**About this form**

Your application to the Animal Ethics Committee **must include** an Application Cover Sheet and either a Research Application or a Teaching Application. Other documentation may be required as set out in the Application Cover Sheet.

Please use this form to provide details of your animal research proposal.

1. Background, Summary and Rationale

It is very important that you provide all the relevant information and answer these questions as fully as possible. An obligation to respect animals underpins the Code bringing with it a responsibility to ensure that the care and use of animals for scientific purposes is ethically acceptable, balancing whether the potential effects on the wellbeing of the animals involved is justified by the potential benefits to humans, animals, or the environment. When completing the questions also consider how the project may bring to society a constructive and beneficial contribution.

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| Project overview: What you intend to achieve, in lay language. |
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| Background to the experiment / introduction (relevant literature reviewed). |
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| Rationale and justification for the use of live animals, the species, and the number of animals used. |
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### 1.2 Re-use of Animals

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| Does the project involve the use of animals – or utilise survey sites – that have been the subject or location of a previous experiment? | Unknown  No  Yes |
| If yes, what was previously done to these animals or survey sites? Include justification for reuse. | |
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### 1.3 Previous Versions of the Application or Research

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| Does the project replicate or repeat previous experiments? | Yes  No |

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| Previous experiment type. | Repeat of a previously conducted project  Continuation of an expired project  Continuation of an existing project that has been significantly revised  Follow up study to a pilot study  Not applicable to this project |
| If this is a **repeat, continuation or follow up**, please explain why, and provide the AEC reference/protocol number and title of the previous project. | |
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| Provide a summary (suggested word limit of 150 words) of the outcomes of the previous project. | |
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| Is the project a continuation of prior work conducted by any of the listed investigators? | Yes  No |
| If answer is yes, list up to five (5) of the most relevant publications/presentations. Provide the full reference. | |
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1. Methods and Ethical Considerations

Russell and Burch’s principles of Replacement, Reduction and Refinement (commonly referred to as the 3Rs) provide a systematic framework to achieve the goal of humane experimental techniques.

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| This section provides the opportunity to demonstrate how your proposed project satisfies the 3Rs. This section is essential to the AEC’s deliberations. |

Replacement: Where possible, to use non-animal alternatives e.g., computer modelling, cell/tissue culture. If it is not possible to avoid animal use, is it possible to substitute a species considered less able to experience pain/suffering according to current knowledge e.g., invertebrates replacing vertebrates, and still satisfy the intended research aims and objectives?

Reduction: To reduce the number of animals used to the minimum required to achieve statistically valid outcomes. This includes ensuring that experiments do not have to be replicated due to poor experimental design. Other considerations include maximizing the information derived from each animal, or cohort, without compromising animal welfare.

Refinement: To ensure that the procedures involved minimize negative impacts on animal welfare, including pain and distress. It includes promoting positive welfare for the animals from birth to death. Animals with compromised wellbeing have disturbed behaviour, physiology and immunology that can lead to unreliable conclusions and/or unwanted variation in scientific output, affecting the reliability and reproducibility of studies. Specific areas include, but are not limited to analgesia, anaesthesia, good husbandry, and environmental enrichment.

* Directly outline what consideration has been given to each of the 3Rs (Replacement, Reduction and Refinement) in developing this project.
* Include details of any non-animal alternatives that have been considered, and justification for declining their use.

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| Demonstrate how the principles of replacement, reduction and refinement have been considered and applied in this project. |
| [include as much text as required] |

### 2.1 Summary of the Research Plan – the What and the Why

This summary should:

* Include details of experimental design, procedures involved, sequence of events and applicable SOPs. If your project involves the use of university owned horses, please state that you will be following ‘*SOP6.1 Equine Cumulative use measurement*’ and use the SOP to provide the AEC with the expected impact score for each of your proposed activities on horses, this could be presented in the form of a table.
* For wildlife projects please consult the [Animal Research Review Panel Guideline 10 - Wildlife Surveys.](https://www.dpi.nsw.gov.au/dpi/animals/animal-ethics-infolink/arrp-policies,-guidelines-and-factsheets/wildlife-research/wildlife-surveys)
* Identify factors likely to cause pain, suffering or lasting harm. Provide justification for their usage and measures taken to minimize harm and ensure the animals welfare.
* Identify if you intend to use industry/farming/commercial standards of husbandry or welfare as these are not automatically acceptable standards for research animals. Commercial standards of care must be justified in relation to the research aims.

