UNIVERSITY OF WAIKATO ANIMAL ETHICS COMMITTEE

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

Protocol Number:

APPLICATION COVER SHEET

Project Details (Do not use acronyms)	
Full Protocol Title: Suboptimal choice in the Brushtail Possum	
Name of Primary Applicant: Stephanie Bremner	
Faculty/School/Department: School of Psychology	
Expected start date: 20 June 2015	**Expected completion date**: 20 June 2016
Animals species: Possums (common name)	**Number to be used over entire project:** 6
Impact Level: A - No impact (E.g. No impact , Little impact, Moderate impact. See Q 6 Animal Use Statistics Form – Appendix 1):	

Type of Application (Can tick more than one box):	☑ Research ☐ Teaching ☐ Other (Specify)	☑ Part of research thesis

Standard Operating Procedures:	☑ No ☐ Yes: SOP Number/ Title: Was the application approved ☐ No ☐ Yes

Other AEC approval:	Has this application been submitted any other AEC for approval ☑ No ☐ Yes (Specify Committee) Details:

Funding support:	Is this research part of a funding grant either received or pending ☑ No ☐ Yes (Specify funding source) Details:

OFFICE USE ONLY	***Protocol Number:***
This proposal is approved for the period:	
From: 30/6/15	**To:** 30/6/16
Signature AEC Chair:	**Date:** 30/6/15

All research involving the use of animals must comply with the *Animal Welfare Act (1999)* and the University of Waikato Code of Ethical Conduct for the Use of Animals in Teaching and Research.

Please submit this form to the Animal Ethics Committee, Research Office, B Block, University of Waikato or email animal.ethics@waikato.ac.nz

APPLICATION

Section1: Personnel Information

1.1 PRIMARY APPLICANT (Researcher or student undertaking thesis)	
Title, first name, last name: Stephanie Bremner	
Qualifications: BSocSc majoring in Psychology (Hons)	
Institutional mailing address: Private Bag 3105, Hamilton 3240	
Email: sbremner93@hotmail.com	**Phone:** 0276364221
Please detail the relevant experience you have (including the number of years) in the procedures/techniques to be used in this project.	
Previous experience working with hens in PSYC314 in 2013, and I completed my Honours dissertation working with possums at No 3 Dairy in 2014.	

1.2 CHIEF SUPERVISOR (WHEN APPLICABLE) TO BE COMPLETED BY THE STUDENT'S SUPERVISOR (IT IS EXPECTED THAT THE SUPERVISOR WILL ASSIST THE STUDENT WITH THE DEVELOPMENT OF THIS APPLICATION)	
Title, first name, last name Dr James McEwan	
Qualifications: PhD(Waikato)	
Mailing address: School of Psychology, University of Waikato, Private Bag 3105, Hamilton 3240	
Email: jmcewan@waikato.ac.nz	**Phone:** Phone: +64 7 838 4466 extn. 8295
What is your Role in this project?	
Supervisor – I will assist the student in planning their research project, data analysis, and in the preparation of their thesis. I will also monitor the student progress and the health of animals, and state of the experiment during weekly meetings. I will not be assisting with the day-to-day handling of animals or data collection.	
Please detail the relevant experience you have (including the number of years) in the procedures/techniques to be used in this project.	
Dr McEwan has over 24 years' experience conducting research with non-human animals.	

1.3 OTHER PERSONNEL CONTACT DETAILS MUST ALWAYS BE PROVIDED
(Indicate which personnel are handling and which are watching)

Title, First Name, Last Name	Qualification	Contact details	Role in Project
Ali Cullum	BSc (Hons), BVM&S, MACVSc (Avian Health)	027 288 3068	Veterinarian to the Project
Jenny Chandler	BSc, MAScTA	07 838 5568	Animal technician
PhD and Masters students	Completing PhDs and Masters thesis	07 838 5568	Running the experiment/animal husbandry (feeding and weighing the possums)

Section 2: Project Description

2.1 LAY SUMMARY OF OVERALL PROJECT (one paragraph)

(To be written in terms that people with a non-scientific background will understand)

Survival instincts, in theory, should cause animals to choose optimal (larger, or more likely) access to food when presented with optimal and sub-optimal choices. Much literature, however, states that animals and humans often choose sub-optimally.

