



	<div>Flinders University</div> <div>College of Science and Engineering</div> <div>Standard Operating Procedure</div> <div>Use of the College of Science and Engineering Animal Facilities 17/09/19</div>			Version 10
				Science & Engineering Animal Facilities
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Contact Person	SOP prepared by			Review Date
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Legislation

- [Australian Code for the Care and Use of Animals for Scientific Purposes 8th Ed.](#)
- [Animal Welfare Act 1985](#)
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- [Gene Technology Act 2000](#)
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- [Work Health and Safety Regulations 2012](#)
- [Fisheries Management Act 2007 \(Section 115\)](#)
- [National Parks and Wildlife Act 1972](#)
- [National Parks and Wildlife Regulations 2019](#)
- [National Parks and Wildlife \(Protected Animals- Marine Mammals\) Regulations 2010](#)

University Policy

- [Work Health and Safety Policies and Information](#)
- [Responsible Conduct of Research Policy 2016](#)
- [NHMRC Guidelines](#)

Local Policy

Use of the Flinders University College of Science and Engineering Animal Facilities, is subject to awareness of, and adherence to the following:

Research Involving Animals:

- ❑ The University holds a licence for the use of animals for teaching and research purposes. To satisfy the requirements of the licence, anyone wishing to undertake teaching and research using animals must initially submit a proposal to the College of Science and Engineering Animal Welfare Sub- Committee (AWS-C) for review. Following this review, the application may then be submitted to the University Animal Welfare Committee (AWC). No work with animals may commence until written approval has been received from the Animal Welfare Committee. Standardised application forms for Laboratory or Wildlife work with animals can be found on the Flinders University Animal Welfare Committee website listed below. It is your responsibility to regularly check this site for updates to guidelines, forms etc.

http://www.flinders.edu.au/research/researcher-support/ebi/animal-ethics/animal-ethics_home.cfm

- ❑ From 2019, applications will be transitioning to the ResearchNow Ethics & Biosafety program, located on OKTA. As long as the forms are still available at the link above, they will be accepted too.
- ❑ **All staff and students involved in animal research must complete Animal Ethics Online Training (AEOT) and must also regularly attend Animal Researcher Information Sessions (ARIS).**

Standard Operating Procedures

Refer to Risk assessments, Standard Operating Procedures and Safe Operating Procedures for chemicals, processes and plant equipment where appropriate. All projects must have an accompanying Risk Assessment signed by the Chief Investigator and submitted to the College of Science and Engineering OH&S Manager.

The following are a list of the main SOP's governing working with animals in the College of Science and Engineering. An extensive database of specific technique SOP's is also available from the Animal Facilities Coordinator and on the AWC home page.

- **Standard Operating Procedure and Safe Work Procedure for the Use of the Animal Facility, Aquaculture and Marine Aquarium Facilities**
- **Standard Operating Procedure for Working With Fish**
- **Standard Operating Procedure for Working With Reptiles**
- **Standard Operating Procedure for Working With Birds**

Permits

- ❑ Any research to be undertaken in the field or involving the capture of animals to be housed at the University, may require a permit from Department for Environment and Water (DEW).
- ❑ Collection and live transport/holding of aquatic specimens and/or noxious species/declared pests will require a specific exemptions and permits from The Department of Primary Industries and Resources of South Australia (PIRSA).
- ❑ <https://www.environment.sa.gov.au/licences-and-permits/wildlife-permits/contact-us>
- ❑ <https://www.environment.sa.gov.au/licences-and-permits/scientific-research-permits>
- ❑ https://www.pir.sa.gov.au/fishing/permits_and_exemptions

While your research may not involve animals as defined by the Australian Code, and therefore not require an application for the use of animals; it is necessary to provide details of organisms you propose to use to the AWC. This registers their use on a database and identifies potential situations where an application will still be required. For example: marine or terrestrial invertebrate collecting which includes the 'by catch' of non-target animal species will require an application must be submitted to the AWC. Deceased animals obtained from an abattoir or seafood store or found opportunistically on the roadside will not require an ethics application but will need to be added to the animal use register - contact the Animal Ethics Officer.

