



## **Sydney Zoo**

### **Occupational Health and Safety**

#### **Health and Hygiene**

- **1 - Purpose**

The Sydney Zoo (SZ) has a commitment to the health and safety of its visitors, staff, contractors and volunteers. The purpose of these guidelines is to provide employees with a single point of reference for policies and procedures pertaining to hygiene, health and the prevention of infectious disease. The primary aim of this policy is to minimise the opportunity for infectious or parasitic disease to occur in zoo employees, volunteers, the public and animals.

- **2 - Policy**

The SZ is committed to safeguarding the health of its visitors, staff, contractors and volunteers through the implementation of a health and hygiene policy. This policy aims to prevent the transmission of disease between animals and people via the following policy guidelines:

- Employees who have direct animal contact will undergo on-going health monitoring and will receive zoonosis education;
- Animals entering the zoo will undergo a quarantine period and diagnostic testing sufficient to minimise the risk of introducing significant zoonotic pathogens into the animal collection;
- Veterinary staff will employ a program of preventative animal medicine that will reduce the prevalence and/or risk of transmission of significant zoonotic pathogens within the animal collection;
- Keeping staff will employ husbandry, pest control, and hygiene regimes that decrease the environmental burden of potentially zoonotic agents, and aim to block the routes of disease transmission;
- Visitors will not have direct contact with non-human primates or bats. Staff working with these species will follow specific husbandry and hygiene protocols;
- Visitor contact with animals will occur under the supervision of properly trained staff or volunteers;



- Visitor contact with animals will take place in an environment that provides hand washing facilities and adequate instructions. If an animal encounter is provided visitors will be advised to wash their hands after touching any animal and/or use antiseptic solution provided;
- Any public property that comes into contact with animals or their exhibits must be disinfected using appropriate antiseptic wipe or solution before being returned to the owner. If cleaning the property by the employee is not feasible, then the owner must be advised to have the property cleaned.
- Immunocompromised people should have minimal contact with animals, particularly with reptiles.

Any wilful breach of the recommendations or procedures outlined in this policy may result in disciplinary action.

- **3 - Definitions**

### 3.1 Immunocompromised persons

An immunocompromised person is any individual with diabetes, chronic viral disease, chronic liver or kidney disease, children less than 5 years old, persons taking immunomodulation drugs, splenectomised people and the elderly.

### 3.2 Zoonosis

Zoonosis (singular-“zoonotic disease”) are diseases that can be transmitted between humans and animals e.g. Hepatitis B, Lyssa Virus, Tuberculosis, and Herpes Virus.

Toxoplasmosis.

Zoonosis may be caused by parasites, bacteria, fungi, protozoa or viruses. These organisms are routinely transmitted through the following methods:

- Direct contact during handling of animals and their tissues, through bites and scratches; and
- Indirect contact through urine, faeces, secretions, blood, aerosols, or inanimate objects contaminated with these materials.

Clinical signs of a zoonotic disease may include common non-specific signs such as fever, swollen lymph nodes, persistent diarrhoea, or persistent cold or flu-like symptoms.

### 3.3 Significant Injury or Illness

As defined by WorkCover a significant injury or illness is:

“A dangerous occurrence or injury, illness or incident which results in an employee or contractor being unfit to attend their usual place of work for a continuous period of at least 7 consecutive days”.

### 3.4 A Dangerous Occurrence

As defined by WorkCover “a dangerous occurrence is any work-related occurrence”

That:

- “Causes the death of a person”;
- “Results in the amputation of a limb”;
- “Results in the person being placed on a life support system”; or
- “Presents an immediate threat to life”.

- **4 - Policy Practice and Procedure**

#### 4.1 Infectious Disease Prevention

Although nearly any contact with other living organisms carries some risk of disease transmission it can be mitigated by adopting broad principles of health and hygiene.

Zoonotic disease is initially controlled through health screening programs for animals and staff, and through personal hygiene practices that break the transmission cycle of zoonotic agents. Methods that the SZ will employ to limit the risk of spread of disease among animals, employees, and the general public include:

- Quarantine testing to prevent animals infected with significant zoonotic agents from entering the general zoo collection;
- Ongoing health screening and preventative health regimes for the animal collection;
- Husbandry and hygiene protocols for animal care to minimise the number of potential pathogens in the environment and the potential for transmission of these agents;
- Ongoing employee health screening to detect exposure or infection with potentially pathogenic agents;
- Pre-employment and ongoing employee vaccination to bolster the immune system of employees and prevent infection with specific pathogenic agents;
- Specific vaccination requirements for people in different risk categories;
- Specific preventative measures for minimising the risk of zoonotic infection when dealing with high risk species e.g. primates and bats;
- Protocols for dealing with bites and scratches inflicted by primates or bats;
- Guidelines for the correct use of disinfectants and antiseptics; and
- An effective pest-control program that will decrease the number of rodents, and other pests that may act in transmitting potential pathogens between animal and human areas of the zoo.

