

Enquiries Jacqui Brock
Telephone 07 4699 4366
Your reference

Our reference TWB4906

Department of
Environment and Resource
Management

19 May 2010

sch4p4(6) Personal Information

Australia Zoo Wildlife Warriors Worldwide Ltd
PO Box 29
BEERWAH QLD 4519

Dear (6) Personal Information

I am pleased to advise that your application for a Scientific Purposes Permit has been approved.

Please find enclosed permit numbers WISP07282410 and s.73 Irrelevant which have been issued under the provisions of the *Nature Conservation Act 1992*.

You are asked to carefully read the conditions attached to this permit. Included with this letter is advice on the review and appeal process that may be available to you. Should you seek a review or appeal, the Department of Environment and Resource Management advises that you seek independent advice before taking such action.

Prior to commencement of activities detailed in the application, you must contact the Project Officer, Scientific Purposes Permits, Toowoomba to advise of the dates and locations of such surveys; the name of the collaborating researcher; the educational institution and the current permit number under which the researcher is working.

Before commencing work on protected areas, it is important that you contact the Senior Ranger or Ranger in Charge of each location at least one week prior to your intended arrival.

Subject to the mid term review of the effects of the assessment techniques on the monitored populations, the proportion of koalas permitted to be assessed may be increased.

In addition to the conditions attached to the permit, your cooperation is requested in observing the following matters:

- Whilst working on parks and forests, you are encouraged to wear appropriate safety clothing e.g. long sleeve shirts, long pants and steel capped boots and carry a first aid kit and telephone in case of emergency.
- Additional persons authorised to collect under this permit must while collecting:

- (a) carry a copy of the permit endorsed by the permit holder with the additional persons name and residential address; and
- (b) carry a form of identification that displays a coloured photograph of the person, such as a Queensland driver licence.
- Names of additional persons authorised and endorsed by you should be provided in writing to the office issuing the permit.

A return of operations (Wildlife Data Return and Report) must be submitted on the standard reporting forms within 10 business days of each 12 month period the permit is in force; and within 10 working days of the expiry date of the permit.

Please submit these forms, along with any reports or publications arising from the research to the Project Officer (Scientific Permits), Department of Environment and Resource Management, PO Box 731, Toowoomba QLD 4350. Alternatively, reports may be submitted electronically to SPPreport.southern@derm.qld.gov.au.

Total protection of all things occurring naturally on a park applies, and due consideration to public opinion is expected to be given at all times.

This permit does not give or imply the right to enter any land. Prior permission of the landholder, in the case of private property, or the Agency responsible for administration of the land, must be obtained prior to entry.

Yours sincerely

sch4p4(6) Personal information

Paul Sharpe
Manager, Visitor Permits Unit
Tourism and Visitor Services

Information Notice

This notice is issued by the Department of Environment and Resource Management to advise of a statutory decision on a permit application under conservation legislation.

Your application has been assessed against a range of matters (set out below) and consequently some conditions have been imposed on your permit. Please take the time to familiarise yourself with these. Should you have any questions regarding any of these conditions please contact the Project Manager.

Review and appeal provisions (set out below) are available to you should you be dissatisfied with any condition imposed on your permit.

Assessment

When assessing an application for a relevant authority (such as a permit for scientific purposes) the Chief Executive must have regard to the provisions of the *Nature Conservation (Administration) Regulation 2006*, the *Nature Conservation (Protected Areas Management) Regulation 2006* and *Nature Conservation (Wildlife Management) Regulation 2006*.

In considering an application for a relevant authority, the chief executive must have regard to each of the following—

- (a) the impact the activities that may be carried out under the authority may have on the conservation of the cultural or natural resources of a protected area or native wildlife;
- (b) the effect the grant of the authority will have on the fair and equitable access to nature, having regard to, in particular, the ecologically sustainable use of protected areas or wildlife;
- (c) any contribution the applicant proposes to make to the conservation of nature;
- (d) any relevant Australian or international code, instrument, protocol or standard or any relevant intergovernmental agreement;
- (e) the precautionary principle;
- (f) public health and safety;
- (g) the public interest;
- (h) for an application for a relevant authority other than a camping permit—whether the applicant is a suitable person to hold the authority, having regard to the matters mentioned in schedule 2;
- (i) for an application for a relevant authority for a national park (Cape York Peninsula Aboriginal land)—the indigenous management agreement for the protected area;
- (j) any recovery plan for wildlife to which the authority applies;
- (k) any other matter stated in a management instrument as a matter the chief executive must have regard to when considering an application for the authority.

Without limiting the above the chief executive may have regard to anything else the chief executive considers appropriate to achieve the object of the Act.

In addition, for **protected areas** the chief executive:

- must have regard to:
 - the impact the activities may have on the character and amenity of the area and adjacent areas;
 - the likely cumulative effect of the proposed use and other uses on the area; and
 - the orderly and proper management of the area.
- cannot grant a permit that is inconsistent with:
 - the management principles for the area; or
 - the management intent or management plan for the area.

In addition, for a **scientific purposes permit** the chief executive may grant the authority only if:

- for a protected animal:

Information Notice

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- the animal is to be used for research that is likely to make a significant contribution to community knowledge about the matter for which the research is carried out; and
- the animal is not to be used for a commercial purpose; and
- it is necessary to take the animal from the wild (for example, because there are no animals of the same species in captivity that are available or appropriate for the research)
- for whales or dolphins only if the scientific research has been recommended by—
 - the scientific advisory committee; or
 - a person who is recognised in the research community for whales or dolphins as a person who is highly experienced and qualified in scientific research about whales or dolphins.

Additional matters apply to the grant of an Aboriginal tradition authority or Island custom authority.

Review and appeal

The *Nature Conservation (Administration) Regulation 2006* has review and appeal provisions available to you should you be dissatisfied with any condition imposed on your permit. In summary these include:

- If you wish to apply for an internal review of the decision an application must be made in writing within 20 business days after being given this notice.
- The application must be supported by sufficient information to decide the application.
- The application for internal review does not stay the decision made. However you may apply to the Queensland Civil and Administrative Tribunal for a stay of the decision.
- The Department of Environment and Resource Management must review the decision within 28 days of receiving the application and provide you with a decision within 14 days of making the review decision.
- If you are dissatisfied with the review decision then you are able to file an application in the registry of the Queensland Civil and Administrative Tribunal within 28 days of receiving the review notice.
- For further information you are directed to Part 4: Review and Appeal Provisions of the *Nature Conservation (Administration) Regulation 2006* and the *Queensland Civil and Administrative Tribunal Act 2009* which can be found at www.legislation.qld.gov.au/OQPChome.htm.

Review and appeal rights under the *Nature Conservation (Administration) Regulation 2006* are located in part 4 of the regulation. If you are dissatisfied with the review decision then you are able to file an application in the registry of the Queensland Civil and Administrative Tribunal pursuant to the *Queensland Civil and Administrative Tribunal Act 2009* within 28 days of receiving the review notice. A copy of the regulation and the act can be accessed at www.legislation.qld.gov.au

Native title - please note:

Should it be determined at some future date by any Court or Tribunal that native title exists over the subject land or waters, this licence may be terminated and the licensee (or any subsequent licensee) may be required to remove any works established under this licence at the licensee's (or any subsequent licensee's) own cost, expense and risk. In that event, no compensation for works, development costs or loss of income shall be payable to the licensee (or any subsequent licensee) by the State of Queensland.

**DEPARTMENT OF ENVIRONMENT
AND RESOURCE MANAGEMENT
SCIENTIFIC PURPOSES PERMITS APPLICATION**

PROJECT ASSESSMENT

APPLICATION DETAILS

Applicant Name : Australia Zoo Wildlife Warriors Worldwide Ltd

Project Title : Investigation of koala health in wild populations in Queensland

File Reference : TWB4906

Completion Date : 2013

Permit Processing Officer : Jacqui Brock

Referral Officer : Laura Harland – Northern Region
Lee-Ann Toon – Central Region

Referral Date : 31 March 2010

Deadline for Assessment : Would you please arrange for an assessment to be conducted on the attached application form. Please provide response by 4 May 2010.
Please advise if you cannot respond by the due date as a nil response will be taken as "no objection".

PROJECT ASSESSMENT

Please provide a statement of evidence to support any negative response.

Question		Response
1.	Is the project likely to have an adverse impact on rare or threatened species or threatened ecosystems?	No
No but koala are a special least concern. It is possible that this project could have adverse effects although this is clearly not the intention.		
2.	Is the project likely to cause inappropriate damage to an ecosystem?	No
3.	Is the project considered to be ecologically sustainable?	Yes
4.	Is the scientific purpose of the project legitimate?	Yes
5.	Is it reasonably necessary for the research to be conducted?	Yes / No

<p>The information is valuable but the potential for stress or mishap is significant and the applicant has not addressed the impact in any way on the application. As one example there is no mention of prevention of disease transmission via the vehicle and receptacles used to transport the koalas.</p>	
<p>6. Does any plan, regulation or agreement prevent the issue of the permit?</p>	<p>No</p>
<p>7. Is the project likely to impact any approved program of work?</p> <p>I assume Harriet Preece will be consulted on this project. She would have a far better working knowledge of the value of the work, the legislation pertinent to it and of any impact of the work on other koala projects.</p>	
<p>8. If the project includes species of cultural significance or relates to cultural resources of significance to a community or group of aboriginal people or Torres Strait Islanders particularly concerned with the land where the resource is to be taken, are there any objections to the issuance of the permit?</p>	<p>Yes / No</p>
<p>I do not know</p>	
<p>9. Are community attitudes to the project likely to be adverse?</p>	<p>Yes / No</p>
<p>Possibly. It's a high profile species and any accidents or problems would be most regrettable.</p>	

ASSESSMENT RESULT

<p>Recommendation: (please tick)</p>	<p>☐ Approved</p> <p>☒ Conditional Approval (list conditions below)</p> <p>☐ Refusal (list reasons below)</p>
<p>Comments/conditions:</p> <p>I would like to see the risk inherent with transporting, anaesthetizing and handling koalas spelt out and analyzed by the applicant and would suggest given the sensitivity of the species that he be encouraged to develop these in more detail than the word limit currently allows. I would only be prepared to approve the permit if I were satisfied that all reasonable risks were identified and controlled. I would also expect to see the ethics approval and any conditions.</p>	

ASSESSING OFFICER DETAILS

Assessing Officer :	Graham Hemson
Signature (not required if sending by email)	<div style="border: 1px solid red; padding: 2px;">sch4p4(6) Personal information</div>
Date :	6/8/10

Please email this form back to Jacqui Brock (jacqui.brock@derm.qld.gov.au)

or fax to 4699 4366.

Thank you for your assistance.

SCIENTIFIC PURPOSES PERMITS APPLICATION

KOALA CONSERVATION UNIT

PROJECT ASSESSMENT

APPLICATION DETAILS

Applicant Name : Australia Zoo Wildlife Warriors Worldwide Ltd

Project Title : Investigation of koala health in wild populations around Queensland

File Reference : TWB4906

Completion Date : 2013

Permit Processing Officer : Jacqui Brock

Referral Officer : Allan McKinnon, Rebecca Larkin, Deidre de Villiers, Harriet Preece

Referral Date : 31 March 2010

Deadline for TSEU Assessment : Would you please arrange for an assessment to be conducted on the attached application form by COB 30 April 2010 (please contact the processing officer if this is not possible)

APPLICATION ASSESSMENT

Please provide a statement of evidence to support any negative response.

Question		Response
1.	Does the project conflict with any regulation, conservation plan, management program or recovery plan for the wildlife or community?	YES / NO
Beyond my area of expertise to assess		
2.	Is the project likely to cause the status of the wildlife or the community to decline?	YES / NO
I suspect not but as the locations are not stated then this is difficult to assess		
3.	If the project involves the permanent take of threatened wildlife can the samples be obtained from other sources?	YES / NO

According to the AEC application some koalas deemed by the vet assessment to be 'suffering from illness or injuries that are not consistent with satisfactory quality of life or successful veterinary treatment' (Q4.2 paragraph 4) will be treated on the spot or transferred to the AWH. No further details are given as to the expected fate of such koalas – preferably the decision to euthanase should be made at the time and not after the koala has been transported possibly several hours by vehicle if this can be avoided. Rehabilitated koalas should be returned as soon as possible to the point of capture (and not relocated elsewhere) or if rehabilitation is not successful the koala should be euthanased. No koalas (or offspring of these koalas) in the study, if approved, should end up being kept permanently in captivity

4. Is the project likely to provide information to assist with the management of the community, wildlife or its habitat?	YES / NO
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While the AEC protocol application states that disease prevalence is 'high' and the study will provide further information, it does not address possible alternatives such as single location smaller studies to assess disease prevalence in areas where this is already unknown (koala hospitals have been operating for several decades and disease information from certain areas is extensive).

