Comments on Some Issues for Consideration by the Koala Taskforce- August 2008

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Preliminary comments:

One of the purposes of the *Integrated Planning Act* is to cause development to be "ecologically sustainable". Ecologically sustainable development (ESD) is a term and concept so used (and misused) in recent years that it almost has no meaning in practice. However, it is quite clear that the appropriate application of the important guiding principles and objectives of that concept is absolutely essential if we are to save koalas in the long term. The *IPA* and *Nature Conservation Act* must act in tandem to guide and enforce that. To date, both Acts, and the State departments administering them, have failed to achieve those aims.

For reference, some of the relevant principles/objectives underpinning ESD are:

a. Conservation of biological diversity

b. Intergenerational equity (fairness to future generations)

c. The precautionary principle

I believe that these three principles must be reflected in the recommendations of this taskforce. Our primary purpose is not to find ways to facilitate koala friendly development, but to clearly state what *must* occur to ensure the conservation of a healthy koala population into the long-term future.

Major Issues:

1. **Gross and incremental loss and fragmentation of koala habitat continue to occur.**

Despite a number of state planning policies and koala conservation plans spanning the past 10-15 years both large scale and incremental loss and fragmentation of koala habitat continue to occur. Small populations of koalas that are isolated from others have little chance of long-term survival without active monitoring and management. Much of the koala population of Queensland occurs in isolated habitat fragments and many of these populations are likely to extirpated in the coming decades without intervention. Impediments to the protection of large and small habitat remnants and habitat connectivity, such as the poor protection of habitat and koalas in the *urban footprint,* the *injurious affection* compensation recourse for landholders, and the wide definition of *committed development*, must be removed if further significant habitat loss and dramatic population decline are to be avoided. This is absolutely essential to the long-term conservation of koalas in this in SEQ at least.

Significant koala habitat areas within the existing *urban footprint* must be identified, mapped and ranked using the same methodology as occurs in the Koala Plan. These areas are likely to be critical to the regional conservation of the species and should not be written off under the banner of "committed development". Off-setting the resultant loss of urban footprint area could be achieved by identification and inclusion of degraded or cleared land outside of the current urban footprint.

2. **Poor understanding of disease**

The two significant epizootics, of which we have some knowledge, (Koala Retrovirus (KoRV) infection

and Chlamydiosis) are still poorly understood in terms of pathogenesis, interaction, ecological impact and distribution. Nevertheless, the constellation of diseases caused (or suspected to be caused) by these infectious agents are clearly a critical threatening process, and undoubtedly hasten extinction in isolated koala populations. Although active research on both infections is occurring at the University of Queensland and Queensland University of Technology, our understanding of the real impacts of these infections is rudimentary. Substantial funding is required to address this problem.

3. **Failure to truly protect individual koalas from being killed in land-clearing.**

Although there is little scientific evidence for it, a large proportion of "non-natural" deaths of koalas in Queensland probably occur during the process of land-clearing. In reality, the quantum of it probably exceeds, by an order of magnitude, the total number killed by domestic pets and cars combined. The reasons for this are as follows:

a. Land-clearing (vegetation clearing) in many instances occurs with little or no regulation, or requirement for notification of local or state authorities (due to exemptions, illegal clearing etc);

b. Most land-clearing that *does* require permission from local or state authorities *is not* subject to conditioning requiring the presence of a wildlife spotter/catcher;

c. Most land-clearing techniques result in severe injury or death to koalas (and most other wildlife). Uninjured koalas that are displaced may die later from starvation or misadventure.

d. The operational procedures of wildlife spotter/catchers are not regulated or monitored.

The death of koalas during land-clearing results in both significant adverse conservation outcomes as well as serious animal welfare issues due to the mechanisms of death or injury which commonly occur.

4. **Failure to adequately mitigate urbanisation and transport infrastructure impacts**

Motor vehicle trauma, and to a lesser extent, dog attack trauma, still cause significant morbidity and mortality in urban/peri-urban koalas, despite the fact that effective mitigation measures are known and tested. Consequently, significant funds and resources are expended, generally by NGOs, in the rescue and rehabilitation of koalas, and there are important animal welfare issues arising, because of the minimal use of measures which could avoid these impacts.

