



Application to the Chief Executive for an approval for animal management and/or welfare

Animal management and/or welfare form

- This form is to be used to apply for an approval for animal management and/or welfare purposes pursuant to the [Health \(Drugs and Poisons\) Regulation 1996](#).
- Please print clearly or complete electronically, date and sign. Answer all questions in full.
- All forms requiring a signature must bear the original signature in ink. The Department of Health is not able to accept a photocopy, facsimile (fax) or emailed copy of the completed form.
- Certified evidence of identity must be included with this application such as a drivers licence, passport or Adult Proof of Age Card.
- Official photocopied documents including evidence of identity must bear the certification and original signature, name and occupation of an authorised identifier (certified copy) i.e. Justice of the Peace, Commissioner for Declarations, police officer, solicitor or an officer from a local [Public Health Unit](#).

Information about the approval

- Approvals will be granted to individuals working/volunteering for or contracted to Government agencies (local or State), prescribed entities under the *Animal Care and Protection Act 2001* or Animal Care and Protection Regulation 2012, or entities who possess a relevant permit from the Department of Environment and Heritage Protection or a licence for exhibited animals from the Department of Agriculture and Fisheries.
- A separate application is required for an animal control officer (employee) of a local government to possess and administer Schedule 4 medicines.
- Only the Schedule 4 medicines used for euthanasia or sedation prior to euthanasia, or transporting animals for subsequent treatment by a registered veterinary surgeon will be approved. See the list of medicines in Section 7 of this form.
- For applicants employed by certain government agencies and the Royal Society for the Prevention of Cruelty to Animals—Queensland, approval for the use of Schedule 4 vaccines will also be considered. If you require any additional medicines, please contact the Department of Health.
- Schedule 4 medicines are listed in the current Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) published by the Commonwealth under the [Therapeutic Goods Act 1989](#).
- Approvals may be granted subject to certain conditions as listed in the approval and the [Guideline – Animal welfare approval](#).
- Further information is available via the Department of Health or telephone (07) 3708 5264.

1. Purpose

Is the application for the Chief Executive Officer of a local government agency to obtain, possess and issue Schedule 4 medicines to an employee of the respective local government (approval holder)?

☐ Yes ☐ No

Note: If yes, you do not need to complete Sections 5 or 9.

Does the applicant work for a Government agency (local or State Government)

☐ Yes ☐ No

Does the applicant work for a prescribed entity under the *Animal Care and Protection Act 2001* or Animal Care and Protection Regulation 2012?

☐ Yes ☐ No

Does the applicant work for an organisation that possesses a relevant permit from the Department of Environment and Heritage Protection or a licence from the Department of Agriculture and Fisheries?

☐ Yes ☐ No

2. Reason/s for approval

3. Period of approval

Period for which approval is required (2 year maximum)

4. Applicant details

Title		Given name	
Surname			
Date of birth			
Phone number			
Mobile number			
Email			
Residential address			
P/C		State	
Postal address		Same as residential ☐	
P/C		State	
Current position (also state if you are employed, contracted or a volunteer)			

5. Qualifications and training

Refer to the [Guideline – Animal welfare approval](#) for further information regarding qualifications and training. Please tick all that apply:

- ☐ I have Registered Training Organisation (RTO) qualifications relevant to the safe administration and use of scheduled medicines and have attached a certified copy of my certificate of successful completion.
- ☐ I have received training from a Queensland Registered Veterinary Surgeon working/volunteering for or contracted to my employer equivalent to RTO training competencies and have attached a copy of a competency checklist signed by the veterinary surgeon indicating successful completion.

6. Employer details

Employer name	
Company number (ACN)	Permit/Licence number (if applicable)
Business name	
Business address	
P/C	State
Postal address	
Same as business ☐	
P/C	State
Contact person for approval at the entity	
Title	Given name
Surname	
Contact email	
Contact phone number	

7. Scheduled medicines requested

What scheduled medicines are you requesting to use? Please tick all that apply:

- ☐ Alfaxalone (Alfaxan)
- ☐ Zolazepam/tiletamine (Zoletil)
- ☐ Acepromazine (ACP)
- ☐ Xylazine (Xylazil)
- ☐ Sodium Pentobarbitone (Lethabarb)
- ☐ F3 Feline Herpes, Calicivirus, Panleukopenia

☐	C3 Distemper, Adenovirus, Parvo Living
☐	C4 Distemper, Adenovirus, Parvo Living and Parainfluenza Living
☐	C5 Distemper, Adenovirus, Parvo Living, Bordetella Bronchiseptica & Parainfluenza Living

8. Storage description

Schedule 4 medicines must be held at all times in secure, locked storage. The keys to such storage must be kept in the personal possession of the approval holder or an authorised person. **Note: an inspection of premises/storage conditions may be undertaken by an authorised inspector of Queensland Health as part of the approval process.*

Identifying name (name of premises, building etc.)

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Street address (include shed/unit number)

--

P/C

State

Type of storage (details of vehicle, room, receptacle)

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Security measures (lockable storage, key possession etc.)

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9. Endorsement by veterinary surgeon

Note: This section does not apply if you are the Chief Executive Officer of a local government.

This section is to be completed and signed by the employer's Queensland registered veterinary surgeon as an endorsement that the applicant has current competency to fulfil the requirements of the employer, and to undertake activities with medicines as per the employer's protocol.

Further information for veterinary surgeons is provided in the [Guideline – Animal welfare approval](#).

I confirm that I have personally trained (applicant name)

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in the administration and use of the Schedule 4 medicines listed in Section 7, as per the employer's protocol. I believe the applicant is competent to follow the employer's protocol when administering and using these Schedule 4 medicines.

I confirm that I have endorsed the employer's protocol for the competencies required, and the procedures for the safe and effective use of scheduled medicines.

Title

Given name

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Surname

--

Registration number

--

Email

--

Signature

Date

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10. Employer endorsement

This section needs to be completed by the applicant's employer or supervisor.

The named applicant is working/volunteering for or contracted to (insert employer's name—the entity)

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and is required to possess and administer the Schedule 4 medicines indicated on this form at Section 7 as part of his/her animal welfare duties. A protocol document as described in the [Guideline – Animal welfare approval](#), has been written or endorsed by a registered veterinary surgeon working/volunteering for or contracted to the entity.

The protocol has been submitted with this application. ☐

The protocol document will undergo appropriate review, update and endorsement by a registered veterinary surgeon every three years. ☐

Proof of indemnity insurance cover has been submitted with this application (where applicable). ☐

Note: The Department of Health does not approve or endorse protocol documents.

Employer/supervisor details

Title

Given name

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Surname

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Contact number	
Email	
Signature	Date

11. Disclosure by the applicant

Have you, the applicant:

been convicted of an indictable offence (drink driving and traffic offences are not indictable offences)? ☐ Yes ☐ No

been convicted of an offence against the [Health Act 1937](#) or the Health (Drugs & Poisons) Regulation 1996 or a repealed corresponding law? ☐ Yes ☐ No

held an approval granted under the [Health \(Drugs and Poisons\) Regulation 1996](#) or a repealed provision or a corresponding law that was suspended or cancelled? ☐ Yes ☐ No

ever been refused an approval under the [Health \(Drugs and Poisons\) Regulation 1996](#) or a repealed provision or a corresponding law? ☐ Yes ☐ No

**If any questions are answered 'YES', please attach documentation that provides details of the offence, the nature of the offence and the circumstances of its commission. Applicants are advised that in order to ensure the requirements of Section 15 of the Health (Drugs and Poisons) Regulation 1996 are met, the Department of Health may in certain circumstances, provide the information contained in this application to relevant external agencies.*

12. Declaration

I consent to the making of enquiries of, and the exchange of information with the authorities of any State, Territory or Commonwealth regarding any matters relevant to this application. ☐

I declare that the information stated by me on this application form and accompanying this application is true, correct and complete. ☐

I understand and agree to comply with the relevant provisions of [Health \(Drugs and Poisons\) Regulation 1996](#) and the [Guideline – Animal welfare approval](#). ☐

Full name

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Signature Date

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Applications must be forwarded by POST to:

Chief Executive
Healthcare Approvals & Regulation
Locked Bag 21
FORTITUDE VALLEY BC QLD 4006

Privacy Statement: The Department of Health provides this form under the [Health \(Drugs and Poisons\) Regulation 1996](#). The information and documents collected for the purpose of this application may be accessible by authorised departmental persons. The department will not disclose your personal information or supporting documents to third parties without your consent unless required or authorised by law.

The [Information Privacy Act 2009](#) sets out the rules for the collection and handling of personal information by the Department of Health. For information about how the Department of Health protects your personal information, or to learn about your right to access your own personal information, please see our [website](#).

Vial Number	Column1	MIX Volume 3 or 5 (ml)	Date Use/Disposal Remainder	Month year	Purpose	Volume Used/Disposed (ml)	Officer
285	USED/DISPC	3.00	25/5/2018	May 2018	Red17F	1.00	J Kellam
261	USED	3.00	2/7/2018	July 2018	YYYellow17M HD	3.00	S.73
284	USED/DISPC	3.00	23/7/2018	July 2018	used BRpi17F	1.00	S Dowdell
284	USED/DISPC	3.00	23/7/2018	July 2018	used YGR16M	1.00	S Dowdell
245	USED/DISPC	5.00	24/7/2018	July 2018	used BBB16M	1.00	S Dowdell
245	USED/DISPC	5.00	24/7/2018	July 2018	used BBB16M	1.00	S Dowdell
245	USED/DISPC	5.00	24/7/2018	July 2018	used PuBO16M	1.00	S Dowdell
294	USED/DISPC	3.00	5/8/2018	August 2018	16Blue16M	1.50	J Kellam
294	USED/DISPC	3.00	5/8/2018	August 2018	17Green17M	0.50	J Kellam
303	USED/DISPC	3.00	15/9/2018	September 2018	Trap and tag male	1.00	J Kellam
303	USED/DISPC	3.00	15/9/2018	September 2018	Trap and tag male	0.40	J Kellam
303	USED/DISPC	3.00	15/9/2018	September 2018	Trap and tag male	0.30	J Kellam
298	USED/DISPC	3.00	17/9/2018	September 2018	Female sub adult ding	1.10	J Kellam
299	USED/DISPC	3.00	27/9/2018	September 2018	Male sub adult Dingo 17	0.90	J Kellam
277	USED/DISPC	5.00	25/10/2018	October 2018	16Pink16F	1.00	S Dowdell
277	USED/DISPC	5.00	25/10/2018	October 2018	17Purple17F	1.00	S Dowdell
276	USED/DISPC	5.00	26/10/2018	October 2018	OPuO16M	1.00	S Dowdell
309	S Dowdell	5.00	27/10/2018	October 2018	PiOR15M	1.00	S Dowdell



JOB SAFETY ANALYSIS WORKSHEET (JSA)

Activity:	Trap and tag of Dingoes for identification		
Workplace: (Where the task is being carried out)	Fraser Island		Page: 1 of 7
Task / Operation: (Specify the task being analysed)	Trap and tag of dingoes for identification purposes		
JSA prepared by:	Name(s)	Signature(s)	Date
	John Dargusch		16/01/2014
	Linda Behrendorff		
Who was consulted? (Example: Employees who do task, Health and Safety Reps, etc)	Paul Fishburn – Dingo ranger Bruce Knuckey – Senior ranger (MUST)		Date for Review

Instructions:

1. Document task. It should have an agreed starting and finishing point. **Example:** Unloading a truck at a depot site
2. Record individual steps of the task. **Example:** 1. Arrive at depot. 2. Park truck in designated area ...
3. Identify hazards associated with each step. **Example** of a hazard: Driver exits cabin when forklift in use (unloading).
4. Identify suitable control measures associated with each hazard. The controls may already be in place but may need checking for their effectiveness
Example: Driver to remain in cabin during loading/unloading.
5. Nominate person(s) responsible for the actions where required.