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| Address the points above in this section |
| [include as much text as required] |

### 2.2 Animal Housing Design

Standards of animal housing and management can have a significant impact on animal well-being and thus on experimental results. It is therefore important that a full description of housing is provided.

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| Have you provided the housing location details for all housing locations, in your coversheet? | Yes  No |
| Location 1: <e.g., Equine Centre> |  |
| Describe the type of housing that will be provided along with dimensions, bedding, and substrate. If housing will change during the project, ensure this is clearly explained. If housing is not in accord with current best practice, this must be specifically justified. | |
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| What is the maximum and minimum number of animals per enclosure, ie cage/pen/paddock/tank? |  |
| Will animals be individually housed? | Yes  No |
| What and how often will the animal/s be fed? |  |
| What is the feeding method? |  |
| If this is a non-standard diet, explain why and any potential welfare implications |  |
| How is water provided? |  |

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| Describe the environmental enrichment that will be provided? If enrichment is not to be provided in accord with current best practice, this must be specifically justified. |
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| Noting that industry/commercial standards of animal care and welfare are not automatically acceptable standards for research animals, provide justification for the need to apply these standards in order to achieve the research aims (if applicable). |
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| List any other husbandry procedures that may be required during the project (e.g., hoof trimming). |
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| Does the project involve the transport of animals? | Yes  No |
| If yes, describe how animals will be transported, over what period, and what precautions will be taken against cold/heat/stress, etc | |
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### 2.3 Monitoring

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| Daily monitoring of animals is required under the Code. The level of monitoring required will vary according to the type of research and animals used. Please document animal monitoring and attach the required monitoring sheets to this application.  If anaesthesia and/or surgery are part of this proposal, include copies of the anaesthetic monitoring sheets If working with wildlife that is remaining in the wild, complete section 3. | | |
| How will animals be identified? |  | |
| Which member/s of the team will be responsible for daily monitoring of the animals? |  | |
| Which member/s of the team will be responsible for monitoring the animals at night, on weekends and holidays? |  | |
| What method/s will be used to monitor the animals and what will be checked e.g., food, water, and behaviour? | | |
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| Provide details of the method and frequency of animal monitoring to be conducted: | | |
| 1. Before the experimental procedure/s | |  |
| 1. During the experimental procedure/s | |  |
| 1. After the experimental procedure/s | |  |

### 2.4 Student Volunteers

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| Will any students be undertaking supervised procedures, husbandry and/or monitoring activities? | Yes  No |

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| Will any students be undertaking unsupervised procedures, husbandry and/or monitoring activities? | Yes  No |
| If yes, please list tasks that they will be involved in, and how you will assess competency. Indicate experience of the instructor in the application of these techniques. Please also note that a full list of participants must be provided as part of your Annual and End of Project reports. | |
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### 2.5 Risk Management

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| Identify risks to animal management which may arise during this project, e.g., adverse weather, power outage, trap injury etc. In the case of wildlife research there are more questions to answer on this topic in section 3. |
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| Explain what will be done if an animal health/welfare issue is identified? |
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| List the criteria for intervention, treatment, or withdrawal of the animals. |
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| It may be necessary to euthanise animals on welfare grounds, as opposed to euthanasia as an integral part of the project. If euthanasia is performed on welfare grounds, how will this be done, and by whom? |
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| Who is responsible for the management of emergencies and how will you ensure they can be contacted? |
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| Which practice/veterinarian will provide veterinary services, including in the field for wildlife projects?  I have spoken to them, and they have agreed to provide services for this project  I have funding available for WWVH if emergency/out of hours are required | |
| Veterinarian Name |  |
| Registration Number |  |
| Contact Email |  |
| Contact Phone |  |