5. **Failure to manage the urban/peri-urban koala population in a considered and scientific way**

The current EPA/QPWS dogma guiding the "conservation" of koalas in urban/peri-urban areas dictates that koalas are essentially to be returned to, or maintained in their present locations, irrespective of the potential risk to life, or long-term likelihood of localised extinction of many of these populations. This paradigm is flawed because it results in an unacceptably high level of mortality (loss of individuals) and therefore loss of genetic diversity, and has little justification in terms of long-term regional conservation of koalas. Similarly, the management of koalas displaced by land-clearing is regulated by the EPA in such

a manner that both animal welfare and conservation outcomes are sub-optimal.

6. **Inconsistency in standards between the two primary koala care facilities**

Moggill Koala Hospital (MKH) and the Australian Wildlife Hospital (AWH) and their affiliated wildlife rescue organisations account for the majority of admissions to care of sick and injured koalas in SEQ. Despite the ongoing efforts of some individuals and organisations, MKH continues to operate at a veterinary standard that is well below what should be considered acceptable. This has resulted in significant concerns about animal welfare, which are ongoing. Given the large number of koalas that enter rehabilitation networks *alive*, and the proportionately low number returned back to the wild, there is a good argument for addressing the need to bring all networks and hospitals to a level of *best practice standard*, in terms of the whole rescue and rehabilitation process.

Priorities

1. **Preservation of large blocks of koala habitat**

The preservation of remaining large blocks of relatively intact koala habitat must be a priority, and must include those under the current *urban footprint*. The maintenance of habitat connectivity, or restoration of effective corridors between these and other habitat remnants, will increase the general robustness of the koala populations inhabiting them, and improve their resilience to a variety of the primary threatening processes. Measures to protect large habitat remnants and corridors *must not* be limited to the SEQ bioregion, and *must* be inclusive of other bioregions under significant threat, or already suffering from substantial land-clearing, such as the Brigalow Belt. Impediments to the effective and rigorous protection of habitat remnants and corridors by local and state government must be removed by legislative measures.

Local government must be given certainty about their ability (and obligations) to protect koala habitat and corridors by:

a. Further development of koala habitat mapping down to property scale, including within the urban footprint in SEQ.

b. EPA to be a concurrence agency in all development applications in koala habitat whether *Urban Koala Area* or not- Statewide.

c. The mapping and protection of key koala habitat and corridors must be non-negotiable.

d. EPA must be prepared to assert its role.

Furthermore, extractive industry and major infrastructure must not be exempt from the requirements for koala habitat conservation and protection in-situ.

2. **Fund scientific research on disease**

Koalas in Queensland are succumbing to two epizootics which are virtually unprecedented, in terms of

scale/prevalence, in wildlife populations: chlamydiosis and Koala Retrovirus (KoRV)-associated disease. Although chlamydiae are considered to have been present in koalas for a very long period of time, KoRV is most likely a relatively recent infection (host-jump) into the species. Investigation of the association between active KoRV infection and the expression of severe chlamydial disease is a priority for koala disease research. KoRV infection in koalas is considered to be causally associated/potentially associated with the following diseases:

a. Leukaemia

b. Lymphoma and other forms of cancer/disorders of cell growth and proliferation

c. A broad-based immune-deficiency syndrome

d. Chronic illthrift

e. Pouch death of joeys

There are currently two groups leading the research on these disease epizootics in koalas: the Koala Retrovirus research group, headed by Professor Paul Young at the University of Queensland, and the Chlamydia research group headed by Professor Peter Timms at QUT's Institute of Health and Biomedical Innovation. Both groups' contributions to our understanding of the impacts of these epizootics would be greatly enhanced by the application of substantial funding to their respective projects and collaborations.

