

Animal Hazards Procedure

Section 1 - Context

(1) These procedures outline safe practices for University of Newcastle staff, students and visitors working with or coming into contact with animals or animal products in the course of their work or research. The procedures provide details about the nature of zoonoses and other animal-based hazards that may be encountered in the activities of The University of Newcastle, and the measures that should be implemented to prevent infection, illness and injury.

Section 2 - Procedure

Risk Assessment Safety Review

(2) All hazards associated with the activities of The University of Newcastle should be the subject of a risk management process, namely:

- a. Hazard identification, through inspection of the work area and any research/project proposals;
- b. Risk assessment, through the review of health and safety information;
- c. Risk control, through providing appropriate facilities, induction and training;
- d. Review of the process at appropriate intervals.

(3) When coming into contact with animals or animal products (any product derived from animals including, but not limited to, blood, serum, milk, tissue, and urine but not including products derived from humans), a risk analysis must be conducted by the person directing the work (Chief Investigator, supervisor, manager, Chair, Animal Care and Ethics Committee, etc.). This should be done in consultation with the people carrying out the work. It should be documented and distributed to all persons participating in the project or working on other tasks in the area.

(4) All work involving animals must be referred to the Institutional Biosafety Committee (IBC) by completing an application for safety review and approval.

Hazard Identification

(5) There are a number of potential hazards specific to working with animals, including:

- a. bites, scratches and kicks;
- b. the development of animal allergies;
- c. infections associated with zoonotic diseases; and
- d. the opportunity for the transmission of infection from animals to humans of pathogens with which the animals have been inoculated. These procedures deal with such specific hazards.

(6) In addition, the work may introduce additional hazards such as manual handling tasks, hazardous substances, the use of sharps, use of genetically modified organisms, exposure to radiation, and so on. These areas are covered under separate procedures documents.

Zoonoses

(7) Over 200 diseases have been classified as zoonoses throughout the world. A variety of pathogens and reservoir animals (cattle, pigs, sheep, birds, dogs, cats and other domestic, native or exotic species) are involved. Persons having contact with animals must familiarize themselves with the potential zoonotic diseases that the species they are dealing with may harbour.

(8) Some zoonotic diseases are fatal eg Hendra Virus, and Australian Bat Lyssavirus and some are life threatening, particularly in immuno-compromised individuals (e.g. people undergoing treatment with corticosteroids or chemotherapy, or who are HIV positive). Pregnant women can be particularly at risk due to certain infections such as toxoplasmosis that can affect the developing foetus.

(9) The following tables summarise some of the potential zoonotic diseases. Note that research animals may be imported from other countries and may be quarantined within research animal facilities- and persons contacting such animals may be exposed to zoonoses not otherwise present in Australia.

Bacterial Diseases

Human Disease	Agent	Animal Hosts	Means of Spread
Anthrax	B. anthracis	Farm animals	Inhalation/ Ingestion of spores, contact with non intact skin
Brucellosis	Brucella spp	Swine, dogs, cattle, sheep, goats	Contact
Colibacillosis	E. coli	most species	Ingestion
Leptospirosis	Leptospira spp.	Rodents, dogs, farm/ wild animals	Contact with urine
Mycobacteriosis	Mycobacterium spp.	Fish, reptiles, amphibians	Puncture wounds/scratches, inhalation
Pasteurellosis	P. multocida	mammals and birds	contact/ ingestion
Pseudotuberculosis	P. pseudotuberculosis	Rodents, birds	Contact/ ingestion
Psittacosis	Chlamydia psittaci	parrots, pigeons	Inhalation
Rat bite fever	S. moniliformis	Rodents	Rodent bites/ ingestion
Salmonellosis	Salmonella spp.	Farm animals, rodents, reptiles amphibia	Ingestion/ inhalation/ contact
Tetanus	Cl. Tetani	Horses, other equidae	Contaminated wounds
Tuberculosis	M. bovis/ avum/ tuberculosis	Primates, cattle, dogs, poultry, swine, sheep	contact, ingestion , inhalation, needle stick
Vibriosis (Campylobacter)	Vibrio spp.	Domestic ruminants, dogs, rodents, birds, fish, amphibians, reptiles	Uncertain, probable ingestion
Listeriosis	L. Monocytogenes	Ruminants, small marsupials, most animals and birds	Ingestion in food.
Wound infections	Aeromonas spp.	Fish, amphibians, reptiles	Contamination of existing wounds