5. Are community attitudes to the project likely to be adverse? Yes, particularly if there are deaths or injuries to koalas during capture and handling.	YES / NO
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ASSESSMENT RESULT

Recommendation: (please tick)	☐ Approved ☐ Conditional Approval (list conditions below) ☐ Refusal (list reasons below)
<p>Comments/conditions:</p> <p>The application proposes that up to 500 koalas anywhere in Qld will be subjected to a general anaesthesia that they would not otherwise receive. This anaesthesia is stated in the application as being 'three hours or so' – a time that I would consider to be prolonged in a wild animal for a simple health assessment, and might be in addition to more than an hours transportation in a vehicle (it is not made clear if the animal would be anaesthetised/ sedated for the transportation). The implication is that the vet assessment will benefit the individual koala but I am not convinced that this is actually the case. Minimisation of the impact on the individual koala is assumed rather than addressed. Presumably these are free living koalas that are being caught, ie they are not on the ground or have been taken into care because of injury or disease so we can assume that most of them will not be showing signs of disease when captured. Stressed koalas are more likely to break out into clinical disease (from Chlamydia) so the stress on each individual koala needs to be minimised ie handling and transport times kept to a minimum.</p> <p>While I support having veterinary expertise present for any koala capture and handling, tagging and release of koalas for research has been carried out extensively</p>	

across most of the range of koalas in Australia for several decades without a vet. For example, the body score of a koala is easily assessed by a trained non-vet and gives a reasonable indication of health status (although admittedly not whether a female is infertile due to Chlamydia). Presumably procedures to deal with injured/sick koalas have also been in place. Therefore the justification that a vet *needs* to be present is difficult to accept.

The proposed project therefore seems to be a request for blanket approval to submit any koala being captured in the state for research to an additional and significant stressful event for general disease surveillance. An epidemiological study on a particular disease in free living wildlife I would assume to be structured quite differently. General disease surveillance is a useful exercise but I am not sure this is the best way to achieve that. We already have a system in place in SE Qld, for example, using koalas that come into care or are found dead. Some information from other areas would be very useful but again more specificity in the location is required.

I think the input of an epidemiologist, preferably someone who also has experience in disease surveillance in free ranging animals, would be helpful in assessing the scientific justification for the project. For example, I am aware of a recent article (July 2009) that describes a new species of trypanosome in koalas, of which (6) Personal Information is one of the authors. I am do not know whether it causes clinical disease and have as yet been unable to find any other information about it. A research project to study the parasite and any associated disease would therefore seem to be needed but I am not sure that opportunistic sampling for it as described is the appropriate method. Routine bone marrow biopsy is, as far as I am aware, done only by (6) Personal Information and little has been published by him of the results so, again, it is difficult to know how justified/useful it is.

I therefore support the recommendation made by (6) Personal Information that approval should be given for only half of the captured koalas be given the full vet assessment, so that any adverse effects can be assessed against the 'control', non-assessed group. This puts the onus back on them to show that the impact is minimal. This could be assessed after a year, for example, and a report submitted prior to further approval being given. Also there should be a condition that the results are published in a reputable journal preferably.

ASSESSING OFFICER DETAILS

Assessing Officer: Rebecca Larkin

Signature :

(not required if sending via email)

Date : 13/4/2010

Please email this form to jacqui.brock@epa.qld.gov.au

Or fax to 4699 4366

Thank you for your assistance.

Published on DES
Disclosure Log
RTI Act 2009

SCIENTIFIC PURPOSES PERMITS APPLICATION

KOALA CONSERVATION UNIT

PROJECT ASSESSMENT

APPLICATION DETAILS

Applicant Name : Australia Zoo Wildlife Warriors Worldwide Ltd

Project Title : Investigation of koala health in wild populations around Queensland

File Reference : TWB4906

Completion Date : 2013

Permit Processing Officer : Jacqui Brock

Referral Officer : Allan McKinnon, Rebecca Larkin, Deidre de Villiers, Harriet Preece

Referral Date : 31 March 2010

Deadline for TSEU Assessment : Would you please arrange for an assessment to be conducted on the attached application form by COB 30 April 2010 (please contact the processing officer if this is not possible)

APPLICATION ASSESSMENT

Please provide a statement of evidence to support any negative response.

Question		Response
1.	Does the project conflict with any regulation, conservation plan, management program or recovery plan for the wildlife or community?	YES / NO
No		
2.	Is the project likely to cause the status of the wildlife or the community to decline?	YES / NO
No		
3.	If the project involves the permanent take of threatened wildlife can the samples be obtained from other sources?	YES / NO
N/A		
4.	Is the project likely to provide information to assist with the management of the community, wildlife or its habitat?	YES / NO

Yes	
5. Are community attitudes to the project likely to be adverse?	YES / NO
No	

ASSESSMENT RESULT

Recommendation: (please tick)	☒ Approved ☐ Conditional Approval (list conditions below) ☐ Refusal (list reasons below)
<p>Comments/conditions:</p> <p>The processes identified in this project are consistent with those carried out routinely at the Australian Wildlife Hospital. In my own experience, koalas in my care have not suffered any adverse outcomes after a thorough health assessment of the likes described in this proposed project.</p> <p>The chief investigator of the project for which the animals are originally caught should ultimately determine the fate of an animal (short term or complete removal from the project) identified as non-healthy (as determined by the health check for this project) based on the project's animal ethics obligations, experimental design and the nature/severity of the koala's illness.</p>	

ASSESSING OFFICER DETAILS

Assessing Officer : Deidré de Villiers

Signature :

(not required if sending via email)

Date : 22/4/10

Please email this form to jacqui.brock@epa.qld.gov.au

Or fax to 4699 4366

Thank you for your assistance.

Jacqui Brock

From: Eco Access
Sent: Tuesday, 16 February 2010 12:41 PM
To: Jacqui Brock
Subject: FW: SPP Application for koala veterinary examinations.doc

Attachments: SPP Application for koala veterinary examinations.doc



SPP Application
for koala vete...

Hi Jacqui

We'll get this into the system for you shortly.

Cheers

Bernie.

Bernadette Carter

Team Leader, Ecoaccess Customer Service Unit Telephone 07 3137 4201 Fax 07 3896 3342
Email bernie.carter@derm.qld.gov.au www.derm.qld.gov.au

Department of Environment and Resource Management
41 George Street, Brisbane Qld 4000
PO Box 15155 CITY EAST Qld 4002

sch4p4(6) Personal Information: sch4p4(6) Personal information
Sent: Monday, 15 February 2010 2:30 PM
To: Eco Access
Cc: sch4p4(6) Personal information
Subject: SPP Application for koala veterinary examinations.doc

Please find attached an application for scientific purposes permit. Qualifications and referees reports have been supplied previously. AEC approval is pending and will be notified.

Regards

sch4p4(6) Personal Information

Director of Research and Ecological Services

Australia Zoo Wildlife Warriors Worldwide Ltd

Mobile: sch4p4(6) Personal information

SCIENTIFIC PURPOSES PERMITS APPLICATION
**SCIENTIFIC PURPOSES PERMITS ASSESSMENT
COMMITTEE - PROJECT ASSESSMENT**
APPLICATION DETAILS
Applicant Name :
Project Title : Investigation of koala health in wild populations around Queensland

File Reference : TWB4906

Completion Date : 2013

Permit Processing Officer : Jacqui Brock

Referral Officer : John Neldner, Pat Comben, Greg Gordon, Rebecca Williams

Referral Date : 31 March 2010

Deadline for SPPAC Assessment : 4 May 2010

APPLICATION ASSESSMENT

Please provide a statement of evidence to support any negative response.

Question	Response
1. If the project proposes that animals or whole plants are to be permanently taken, is there no other alternative way to discover what the scientist needs to know?	NO
2. Is what the scientist needs to know important enough to justify the level of taking of wildlife proposed?	YES
The results are likely to be very useful for furthering knowledge of koala biology and conservation	
3. Is the information to be derived from the project not known already, or is the project being repeated for the purposes of verification of results?	NO
4. Does the project involve no more taking of wildlife than is necessary to obtain the needed information?	NO

ASSESSMENT RESULT

Recommendation:
(please tick)

☐

☒

Conditional Approval (list conditions below)

☐

Comments/conditions:

1. I do not have any concerns about the impact of the procedures on individual koalas. Koalas are reasonably robust animals and have been subject to medical examinations and procedures in other projects over a long period now without raising undue concerns. Koalas have been managed successfully in captivity for many years and there is well established knowledge of koala medicine.

2. There should be a requirement that animals should generally be returned to the researcher and released in the field on the day of capture. Holding over night should only be permitted if they can give significant reasons to justify it. Holding over night or longer may disrupt the koala's position in the local group and make it harder for it to re-establish in the area. Competing animals might for instance occupy the animal's territory, especially in the case of males.

I recommend that they should initially be required to return animals to the field on the same day. If they object to this, and can give sufficient justification for exceptions to this requirement, then EPA should look at it further at that stage.

3. Australia Zoo is deeply involved in koala rescue and rehabilitation. I am concerned that there is a conflict of interest here. The zoo may be tempted to provide unwarranted treatment to research animals. Ecological research, if the research is to be valid, generally requires that animals are living free from intervention by the researcher and subject to natural processes operating in the study area, even when they are likely to be subject to mortality, including mortality from disease. Mortality operating in the study area should be allowed to continue without interference by the researchers.

On p 7, section 4.2, par 4, of the ethics application, it is implied that koalas will be under the control of the veterinarian and Australia Zoo while they are subject to medical examination; and that decisions about their fate will be made by Zoo staff; and that animals may be either euthanased or hospitalized for rehabilitation according to the decision of the veterinarian.

I recommend that the permit should specifically state (1) that the koalas should remain under the control of the primary researcher at all times and (2) that decisions about their fate should only be made by the primary researcher, not Aust Zoo staff.

Euthanasia of dying animals should be permitted, but treatment and rehabilitation of other koalas should not be permitted in ecological studies unless there is no conflict with the primary aim of the study. The latter koalas should be returned to the study areas. Proposals to treat and rehabilitate ill animals should be subject to EPA permit in each case.

4. This is a collaborative project, and there is a requirement in the ethics permit that research

must include epidemiological studies. The primary researchers will generally be the only group with the capacity to perform the epidemiology, which requires significantly more data than will be available to the veterinary team.

I recommend therefore that there should be a specific requirement that the results of the medical examination for each animal must be provided to the primary researchers within a short time after the examination, eg, within 2 months.

5. Given that the applicants propose that disease is a major threat to koala populations, consideration should be given to requiring them to provide comprehensive reports of their results to the EPA at appropriate intervals, eg, six monthly. Such data would be very useful for koala conservation programs.

ASSESSING OFFICER DETAILS

Signature : Greg Gordon

**(Not required if
sending by email)**

Date : 13 April 2010

Please return completed form to Jacqui.brock@epa.qld.gov.au
Or fax 4699 4399

Thank you for your assistance.

SCIENTIFIC PURPOSES PERMITS APPLICATION
**SCIENTIFIC PURPOSES PERMITS ASSESSMENT
 COMMITTEE - PROJECT ASSESSMENT**
APPLICATION DETAILS
Applicant Name :
Project Title : Investigation of koala health in wild populations around Queensland

File Reference : TWB4906

Completion Date : 2013

Permit Processing Officer : Jacqui Brock

Referral Officer : John Neldner, Pat Comben, Greg Gordon, Rebecca Williams

Referral Date : 31 March 2010

Deadline for SPPAC Assessment : 4 May 2010

APPLICATION ASSESSMENT

Please provide a statement of evidence to support any negative response.

Question	Response
1. If the project proposes that animals or whole plants are to be permanently taken, is there no other alternative way to discover what the scientist needs to know?	NO
No additional animals are to be collected	
2. Is what the scientist needs to know important enough to justify the level of taking of wildlife proposed?	YES
Need more information on the disease status of wild koalas	
3. Is the information to be derived from the project not known already, or is the project being repeated for the purposes of verification of results?	NO
Need more information on the disease status of wild koalas	
4. Does the project involve no more taking of wildlife than is necessary to obtain the needed information?	YES
No additional animals are to be collected	

Project Proposal to Use Animals for a Scientific Purpose

This form to be used for submission to a DEEDI Animal Ethics Committee (AEC)

Important Notices

The 'Applicant' is the entity submitting this proposal. Within DEEDI, the applicant must be an individual. However, for an external entity (i.e. not DEEDI), the applicant may be an individual or a company or an institution.

DEEDI Animal Ethics Committees (AECs) deem the applicant to be in charge of the project and to be responsible for:

- The conduct of the project in accordance with AEC approval, the *Animal Care and Protection Act 2001*, the *Australian code of practice for the care and use of animals for scientific purposes* (the Code) and all other relevant Commonwealth and State legislation
- The submission of all necessary reports, notices and advices as required by the AEC.

As an AEC approval is not transferable, it may not be appropriate for an employee of an external entity (e.g. a company or institution) to be the applicant. If an employee is the applicant and leaves the company or institution, the company or institution can't continue to use the approval.

Investigators and teachers have personal responsibility for all matters related to the welfare of the animals they use and must act in accordance with all requirements of the Code. This responsibility begins when an animal is allocated to a project and ends with its fate at the completion of the project. Investigators and teachers have an obligation to treat animals with respect and to consider their welfare as an essential factor when planning and conducting projects.

All text boxes will expand automatically to accommodate entry. Do not remove/alter formatting, headers or footers. Any changes/deletions to headers, footers or formatting may result in the proposal being declined and returned to the applicant.

All pages must be submitted electronically in Word format to your AEC contact. For the last page – Section 7 Declarations – either insert a digitised signature or fax a signed hard copy to the AEC Secretary on 07 3239 3504.

AEC USE ONLY			
Proposal Reference Number:		Date Assessed:	
Assessment Category: (cross one box only)			
☐ Approved as submitted			
☐ Approved subject to modifications			
☐ Pending			
☐ Rejected			
Signature of Chair:			
Initials of Members:			
Category A:	Category B:	Category C:	Category D:
Monitoring concerns:			

PROPOSAL SUMMARY INFORMATION

1.1 Title of project

Assessment of the impacts of disease in wild koala populations across Queensland using opportunistic health assessment and biological sampling.