Pigeons and hens have been found to prefer lower, but more certain probabilities of reinforcement over higher, more unpredictable probabilities. That is, they are choosing sub-optimally. Sub-optimal choice appears to be a trade-off between losing food, and certainty of reinforcement.

Much research on sub-optimal choice has been conducted with pigeons, with some literature focusing on humans and dogs. This project will investigate the effects of optimal and sub-optimal choice presentation on possums.

2.2 AIM OF THE PROJECT

(Brief and written in terms that people with a non-scientific background will understand)

Two studies are currently underway at No. 3 Dairy investigating sub-optimal choice in possums. Currently, the possums are responding optimally, which does not correspond with sub-optimal literature involving hens, pigeons, rats, dogs, and humans.

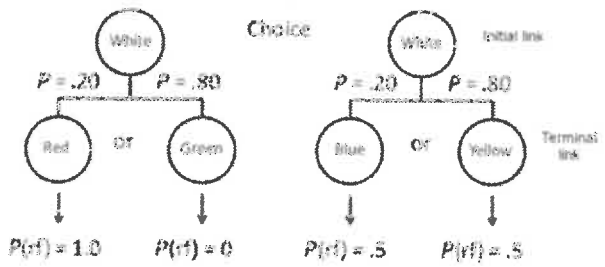
Literature focusing on the Allias paradox states that reducing the terminal link duration (time between trials) by more than half, has been found to produce switches in responding from sub-optimal to optimal. As the current studies have found optimal responding in possums, the terminal link length in this project will be both halved, and doubled to examine whether switching from optimal to sub-optimal will occur as a result of halving the terminal link duration, or whether the switching that occurs is only from sub-optimal to optimal following a decrease in terminal link.

This experiment aims to examine whether the findings of these current studies are replicable, or whether manipulating variables such as the terminal link duration will have an effect on choice.

2.3. BACKGROUND

(Include a short review of previous relevant studies in this area and references where appropriate)

Previous informal research conducted at No. 3 Dairy has indicated that possums have the ability to discriminate between blue and yellow stimulus lights. Ngatai (2013) replicated part A and B of Stagner and Zentall's (2010) experiment with hens, and found the same sub-optimal responding patterns. As shown in the figure below, Stagner and Zentall (2010) presented pigeons with two choice alternatives. The pigeons were required to peck a centre key initiating the trial, followed by a choice of pecking the left or right key, which had different probabilities of reinforcement. On the left key, the pigeons had a 20% chance of getting a red stimulus which resulted in reinforcement 100% of the time, and an 80% chance of getting a green stimulus which resulted in no reinforcement. Stagner and Zentall (2010) found that the pigeons preferred the low probability, but certain reinforcement alternative.



Ngatai (2013) used blue, yellow, green and red stimulus lights have been. However, Thomas and Maddigan (2004) suggest that because possums have dichromatic (two-colour) vision, they have trouble distinguishing between mid to long wavelength colours. This means that they are unlikely to be able to discriminate between green and yellow (both mid wavelength colours. Signal (2002) found that possums were able to discriminate between constant and flickering stimulus lights.

Zentall and Stagner (2011b) found that reducing the terminal link by more than half resulted in pigeons switching from choosing the low probability alternative to the high probability alternative (Allias paradox). This experiment will investigate the Allias paradox. Possums in two current studies investigating sub-optimal choice at No. 3 Dairy are responding optimally. This experiment aims to examine whether switching following a decrease in terminal link length occurs regardless of current choice (optimal or sub-optimal), or whether a shorter terminal link results in optimal choice and a longer terminal link results in suboptimal choice. To do this, the initial terminal link (10 seconds) will be both more than halved, and more than doubled.

2.4 JUSTIFICATION FOR THE PROJECT

a. What are the potential benefits of the research – to humans, other animals, or the environment?

This experiment will test whether variable manipulation will result in replication of sub-optimal choices, as has been observed in the literature with animals and humans, or whether the findings will remain consistent with the current sub-optimal projects at No. 3 Dairy.

b. How will the results of this work be disseminated?

Masters thesis and presentations at conferences or publication if applicable.

2.5 DESCRIPTION OF PROCEDURES

(Detailed description of all procedures)

What will happen to the live animals? Give a step-by-step description of all procedures to be carried out on each group of animals. The use of your own flowchart, table or "research design" figure is recommended for complex experiments.