#### 4.2 Employee Health

Veterinary and keeping staff are at increased risk of contracting zoonotic disease due to their close association with animals. These individuals must be educated regarding the potential impact of zoonotic disease, the clinical signs of zoonotic

disease, the methods of disease transmission and effective mechanisms to prevent disease transmission.

Employees dealing with high risk species such as bats and primates need to be particularly conscious of the nature of zoonosis and how it is spread. These employees need to refer to standard operating procedures for the prevention of zoonotic infections.

Pregnant employees are advised to follow strict hygiene practices and seek guidance from their nominated treating Medical provider on the prevention of infection of Toxoplasmosis. Appropriate precaution should be initiated to minimise the risk of exposure to X-Rays and potentially harmful anaesthetics, animal medications and/or other chemicals.

#### 4.3 Visitor Health

Visitor health will be protected in most areas of the zoo through distance and isolation from the animals. Additional health protection is offered through the zoos' animal quarantine and preventative medicine programs.

Areas within the zoo where the public can contact animals may present an increased risk of disease transmission. Although the risk of zoonotic disease is best managed through avoiding direct contact with animals, this denies the public many valuable experiences. Hands on contact with animals engenders positive attitudes toward conservation and animal welfare.

The risk of visitors contracting a zoonotic disease after contact with a collection animal will be minimised through the implementation of reasonable precautions which are set out as follows:

- Access to adequate hand washing facilities within all areas of direct contact between visitors and collection animals. Hand washing is the most effective tool in breaking the transmission cycle of zoonotic agents.
- If an animal encounter is provided visitors will be advised to wash their hands after touching any animal and/or use the antiseptic solution provided;
- Immunocompromised persons should be discouraged from direct or indirect animal contact, particularly with reptiles and primates; and
- Supervision of animal contact areas by properly trained zoo volunteers or employees to ensure compliance with these precautions.

- **5 - Accountability**

#### 5.1 Employees, Contractors and Volunteers

Employees, contractors and volunteers are responsible for:

- complying with this policy and the general hygiene and injury management procedures as outlined in Appendix I and II;
- protecting their own health as well as the health of their animals;

- reporting any animal that is showing clinical signs of illness to their supervisor, or to the veterinary staff;
- reporting incidents, hazards, injuries and/or illnesses to an immediate supervisor or manager;
- avoiding direct or indirect contact with animals, if they are aware that they may have a compromised immune system for any reason; and
- Primate keepers who are exhibiting signs of flu, cold, herpetic ulcers or vomiting/diarrhoea must be rostered to another section to prevent transmission of any viral agents to the collection primates.

## 5.2 Managers

Managers or delegates are responsible for:

- Informing the OH&S Manager of any incidents, hazards, injuries and/or illness reported by an employee;
- Providing protective clothing and equipment where applicable to reduce risk of transmission and infection;
- maintaining hand wash facilities as outlined in Appendix I;
- Ensure employees attend health and hygiene training sessions delivered by the OH&S team; and
- Providing workplace procedures that adequately address health and hygiene issues specific to each section.

## 5.3 OH&S Team

The OH&S team is responsible for:

- Reporting any significant injury, illness or incident to Work Covers;
- Reporting any injury sustained by an animal attacker bite requiring medical attention to the Registrar of the Exhibited Animals Protection Act;
- Providing awareness training to employees about SZ health and hygiene policies and procedures.

- **6 - Approval**

Jake Burgess

Chief Executive Officer      Date

- **7 - Appendix**

Appendix I – General Hygiene Procedures

Appendix II – Injury Management Procedures

,

## Appendix I

### General Hygiene Procedures

Employees must be aware of the need to maintain the integrity of their skin, as this is one of the most important barriers against infection.

To maintain a high level of hygiene and reduce the risk of transmission and contraction of diseases employees must ensure compliance with the procedures outlined below:

- Thoroughly wash hands before and after eating, before and after using the toilet, before preparing food and between different tasks;
- All Antiseptics and Disinfectants must be used in accordance with manufacturer's guidelines. Unless otherwise indicated by the occurrence of an infectious disease or other similar circumstance, thoroughly washing hands with soap and water would fulfil normal standards of hygiene;
- Ensure no human food is prepared, stored, or consumed in animal areas. Food being prepared for animals is not to be consumed by staff under any circumstance;
- Ensure high pressure hoses are not used when there is potential of aerosolising potentially pathogenic agents, unless additional safety precautions, such as the use of respiratory masks, are employed. This practice is especially important within primate enclosures;
- Wear adequate protective clothing where there is a risk of contracting animal materials that could contain zoonotic agents. Access to gowns, overalls, aprons, gloves, masks, goggles, and rubber boots must be available where they are needed on each section;
- Ensure hand washing stations are maintained and include skin disinfectant/soap dispensers, free flowing water, and paper towel dispensers. These are strategically located throughout each division of the zoo; and
- Clean minor cuts and abrasions immediately with a suitable disinfectant and an appropriate barrier dressing or glove should be applied. The First Aid Unit or a medical practitioner should be consulted in the event of suspected inflammatory or infectious skin or eye conditions.