Ensure risk controls are implemented and monitored. Review the JSA to ensure that the controls are effective.

A: Steps List each step required to perform the task in the sequence they are carried out.	B: Hazards and associated Risks List the hazards associated with each task that might cause negative effects.	RB	C: Risk Control Measures List the control measures required to eliminate or minimise the effect of the identified hazard.	RA	D: Person Responsible List the people with responsibility for the implementation and maintenance of the control measures
NOTE: RB = Risk Rating before controls implemented - RA = Risk Rating after controls are implemented					
Driving on Fraser Island/Driving at night.	Changing terrain. Soft sand. Washouts. Washed up debris. Pedestrians. Wildlife	M	- Drivers experienced in 4wd operations and familiar with vehicles and conditions. - Induction on vehicle and possible hazards prior to operating.	L	QPWS Staff in field
Vehicle parked during dark hours.	Collision with other beach traffic.	L	- Reflector panels maintained in clean condition. - Vehicle parked off obvious track. - Staff pay attention	L	QPWS Staff in field
Staff moving by foot at night.	Fall due to uneven terrain.	L	- Staff to use head torches. - Ensure first aid kits are in vehicles - Staff with up to date first aid training	L	QPWS Staff in field

A: Steps List each step required to perform the task in the sequence they are carried out.	B: Hazards and associated Risks List the hazards associated with each task that might cause negative effects.		C: Risk Control Measures List the control measures required to eliminate or minimise the effect of the identified hazard.		D: Person Responsible List the people with responsibility for the implementation and maintenance of the control measures
	NOTE: RB = Risk Rating before controls implemented - RA = Risk Rating after controls are implemented				
Trap setting	<p>Hit self with lump hammer whilst driving in pickets to anchor traps.</p> <p>Fingers being caught in traps whilst setting & covering.</p> <p>Sand being thrown into eyes whilst setting or covering traps.</p> <p>Member of public walking through trap sites.</p> <p>Traps not secured properly to chain and chain to star pickets.</p>	M	<ul style="list-style-type: none"> - Staff to pay attention whilst hammering pickets. - 'Throw' one of the soft jaw trap arms over the treadle plate whilst setting trap. - Take care whilst covering traps. - Mark locations of treadle plates whilst finishing traps to avoid touching treadle plates. - If possible choose trapping sites that are not likely to be approached by members of the public. - Ensure 'D' shackles are correctly tightened before and after securing without over tightening and stripping thread. - Always erect 'Trapping in progress' signs in the vicinity of the traps. - If it is necessary to trap in areas close to camps/houses/resorts, notify anyone nearby to keep away from trap sites and not to approach dingoes in traps. - Wear eye protection - Trap count at end of trapping 	L	QPWS Staff in field
Control of trapped dingo/es, Part 1. – Using pin poles for initial control.	<p>Risk of dingo bite whilst attempting to control with pin poles.</p> <p>Sunburn if doing during day.</p>	M	<ul style="list-style-type: none"> - Before attempting to control dingo with pin poles, first gauge how far the dingo can reach whilst it is in the trap. - Look for how far it can lunge, how much play is in the chain anchoring the trap and how many legs are trapped. - By observing these things first, this will determine where it will be safe to stand to pin the dingo. - At least two people to undertake task good 	L	QPWS Staff in field

A: Steps List each step required to perform the task in the sequence they are carried out.	B: Hazards and associated Risks List the hazards associated with each task that might cause negative effects.	RB	C: Risk Control Measures List the control measures required to eliminate or minimise the effect of the identified hazard.	RA	D: Person Responsible List the people with responsibility for the implementation and maintenance of the control measures
	NOTE: RB = Risk Rating before controls implemented - RA = Risk Rating after controls are implemented				
			communication is paramount whilst pinning dingo. - As per trap and tag in current MOCES Document. -Appropriate sun protective clothing and sunscreen if conduct activity during the day		
Control of trapped dingo/es, Part 2. – Sedation of pinned & trapped dingo/es.	Accidental injection of staff or needle-stick injury. Risk that dingo can squeeze out from pin pole whilst Zoletil is being administered in close proximity to staff. Control not maintained over dingo before drug has taken effect. Welfare of wildlife Escape of wildlife from cage	M	- As per Trap and Tag procedure in current MOCES Document. - Staff administering drugs must have current QLD Health drug authorisation. - Prior preparation of Zoletil expected to be needed. - Ensure cap remains on syringe and jab stick is kept in a secure location made known to other staff present, if it is loaded. - Also make clear to staff in control of dingo when approaching to use the jab stick/syringe/Dart. - Drug administer must be sure that dingo is secure in pin poles prior to drug administration. - Staff holding pin poles are to be very aware of dingoes movements before drug is administered - After drug is administered, staff are to monitor dingo for signs that the drug is taking effect, such as: Salivation, change in breathing pattern (long slow breaths). -Caged wildlife to be secured appropriately so as not to cause injury. Drive in an appropriate manner. -Cage should be placed on the tray with the	L	Drug Authorised staff member.

A: Steps List each step required to perform the task in the sequence they are carried out.	B: Hazards and associated Risks List the hazards associated with each task that might cause negative effects.	RB	C: Risk Control Measures List the control measures required to eliminate or minimise the effect of the identified hazard.	RA	D: Person Responsible List the people with responsibility for the implementation and maintenance of the control measures
	NOTE: RB = Risk Rating before controls implemented - RA = Risk Rating after controls are implemented				
			door against the cabin of the utility. Use cable ties to secure wire cages		
Processing of sedated dingo	Manual handling when lifting dingo for weighing, also whilst in cage. Touching dingo with bare hands. Needle stick injury from inserting microchip. Tagging with livestock tagger.	L	<ul style="list-style-type: none"> -Exercise correct manual handling lifting techniques. -Wear disposable rubber gloves and wash hands thoroughly afterwards. - Avoid needle stick injury when inserting microchip. -Follow current MOCES procedure <ul style="list-style-type: none"> - Keep free hand away from clamp whilst inserting tag or use two hands on the clamp. 	L	QPWS field staff
Humane destruction of dingoes	Needle stick injury	L	<ul style="list-style-type: none"> - Follow current MOCES procedure -Ensure cap remains on syringe and jab stick is kept in a secure location made known to other staff present, if it is loaded. -Only staff trained in drug administration to carry out Humane destruction 	L	Drug Authorised staff member who initially sedated dingo.
Release of Dingo/es.	Risk of dingo biting staff after release.	M	<ul style="list-style-type: none"> - Drug authorised staff who administered Zoletil are responsible for the appropriate time and place for release of the dingo. - Prior to release, monitor dingo for signs that show it is no longer showing the effects of Zoletil. - Face door of cage away from other staff/cars. 	L	Drug authorised staff member who initially sedated dingo

A: Steps List each step required to perform the task in the sequence they are carried out.	B: Hazards and associated Risks List the hazards associated with each task that might cause negative effects.	RB	C: Risk Control Measures List the control measures required to eliminate or minimise the effect of the identified hazard.	RA	D: Person Responsible List the people with responsibility for the implementation and maintenance of the control measures
	NOTE: RB = Risk Rating before controls implemented - RA = Risk Rating after controls are implemented				
			<ul style="list-style-type: none"> - Face door of cage towards an open space. - Make other staff aware of intentions to release dingo. - Person releasing dingo should be prepared to use the cage/blanket as a physical barrier from dingo. All other persons are to stay behind releaser. 		
Removal of soft jaw traps	Sand being thrown into eyes from uncovering traps. Fingers caught uncovering traps. Manual handling issues caused by pulling star picket anchors out of the ground.	M	<ul style="list-style-type: none"> - Use shovel or boots and keep distance to carefully find all traps (don't bend down and find traps with hands). - Set traps off carefully with boots/shovel/brush. - Use shovel to dig out star pickets or specially designed jig to lever out. - Wear protective glasses and leather gloves. 	L	QPWS staff in field
Working in hot/humid or sunny conditions.	Heat exposure. Sun exposure.	L	<ul style="list-style-type: none"> - Staff briefed on need for hydration. - Water carried in vehicle. - Adequate breaks taken. - Hats and sunscreen utilised. 	L	QPWS staff in field
Working in remote areas of Fraser Island.	Isolation. Timely response for medical assistance.	M	<ul style="list-style-type: none"> - Personnel to carry EPIRB or SPOT locator - Utilise departmental radios. - Utilise mobile phones. - Minimum of two personnel together at all times. 	L	QPWS staff in field
Public contact with campers and other visitors.	Exposure to aggressive or inebriated people.	L	<ul style="list-style-type: none"> - Personnel work in teams of two - Personnel leave scene and inform police at first indication of conflict. 	L	QPWS staff in field
Irregular work hours maintained.	Fatigue	M	<ul style="list-style-type: none"> - Work rosters in line with Agency Awards and procedures 	L	QPWS staff in field

A: Steps List each step required to perform the task in the sequence they are carried out.	B: Hazards and associated Risks List the hazards associated with each task that might cause negative effects.	RB	C: Risk Control Measures List the control measures required to eliminate or minimise the effect of the identified hazard.	RA	D: Person Responsible List the people with responsibility for the implementation and maintenance of the control measures
	NOTE: RB = Risk Rating before controls implemented - RA = Risk Rating after controls are implemented				
			- Personnel not to work more than 12 hours in 24. - At least one 10 hour break in each 24.		

Approved by: _____

Name: _____

Position: _____

Date: _____

Published on DES Disclosure Log
RTI Act 2009

HEALTH (DRUGS AND POISONS) REGULATION 1996
APPROVAL UNDER SECTION 18(1)
APPROVAL No. AW006383817

s.73

sch4p4(6) Personal information

The Decision

The Approval is granted by the Delegate of the Chief Executive under section 18(1) of the Health (Drugs and Poisons) Regulation 1996.

