



This document has been developed by The Australian National University's (ANU) Research Ethics Office. It has been endorsed by the ANU Animal Ethics Committee (AEC). It is designed to provide guidance regarding current best practice to institutional animal users and carers on the care and use of animals for scientific purposes. It has been prepared in consultation with the Australian code for the care and use of animals for scientific purposes 8th edition 2013.

Document_031_Standard_New Equipment V2.0 Background

New equipment that is intended to be utilised for animals in an experimental or husbandry setting may have an impact on animal welfare. There is a wide variety of equipment types that this may include, and would be difficult to list in a single document. The intention of this standard is to ensure that new equipment is appropriately assessed against ANU animal welfare standards both prior to purchase and again during commissioning, to ensure adequate assessment, purchase procedures, and training are undertaken to minimise welfare risks.

Where equipment is replacing 'like for like' equipment that is already approved on an ethics protocol, the installation should be considered as to whether the below considerations would still apply. This assessment should be performed by the persons responsible for using the equipment, and prior to the first use with animals.

General Information and Considerations

Equipment Type

Prior to purchasing new equipment, it is highly recommended that individuals assess whether the equipment may have an impact on animal welfare. This can be determined by considering some of the following common questions:

- Will the animal be expected to interact with the equipment in any way?
- Will the equipment 'house' animals?
- Will the equipment have an effect on the animal i.e. create a varied environment, cause stress or discomfort etc.
- Will the animal's ability to reach food or water be impacted in any way
- Will the animal's ability to seek shelter or enrichment be impacted in any way
- Will the environment of the animal be affected e.g. temperature, lighting
- Is the equipment designed for or appropriate for the target species?
- Is specialised training or experience required to be able to use the equipment safely?

Equipment Location

Prior to installing new equipment, you should consider the most appropriate location to house the equipment. If it has been purchased using grant funds, it may be necessary to ensure the equipment is placed in an area that can be accessed by a variety of users, from ANU and externally. If this is the case, you must consult with your relevant School and College to discuss appropriate locations for housing equipment that take into consideration:

- The hierarchy of the location and ability to move animals in and out of the area within the University's risk management practices.
- The security requirements for the equipment and associated work (i.e. animal holding).
- Any OGTR rules and regulations where the equipment may be used with genetically modified organisms.

- The demand for use and an estimate of the number of groups that will utilise the equipment and their location.
- Any other local school and WHS requirements

Equipment Installation and Decontamination

Each Research School will have its own requirements for decontamination of equipment to maintain health standards within the relevant animal facilities. You must consult with facility managers prior to taking equipment into animal areas.

Decontamination options may include:

- External cleaning of the equipment using a disinfectant or ethanol.
- The use of vaporised hydrogen peroxide for thorough decontamination.
- Autoclaving for full sterilisation (not suitable for electrical or sensitive equipment)
- A combination of the above

Other Considerations

It is recommended that you cross check other legislative and operational requirements prior to purchasing new equipment, e.g. Work Health and Safety, Quarantine etc as applicable to your work area. Even if not mandated by legislation, staff should ensure that they have undertaken any appropriate training before use of the equipment, and have conducted refresher training if there have been gaps between use.

Monitoring, Intervention and Reporting

All procedures utilising equipment must be detailed in an approved animal ethics protocol prior to being undertaken, and should include a Standard Operating Procedure or Safe Work Procedure. This includes pilot studies as per the Code (2.3.14). Where choice is possible, researchers should aim to select equipment that has the lowest impact on the welfare of the animal.

Minimum Requirements

- All equipment that may have an impact on animal welfare should be discussed with the ANU veterinarians prior to purchase.
- Any novel equipment that is intended to be purchased must have animal ethics approval for use prior to being commissioned and used with live animals.
- The ANU Veterinarians should be consulted prior to commissioning of new equipment to allow them to assess potential welfare risks of the equipment and the commissioning process.
- Hierarchy and access requirements must be considered prior to installation.
- Maintenance requirements and access to trouble-shooting and support should be considered prior to purchase.

References and Resources

[NHMRC. Australian code for the care and use of animals for scientific purposes 8th Edition 2013 \(Section 4.4.3\)](#)

Smith, A.J (2020) Guidelines for planning and conducting high quality research and testing on animals, *Laboratory Animal Research*, **36**(21) <https://doi.org/10.1186/s42826-020-00054-0>