1.2 Applicant details

Name:	Australia Zoo Wildlife Warriors Worldwide Ltd				
Address:	1638 Steve Irwin Way, Beerwah				
Phone:	0754362097	Fax:	0754362066	E-Mail:	sch4p4(6) Personal information

1.3 Applicant's contact person details.

Complete **only** if the applicant is external to DEEDI and is not an individual, e.g. a company.

Name:	sch4p4(6) Personal Information				
Address:	P.O.Box 29, Beerwah Qld 4519				
Relationship to Applicant (e.g. employee):	Employee				
Phone:	sch4p4(6) Personal information	Fax:	0754362066	E-Mail:	sch4p4(6) Personal information

1.4 Description of animals used in project.

Put total for project here with detail in 3.3 for individual trials if required, fill out as appropriate for the species to be used. If rows are insufficient attach a separate appendix detailing complete animal list. A separate pro forma for this purpose is available on the Animal Ethics Ournet site or from the AEC Coordinator.

Animal Type (e.g. Cattle, Poultry, Fish, Koalas)	Scientific name	Class*	Sex	Number**
Koala	<i>Phascolarctos cinereus</i>	Adults, juveniles	Any	500
* Use either Prenatal, Newborn, Juvenile / Weaner / Pouch animal, Adults, Genetically Modified Organisms, others (describe)				
** Total number of animals to be used for the duration of this project (inc. control and replacement animals)				

1.5 Project:

Give the proposed start and end dates, of the project.

Start date:

Mar 2010

End date:

(3 years max duration)

Feb 2013

1.6 Special Consideration

1.6.1. Does the project involve any recombinant DNA technology, infectious, toxic, radioactive or carcinogenic agents that may be harmful to other animals or to people? If so you must advise all personnel involved. Provide details below of such agents and their possible impact as well as appropriate licences/permits/authorities.

No

1.6.2 Is this project a cooperative or a joint project with another institution or party? If so name parties and explain their roles.

Yes. The project has a primary objective of collaborating with existing research groups and projects to minimise duplication and maximise the benefit of each koala capture event. Furthermore, our examinations and procedures seek to standardise the collection of data and samples from koalas and feed these into existing or new laboratory-based koala research programs. Our proposed collaborators include koala ecology research groups at UQ (headed by sch4p4(6) Personal information sch4p4(6) Personal information and the Koala Retrovirus Research Group at UQ, the Chlamydia Research Group at QUT (headed by sch4p4(6) Personal information and sch4p4(6) Personal information and others. Collaborators involved in the field research and capture of koalas will have their own AEC and SPP approvals, as will the laboratory-based research groups. Our role is to facilitate the collection of clinical data and biological sampling, so that the benefit of each koala capture event (irrespective of its primary purpose) is maximised.

1.6.3 Is AEC approval also being sought through another AEC? If so name the other AEC and give reasons for proposal for joint approvals

No

2. JUSTIFICATION FOR ANIMAL USE (justification)

2.1 Big Picture Background

It is essential that this section is easily understood by those without technical and scientific knowledge. In plain, clear and concise English (use lay language, avoid jargon and acronyms and use a glossary if necessary) put the project into context (the big picture). In particular, write this section so that AEC members without a veterinary or scientific background can understand what has led to the current situation (including reference to earlier work or this project being part of a larger body of work), the need that exists and how this project addresses that need. Describe and where possible quantify the economic, environmental, educational and welfare benefits resulting from the project.

Glossary: {Include here an explanation of acronyms, technical terms and all abbreviations}

GPS: global position system, **radiocollar:** telemetry collar fitted to an animal to enable it to be tracked using VHF radiowaves emitted from the collar, **GPS collar:** radiotelemetry collar that includes a GPS device to store positional data at programmed times and intervals; **KoRV:** Koala retrovirus – a recently discovered virus thought to cause leukaemia, AIDS and a range of other cancers and conditions in koalas; **chlamydiosis:** a serious and sometimes fatal bacterial infection in koalas that can cause blindness, infertility and urinary tract infection.

The Big Picture:

Recent scientific and anecdotal evidence suggests that koala populations in SEQ are in rapid decline. A range of causes has been identified, including loss and fragmentation of habitat, urbanisation impacts (vehicle strike, dog attack, drowning etc) and disease. The recent Koala Crisis Response Strategy recommended a number of measures to combat declines in wild koala populations, or inform management strategies. One of these was a recommendation that the impacts of disease in wild koala populations be further investigated as a matter of urgency. Over the past two years we have developed a standardised protocol for the thorough clinical assessment of koalas and the collection of biological samples. Initial assessments of wild koala populations in SEQ suggest that disease prevalence and severity is far worse than previously thought. There is an urgent need to better measure and understand the impact of disease in koala populations across the state. Our program seeks to "tack on" to existing and future studies involving the capture of wild koalas, so that the benefit of each capture event is maximised. Ultimately, this reduces the welfare impacts by avoiding unnecessary capture of koalas.

2.2 Objectives and purpose of proposed animal use and alternatives (replacement)

2.2.1 Detail the objective and purpose of animal use

The primary objective of this project is to collect detailed health data and biological samples from wild koalas being captured primarily for other reasons. In other words, koalas are being caught for a variety of ecological, behavioural and physiological studies by other research groups – we propose to "value add" to those projects by conducting full veterinary assessments and collecting a standardised group of biological samples to support laboratory-based koala disease research.

2.2.2 Will any animals be used for teaching activities within this project? Indicate: YES / NO
If 'Yes' please complete and attach Form AE 03(B) to the back of this proposal.

2.2.3. If all or some of this project is a repeat of work that has been done already, provide justification for this project.

Our team have developed the standardised health assessment and sampling protocol for koalas which is currently being used to monitor the health of koalas at a variety of sites in SEQ (Narangba, Brendale, Gold Coast) for which there are existing scientific purposes and AEC approvals. The current program proposal seeks to roll out the same methods to include a much larger group of koalas over a larger geographic range.

2.2.4. Explain why you need to use live animals to achieve all or some of your aims.

The project seeks to investigate the health of wild koalas both cross-sectionally (prevalence data) and longitudinally (incidence data) whenever possible (ie projects in which ongoing monitoring or repeat captures are proposed).

2.2.5. List alternatives to live animals that COULD be used in this project and explain why such alternatives are unsuitable for this project or list those used in conjunction with this project.

There are no alternatives to the use of live animals. The project seeks to make an assessment of the health of live animals in the wild and collect biological sample necessary for laboratory-based scientific research.

3. EXPERIMENTAL DESIGN OF PROJECT (reduction/refinement)

3.1 Justification for number of animals

Justify why the proposed number of animals is appropriate to achieve the aims.

The proposed maximum number of koalas is chosen as it represents the maximum number likely to be encountered/able to be processed by us over the three year period. The greater the data set, the more robust the assessment of disease impacts across the state.

3.2 Reuse of animals and/or tissues

3.2.1 Have any of the animals proposed to be used, already been used in a project? If yes, give the name and approval number of this project and state how they were used. State why do you consider it beneficial to use these animals again rather than 'new' animals?

Yes. Most, if not all of the koalas for which examinations and sampling will be conducted will be captured under the provisions of other SPP and AEC approvals. One of the intentions of our program is to avoid the need to capture koalas specifically for health checks when koalas are already being captured for other purposes.

3.2.2 Is there an opportunity to reduce any future use of animals by way of sharing, animals/tissues/data with other investigators/teachers? This may involve consultation. What is proposed?

One of the primary benefits of our proposed program is to maximise the benefit of each koala capture event by collecting samples and data for a variety of collaborating research groups. This avoids duplication and minimises animal welfare impacts.

3.3 Experimental design

3.3.1 Where applicable include a table showing treatments and group sizes and outlining trial design in this space.

N/A			

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3.3.2 If you propose that experimental design is not needed for the justification of this activity, you must provide your reasoning here.

The primary purpose of the project is to assess the impact of disease in wild koala populations "opportunistically". That is, by taking advantage of the capture of koalas for other purposes and conducting health assessment and biological sampling as animals are available. It is not an experimental project *per se*, but an opportunistic data collection program. As such, there is not a specific experimental design.

Published on DES
Disclosure Log
RTI Act 2009

3.4 Biometrician's comments

BIOMETRICIAN USE ONLY			
EXPERIMENTAL DESIGN EVALUATION			
Biometrician Name:		Indicate evaluation outcome.	
Job Title:		Accepted Experimental Design	
Organisation:		Accepted Experimental Design with Modification	
Phone:		Unacceptable Experimental Design	
COMMENTS			
Signature:		Date:	

4. SEQUENCE OF PROCEDURES AND THEIR IMPACTS ON ANIMALS (refinement via design and monitoring)

4.1 Sequence of procedures

List the sequence of procedures in the project as an activity schedule or timeline, beginning when animals are allocated to the project and ending with their fate at the completion of the project. The schedule or timeline should identify clearly the timing and duration of every procedure, including the number and duration of any component phases and/or any repetitive activities.

1. Receipt of wild koalas captured under other SPP and AEC approvals.
2. Conduct of anaesthesia, veterinary assessment and biological sampling.
3. Recovery of koalas from anaesthesia.
4. Return of koalas to the care of primary field researcher, euthanased or referred for veterinary care.

4.2 Details of procedures

In plain English give details of each procedure listed in 4.1. Use a heading for each explanation of procedure, which is the same as the procedures used in Table 4.1 Details provided should include, but need not be limited to, the following as appropriate to the proposal).

- All administered substances (name, toxicity, action, route, dose, frequency).
- All procedures carried out on animals (e.g. sampling method, frequency, amount, special housing, handling and restraint).
- How each procedure may impact negatively on the animals.
- How any negative impacts on animals will be minimised.
- How the impact on animals will be monitored, assessed and managed including method and frequency of monitoring (during and after procedures).

1. Receipt of wild koalas captured under other SPP and AEC approvals.

This proposed program aims to reduce, as much as possible, the need to capture koalas for single purposes, but rather seeks to maximise the benefit of each "koala capture event" conducted by a range of separate research groups, and apply a standardised health assessment and sampling protocol. This value add to their project, avoids the need to conduct a separate project aimed solely at investigating koala population health, and facilitates the distribution of standardised health data and samples to a range of collaborating groups. Hence capture of wild koalas is performed under other approvals, and in accordance with their own approved protocols and conditions. Our involvement begins with receipt of a captured koala, unless we assist with the capture ourselves – in which case it would be consistent with their own AEC and SPP approvals. At receipt of each koala, we record signalment and capture details (see attached Koala Examination Data Record Sheet).

2. Conduct of anaesthesia, veterinary assessment and biological sampling.

All veterinary procedures are conducted by or under the direct supervision of an experienced wildlife veterinarian and an experienced wildlife veterinary nurse. For projects in remote areas (more than 1 hours drive from the Australian Wildlife Hospital) all veterinary procedures will be conducted in the field using our mobile veterinary

unit. Otherwise procedures will be conducted at the Australian Wildlife Hospital at Beerwah. The anaesthesia and processing of koalas follows the protocol indicated in the attachments. In summary: koalas are anaesthetised by intramuscular injection of alfaxalone (Alfaxan CD RTU, Jurox) at a dose rate of approximately 3mg/kg. A 22 or 23 gauge needle is used. Minimal or no restraint is generally required, and the injection is performed while the koala is in the transport cage. After induction of general anaesthesia (generally 5 minutes or so) the koala is removed from the cage and placed on the examination table. The anaesthesia is maintained by administration of an isoflurane/oxygen mix delivered by face mask at between 1.5-2.5% vapour pressure of isoflurane. A full physical and clinical examination is conducted in accordance with standard veterinary procedures (see attached protocol), and the findings recorded in the koala examination data record sheet (attached). A blood sample of approximately 5 ml is collected from the cephalic vein using standard aseptic technique and is processed for analysis of a blood smear, packed cell volume, and total solids estimation; and the remainder is processed for analysis of koala retrovirus status, presence of Trypanosomes and for the extraction of DNA for miscellaneous research purposes. Duplicate swabs for the detection of *Chlamydia* are collected from the following sites: left conjunctiva, right conjunctiva, urogenital sinus (female koalas) or penile urethra (male koalas). A 5-20ul sample of bone marrow is collected from the iliac crest using an 18 gauge needle as per the attached protocol entitled "Collection of bone marrow". The sample is smeared onto microscope slides and examined for bone marrow abnormalities, such as leukaemia. A small fur sample is plucked from the left flank using haemostats. In projects for which koalas will be eartagged, the ear punchlet will be collected for DNA extraction.

Depending upon the approvals given for the primary project, the following procedures may also be conducted while the koala is anaesthetised: plastic swivel-type ear tag is inserted into the pinna of the ear; microchip is inserted subcutaneously into the interscapular area; radiotelemetry collar is applied if required for the primary project.

3. Recovery of koalas from anaesthesia.

During anaesthesia and recovery koalas are constantly monitored by a trained and experienced wildlife veterinary nurse. At the completion of all veterinary procedures volatile anaesthesia delivery is stopped and the koala monitored until it achieves sterna recumbancy. At this point it is transferred to a transport cage until fully recovered from anaesthesia. When the veterinary team is satisfied that the koala has recovered sufficiently to be released back into the wild safely, it will be handed over to the primary research team.