## Appendix II

### Injury Management Procedures

#### Biological Injury

The following procedures should be employed to manage risk associated with a biological injury:

- Protective eye wear must be worn whenever there is a risk of ocular contamination by animal materials or when there is a risk of ocular impact by projectiles;
- Thorough cleansing under running water using soap or a suitable skin disinfectant

(E.g. chlorhexidine or iodine based) is necessary if contact occurs between employee and animal blood, body fluids or tissues.

- Clothes contaminated by body secretions such as blood, urine, faeces, or saliva should be removed and washed;
- Spills of urine, faeces or blood should be cleaned with 1% sodium hypochlorite solution. Disposable latex gloves should be worn during this procedure; and
- Disposable gloves, and in some circumstances surgical masks and overalls should be worn when contact with blood, body fluids, tissues or contaminated surfaces are anticipated.

### Bite and Scratch Wound

Bite and scratch wounds constitute an inoculation of bacteria into the deeper tissues of the body and infection is not uncommon. Early care of bite and scratch wounds is essential to prevent bacteria from becoming established within the wound.

For any type of bite or scratch immediately:

- Thoroughly cleanse the wound under running water, using soap or a suitable skin disinfectant (e.g. chlorhexidine or iodine based)
- Report the incident to First Aid; and seek further medical assistance if indicated.
- Complete an injury/illness report;
- Educate the patient about the signs of infection, such as fever, throbbing pain, redness, swelling, discharge or foul smell of a wound, or swelling of lymph nodes; and
- Consult a Doctor if there is any health concern or if there is any question regarding tetanus or hepatitis B vaccination status of the individual.

Bite wounds inflicted by a venomous animal are to be managed in accordance with the Snake Bite & Venomous Animal Injury protocols of the Emergency Procedures Manual. (Still to be written)

### Appendix III

#### Primate Zoonosis Prevention

The following are precautionary measures to prevent zoonotic infections when dealing with primates.

Note: various diseases are also readily transmitted from humans to other primates and the following measures are aimed at preventing these as well.

1. Hands should be washed frequently, especially after handling animals, food, bedding, enclosure material, excrement, tissues and body fluid. Hands must be washed before and after using the toilet, eating and smoking. Hand washing is probably the most effective means of preventing diseases transmission.

2. Strict personal hygiene is essential. Apart from hand washing, human food should not be prepared in animal kitchens (and vice versa), no smoking, eating or drinking in animal areas, keeping hands away from mouth, nose and eyes while working around animals and their faeces, and no chewing on pens, pencils or needle caps. Animal utensils, e.g. bowls, knives, should not be used for preparing human food and vice versa.
3. Enclosures should be cleaned to minimise the risk of creating aerosols or droplets of potentially infectious material. Wearing protective clothing (masks, gloves, goggles or glasses) and the manual removal of bedding, food and faeces prior to hosing, decreases the risk of creating aerosols or droplets. Scrubbing dirty areas with disinfectants should be done before hosing. The use of high-pressure water hoses and steam cleaners should be kept to a minimum.
4. People who are ill (cold, flu, other respiratory infections, cold sores, gastroenteritis) should avoid working with primates during their illness.
5. If people working with primates get sick (fever, chills, diarrhoea, open sores) they should seek medical attention and inform their doctor that they work with primates.
6. Appropriate restraint and immobilisation techniques must be used if an animal is to be handled. This is essential in order to prevent trauma to the handler and the animal. Protective clothing such as gloves, overalls and goggles should be worn when handling some primate species, particularly if health status and origin are unknown. If injured, people should wash wounds thoroughly with a disinfectant soap and seek medical attention if indicated.
7. Immunocompromised people (e.g. those with AIDS, or other illnesses which suppress immunity, receiving radiation, chemotherapy or steroids), the young and the elderly should be extremely cautious when working with primates.
8. After injecting a primate needles must not be recapped, and all sharps must be disposed of in approved containers.
9. People with open cuts or sores on their hands should wear gloves.
10. An effective pest prevention or control program (insects, rodents, and birds) should be maintained in any primate facility.
11. All primate deaths should be thoroughly investigated and necropsies carried out by an experienced veterinarian. Protective clothing (gloves, masks, goggles, overalls, aprons and gumboots) should always be worn. If a zoonotic disease is suspected the necropsy should be carried out in a biohazard safety cabinet. Laboratory personnel handling faeces and body fluids from primates should also wear protective clothing and work in a biohazard safety cabinet.
12. All primates must be quarantined appropriately and examined and tested for relevant diseases depending on species and country of origin.
13. All primates and their blood, tissues, secretions and excreta should be treated as potential sources of zoonotic pathogens. Animals can remain carriers of some



zoonotic pathogens despite being healthy and negative on serological and other tests e.g. herpes B virus

14. All institutions holding primates should have zoonotic disease education and prevention programs in place for their staff.