ISSUE DATE: 28/03/2017
EXPIRY DATE: 27/03/2019

Approval Holder Information

Approval Holder s.73
Address sch4p4(6) Personal information

Employer Details

Name Department of National Parks, Sports, Racing & Recreation - QPWS
Address Esplanade, Eurong FRASER ISLAND QLD 4581

Premises Details

Name Eurong Ranger Base FRASER ISLAND
Address Eurong Ranger Base FRASER ISLAND QLD 4581

Activity Details

Subject to the conditions stated below, the holder of this Approval may carry out the following activity/activities:

Possess and Administer

Conditions

1. The scheduled substances are used only for the purposes of either vaccination, sedation, euthanasia, capture or treatment of animals as part of the approval holder performing animal welfare duties for the employer/organisation named in this approval.

Reason: Ensures that the scheduled substances are used only for the purposes for which the approval holder has been trained. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

2. The scheduled substances are only obtained from the veterinary surgeon for the time being employed/contracted or engaged by the employer/organisation of the approval holder named in this approval.

Reason: Ensures that a veterinary surgeon familiar with and employed/contracted or engaged by the employer/organisation of the approval holder, is solely responsible for the supply of scheduled substances to the approval holder. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

3. Administration of the scheduled substances by the approval holder shall only be on the direction of the veterinary surgeon employed/contracted or engaged by the employer/organisation of the approval holder named in this approval and in accordance with a protocol that has been developed by a veterinary surgeon employed/contracted or engaged by the employer/organisation of the approval holder named in this approval.

Where it is not practicable for the veterinary surgeon to give a verbal direction to administer the scheduled substance, for example where the

approval holder is in a remote location - the veterinary surgeon must be contacted to review the administration of the scheduled substance within 24 hours. The approval holder must note the specifics of the review on the relevant record entry.

Further, a direction from the veterinary surgeon is not required for the euthanasia of feral cats, provided the approval holder acts in accordance with the above protocol.

Furthermore, where the attached schedule includes the drug Zolazepam/Tiletamine (Zoletil), the approval holder shall not use or administer that drug unless in the company of another person who has a Queensland Health approval for that drug, or who has appropriate first aid training, or is a veterinary surgeon.

Reason: Ensures safe, correct and appropriate use of the scheduled substances. Use and administration of the drug Zoletil requires the approval holder to be in the presence of another approval holder or person who has appropriate first aid training or veterinary surgeon due to safety concerns relating to the fast acting nature of the drug.

4. Whilst not actually in use the scheduled substances must be kept in lockable storage containers at the premises nominated in this approval. The keys to the locked storage containers are to be kept in the personal possession of the approval holder.

Reason: Ensures accountability and security of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

5. Records of incoming stock and daily usage together with a progressive balance must be kept for the scheduled substances. Such records shall be kept in a bound book with numbered pages and separate pages must be used for each different class, or strength of the scheduled substances.

Alternatively, a computerised recording system may be used for the recording of the scheduled substances subject to the following:

1. The computer system is programmed in a manner which ensures:

- (a) a separate part of the drugs register is used for each class of scheduled substances; and
- (b) a general heading is displayed on each such part describing the class and measurement of the scheduled substances recorded; and
- (c) entry into the substances register, details that are listed in point 2 below; and
- (d) each transaction is recorded in chronological order

2. Each transaction for each class of scheduled drug must include the following details:

- (a) the date of the transaction
- (b) from whom the scheduled substances were obtained
- (c) the use of the scheduled substances
- (d) the quantity or volume of the scheduled substances obtained or used
- (e) the quantity or volume of the scheduled substances in stock after the transaction

Such records shall be kept for a period of two years from the date of each transaction and be made available to an Environmental Health Officer of Queensland Health on demand.

Reason: Ensures accountability and traceability of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

6. All scheduled substance records must be checked and initialled on a monthly basis by the veterinary surgeon employed/contracted or otherwise engaged by the employer/organisation of the approval holder.

The exception to such checking and initialling is where the organisation that employs/contracts or otherwise engages the approval holder also utilises an electronic stock control system that is capable of monitoring (in real time) the usage of the scheduled substances by the approval holder. Such system must be monitored routinely by the veterinary surgeon employed/contracted or otherwise engaged by the organisation. The system must also have been deemed as an acceptable system for this purpose by the delegate of the Chief Executive.

Reason: Ensures accountability and traceability and correct use of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

7. The approval holder must only use the scheduled substances listed in the approval in accordance with their registered purpose as registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA) under the Agricultural and Veterinary Chemicals Control Act 1994, unless used in accordance with an off-label permit granted by the APVMA.

Reason: Ensures appropriate use of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

8. The approval holder shall immediately notify the Manager, Environmental Health of the local Queensland Health Public Health Unit should any theft, misappropriation or losses occur of any of the scheduled substances included in the schedule of this approval.

Reason: Ensures that any theft, misappropriation or losses concerning the scheduled substances are reported to Queensland Health for appropriate follow-up action. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

9. All scheduled substances included in the schedule of this approval must be stored and transported in a locked container in a manner that prevents access to unauthorised persons.

Reason: Ensures that the drugs or poisons are securely stored and are only accessible to approved persons. No findings of fact were

required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

Scheduled Substances

The following table lists the scheduled substances permitted under this Approval.

Scheduled Substance	Form	Strength	Quantity
Pentobarbitone	As per submitted protocol	As per submitted protocol	As per submitted protocol
Tiletamine and Zolazepam (Zoletil 100)	As per submitted protocol	As per submitted protocol	As per submitted protocol

Other Obligations and Information

This legislative instrument is not transferable.

It is a requirement that the holder of this Approval complies with all legal obligations imposed by the Health Act 1937 and any Regulations in relation to record keeping, storage and premises requirements.

The office for this Approval is Drugs & Poisons Licensing.

Contact details for all offices can be found online at www.health.qld.gov.au/cho/. Alternatively please call 07 33289310 for transfer to the relevant office.

Where non mandatory conditions have been imposed, the reason for these conditions is provided.

You have the right to have the decision to impose conditions on your endorsement reviewed by the Queensland Civil and Administrative Tribunal (QCAT). Such review must be made within 28 days from this notice.

Form 23 - Application to review a decision is available from the QCAT website at <http://www.qcat.qld.gov.au>

If you wish to seek a stay of a decision, you must complete form 44 - Application to stay a decision, also available from the QCAT website.

End of Approval

HEALTH (DRUGS AND POISONS) REGULATION 1996
APPROVAL UNDER SECTION 18(1)
APPROVAL No. AW006442517

s.73

sch4p4(6) Personal information

The Decision

The Approval is granted by the Delegate of the Chief Executive under section 18(1) of the Health (Drugs and Poisons) Regulation 1996.

ISSUE DATE: 24/04/2017
EXPIRY DATE: 23/04/2019

Approval Holder Information

Approval Holder
Address

s.73

sch4p4(6) Personal information

Employer Details

Name Department of National Parks, Sport and Racing
Address Esplanade EURONG QLD 4581

Premises Details

Name Eurong Ranger Base FRASER ISLAND
Address Eurong Ranger Base FRASER ISLAND QLD 4581

Activity Details

Subject to the conditions stated below, the holder of this Approval may carry out the following activity/activities:

Possess and Administer

Conditions

1. The scheduled substances are used only for the purposes of either vaccination, sedation, euthanasia, capture or treatment of animals as part of the approval holder performing animal welfare duties for the employer/organisation named in this approval.

Reason: Ensures that the scheduled substances are used only for the purposes for which the approval holder has been trained. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

2. The scheduled substances are only obtained from the veterinary surgeon for the time being employed/contracted or engaged by the employer/organisation of the approval holder named in this approval.

Reason: Ensures that a veterinary surgeon familiar with and employed/contracted or engaged by the employer/organisation of the approval holder, is solely responsible for the supply of scheduled substances to the approval holder. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

3. Administration of the scheduled substances by the approval holder shall only be on the direction of the veterinary surgeon employed/contracted or engaged by the employer/organisation of the approval holder named in this approval and in accordance with a protocol that has been developed by a veterinary surgeon employed/contracted or engaged by the employer/organisation of the approval holder named in this approval.

Where it is not practicable for the veterinary surgeon to give a verbal direction to administer the scheduled substance, for example where the

approval holder is in a remote location - the veterinary surgeon must be contacted to review the administration of the scheduled substance within 24 hours. The approval holder must note the specifics of the review on the relevant record entry.

Further, a direction from the veterinary surgeon is not required for the euthanasia of feral cats, provided the approval holder acts in accordance with the above protocol.

Furthermore, where the attached schedule includes the drug Zolazepam/Tiletamine (Zoletil), the approval holder shall not use or administer that drug unless in the company of another person who has a Queensland Health approval for that drug, or who has appropriate first aid training, or is a veterinary surgeon.

Reason: Ensures safe, correct and appropriate use of the scheduled substances. Use and administration of the drug Zoletil requires the approval holder to be in the presence of another approval holder or person who has appropriate first aid training or veterinary surgeon due to safety concerns relating to the fast acting nature of the drug.

4. Whilst not actually in use the scheduled substances must be kept in lockable storage containers at the premises nominated in this approval. The keys to the locked storage containers are to be kept in the personal possession of the approval holder.

Reason: Ensures accountability and security of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

5. Records of incoming stock and daily usage together with a progressive balance must be kept for the scheduled substances. Such records shall be kept in a bound book with numbered pages and separate pages must be used for each different class, or strength of the scheduled substances.

Alternatively, a computerised recording system may be used for the recording of the scheduled substances subject to the following:

1. The computer system is programmed in a manner which ensures:

- (a) a separate part of the drugs register is used for each class of scheduled substances; and
- (b) a general heading is displayed on each such part describing the class and measurement of the scheduled substances recorded; and
- (c) entry into the substances register, details that are listed in point 2 below; and
- (d) each transaction is recorded in chronological order

2. Each transaction for each class of scheduled drug must include the following details:

- (a) the date of the transaction
- (b) from whom the scheduled substances were obtained
- (c) the use of the scheduled substances
- (d) the quantity or volume of the scheduled substances obtained or used
- (e) the quantity or volume of the scheduled substances in stock after the transaction

Such records shall be kept for a period of two years from the date of each transaction and be made available to an Environmental Health Officer of Queensland Health on demand.

Reason: Ensures accountability and traceability of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

6. All scheduled substance records must be checked and initialled on a monthly basis by the veterinary surgeon employed/contracted or otherwise engaged by the employer/organisation of the approval holder.

The exception to such checking and initialling is where the organisation that employs/contracts or otherwise engages the approval holder also utilises an electronic stock control system that is capable of monitoring (in real time) the usage of the scheduled substances by the approval holder. Such system must be monitored routinely by the veterinary surgeon employed/contracted or otherwise engaged by the organisation. The system must also have been deemed as an acceptable system for this purpose by the delegate of the Chief Executive.