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| In the event of an unforeseen incident that requires euthanasia of an animal, please note that in signing this application, the Chief Investigator confirms that the procedure will be carried out humanely by a registered veterinarian. If a registered veterinarian is unavailable, the proposed alternative is set out below. | |
| Proposed Alternative. |  |
| How will death be confirmed? |  |
| What material (if any) is to be collected? |  |
| Describe steps to be taken to ensure the health and safety of surviving animals | |
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**2.5.1** **Foreshadowed Adverse Events**

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| If applicable, please outline any expected non-experimental morbidity and mortality that may occur during this project (e.g., death of lambs). Please include, where applicable, descriptions of each condition, expected maximum rates (%) of animals that may be affected and the anticipated impacts on animal wellbeing and how these will be addressed/minimised. If you do not foreshadow adverse events, then all adverse events will be treated as unexpected and must be reported promptly. If the AEC approves these foreshadowed events, then you are not required to complete an unexpected adverse event form, but all adverse events must still be reported in the annual and end of project reports. |
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**2.5.2 Administration of Substances or Compounds**

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| If the project involves the administration of substances or compounds (including medications, anaesthetic agents, and experimental compounds), specify the details of the compounds/substances to be administered. This is not required for routine medications/treatments.  Include name, concentration, dose rate, preparation of substance (sterility, vehicle, any testing for purity/contamination etc), route of administration, needle size (if applicable), frequency and timing of administration. | |
| Generic name and concentration (on packaging) |  |
| Reason for use |  |
| Dose rate to be used (mg/kg) |  |
| Concentration to be used (mg/ml) |  |
| Total dose to be given (mg/ml) |  |
| Frequency/timing to be administered |  |
| Route of administration |  |
| Needle size to be used (if applicable) |  |

**2.5.3 Special Ethical Considerations (if applicable)**

Special ethical considerations arise when the conditions necessary to minimise pain and distress cannot be met because of the project design and/or outcomes. Some examples include (this is not an exhaustive list):

Keeping social animals in isolation for prolonged periods, death as an endpoint, studies where pain is expected but cannot be remitted partially or at all, the re-use of animals in high impact sequential studies, the use of GMOs with serious physical/physiological limitations.

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| Are there any aspects of the project that raise special ethical considerations? Please explain how you have addressed the special ethical considerations. |
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**2.5.4 Image Capture**

Image capture, on occasion, has the capacity to have some negative welfare impacts on animals. Examples where image capture methods might have this effect, include:

* the need to focus direct attention on the animal longer than it finds comfortable (e.g., dogs and cats)
* the need to prolong an aspect of the procedure for the purposes of capturing the images e.g., images of surgical procedures might involve slightly prolonging anaesthetic.
* the need to alter the procedure to maximise the quality of the images e.g., holding a sheep for longer than normal, or in a position that otherwise would not be adopted.
* Note that an Image Release may be required from the owner of the animal being photographed or video recorded

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| If you are capturing images of procedures or animals during the project (e.g., photos, video or streaming), what steps have you taken to minimise any anticipated negative animal welfare impacts arising from the image capture methods?  Please ensure you follow the [‘Guidelines on the use of animal images by Charles Sturt University’](https://cdn.csu.edu.au/__data/assets/pdf_file/0011/4255949/Guidelines-on-the-use-of-animal-images.pdf) |
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### 2.6 Fate of Animals, including Rehoming

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| What is the fate of the animals when the project is completed? Select all that apply. Refer to clause 3.4 of the “[*Australian code for the care and use of animals for scientific purposes*](https://www.nhmrc.gov.au/about-us/publications/australian-code-care-and-use-animals-scientific-purposes)*”.* | Return to normal husbandry conditions or natural habitat  Re-use  Tissue or voucher specimen collection/sharing  Rehoming  Euthanasia (humane killing)  Other (please specify) |
| Other: | |

**2.6.1 Tissue or Voucher Specimen Collection / Sharing**

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| Which tissues or biological materials will be available to be shared, and how will this be facilitated? If you will not be sharing tissues, please explain why this is not practicable. For voucher specimen collection please complete additional questions in section 3. |
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**2.6.2 Rehoming**

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| If animals can be rehomed according to the University [rehoming procedure](https://policy.csu.edu.au/document/view-current.php?id=438), please describe when and how this is expected to occur. If animals are unable to be rehomed, please justify |
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**2.6.3 Euthanasia**

Complete this section if ***Euthanasia (humane killing)*** was selected as an applicable fate. Please also specify whether a secondary method of euthanasia will be available and how death will be confirmed.

