolated from others now
  - Historically continuous
  - More genetic diversity than originally thought
  - Congenital diseases suggest localized inbreeding



### Campbelltown Koalas: Comments on Disease Findings

- Diseases seen elsewhere are also occurring here, but they are rare and often in older animals (are not a threat).
  - Oxalate toxicity
  - Lymphoma/leukemia
  - Mange



- Dogs and vehicles are the biggest threat
- Based on all health and ecological studies, this is a healthy, growing population.

#### Campbelltown Koals: Chlamydia

- The population is Chlamydia free
- Can it stay that way when there is widespread infection in the Southern Highlands?
  - Difficult to block koala movement, although Appin road does a good job in many cases
  - Need to continue quarantine on animals coming into care from Campbelltown



#### **Veterinary Care**

 Testing and care costs money. The University of Sydney Wildlife Hospital has provided it since 2007 at no cost to carers or the general community

• This may not be sustainable



 Financial support to guarantee long-term services needs to be considered

#### **Thank You for Your Attention**



#### An Example of the Koala-Urban Interface

# Facilitated Q&A
# Lunch

Campbelltown City Council

# Workshop activity: local issues collaborative solutions

- Reflecting on what we've heard today, what are the key areas of koala care and conservation in the Greater Macarthur Region that we need to build on?
- Thinking about the long term future of koala's in the region, what are the biggest issues we need to address?
- Thinking about the care and conservation of Greater Macarthur's Koala population, let's further explore future opportunities

## Table by table report back

Reflecting on what we have heard today



## Next Steps: Fletcher Rayner and Brendan Blakeley



## D Table Allocations

## Greater Macarthur Koala Partnership Forum – Draft Seating Arrangements

## TABLE 1 – Facilitator: Malia Corry

Name	Org.	
1. Malia Corry	Elton Consulting	
2. Alex Graham	OEH (Director for Greater Sydney)	
3. Cr. Karen Hunt	Campbelltown Councillor	
4. Cr. Matthew Deeth	Mayor of Wollondilly	
5. Lindy Deitz	General Manager of Campbelltown Council	
6. Cr. George Britcevic	Mayor of Campbelltown	
7. Fiona Morrison	DPE	
8. Clr. Judith Hannan	Wollondilly Shire Councillor	
9. Steve Phillips	Campbelltown Council koala consultant	
10. Warren Morrison	Wollondilly Shire Council	

## TABLE 2 – Facilitator: Anna Collins

Name	Org.	
1. Anna Collins	Elton Consulting (facilitator)	
2. Cr. Rey Manoto	Campbelltown Councillor	
3. Ian Andrews	Campbelltown Council	
4. David Phalen	Koala Health Hub	
5. Leslie Harrison	Landowner	
6. Kate Gowland	Commonwealth Department of Environment and Energy	
7. Penny Vella	OEH	
8. Vicki Lett	WIRES	
9. Stephanie Clarke	NSW Parks Association	

## TABLE 3 – Facilitator: Brendan Blakeley

Name	Org
1. Brendan Blakeley	Elton Consulting (facilitator)
2. Liza Shaper	OEH
3. Paul Amos	RMS
4. Cheryl Harrison	Landowner
5. Barry Durman	NSW Parks Association
6. Mark Anderson	Lendlease communities

Name	Org
7. Sam Mir	Landholder
8. Nea Makowski	Wildlife volunteer
10. Paul Dow	Landowner

## TABLE 4: Facilitator – Angela Taylor

Name	Org	
1. Angela Taylor	Campbelltown Council (facilitator)	
2. Enhua Lee	OEH	
3. Adrian Abbott	Presquartz	
4. Cr. Margaret Chivers	Campbelltown Council	
5. Sue Fenton	Landowner	
6. Cr. Meg Oates	Campbelltown Council	
7. Rhonda Phillips	Sydney wildlife	
8. Richard Lonza	Save the Wildlife and Bushlands in Campbelltown	
9. Mathew Misdale	Campbelltown Council	