Reason: Ensures accountability and traceability and correct use of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

7. The approval holder must only use the scheduled substances listed in the approval in accordance with their registered purpose as registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA) under the Agricultural and Veterinary Chemicals Control Act 1994, unless used in accordance with an off-label permit granted by the APVMA.

Reason: Ensures appropriate use of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

8. The approval holder shall immediately notify the Manager, Environmental Health of the local Queensland Health Public Health Unit should any theft, misappropriation or losses occur of any of the scheduled substances included in the schedule of this approval.

Reason: Ensures that any theft, misappropriation or losses concerning the scheduled substances are reported to Queensland Health for appropriate follow-up action. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

9. All scheduled substances included in the schedule of this approval must be stored and transported in a locked container in a manner that prevents access to unauthorised persons.

Reason: Ensures that the drugs or poisons are securely stored and are only accessible to approved persons. No findings of fact were

required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

Scheduled Substances

The following table lists the scheduled substances permitted under this Approval.

Scheduled Substance	Form	Strength	Quantity
Pentobarbitone	As per submitted protocol	As per submitted protocol	As per submitted protocol
Tiletamine and Zolazepam (Zoletil 100)	As per submitted protocol	As per submitted protocol	As per submitted protocol

Other Obligations and Information

This legislative instrument is not transferable.

It is a requirement that the holder of this Approval complies with all legal obligations imposed by the Health Act 1937 and any Regulations in relation to record keeping, storage and premises requirements.

The office for this Approval is Wide Bay (Hervey Bay) Public Health Unit.

Contact details for all offices can be found online at www.health.qld.gov.au/cho/. Alternatively please call 07 33289310 for transfer to the relevant office.

Where non mandatory conditions have been imposed, the reason for these conditions is provided.

You have the right to have the decision to impose conditions on your endorsement reviewed by the Queensland Civil and Administrative Tribunal (QCAT). Such review must be made within 28 days from this notice.

Form 23 - Application to review a decision is available from the QCAT website at <http://www.qcat.qld.gov.au>

If you wish to seek a stay of a decision, you must complete form 44 - Application to stay a decision, also available from the QCAT website.

End of Approval

s.73

sch4p4(6) Personal information

The Decision

The Approval is granted by the Delegate of the Chief Executive under section 18(1) of the Health (Drugs and Poisons) Regulation 1996.

ISSUE DATE: 24/04/2017

EXPIRY DATE: 23/04/2019

Approval Holder Information

Approval Holder

s.73

Address

sch4p4(6) Personal information

Employer Details

Name

Department of National Parks, Sport and Racing

Address

Esplanade EURONG QLD 4581

Premises Details

Name

Eurong Ranger Base FRASER ISLAND

Address

Eurong Ranger Base FRASER ISLAND QLD 4581

Activity Details

Subject to the conditions stated below, the holder of this Approval may carry out the following activity/activities:

Possess and Administer

Conditions

1. The scheduled substances are used only for the purposes of either vaccination, sedation, euthanasia, capture or treatment of animals as part of the approval holder performing animal welfare duties for the employer/organisation named in this approval.

Reason: Ensures that the scheduled substances are used only for the purposes for which the approval holder has been trained. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

2. The scheduled substances are only obtained from the veterinary surgeon for the time being employed/contracted or engaged by the employer/organisation of the approval holder named in this approval.

Reason: Ensures that a veterinary surgeon familiar with and employed/contracted or engaged by the employer/organisation of the approval holder, is solely responsible for the supply of scheduled substances to the approval holder. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

3. Administration of the scheduled substances by the approval holder shall only be on the direction of the veterinary surgeon employed/contracted or engaged by the employer/organisation of the approval holder named in this approval and in accordance with a protocol that has been developed by a veterinary surgeon employed/contracted or engaged by the employer/organisation of the approval holder named in this approval.

Where it is not practicable for the veterinary surgeon to give a verbal direction to administer the scheduled substance, for example where the

required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

Scheduled Substances

The following table lists the scheduled substances permitted under this Approval.

Scheduled Substance	Form	Strength	Quantity
Pentobarbitone	As per submitted protocol	As per submitted protocol	As per submitted protocol
Tiletamine and Zolazepam (Zoletil 100)	As per submitted protocol	As per submitted protocol	As per submitted protocol

Other Obligations and Information

This legislative instrument is not transferable.

It is a requirement that the holder of this Approval complies with all legal obligations imposed by the Health Act 1937 and any Regulations in relation to record keeping, storage and premises requirements.

The office for this Approval is Wide Bay (Hervey Bay) Public Health Unit.

Contact details for all offices can be found online at www.health.qld.gov.au/cho/. Alternatively please call 07 33289310 for transfer to the relevant office.

Where non mandatory conditions have been imposed, the reason for these conditions is provided.

You have the right to have the decision to impose conditions on your endorsement reviewed by the Queensland Civil and Administrative Tribunal (QCAT). Such review must be made within 28 days from this notice.

Form 23 - Application to review a decision is available from the QCAT website at <http://www.qcat.qld.gov.au>

If you wish to seek a stay of a decision, you must complete form 44 - Application to stay a decision, also available from the QCAT website.

End of Approval

HEALTH (DRUGS AND POISONS) REGULATION 1996
APPROVAL UNDER SECTION 18(1)
APPROVAL No. AW006442417

s.73

sch4p4(6) Personal information

The Decision

The Approval is granted by the Delegate of the Chief Executive under section 18(1) of the Health (Drugs and Poisons) Regulation 1996.

ISSUE DATE: 24/04/2017
EXPIRY DATE: 23/04/2019

Approval Holder Information

Approval Holder
Address

s.73

sch4p4(6) Personal information

Employer Details

Name Department of National Parks, Sport and Racing
Address Esplanade EURONG QLD 4581

Premises Details

Name Eurong Ranger Base FRASER ISLAND
Address Eurong Ranger Base FRASER ISLAND QLD 4581

Activity Details

Subject to the conditions stated below, the holder of this Approval may carry out the following activity/activities:

Possess and Administer

Conditions

1. The scheduled substances are used only for the purposes of either vaccination, sedation, euthanasia, capture or treatment of animals as part of the approval holder performing animal welfare duties for the employer/organisation named in this approval.

Reason: Ensures that the scheduled substances are used only for the purposes for which the approval holder has been trained. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

2. The scheduled substances are only obtained from the veterinary surgeon for the time being employed/contracted or engaged by the employer/organisation of the approval holder named in this approval.

Reason: Ensures that a veterinary surgeon familiar with and employed/contracted or engaged by the employer/organisation of the approval holder, is solely responsible for the supply of scheduled substances to the approval holder. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

3. Administration of the scheduled substances by the approval holder shall only be on the direction of the veterinary surgeon employed/contracted or engaged by the employer/organisation of the approval holder named in this approval and in accordance with a protocol that has been developed by a veterinary surgeon employed/contracted or engaged by the employer/organisation of the approval holder named in this approval.

Where it is not practicable for the veterinary surgeon to give a verbal direction to administer the scheduled substance, for example where the

approval holder is in a remote location - the veterinary surgeon must be contacted to review the administration of the scheduled substance within 24 hours. The approval holder must note the specifics of the review on the relevant record entry.

Further, a direction from the veterinary surgeon is not required for the euthanasia of feral cats, provided the approval holder acts in accordance with the above protocol.

Furthermore, where the attached schedule includes the drug Zolazepam/Tiletamine (Zoletil), the approval holder shall not use or administer that drug unless in the company of another person who has a Queensland Health approval for that drug, or who has appropriate first aid training, or is a veterinary surgeon.

Reason: Ensures safe, correct and appropriate use of the scheduled substances. Use and administration of the drug Zoletil requires the approval holder to be in the presence of another approval holder or person who has appropriate first aid training or veterinary surgeon due to safety concerns relating to the fast acting nature of the drug.

4. Whilst not actually in use the scheduled substances must be kept in lockable storage containers at the premises nominated in this approval. The keys to the locked storage containers are to be kept in the personal possession of the approval holder.

Reason: Ensures accountability and security of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

5. Records of incoming stock and daily usage together with a progressive balance must be kept for the scheduled substances. Such records shall be kept in a bound book with numbered pages and separate pages must be used for each different class, or strength of the scheduled substances.

Alternatively, a computerised recording system may be used for the recording of the scheduled substances subject to the following:

1. The computer system is programmed in a manner which ensures:

- (a) a separate part of the drugs register is used for each class of scheduled substances; and
- (b) a general heading is displayed on each such part describing the class and measurement of the scheduled substances recorded; and
- (c) entry into the substances register, details that are listed in point 2 below; and
- (d) each transaction is recorded in chronological order

2. Each transaction for each class of scheduled drug must include the following details:

- (a) the date of the transaction
- (b) from whom the scheduled substances were obtained
- (c) the use of the scheduled substances
- (d) the quantity or volume of the scheduled substances obtained or used
- (e) the quantity or volume of the scheduled substances in stock after the transaction

Such records shall be kept for a period of two years from the date of each transaction and be made available to an Environmental Health Officer of Queensland Health on demand.

Reason: Ensures accountability and traceability of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

6. All scheduled substance records must be checked and initialled on a monthly basis by the veterinary surgeon employed/contracted or otherwise engaged by the employer/organisation of the approval holder.

The exception to such checking and initialling is where the organisation that employs/contracts or otherwise engages the approval holder also utilises an electronic stock control system that is capable of monitoring (in real time) the usage of the scheduled substances by the approval holder. Such system must be monitored routinely by the veterinary surgeon employed/contracted or otherwise engaged by the organisation. The system must also have been deemed as an acceptable system for this purpose by the delegate of the Chief Executive.

Reason: Ensures accountability and traceability and correct use of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

7. The approval holder must only use the scheduled substances listed in the approval in accordance with their registered purpose as registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA) under the Agricultural and Veterinary Chemicals Control Act 1994, unless used in accordance with an off-label permit granted by the APVMA.

Reason: Ensures appropriate use of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

8. The approval holder shall immediately notify the Manager, Environmental Health of the local Queensland Health Public Health Unit should any theft, misappropriation or losses occur of any of the scheduled substances included in the schedule of this approval.

Reason: Ensures that any theft, misappropriation or losses concerning the scheduled substances are reported to Queensland Health for appropriate follow-up action. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

9. All scheduled substances included in the schedule of this approval must be stored and transported in a locked container in a manner that prevents access to unauthorised persons.

Reason: Ensures that the drugs or poisons are securely stored and are only accessible to approved persons. No findings of fact were

required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

Scheduled Substances

The following table lists the scheduled substances permitted under this Approval.