Rickettsial Diseases

Human Disease	Agent	Animal Hosts	Means of Spread
Tick Typhus	R. australis	Mammals with ticks	Tick bites
Murine typhus	R. mosseri (R. typhi)	Rats/ mice	rat flea bites
Q fever	Coxiella burnetti	Cattle/ sheep	Inhalation
Scrub typhus	R. orientalis	Small forest mammals	Mite bites.

Viral Diseases

Human Disease	Agent	Animal Hosts	Means of Spread
Hendra Virus	Henipavirus	Horses (via bats)	Contact with body fluids
Australian Bat Lyssavirus	Lyssavirus	Bats	Bites and scratches contaminated with bat saliva
Menagle Virus	Paramyxovirus	Pigs (via bats)	Contact? Bites and scratches?
Equine Encephalomyelitis	EEE/ WEE/ VEE arbovirus	Birds/ horses	Mosquito bites
Haemorrhagic fevers	Asian arboviruses	Rodents/ hares/ monkeys	tick bites
Lymphocytic choriomeningitis virus	LCM Virus	rodents and other mammals	contact/ inhalation/ tissue culture
Herpes B Encephalitis	Herpes simiae	Rhesus/ other Macaca	contact/ bites
Hepatitis A	Hepatitis virus	Chimpanzees	Contact
Rabies	Rabies virus	dogs/ bats etc	bites, saliva contact
Murray Valley Encephalitis	Arbovirus	Birds, native and domestic animals	Mosquito bites
Epidemic polyarthritis (Ross River virus, Barmah Forest Virus)	Arbovirus	Mammals	Mosquito bites

Fungal and Protozoan Diseases

Human Disease	Agent	Animal Hosts	Means of Spread
Ringworm	Trichophyton spp./ microsporium spp.	Dog, cat, guinea pig, rodents, farm animals	contact
Toxoplasmosis	Toxoplasma gondii	Primary Host cats, secondary hosts most mammals and birds	Ingestion (cat faeces and raw meat)
Cryptosporidiosis	Cryptosporidium spp	All animals	Ingestion (shed in faeces)

Parasites

Human Disease	Agent	Animal Hosts	Means of Spread
Trichostrongylosis	Trichostrongylosis spp	Sheep, cattle, goats pigs, horses, cats, pigeons	Ingestion vegetation contaminated by larvae from faeces
Toxocariasis	Toxocara canis	Dog	Ingestion of infectious ova from faeces
Hydatid disease	Echinococcus granulosus	Dog/ dingo	Ingestion of ova passed in faeces
Heartworm	Dirofilaria immitis	Dog	Mosquito bites

Allergies

(10) Persons who come into contact with laboratory animal proteins (usually contained in saliva, urine or shed skin) may develop Laboratory Animal Allergy (LAA). Allergic reactions are more likely after substantial or repeated exposure to the allergen- either to the animal itself or to items contaminated with the excretions and secretions of animals including urine, saliva, dander, fur/hair and serum. LAA may lead to serious allergic reactions, including occupational asthma, if exposure to the allergens continues. Up to 30% of people exposed to laboratory animals may be affected by LAA to some degree if appropriate risk controls are not in place.

(11) Most studies indicate that individuals with allergies to substances outside the laboratory have an increased risk of developing LAA.

(12) Persons in contact with latex may develop a latex allergy. Latex allergies are becoming more prevalent and initial symptoms include skin irritation and rash

Bites, Scratches and Kicks

(13) Handling live animals, both in the laboratory and in the field, obviously has an influence on their behaviour. Responses to stressful or threatening situations can lead to the handler being bitten, scratched, kicked, butted, trampled or stung.

(14) Any animal bite or scratch that breaks the skin can quickly become infected if not cleansed immediately. The microbial flora of the mouth of animals contains a mixed population of potential pathogens.