Each possum will be individually housed in an open wire cage at No 3. Dairy. Each cage has a nesting box on top of the cage to which the possum has constant access. The room that houses these cages is on a reverse 12/12 hour light cycle (light between approx. 9pm and 9am, and dark between approx. 9am and 9pm). During the dark cycle, red light is available for experimenters to see when in the possum room. This light does not disturb the possums. Possums are weighed weekly and are maintained at a pre-determined weight to both ensure good health and motivation to respond. Possums receive a barley and cocoa pop mix as reinforcement, and are given supplemental pellets, dock leaves, and apple or carrot daily within an hour after each experimental session. The amount of supplemental food that each possum receives is dependent upon their current weight relative to their target weight, and how many reinforcers they receive during the experimental session.

Thomas and Maddigan's (2004) research suggests that possums are unlikely to discriminate between red and green, and Signal's (2002) research showed that possums can discriminate between constant and flickering discriminative stimuli. For these reasons, this project will use blue and yellow LED lights as discriminative stimuli, both constant and flickering as the four discriminative stimuli.

The first part of this project will be examining whether possums are capable of forced choice responding to these stimuli using a "follow the light" procedure, which requires responding on a central lever to begin the trial, and then responding on the lever with the discriminative stimulus. Each correct response will be reinforced. The reinforcer used will be extruded maize. Following successful completion of forced choice training, the discrimination procedure will begin. The initial procedure will contain equal probability of getting a certain stimulus on both levers (50%). Reinforcement probability will also be 50%, therefore reinforcement will be provided on 50% of these trials. This condition will help to identify any response biases.

Several conditions will then manipulate reinforcement probability (50%-100), stimulus probability (20% to 80%), and terminal link length (4s, 10s, and 25s – lower values 60% smaller than the next largest value), with one variable being manipulated at a time per condition.

2.6 DATA COLLECTED AND PROPOSED STATISTICAL ANALYSIS

(Give a clear description of the design of the experiment. Describe the statistical approach that will be used and evidence that the approach can yield answers to the proposed research question.)

This study will be a repeated measures design. The main dependent variables will be the response rate, and the proportion of choice allocated to each alternative. Analysis will be conducted using appropriate inferential and descriptive statistics.

2.7 ADDRESSING THE THREE Rs

Replacement, Reduction and Refinement (or the "Three Rs") are the cornerstone for ethical use of animals in research, testing and teaching.

(Please complete all three sections – one to two sentences per section)

2.7.1 Replacement (what alternatives to animal use have you considered e.g. computer modelling)

There are no alternatives as this study proposes to examine the generalisability of previous studies results to possums.

2.7.2 Reduction (what ways do you propose to minimise the use of animals while still keeping the results meaningful)

A small number of possums (6) will be used within a repeated measures design to reduce the number of possums required for this experiment.

2.7.3 Refinement (how have the procedures been refined to decrease the negative impacts these procedures have on animals e.g. analgesic use, appropriate housing, the skill of those involved in the use and care of the animals).

Each possum's home cage acts as the experimental chamber which reduces handling of the animals. The reverse light/dark cycle also reduces disruption of the possums. The procedure to be used has been conducted previously, and therefore we expect that the possums will perform the task.

2.8 ANIMALS TO BE USED IN TEACHING (I.E. UNDERGRADUATE LABS) **If no, proceed section 3**		
2.8.1	Detail preparation of students for animal use	
2.8.2	Detail supervision of students	
2.8.3	Detail overall relevant experience of students	
2.8.4	Copy of laboratory handout is attached	

Section 3: Animals Used and Welfare

3.1 ANIMAL SUMMARY **(Please also complete Appendix 1)** **Species scientific & Common name** **ONE SPECIES PER LINE**		**Strain** (type of animal)	**Species Code (see Q1 of Animal Use Statistics Form Appendix 1)**	**Total number required** (over the life of the project)	**Grading of manipulation (see Q6 of Animal Use Statistics Form Appendix 1)**
1.	Possum		1t	6	B
2.					
3.					