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| What method of euthanasia will be used? |
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| Where will euthanasia be performed? How will death be confirmed? |
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| Who will perform the euthanasia? *(Ensure that this person is listed as a member of the project team and signs the cover sheet).* |
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| What training and experience do they have in the euthanasia methods used? |
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**2.6.4 Animal Remains Disposal Details (if applicable)**

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| Will animal remains require disposal as part of this project? | Yes  No |
| If animal remains will require disposal at any point in this project, please list the method of disposal and type of remains disposed. | |
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| Facility Name |  |
| Address |  |
| Contact Email |  |
| Contact Phone |  |

1. Additional Wildlife Questions

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| If your application includes wildlife, please ensure you complete this section. |

### 3.1 Capturing Wildlife

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| If animals are to be captured, explain why this is necessary. What alternatives to capturing animals have been considered and why are these not appropriate? |
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| Will the methods described in the [NSW Department of Primary Industries Animal Research Review Panel Guideline 10](https://www.dpi.nsw.gov.au/dpi/animals/animal-ethics-infolink/arrp-policies,-guidelines-and-factsheets/wildlife-research/wildlife-surveys) on wildlife surveys be followed to minimise impact on animals? | Yes  No |
| If no, give a detailed justification and explanation | |
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| How many traps will be set and over what period? |
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| What traps will be used? Provide a detailed description (including dimensions) of any traps, nets and how they will be used. If using Mist Nets, please provide details of experience and training in use. If Pitfall Traps are to be used, the [Guidelines for the Use of Pitfall Traps by NSW DPI](https://www.dpi.nsw.gov.au/dpi/animals/animal-ethics-infolink/arrp-policies,-guidelines-and-factsheets/wildlife-research/pitfall-traps) must be followed. Attach diagrams or photographs as relevant. |
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| How will traps or nets be identified, and their locations recorded? |
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| How will animals be individually (or group) identified? E.g., temporary, or permanent mark, identifying features. |
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| How will you identify and monitor the number of times an individual is trapped/caught? |
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| How often and at what times will traps be checked and/or cleared? |
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| How will traps or nets be inactivated when not in use and deactivated when no longer required? |
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**3.1.2 Wildlife Risk Management**

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| How will distress, death or predation of trapped animals be minimised? |
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| How will the potential impact on dependent young be minimised (if applicable)? |
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| What will happen to any non-target species captured during this project (feral animals, pest species etc)? |
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| Describe any other methods to be used for capture. |
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| What precautions will be taken in the event of adverse weather? |
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| How will animals be handled or restrained (if applicable)? |
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| What, if any, adverse events will there be on the animals in relation to all the procedures you will carry out? |
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| If invasive methods are to be used, how will pain/distress be minimised? |
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### 3.2 Wildlife Monitoring

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| Will any radio-tracking collars or other radio-tracking equipment be used? | Yes  No |
| If yes, describe what equipment will be used on the animal, how it will be attached, how much the equipment weighs and the impact on the animal? As well as how the equipment will be retrieved? | |
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| How will the animals be monitored during capture, handling and post-release? |
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### 3.3 Sample Collection

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| Will samples (milk, scales etc.) be taken? | Yes  No |
| If yes, give details | |
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| Will voucher specimens be taken? | Yes  No |
| If yes, provide justification for the taking and the number of specimens. | |
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| Where will the specimens be lodged? |
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| Will the [NSW Government Animal Research Review Panel Guideline 5 on the ‘Collection of voucher specimens’](https://www.dpi.nsw.gov.au/dpi/animals/animal-ethics-infolink/arrp-policies,-guidelines-and-factsheets/wildlife-research/voucher-specimens) be followed? | Yes  No |
| If no, provide a detailed justification and explanation | |
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