Animals Inoculated with Human Pathogens

(15) Some research protocols call for the deliberate infection of animals with human pathogens. Such infected animals may be a source of infection for persons coming into contact with them.

Risk Assessment

Zoonoses

A person may be exposed to pathogens carried by animals through:

- a. inhalation of infected dust or droplets/aerosols (bedding, hair, body fluids, etc.);
- b. ingestion of infected material (e.g. contaminated food);
- c. by skin contact with infected material;
- d. through skin penetration (bites & scratches).

(16) The likelihood of a disease developing following this exposure depends on:

- a. the pathogen and its infective dose;
- b. the titre of the agent in the exposure;

c. the immune status of the host.

(17) The risk of developing a zoonotic disease therefore depends upon:

- a. the animal and its origin and microbiological status
- b. the potential pathogen
- c. the exposure routes that the work presents
- d. the immune status of the persons potentially exposed
- e. the type of animal handling required and the competence of the handler

(18) Any risk assessment must take account of all of these factors. For some animals, e.g. Specific Pathogen-Free animals, the risk of acquiring a zoonotic disease is extremely low. In general, pathogens that give rise to zoonoses are classified as Risk Group 2 under AS/NZS 2243.3, i.e. they represent a moderate individual risk, and a low risk to the community. Some, however, such as *Coxiella burnetii* (Q-fever) and Lyssavirus, fall into Risk Group 3, and can therefore pose a significant risk to laboratory or field personnel.

Allergies

(19) The most important risk factor is level of exposure to the allergen.

(20) Persons with pre existing allergies may be more at risk of developing LAA or of exacerbation of their pre existing allergies.

(21) Smokers may be more at risk of developing LAA.

It is recommended that nitrile gloves are worn in preference to latex to minimize the risk of developing an allergy to latex.

Bites, Scratches and Kicks

Risk of injury from animal bites, scratches and kicks relates to the manner of handling of the animal, the temperament of the animal and the ability of the animal to inflict damage.

- a. Domesticated animals are less likely to cause injury
- b. Persons trained in correct animal handling are less likely to be injured
- c. The type of risk is associated with species e.g. rats and mice are more likely to cause bite injuries, cattle are more likely to cause trampling injuries
- d. Painful procedures are more likely to result in an attack by an animal
- e. The correct handling equipment will reduce risk

Familiarity of the animal to the handler should reduce risk of injury.

Animals Inoculated with Human Pathogens

Risk of infection from animals deliberately infected with human pathogens relates to:

- a. The pathogen
- b. Mode of transmission from animal to human
- c. Exposure to aerosols of the infective agent during inoculation of the animal
- d. The infectiveness of the pathogen
- e. The method of caging and handling of the infected animal

(22) Deliberately infected animals must be housed within containment facilities to minimise the risk.

(23) Containment facilities are regulated by:

- a. The Gene Technology Act 2000, and accompanying Gene Technology Regulations 2001.
- b. Standards Australia AS/NZS 2243.3:2010; "Safety in Laboratories Microbiological safety and containment"

(24) There are four levels of physical containment required by the Standards Australia for animal facilities and laboratories wishing to hold and use deliberately infected animals. The intention is to house these animals in a secure facility to prevent the transmission of infection from deliberately infected animals to people and other animals.

(25) The containment levels are designated as PC1 (the lowest level of containment), PC2, PC3, and PC4 (the highest level of containment). The University currently only has facilities of a PC1 or PC2 rating and therefore no risk group 3 microorganisms can be stored or handled in University facilities at this time.

Risk Control

Personal Hygiene

(26) Transmission of infectious agents from animals to persons in contact with them can largely be prevented by:

- a. Thorough hand washing after handling animals or cleaning their enclosures
- b. Not eating, drinking or applying cosmetics within the animal housing facility

Microbiology Practices

(27) The facilities and procedures adopted for handling animals must be consistent with the highest risk group of the pathogens that may be encountered. That is, where a risk group 2 pathogen is likely, Physical Containment (PC) Level 2 practices must be followed, as described in AS/NZS 2243.3. The standard describes appropriate hygiene and sharps-handling practices.