4. Return of the koala to the primary field researcher, euthanased or referred for veterinary care.

The prevalence of disease in wild koalas is very high. Some koalas that are examined during the proposed project will be suffering from injuries or illness that are not consistent with satisfactory quality of life or successful veterinary treatment. If, in the judgement of the veterinary team, a koala is sick or injured sufficiently to be unlikely to respond to treatment, the koala will be humanely euthanased before recovery from anaesthesia by intravenous injection of concentrated pentobarbitone sodium (Lethabarb). If, in the judgement of the veterinary team a koala is sick or injured enough to warrant veterinary attention, the koala will be treated either immediately by the veterinary team and/or transferred to the Australian Wildlife Hospital for treatment as appropriate. Otherwise the koala will be returned to the primary field researcher for release back into the wild or disposed of or handled in accordance with their SPP and AEC approvals.

NOTE: Some field projects with which we seek to collaborate will involve the monitoring of koalas for variable periods of time using radiotelemetry. Our recommendations are that koalas undergoing such monitoring are subjected to routine health assessment every 6 months or so, or at any time if showing signs of significant injury or illness.

4.3 Management procedures differing from Code of Practice

Will any routine husbandry or management procedures be done which are not compliant with any of the relevant Codes of Practice? If so, detail and justify.

No

4.4 Animal treatment/withdrawal and euthanasia decision

4.4.1 Detail the specific criteria which will result in animals being treated or withdrawn from project or euthanased. Describe what will be done. Insert a decision tree for enacting treatment, withdrawal or euthanasia (specifying the method) in each case as applicable to this project.

Any koala found to be suffering from injury or illness or behaving abnormally, or subject to high risk will be subjected to thorough veterinary assessment as described above, and euthanased, treated or returned to the project, based on the assessment and judgement of the veterinarian. If euthanasia is required on veterinary or humane grounds, this will be conducted by a veterinarian by anaesthesia with alfaxalone as described above, followed by euthanasia by intravenous injection of a concentrated solution of sodium pentobarbitone (such as Lethabarb).

4.4.2 What arrangements are in place for contacting somebody who is competent and authorised to treat/withdraw animals (including euthanasing) in an emergency?

This AEC application only applies to procedures between the hand-over of a koala by the primary field researcher to the veterinary team for health examination and sampling, and return of the koala to the primary researcher at the completion of the veterinary procedures. Euthanasia of koalas suffering from incurable and serious disease will occur prior to recovery from anaesthesia. Otherwise, the conditions of the primary researcher's SPP and AEC will direct how emergency veterinary responses are conducted at times other than during the health assessment and sampling.

4.4.3 Emergency contact details. In the event of an emergency involving animals in this project, please provide after hours contact numbers for the appropriate people.

Name	Phone	Role	Comments
sch4p4(6) Personal information		Principle investigator	Experienced koala veterinarian
		Co-investigator	Experienced koala veterinary nurse
		Co-investigator	Experienced ecologist
		Co-investigator	Experienced field officer

4.5 Fate of the animals at the end of the project:

If sold give details of expected fate; if euthanased, detail method of euthanasia; if to be transferred to another project, give details.

Released back into the wild.

4.6 Death as an End Point

If your project requires animals to die as a deliberate measure for evaluating biological or chemical processes, responses or effects (as opposed to being euthanased) justify this here.

N/A

4.7 Routine Animal Monitoring and Management

How will the animals be routinely monitored and cared for during the project, other than during specific experimental or teaching procedures? Specify the frequency and details of this monitoring or care.

This AEC application specifically applies only to the specific period of time during which koalas are received by us from another researcher (working under their own AEC and SPP approvals), subjected to anaesthesia, health assessment and sampling, then recovery from anaesthesia, up until the return of the fully recovered koala to the primary field researcher. During this period, which may average three hours or so, the koala is closely supervised and monitored by experienced veterinary staff. During anaesthesia each koala is monitored visually by the veterinary nurse and/or veterinarian, and also monitored using a pulse oximeter.

5. ANIMAL OWNERSHIP, LOCATION, HOUSING AND MANAGEMENT (refinement via management)

5.1 Sources of animals

5.1.1 Name the source(s) of the animals and list any permits necessary to acquire, transport or use these animals

Wild koalas will be captured at a variety of field sites around Queensland which will be determined by the objectives of our various collaborating researchers. These collaborators will be working under their own AEC and SPP approvals. We have applied for a scientific purposes permit from DERM for the specific purposes of this study.

5.1.2 Describe transport arrangements for animals acquired for this project. (It's your responsibility to ensure that animals being transported specifically for this project are transported in a manner that is cognisant of the species special needs and will minimise the chance of stress or injury at all stages of the transport operation. Where possible, this should involve following SCARM codes for the transport of animals).

All koalas will be transported in specially constructed koala transport cages in airconditioned cars.

5.2 Location of Project

Where applicable, give the name and location of sites with a contact phone and fax number. State who will own the animals whilst they are in the project.

Koalas remain the property of the State.

5.3 Detail and description of Housing Facilities and/or Wildlife Management Equipment

5.3.1 Name the type of facilities (e.g. animal house, paddock, experimental pens, yards, ponds, tanks, cages, traps & nets) where the animals will be kept/held routinely and where any specific procedures will be carried out. Name any special features of the facilities or management, which could impact on the animals' welfare (such as confinement of individuals in metabolism crates, ponds, tanks, traps, nets, etc; abnormal group size; stocking rate; and exposure).

N/A Koala examinations will be conducted at the Australian Wildlife Hospital when animals are obtained from sites within 1 hours drive of the hospital, or at or close to the capture site when sites are remote from the hospital. Remote examinations will be conducted in our mobile veterinary unit.

5.3.2 Give a description of each facility/piece of equipment listed in 5.3.1 (e.g. dimensions, materials, feed and water supply, environmental control, or protection shelter, bedding, hiding areas, environmental enrichment). List the relevant Codes of Practice or other approved standards that are applicable (include actual information from the code on minimum standard).

See photos supplied of mobile field veterinary unit.

5.3.3 Give details of group size and composition and stocking rate/space allocation. (Include information from Codes of Practice or other applicable standards as a comparison where applicable)

N/A

5.3.4 If the animal facilities/equipment do not comply with the relevant Codes of Practice or other agreed standards then describe and justify.

N/A

6. PEOPLE & PROCEDURES INVOLVED IN PROJECT

6.1 People and procedures

Provide details for each person who will be involved in the project. Please note that any future change to the list of people involved in the project and/or their details requires AEC approval of the amendment. Additional rows can be added by using the "Tab" key or a separate pro forma for this purpose is available on the Animal Ethics Ournet site or from the AEC Coordinator..

Person's name, location and organisation	Role in Project	List each procedure the person may perform in the project (may enter 'all in 4.1' if appropriate)	Relevant qualifications and experience	Do you assure the AEC that this person is competent to perform each listed procedure or will be supervised by a competent person? (Y/N)	Legal basis for this person's use of animals * (e.g. enter '2' for staff acting in the course of their retainer)	Name of registered person to whom this person is responsible: (enter name shown on Scientific User Registration Certificate)	Registration Number: (enter number shown on Scientific User Registration Certificate)
sch4p4(6) Personal information	P.I. (veterinarian)	Project supervision and all veterinary procedures, koala capture, radiotracking	Registered veterinarian, 20 years wildlife experience	Yes	2	Australia Zoo Wildlife Warriors Worldwide Ltd	234
	Co-investigator	Koala capture, veterinary nursing and radiotracking	8 years experience as wildlife veterinary nurse and researcher	Yes	2		
	Co-investigator	Koala capture, radiotracking, day to day project management and supervision	10 years wildlife experience, BAppSc (Hons)	Yes	2		
	Co-investigator	Koala capture, radiotracking	6 years experience as wildlife handler and field officer	Yes	2		
							{Hit "Tab" key to add more rows}

* Use the following numeric code to describe the legal basis on which the person is authorised to use animals for scientific purposes under the *Animal Care and Protection Act 2001* (Section 51):

- 1 A registered person;
- 2 An individual retained (i.e. employed or engaged whether or not for remuneration) by a registered person acting in the course of their retainer;
- 3 A student at a college, institute, school, university or other institution that is registered and acting in the course of their studies with the institution.

6.2 Routine monitoring and euthanasia

These are the people who will provide routine monitoring and care during weekdays and at weekends and holidays or while animals are held (in the case of wildlife/fish). Please ensure those indicated as authorised to treat animals comply with the Veterinary Surgeons Act 1936. If rows are insufficient, copy table to new page or a separate pro forma for this purpose is available on the Animal Ethics Ournet site or from the AEC Coordinator.

Person's name, location and organisation.	Person's contact details.	Indicate the procedure the person may perform (Y/N)	Relevant Qualifications and experience	Do you assure the AEC that this person is competent to perform each listed procedure <u>or</u> will be supervised by a competent person? (Y/N)
sch4p4(6) Personal information		Undertake routine animal monitoring	sch4p4(6) Personal information	Y
		Recognise sick, injured, or moribund animals		
		Treat animals		
		Euthanase animals		
		Undertake routine animal monitoring		Y
		Recognise sick, injured, or moribund animals		
		Treat animals		
		Euthanase animals		
		Undertake routine animal monitoring		y
		Recognise sick, injured, or moribund animals		
		Treat animals		
		Euthanase animals		
		Undertake routine animal monitoring		y
		Recognise sick, injured, or moribund animals		
		Treat animals		
		Euthanase animals		
Undertake routine animal monitoring				
Recognise sick, injured, or moribund animals				
Treat animals				
Euthanase animals				
Undertake routine animal monitoring				
Recognise sick, injured, or moribund animals				
Treat animals				
Euthanase animals				

7. DECLARATIONS

Title of project

Repeat here as this page sometimes is faxed separately with all signatures.

Assessment of the impacts of disease in wild koala populations across Queensland using opportunistic health assessment and biological sampling.

Applicant

I, being the applicant or its duly authorised agent, assure the AEC that:

- Adequate resources will be available to undertake the project
- I and all others involved in the project are familiar, and will comply with the requirements of the Animal Care and Protection Act 2001, the Australian code of practice for the care and use of animals for scientific purposes and all other relevant Commonwealth and State legislation
- I and all others involved in the project will adhere to all requirements of the AEC including the provision of reports, notices and advices.

Name:	sch4p4(6) Personal Information	Position:	sch4p4(6) Personal Information
Signature:	Date: 2 February 2010		

Person-in-Charge of Animals and/or Facilities at DEEDI Site

(complete only if the project will be conducted on a DEEDI managed site)

Site:

I assure the AEC that:

- The nominated locations/facilities for the animals on this site will be available as detailed in the proposal
- Staff directly responsible to me will be available to undertake the nominated tasks as detailed in the proposal.

Name:	Position:
Signature:	Date:

Applicant's supervising manager (complete only if the applicant is a DEEDI officer)

I assure the AEC that:

- This project meets government priorities, agency objectives and is aligned to program benefits.
- Adequate resources will be available to undertake this project.
- I will notify the AEC immediately if the applicant ceases involvement with this project and will apply to amend this AEC proposal.

Name:	Position:
Signature:	Date:

Date of Examination: _____	Australian Wildlife Hospital Koala Examination Data Sheet	Project Description _____
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Animal Details
☐ See Accession Form (or complete details below)

Animal's Name	Accession No	
Gender	☐ Male ☐ Female ☐ Intersex	QPWS Form No
Re-Admission	☐ No ☐ Yes (previous Accession No.....)	

Rescuer Details

Rescuer Name	Affiliation/Group
Rescuer Address	Telephone (home)
Email Address	

Rescue Details

Date of Rescue	Time of Rescue	AM/PM
Exact location of rescue		
Grid Reference/GPS coord.	LGA	
Reason for Rescue		
Position of koala	☐ In tree ☐ On ground ☐ In captivity ☐ Other	
Capture details: (how, who, how long, adverse events etc)		

Identifying Features:

Ear Tag	☐ No ☐ Yes - Tag No..... ☐ Left ☐ Right
Microchip	☐ No ☐ Yes - Number:
Other identifying features:	

Disease Status and Scores:

Disease obvious prior to disturbance?	☐ No ☐ Yes	Disease apparent during capture?	☐ No ☐ Yes	Disease only found by vet exam?	☐ No ☐ Yes
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Summary of Diagnoses:

1.											
2.											
3.											
4.											
Overall disease score	0	1	2	3	4	5	Overall chlamydial disease score	0	1	2	3
KoRV Suspicion						Chlamydia			Other		
☐ ? Aids ☐ Lymphoma ☐ Plantar hyperkeratosis ☐ Leukaemia ☐ Myelodysplasia		☐ Aplastic anaemia ☐ Other Neoplasm ☐ ☐		☐ Eyes ☐ Urinary / Renal ☐ Respiratory ☐ Reproductive ☐		☐ Trauma ☐ Orphan ☐ Healthy ☐ ☐					

Initial Outcome:

☐ Dead on arrival	☐ Euthanased	☐ Admit to Hospital
☐ Died during examination	☐ Immediate release	☐ Sent to Carer on / / 20

Final Outcome:

☐ Euthanased on / / 20	☐ Sent to carer on / / 20	☐ Released on / / 20
☐ Died on / / 20	☐ Permanent care @	☐ Transferred to on / / 20

Release Details:

Release Date:	Released by:
Distance from rescue site:	Release authorised by:
Exact location of release:	

Distant Examination:

Demeanour	☐ B.A.R. ☐ Excited ☐ Q.A.R. ☐ Depressed ☐ Moribund
Behaviour	☐ Normal ☐ Abnormal
Posture	☐ Normal ☐ Abnormal
Gait	☐ Normal ☐ Not observed ☐ Abnormal
Symmetry	☐ Normal ☐ Abnormal
Breathing	☐ Normal ☐ Shallow ☐ Rapid ☐ Laboured
Coat	☐ Normal ☐ Abnormal
Discharges	☐ Nil ☐ Present
Wounds/Bleeding	☐ Nil ☐ Present
Other lesions:	☐ Nil ☐ Present
Abdomen:	☐ Normal ☐ Bloated ☐ Sunken