Scheduled Substance	Form	Strength	Quantity
Pentobarbitone	As per submitted protocol	As per submitted protocol	As per submitted protocol
Tiletamine and Zolazepam (Zoletil 100)	As per submitted protocol	As per submitted protocol	As per submitted protocol

Other Obligations and Information

This legislative instrument is not transferable.

It is a requirement that the holder of this Approval complies with all legal obligations imposed by the Health Act 1937 and any Regulations in relation to record keeping, storage and premises requirements.

The office for this Approval is Wide Bay (Bundaberg) Public Health Unit.

Contact details for all offices can be found online at www.health.qld.gov.au/cho/. Alternatively please call 07 33289310 for transfer to the relevant office.

Where non mandatory conditions have been imposed, the reason for these conditions is provided.

You have the right to have the decision to impose conditions on your endorsement reviewed by the Queensland Civil and Administrative Tribunal (QCAT). Such review must be made within 28 days from this notice.

Form 23 - Application to review a decision is available from the QCAT website at <http://www.qcat.qld.gov.au>

If you wish to seek a stay of a decision, you must complete form 44 - Application to stay a decision, also available from the QCAT website.

End of Approval

HEALTH (DRUGS AND POISONS) REGULATION 1996
APPROVAL UNDER SECTION 18(1)
APPROVAL No. AW006444317

s.73

sch4p4(6) Personal information

The Decision

The Approval is granted by the Delegate of the Chief Executive under section 18(1) of the Health (Drugs and Poisons) Regulation 1996.

ISSUE DATE: 24/04/2017

EXPIRY DATE: 23/04/2019

Approval Holder Information

Approval Holder

s.73

Address

sch4p4(6) Personal information

Employer Details

Name Department of National Parks, Sport and Racing

Address Esplanade EURONG QLD 4581

Premises Details

Name Eurong Ranger Base FRASER ISLAND

Address Eurong Ranger Base FRASER ISLAND QLD 4581

Activity Details

Subject to the conditions stated below, the holder of this Approval may carry out the following activity/activities:

Possess and Administer

Conditions

1. The scheduled substances are used only for the purposes of either vaccination, sedation, euthanasia, capture or treatment of animals as part of the approval holder performing animal welfare duties for the employer/organisation named in this approval.

Reason: Ensures that the scheduled substances are used only for the purposes for which the approval holder has been trained. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

2. The scheduled substances are only obtained from the veterinary surgeon for the time being employed/contracted or engaged by the employer/organisation of the approval holder named in this approval.

Reason: Ensures that a veterinary surgeon familiar with and employed/contracted or engaged by the employer/organisation of the approval holder, is solely responsible for the supply of scheduled substances to the approval holder. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

3. Administration of the scheduled substances by the approval holder shall only be on the direction of the veterinary surgeon employed/contracted or engaged by the employer/organisation of the approval holder named in this approval and in accordance with a protocol that has been developed by a veterinary surgeon employed/contracted or engaged by the employer/organisation of the approval holder named in this approval.

Where it is not practicable for the veterinary surgeon to give a verbal direction to administer the scheduled substance, for example where the approval holder is in a remote location - the veterinary surgeon must be contacted to review the administration of the scheduled substance within 24 hours. The approval holder must note the specifics of the review on the relevant record entry.

Further, a direction from the veterinary surgeon is not required for the euthanasia of feral cats, provided the approval holder acts in accordance with the above protocol.

Furthermore, where the attached schedule includes the drug Zolazepam/Tiletamine (Zoletil), the approval holder shall not use or administer that drug unless in the company of another person who has a Queensland Health approval for that drug, or who has appropriate first aid training, or is a veterinary surgeon.

Reason: Ensures safe, correct and appropriate use of the scheduled substances. Use and administration of the drug Zoletil requires the approval holder to be in the presence of another approval holder or person who has appropriate first aid training or veterinary surgeon due to safety concerns relating to the fast acting nature of the drug.

4. Whilst not actually in use the scheduled substances must be kept in lockable storage containers at the premises nominated in this approval. The keys to the locked storage containers are to be kept in the personal possession of the approval holder.

Reason: Ensures accountability and security of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

5. Records of incoming stock and daily usage together with a progressive balance must be kept for the scheduled substances. Such records shall be kept in a bound book with numbered pages and separate pages must be used for each different class, or strength of the scheduled substances.

Alternatively, a computerised recording system may be used for the recording of the scheduled substances subject to the following:

1. The computer system is programmed in a manner which ensures:

- (a) a separate part of the drugs register is used for each class of scheduled substances; and
- (b) a general heading is displayed on each such part describing the class and measurement of the scheduled substances recorded; and
- (c) entry into the substances register, details that are listed in point 2 below; and
- (d) each transaction is recorded in chronological order

2. Each transaction for each class of scheduled drug must include the following details:

- (a) the date of the transaction
- (b) from whom the scheduled substances were obtained
- (c) the use of the scheduled substances
- (d) the quantity or volume of the scheduled substances obtained or used
- (e) the quantity or volume of the scheduled substances in stock after the transaction

Such records shall be kept for a period of two years from the date of each transaction and be made available to an Environmental Health Officer of Queensland Health on demand.

Reason: Ensures accountability and traceability of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

6. All scheduled substance records must be checked and initialled on a monthly basis by the veterinary surgeon employed/contracted or otherwise engaged by the employer/organisation of the approval holder.

The exception to such checking and initialling is where the organisation that employs/contracts or otherwise engages the approval holder also utilises an electronic stock control system that is capable of monitoring (in real time) the usage of the scheduled substances by the approval holder. Such system must be monitored routinely by the veterinary surgeon employed/contracted or otherwise engaged by the organisation. The system must also have been deemed as an acceptable system for this purpose by the delegate of the Chief Executive.

Reason: Ensures accountability and traceability and correct use of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

7. The approval holder must only use the scheduled substances listed in the approval in accordance with their registered purpose as registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA) under the Agricultural and Veterinary Chemicals Control Act 1994, unless used in accordance with an off-label permit granted by the APVMA.

Reason: Ensures appropriate use of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

8. The approval holder shall immediately notify the Manager, Environmental Health of the local Queensland Health Public Health Unit should any theft, misappropriation or losses occur of any of the scheduled substances included in the schedule of this approval.

Reason: Ensures that any theft, misappropriation or losses concerning the scheduled substances are reported to Queensland Health for appropriate follow-up action. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

9. All scheduled substances included in the schedule of this approval must be stored and transported in a locked container in a manner that prevents access to unauthorised persons.

Reason: Ensures that the drugs or poisons are securely stored and are only accessible to approved persons. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

Scheduled Substances

The following table lists the scheduled substances permitted under this Approval.

Scheduled Substance	Form	Strength	Quantity
Pentobarbitone	As per submitted protocol	As per submitted protocol	As per submitted protocol
Tiletamine and Zolazepam (Zoletil 100)	As per submitted protocol	As per submitted protocol	As per submitted protocol

Other Obligations and Information

This legislative instrument is not transferable.

It is a requirement that the holder of this Approval complies with all legal obligations imposed by the Health Act 1937 and any Regulations in relation to record keeping, storage and premises requirements.

The office for this Approval is Drugs & Poisons Licensing.

Contact details for all offices can be found online at www.health.qld.gov.au/cho/. Alternatively please call 07 33289310 for transfer to the relevant office.

Where non mandatory conditions have been imposed, the reason for these conditions is provided.

You have the right to have the decision to impose conditions on your endorsement reviewed by the Queensland Civil and Administrative Tribunal (QCAT). Such review must be made within 28 days from this notice.

Form 23 - Application to review a decision is available from the QCAT website at <http://www.qcat.qld.gov.au>

If you wish to seek a stay of a decision, you must complete form 44 - Application to stay a decision, also available from the QCAT website.

End of Approval



HEALTH (DRUGS AND POISONS) REGULATION 1996
APPROVAL UNDER SECTION 18(1)
APPROVAL No. AW006870717

s.73

sch4p4(6) Personal information

The Decision

The Approval is granted by the Delegate of the Chief Executive under section 18(1) of the Health (Drugs and Poisons) Regulation 1996.

ISSUE DATE: 11/12/2017

EXPIRY DATE: 10/12/2019

Approval Holder Information

Approval Holder

s.73

Address

sch4p4(6) Personal information

Employer Details

Name

Department of National Parks, Sport and Racing

Address

Esplanade EURONG QLD 4581

Premises Details

Name

Eurong Ranger Base FRASER ISLAND

Address

Eurong Ranger Base FRASER ISLAND QLD 4581

Activity Details

Subject to the conditions stated below, the holder of this Approval may carry out the following activity/activities:

Possess and Administer

Conditions

1. The scheduled substances are used only for the purposes of either vaccination, sedation, euthanasia, capture or treatment of animals as part of the approval holder performing animal welfare duties for the employer/organisation named in this approval.

Reason: Ensures that the scheduled substances are used only for the purposes for which the approval holder has been trained. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

2. The scheduled substances are only obtained from the veterinary surgeon for the time being employed/contracted or engaged by the employer/organisation of the approval holder named in this approval.

Reason: Ensures that a veterinary surgeon familiar with and employed/contracted or engaged by the employer/organisation of the approval holder, is solely responsible for the supply of scheduled substances to the approval holder. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

3. Administration of the scheduled substances by the approval holder shall only be on the direction of the veterinary surgeon employed/contracted or engaged by the employer/organisation of the approval holder named in this approval and in accordance with a protocol that has been developed by a veterinary surgeon employed/contracted or engaged by the employer/organisation of the approval holder named in this approval.

Where it is not practicable for the veterinary surgeon to give a verbal direction to administer the scheduled substance, for example where the

approval holder is in a remote location - the veterinary surgeon must be contacted to review the administration of the scheduled substance within 24 hours. The approval holder must note the specifics of the review on the relevant record entry.

Further, a direction from the veterinary surgeon is not required for the euthanasia of feral cats, provided the approval holder acts in accordance with the above protocol.

Furthermore, where the attached schedule includes the drug Zolazepam/Tiletamine (Zoletil), the approval holder shall not use or administer that drug unless in the company of another person who has a Queensland Health approval for that drug, or who has appropriate first aid training, or is a veterinary surgeon.

Reason: Ensures safe, correct and appropriate use of the scheduled substances. Use and administration of the drug Zoletil requires the approval holder to be in the presence of another approval holder or person who has appropriate first aid training or veterinary surgeon due to safety concerns relating to the fast acting nature of the drug.

4. Whilst not actually in use the scheduled substances must be kept in lockable storage containers at the premises nominated in this approval. The keys to the locked storage containers are to be kept in the personal possession of the approval holder.

Reason: Ensures accountability and security of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

5. Records of incoming stock and daily usage together with a progressive balance must be kept for the scheduled substances. Such records shall be kept in a bound book with numbered pages and separate pages must be used for each different class, or strength of the scheduled substances.