My recommendations for priorities for research on KoRV/Chlamydiosis are:

a. State wide investigation of disease and pathogen prevalence in the state koala population, with ongoing monitoring.

b. Clarification of the association between KoRV infection and immune-deficiency syndromes.

c. Investigation of the association between KoRV infection and development of chlamydial disease.

d. Modeling/prediction of population viability with inclusion of disease data.

e. Development of disease prediction criteria and strategies for minimisation of disease within extant populations.

3. **Protect koalas from death as a result of land-clearing (vegetation clearing).**

Koalas must be protected state-wide, irrespective of koala districts, mapping or other considerations. Currently koalas still die) in large numbers as a direct, or indirect result of vegetation clearing operations, in spite of the current koala plan. The most proximate measure to protect koalas from injury or death during the process of land-clearing is to engage experienced wildlife spotter/catchers in the prelude to, and during, vegetation clearing operations.

As discussed in more detail below, sequential clearing techniques are rarely an appropriate measure for the management of koalas likely to be displaced by vegetation clearing. The draft Code of Practice for landclearing and wildlife spotter/catchers provides guidelines on the appropriate management of wildlife displaced or impacted by vegetation clearing, and should be complied with during all such operations. Unfortunately, this document has not been formally ratified by State authorities and is not supported by current legislation. (The draft Code of Practice was written by us in response to the lack of accreditation, monitoring or formal operating procedures for wildlife spotter/catchers.)

My recommendations are as follows:

a. A Code of Practice (based on the draft appended to this document) must be developed and ratified for use statewide in any activities causing disturbance to or destruction of wildlife habitats, including koala habitats. The Code must be supported by relevant state legislation including the *Nature Conservation Act,* the *Animal Care and Protection Act* and the *Integrated Planning Act*, such that compliance with it is required of any activities likely to result in wildlife injury or death. Specifically, code compliance must be a condition of development where it is invoked.

b. That the EPA and DPI&F (if necessary) assume responsibility for the appropriate accreditation of wildlife spotter/catchers, and share compliance monitoring and enforcement of the Code with local government.

c. Management of koalas currently residing in habitat already "committed" for development:

In the event that koala habitat that is currently "committed for development" is not protected by the mechanisms proposed by the koala taskforce, then that population of koalas is a significant group worthy of proper management. (Do we, or are we able to get, an estimate of the total area of koala habitat and estimated koala numbers likely to be lost/affected by committed future development?)

There are only two ways of humanely managing koalas that are subjected to the risks associated with land-clearing and displacement from habitat:

(a) Capture and euthanasia
(b) Capture and translocation to suitable safe habitat using appropriate translocation techniques.

The current koala plan expressly forbids the translocation of koalas from development sites, and suggests that koalas should be allowed to move from land-clearing sites "of their own volition". "Sequential clearing" is supposed to facilitate this process.

Unfortunately, the relevant policy in the koala plan is inappropriate in many instances because suitable habitat in adjacent areas is simply not available or sufficient, or may be subject to clearing in the future. Furthermore, the policy does not acknowledge that the forced movement of a koala from its current habitat due to land-clearing (as occurs now in compliance with the current koala plan) is, in fact, a forced translocation, but one that is not subjected to a considered and scientific approach.

The new plan must acknowledge the need for translocation as an appropriate and scientifically valid management strategy for displaced koalas.

At Monday's taskforce meeting, Frank Carrick made quite strong suggestions that translocation of koalas is not appropriate because translocated koalas would probably die, or displace resident koalas in the recipient site, causing their death. This is unsubstantiated by scientific research and simply untrue. Our research, which includes 5 separate radio-telemetry studies on translocated koalas, suggests exactly the opposite: that koalas *do not* die as a result of translocation, and disperse and establish home ranges in a manner that suggests that there is little competition for space with resident koalas. Furthermore, the assumption that existing koala habitat is already at carrying capacity is similarly unsubstantiated and seems to be contradicted by our research. The reasons why this is so probably include the high incidence of disease generally, and relatively low population fecundity due to chlamydial disease.

Another opinion commonly expressed to counter translocation as a management technique, is that it allows developers an excuse for clearing koala habitat, because "you can just translocate them". This has little validity in practice, because either the State and local authorities allow development and land-clearing in koala habitat or they don't; and that decision has rarely (if ever) hinged on the availability of translocation as a koala management technique.