15. Appropriate barriers must be in place to prevent close contact between public and nonhuman primates e.g. glass, wide moats. Providing all the above precautions are taken limited close contact between low risk animals or species is acceptable. Access to animal holding facilities should be restricted to essential personnel. If other people are given access to these facilities then all the above precautions must be strictly followed.

16. Appropriate signage must be placed at the entrance to all primate facilities warning of the potential from transmission of disease from people to the animals and vice versa.

#### Appendix IV

##### Protocol for Employees working with bats

Unless otherwise stated this protocol refers to all bat species (Mega- and Microchiroptera).

The aim of this protocol is to minimise the potential for human exposure to Australian Bat

Lyssavirus (ABL).

Suitably trained and briefed staff may undertake the non-contact aspects of day to day bat husbandry including the maintenance of the floor substrate, removal of waste and provision of new food. These staff may or may not be vaccinated for rabies. Where bats are housed in a restricted space (cage or scenario where the animals are likely to take flight rather than climb away from staff) or a specimen requires close inspection, capture or manual restraint, only rabies vaccinated staff with protective antibody titres can undertake those aspects of the animal's husbandry.

Only keepers experienced in handling bats, and designated by the Manager of Australian Fauna are to undertake any form of bat restraint that may lead to bites/scratches. These staff are to receive pre exposure rabies vaccination prior to any contact with bats. Rabies antibody titres are to be checked after the initial course of vaccinations. If there is a positive immunity level indicated after the course then there will be no need for ongoing immunity checks, however a booster will be required every 2 years thereafter. If the titre is low (not-protective), a booster vaccination will be required. Veterinarians, veterinary pathologists and laboratory staff also require vaccination.

Handling of bats should occur only when absolutely necessary as this is the most likely time for people to be injured. Appropriate care should be taken by the designated handler so as to minimise the risk of bites/scratches, e.g. mandatory use of gloves, and consider using towels, arm protection (long sleeves), and face

protection. If a bite or scratch breaks the skin, or if bat blood/saliva contacts broken skin or mucous membranes, the wound or contact site must immediately be washed thoroughly with soap and water; and an antiseptic solution (e.g. Chlorhexidine or Povidone-Iodine) applied. An Incident Report must be submitted and medical advice sought as to whether post-exposure vaccination is needed, following NSW Health recommendations.



# Sydney Zoo Workplace Health and Safety

---

## Contents

1	Introduction .....	2
2	Health and Hygiene.....	3
2.1	Purpose .....	3
2.2	Policy.....	3
2.3	Definitions .....	4
2.3.1	Immunocompromised persons .....	4
2.3.2	Zoonosis.....	4
2.3.3	Significant Injury or Illness.....	4
2.3.4	A Dangerous Occurrence.....	4
2.4	Policy Practice and Procedure.....	4
2.4.1	Infectious Disease Prevention .....	4
2.4.2	Employee Health .....	5
2.4.3	Visitor Health.....	5
2.5	Accountability .....	6
2.5.1	Employees, Contractors and Volunteers.....	6
2.5.2	Managers.....	6
2.5.3	WHS Team .....	6
2.6	Approval.....	6
2.7	Appendices.....	7
3	Appendix I.....	8
3.1	General Hygiene Procedures.....	8
4	Appendix II.....	9
4.1	Injury Management Procedures .....	9
4.1.1	Biological Injury .....	9
4.1.2	Bite and Scratch Wound.....	9
5	Appendix III.....	10
5.1	Primate Zoonosis Prevention .....	10
6	Appendix IV.....	12
6.1	Protocol for Employees working with bats .....	12



## 1 Introduction

The following Workplace Health and Safety regulations deal specifically with health and hygiene and personal injury management. They are based upon published industry standards.