Alternatively, a computerised recording system may be used for the recording of the scheduled substances subject to the following:

1. The computer system is programmed in a manner which ensures:

- (a) a separate part of the drugs register is used for each class of scheduled substances; and
- (b) a general heading is displayed on each such part describing the class and measurement of the scheduled substances recorded; and
- (c) entry into the substances register, details that are listed in point 2 below; and
- (d) each transaction is recorded in chronological order

2. Each transaction for each class of scheduled drug must include the following details:

- (a) the date of the transaction
- (b) from whom the scheduled substances were obtained
- (c) the use of the scheduled substances
- (d) the quantity or volume of the scheduled substances obtained or used
- (e) the quantity or volume of the scheduled substances in stock after the transaction

Such records shall be kept for a period of two years from the date of each transaction and be made available to an Environmental Health Officer of Queensland Health on demand.

Reason: Ensures accountability and traceability of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

6. All scheduled substance records must be checked and initialled on a monthly basis by the veterinary surgeon employed/contracted or otherwise engaged by the employer/organisation of the approval holder.

The exception to such checking and initialling is where the organisation that employs/contracts or otherwise engages the approval holder also utilises an electronic stock control system that is capable of monitoring (in real time) the usage of the scheduled substances by the approval holder. Such system must be monitored routinely by the veterinary surgeon employed/contracted or otherwise engaged by the organisation. The system must also have been deemed as an acceptable system for this purpose by the delegate of the Chief Executive.

Reason: Ensures accountability and traceability and correct use of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

7. The approval holder must only use the scheduled substances listed in the approval in accordance with their registered purpose as registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA) under the Agricultural and Veterinary Chemicals Control Act 1994, unless used in accordance with an off-label permit granted by the APVMA.

Reason: Ensures appropriate use of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

8. The approval holder shall immediately notify the Chief Executive, Department of Health through Medicines Regulation and Quality should any theft, misappropriation or losses occur of any of the scheduled substances included in the schedule of this approval.

Reason: Ensures that any theft, misappropriation or losses concerning the scheduled substances are reported to Queensland Health for appropriate follow-up action. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

9. All scheduled substances included in the schedule of this approval must be stored and transported in a locked container in a manner that prevents access to unauthorised persons.

Reason: Ensures that the drugs or poisons are securely stored and are only accessible to approved persons. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

Scheduled Substances

The following table lists the scheduled substances permitted under this Approval.

Scheduled Substance	Form	Strength	Quantity
Pentobarbitone	As per submitted protocol	As per submitted protocol	As per submitted protocol
Tiletamine and Zolazepam (Zoletil 100)	As per submitted protocol	As per submitted protocol	As per submitted protocol

Other Obligations and Information

This legislative instrument is not transferable.

It is a requirement that the holder of this Approval complies with all legal obligations imposed by the Health Act 1937 and any Regulations in relation to record keeping, storage and premises requirements.

The office for this Approval is Drugs & Poisons Licensing.

Contact details for all offices can be found online at www.health.qld.gov.au/cho/. Alternatively please call 07 33289310 for transfer to the relevant office.

Where non mandatory conditions have been imposed, the reason for these conditions is provided.

You have the right to have the decision to impose conditions on your endorsement reviewed by the Queensland Civil and Administrative Tribunal (QCAT). Such review must be made within 28 days from this notice.

Form 23 - Application to review a decision is available from the QCAT website at <http://www.qcat.qld.gov.au>

If you wish to seek a stay of a decision, you must complete form 44 - Application to stay a decision, also available from the QCAT website.

End of Approval

HEALTH (DRUGS AND POISONS) REGULATION 1996
APPROVAL UNDER SECTION 18(1)
APPROVAL No. AW006897817

s.73

sch4p4(6) Personal information

The Decision

The Approval is granted by the Delegate of the Chief Executive under section 18(1) of the Health (Drugs and Poisons) Regulation 1996.

ISSUE DATE: 12/12/2017

EXPIRY DATE: 11/12/2019

Approval Holder Information

Approval Holder

s.73

Address

sch4p4(6) Personal information

Employer Details

Name Department of National Parks, Sport and Racing

Address Esplanade EURONG QLD 4581

Premises Details

Name Eurong Ranger Base FRASER ISLAND

Address Eurong Ranger Base FRASER ISLAND QLD 4581

Activity Details

Subject to the conditions stated below, the holder of this Approval may carry out the following activity/activities:

Possess and Administer

Conditions

1. The scheduled substances are used only for the purposes of either vaccination, sedation, euthanasia, capture or treatment of animals as part of the approval holder performing animal welfare duties for the employer/organisation named in this approval.

Reason: Ensures that the scheduled substances are used only for the purposes for which the approval holder has been trained. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

2. The scheduled substances are only obtained from the veterinary surgeon for the time being employed/contracted or engaged by the employer/organisation of the approval holder named in this approval.

Reason: Ensures that a veterinary surgeon familiar with and employed/contracted or engaged by the employer/organisation of the approval holder, is solely responsible for the supply of scheduled substances to the approval holder. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

3. Administration of the scheduled substances by the approval holder shall only be on the direction of the veterinary surgeon employed/contracted or engaged by the employer/organisation of the approval holder named in this approval and in accordance with a protocol that has been developed by a veterinary surgeon employed/contracted or engaged by the employer/organisation of the approval holder named in this approval.

Where it is not practicable for the veterinary surgeon to give a verbal direction to administer the scheduled substance, for example where the

approval holder is in a remote location - the veterinary surgeon must be contacted to review the administration of the scheduled substance within 24 hours. The approval holder must note the specifics of the review on the relevant record entry.

Further, a direction from the veterinary surgeon is not required for the euthanasia of feral cats, provided the approval holder acts in accordance with the above protocol.

Furthermore, where the attached schedule includes the drug Zolazepam/Tiletamine (Zoletil), the approval holder shall not use or administer that drug unless in the company of another person who has a Queensland Health approval for that drug, or who has appropriate first aid training, or is a veterinary surgeon.

Reason: Ensures safe, correct and appropriate use of the scheduled substances. Use and administration of the drug Zoletil requires the approval holder to be in the presence of another approval holder or person who has appropriate first aid training or veterinary surgeon due to safety concerns relating to the fast acting nature of the drug.

4. Whilst not actually in use the scheduled substances must be kept in lockable storage containers at the premises nominated in this approval. The keys to the locked storage containers are to be kept in the personal possession of the approval holder.

Reason: Ensures accountability and security of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

5. Records of incoming stock and daily usage together with a progressive balance must be kept for the scheduled substances. Such records shall be kept in a bound book with numbered pages and separate pages must be used for each different class, or strength of the scheduled substances.

Alternatively, a computerised recording system may be used for the recording of the scheduled substances subject to the following:

1. The computer system is programmed in a manner which ensures:

- (a) a separate part of the drugs register is used for each class of scheduled substances; and
- (b) a general heading is displayed on each such part describing the class and measurement of the scheduled substances recorded; and
- (c) entry into the substances register, details that are listed in point 2 below; and
- (d) each transaction is recorded in chronological order

2. Each transaction for each class of scheduled drug must include the following details:

- (a) the date of the transaction
- (b) from whom the scheduled substances were obtained
- (c) the use of the scheduled substances
- (d) the quantity or volume of the scheduled substances obtained or used
- (e) the quantity or volume of the scheduled substances in stock after the transaction

Such records shall be kept for a period of two years from the date of each transaction and be made available to an Environmental Health Officer of Queensland Health on demand.

Reason: Ensures accountability and traceability of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

6. All scheduled substance records must be checked and initialled on a monthly basis by the veterinary surgeon employed/contracted or otherwise engaged by the employer/organisation of the approval holder.

The exception to such checking and initialling is where the organisation that employs/contracts or otherwise engages the approval holder also utilises an electronic stock control system that is capable of monitoring (in real time) the usage of the scheduled substances by the approval holder. Such system must be monitored routinely by the veterinary surgeon employed/contracted or otherwise engaged by the organisation. The system must also have been deemed as an acceptable system for this purpose by the delegate of the Chief Executive.

Reason: Ensures accountability and traceability and correct use of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

7. The approval holder must only use the scheduled substances listed in the approval in accordance with their registered purpose as registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA) under the Agricultural and Veterinary Chemicals Control Act 1994, unless used in accordance with an off-label permit granted by the APVMA.

Reason: Ensures appropriate use of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

8. The approval holder shall immediately notify the Chief Executive, Department of Health through Medicines Regulation and Quality should any theft, misappropriation or losses occur of any of the scheduled substances included in the schedule of this approval.

Reason: Ensures that any theft, misappropriation or losses concerning the scheduled substances are reported to Queensland Health for appropriate follow-up action. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

9. All scheduled substances included in the schedule of this approval must be stored and transported in a locked container in a manner that prevents access to unauthorised persons.

Reason: Ensures that the drugs or poisons are securely stored and are only accessible to approved persons. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

Scheduled Substances

The following table lists the scheduled substances permitted under this Approval.

Scheduled Substance	Form	Strength	Quantity
Pentobarbitone Sodium	As per submitted protocol	As per submitted protocol	As per submitted protocol
Tiletamine and Zolazepam (Zoletil 100)	As per submitted protocol	As per submitted protocol	As per submitted protocol

Other Obligations and Information

This legislative instrument is not transferable.

It is a requirement that the holder of this Approval complies with all legal obligations imposed by the Health Act 1937 and any Regulations in relation to record keeping, storage and premises requirements.

The office for this Approval is Drugs & Poisons Licensing.

Contact details for all offices can be found online at www.health.qld.gov.au/cho/. Alternatively please call 07 33289310 for transfer to the relevant office.

Where non mandatory conditions have been imposed, the reason for these conditions is provided.

You have the right to have the decision to impose conditions on your endorsement reviewed by the Queensland Civil and Administrative Tribunal (QCAT). Such review must be made within 28 days from this notice.

Form 23 - Application to review a decision is available from the QCAT website at <http://www.qcat.qld.gov.au>

If you wish to seek a stay of a decision, you must complete form 44 - Application to stay a decision, also available from the QCAT website.

End of Approval

HEALTH (DRUGS AND POISONS) REGULATION 1996
APPROVAL UNDER SECTION 18(1)
APPROVAL No. AW006383817

s.73

sch4p4(6) Personal information

The Decision

The Approval is granted by the Delegate of the Chief Executive under section 18(1) of the Health (Drugs and Poisons) Regulation 1996.

ISSUE DATE: 28/03/2017

EXPIRY DATE: 27/03/2019

Approval Holder Information

Approval Holder

s.73

Address

sch4p4(6) Personal information

Employer Details

Name

Department of National Parks, Sports, Racing & Recreation - QPWS

Address

Esplanade, Eurong FRASER ISLAND QLD 4581

Premises Details

Name

Eurong Ranger Base FRASER ISLAND

Address

Eurong Ranger Base FRASER ISLAND QLD 4581

Activity Details

Subject to the conditions stated below, the holder of this Approval may carry out the following activity/activities:

Possess and Administer

Conditions

1. The scheduled substances are used only for the purposes of either vaccination, sedation, euthanasia, capture or treatment of animals as part of the approval holder performing animal welfare duties for the employer/organisation named in this approval.