The current koala plan (Policy 6 *Vegetation Clearing Practices*) offers "sequential clearing" as a best practice approach to managing koalas that are resident on sites undergoing vegetation clearing operations. In most cases, particularly in SEQ this approach is entirely inadequate and does little to ensure the survival of displaced koalas, largely because remnant habitat (after clearing) is insufficient, and displaced koalas are not protected from misadventure.

Sequential clearing, as the primary management technique for koalas (in preference to managed translocation), is only valid under the following circumstances, where:

(a) Large areas of suitable koala habitat are immediately adjacent to the proposed land-clearing site;

(b) The adjacent habitat is of a tenure that secures it from future development;

(c) The adjacent habitat has connectivity with other suitable habitat remnants

(d) Displaced koalas are protected from dispersing into unsafe areas (such as busy roads, suburbia) both in the immediate area and;

(e) Adjacent habitat is not considered to be at carrying capacity for koalas;

My recommendations for translocation of koalas from land-clearing sites are as follows. (These recommendations are based on information provided by previous koala translocation projects):

(a) Whenever possible, the developer should commission a program (at least 12 months prior to scheduled vegetation clearing) whereby all koalas on site are captured, their health thoroughly assessed, and viable (that is, healthy) koalas radiocollared and monitored by radiotelemetry to determine habitat usage and home range on site and in adjacent areas.

(b) Determine the viability of maintaining a koala population on the site and adjacent areas if the proposed vegetation clearing plan and development proceed, which must include consideration of remaining habitat area, connectivity of habitat with other remnants, long-term population viability, and also the likely development impacts (both short and long term), such as roads traffic, fences, domestic pets and other hazards.

(c) If translocation of koalas is required, then all koalas to be subjected to translocation must be given thorough health assessment (by an experienced koala veterinarian), and determined to be healthy.

(d) Koalas must be retained in captivity for a minimum of 2 weeks prior to translocation for the following reasons:

    a. To dull home range fidelity instincts

    b. To introduce browse species present at the recipient (translocation) site

    c. To monitor health closely

(e) Recipient (translocation) sites must be large areas of protected habitat or habitat of secure tenure.

(f) Following release into recipient habitat, koalas must be monitored by radiotelemetry for a minimum period of 3 months. (Daily for 2 weeks, then at least twice weekly for the remainder).

(g) Translocated koalas that fail to adapt must be recaptured, reassessed, then subjected to the same process, or euthanased, if that is considered an appropriate and humane option for that particular koala.

4. **Mitigation of urbanisation and transport infrastructure impacts**

Given the dramatic decline in koala populations that has occurred recently, there seems little justification for not applying simple and effective principles to the design and construction of infrastructure and urban developments that will minimise koala morbidity and mortality:

a. Protect koalas from the threat (by appropriate fencing).

b. Provide for the movement of koalas through essential corridors by providing habitat overpasses/underpasses/crossing structures (crossing roads or transport infrastructure), or fenced corridors through high-risk urban areas.

c. Restore or create habitat corridors (fenced if necessary) that facilitate movement of koalas between habitat remnants in safety.

The application of these principles/measures must occur in both new and existing developments and infrastructure (ie retrofitted) that are known to be implicated in koala morbidity or death. The failure to allow for these features due to budget/cost reasons is now simply unacceptable. Measures necessary to mitigate impacts associated with new developments must be clearly and specifically conditioned in development approvals, and sufficient resources applied to compliance monitoring and enforcement.

With respect to mitigation of dog attack impacts, the principles are similarly simple: domestic dog owners must take ***fair, reasonable and appropriate measures to protect wildlife from their dogs***. Failure to do so should incur fines sufficient to deter lack of compliance. *However, it is absolutely essential that state government provide support to local government in the development and implementation of these measures, including compliance monitoring and enforcement.*

Simple strategies, as already discussed at the first koala taskforce meeting include:

a. Ban on dogs and cats in new developments in wildlife sensitive areas

b. Requirement for dog and cat owners to restrain their pets in a wildlife-proof enclosure or run, or indoors when unsupervised.

c. Dogs not to be off-leash in koala conservation parks or reserves.

d. Maximum size dog to be < 7kg (bearing in mind that a couple of fox-terriers can do as much damage as a Rottweiler).