General Physical Examination:

Anaesthesia	Induction Anaesthetic Agent..... Dose		
	Route: ☐ i.m. ☐ i.v. ☐ facemask ☐ Tube		
	Maintenance Anaesthetic Agent..... Dose		
	Route: ☐ i.m. ☐ i.v. ☐ facemask ☐ Tube		
Vital Signs	Mucous Membrane: ☐ Pink ☐ Pale ☐ Cyanotic ☐ Red		
	HR	RR	Rectal Temp °C
	CRT	SpO ₂	
	Pulse: Rate		
	Rhythm: ☐ Regular ☐ Occasional arrhythmia ☐ Frequent/constant arrhythmia		
	Amplitude: ☐ Normal ☐ Increased ☐ Decreased		
Hydration	Tone: ☐ Normal ☐ Increased ☐ Decreased		
	☐ Normal ☐ <5% dehydrated ☐ 5-10% dehydrated ☐ > 10% dehydrated		
Weight / Body Score	Body Score / 10 Weightkg	Joey	☐ Pouch ☐ Back ☐ Free-living Est. Age..... Wt.....g Sex: M F U
Tooth Wear:	Class Estimated Age years/mths Rangeyears		
Chest auscultation:	Heart.....		
	Lungs Other respiratory findings: ☐ Normal ☐ Abnormal		
Neurological	☐ Normal ☐ Abnormal		

General Physical Examination (continued):

Musculoskeletal	☐ Normal ☐ Abnormal	
Head / Mouth	Head Symmetry	☐ Normal ☐ Abnormal
	Ears	☐ Normal ☐ Abnormal
	Nares	☐ Normal ☐ Abnormal
	Lips	☐ Normal ☐ Abnormal
	Tongue	☐ Normal ☐ Abnormal
	Teeth	☐ Normal ☐ Abnormal
	Cheek Pouches	☐ Normal ☐ Abnormal
	Gingiva	☐ Normal ☐ Abnormal
	Fauces	☐ Normal ☐ Abnormal
	Palate/tonsils	☐ Normal ☐ Abnormal
	Pharynx	☐ Normal ☐ Abnormal
	Larynx	☐ Normal ☐ Abnormal
Eyes:	<div style="display: flex; justify-content: space-between;"> <div> <p>LEFT</p> <p>Periorbital skin: ☐ Normal ☐ Alopecic ☐ Pigmented</p> <p>Eyelids: ☐ Normal ☐ Other</p> <p>Palpebral fissure ☐ Normal ☐ ↓ Scarred ☐ ↑</p> <p>Conjunctiva: ☐ Normal ☐ Proliferated 1 2 3</p> <p>Other.....</p> <p>Nictitating: ☐ Normal ☐ Prolapsed 1 2</p> <p>Sclera: ☐ Normal ☐ Other</p> <p>Cornea: ☐ Normal ☐ Abnormal</p> <p>Opacity: ☐ Clear ☐ Mild ☐ Marked</p> <p>Iris & Pupil: ☐ Normal ☐ Abnormal</p> <p>Discharge: ☐ Nil ☐ Serous ☐ Purulent Amt: 1 2 3</p> <p>Description:</p> <p>Chlamydia eye disease score: 0 1 2 3</p> </div> <div> <p>RIGHT</p> <p>☐ Normal ☐ Alopecic ☐ Pigmented</p> <p>☐ Normal ☐ Other</p> <p>☐ Normal ☐ ↓ Scarred ☐ ↑</p> <p>☐ Normal ☐ Proliferated 1 2 3</p> <p>Other.....</p> <p>☐ Normal ☐ Prolapsed 1 2</p> <p>☐ Normal ☐ Other</p> <p>☐ Normal ☐ Abnormal</p> <p>☐ Clear ☐ Mild ☐ Marked</p> <p>☐ Normal ☐ Abnormal</p> <p>☐ Nil ☐ Serous ☐ Purulent Amt: 1 2 3</p> <p>.....</p> <p>.....</p> <p>0 1 2 3</p> </div> </div>	
Coat:	<p>Colour: ☐ Light Grey ☐ Brown ☐ Dark Grey</p> <p>Structure: ☐ Normal ☐ Sparse ☐ Clumped/irregular</p> <p>Texture: ☐ Normal ☐ Greasy ☐ Dry</p> <p>Other:</p>	
Skin/ External parasites:	☐ Normal ☐ Abnormal	
Lymph Nodes	Rostral mandibular	☐ Normal L R ☐ Enlarged L R ☐ Small L R
	Facial	☐ Normal L R ☐ Enlarged L R ☐ Small L R
	Mandibular	☐ Normal L R ☐ Enlarged L R ☐ Small L R
	Superficial cervical	☐ Normal L R ☐ Enlarged L R ☐ Small L R
	Axillary	☐ Normal L R ☐ Enlarged L R ☐ Small L R
	Inguinal	☐ Normal L R ☐ Enlarged L R ☐ Small L R
	Notes	

General Physical Examination (continued):

Abdominal Palpation	Abdominal Fill ☐ Normal ☐ Abnormal
	Stomach Fill ☐ 1 – (empty) ☐ 2 (½ full) ☐ 3 (full)
	Stomach Consistency ☐ Normal (firm) ☐ Soft ☐ Bloated ☐
	Distal colon ☐ Pellets ☐ Empty/ pellets not palpated
	Proximal colon/caecum ☐ Normal ☐ Abnormal
Notes /Other abdominal lesions:	
Chest Palpation:	Clavicle: ☐ Normal ☐ Abnormal
	Ribs: ☐ Normal ☐ Abnormal
Limbs and Joints	Left Forearm ☐ Normal ☐ Abnormal
	Left Paw/digits: ☐ Normal ☐ Abnormal
	Left Hindleg ☐ Normal ☐ Abnormal
	Left Foot/digits: ☐ Normal ☐ Abnormal
	Right Forearm ☐ Normal ☐ Abnormal
	Right Paw/Digits ☐ Normal ☐ Abnormal
	Right Hindleg ☐ Normal ☐ Abnormal
	Right Foot/digits: ☐ Normal ☐ Abnormal
Scrotum / Pouch	☐ Normal ☐ Abnormal
Scent Gland/ Mammary Glands	☐ Active ☐ Inactive ☐ Abnormal
Cloaca/Clitoris/ Penis	☐ Normal ☐ Abnormal
Dirty Tail Score	(circle score)
	Rump stained: 0 (no staining) 1 (mild) 2 (marked)
	Rump wetness: 0 (dry) 1 (damp) 2 (dripping wet)
	Cloaca: 0 (normal)
	1 (red/inflamed – slightly protruding)
	2 (marked protrusion – no ulceration)
	3 (2 + ulceration/pseudomembrane)
	Rump: 0 (normal)
	1 (inflamed skin – no decubital ulcers)
	2 (decubital ulcers or erosions from urine scalding)
Dysuria: 0 (nil/not observed)	
1 (apparent discomfort when urinating and/or vocalisation)	
Total Score: / 10	

Other Koala Details, History or Previous Treatments:

Procedures Performed:

CLINICAL PATHOLOGY

☐ **Blood** ☐ In-House ☐ External (Idexx/other.....) PCV _____ % TS _____ g/litre
Stain: ☐ Giemsa ☐ Diff-Quick ☐ Other Slide Kept? ☐ Y ☐ N

Smear: _____

☐ **Bone Marrow** Stain: ☐ Giemsa ☐ Diff-Quick ☐ Other Slide Kept? ☐ Y ☐ N
Collection Site: ☐ Iliac Crest L R ☐ Other.....

Smear: _____

☐ **Abdominal Aspirate** Stain: ☐ Giemsa ☐ Diff-Quick ☐ Other Slide Kept? ☐ Y ☐ N

Smear: _____

☐ **Faecal Analysis**

Gross Examination: Shape ☐ Normal ☐ Abnormal
Size ☐ Normal ☐ Abnormal
Consistency ☐ Normal ☐ Abnormal
Fragment Size ☐ Normal ☐ Abnormal

Tests: ☐ Float ☐ Wet Prep ☐ Stain

☐ **Urinalysis** Collection Method: ☐ Cysto ☐ Catheter ☐ Free catch
☐ Urinalysis ☐ Urine Sediment Smear ☐ USG

Smear: _____

Urinalysis: pH: Pr: Hb/Mb: Gluc: Other: _____

☐ **Chlamydia (Clearview) Test** ☐ Test site ☐ + ☐ -
Rate positives on a scale of 1 - 4 using the following chart:
4: very strong, 2+ive control
3: strong +ve but < +ve control
2: weak +ve, easily seen
1: very weak, barely perceptible
☐ Test site ☐ + ☐ -
☐ Test site ☐ + ☐ -
☐ Test site ☐ + ☐ -
☐ Test site ☐ + ☐ -

☐ **Radiographs**

☐ **Other Diagnostic Aids**

ULTRASOUND

Bladder	☐ Normal ☐ Abnormal Urine/Lumen: ☐ Clear ☐ Flocculent echo ☐ Luminal cast/other Wall Thickness at point of widest lumen (transverse section)			
		LEFT	LUMEN	RIGHT
	Horizontal			
	Vertical			
	Left Diagonal			
	Right Diagonal			
Other remarks:				
.....				
Female Reproductive Tract	☐ Normal ☐ Pregnant ☐ Oestrus/mucosal hyperplasia ☐ Abnormal			
RIGHT				
Female Reproductive Tract	☐ Normal ☐ Pregnant ☐ Oestrus/mucosal hyperplasia ☐ Abnormal			
LEFT				
Prostate	☐ Examined ☐ Not examined ☐ Poor image ☐ Normal ☐ Abnormal			
				
Frontal plane diametermm (at widest diameter)				

		Left	Right
Kidneys	Overall Structure:	☐ Normal ☐ Abnormal	☐ Normal ☐ Abnormal
	Measurements:	Lengthmm Vert. Diametermm Horiz. Diametermm	Lengthmm Vert. Diametermm Horiz. Diametermm
	Parenchyma echo:	☐ Normal ☐ Hyperechoic ☐ Hypoechoic	☐ Normal ☐ Hyperechoic ☐ Hypoechoic
	Renal pelvis:	☐ Normal ☐ Dilated	☐ Normal ☐ Dilated
	Ureter:	☐ Normal ☐ Dilated	☐ Normal ☐ Dilated
	Lesions:	☐ Nil ☐ Present	☐ Nil ☐ Present
	UGT Chlamydia disease score	0 1 2 3 4	

Notes/Treatment/Comments

Research Samples Collected

Sample	Purpose	Site	For whom	Stored/Sent	Date	Collector

Electronic data files:

Type	Number	Details	Location
Photos			
Sonograms			

Disease Scoring Criteria:

Overall disease score:

- 0 No clinical abnormalities detected PLUS no Clearview test >1.
- 1 No clinical abnormalities detected PLUS at least one Clearview test result >1.
- 2 Mild clinical disease, likely to respond to drug or surgical therapy with complete remission. Eg: mild or acute conjunctivitis. Mild cystitis or prostatitis. Mild reproductive tract disease (eg just para-ovarian/bursal cysts). DO NOT include severe reproductive tract disease, eg severe metritis, abscesses etc. or multifocal chlamydial disease, or other concurrent disease. BCS must be 6 or greater.
- 3 Any of the following:
 - a. Category 2 disease with BCS of <6, OR
 - b. chronic cystitis BCS 6 or greater, OR
 - c. chronic severe keratoconjunctivitis with BCS of 6 or greater, OR
 - d. multifocal chlamydial disease with BCS 6 or greater, OR
 - e. disease of moderate severity that could be expected to resolve with treatment.
- 4 Any of the following:
 - a. Category 3 disease with BCS of less than 6, OR
 - b. Chronic poor doer
 - c. Refractive Chlamydiosis with BCS <6
 - d. Suspect myelodysplasia (dysplastic changes subtle/not definitive)
 - e. Suspect AIDS (eg one of: generalized or multifocal dermatitis, stomatitis, mouth ulceration, chronic typhlocolitis/caeco-colic dysbiosis syndrome, cryptococcosis)
 - f. Severe trypanosomiasis (organisms present in smears PLUS severe clinical signs of anaemia, pain etc)
 - g. Severe/end stage chlamydial disease with poor body condition
- 5 Any of the following:
 - a. Cancer (other than benign growth), OR
 - b. Definitive myelodysplasia (overt or severe dysplastic changes)
 - c. Leukaemia
 - d. Definitive AIDS (two or more of the following: stomatitis, severe gingivitis, mouth or lip ulceration, chronic or severe typhlocolitis/caecocolic dysbiosis syndrome, marginal anaemia with lymphopaenia, severe or generalized dermatitis, severe or life-threatening fungal infection, disseminated cryptococcosis, chronic illthrift, unexplained poor body condition)
 - e. Very severe disease requiring immediate euthanasia, or likely to result in imminent death of the koala (eg renal abscess).