(28) It is recognised that there may be situations, eg. field work with wild bats, where this may not be possible. In such cases appropriate measures must be put in place, such as:

- a. The use of personal protective equipment (eye/face protection, gloves, overalls, etc.)
- b. Immunisation, where this is available
- c. Provision of first aid equipment and procedures (such as eye wash units, soap & water, etc.)
- d. Awareness of the risks involved
- e. Appropriate access to medical review and treatment

Health Status

(29) Health status can significantly affect risks associated with handling of animals and animal products.

- a. Persons in contact with animals should always notify their health practitioner of the species of animals they are in contact with.
- b. Any staff working with animals that are immuno-compromised should inform their supervisor or discuss with the Medical Director, University Health Service.
- c. Pregnant women should notify their supervisor as early in their pregnancy as possible, as the risk to the foetus with some hazards (eg toxoplasmosis or x rays) is greatest in the first few weeks. If this is not possible they should consult a medical practitioner regarding the advisability of animal work as soon as possible after the pregnancy is confirmed.

- d. New staff in positions requiring contact with animals and/or animal products must be assessed by the Medical Director, University Health Service, prior to their appointment. In some cases medical advice may be against making an appointment. If an appointment proceeds, adequate measures should be taken to protect the health of the individual, and the individual must be made aware of the risks involved. The staff member shall be reviewed annually.

Training

(30) It is essential that all persons who work with or come in contact with animals are properly trained and supervised according to their level of competence.

(31) All persons handling animals or animal products are required to attend the training session on animal handling conducted by the University Veterinarian and Animal Welfare Officer, and follow this with specific training with their supervisor. A record of this training must be kept with the person.

(32) Persons working with animals or animal products shall receive individual training by their supervisor/manager on the operation of any safety equipment and materials that they may be required to use. They shall also receive training of correct procedures to be used to protect themselves and other animal workers and this must be documented.

(33) For BioResearch Facilities (BRF) staff and persons using BioResearch facilities, a record of induction into the use of the BioResearch facilities and equipment will be kept in an "induction folder" in the animal facility.

Personal Protective Equipment (PPE)

(34) All employees handling animals or animal products must wear the correct personal protective equipment based on the risk of the procedure/practices. Possible PPE includes:

- a. Rubber or cotton-lined gloves (preferably Nitrile)
- b. Lab coat/gown or overalls.
- c. Face masks, surgical, particulate or reparable
- d. Safety boots
- e. Cover shoes
- f. Surgical caps

(35) The minimum requirements for PPE in a laboratory shall be laboratory coat/gown, protective eyewear and closed shoes unless lesser requirements can be justified by a risk assessment. A correctly fitted P2 mask should be used where exposure to laboratory animal allergens is significant.

(36) All protective clothing must be removed after exposure to animal activities and laundered or disposed of in a manner appropriate to the type of contamination and clothing.

Equipment

(37) Appropriate equipment must be used to handle and restrain animals e.g.:

- a. Restraint devices suitable for the species being used
- b. Biohazard hoods to prevent exposure to pathogens and minimise exposure to allergens
- c. Room air extraction equipment and effective ventilation systems.

Transport of Animals

(38) Animals must be transported so as to minimise the risk of exposure of other people to hazards.

- a. Transport containers must be appropriate to the species.
- b. Laboratory rodents must be transported in filtered boxes or covered cages to prevent dissemination of laboratory animal allergens.
- c. Animals infected with human pathogens must be transported in containers that prevent the dissemination of the pathogen (eg HEPA filtered transport containers for rodents).

Vaccinations

(39) For certain pathogens, immunization is an appropriate way of controlling the risks of acquiring a zoonotic disease.

- a. Tetanus Vaccination is recommended for persons working with any animal.
- b. Hepatitis B and tuberculosis vaccination may be required prior to working with some animals (eg primates)
- c. Q- Fever vaccination shall be given to persons working with goats, cattle and sheep and some native animals. All staff working with the BioResearch Facilities shall be vaccinated against Q-fever.
- d. Rabies vaccination (to protect against bat lyssavirus) is required for persons working with bats

Advice on the availability of immunisations, and the vaccinations themselves, will be provided by the University Health Service.