## TABLE 5: Facilitator: Belinda Borg

Name	Org	
1. Belinda Borg	Campbelltown Council (facilitator)	
2. Saul Deane	Total Environment Centre	
3. Mike Freelander	Member for Macarthur	
4. Gerry Beasley	Walker Corporation	
5. Pat Durman	NSW Parks Association	
6. Renee Faron	Sydney Wildlife	
7. Kevin Fenton	Landowner	
8. Susan Harrison	OEH	
9. Michaela Beattie	Campbelltown Council	

## TABLE 6 - Facilitator: Mitchell Clark

Name	Org	
1. Mitchell Clark	Campbelltown Council (facilitator)	
2. Michelle Dickson	RMS	
3. Steve Cenaciempo	Kyluk	

Name	Org	
4. Leanne Taylor	WIRES	
5. Greg Warren	Member for Campbelltown	
6. Thomas Watt	DPE	
7. Kevin Montier	Lendlease	
8. Gina Metcalfe	DPE	
9. Fabian Yu	Save the Wildlife and Bushlands in Campbelltown	

## TABLE 7: Facilitator: Amanda King

Name	Org	
1. Amanda King	Campbelltown Council (facilitator)	
2. Catherine Van Laeren	DPE	
3. Steve Ward	EMM	
4. Dr. David Robertson	Cumberland Ecology on behalf of Presquartz	
5. Jessica Hagan	КНН	
6. Oliver Roborgh	Walker Corporation	
7. Cr. Michael Banasik	Wollondilly Council	
8. Tracey Maguire	WIRES	

## TABLE 8 Facilitator: Angela Taylor

Name	Org	
1. Angela Taylor	Campbelltown Council (facilitator)	
2. Catherine Van Laeren	DPE	
3. Barry Durman	NSW Parks Association	
4. Dr. David Robertson	Cumberland Ecology OBO Presquartz	
5. Steve Cenaciempo	Kyluk Pty Ltd.	
6. Steve Ward	EMM	
7. Oliver Roborgh	Walker Corporation	
8. Michael Banasik	Councillor, Wollondilly Council	

## TABLE 9: Councillor table (observing only)

Name	Org	
1. Cr Karen Hunt	Campbelltown Councillor	
2. Cr Margaret Chivrers	Campbelltown Councillor	
3. Cr Meg Oates	Campbelltown Councillor	
4. Alexandra Cave	Campbelltown Council, Environmental Officer	

## E **Templates**

## **CAMPBELLTOWN'S GREATER MACARTHUR KOALA FORUM:** LOCAL ISSUES, COLLABORATIVE SOLUTIONS

1. Reflecting on what we have heard today, what are the key areas of koala care and conservation in the Greater Macarthur Region that we need to build on?

2. Thinking about the long-term future of koala's in the Greater Macarthur region, what are the biggest issues that we need to address?



Table number:

## CAMPBELLTOWN'S GREATER MACARTHUR KOALA FORUM: LOCAL ISSUES, COLLABORATIVE SOLUTIONS

3. Again, thinking about the care and conservation of Greater Macarthur's koala population, let's further explore the opportunities		
Opportunities – What we would like to see?	Actions – What needs to be done?	Responsibility – Who needs to be involved