Reason: Ensures that the scheduled substances are used only for the purposes for which the approval holder has been trained. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

2. The scheduled substances are only obtained from the veterinary surgeon for the time being employed/contracted or engaged by the employer/organisation of the approval holder named in this approval.

Reason: Ensures that a veterinary surgeon familiar with and employed/contracted or engaged by the employer/organisation of the approval holder, is solely responsible for the supply of scheduled substances to the approval holder. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

3. Administration of the scheduled substances by the approval holder shall only be on the direction of the veterinary surgeon employed/contracted or engaged by the employer/organisation of the approval holder named in this approval and in accordance with a protocol that has been developed by a veterinary surgeon employed/contracted or engaged by the employer/organisation of the approval holder named in this approval.

Where it is not practicable for the veterinary surgeon to give a verbal direction to administer the scheduled substance, for example where the

approval holder is in a remote location - the veterinary surgeon must be contacted to review the administration of the scheduled substance within 24 hours. The approval holder must note the specifics of the review on the relevant record entry.

Further, a direction from the veterinary surgeon is not required for the euthanasia of feral cats, provided the approval holder acts in accordance with the above protocol.

Furthermore, where the attached schedule includes the drug Zolazepam/Tiletamine (Zoletil), the approval holder shall not use or administer that drug unless in the company of another person who has a Queensland Health approval for that drug, or who has appropriate first aid training, or is a veterinary surgeon.

Reason: Ensures safe, correct and appropriate use of the scheduled substances. Use and administration of the drug Zoletil requires the approval holder to be in the presence of another approval holder or person who has appropriate first aid training or veterinary surgeon due to safety concerns relating to the fast acting nature of the drug.

4. Whilst not actually in use the scheduled substances must be kept in lockable storage containers at the premises nominated in this approval. The keys to the locked storage containers are to be kept in the personal possession of the approval holder.

Reason: Ensures accountability and security of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

5. Records of incoming stock and daily usage together with a progressive balance must be kept for the scheduled substances. Such records shall be kept in a bound book with numbered pages and separate pages must be used for each different class, or strength of the scheduled substances.

Alternatively, a computerised recording system may be used for the recording of the scheduled substances subject to the following:

1. The computer system is programmed in a manner which ensures:

- (a) a separate part of the drugs register is used for each class of scheduled substances; and
- (b) a general heading is displayed on each such part describing the class and measurement of the scheduled substances recorded; and
- (c) entry into the substances register, details that are listed in point 2 below; and
- (d) each transaction is recorded in chronological order

2. Each transaction for each class of scheduled drug must include the following details:

- (a) the date of the transaction
- (b) from whom the scheduled substances were obtained
- (c) the use of the scheduled substances
- (d) the quantity or volume of the scheduled substances obtained or used
- (e) the quantity or volume of the scheduled substances in stock after the transaction

Such records shall be kept for a period of two years from the date of each transaction and be made available to an Environmental Health Officer of Queensland Health on demand.

Reason: Ensures accountability and traceability of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

6. All scheduled substance records must be checked and initialed on a monthly basis by the veterinary surgeon employed/contracted or otherwise engaged by the employer/organisation of the approval holder.

The exception to such checking and initialling is where the organisation that employs/contracts or otherwise engages the approval holder also utilises an electronic stock control system that is capable of monitoring (in real time) the usage of the scheduled substances by the approval holder. Such system must be monitored routinely by the veterinary surgeon employed/contracted or otherwise engaged by the organisation. The system must also have been deemed as an acceptable system for this purpose by the delegate of the Chief Executive.

Reason: Ensures accountability and traceability and correct use of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

7. The approval holder must only use the scheduled substances listed in the approval in accordance with their registered purpose as registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA) under the Agricultural and Veterinary Chemicals Control Act 1994, unless used in accordance with an off-label permit granted by the APVMA.

Reason: Ensures appropriate use of the scheduled substances. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

8. The approval holder shall immediately notify the Manager, Environmental Health of the local Queensland Health Public Health Unit should any theft, misappropriation or losses occur of any of the scheduled substances included in the schedule of this approval.

Reason: Ensures that any theft, misappropriation or losses concerning the scheduled substances are reported to Queensland Health for appropriate follow-up action. No findings of fact were required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

9. All scheduled substances included in the schedule of this approval must be stored and transported in a locked container in a manner that prevents access to unauthorised persons.

Reason: Ensures that the drugs or poisons are securely stored and are only accessible to approved persons. No findings of fact were

required to be made for the imposition of this condition. This is imposed to ensure compliance with the Regulation and the protection of the public.

Scheduled Substances

The following table lists the scheduled substances permitted under this Approval.

Scheduled Substance	Form	Strength	Quantity
Pentobarbitone	As per submitted protocol	As per submitted protocol	As per submitted protocol
Tiletamine and Zolazepam (Zoletil 100)	As per submitted protocol	As per submitted protocol	As per submitted protocol

Other Obligations and Information

This legislative instrument is not transferable.

It is a requirement that the holder of this Approval complies with all legal obligations imposed by the Health Act 1937 and any Regulations in relation to record keeping, storage and premises requirements.

The office for this Approval is Drugs & Poisons Licensing.

Contact details for all offices can be found online at www.health.qld.gov.au/cho/. Alternatively please call 07 33289310 for transfer to the relevant office.

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You have the right to have the decision to impose conditions on your endorsement reviewed by the Queensland Civil and Administrative Tribunal (QCAT). Such review must be made within 28 days from this notice.

Form 23 - Application to review a decision is available from the QCAT website at <http://www.qcat.qld.gov.au>

If you wish to seek a stay of a decision, you must complete form 44 - Application to stay a decision, also available from the QCAT website.

End of Approval



Scheduled drugs register

Storage of scheduled drugs must be as per the requirements of the Health (Drugs & Poisons) Regulation 1996

- One form per drug type. Example: - Zoletil 100
- All register forms are to be kept together in a folder, in or near the drugs storage unit. This includes all completed forms.
- The Register must be filled out for every scheduled drug purchase, field use, disposal and transfers.
- The form number should include your parkinfo location code:
Example: Form Number:- **7101FEA001** Location:- Great Sandy National Park (Eurong)

Form Number	7101FEA001	Location	Great Sandy National Park (Eurong)
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Name and position of nominated responsible person

Name s.73
Position 005 Ranger (NRM)

Phone sch4p3(3) Prejudice the
E-mail or fax s.73 @des.qld.gov.au

Authority Number (for scheduled drugs)

AW00638317 Exp. - 27/03/2019

Address

Details QPWS Ranger Base Eurong, Fraser Island.
--

Postal Address (if different to above)

Details PMB 10 MS 20173 Rainbow Beach QLD 4581
--





Scheduled drugs register - must be completed in full

Drug type							
Date	Carry-over from previous sheet No:	Purchase	Disposal/transfer	Field use	Amount balance	Signature	
16/3/18	280, 283, 284 Vet 281 1.3.1		1st dart to S. Kellam Dispose 281 → 0.3.1		3 dry	sch4p3(3) Prejudice the protection of an individual	
16/3/18	Balance		DRY	280, 283, 284	3 dry		
21/3/18	280, 283, 284		Trans to S. O'Connell → 284		2 dry		
23/3/18	280, 283	Mix 283:1.3		0.3.1	280 1.0.1 283 2.7.1		
28/3/18			0.3.1.1 Disposed	0.2.1	280 2.8.1 DRY 2.2.1		
29/3/18	280 Dry	286 1.5.1 283 1.5 2.2.1			280 Dry 283 1.3 2.1		
		275 1.3 3.1			286 1.5 3.1 275 1.3 3.1		
17/4/18	DISPOSAL		283 2.2.1 275 3.1.1 286 3.2.1		1 Dry 280		
	280 (DRY)		AUDIT		1 dry, vet		
18/4/18	INTERVIEWED BY	FLI POLICE COLLECT					
11/6/18		261			2 dry, vet		
27/7/18	Mix 281	261	1:3		1 dry, 1 vet		
Carry over this amount to new form							

Declaration by nominated person (Sign when form is full)

I declare that the information contained in this register is true and correct. I also make this declaration in the knowledge that a person making an application which is false, misleading or incomplete commits an offence against the Health (Drugs and Poisons) Regulation 1996.

Signature:

Date

2/7/18



Scheduled drugs register

Storage of scheduled drugs must be as per the requirements of the Health (Drugs & Poisons) Regulation 1996

- One form per drug type. Example: - Zoletil 100
- All register forms are to be kept together in a folder, in or near the drugs storage unit. This includes all completed forms.
- The Register must be filled out for every scheduled drug purchase, field use, disposal and transfers.
- The form number should include your parkinfo location code:
Example: Form Number: - 7101FEA001 Location: - Great Sandy National Park (Eurong)

Form Number	7101FEA001	Location	Great Sandy National Park (Eurong)
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Name and position of nominated responsible person

Name	s.73
------	------

Position	005 Ranger (NRM)
----------	------------------

Phone	sch4p3 (3) Prejudice the protection of an individuals right to
-------	--

E-mail or fax	s.73	0605.944.9000
---------------	------	---------------

Authority Number (for scheduled drugs)

AV00638317 - Exp 27/3/19

Address

Details	QAS Range near Eurong, Phase 1s.
---------	----------------------------------

Postal Address (if different to above)

Details	PMB10 MS 20173 Rainbow Beach QLD 4581
---------	--

[illegible]

Carry over this amount to new form _____

I declare that the information contained in this register is true and correct. I also make this declaration in the knowledge that a person making an application which is false, misleading or incomplete commits an offence against the *Health (Drugs and Poisons) Regulation 1996*.

Signature: Date:

Field Sheet: Administering scheduled drugs to animals

To record details of field operations for administering drugs to animal

One form to be used for each field operation

1. Name and position of person administering drugs

Name s.73
Position 005 Ranger (NRM)

Phone sch4p3(3) Prejudice th
E-mail or fax s.73 @nprsr.qld.gov.au

2. Name and purpose of program

Details Dingo Management Fraser Island

3. Location and date of program

Location Fraser Island	Date
---------------------------	------

4. Target species

Details Dingo

5. Drug and dosage used

Details 1.) Pentobarbitone Sodium 2.) Tileamine & Zolazepam (Zoltil 100)
--

6. Field operations checklist

This checklist must be completed prior to commencement of all field operations.