5. **Management of the urban/peri-urban and displaced koala population in a considered and scientific way**

Highly fragmented wildlife populations which exist with limited opportunities for normal ecological processes such as recruitment, immigration, emigration and genetic mixing, are more susceptible to extinction. In fact it is a likelihood in respect of many isolated koala populations in Queensland. The high prevalence and incidence of a variety of infectious diseases hastens this process.

The default position of the EPA, which recommends a hands-off approach (in the face of minimal monitoring) and no management intervention is now no longer appropriate. This approach is only justified if koala population numbers, demographics, health and genetic diversity are thoroughly monitored over time, and intervention shown to be unnecessary for robust sustainability. Given our lack of knowledge of these things, even in well-studied populations, our ability to predict extinction tipping points for local and regional koala populations is non-existent.

The current recommendations for translocation of koalas found in threatening situations or displaced by vegetation clearing are manifestly inadequate and inappropriate.

My recommendation is that a separate taskforce or committee be established to draw up guidelines for the assessment of habitat and koala translocation issues and management of koalas displaced by habitat

loss.

6. **Koala rehabilitation**

Although rehabilitation of wildlife is often considered to be of low importance, contributing minimally to conservation generally, this attitude, I believe, is overly simplistic and superficial. The rehabilitation/humane management of sick and injured wildlife is something that the community expects and demands, and the whole process has more far-reaching benefits than simply the return of a few individuals back into wild populations.

There are two facilities that receive the vast majority of sick and injured koalas for rehabilitation in SEQ. The EPA-run Moggill Koala Hospital (MKH) and the Australian Wildlife Hospital (AWH) based at Australia Zoo.

Bluntly, MKH continues to operate at a veterinary standard that is unacceptably low, particularly for trauma cases and critically ill cases. Animal welfare issues associated with operational standards of both MKH and their affiliated koala rescue groups have been brought to the attention of the EPA and DPI&F's Animal Welfare Unit. As a result the Animal Welfare Unit is facilitating a process for the writing and implementation of minimum standards for welfare and care of sick and injured koalas.

My recommendations for koala rehabilitation are:

1. That MKH be closed, or, alternatively, operational procedures and policies be brought in line with best practice veterinary standards. The latter will no-doubt require additional funding/resources. Any facility that cares for critically injured animals *must* be attended 24-hours a day by suitably qualified and experienced staff, so that pain and distress in patients is appropriately monitored.

2. That the process of development of minimum standards and best practice procedures and processes, currently being driven by the Animal Welfare Unit, be supported and facilitated, and final recommendations and strategies actioned/implemented promptly.

Some other recommendations:

That State government:

1. Facilitate and support the involvement of regional NRM bodies, such as SEQ Catchments in the coordination of things like the annual koala surveys, improvement and restoration of regional and local habitat corridors (off-sets, biodiversity banking etc).

2. Appropriately drive EPA's role as the principle agency responsible for conservation of biodiversity and nature. This will require a substantial increase in funding and resources, and development of a greater will, within that department, to rise to the significant challenges and responsibilities of that role. The Agency appears to be inconsistent in its application of resources for enforcement of the *Environmental Protection Act* versus issues associated with wildlife and

habitat protection. This inconsistency must be addressed.

3. Use any leverage generated by the review of the National Koala Conservation Strategy to drive (and secure federal funding for) effective koala conservation strategies.

4. Support the development and implementation of local laws, local community education and awareness campaigns, aimed at koala conservation and protection.

5. Facilitate and support independently-developed wildlife conservation and protection strategies, such as the draft *Code of Practice for the protection of wild animals affected by land-clearing and other habitat impacts and Wildlife Spotter/Catchers* (appended hereto).