## **F** Workshop Summary



## **Identifying further opportunities in koala care and conservation**

Greater Macarthur Koala Partnership Forum

Opportunity	A	ctions	R	esponsibility	Та	able
Opportunity Strategic planning	A * * * * *	<ul> <li>ctions</li> <li>Ongoing collaboration to realise opportunities for further programmes</li> <li>Development provisions that provide for koala conservation outcomes including:</li> <li>Planning provisions that exclude certain high-risk companion animals unless subject to strong controls</li> <li>Cumberland Plain Strategic Conservation Plan</li> <li>Regional koala planning to provide consistent conservation outcomes with equal consideration</li> <li>Finalisation of SEPP 44 review</li> <li>Consolidation of all data through:</li> <li>Ensuring data platforms across local, state and federal bodies are streamlined</li> <li>Combining information from wildlife volunteers, research institutions and citizen science</li> <li>Creating apps that facilitate these data consolidation efforts</li> <li>Greater access and sharing of research for</li> </ul>	» » » » »	DPE Council Community Greater Sydney Commission OEH Commonwealth government University research facilities Vets	<b>T</b> a ************************************	Table 1&7 Table 4 Table 3
Local & state conservation legislation Bushfire management planning	» » » »	outcomes under State conservation acts Regional coordination of LGA advocacy measures including greater collaboration between councils Implementing and achieving conservation outcomes Hazard burning (best practice hazard reduction) Working out asset protection zones Contingency plan for the Greater Macarthur Koala	» » » »	Councils OEH DPE Other key landholders Rural Fire Service Councils National Parks	» » »	Table 4 Table 1&7 Table 6 Table 2
			» » »	Developers Landholders State and local government		



Extension of funding	*	Explore options for additional state and federal funding	»	All levels of government	*	Table 1&7
	»	Application for additional funding from the	»	Researchers		
		Biodiversity Conservation Trust	»	Community		
Reducing vehicle strike	*	Implementation of fencing (including virtual fencing strategies)	»	State government	*	Table 6
rates	»	Crossings	*	Local government		
	»	Strategically placed corridors (ie in areas of low vehicle speed limits)	*	Local community		
Corridors and	*	Improving east-west connections through:	*	RMS	*	Table 1&7
connectivity		> Land bridge/fencing/over & underpasses	*	Federal government	*	Table 5
		> Also providing these passes for other wildlife	»	State	» »	Table 4 Table 3
	»	Formalise corridor planning in local & state legislative controls (SEPPs & LEPs)	*	government		
	*	Educational campaigns for the community on how to avoid impacting koalas as well as methods for caring for sick and injured wildlife	» »	Council Local community		
	*	Planning for habitat expansion to facilitate growing populations and restore habitat connectivity	» »	Council DPE		
	>>	Allowing koalas to disperse widely				
	>>	Use natural landforms for connectivity				
	>>	Reduce speed limits in urban areas				
	»	Addressing the issues of Appin Rd				
Quarantining local populations	»	Keeping Campbelltown koalas disease free by limiting interactions with diseased neighbouring populations	>>	Council OEH DPE	*	Table 3
Extension of	>>	Improving awareness of the existing hospital	»	State	*	Table 6
Koala Care nitiatives	*	Expanding funding for hospitals and local carers	>>	government Local	>>	Table 5
	*	Better training for vets	"	government	>>	Table 3
	*	Instituting 24-hour hospital and carer support	>>	University KHH		
	»	Developing a koala rehab home	*	Community		
	*	Further koala triage training for vets				
	*	Extending collaboration between KHH and local groups				
	»	Supporting more training services for volunteers and carers				



Collaring and tracking local koala population	» »	Ear tagging and radio tracking post-release (looking at Wollondilly and Southern Highlands as working examples for tracking programs) Receiving ethics approval so these protection measures can be implemented Identifying areas for future funding for these programs	» » » »	Collaboration with other councils Council OEH State government Environmental	» »	Table 5 Table 2
				groups		
International tourism opportunities	» »	Building a regional tourism park in order to build Campbelltown LGA as a regionally significant hub for NSW koalas This national park to potentially connect Georges	» » »	Community National parks Developers	*	Table 5
	"	River and Nepean River	*	Landowners		
	>>	Commitment to turn it into a national park	>>	Council		
	»	Expansion of educational and research facilities within a regional tourism park	٦			
Expanding local habitat trees for Koalas	» » »	Primary and secondary food trees placed on shale/sandstone transition forest (SSTF) Koala food tree plantings in strategic locations Enhancement of existing habitat trees	» » »	Community Council Developers	» » »	Table 5 Table 4 Table 3 Table 2
Managing urban development and koala preservation	» »	Council to inform landholders of plans for development & conservation Managing the interface with urban spaces to reduce attacks	» » »	Landowners Council DPE	*	Table 3
	*	Connectivity methods to direct koalas away from urban developments				