The objectives of the Sydney Zoo WHS Policies are to:

1. Set appropriate health, safety and environment standards, objectives and targets which meet and ultimately exceed relevant legislation, guidelines and codes of practice;
2. Continually review and monitor performance to assess the effectiveness and success of implemented systems and programs;
3. Address health safety, and community issues in decision making processes, alongside all other business considerations;
4. Regularly review and update health, and safety procedures and guidelines to ensure they evolve with developments in best practice and with community expectations.
5. Ensure a high standard of performance by ensuring local contractors and suppliers who wish to work in conjunction with Sydney Zoo are bound by the requirements of the policies and therefore aim to comply with standards and guidelines set by Sydney Zoo.
6. Emphasise the use of appropriate protection devices consistent with the nature of the risk and continually support the promotion of health and safety in the workplace.
7. Educate and motivate the workforce by informing employees at every level, of their own, and the company's responsibilities and encourage them to be pro-active in the management of health and safety matters thereby continually aspiring toward the goal of best practice management.
8. Maintain an efficient and consistent reporting system to ensure that Sydney Zoo is kept informed of significant WHS developments and issues, particularly those incidents detrimental to the health and safety of the staff, community or environment.
9. Comply with the Biosecurity Act 2015 and the NSW Biosecurity Strategy.

Prior to opening the Zoo further Workplace Health and Safety further manuals will be developed for the Facility. The WHS policies will have to deal with, at minimum, the following matters:

- 1) General requirements of the Model Work Health and Safety (WHS) Act, supported by model WHS regulations, model Codes of Practice and a National Compliance and Enforcement Policy, and
- 2) Internal polices will be developed with respect to:
  - a) Injury Management and First Aid
  - b) Workers Compensation and Procedures
  - c) UV and Weather Extremes
  - d) Sharps handling procedures
  - e) Manual Handling methods and strategies
  - f) Plant and Equipment Safety
  - g) Firearms management procedures
  - h) Motor Vehicle Safety
  - i) Behind the Scenes Tours
  - j) Health and Hygiene Protocols
  - k) Contractor Induction
  - l) Chemicals Management
  - m) Alcohol and Other Drugs

- n) Dangerous animal handling
- o) Smoke Free Environment

## 2 Health and Hygiene

### 2.1 Purpose

The Sydney Zoo (SZ) has a commitment to the health and safety of its visitors, staff, contractors and volunteers. The purpose of these guidelines is to provide employees with a single point of reference for policies and procedures pertaining to hygiene, health and the prevention of infectious disease. The primary aim of this policy is to minimise the opportunity for infectious or parasitic disease to occur in zoo employees, volunteers, the public and animals.

### 2.2 Policy

The SZ is committed to safeguarding the health of its visitors, staff, contractors and volunteers through the implementation of a health and hygiene policy. This policy aims to prevent the transmission of disease between animals and people via the following policy guidelines:

- Employees who have direct animal contact will undergo on-going health monitoring and will receive zoonosis education;
- Animals entering the zoo will undergo a quarantine period and diagnostic testing sufficient to minimise the risk of introducing significant zoonotic pathogens into the animal collection;
- Veterinary staff will employ a program of preventative animal medicine that will reduce the prevalence and/or risk of transmission of significant zoonotic pathogens within the animal collection;
- Keeping staff will employ husbandry, pest control, and hygiene regimes that decrease the environmental burden of potentially zoonotic agents, and aim to block the routes of disease transmission;
- Visitors will not have direct contact with non-human primates or bats. Staff working with these species will follow specific husbandry and hygiene protocols;
- Visitor contact with animals will occur under the supervision of properly trained staff or volunteers;
- Visitor contact with animals will take place in an environment that provides hand washing facilities and adequate instructions. If an animal encounter is provided visitors will be advised to wash their hands after touching any animal and/or use antiseptic solution provided;
- Any public property that comes into contact with animals or their exhibits must be disinfected using appropriate antiseptic wipe or solution before being returned to the owner. If cleaning the property by the employee is not feasible, then the owner must be advised to have the property cleaned.
- Immunocompromised people should have minimal contact with animals, particularly with reptiles.
- Any wilful breach of the recommendations or procedures outlined in this policy may result in disciplinary action.

## 2.3 Definitions

### 2.3.1 Immunocompromised persons

An immunocompromised person is any individual with diabetes, chronic viral disease, chronic liver or kidney disease, children less than 5 years old, persons taking immunomodulation drugs, splenectomised people and the elderly.

### 2.3.2 Zoonosis

Zoonosis (singular-“zoonotic disease”) are diseases that can be transmitted between humans and animals e.g. Hepatitis B, Lyssa Virus, Tuberculosis, and Herpes Virus, Toxoplasmosis.

Zoonosis may be caused by parasites, bacteria, fungi, protozoa or viruses. These organisms are routinely transmitted through the following methods:

1. Direct contact during handling of animals and their tissues, through bites and scratches; and
2. Indirect contact through urine, faeces, secretions, blood, aerosols, or inanimate objects contaminated with these materials.

Clinical signs of a zoonotic disease may include common non-specific signs such as fever, swollen lymph nodes, persistent diarrhoea, or persistent cold or flu-like symptoms.