Induction

All users of facilities are required to undergo induction. Induction will familiarise you with the Safe and Standard Operating procedures for the facility and any training required. This induction will also provide an overview of operation of aquarium systems and the monitoring and recording of water quality parameters.

Project proposal approved	Yes/No	Date:
Any hazardous/toxic substances used RA supplied	Yes/No	Date:
Project Risk Assessment completed	Yes/No	Date:
Safe Work Practice supplied	Yes/No	Date:
Booking form completed and signed	Yes/No	Date:
Room/tank labels issued	Yes/No	Date:
Swipe Access/key issued	Yes/No	Date:
Attended Biology OH&S induction	Yes/No	Date:
Shown emergency exits/fire extinguishers in facility	Yes/No	Date:
Shown hand wash station and first aid kit	Yes/No	Date:
Location of phones and emergency numbers/signage	Yes/No	Date:
Inducted in SOP document	Yes/No	Date:
University Induction for new staff- booked in/undertaken	Yes/No	Date:
Familiarised with University website and relevant links	Yes/No	Date:
Identified any other health and safety training required- hazardous substances training, First Aid, OH&S online.	Yes/No	Date:
Immunizations current	Yes/No	Date:
Swipe Card and Payroll access submitted	Yes/No	Date:
Supplied with SOP's for Animal Facility	Yes/No	Date:
Complete initial training sessions under supervision	Yes/No	Date:
Complete required tasks without supervision	Yes/No	Date:
Discuss and initiate further training requirements as required	Yes/No	Date:

Teaching and Research with Animals

- Background research - animal suitability, husbandry, availability, etc.
 - Read the *Australian Code for the Care and Use of Animals for Scientific Purposes*, 8th ed 2013.
- Do you have sufficient funding (research/animal assistants, equipment for monitoring, animal maintenance, veterinary care).
- Permits - what permits are required to work with these animals.
- Ethics application to Animal Welfare Sub-Committee (AWS-C) via ResearchNow Ethics & Biosafety.
- Available space - talk to Animal Facilities Coordinator.
- Skills and training in working with the species - what support staff/ training is available.
- Ethics application to Animal Welfare Committee (AWC) via ResearchNow Ethics & Biosafety - after feedback from the AWS-C and making any requested changes.
- Receive Project approval or make changes as requested by the AWC.
- Commence Project.
- CHANGES! Do I need to modify my project? Add/Remove staff and students? More animals? Procedure change? As long as the project AIMS remain the same, you can apply for a modification. If the AIMS have changed, you will need to submit a new application.
- Has an incident occurred during your project that is not part of your approval? eg. animal mortalities have exceeded approved numbers, animals are displaying unanticipated physiological symptoms impacting their health, or equipment has failed resulting in animal mortalities or injuries. You need to notify the Animal Facilities Coordinator and/or the Animal Welfare Officer as soon as possible after the incident has been observed, and complete an Unexpected Adverse Event Report. This report must be submitted to the Animal Welfare Committee within 3 working days of the incident occurring.

Modifications to Projects or Facilities

- ❑ Any form of modification planned to existing facilities or projects should be discussed with the Animal Facilities Coordinator. Modifications to existing systems may require approval from the AWC, and cost must be budgeted for in the projects funding. Modifications to projects will require AWC approval.
- ❑ Changes to diet, room or aquarium temperature, light cycle, etc, should be discussed with the Animal Facilities Coordinator at least a week before any changes are planned.

Facility Communication and Compliance Workflow

Glossary of terms describing the daily monitoring program, associated documentation and work flow of Facility staff and Facility Users.

Door monitoring chart

Each room has a chart on the door describing what the animals are monitored for daily or weekly.