Records of vaccinations should be held with the University Health Service, and by the vaccinated staff member as evidence of their vaccination status for supervisors.

Information for Specific Pathogens

(40) Specific information about and prevention and control methods for some zoonoses are listed below. Additional information can be obtained from Medical or Veterinary personnel. People working in the at-risk groups should know of the sources of infection and the modes of transmission of the disease.

(41) Due to the peculiar nature of zoonotic diseases and their modes of transmission, diagnosis may often be difficult. People who work with animals or animal products must alert medical personnel to the nature of their occupations. Many symptoms of zoonotic infections are flu-like, skin diseases or intestinal upsets which are difficult to distinguish from human diseases. Several of these diseases require notification, by a medical practitioner, to the appropriate health authority.

Q fever

(42) Cattle, Sheep

- a. Personal protective equipment and strict hygienic practices must be followed when pregnant animals, birthing fluids, hides, wool, straw, or other contaminated material is handled. This includes the prevention of inhalation of contaminated dust or fluid droplets,
- b. adequate disinfection and disposal of material, and prompt treatment of cuts and abrasions.
- c. Placental and other birth material should be burnt or buried. Contaminated litter should be burnt.
- d. Milk should be pasteurised or boiled.
- e. Vaccination- A vaccine has been developed in Australia to immunise high-risk groups against Q Fever.
- f. Persons developing flu-like symptoms who have had contact with infected animals should seek medical advice, stating clearly that contact with the Q Fever organism may have occurred.

Leptospirosis

(43) Rodents, dogs, farm and wild animals.

- a. People must avoid contact with potentially contaminated water or wear protective boots or gloves when work necessitates contact with such water.
- b. Wild rats and mice should be eradicated whenever possible.
- c. Vaccination of animals that may be carriers of the disease
- d. No human vaccination is available

Brucellosis

(44) Swine, dogs, cattle, sheep, goats

- a. Individuals with uncovered wounds should not be permitted to work with carrier species. Cuts and abrasions should be treated immediately
- b. Eating and smoking should be banned in animal handling areas.
- c. Splashes of animal material on clothing, equipment or skin surfaces should be removed as soon as possible.
- d. Protective clothing and equipment, such as face and eye protection, gloves and impervious boots should be available and used where necessary. Particular care should be taken when handling udders, uteri, bladders
- e. As frequently as possible, all utensils, instruments, and other areas of potential contamination should be cleaned and disinfected and then cleansed with water at temperatures above 82°C.

Hydatid Disease

(45) Dog, dingo

- a. All people who come in contact with potentially infected dogs or contaminated areas should be educated regarding the mode of transmission of hydatid disease and the need for strict personal hygiene.
- b. Dogs should be kept away from animal carcasses.
- c. Potentially infected dogs should be tested for the presence of *Echinococcus granulosus* and subsequently treated with the appropriate oral medication.

Campylobacter and Salmonella Infections

(46) Farm animals, dogs, birds, rodents, reptiles, amphibia

- a. Thorough washing of hands after contact with animals.
- b. Avoiding the consumption of raw meats, unpasteurised dairy products and unchlorinated water.
- c. The protection of animal and human food and drinking water from contamination by animal excreta.

Psittacosis

(47) Birds - particularly parrots and pigeons but many other bird species may be carriers.

- a. Water containing antibiotics can be used to prevent the infection in birds- seek veterinary advice for the appropriate antibiotic.
- b. New birds added to disease-free aviary flocks should first be quarantined and treated with appropriate antibiotics.
- c. Sick birds should be quarantined during antibiotic treatment, or alternatively, those birds suspected of being infected should be destroyed and their bodies disinfected in suitable disinfectant.
- d. Ideally birds should be tested and a serologically negative closed flock maintained.
- e. When the status of a flock is 'infected' or 'unknown' PPE including facemasks that protect the wearer from dust should be worn.

Arbovirus Infections

(48) Most mammals and birds

- a. Destroy adult mosquitoes and larvae,
- b. Eliminate mosquito breeding sites,
- c. Screen sleeping areas
- d. Avoid exposure to mosquitoes during their biting times.