3.2 WILL ANIMALS BE HOUSED OR HELD (SHORT-TERM OR LONG-TERM)? **If no, proceed to 3.3**		
3.2.1	Name of Facility where animals to be housed?	No 3 Dairy
3.2.2	Describe container (dimensions of cages / pens)	Individual wire cages approximately 550-mm wide, 1000-mm high, and 580-mm deep, with a wire shelf 700-mm from the base of the cage, and a nesting box on top approximately 450-mm wide, height sloping from 360-mm to 190-mm, with a depth of 300-mm
3.2.3	How many animals per container / enclosure?	One per cage
3.2.4	What will be the duration of housing?	Indefinite

3.2.5	Who will be responsible for the care of the animals?	Jenny Chandler

3.3 PRIOR HISTORY OF THE ANIMALS
(If animals are to be used from another project a summary of the type of project, its protocol number, and other information such as the amount of time between projects etc. is to be stated)

Ishan (est 12 years)
902 - DRL study 2014

Dexter (8)
902 - DRL study 2014

Frank (10)
902 - DRL study 2014

Kanji (<1)
Naïve. Lab raised

Sparky (11)
914 - Counting 2014

Riley (5)
914 - Counting 2014

3.4 MANAGEMENT OF ADVERSE EVENTS
(Describe any possible adverse events and how you might manage these. For example, proposed methods of prevention or control such as regular inspection, analgesic regimes and specified humane end points)

No adverse events are expected to occur during the experiment. Possums will be monitored daily by PhD and masters students, and Jenny. Jenny will be made aware if any issues arise with the possums health, and the vet will be called.

3.5 FATE OF THE ANIMALS
(What will happen to the animals at the end of the experiment?)

The possums will remain at No. 3 dairy for future experimental use

Section 4: Specific Procedures

4.1 INSTITUTIONAL DRUG ADMINISTRATION ORDER
(See Appendix 2)

Is there an operational procedure required for the use of a product (drug /chemical) in the experiments?
If 'yes' this will require an Institutional Drug Administration Order.

Name of Product:

4.2. USE OF ANAESTHIC **If 'Yes' complete the table below**		
4.2.1	Name of anaesthetic	
4.2.2	Local or general	
4.2.3	Method of restraint	
4.2.4	Will animals have to recover from anaesthetic? How long is the recovery period?	
4.2.5	How will you deal with post-operative pain and/or discomfort?	

Section 5: Declaration

5.1 PERMITS AND APPROVALS		
5.1.1	Has an application been made to another Committee e.g. Ruakura?	
5.1.2	Are any DOC permits required?	
5.1.3	Are any Iwi approvals required?	
5.1.4	Are any other approvals / permits required?	

5.2 DECLARATION		**CHECK**
5.2.1	I have read and understand the conditions outlined in the Code of Ethical Conduct for the Use of Animals for Teaching and Research. http://www.waikato.ac.nz/research/unilink/ethics/animal_ethics.shtml	
5.2.2	I have read the Good Practice Guide for the Use of Animals in Research, Testing and Teaching http://www.biosecurity.govt.nz/files/regs/animal-welfare/pubs/naeac/guide-for-animals-use.pdf	
5.2.3	If this application is approved, I will inform the Committee of any changes in the project or unexpected outcomes affecting animal welfare, and any event (beyond any approved manipulation) impacting adversely on animal welfare.	
5.2.4	I will submit a complete Animal Use Statistics Form by the specified date.	
5.2.5	I will report as required to the Animal Ethics Committee.	

Signed by the applicant:

_____ **Date:**_____

I accept responsibility for this project's compliance with the University's Code of Ethical Conduct for the Use of Animals for Teaching and Research.

Signed by the Chief Supervisor (if applicable):

_____ **Date:**_____

I accept responsibility for this project's compliance with the University's Code of Ethical Conduct for the Use of Animals for Teaching and Research.

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5.2.4	I will submit a complete Animal Use Statistics Form by the specified date.	
5.2.5	I will report as required to the Animal Ethics Committee.	

Signed by the applicant:

_____ **Date:** 12/6/15

I accept responsibility for this project's compliance with the University's Code of Ethical Conduct for the Use of Animals for Teaching and Research.

Signed by ~~the Chief Supervisor (if applicable)~~:

_____ **Date:** 13/6/15

Appendix 1

Animal Use Statistics Form– one species per sheet

Note: Fill in the YELLOW areas now with the number of animals you propose using (this is part of the application form). The BLUE areas are to be filled in after the research has been completed, and a SIGNED hard copy of this form only is to be submitted to the AEC Coordinator by the completion date indicated on page 1 of this application form.