## **Top priorities- Critical areas of action**

- 1. Consolidation of data and research on koala conservation across government and non-government initiatives
- 2. Creating and implementing a contingency plan for local koala populations to mitigate risk from natural disasters
- 3. Accessing additional funding for community care and conservation groups
- 4. Reducing vehicle strike rates by implementing deterrents



- 5. Improving natural habitat corridors and connectivity
- 6. Expanding local habitat trees for Koalas
- 7. Furthering quarantine efforts to ensure the local population remains disease free
- 8. Developing further care initiatives and expanding current facilities such as the KHH
- 9. Collaring and tracking local populations to build on knowledge and research of local populations
- 10. Developing a national tourism par for tourism, education and further conservation of koala populations between the Georges River Council and Nepean River
- 11. Increased communication between Council and landowners about managing development and conservation needs

#### TABLE NO: 1 & 7

Reflecting on what we have heard today, what are the key areas of koala care and conservation in the Greater Macarthur Region that we need to build on?

- Chlamydia free population quarantine.
- Corridors protection e.g. East/west connections/channels/underpasses
- Funding wholistic approach to manage key risks e.g. Hospital, vehicle strikes, dog attacks, research
- Koala friendly? Development
- Collaboration room community organisations

Thinking about the long-term future of koala's in the Greater Macarthur region, what are the biggest issues that we need to address?

- Habitat destruction
- Planning corridors, connectivity regional scale places for humans sitting together –
- Balance Georges River Parkway?
- Getting the priorities right
- Planning with purpose e.g. Trees
- Bushfire risk

Opportunities – what would you like to see?	Actions – what needs to be done?	Responsibility – who needs to be involved?
Strategic planting (canopy expansion)	Engagement with community around where for pilot program Ongoing collaboration to realise opportunities for further programmes	DPE, council, community
Strategic planning	Housing diversity focuses on density around amenity (not	Council, DPE, community Developers RMS
Bushfire management planning Climate change Landcare	Hazard burning Working out asset protection zones Planning – Greater Macarthur	RFS, Councils National Parks Developers Landholders
Funding eg. Explore Biodiversity Conversation Trust	Unified Hub to tie in with research, development Explore State/Fed, developer	All levels of government Researchers Community

### TABLE NO: 2

Reflecting on what we have heard today, what are the key areas of koala care and conservation in the Greater Macarthur Region that we need to build on?

- Sightings on koalas in Campbelltown there is a whole body of info we are missing re Holsworthy population.
- Corridors
- Vehicle Strike
- Care facilities contingency plans disaster planning for fires. Need to be prepared in the instance this occurs. Nothing in place in NSW.
- Planning training & PPE. Possibility for national parks to run short courses. Dr Phalen refers 2 disaster study implemented in VIC (triage site)
- Core habitat needs to be cared for and expanded. With pressures of development in mind. Thinking
  about restoration of habitat has there been any studies conducted/ NB. Wollondilly is conducting
  invest into what habitat trees the koala population are using. Also referring to North Coast studies
  regarding the use of rehabilitated native vegetation. Issues with viability/long time it takes to restore
  regrow.
- Fences, structures and road fatality. Three bridges connecting. Also notes questions of how they work needs rigorous appraisal. Study in Northern NSW about studies of offspring(?). Studies shown they will use the underground tunnels (Dr Phalen). Other landowners note will it work for other species as well as ferals.

Thinking about the long-term future of koala's in the Greater Macarthur region, what are the biggest issues that we need to address?

- KHH: need for further funding. This is critical for ongoing <u>education</u> as well as critical care. Also, disease analysis, where KHH has picked up a whole range of issues that the public haven't been previously aware of.
- Political rhetoric. \$4m funding "pledge" but also note the ongoing operation costs, the current model is right they just need more funding.
- Opportunities for the general public are there for KHH and they could work with Campbelltown to hold a public forum on accessing the hospital.
- Issues with timing: responses to disaster instances. There needs to be processes in place. NB. Responding to care in Army base and access to this. Liaising with federal defence on issues associated with Holsworthy. Needs whole range of connections and coordination or a "champion" for this.