Ringworm

(49) Dog, cat, guinea pig, rodents, farm animals

- a. An infected person can spread the infection to animals or to other people. Personal protective equipment and good hygiene is therefore an essential element in preventing the spread of ringworm.
- b. An orally-administered drug will kill the fungus in animals and people.
- c. Clipping of hair, where appropriate, and the application of a topical fungicidal preparation to lesions are also advisable.

Australian Bat Lyssavirus

(50) Fruit bats (megachiroptera) and insectivorous bats (microchiroptera) both carry strains of bat lyssavirus that can infect humans.

- a. Bat Lyssavirus is closely related to but distinct from the classic rabies virus.
- b. Rabies vaccine and rabies immunoglobulin protect laboratory animals against bat lyssavirus hence it is recommended that persons working with bats are vaccinated with the rabies vaccine.
- c. Avoid handling bats if possible. If handling bats make every effort to avoid being bitten or scratched. Wear puncture proof gloves, long sleeves, protective glasses and mask. Cover all open wounds.
- d. Avoid contact with bat saliva. If bat saliva contacts eyes, nose, mouth or wound, flush the area thoroughly with water.
- e. If bitten or scratched immediately wash the area thoroughly with soap and water for at least five minutes. Apply a virucidal antiseptic after washing such as betadine, or iodine and see a medical practitioner.

Hendra Virus

(51) Horses

- a. There is no human vaccine available for this virus and no specific therapy hence control measures must rely on avoiding contact with the virus.
- b. There is a vaccination available for horses and all horses should receive a full vaccination protocol.
- c. The virus is found in bats, though there is as yet no evidence of direct transmission from bats to humans. Control measures described for Bat Lyssavirus should minimize the risk of any exposure.
- d. Hendra virus is transmitted from horses to humans via body fluids-(nasal discharge, ocular discharge, saliva, and urine).
- e. Affected horses may show signs of respiratory distress, frothy nasal discharge, fever, neurological signs, and sudden death
- f. Care should be taken to ensure that horses are not kept near known bat colonies and that food and water containers are not kept under fruiting or flowering trees that attract bats.
- g. Persons treating sick horses should wear PPE and avoid contact with body fluids.

First Aid and Emergency Response

(52) Any animal bite or scratch that breaks the skin can quickly become infected if not cleansed immediately. The microbial flora of the mouth of animals contains a mixed population of potential pathogens. The basic principles of flushing, cleaning and disinfection apply.

- a. A first aid kit suitable must be present in every workplace and work vehicle and be in close proximity to the activities undertaken.
- b. The standard procedure for the treatment of wounds inflicted by bites or scratches is to scrub the wound with copious soap and water and if possible, induce bleeding. An antiseptic is applied and the wound covered by a sterile dressing. Medical advice should be sought after first aid has been administered.
- c. If the animal is thought to be contaminated or there has been possible exposure to a pathogen (zoonotic or research infection), the medical practitioner should be informed, and the person bitten regularly reviewed for up to 3 weeks following the injury.

Risk Evaluation

Health Surveillance

(53) In general, where administrative (that is, procedural) controls, or personal protective equipment are used to control significant risks, health surveillance should be undertaken.

- a. All new University of Newcastle employees are required to complete a baseline health questionnaire as part of the Health and Hazard Assessment Questionnaire (HHAQ).
- b. Where it is identified that the employee will be working with animals they will be contacted by the University Health Services for a medical consultation. The consultation will include a review of immunisations, baseline allergy assessment and spirometry . Medical review will be carried out annually.
- c. All, students and others (e.g. members of Animal Care and Ethics Committees) should be medically assessed where exposure is significant or if symptomatic.
- d. During induction into BioResearch Facilities facilities, all new personnel will be given a copy of the Laboratory Animal Allergy Information Sheet. (See [Laboratory Animal Allergy \(LAA\)](#)).
- e. All personnel working with animals will be asked to complete a Laboratory animal allergy assessment questionnaire annually. Where this questionnaire reveals the possible development of Laboratory animal allergy the respondent will be directed to contact the University Health Service.