P = Planned to Use AU = Actually Used

1. Animal Type:
Possums 1t

2. Source of Animals:	P	AU
Breeding unit	1	
Commercial		
Farm		
Born during project		
Captured	5	
Imported into New Zealand		
Public sources		

3. Status of Animals:	P	AU
Normal/conventional	6	
SPF/germ free		
Diseased		
Transgenic/chimera		
Protected species		
Unborn/prehatched		
Other		

4. Purpose:	P	AU
Teaching		
Species conservation		
Environmental management		
Animal husbandry		
Basic biological research	6	
Medical research		
Veterinary research		
Production of biological agents		
Development of alternatives		
Other		

ANIMAL TYPE CODES:

5. Re-use:	P	AU
No prior use	1	
Previously used	5	

6. Grading:		P	AU
No impact	A	6	
Little impact	B		
Moderate impact	C		
High impact	D		
Very high impact	E		

(see attached grading form)

7. Alive:	P	AU
Retained [by your institution]	6	
Returned [to owner]		
Released [to the wild]		
Disposed of [eg to works or rehomed]		
Total Alive		

8. Dead:	P	AU
Killed for dissection, sampling		
Died/destroyed in the course of manipulation/use		
Euthanased after manipulation or use		
Died/destroyed for reasons not associated with manipulation/use		

Completed by:	
Signature:	
Date:	
Protocol No.	

Type of animal used. No distinctions on basis of sex, age, breed, strain or physiological condition.

BOX 1	CODE LETTERS				CODE LETTERS		
Rodents	1	a	Mice	Birds	1	p	Fowls, Chickens
	1	b	Rats		1	q	Pigeons
	1	c	Guinea Pigs		1	r	Other Birds
	1	d	Hamsters	Miscellaneous	1	s	Marine Mammals
Rabbits	1	e	Rabbits		1	t	Possums
Farm Animals	1	f	Sheep		1	u	Reptiles
	1	g	Cattle		1	w	Amphibia
	1	h	Goats		1	x	Fish
	1	j	Deer	Other	1	y	Other Species (°name)
	1	k	Pigs				
Other Domestic	1	m	Horses				
Mammals	1	n	Dogs				
	1	o	Cats				

Grading of Manipulation Examples

Grade A – "No impact or virtually no impact"

Examples:

Mental state: Field observations of grazing behaviour on farms, or benign handling of tame and trained animals that are familiar with all personnel and procedures and with the place where the procedures are conducted.

Food/water: Animals kept outdoors eating their usual food in appropriate amounts; grazing trials on treated pastures; offering supplements to naturally available food; provision of complete, balanced rations to meet all nutritional requirements of animals maintained indoors.

Environmental challenge: Exposure to ambient conditions that are within the thermoneutral range; reduced barometric pressures which do not cause increases in red blood cell production.

Disease/injury/functional impairment: Studies of healthy uninjured animals that are kept in physical conditions which do not themselves lead to injuries such as lameness or compression sores; studies to establish normal characteristics of healthy animals.

Behaviour: Studies of wild or undomesticated animals in their natural habitats; field studies of domesticated animals.

Grade B – "Little impact"

Manipulations of minor impact and short duration

Examples:

Mental state: Experiments on completely anaesthetised animals that do not regain consciousness; simple venipuncture or venisection; injection of non-toxic substances; skin tests which cause low- level irritation without ulceration/erosion; feeding trained animals by orogastric tube; movement of free-range domesticated animals to unfamiliar housing; minor restrictions of water and/or feed intake beyond the normal period of satiation.

Food/water: Water priming for kidney function tests; short-term overall food intake restrictions or excesses that are within usual tolerance levels for the species; short-term changes in dietary composition that cause no clinical signs of deficiency or toxicity, but which would cause such symptoms in the longer term.

Environmental challenge: Exposure to levels of cold or heat that are outside the thermoneutral range, or barometric pressures that increase red blood cell production, but which remain within the capacity of the animals to adapt and do not lead to debility in the long term.