### 2.3.3 Significant Injury or Illness

As defined by WorkCover a significant injury or illness is:

“A dangerous occurrence or injury, illness or incident which results in an employee or contractor being unfit to attend their usual place of work for a continuous period of at least 7 consecutive days”.

### 2.3.4 A Dangerous Occurrence

As defined by WorkCover “a dangerous occurrence is any work-related occurrence”

That:

1. “Causes the death of a person”;
2. “Results in the amputation of a limb”;
3. “Results in the person being placed on a life support system”; or
4. “Presents an immediate threat to life”.

## 2.4 Policy Practice and Procedure

### 2.4.1 Infectious Disease Prevention

Although nearly any contact with other living organisms carries some risk of disease transmission it can be mitigated by adopting broad principles of health and hygiene.

Zoonotic disease is initially controlled through health screening programs for animals and staff, and through personal hygiene practices that break the transmission cycle of zoonotic agents. Methods that the SZ will employ to limit the risk of spread of disease among animals, employees, and the general public include:

- Quarantine testing to prevent animals infected with significant zoonotic agents from entering the general zoo collection;
- Ongoing health screening and preventative health regimes for the animal collection;

- Husbandry and hygiene protocols for animal care to minimise the number of potential pathogens in the environment and the potential for transmission of these agents;
- Ongoing employee health screening to detect exposure or infection with potentially pathogenic agents;
- Pre-employment and ongoing employee vaccination to bolster the immune system of employees and prevent infection with specific pathogenic agents;
- Specific vaccination requirements for people in different risk categories;
- Specific preventative measures for minimising the risk of zoonotic infection when dealing with high risk species e.g. primates and bats;
- Protocols for dealing with bites and scratches inflicted by primates or bats;
- Guidelines for the correct use of disinfectants and antiseptics; and
- An effective pest-control program that will decrease the number of rodents, and other pests that may act in transmitting potential pathogens between animal and human areas of the zoo.

### 2.4.2 Employee Health

Veterinary and keeping staff are at increased risk of contracting zoonotic disease due to their close association with animals. These individuals must be educated regarding the potential impact of zoonotic disease, the clinical signs of zoonotic disease, the methods of disease transmission and effective mechanisms to prevent disease transmission.

Employees dealing with high risk species such as bats and primates need to be particularly conscious of the nature of zoonosis and how it is spread. These employees need to refer to standard operating procedures for the prevention of zoonotic infections.

Pregnant employees are advised to follow strict hygiene practices and seek guidance from their nominated treating Medical provider on the prevention of infection of Toxoplasmosis. Appropriate precaution should be initiated to minimise the risk of exposure to X-Rays and potentially harmful anaesthetics, animal medications and/or other chemicals.

### 2.4.3 Visitor Health

Visitor health will be protected in most areas of the zoo through distance and isolation from the animals. Additional health protection is offered through the zoos' animal quarantine and preventative medicine programs.

Areas within the zoo where the public can contact animals may present an increased risk of disease transmission. Although the risk of zoonotic disease is best managed through avoiding direct contact with animals, this denies the public many valuable experiences. Hands on contact with animals engenders positive attitudes toward conservation and animal welfare.

The risk of visitors contracting a zoonotic disease after contact with a collection animal will be minimised through the implementation of reasonable precautions which are set out as follows:

- Access to adequate hand washing facilities within all areas of direct contact between visitors and collection animals. Hand washing is the most effective tool in breaking the transmission cycle of zoonotic agents.
- If an animal encounter is provided visitors will be advised to wash their hands after touching any animal and/or use the antiseptic solution provided;
- Immunocompromised persons should be discouraged from direct or indirect animal contact, particularly with reptiles and primates; and

- Supervision of animal contact areas by properly trained zoo volunteers or employees to ensure compliance with these precautions.

## 2.5 Accountability

### 2.5.1 Employees, Contractors and Volunteers

Employees, contractors and volunteers are responsible for:

- complying with this policy and the general hygiene and injury management procedures as outlined in Appendix I and II;
- protecting their own health as well as the health of their animals;
- reporting any animal that is showing clinical signs of illness to their supervisor, or to the veterinary staff;
- reporting incidents, hazards, injuries and/or illnesses to an immediate supervisor or manager;
- avoiding direct or indirect contact with animals, if they are aware that they may have a compromised immune system for any reason; and
- Primate keepers who are exhibiting signs of flu, cold, herpetic ulcers or vomiting/diarrhoea must be rostered to another section to prevent transmission of any viral agents to the collection primates.

### 2.5.2 Managers

Managers or delegates are responsible for:

- Informing the WHS Manager of any incidents, hazards, injuries and/or illness reported by an employee;
- Providing protective clothing and equipment where applicable to reduce risk of transmission and infection;
- maintaining hand wash facilities as outlined in Appendix I;
- Ensure employees attend health and hygiene training sessions delivered by the WHS team; and
- Providing workplace procedures that adequately address health and hygiene issues specific to each section.