Door calendar

The calendars are **located on the door to each animal room**. Outside pens share a calendar, this is pinned up above the Terrestrial communications book. Next to the calendars are a list of animal and physical environment parameter lists, a calendar signature indicates these have been checked each day. Accompanying the signature will be a (C) checked and (F) to indicate animals and environ have been checked and fed.

If monitoring indicates there is an issue, the calendar date signature will be highlighted to indicate staff should go to the communications book for further information

Communications Book

The Terrestrial and Aquatic communications books are for recording all animal related activity- eg. births, deaths, ill-health, room movement, arrivals, transfers, initiation of medical treatment. Please use the appropriately dated page and initial your notes.

These books are **located on the benches in the Terrestrial and Aquatic hallways** and

Approved application

These are **located on pin up boards** either near the rooms housing the animals or near the communication books. Copies are also available on the **share drive**. Bear in mind there may have been modifications or animal welfare officer directives since the original approval but it does give you a baseline to inform further enquiries.

Clinical Record Sheet

These are initiated for animals undergoing experimental procedures or presenting with signs of ill health. Copies are available on the **share drive and adjacent to the communication books**.

Running Mortality Sheet

These apply to a limited range of projects with a fixed number of identifiable animals eg. Individually housed, non-breeding. Templates are located on the **share drive** and spare hard copies are in a folder **next to the communication book**.

Facility Communication and Compliance Workflow

Daily Duties

This excel spreadsheet is **located within Microsoft Teams** (Animal House Team). The document can be edited in real time by multiple team members and is where you can find information on tasks being undertaken each day- including monitoring and maintenance of all animals in the facility.

Medication Book

Located next to the Communication book. Information recorded here- Animals details, dosage regime of medication approved by the AWO, record of medications held.

Health Records

Excel spreadsheet located on the share drive. This notes all animal's location, numbers held, health status, arrival, transfer, departure. The information is obtained from the Communications books and is used to compile the Health Report to the Animal Welfare Committee, the annual Fauna Permit returns/ permit renewal and, occasionally, the Marine Collection Exemption.

These records are also a visual indicator of potential patterns in health anomalies.

Health Report

Compiled monthly from the Health records and submitted to the Animal Welfare Committee. **This document is stored on the share drive.**

Share drive

Permission restricted folder **on the CSE share drive** for Animal Facility staff to access records and maintain monitoring and compliance information. Routinely backed up to the Facility Managers computer. AWO has access to view health records and daily duties archive.

Unexpected Adverse Event

An incident impacting on the health and welfare of animals held in the facility that is not part of the approved ethics application. Eg equipment failure, mortalities exceeding approved numbers, ill health. A template of this form is **located on the Animal Ethics Committee webpage.**

Calendar and Daily Duties signatures/ symbols

(C) Checked. (F) fed are used on the door calendars, as well as staff initials. Staff initials are used to sign off on the daily duties.

Facility Communication and Compliance Workflow

Communication Workflow

- Upon arrival, communicate with other team members about any animal related matters and determine who is working where (terrestrial or aquatic).
- Check Daily Duties for any notes from previous day.
- Check emails/messenger/office phone for Facility related messages.
- Check communications book in terrestrial and aquatic hallways for notes regarding animals/facilities. (if you are only rostered to one area just check the relevant book initially, check the other area later if assisting in that area).
- Commence animal monitoring and husbandry tasks as per directions in the Daily Duties spreadsheet.
- As tasks are completed in the animal rooms- as per the parameters listed on the doors to the rooms- sign off with your initials on the calendar and whether you have (C) checked and (F) fed.
 - If there are any issues (births, deaths, ill health, equipment failure, potential unexpected adverse event, etc), highlight the day on the door calendar, sign off and proceed to the Communication book to note the issue (if it is an urgent animal welfare matter, please attend/ resolve the issue first and complete noting afterwards).
 - If the approved application has a running mortality sheet, record deaths on the sheet as well as in the Communication book. If the running mortality hits a milestone, notify the Animal Facilities Coordinator and in their absence- contact the Chief Investigator and the Animal Welfare officer.
 - If the approved application has a clinical record sheet, please fill in details on the sheet and follow the monitoring protocols outlined on the sheet.
 - Running mortality and clinical record sheets are stored next to the communication books.
 - The AWO must authorise courses of medication. Once authorised, please note this in the Communication book and then record the animals details and dosage regime in the Medication book. There is a column to sign off in the medication book after each dosage is given.