Disease/injury/functional impairment: Studies of vaccines using killed pathogens; tuberculosis tests; induction of mild fever without other debilitating effects; induction of subclinical parasitism; healing of minor superficial incisions, cuts or wounds; minor surgical and/or pharmacological modification of homeostatic capacity (for example, creation of non-obstructive gut fistulae; splenectomy; endocrine gland removal with complete and permanent hormone replacement therapy); physical conditions which cause transient lameness of low intensity, mild compression sores or abrasions.

Behaviour: Mild and short-term physical restraint; keeping free-range domesticated animals in a yard; movement of free-range domesticated livestock to unfamiliar housing; operant conditioning with positive reinforcement in barren laboratory environments; benign preference tests in unnatural surroundings.

Grade C – "Moderate impact"

Manipulations of minor impact and long duration or moderate impact and short duration

Examples:

Mental state: Recovery from major surgeries like thoracotomy, orthopaedic procedures, hysterectomy or gall bladder removal with effective use of analgesics; surgical procedures on conscious animals but with the use of local anaesthesia and systemic analgesic; movement of excitable free-range domesticated livestock to unfamiliar housing; short term capture, handling and restraint of wild or semi-domesticated animals that exhibit marked flight responses; moderate restrictions of water and/or
feed intake beyond the normal period of satiation.

Food/water: Simulation of usual overall intake restrictions often experienced by pregnant/lactating ruminants during cold winters or drought; dietary induction of milk fever in cattle; induction of mild deficiency or toxicity signs by feeding diets containing inadequate or excessive amounts of essential nutrients.

Environmental challenge: Short-term exposure to severe extremes of cold or heat which would lead to collapse if prolonged.

Disease/injury/functional impairment: Studies of live vaccines; induction of clinical parasitism; induction of mild reversible infectious diarrhoea; moderate surgical and/or pharmacological modification to homeostatic capacity (for example, limited gut resection; endocrine gland removal with delayed or incomplete hormone replacement therapy); physical conditions that cause minor chronic lameness or other injuries; studies of the effects of infectious or toxic agents that cause rapid death without distress.

Behaviour: Medium-term restrictions of instinctive behaviour; medium-term holding of ruminants in a metabolism crate; long-term restraint leading to the development of reversible stereotypies; changing social group composition.

Grade D – "High impact"

Manipulations of moderate impact and long duration or high impact and short duration

Examples:

Mental state: Recovery from major surgery under anaesthesia without the use of postoperative analgesics; marked social or environmental deprivation; longer term capture, handling, restraint or housing, without the use of tranquilisers, of wild or semi-domesticated animals that exhibit marked flight responses.

Food/water: Dietary induction of advanced pregnancy toxaemia in sheep or ketosis in dairy cattle; dietary induction of advanced signs of nutrient deficiency or excess; severe deleterious effects of dietary toxins; severe restrictions of water and/or feed intake beyond the normal period of satiation.

Environmental challenge: Prolonged exposure to severe cold or heat that would lead to failure of thermoregulation and collapse, but the exposure is terminated just before those outcomes.

Disease/injury/functional impairment: Studies of severe facial eczema; induction of severe diarrhoea or severe infectious pneumonia; protracted or irreversible pharmacological modification of homeostatic capacity (for example, chemical induction of diabetes mellitus without replacement therapy); marked surgical modification of homeostatic capacity (for example, extensive gut resection; cutting of sensory or motor nerves serving large areas of the body from which no self-mutilation injury results; precise lesioning of limited areas of the brain but with intervention before collapse); physical conditions that cause moderate chronic lameness or other injuries; studies of the effects of infectious and toxic agents that cause either a protracted death with minor distress or a rapid death with moderate distress.

Behaviour: Application of marked and repeated noxious stimuli from which escape is impossible; prolonged periods (several hours or more) of close physical restraint; marked alterations to the perceptual or motor functions of animals to test consequent behaviour.

Grade E – "Very high impact"

Manipulations of high impact and long duration

Examples:

Mental state: Conducting major surgeries without the use of anaesthesia on control animals in assessing efficacy of analgesics; testing the efficacy of analgesics in animals with severe induced pain.

Food/water: Experiments that cause animals to die from poisoning by toxins in the diet; protracted and severe restrictions on water and/or feed intake.