- Access 2 surveyance reports from within OEH. (Enhua Lee)
- Need for a rescue immediate response facility.
- Need for people with training which requires funding as well as vet's with time and passion (Lawrence Council) for example pay for immediate koala care.
- Difference between private vs public clinics, subsidising this. Funding and subsidisation is critical for KHH because eventually will run out of USYD funding.

Opportunities – what would you	Actions – what needs to be	Responsibility – who needs to be
like to see?	done?	involved?
Ear tagging and radio tracking post release.	Funding Ethics community Important for all species, the success of rehab is a measure of how well initiatives are going	needs to be immediately addressed.
Looking at Wollondilly and Southern Highlands as working examples for tracking programs.		Need to extend their area of care. This falls into their research grants, combination of LGA & OEH. If the council want something tracked, it is feasible but the people who could put the collars on were not within animal ethics group. Train people within Campbelltown, there is no shortage of people able to volunteer just need training and permission. NB. Ethics approval is quite the process.
Contingency plan	Liaison with major stakeholders	Liaison with major stakeholders
Expanding and protecting existing habitat.	Habitat tree enhancement	Leveraging stakeholders together Wingecaribee and Wollondilly is a great example and leveraging community support.
Smith Creek / Creek health	Slowing water? Managing these areas. *	Council and landowners

		NB Catchment management plans which details how streams should be.
KHH Hub – increasing sustainability. Collaboration with local groups.		Local representatives, federal government (funding), council.
Extension of training and expansion of carers.	Sydney Wildlife and WIRES are primary x2 carers.	Looking at NSW government funding for carers.
Corridors and management of road facilities.	Explore options outside of tunnels for safe passage.	Council, RMS.
\$4m funding into an endowment.	Split between KHH and local carers.	Council/state/federal government feel they can train carers.
Access to research for carer groups.	Making information more easily accessible and transparent.	State government giving support to local community and researchers for research that is "filtered out".

### TABLE NO: 3

Reflecting on what we have heard today, what are the key areas of koala care and conservation in the Greater Macarthur Region that we need to build on?

- Existing rehabilitation & rescue services
- The amount of research in the area, including long term research
- Koala population in recovery
- The distance koalas can travel
- Release of rehabilitated koalas
- Quarantine to protect koalas from disease
- People from various sections of the community all know a lot about koala protection
- Koalas need to access a range of habitats
- Amount of koala care
- The need to protect koalas from danger, e.g. Urban areas & fire

Thinking about the long-term future of koala's in the Greater Macarthur region, what are the biggest issues that we need to address?

- Preserve & improve connectivity urban bush, overpasses
- Keep koalas out of areas where there are cars & dogs
- Ensuring support for koala carers & finding safe release areas
- Need for collation of information on tools such as data, mitigation measures
- All data should be added to NSW Bionet (including Rob Close data)
- Use of NSW Koala Strategy app
- No net loss of vegetation on development sites
- Quantify the cumulative impact of developments
- Keep dogs in an enclosure, not just the back yard

Opportunities – what would you like to see?	Actions – what needs to be done?	Responsibility – who needs to be involved?
Co-ordinate & bring together all data & mitigation measures	Make sure the data all works together (e.g. Local, regional & state data formats). Also include community, research institutions, citizen science Create apps to facilitate data capture & storage	OEH, Commonwealth, councils, koala carers, universities, vets.
Connectivity	Address the issue of keeping Campbelltown koala's disease free Allowing koalas to disperse widely Must be safe & directs animals away from roads & urban areas Prioritise the most important location that will connect the most koalas & not harm them Use natural landforms for connectivity Don't introduce animals into future urban areas Separate koalas from urban areas Keep koalas off high traffic high speed roads Reduce speed limits in urban areas	Community DPE Council RMS
How to better support groups undertaking care & research	Bring people together Learn lessons from other areas with complex problems More tree planting days Community education Council to inform landholders of plans for development & conservation	

#### TABLE NO: 4

Reflecting on what we have heard today, what are the key areas of koala care and conservation in the Greater Macarthur Region that we need to build on?