Facility Communication and Compliance Workflow

Communication Workflow

- If your monitoring detects an issue that is not in compliance with the approved application, please advise the Facility Manager. If this is not possible, Please contact the Chief Investigator to discuss the appropriate course of action to resolve the issue; you can also advise the CI to notify the Animal Welfare Office. If the CI is uncontactable, advise the Animal Welfare Office in their absence.
- When work has been completed, please sign off on the Daily Duties spreadsheet, located in **Microsoft Teams**. Please include notes for staff rostered on the next day.
- Information from the Communication books is then transferred to the excel spreadsheets file “Health records” located in the **share drive**. This spreadsheet allows us to keep track of animal numbers.
- The monthly report to the Animal Welfare Committee is created with the data from the Health records and stored in the **share drive**.

Copies of Legislation

- Hard copies of the Australian Code for the Care and Use of Animals for scientific purposes 8th ed. are available in the Animal Facilities Office and can also be found online <https://www.nhmrc.gov.au/about-us/publications/australian-code-care-and-use-animals-scientific-purposes> and on the **share drive**.
- [A Hard Copy of the Animal Welfare Act](#) is available in the Animal Facilities Office and can also be found **on the share drive**.
- [A Hard copy of the Animal Welfare Regulations](#) is available in the Animal Facilities Office and can also be found **on the share drive**.
- [A Hard copy of the Marine Specimen Collection Exemption](#) is available in the Animal Facilities Office and can also be found **on the share drive**.

General

- ❑ Please be aware that students are filming as part of their research. Keep noise to a minimum so as not to affect behaviour during filming.
- ❑ Sick animals will not be available for research work until they have fully recovered.
- ❑ Although the Animal Facility staff carry out daily care monitoring of all animals held in the facility, it is also the responsibility of the researcher to ensure adequate monitoring of their animals wellbeing (Chapter 2.4 - *Australian Code for the Care and Use of Animals for Scientific Research, 8th edn, 2013*).
- ❑ Do not prop open external doors as it compromises the security of the facility.
- ❑ Please notify us before undertaking any work with power tools, as there is a risk it will trigger smoke and heat sensor alarms.
- ❑ Refer to supporting Standard Operating Procedures and Safe Work Procedures.
- ❑ Wear shoes at all times (not thongs).

Animal Arrivals/Departures

- ❑ Animal Facility staff should be notified at least one week before any approved animals are arriving or leaving. Animals without ethics approval, booked space, and linked to a submitted risk assessment, will not be admitted into the Animal Facility.
- ❑ Animals must be given a clean bill of health by staff, at the end of the Quarantine period before being released to a project.
- ❑ Newly arriving animals will not be allocated to a project until they have completed a minimum quarantine period of 2 weeks, and have been assessed as a healthy, stable population. This may be varied, with approval from the AWC, if the time delay will impact the research proposed eg. A juvenile animal may undergo changes in size, weight, colouration during the 2 week quarantine period that will impact experimental design and validity of results.
- ❑ Mortalities for newly arriving wildlife can be expected to be as high as 80%, taking into consideration the following factors:
 - Stress induced illness from wild capture/handling, transport, and change in environment.
 - Unknown age/health status (animals may appear visibly healthy but carrying microorganisms that only produce symptoms under stressful conditions).
- ❑ Euthanasia at the end of the project or release to the wild must comply with any permits/licences/approvals from:
 - Department for Environment and Water (DEW)
 - Primary Industries & Resources of South Australia (PIRSA) permits
 - Animal Welfare Committee (AWC)
- ❑ All applications in which new aquaculture systems are to be established must mention the pre-conditioning of water and biofilters. In addition, applications must mention that all tanks, water recirculation equipment, and facilities, should be tested prior to arrival of aquatic animals.