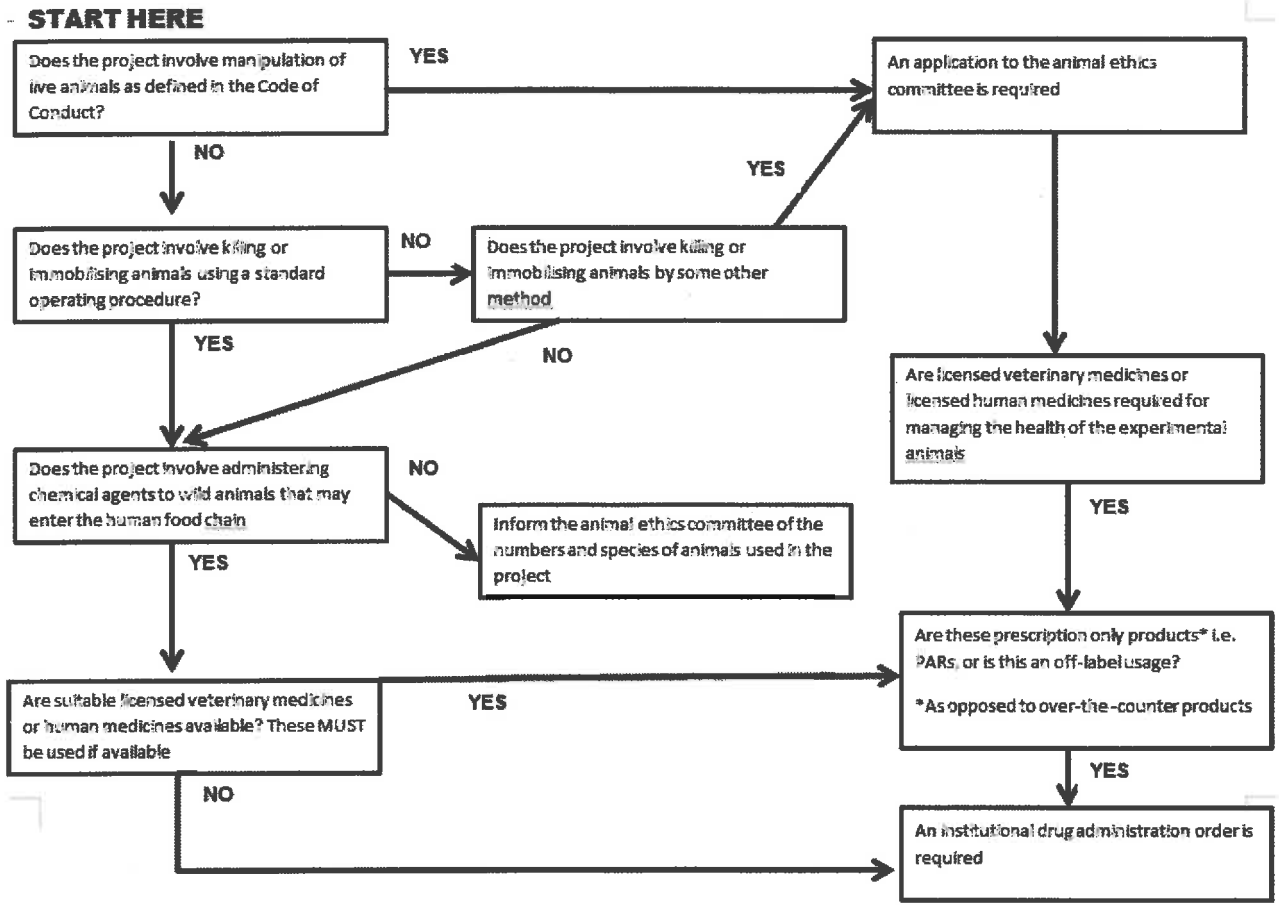
Environmental challenge: Purposeful exposure of conscious animals to lethal extremes of cold, heat or barometric pressure which duplicate naturally occurring conditions.

Disease/injury/functional impairment: Studies of methods for killing pest animals; cutting of sensory or motor nerves serving large areas of the body from which self-mutilation injury results; evaluation of vaccines where death is the measure of failure to protect; studies of the effects of infectious or toxic agents which cause either a protracted death with marked distress or a rapid death with severe distress.

Behaviour: Application of marked and repeated extremely noxious stimuli from which escape is impossible; prolonged periods (several hours or more) of close physical restraint.

Appendix 2

Is an Institutional Drug Administration Order (IDAO) Required?



If a decision remains unspecified then no further action is required.