### 2.5.3 WHS Team

The WHS team is responsible for:

- Reporting any significant injury, illness or incident to Work Covers;
- Reporting any injury sustained by an animal attacker bite requiring medical attention to the Registrar of the Exhibited Animals Protection Act;
- Providing awareness training to employees about SZ health and hygiene policies and procedures.

## 2.6 Approval

Jake Burgess

Chief Executive Officer    Date



## 2.7 Appendices

Appendix I – General Hygiene Procedures

Appendix II – Injury Management Procedures

Appendix III - Primate Zoonosis Prevention

Appendix IV - Protocol for Employees working with bats

DRAFT

## 3 Appendix I

### 3.1 General Hygiene Procedures

Employees must be aware of the need to maintain the integrity of their skin, as this is one of the most important barriers against infection.

To maintain a high level of hygiene and reduce the risk of transmission and contraction of diseases employees must ensure compliance with the procedures outlined below:

- Thoroughly wash hands before and after eating, before and after using the toilet, before preparing food and between different tasks;
- All Antiseptics and Disinfectants must be used in accordance with manufacturer's guidelines. Unless otherwise indicated by the occurrence of an infectious disease or other similar circumstance, thoroughly washing hands with soap and water would fulfil normal standards of hygiene;
- Ensure no human food is prepared, stored, or consumed in animal areas. Food being prepared for animals is not to be consumed by staff under any circumstance;
- Ensure high pressure hoses are not used when there is potential of aerosolising potentially pathogenic agents, unless additional safety precautions, such as the use of respiratory masks, are employed. This practice is especially important within primate enclosures;
- Wear adequate protective clothing where there is a risk of contracting animal materials that could contain zoonotic agents. Access to gowns, overalls, aprons, gloves, masks, goggles, and rubber boots must be available where they are needed on each section;
- Ensure hand washing stations are maintained and include skin disinfectant/soap dispensers, free flowing water, and paper towel dispensers. These are strategically located throughout each division of the zoo; and
- Clean minor cuts and abrasions immediately with a suitable disinfectant and an appropriate barrier dressing or glove should be applied. The First Aid Unit or a medical practitioner should be consulted in the event of suspected inflammatory or infectious skin or eye conditions.

## 4 Appendix II

### 4.1 Injury Management Procedures

#### 4.1.1 Biological Injury

The following procedures should be employed to manage risk associated with a biological injury:

- Protective eye wear must be worn whenever there is a risk of ocular contamination by animal materials or when there is a risk of ocular impact by projectiles;
- Thorough cleansing under running water using soap or a suitable skin disinfectant (E.g. chlorhexidine or iodine based) is necessary if contact occurs between employee and animal blood, body fluids or tissues.
- Clothes contaminated by body secretions such as blood, urine, faeces, or saliva should be removed and washed;
- Spills of urine, faeces or blood should be cleaned with 1% sodium hypochlorite solution. Disposable latex gloves should be worn during this procedure; and
- Disposable gloves, and in some circumstances surgical masks and overalls should be worn when contact with blood, body fluids, tissues or contaminated surfaces are anticipated.

#### 4.1.2 Bite and Scratch Wound

Bite and scratch wounds constitute an inoculation of bacteria into the deeper tissues of the body and infection is not uncommon. Early care of bite and scratch wounds is essential to prevent bacteria from becoming established within the wound.

For any type of bite or scratch immediately:

- Thoroughly cleanse the wound under running water, using soap or a suitable skin disinfectant (e.g. chlorhexidine or iodine based)
- Report the incident to First Aid; and seek further medical assistance if indicated.
- Complete an injury/illness report;
- Educate the patient about the signs of infection, such as fever, throbbing pain, redness, swelling, discharge or foul smell of a wound, or swelling of lymph nodes; and
- Consult a Doctor if there is any health concern or if there is any question regarding tetanus or hepatitis B vaccination status of the individual.

Bite wounds inflicted by a venomous animal are to be managed in accordance with the Snake Bite & Venomous Animal Injury protocols of the Emergency Procedures Manual. (Still to be written)

## 5 Appendix III

### 5.1 Primate Zoonosis Prevention

The following are precautionary measures to prevent zoonotic infections when dealing with primates.

Note: various diseases are also readily transmitted from humans to other primates and the following measures are aimed at preventing these as well.