Overall Chlamydia disease score:

- 0 No detectable disease
- 1 Mild/resolved chlamydial disease
- 2 Serious/severe chlamydial disease without other criteria for AIDS (see 5 d. above)
- 3 Serious/severe chlamydial disease with other criteria for AIDS (see 5 d. above)

Anatomical Chlamydia disease score:

Anatomical site	Score	Description
Eyes	0	No ocular disease
	1	Mild conjunctivitis with no proliferative change, serous or purulent discharge, consistent with acute/subacute inflammation
	2	Chronic kerato-conjunctivitis with minimal or no discharge, and little evidence of active inflammation. May be some corneal opacity.
Bladder/urinary tract/ reproductive tract	3	Chronic active inflammation with exudation, proliferative conjunctivitis and keratitis.
	0	No detectable disease by overt signs, cystocentesis or ultrasound at either anatomical site
	1	Bladder: Subclinical disease detected by urinalysis and/or urine sediment examination, with mild bladder thickening. No overt signs or urine staining. OR Bursal or oviductal cysts (irrespective of size) present without marked thickening or luminal exudation of uteri. No significant cloacal discharge, cloacitis or cloacal/clitoral protrusion. No overt signs. BUT NOT BOTH. IF BOTH THEN SCORE IS "2"
	2	Overt signs of cystitis (dirty tail) with confirmation by cystocentesis and/or ultrasound. Inflammatory exudates apparent on sediment examination but no significant haemorrhage, or complications such as ureteral dilatation or nephritis. OR bladder AND reproductive tract disease described in score "1" above OR Uterine disease apparent ultrasonographically, including thickened uterine wall, uterine exudation, uterine cysts, with or without bursal and oviductal disease. No overt signs of cloacal/reproductive tract disease.
	3	Severe chronic/subacute cystitis with exudation and significant haemorrhage apparent grossly or on sediment examination. Ureters may or may not be dilated, nephritis may or may not be apparent OR Severe reproductive tract disease with extensive involvement of both uteri and with cloacitis and cloacal exudation OR one or other with a lesser score for the alternative tract BUT NOT BOTH
	4	BOTH urinary and reproductive tract disease as described in "3" above

Standardised Koala Examination Protocol



Summary

1. History

- Date of rescue
- Time of rescue
- Location of rescue/address and/or grid reference
- Local government area/shire
- Urban or rural setting – habitat summary
- Reason for rescue (e.g. sick, MVA, dog attack, weeping eyes)
- Circumstances surrounding rescue (e.g. found on side of road)
- Position of koala at time of rescue
- Name of rescuer
- Address and contact number of rescuer
- Rescuer organisation
- Primary caller details (if different from rescuer)
- Detailed animal history

2. Distant Exam

- Demeanour
- Behaviour/activity
- Posture
- Gait
- Symmetry
- Breathing
- Coat condition
- Discharges
- Wounds/bleeding
- Other obvious lesions
- Abdominal fill (bloated, normal, sunken)

3. General Physical Exam

- Vital signs- HR, RR, mm, CRT, pulse (RRAT), SpO₂, rectal temp.
- Chest auscultation (heart sounds, pulmonary/airway sounds)
- Body condition score
- Weight

- Tooth wear class
- Coat and skin colour and condition
- Head Examination: eyes, ears, nares, mouth, palpation
- Examination of mouth (teeth, tongue, gingiva, cheek pouches, pharynx and larynx)
- Neck/throat palpation
- Paws/claws/digits
- Chest palpation
- Abdominal palpation (stomach fill and consistency, left and right kidney, caeco-colic consistency, pellets in distal colon, female reproductive tract/cysts, bladder)
- Palpation and manipulation of limbs and joints
- Scrotum/pouch/mammary gland examination
- Cloaca, clitoris and penis, and dirty tail score
- Examination of peripheral lymph nodes

4. Special Exam

- Collect blood for PCV/TP, blood smear, CBC and MBA
- Collect bone marrow (iliac crest), smear and stain
- Abdominal tap, smear and Specific Gravity (SG)
- Ultrasound (reproductive tract/bladder/ureters/kidneys)
- Cystocentesis (urinalysis, USG and urine sediment smear)
- X-ray chest (if indicated)
- Faecal examination (gross, shape, size, consistency and fragment size, wet prep and float)

5. Research Sample Collection

- Whole Blood (EDTA, Lith Hep, Na Hep, clot, other)
- Blood smears
- Plasma in RNA
- Chlamydia swabs (Clearview, PCR, smear, other)

1. History Collection

The history record should include all details relating to the rescue of the koala, particularly the circumstances that the koala was in and why it needed rescuing, some detail about the state and quality of the habitat (is it urban, rural, recently developed, generally good habitat, or generally bad habitat etc). History must include details allowing the exact location of the rescue to be determined, and the caller and/or rescuer to be contacted for further details if required. If the animal was in care with another organisation, the history should include all husbandry, treatments and clinical findings at the referring organisation.

2. Distant Examination

The purpose of the distant examination is to form an impression of the general condition of the koala prior to handling and anaesthesia. Often the koala will be in a transport box, in which it can stay for some parts of the distant examination. It may then be necessary to remove the koala from the transport box to observe gait, some aspects of behaviour and to better observe some lesions. Neurological examinations may be performed at this time prior to sedation or anaesthesia. The following should be determined at the distant examination:

Demeanour:	Normal Excited Depressed Moribund
Behaviour/Activity:	Normal (BAR) Abnormal (eg sneezing):
Posture:	Normal Abnormal (eg head tilt):.....
Gait:	Normal Abnormal (eg ataxia, hind paresis):.....
Symmetry:	Normal Abnormal (eg bloated left side abdomen):.....
Breathing:	Normal Rapid Shallow Laboured Open-mouthed Noisy
Coat Condition:	Normal Abnormal (eg dry/sparse, alopecia):.....
Discharges:	Nil visible Present:.....
Wounds/bleeding:	Nil visible Present:.....
Abdominal fill:	Normal Bloated Sunken
Other obvious lesions:	Nil visible Present:.....
Neurological exam. Req.	No Yes (reason):.....

Findings of neurological examination:.....

3. General Physical Examination

The General Physical Examination (GPE) should be thorough, systematic and consistent. In most cases the GPE will be performed under general anaesthesia to facilitate thorough examination and to improve animal welfare. The agent of choice for induction of anaesthesia is alfaxalone (Alfaxan CD RTU 10mg/ml, Jurox) administered at 3mg/kg intramuscularly. This is easily and quickly administered in the transport box, with minimal restraint and stress, and is generally given into the quadriceps muscle mass. When properly administered, recumbancy should occur in approximately 5 minutes, at which time the koala can be maintained using isoflurane/O₂ administered by mask or ET tube. Intubation is required if there is dyspnoea, or if procedures such as broncho-alveolar lavage (BAL) may be required. Intubation is best accomplished using a long straight laryngoscope blade and a thin stilette.

(Intubation: the koala has a long pharynx and soft palate, the caudal edge of which may be positioned under the free edge of the epiglottis, thereby obscuring it from view. Visualisation of the epiglottis is generally required as it is the primary land-mark for intubation. Having the head held extended in line with the spine assists in visualization of the larynx and/or epiglottis. Place the laryngoscope blade deeply into the pharynx such that its tip sits just rostral to the larynx. DO NOT pull on the tongue – allow it to sit in its natural position. Pulling on the tongue does not assist visualization of the larynx. If the epiglottis is obscured by the soft palate, the stilette may be used to gently raise it dorsally, until the free edge of the epiglottis is seen. The stilette may then be used to depress the epiglottis, and the glottis visualized and the stilette fed through the glottis into the trachea. If the glottis is not visible, the correct position of the stilette is confirmed by feeding the tip of it bumping over the tracheal rings as it passes down the trachea. Once in place, a 3.5, 4.0 or 4.5 mm ID ET tube is fed over the stilette, then the stilette is removed. Confirmation of the correct position of the ET tube is made by gently patting the chest while placing your ear near the end of the ET tube. When the tube is in place, the cuff may be gently inflated and the tube tied in place.)

Vital signs should be observed and recorded at the onset of general anaesthesia to determine the need to provide fluid support or resuscitation, or other emergency treatment. Observe and record the following:

Mucous membranes: colour (MM) (pink, pale/white, cyanotic, red) and capillary refill time (CRT): push on the fleshy pad of hard palate in the maxillary diastema. Record refill time in seconds.

Pulse quality: palpate the femoral or axillary pulse and record observations of the following:

Rate: bpm
Rhythm: regular occasional arrhythmia frequent arrhythmia
Amplitude: normal hyperdynamic weak
Tone: normal reduced (thready) increased

SpO₂: measure using pulse oximeter with sensor placed on ear or foot ("thumb" or metatarsal region). If no reading is achieved, try clipping, or use tongue or cheek pouch.

Heart rate and rhythm: by auscultation of the chest

Respiratory rate and quality: (including auscultation)

Rate: bpm
Dyspnoea: No Yes – origin: nasal pharyngeal laryngeal (obviated by intubation), large airways (coarse crackles/rales), lower airways/parenchyma (fine crackles), extrapulmonary

Rectal temperature: direct the thermometer dorsally from the caudal aspect of the cloaca.

Body Condition Score and Weight

Palpate the suprascapularis and infrascapularis muscles at the midpoint of the scapular spine.

A body condition score is determined from 1 (emaciated – no palpable muscle) to 10 (excellent - convex muscle masses on either side of the scapular spine). The score is then validated by palpation of other muscle masses adjacent to bony prominences, including dorsum of cranium and spine, and other large muscle masses such as quadriceps and biceps muscle groups. Body condition scores should be indicative of the following body condition descriptions: 1 or 2 – emaciated; 3 or 4 – poor; 5 or 6 fair; 7 or 8 good; 9 or 10 – excellent.

Weigh the koala.

Systematic Examination

Head

Examine both eyes, observing the following specific features:

Periorbital skin: normal alopecic pigmented
 Eyelids: normal other:.....
 Palpebral fissure: normal reduced/scarred
 Conjunctiva: normal proliferated 1 (mild – not protruding) 2 (moderate protruding, but not completely obscuring eye) 3 (severe – protruding and completely obscuring eye) other.....
 Nictitating memb: normal prolapsed 1 (mild – partial cover of medial portion of iris, but not pupil) 2 (marked – covering pupil or more)
 Sclera: normal other:.....
 Cornea: normal mild opacity (iris and pupil easily visible) marked opacity (iris and pupil difficult to see) other.....
 Iris and pupil: normal other:.....
 Discharge: nil serous purulent

Examine and palpate the symmetry of the head.

Check both ears, both pinnae and canals.

Check external nares.

Examine mouth, observing the following specific features:

Lips

Fauces of mouth: note erythema, fissuring, oedema, ulceration, exudates

Oral mucosa including cheek pouches

Gingiva and gingival margin: periodontal disease 1 (mild hyperaemia of gingival margin) 2 (moderate hyperaemia, recession and rounding of gingival margin) 3

Tongue – check for ulceration/erosion top and underside

Teeth – check for wear, fractures or loss of teeth and asymmetrical wear. Note tooth wear class (or age range estimate)

Pharynx – check for ulceration, pseudomembranes/plaques, tonsillar enlargement

Larynx examination if visible (stilette may be used to elevate the soft palate)

Neck and Throat

Neck and throat palpation: palpate from pharynx/larynx down trachea to thoracic inlet, noting masses/oedema etc.

Paws Claws and Digits

Examine and palpate paws, claws and digits noting abnormalities such as focal or generalized palmar/plantar hyperkeratosis, erosions/ulceration, paronychia, claw deformity etc

Chest palpation

Palpate the chest/thorax including thoracic inlet and clavicles. Osteochondromas may affect the clavicles and ribs. Fractures of clavicle and ribs may not be obvious without palpation.

Abdomen

Palpation of structures within the abdomen may be very easy in some koalas, and quite difficult in others, particularly those with "tight" bellies and marked gut fill (a normal phenomenon) or if marked ascites is present. However, in most koalas a number of abdominal structures are relatively easily identified and palpated.

Note the general abdominal fill as: Normal (within the normal range) Bloated or Reduced

Palpate the abdomen thoroughly, identifying the following:

Stomach – (under left costal arch) note fill (1 - essentially empty; 2 - ½ full; 3 - full – prominent curvature palpable), also note consistency: normal (firm) abnormal (soft or bloated etc)

Distal colon containing pellets (often palpable just caudal to the stomach)

Proximal colon/caecum (not individually identifiable) – occupies most of the ventral and ventro-lateral space within the abdominal cavity.

(The contents of this organ are normally paste/pasty fluid. In normal animals with normal caeco-colic fill and consistency, the wall of the caecum/proximal colon is generally not palpable. In koalas with caeco-colic dysbiosis the content may become more fluid, allowing the thin wall of the large bowel to become palpable between thumb and fingers. Occasionally, sections of these organs may be affected by inflammation, circulatory changes, neoplastic infiltration/deposition, dehydration etc, resulting in reduction or loss of the mucobacterial lining, inspissation of the mucobacterial lining and digesta, spasm of the wall, oedema of the wall etc. Some of these changes are palpable with experience.)

Left and right kidneys are palpable: note as Normal or Abnormal.....

Bladder: palpable/ not palpable

Female reproductive tract: generally only palpable when affected by abscess or cystic inflammatory changes. To palpate the left side: place fingers of left hand into pouch and thumb between left epipubic bone and ilium, press in firmly and palpate thoroughly moving your thumb up and down the "V" between the epipubic bone and ilium. Repeat the process on the right side.

Note: the spleen is generally not easily palpable, unless affected by neoplastic infiltration.

Musculo-skeletal system

Examine, palpate and manipulate limbs and tail, noting crepitus, reduced range of movement, muscular atrophy, and swellings. Palpate the shoulders, clavicles, ribs, sternum, vertebral column, pelvis, epipubic bones. (Osteochondroma-type lesions commonly affect the head and pelvis, and less commonly clavicle and ribs.)