Animal and Enclosure Identification

- ❑ Animal identification and handling must comply with the SOP's for "*Working with Lizards*", "*Working with Fish*" or "*Working with Birds*".
- ❑ Aquarium/enclosure cards should list the species, identification number, tank number, and (where applicable) on/off grid dates, medical treatments, and any special requirements.
- ❑ Standardised labels are available from Animal Facility staff.
- ❑ If it is possible to identify animals by physical appearance, this is preferable to identification by more invasive procedures.
- ❑ Charts on the doors of rooms must include contact details for researchers, animal numbers, and project approval number, and finish date.

Health

- ❑ A key factor when working with animals is to keep their environment as stress free as possible. Many health issues are triggered by stress and a weakened immune system. Healthy animals can carry various microorganisms in their system/on the body without becoming ill, but a stressful environment (poor water quality, lack of oxygen, incorrect temperatures, housing, poor handling techniques, etc) can all make them much more susceptible to disease. It is important before you start your work that you have appropriate housing arranged, and an understanding of how to maintain your animals in a healthy condition
- ❖ **All unexpected deaths/ sick animals, equipment failures affecting animals etc require the following procedure:**
 - Report to Animal Facilities Coordinator and Animal Welfare Officer as soon as possible, but within 24 hours;
 - Send an Unexpected Adverse Event Report to animal.welfare@flinders.edu.au within 3 working days; and
 - Arrange a necropsy with the Animal Facilities Coordinator or AWO.
- ❑ Animals may only be euthanased by trained staff and researchers, and must adhere to the method stated in the research application approved by the Animal Welfare Committee (AWC), and the guidelines in the *Australian Code for the Care and Use of Animals for Scientific Purposes*, 8th edn, 2013, and in accordance with the Safe Operating Procedures for administering medication.
- ❑ Sick animals may be transported to a vet clinic in consultation with the AWO and/or Animal Facilities Coordinator.

Incident Report

Animal Incident Reporting

Definition- ANY variation in your approved protocol

Examples- Any changes in behaviour or physiological condition not on monitoring chart or clinical record sheet, or in excess of agreed parameters approved in application.

- Changes to drugs being administered or dose being administered.
- Equipment failure.

What do I do ?

Stop. Assess. Stabilise.

DO-Notify Animal House Manager and seek assistance to stop any flooding, stabilise water quality, secure housing, bring injured birds in and set up in a cage in a warm, quiet room.

Contact C.I.(if not you)

Contact AWO for veterinary assistance if required, but also within 24 hours to advise of incident.

DO NOT- administer medications or try and continue with experimental protocol.

The AWO will advise whether you need to cease any further work until the incident has been reviewed by the AWC or whether you may continue until the review. You will need to complete an Animal Incident Reporting Form and submit to the AWC within 3 working days.

Outcomes

AWC concludes incident is an unexpected adverse event. Project may continue as before

AWC concludes incident is an unexpected adverse event and requires modifications for project to continue

AWC concludes the incident is an adverse event and will decide if project may continue- potentially including modifications to minimise further incidents

Hygiene

- ❑ Wash and thoroughly rinse hands when arriving and before exiting facility.
- ❑ No food is to be consumed within animal holding rooms.
- ❑ Anything requiring cleaning should be put in the wash room, not left in the animal rooms (with the exception of tanks).
- ❑ Rooms are to be kept clean, tidy, and free of clutter at all times.
- ❑ Wear gloves when in contact with animals/tanks when possible, and always wash hands thoroughly, using the antiseptic hand wash in preparation room and washroom. This assists in preventing the potential transmission of disease between animals, and also between people and animals.
- ❑ Each room has its own equipment to avoid cross contamination.
- ❑ Floors are swept and mopped weekly.
- ❑ Bins emptied weekly and as required.
- ❑ Lizard tanks cleaned weekly and ad lib with 70% ethanol and warm water.
- ❑ Sand tanks have waste removed as required and sand changed.
- ❑ Animal carcasses must be disposed of in the yellow plastic bin in the Level 1 freezer.