Response

(54) Individuals who suffer any symptoms or injuries related to their work or who have concerns about the effect of their work on their health shall complete a University of Newcastle Injury/Incident/Hazard report and seek medical advice, preferably from the University Health Service. The UoN Health Service and the University of Newcastle will work together with the individual to minimise the impact of the illness, allergy or injury on the individual, and their work or studies.

(55) Unreported illness and injuries may result in worsening of the condition. Early reporting of symptoms and injuries is necessary to maximise the chance of a satisfactory outcome.

(56) If health monitoring confirms a diagnosis of LAA the supervisor should ensure that all practicable steps are taken to minimise exposure to allergens. Respiratory protective equipment should be provided and worn by the person during all high exposure tasks. Other strategies that should be employed include task rotation and close attention to personal hygiene.

(57) For staff with asthma, continuation in an environment that aggravates allergy may result in worsening of the

condition. Where the individual is unable to tolerate continued animal-related work or medical advice indicates that their condition is deteriorating, it may be necessary to redeploy the individual to a more suitable position.

Responsibilities

(58) PVC's and Heads of Divisions are responsible for monitoring the implementation of these procedures and for ensuring that appropriate resources are provided in order to achieve this in their delegated areas of control. They shall ensure that Heads of Schools and Units and Chief Investigators oversee, and are held accountable for, the development of safe systems of animal-based work.

(59) Heads of Schools and Units and Chief Investigators must ensure that effective supervision is provided when working with animals and ensure that safe systems of work are provided, maintained, and communicated in their respective work areas.

(60) Staff, students, visitors and members of committees must follow these safe systems of work, and report circumstances where work or study poses hazards that need to be addressed

Documentation

(61) Minimising risks from animal hazards will result in the following documentation:

- a. A risk assessment for the task.
- b. Information about the hazard and its health effects (e.g. Material Safety Data Sheets, etc.).
- c. Notification of health surveillance outcomes and remedial actions
- d. Risk assessments following changes to risk control measures, in line with health surveillance outcomes.
- e. Records of induction into the use of BRF facilities
- f. Where applicable an application for Safety Clearance

(62) Health surveillance documentation should be retained by the University Health Service, risk assessments with the person preparing them, and induction records/ hazard information with the BioResearch Facilities facilities.

Status and Details

Status	Historic
Effective Date	4th December 2013
Review Date	31st December 2019
Approval Authority	Senior Deputy Vice-Chancellor Research and Innovation
Approval Date	4th December 2013
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Responsible Executive	Martin Sainsbury Chief People and Culture Officer martin.sainsbury@newcastle.edu.au
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Glossary Terms and Definitions

"University" - The University of Newcastle, a body corporate established under sections 4 and 5 of the University of Newcastle Act 1989.

"Vehicle" - Has the same meaning as section 4 of the Road Transport Act 2013.

"Risk" - Effect of uncertainty on objectives. Note: An effect is a deviation from the expected, whether it is positive and/or negative.

"Risk management process" - Systematic application of management policies, procedures, and practices to the activities of communicating, consulting, establishing the context, and identifying, analysing, evaluating, treating, monitoring, and reviewing risk.

"Risk assessment" - The overall process of risk identification, risk analysis, and risk evaluation.

"Course" - When referring to a course offered by the University, a course is a set of learning activities or learning opportunities with defined, assessed and recorded learning outcomes. A course will be identified by an alphanumeric course code and course title. Course types include core courses, compulsory courses, directed courses, capstone courses and electives. For all other uses of this term, the generic definition applies.

"Student" - A person formally enrolled in a course or active in a program offered by the University or affiliated entity.

"Personnel" - In relation to a party, any employee, officer, agent, contractor, sub-contractor, student or volunteer of that party.

"Staff" - Means a person who was at the relevant time employed by the University and includes professional and academic staff of the University, by contract or ongoing, as well as conjoint staff but does not include visitors to the University.

"Supervisor" - Staff members with direct supervisory responsibility for other staff within the workplace (a Supervisor may also be member of Senior Management, with duties as an Officer as defined in the Work Health and Safety Act 2011, or any replacing legislation).