1. Hands should be washed frequently, especially after handling animals, food, bedding, enclosure material, excrement, tissues and body fluid. Hands must be washed before and after using the toilet, eating and smoking. Hand washing is probably the most effective means of preventing diseases transmission.
  2. Strict personal hygiene is essential. Apart from hand washing, human food should not be prepared in animal kitchens (and vice versa), no smoking, eating or drinking in animal areas, keeping hands away from mouth, nose and eyes while working around animals and their faeces, and no chewing on pens, pencils or needle caps. Animal utensils, e.g. bowls, knives, should not be used for preparing human food and vice versa.
  3. Enclosures should be cleaned to minimise the risk of creating aerosols or droplets of potentially infectious material. Wearing protective clothing (masks, gloves, goggles or glasses) and the manual removal of bedding, food and faeces prior to hosing, decreases the risk of creating aerosols or droplets. Scrubbing dirty areas with disinfectants should be done before hosing. The use of high-pressure water hoses and steam cleaners should be kept to a minimum.
  4. People who are ill (cold, flu, other respiratory infections, cold sores, gastroenteritis) should avoid working with primates during their illness.
  5. If people working with primates get sick (fever, chills, diarrhoea, open sores) they should seek medical attention and inform their doctor that they work with primates.
  6. Appropriate restraint and immobilisation techniques must be used if an animal is to be handled. This is essential in order to prevent trauma to the handler and the animal. Protective clothing such as gloves, overalls and goggles should be worn when handling some primate species, particularly if health status and origin are unknown. If injured, people should wash wounds thoroughly with a disinfectant soap and seek medical attention if indicated.
  7. Immunocompromised people (e.g. those with AIDS, or other illnesses which suppress immunity, receiving radiation, chemotherapy or steroids), the young and the elderly should be extremely cautious when working with primates.
  8. After injecting a primate needles must not be recapped, and all sharps must be disposed of in approved containers.
  9. People with open cuts or sores on their hands should wear gloves.
  10. An effective pest prevention or control program (insects, rodents, and birds) should be maintained in any primate facility.
- All primate deaths should be thoroughly investigated and necropsies carried out by an experienced veterinarian. Protective clothing (gloves, masks, goggles, overalls, aprons and gumboots) should always be worn. If a zoonotic disease is suspected the necropsy should be carried out in a biohazard safety cabinet. Laboratory personnel handling faeces and body fluids from primates should also wear protective clothing and work in a biohazard safety cabinet.

- All primates must be quarantined appropriately and examined and tested for relevant diseases depending on species and country of origin.
- All primates and their blood, tissues, secretions and excreta should be treated as potential sources of zoonotic pathogens. Animals can remain carriers of some zoonotic pathogens despite being healthy and negative on serological and other tests e.g. herpes B virus
- All institutions holding primates should have zoonotic disease education and prevention programs in place for their staff.
- Appropriate barriers must be in place to prevent close contact between public and nonhuman primates e.g. glass, wide moats. Providing all the above precautions are taken limited close contact between low risk animals or species is acceptable. Access to animal holding facilities should be restricted to essential personnel. If other people are given access to these facilities then all the above precautions must be strictly followed.
- Appropriate signage must be placed at the entrance to all primate facilities warning of the potential from transmission of disease from people to the animals and vice versa.

DRAFT

## 6 Appendix IV

### 6.1 Protocol for Employees working with bats

Unless otherwise stated this protocol refers to all bat species (Mega- and Microchiroptera).

The aim of this protocol is to minimise the potential for human exposure to Australian Bat Lyssavirus (ABL).

Suitably trained and briefed staff may undertake the non-contact aspects of day to day bat husbandry including the maintenance of the floor substrate, removal of waste and provision of new food. These staff may or may not be vaccinated for rabies. Where bats are housed in a restricted space (cage or scenario where the animals are likely to take flight rather than climb away from staff) or a specimen requires close inspection, capture or manual restraint, only rabies vaccinated staff with protective antibody titres can undertake those aspects of the animal's husbandry.

Only keepers experienced in handling bats, and designated by the Manager of Australian Fauna are to undertake any form of bat restraint that may lead to bites/scratches. These staff are to receive pre exposure rabies vaccination prior to any contact with bats. Rabies antibody titres are to be checked after the initial course of vaccinations. If there is a positive immunity level indicated after the course then there will be no need for ongoing immunity checks, however a booster will be required every 2 years thereafter. If the titre is low (not-protective), a booster vaccination will be required. Veterinarians, veterinary pathologists and laboratory staff also require vaccination.

Handling of bats should occur only when absolutely necessary as this is the most likely time for people to be injured. Appropriate care should be taken by the designated handler so as to minimise the risk of bites/scratches, e.g. mandatory use of gloves, and consider using towels, arm protection (long sleeves), and face protection. If a bite or scratch breaks the skin, or if bat blood/saliva contacts broken skin or mucous membranes, the wound or contact site must immediately be washed thoroughly with soap and water; and an antiseptic solution (e.g. Chlorhexidine or Povidone-Iodine) applied. An Incident Report must be submitted and medical advice sought as to whether post-exposure vaccination is needed, following NSW Health recommendations.