Safety

- ❑ All new staff/students must undergo Work Health and Safety (WHS) induction prior to commencing any work in the Animal Facility.
- ❑ All work undertaken must comply with Safe Work and Standard Operating Procedures.
- ❑ All electrical equipment must be electrically safety tested and tagged before use.
- ❑ All injuries and incidents must be reported to Animal Facility Staff and the Occupational Health and Safety representative.
- ❑ Shoes must be worn at all times in the facility (no flip flops).
- ❑ Do not recap syringes; place straight into the sharps bin.
- ❑ Do not grant access to anyone that is not directly involved in research on the animals held here, including family and friends. Please speak to the Animal Facility Coordinator about it first, as there are several Health and Safety issues to consider and it is essential that we are aware of all the people who come into the Animal Facility.
- ❑ Any chemicals and plant equipment brought into the Animal Facility must have been risk assessed and documentation available. Chemicals may not be stored here unless they are on our current chemical manifest.
- ❑ The First Aid kit is located in the Preparation Room in the Animal Facility.
- ❑ Floors are to be kept clear to avoid creating tripping hazards. Equipment must be stored on shelves.
- ❑ Smoking is not permitted in the Animal Facility or outdoor enclosures.

Care of Animals During Emergencies

- ❑ The Facility has a back-up generator for power outages, so there will rarely be a total facility power failure. If power is out for a specific room or piece of equipment, it is more likely a fuse/safety switch has tripped, which maintenance can rectify and identify the cause of. Generally, it will be a heat lamp or item of plug-in electrical equipment (pumps, power heads, etc). There are replacements items for most equipment in the facility storerooms.
- ❑ Emergency euthanasia should not be undertaken unless all reasonable steps to contact the Chief Investigator, Animal Welfare Officer, and Animal Facilities Coordinator have been unsuccessful, and then only by experienced staff.
- ❑ If you can determine a cause to do with power or plumbing that requires Maintenance to urgently repair, contact them on **(08) 8201 2177 (call Security on (08) 8201 2880 if out of normal business hours).**
- ❑ Once situation is stabilised, commence Unexpected Adverse Event Reporting Procedure.

Emergency Evacuation

- ❖ **In the event of an emergency evacuation, staff must move to local assembly points to await further instruction. If there is sufficient prior notice, animals may be moved-in consultation with the project C.I. and as per *Working with Birds/Lizards/Fish SOP's* to a temporary new location that can maintain their husbandry requirements; until such time as they can be returned to the College of Science and Engineering Animal Facilities.**

SOP Review

This SOP currently applies to the animals housed in the College of Science and Engineering Animal Facility and field sites. This SOP will be reviewed 3 yearly, but also updated more frequently as policies, techniques and animal care requirements change.

Any questions regarding the above guidelines and any technical advice/ assistance required can be directed to Animal Facilities Coordinator.

Position	Name	Contact Details
Animal Facilities Coordinator	Leslie Morrison	X 12196 Office in Animal Facility Leslie.morrison@flinders.edu.au
Animal Welfare Officer	Lewis Vaughan	0450 424 143 awo@flinders.edu.au

Useful References:

- <http://www.nhmrc.gov.au>
- <http://www.adelaide.edu.au/ANZCCART/>
- <http://www.environment.sa.gov.au>
- http://www.flinders.edu.au/research/researcher-support/ebi/animal-ethics/animal-ethics_home.cfm
(Link for Animal Incident Report forms, Teaching and Research Application Forms and all animal welfare related matters)