- Existing groups that support wildlife are private mostly 1 vet with 24 hours.
- Advocacy koala population importance & Wollondilly & Campbelltown advocates are strong
- Koala connectivity studies & natural asset corridors studies
- Draft koala plan of management

Thinking about the long-term future of koala's in the Greater Macarthur region, what are the biggest issues that we need to address?

- Increase in after-hours support both private vets
- Increase in skilled carer support in the area
- Education to assist to train/increase skills base (both carers/vets)
- More resources koala care
- Identify management/conservation prioritise issues koala priorities in planning frameworks. (LGA vs Greater Macarthur) research is needed regarding population impacts, disease & habitat limitations
- Planning to restore habitat to expanding population (planning for expansion of koalas during increasing urbanisation
- Development (roads & urban expansion)
- Prioritising koala management as part of state strategic planning
- Long term conversation planning expansion/surety of conservation (expand reservation)
- Corridor planning increases in current corridor width/volume
- Management of interface urban/habitat spaces novel solutions that include other open space opportunities

Opportunities – what would you like to see?	Actions – what needs to be done?	Responsibility – who needs to be involved?
Better corridor planning to reduce koala fatalities (roads) – manage interface with urban spaces to reduce attacks	Formalise corridor planning in local & state legislative controls (SEPPS & LEPS) Education of the community (both avoiding impacts to koalas & if sick/injured/found) Planning for habitat expansion to facilitate expanding population & restore habitat connectivity Manage corridor/habitat &urban interface	DP&E Local councils OEH
Carer support – after hours / vets at night	24 vet assistance Koala rehab / park to home koalas not able to be released Vet trained in triage for koalas Koala food tree – plantings for harvesting Carer support for wildlife services providers – reduction in ratios of these properties, funding from regional	University / community – vet training Council
Development provisions that provide for koala conversation outcomes Better conservation planning for development	Planning provisions that exclude certain high-risk companion animals without strong control Cumberland Plain Stategic Conservation Plan Regional Koala Planning to provide consistent conservation outcomes with equal consideration Finalisation of SEPP 44 review	Greater Sydney Commission Councils DPE OEH

Prioritise conservation outcomes for koalas in local & state legislation Identifying what are priorities and management actions will fall out of these	regional outcomes	Councils OEH DPE Other key landholders
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#### TABLE NO: 5

Reflecting on what we have heard today, what are the key areas of koala care and conservation in the Greater Macarthur Region that we need to build on?

- Wildlife corridors East/West connections
- New lead champion to continue studies (Stephen Ward)
- Health of koalas in LGA chlamydia-free. Large population.
- Car strikes contributing o koala deaths working on corridors
- Overhead & under head groundcover connections
- Continuing the good health of koalas
- Profile is becoming more prevalent, from a Sydney importance to an international importance

Thinking about the long-term future of koala's in the Greater Macarthur region, what are the biggest issues that we need to address?

- What do we do with Appin Road? Road passes, fencing
- Designing underpass in a way that has had proven success
- Explore funding for these crossings
- Securing those East-West Connections
- Nepean & Georges River land is historical land, we can use this to explore indigenous culture but also native Flora & Fauna. Convict history.

Opportunities – what would you like to see?	done?	Responsibility – who needs to be involved?
Improving East-West Connections	Land bridge/fencing/over & underpasses Also providing these passes for other wildlife	RMS federal government, state government OEH, community, council
Collaring koalas – tracking	Investigate options, collaborating and funding	Collaboration with other councils OEH State government Environmental groups
International tourism opportunity – regional park Campbelltown is a regionally significant regional hub for koalas	Baseline koala survival overpasses 420 metres wide. Regional park that will connect Georges & Nepean River. Commitment to turn it into a national park Education	Community National parks Developers Landowners Council
Enviro Centre & Animal	Care & conservation, tourism, marketing, funding	Joint partnership with uni, levels of government
Enhancing public open space		
Food tree bank for koalas	Plant care primary & secondary food trees on SSTF	Community Council Developers

#### TABLE NO: 6

Reflecting on what we have heard today, what are the key areas of koala care and conservation in the Greater Macarthur Region that we need to build on?