Cloaca, Pouch, Scrotum, Penis

Examine the cloaca, pouch, mammary glands (females), scrotum. Note lesions of these structures and also mammary development/presence of lactation. Extrude and examine the penis (by firm application of digital pressure caudo-lateral to the cloaca).

Skin and coat

Examine the skin and coat, noting abnormalities. Note the general coat condition as follows:

Colour:	Light grey	Brown	Dark grey
Structure:	Normal	Sparse	Clumped/irregular
Texture:	Normal	Greasy	Dry

Note the skin as: Normal Abnormal:

Lymph nodes

Peripheral lymph node examination: palpate the following peripheral lymph nodes:

Rostral mandibular (located lateral aspect of the mandible just rostral to the masseter m.)

Facial (sometimes absent) (sit just ventral to the origin of the zygomatic arch)

Mandibular (sit cranio-medial to the submandibular salivary gland)

Superficial cervical (small nodes subcutaneous tissue of ventral neck)

Axillary

Inguinal

Nodal size should be recorded as	Normal (within normal range)
	Enlarged
	Small (barely palpable)

4. Special Examination Techniques

Recommended Routine Procedures

Blood and Bone Marrow Collection

Leukaemia and other disorders of bone marrow are common in koalas. Therefore, examination of blood smears is an essential component of a thorough clinical examination. Examination of smears of bone marrow aspirates is also highly recommended to detect conditions such as a leukaemic leukaemia and some myelodysplastic conditions in which blood smear abnormalities are subtle or undetectable. Some common malignancies of koalas manifest primarily as intra-abdominal disease (eg abdominal lymphoma, mesothelioma), and may not be detectable at general physical examination, hence examination of abdominal tap smears routinely is highly recommended. Cystitis, also common in koalas, may or may not be associated with "dirty tail", so diagnosis of this condition should be based primarily on urinalysis and sediment examination. In summary, the minimum routine clinical pathology data set should include:

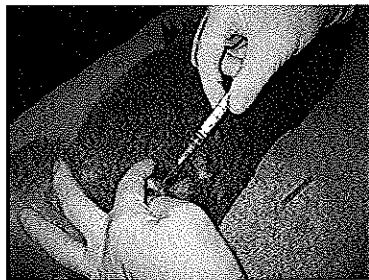
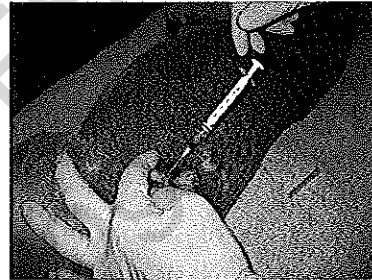
- Blood smear examination
- Packed cell volume (PCV) and total solids (TS) measurement
- Bone marrow smear examination
- Abdominal aspirate examination
- Urinalysis and sediment smear examination

Blood smears should be made immediately after collection of blood, ensuring good smearing technique (gentle) and rapid drying. Stain with Diff-Quick or Giemsa (preferred). Although sending smears to the commercial labs can sometimes be rewarding, often subtle changes (such as myelodysplasia, trypanosomiasis) are overlooked. The koala clinician must develop proficiency in interpretation of blood smears, rather than relying on commercial labs.

Collection of small volumes of blood (up to 5 mls) is generally easily performed using the cephalic vein as in companion animals. Larger volumes are best collected from the femoral vein in the inguinal region. Its general location is found by palpation of the femoral artery

(see photo). As a general rule up to 10% of blood volume (0.7% of body weight) can be safely collected without significant ill effect on the koala (around 50ml from an 8 kg koala).

Bone marrow is collected most easily (and inexpensively) using 18 gauge needle with 2.5ml syringe. The iliac crest is clipped and prepped with alcohol/ alc-sav. The needle is inserted into the end of the iliac crest a short distance only (3-5mm or so) by gentle twisting, and then 0.3-0.5 ml of vacuum applied.



Only allow a flash of marrow to enter the hub of the needle, then release the vacuum and withdraw the needle. If no marrow appears in the hub, gently twist or rock the needle. Immediately make the smear by placing a 3-5 mm drop on a slide, gently place another slide on top and allow to spread for 1 second, then draw very gently apart. Dry immediately, fix and stain with Diff-Quick or Giemsa.

Abdominal fluid is collected by clipping and prepping a small area of the middle of the flank with the koala in lateral recumbancy (see photos). Positioning the needle too far ventrally will increase the chance of entering the caecum/proximal colon. A 25 gauge butterfly catheter attached to a 2.5 ml syringe is used. The needle is very slowly introduced at right-angles to the skin and a small amount of vacuum applied as the needle is very slowly introduced. Do not advance the whole length of the needle in, or it is likely to puncture the large bowel and cause contamination of the sample (This is not a significant health risk). If the needle has been introduced more than 10 mm without success, slowly withdraw partially, and introduce again while applying suction. The butterfly catheter can be tilted down (more parallel with the skin) such that the bevel of the needle is facing down to assist in fluid collection. Careful observation of the initial section of the catheter tubing will allow detection of successful fluid collection. Only a small amount is necessary to make a good smear. If the sample is contaminated with caeco-colic content, get a new catheter and repeat at a slightly different site. As for bone marrow smearing technique: apply a small drop of fluid to the slide, gently place a spreader slide on top, allow to spread for one second, then gently draw the slides apart, air dry and stain.

Ultrasound

Ultrasound is essential for basic assessment of the kidneys, ureters and bladder, the female reproductive tract, and also the male prostate. It may also assist with further investigation of intra-abdominal disease and some other conditions. Routinely, however, it should be used to examine the genitor-urinary systems in both male and female koalas. A 5-9 mHz probe is suitable.

Kidneys are imaged by lying the koala in lateral recumbancy, applying methylated spirits to the fur in the region of the kidney then applying the probe. It is generally not necessary to clip or apply gel to achieve a reasonable image. The following should be noted and recorded:

Kidney L R

Overall structure:	Normal	Abnormal:.....
Parenchyma echo:	Normal	Hyperechoic Hypoechoic
Renal pelvis:	Normal	Dilated
Ureter:	Normal	Dilated
Lesions:	Nil	Present:.....

The koala should be flipped over to image the opposite kidney and ureter.

Kidneys may be affected by diffuse inflammation, scarring, cystic change, infarcts, calculi, dilated renal pelvis and ureters, abscesses, and neoplastic infiltration. Most of these changes are visible using ultrasound.

Bladder is imaged by applying sonographic gel into the pouch of females (not recommended if joey is present), or by applying methylated spirits to the fur just cranial to the scrotum in males. A long 25 gauge needle (30mm or so) with 2.5 ml syringe can be used to aspirate urine using ultrasound guidance. Do not apply vacuum when withdrawing the needle to prevent contamination of the sample with peritoneal fluid, or caeco-colic content (if the needle has passed through the gut).

Female reproductive tract is imaged by applying sonographic gel to the pouch and scanning the tract transversely and sagittally. The paired uteri sit dorsal to the bladder and ventral to the vertebral column. Cystic change or abscesses may affect any part of the reproductive tract from the ovarian bursae to the uteri. Do not confuse a pregnancy or physiological uterine hyperplasia with disease. A pregnancy appears as an oval cyst-like (fluid-filled) dilatation of (usually) a single uterus, and the foetus or embryo may be apparent as a small echogenic structure within the fluid. Physiological hyperplasia is bilateral, symmetrical and appears as a

uniformly mildly echogenic elongated oval dilatation of the uteri. Because the tissue is only mildly echogenic, it can be confused with abscesses or cysts.

Findings should be noted as:

Reproductive tract L R Normal Abnormal:

Male reproductive tract (prostate) is imaged by applying gel or methylated spirits just cranial to the scrotum in the "V" created by the epipubic bones. The probe should be held to give a transverse image of the bladder, then angled into the pelvic canal to provide a transverse image of the prostate gland. Prostatic enlargement by inflammation and/or abscesses is not uncommon.

Urinalysis

Cystitis is common in koalas and may not always be apparent as "dirty tail" or "wet bottom". Examination of urine is therefore recommended as part of a routine veterinary examination. The following should be performed on a urine sample (which is usually collected by ultrasound-guided cystocentesis) and the results recorded:

Dipstick Urinalysis using Combur-9 or similar

USG estimation using a clinical refractometer

Urine sediment examination microscopically: spin the urine in a clinical centrifuge, aspirate the supernatant, and collect the resultant sediment pellet using a fine Chlamydia swab. This is gently rolled onto a clean microscope slide, which is dried, fixed and stained, and then the swab may be used for a Clearview *Chlamydia* antigen test.

Koala Examination Sheet

Koala Name:.....

History and Signalment

Rescuer details:

Name: Affiliation/Group: Contact phone: Email:

Address (optional):

Caller name (if different): Contact phone:

Reason for calling:

Rescue details:

Date of rescue: Time of rescue:

Exact location of details:

Grid ref (if available):

Circumstances of rescue:

Reason for rescue:

Koala In tree On ground In captivity Other.....

Other koala details, history or previous treatments:

Identifying Features:

Is the koala ear tagged? N Y(ear and tag number, type and colour)

Is the koala microchipped? N Y (Microchip number)

Other identifying features:.....

Name given to koala:

Distant examination:

Demeanour: BAR Depressed Excited Moribund

Behaviour: Normal Abnormal:.....

Posture: Normal Abnormal:.....

Gait: Normal Abnormal:.....

Symmetry: Normal Abnormal:.....

Breathing: Normal Shallow Rapid Laboured

Coat: Normal Abnormal:.....

Discharges: Nil Present:.....

Wounds/bleeding: Nil Present:.....

Other lesions: Nil Present:.....

Abdomen fill: Normal Bloated Sunken

General Physical Examination

Vital Signs

HR:..... RR:..... MM: Pink Pale Cyanotic Red CRT:..... SpO₂ Rectal T°:.....

Pulse: Rate:.....

Rhythm: regular occasional arrhythmia frequent/constant arrhythmia

Amplitude: normal increased decreased

Tone: normal increased decreased

Chest auscultation:

Heart:.....

Lungs:.....

Other respiratory findings: Normal Abnormal:.....

Body condition score:/10 Weight: kg

Tooth wear class:..... Estimated age:.....

Coat:

Colour: Light grey Brown Dark grey

Structure: Normal Sparse Clumped/irregular

Texture: Normal Greasy Dry

Other:.....

Skin: Normal Abnormal:.....

Head: Symmetry: Normal Abnormal:.....

Eyes:

Periorbital skin: normal alopecic pigmented

Eyelids: normal other:.....

Palpebral fissure: normal reduced/scarred

Conjunctiva: normal proliferated 1 2 3 other:.....

Nictitating memb: normal prolapsed 1 2

Sclera: normal other:.....

Cornea: normal abnormal:.....

Opacity: clear mild marked

Iris and pupil: normal abnormal:.....

Discharge: nil serous purulent

Koala health assessment project – conditioning recommendation

Compile by Cate Melzer, Principal Conservation Officer, Strategic Services. QPWS

Date - 17 May 2010

sch4p4(6) Personal Information has applied for:

- a permit to take, use, keep or interfere with cultural or natural resources in a protected area (PAM 9a); and
- a scientific purposes permit for animals other than in a protected area (PAM 12).

Key facts:

2. The application seeks approval to undertake extensive health assessment on up to 500 koalas in Queensland over 3 years.
3. Koalas assessed will be captured through a range of approved research projects across Queensland being conducted by researchers other than the applicant.
4. Ethics approval has been received, contingent on the assessment being conducted on Koalas studied as part of an epidemiological assessment. "This project is approved on the basis that collaborating researchers will be including epidemiological analyses and considerations within their approved projects."
5. The Australian Wildlife Hospital assessment procedure (the extended procedure) proposed for this study involves 3 hours under general anaesthetic and involves both bladder and hip bone punctures.
6. DERM Koala veterinarians advise that:
 - a standard Koala health check takes approximately 1 hour under general anaesthetic and does not involve either bladder or hip bone related punctures
 - a literature search found no published examples of the proposed procedure in Koala or similar populations
 - requests to interstate colleagues found no examples of the extended procedure being undertaken currently in interstate populations.
7. The extended procedure is being conducted on relocated Koalas as part of an authorised study being undertaken by sch4p4(6) Personal Information
8. When asked to provide further supporting information the applicant proposed that the use of the proposed procedure is supported by the success of sch4p4(6) Personal Information study, however this research is yet to be concluded and no publications are available.
9. Neither the applicant nor sch4p4(6) Personal Information were able to provide any publications supporting the use of the techniques either on an individual or population level.

Basis for decision (including conditions)

10. The chief executive must have regard to the impact the activities that may have on the conservation of the protected area or native wildlife.

The breadth of the application potentially results in the use of the extended procedure to all monitored koalas in Queensland across multiple populations. However, the extended procedures are as of yet unreported in the literature and the effects of their broad scale application to populations are unknown.

As such it is necessary to implement some controls to protect against the possible damaging effects of the extended procedure until such time as it are either accepted or rejected as acceptable research and/or veterinary practice.

11. The chief executive must have regard to any contribution the applicant proposes to make to the conservation of nature.

The intention of the application is to gather information necessary for the conservation and management of koalas in Queensland. This information will be supplementary to the population monitoring research being conducted and as it may be viewed in the light of that research, may provide additional depth to the ecological information currently being collected.

12. The chief executive must have regard to the precautionary principle.

precautionary principle means the principle that, if there are threats of serious or irreversible environmental damage, lack of full scientific certainty must not be used as a reason for postponing measures to prevent threatening processes.

Statistical verification of the implications of the extended procedures will:

- assist in ensuring that the broad scale application of the extended procedure does not result in harm or disturbance to the koalas populations;
- allow the extended procedure to be verified as acceptable research practice; and
- allow the State wide disease assessment to commence.

Recommendation

13. That the application be granted with the following conditions:

A total of 500 koalas may be processed (inclusive of those processed under both the permit WISP07282410 and s.73 Irrelevant)

Assessments may only be conducted on koala populations being monitored under a current research permit and including an epidemiological component. This permit does not authorise the assessment or collection of biological samples from animals other than those that are part of a population monitored under a research permit.

No more than 50% of koalas captured as part of each research project may be assessed.

The Principal Holder must undertake a review of the effects of the assessment technique on the assessed koala populations, include a statistical comparison of the overt stress, disease and mortality rates between the assessed and unassessed koalas in the monitored populations.

The proportion of koalas assessed may be increased subject to the mid term review of the effects of the assessment techniques of the monitored populations.

The results and findings of the study are to be peer reviewed and published.

	DEEDI Animal Ethics	Form: AE 07
	DECISION of the ANIMAL ETHICS COMMITTEE (AEC)	

1. Applicant details

Name: sch4p4(6) Personal Information		
Organisation: Australia Zoo Wildlife Warriors Worldwide Ltd	Centre:	
Postal Address: 1638 Steve Irwin Way, Beerwah		
Phone: 0754362097	Fax: 0754362066	E-Mail: sch4p4(6) Personal information

2. Project Details

Title of the Project	AEC Proposal Reference Number
<i>Assessment of the impacts of disease in wild koala populations across Queensland using opportunistic health assessment and biological sampling.</i>	CA 2010/02/421 Resubmission

3. AEC Decision

<p>The project proposal has been considered by the AEC and is:</p> <p style="text-align: center;">☒ Approved as submitted [refer comments below]</p> <p><i>Any inquiry regarding this response should be directed to the AEC Coordinator in the first instance. The Coordinator may be contacted via the DEEDI Call Centre on 13 25 23.</i></p>
<p>* Comments/Reasons:</p> <p><i>This project is approved on the basis that collaborating researchers will be including epidemiological analyses and considerations within their approved projects.</i></p>

Period of approval inclusive of the following start and end dates: Approved Start Date: 1 April 2010 Approved End Date: 31 March 2013	Animal type and number approved: <p style="text-align: center;">Koala - 500</p>
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Important information

1. **This approval** is for that work as approved in this decision and only within the start and end dates unless amended by a subsequent AEC decision made in accordance with the requirements of the *Animal Care and Protection Act 2001*, the *Australian code of practice for the care and use of animals for scientific purposes* (refer to 2 b) below).

Any animal use outside this approval will constitute a breach of Section 91 of the *Animal Care and Protection Act 2001* and is subject to a maximum penalty of 300 penalty units or one year's imprisonment.

Unless otherwise stated, this approval applies only to work conducted within Queensland.

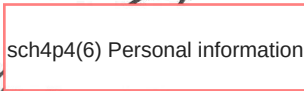
2. **The AEC requires the Applicant to:**

- a) ensure compliance by all investigators with all conditions set out in this decision in addition to the general requirements of the *Animal Care and Protection Act 2001*, the *Australian code of practice for the care and use of animals for scientific purposes* and all other relevant Commonwealth and State legislation.
- b) submit an Amendment Request (Form AE 08) for any proposed change to a project approval prior to that change being implemented (refer to Procedural Guideline 04);
- c) report any unexpected or adverse event that impacts on the welfare of any animal used in this project (refer to Procedural Guideline 03);
- d) submit Annual Progress Reports (Form AE 10) during February of each year; and
- e) submit a Project Completion Advice (Form AE 09) upon completion of this project.

3. **Endorsement:** Approval of your project proposal/amendment request by the AEC is not an endorsement of the project by either the Department of Employment, Economic Development and Innovation or the Queensland Government and is not an endorsement of the Applicant, its products or its processes generally by the AEC, Department of Employment, Economic Development and Innovation or the Queensland Government and no one should assert any such endorsement.

4. **Correspondence:** All correspondence with the AEC in relation to this project should be via email to your AEC contact and cite the name of the Applicant, title of the project and the AEC Proposal Reference Number.

5. **Grievance:** If the Applicant feels that the AEC has erred in its decision regarding any aspect of the project, the Applicant can instigate a grievance procedure (refer to Procedural Guideline 02).

Name of AEC	Community Access
Name of AEC Chair	Geoff Smith
Signature	 sch4p4(6) Personal information
Date of Decision	29 March 2010

FILE NOTE 28 MAY 2010

sch4p4(6) Personal Information called at 10.30am on 28 May 2010.

sch4p4(6) Personal Information questions were – why did it take so long?
How are the assessors chosen for each application?
Who came up with the 50%?

My response was, the length of time was due to the to-ing and fro-ing of seeking extra information and waiting for responses. I explained that Cate was only new to the role and was being particularly careful with all SPPs before signing them. I explained that several permits took longer than usual as Cate needed to understand all of the processes before she signed anything or progressed it. (Ethics was received on 7 April, and further information was requested so we were still within our statutory timeframes)

I explained that for koala permits, the assessments were done by the Koala Conservation Unit, SPPAC as koalas are an iconic species, Park Management for any protected areas and regional contacts for non-protected areas.

I couldn't tell him who came up with the 50% as the file was in Brisbane. However, I did comment that whether I agreed or disagreed with the condition, I felt it could have been worded differently as 50% of an unknown number is difficult to calculate or even guess.

During the discussion I explained that Paul Sharpe was my Manager and that Anne Greentree was our Director and that Anne would be conducting an internal review. I gave him Anne's name and number as requested.

**DEPARTMENT OF ENVIRONMENT
AND RESOURCE MANAGEMENT**
SCIENTIFIC PURPOSES PERMITS APPLICATION

PROJECT ASSESSMENT

APPLICATION DETAILS

Applicant Name : Australia Zoo Wildlife Warriors Worldwide Ltd

Project Title : Investigation of koala health in wild populations in Queensland

File Reference : TWB4906

Completion Date : 2013

Permit Processing Officer : Jacqui Brock

Referral Officer : **Laura Harland – Northern Region**
Lee-Ann Toon – Central Region

Referral Date : 31 March 2010

Deadline for Assessment : Would you please arrange for an assessment to be conducted on the attached application form. **Please provide response by 4 May 2010.**
Please advise if you cannot respond by the due date as a nil response will be taken as "no objection".

PROJECT ASSESSMENT

Please provide a statement of evidence to support any negative response.

Question		Response
1.	Is the project likely to have an adverse impact on rare or threatened species or threatened ecosystems?	No
The intention of the project is to reduce the threat to koalas (classed as <i>Vulnerable</i> within the southeast Queensland bioregion under the NCA) by providing better information on disease impacts.		
2.	Is the project likely to cause inappropriate damage to an ecosystem?	No
Koalas will be returned to the wild unless they are unlikely to survive anyway.		
3.	Is the project considered to be ecologically sustainable?	Yes
The intention is to improve the sustainability of koala populations by providing better information on disease impacts.		
4.	Is the scientific purpose of the project legitimate?	Yes
While urbanization and habitat loss is the primary cause of koala decline, the interaction between these stressors and disease prevalence needs to be better understood.		

5.	Is it reasonably necessary for the research to be conducted?	Yes
Disease prevalence in koalas can significantly alter the sustainability of even protected populations. Understanding koala disease processes can potentially lead to reduced conservation threat to some populations.		
6.	Does any plan, regulation or agreement prevent the issue of the permit?	No
No impediments known. All animals examined will have been captured for other approved reasons.		
7.	Is the project likely to impact any approved program of work?	No
None known. All animals examined will have been captured for other approved reasons, so any impacts should have been identified by the collaborating researcher.		
8.	If the project includes species of cultural significance or relates to cultural resources of significance to a community or group of aboriginal people or Torres Strait Islanders particularly concerned with the land where the resource is to be taken, are there any objections to the issuance of the permit?	No
None known. All animals examined will have been captured for other approved reasons, so any impacts should have been identified by the collaborating researcher.		
9.	Are community attitudes to the project likely to be adverse?	No
Community concern about koala decline is high. Most reasonable people would support a project that aims to improve the conservation outcome for this species.		

ASSESSMENT RESULT

Recommendation: (please tick)	☒ Approved ☐ Conditional Approval (list conditions below) ☐ Refusal (list reasons below)
Comments/conditions: The veterinary procedures involved in the proposed full health assessments of each koala are comprehensive and often quite invasive (such as bone marrow aspiration). Despite the use of anaesthesia, such procedures involve their own imposition of stress on the animals, and are in addition to the stresses imposed by the initial capture and processing by the collaborating researchers. There is thus a <i>possibility</i> that the health assessment process itself may lead to significantly reduced health outcomes for captured koalas. I thus strongly recommend that consideration be given to initially assessing only a randomly selected 50% sample of tagged koalas, so that final survival outcomes for the 'assessed' group may be statistically compared with the 'non-assessed' control group.	

ASSESSING OFFICER DETAILS

Assessing Officer :	Russell Best
Signature (not required if sending by email)	
Date :	9/04/2010

Please email this form back to Jacqui Brock (jacqui.brock@derm.qld.gov.au)

or fax to 4699 4366.

Thank you for your assistance.

Permit¹

This permit is issued under the following legislation:
S12(E) Nature Conservation (Administration) Regulation 2006

Scientific Purposes Permit

Permit number: WISP07282410

Valid from: 20-MAY-2010 to 19-MAY-2013

Parties to the Permit

Role	Name	Address
Principal Holder	Australia Zoo Wildlife Warriors Worldwide Ltd (t/a Wildlife Warriors Ecological Services Unit) ABN 13102721513	1638 Steve Irwin Way BEERWAH QLD 4519
Person In Charge	sch4p4(6) Personal Information	sch4p4(6) Personal information

Permitted Location Activity Details

Location (s)	Activity (s)
Non Protected Areas - Queensland	Research on non-protected areas for scientific purposes

¹ Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation administered by the Environmental Protection Agency and the Queensland Parks and Wildlife Service.

Permit Details

Species Details

Location		Activity	
Non Protected Areas - Queensland		Research on non-protected areas for scientific purposes	
Common Name	Scientific Name	Category	Quantity
koala	Phascolarctos cinereus	Live	500 Animal/s

Conditions of Approval

Agency Interest: Biodiversity

- PB1 Permission must be obtained from the landholder prior to commencing activities on freehold/leasehold land.
- PB2 Prior to commencement of activities detailed in the application, the Principal Holder must advise Queensland Parks and Wildlife Service, Toowoomba of dates and locations of such surveys; the name of the collaborating researcher and Educational Institution and the current permit number under which the researcher is working. This information can be provided by email to sppreport.southern@derm.qld.gov.au or to the Project Officer (Scientific Permits) on (07) 4699 4366.
- PB3 Unless specified, all practices and procedures undertaken pursuant to this permit are to be in accordance with those details contained in and attached to the Application for a Scientific Purposes Permit signed by the Person in Charge on 15 February 2010.

Any mortality during capture or subsequent handling is to be reported immediately to the Project Officer (Scientific Permits), Queensland Parks and Wildlife Service, Toowoomba. The Queensland Museum has first refusal of any material resulting from mortality.

A total of 500 koalas may be processed inclusive of those processed under permit

s.73 Irrelevant

Assessments may only be conducted on koala populations being monitored under a current research permit which includes an epidemiological component.

No more that 50% of koalas captured as part of each research project may be assessed.

The Principal Holder must undertake a review of the effects of the assessment technique on the assessed koala populations; include a statistical comparison of the overt stress, disease and mortality rates between the assessed and unassessed koalas in the monitored populations.

The results and findings of the study are to be peer reviewed and published as agreed by the applicant per email dated 22 April 2010.

This permit is issued subject to the Principal Holder holding the current approval of a registered animal ethics committee.

- PB4. This permit (or a copy plus proof of identity of the permit holder) must be carried while engaged in any activity authorised by the permit.

The following persons while under the direction of the Principal Holder are authorised under this permit:

sch4p4(6) Personal information Glass House Mountains, Queensland
sch4p4(6) Personal information Noosa, Queensland.

Assistants authorised by the Person in Charge must carry a copy of this permit endorsed by the Person in Charge showing their full name and address. Assistants must also carry photo identification such as a Drivers Licence.

The Principal Holder must notify the Project Officer (Scientific Permits) Toowoomba, of any additional collectors or assistants authorised by the Permit Holder.

- PB5. Environmental impact is to be kept to a minimum.
- PB6. Procedures authorised by this permit must be conducted away from public view where possible.
- PB7. The Principal Holder must not engage in the activity authorised by this permit for any commercial purpose.
- PB8. A return of operations (Wildlife Data Return and Report) must be submitted on the standard reporting forms:
- within 10 business days of the anniversary date of the permit each year the permit is in force;
and
- within 10 business days of the expiry date.

The return is to show numbers of specimens of each species, the type of habitat and specific locality or localities where they were collected. This information is to be supplied to the Project Officer (Scientific Permits), Queensland Parks and Wildlife Service, Toowoomba or electronically to SPPreport.southern@derm.qld.gov.au.

A copy of any resulting publication from this research is to be provided to the Project Officer (Scientific Permits), Queensland Parks and Wildlife Service, PO Box 731 Toowoomba or electronically to SPPreport.southern@derm.qld.gov.au.

sch4p4(6) Personal information

Signed

Paul Sharpe
Delegate
Environmental Protection Agency

Published on DES
Disclosure Log
RTI Act 2009