- Local capabilities
- Local facilities
- Local engagement
- Collaboration between organisations/community, etc
- Increased/conserved habitat
- Number of vehicles strikes across LGA

Thinking about the long-term future of koala's in the Greater Macarthur region, what are the biggest issues that we need to address?

- Vehicle strikes
- Habitat conservation and connection
- Population resilience
- Future proofing populations
- Koala care addresses availability of veterinary treatment

Opportunities – what would you like to see?	Actions – what needs to be done?	Responsibility – who needs to be involved?
Reducing vehicle strikes	Fencing Crossings Virtual fencing strategy ideas Strategically placed corridors (ie. in areas suitable / low speed)	State government Local government Community
Future proof/resilience	Maximising habitat Resilience to fire Greater habitat = less disease Best practice hazard reduction Dog attacks	State government Local government Community (wildlife organisations)
Koala care	Awareness of existing hospital Funding for hospital/care Opening hours (ie. Open at night) Better training for vets	State government Local government University Community

## G Post-forum feedback

## Dr. David Phalen, Post forum feedback

Thank you for inviting me to the workshop this week. It was a good and positive day.

One thing that I wanted to follow up with is the idea floated by some that there is a need for a 24/7/365day koala hospital that in addition to being available to carers and providing free services could be used to attract tourists and improve the local economy, as does the Port Macquarie Koala Hospital. This is not a reasonable, feasible, or needed for many reasons.

As I mentioned at the workshop, we live in an area where there is a low density of koalas. Therefore, the number of animals brought into care each year is small (less than 40 and in many years less than 20). This is far fewer than are seen in places like Port Macquarie and Lismore because their koala population density is much greater there. So, just from a number's perspective, it is unlikely that one, much less a few animals would be in care at one time and this would not be much of an attraction.

A hospital is a hospital even if it is combined with a rehabilitation facility, wild animals in recovery should not be used as display animals.

Our carers need two rehabilitation sites, one for Campbelltown koalas and one for ones from elsewhere due to the chlamydia issue.

Financially, it does not make sense and a new hospital would only duplicate services that are already available.

Currently the Avian Reptile and Exotic Pet Hospital is open 6 days a week and two evenings a week.

The Ingleburn Animal Hospital Operates an afterhours service and routinely sees koalas as needed and refers them to us the next day.

To employ the number of veterinarians needed to be in place to see koalas after hours would cost \$200,000 a year. To run a koala hospital with afterhours service would cost approximately \$350,000 a year in staffing costs alone for a maximum of 50 koalas. Not counting the cost of supplies, and maintaining a building it will cost the council (As they will have to pay for this) \$7000 per koala when right now they are getting this service for free.

So, what is the way forward for koala care.

Continue to use the Avian Reptile and Exotic Pet Hospital when we are open and continue to use Ingleburn for after hours. We have trained the afterhours vets at Ingleburn in the past and can do more if required. NSW is developing courses for vets and perhaps Campbelltown would like to support the Ingleburn vets to attend these training course. Perhaps the Council would like to reward Ingleburn Vets for their efforts by making a yearly contribution to the cost of providing this service, or paying some money every time a koala comes in. If you would like us to be on call afterhours we can. It would cost approximately \$30,000 a year to have our veterinarians be on call. If the Campbelltown council and others consider this to be important and wish to support this financially, then we are willing to provide this service beginning at any time.

So, in conclusion, high quality veterinary care is now being offered to the regional koalas. A more formalized after-hours service is possible if resources were to be made available. A separate hospital and veterinary team for koalas, even if it provided care for other wildlife would be a reduplication of facilities and services that already exist. If funded by the Council, and it would have to be, it would come at a terrible cost and would not be, in my opinion, proper use of the taxpayer's money or sustainable, especially given that lower cost services are already in place.

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