Checklist – Darting program				
No.	Item	Description	Tick	Comments
1	RIF Program Plan	Plan of overall operation		
2	Personnel	Assistance required		
3	Transport	Vehicles, Quads, etc		
4	Firearm/s	Rifle, pole syringe, blowpipe.		
5	Darts - preloaded	Keep to minimum		
6	Darts - spare	In proper container		
7	Drug - Premixed	Keep cool to maximise shelf life		
8	Drug container	Lockable esky with ice		

Field Sheet: Administering scheduled drugs to animals

Checklist – Darting program

9	Sharps container	Store used darts & syringes		
10	Blanks	Appropriate power for job		
11	Filler kit	To fill darts in field if required		
12	Field record form	Standard		In folder or clipboard
13	Recovery cage/area	Depends on species		
14	Restraints	Depends on species		
15	PPE	Depends on species and environment		
16	Torches & lights	For night operations		

7. Darting or administering details (to be completed immediately following field operation) (please attach additional sheet if required)

Animal No	Species	Dart Time	Recovery Time	Sedation Time	Vol drug used	Sex	Age	Condition	Comments
12/10/17 16W/16M	DINGO	15:20	19:00	3h 40	1ml	M	SA	Good	fully recovered.
1/11/17 16G/16M	Dingo	15:30	N/A	NA	1ml	M	SA	Good	No effect Did not sedate
	Dingo	16:50	N/A	N/A	1ml	M	SA	Good	No effect after 40min
13/1/18 16/1/18	Dingo	02:35	08:30	2:05	0.5ml	M	J	Good	1:5 No adverse effects
	DINGO	09:15	00:30	00:30	0.5ml	M	J	Good	1:5 17Y/17M No adverse
16/3/18	DINGO	10:30	14:00	3.5	0.7	M	J	Good	1:3 No adverse effects.
13/3/18	DINGO	18:52			0.3	M	J	Good	1.3 4Y/6M/17M 283
2/7/18 2/7/18	DINGO	15:32			1ml	M	SA	Optimal	YY Yellow 17M
		15:40			1ml	M	SA	Optimal	YY Yellow 17M
		17:15			1.5ml	ABOVE			HO —
Total volume of drug used for the day					Reconcile with drugs register				

8. Signature of person administering drug/s

Date:	Signature:
-------	------------

Queensland Parks & Wildlife
NRM Eurong - Fraser Island
Drug Register - Valabarb

Issued To: _____

Signature: _____

Date Issued: _____

Book No

1

Issued By _____

Signature: _____

QPWS NRM Eurong Drug Register Entries - Valabarb									
Date	Officer	Species	Amount	Auth	Balance	True Bal.	Variance	New Stock	Comments
8/6/17	L. Smith	Dingo	7ml	---	---	---	---	---	sch4p3(3) Prejudice the protection of an in
03/07/17	FITZPATRICK POLICE		30.5	INSPECTED BY S.F. FITZPATRICK	---	---	---	---	
28/9/17	D. NORTON	Possum	6ml	D.N.	301ml	---	---	---	
13/10/17	Police	Inspected	---	---	301ml	By S.F. FITZPATRICK	---	---	
2/2/18	Police	Inspected	---	---	301ml	INSPECTED S.F. FITZPATRICK	---	---	
18/4/18	Police	Inspected	---	---	301ml	FORCES VAN ON 2X	---	---	
12/6/18	D. NORTON	Sign out	---	---	301ml	---	---	---	
19/6/18	D. NORTON	Sign in	---	---	301ml	---	---	---	
2/7/18	J. Tappin	Dingo	5ml	Yes	296ml	---	---	---	
24/7/18	Police	Inspected	296ml	Inspected	---	---	---	---	
30/8/18	D. NORTON	Inspected	296ml	Inspected	---	---	---	---	
3/9/18	J. Tappin		---	---	---	---	---	---	
12/9/18	S. Dardell	Sign in	400ml	Yes	696ml	---	---	---	
11/10/18	S. Dardell	Sign in	20ml	Yes	716ml	---	---	---	
11/10/18	S. Dardell	Sign out	100ml	Yes	616ml	---	---	---	
30/10/18	D. NORTON	Inspected	---	Yes	566	---	---	---	
30/10/18	S.F. FITZPATRICK	QPS	---	---	566ml	---	---	---	
30/10/18	D. NORTON	Sign in	50ml	Yes	616ml	---	---	---	
									4X BOTTLES INSPECTED & Decant into old bottles

18-198



Field Sheet: Administering scheduled drugs to animals

To record details of field operations for administering drugs to animal

One form to be used for each field operation

1. Name and position of person administering drugs

Name s.73
Position Ranger, Community Engagement NRM

Phone 07 4127 9128
E-mail or fax s.73 @nprsr.qld.gov.au

2. Name and purpose of program

Details Dingo Management Fraser Island

3. Location and date of program

Location Fraser Island	Date 2/7/2018
---------------------------	------------------

4. Target species

Details Dingo

5. Drug and dosage used

Details Pentobarbitone Sodium Tiletamine & Zolazepam (Zoletil 100)
--

6. Field operations checklist

This checklist must be completed prior to commencement of all field operations.

Checklist – Darting program				
No.	Item	Description	Tick	Comments
1	RIF Program Plan	Plan of overall operation	✓	
2	Personnel	Assistance required	✓	
3	Transport	Vehicles, Quads, etc	✓	
4	Firearm/s	Rifle, pole syringe, blowpipe.	✓	
5	Darts - preloaded	Keep to minimum	✓	
6	Darts - spare	In proper container	✓	
7	Drug - Premixed	Keep cool to maximise shelf life	✓	



Checklist – Darting program

8	Drug container	Lockable esky with ice	NA	
9	Sharps container	Store used darts & syringes	✓	
10	Blanks	Appropriate power for job	✓	
11	Filler kit	To fill darts in field if required	✓	
12	Field record form	Standard	✓	In folder or clipboard
13	Recovery cage/area	Depends on species	✓	
14	Restraints	Depends on species	✓	
15	PPE	Depends on species and environment	✓	
16	Torches & lights	For night operations	✓	

7. Darting or administering details
(to be completed immediately following field operation)
(please attach additional sheet if required)

Animal No	Species	Dart Time	Recovery Time	Sedation Time	Vol drug used	Sex	Age	Condition	Comments
1	Dingo	1725	—	—	5ml	M	12mths	Optimal	H3 44yellow 17m
Total volume of drug used for the day					5ml	Reconcile with drugs register			

8. Signature of person administering drug/s

Date: 2/7/18	Signature:	sch4p3(3) Prejudice the protection
--------------	------------	------------------------------------

Form

Natural Resource Management

Administering scheduled drugs to animals

To record details of field operations for administering drugs to animals. One form to be used for each field operations

1. Name and position of person administering drugs

NAME	S.73
POSITION	004 RANGER NRM

PHONE	sch4p3(3) Prejudice the protection of an indiv
EMAIL OR FAX	S.73

2. Name and purpose of program

DETAILS	FIDCRMS - TRAP AND TAG
---------	------------------------

3. Location and date of program

LOCATION	GREAT SANDY NATIONAL PARK	DATE	3 19-7-2017
----------	---------------------------	------	-------------

4. Target species

DETAILS	DINGO
---------	-------

5. Drug and dosage used

DETAILS	ZOLETIL
---------	---------

6. Field operations checklist

Checklist – Darting program				
No.	Item	Description	Tick	Comments
1	RIF Program Plan	Plan of overall operation	✓	FIDCRMS
2	Personnel	Assistance required	✓	
3	Transport	Vehicles, quads, etc.	✓	
4	Firearm/s	Rifle, pole syringe, blow pipe	✓	
5	Darts – preloaded	Keep to minimum	✓	
6	Darts – spare	In proper container	✓	
7	Drug – premixed	Keep cool to maximise shelf life	✓	

Form
Administering schedules drugs to animals

Checklist – Darting program				
No.	Item	Description	Tick	Comments
8	Drug container	Lockable esky with ice	✓	
9	Sharps containers	Store used darts & syringes	✓	
10	Blanks	Appropriate power for job	N/A	
11	Filler kit	To fill darts in field if required	✓	
12	Field record form	Standard	✓	In folder or clipboard
13	Recovery cage/area	Depends on species	✓	
14	Restraints	Depends on species	✓	
15	PPE	Depends on species and environment	✓	
16	Torches and lights	For night operations	✓	

7. Darting or administering details

(to be completed immediately following field operation – please attach additional sheet if required)

DATE	Animal no.	Species	Dart Time	Recovery Time	Sedation Time	Vol Drug Used	Sex	Age	Condition	Comments ID
	1	DINGO	1630	—	—	1.0ml	F		GOOD	MISFIRE
	1	DINGO	1642	—	—	1.0ml	F		GOOD	DID NOT ADMINISTER
	1	DINGO	1655			1.0ml	F		GOOD	DID NOT ADMINISTER
	STOPPED USING NEW DART DUE TO ISSUES									
	1	DINGO	1718			1.0ml	F		GOOD	SEDATED
25/1/17	1	DINGO	1940			1.0ml	F		GOOD	WITHIN 20 SECS.
25/1/17	1	DINGO	1940	2ND INJECTION		1.0ml	M		GOOD	VT17M BUR 2017.1
	1	DINGO	2031	2230	1hr 59min	0.5ml	M		GOOD	
	1	DINGO	2040		2hrs 40min	0.7ml	M		GOOD	VT17M KBRV
17/2/18	1	DINGO	14135	1730	2hrs 55min	1.0ml	F		GOOD	17BLUE 17F
23/2/18	1	DINGO	1110	1425	3hrs 15min	0.8ml	M		GOOD	17GREEN 17M
16/3/18	1	DINGO	06:00			0.4ml	M		GOOD	17YELLOW 17M
17/3/18	1	DINGO	14:10	2ND INJECTION		0.8ml	F		GOOD	17PINK 17F
	1	DINGO	14:40	17:05	2hrs 55min	0.2ml	F		GOOD	17PINK 17F
17/4/18	1	DINGO	11:50	—	—	0.9ml	F		GOOD	MISFIRE DID NOT ADMINISTER
25/5/18	1	DINGO	11:55	15:00	3hrs 5min	1.0ml	F		GOOD	RRR 17F
Total volume of drug used for the day						Reconcile with drugs register				

8. Signature of person administering drug/s

Date:

Signature:

Form Administering schedules drugs to animals

Checklist – Darting program

No.	Item	Description	Tick	Comments
8	Drug container	Lockable esky with ice	✓	
9	Sharps containers	Store used darts & syringes	✓	
10	Blanks	Appropriate power for job	NR	
11	Filler kit	To fill darts in field if required	✓	
12	Field record form	Standard	✓	In folder or clipboard
13	Recovery cage/area	Depends on species	✓	
14	Restraints	Depends on species	✓	
15	PPE	Depends on species and environment	✓	
16	Torches and lights	For night operations	✓	

7. Darting or administering details

(to be completed immediately following field operation – please attach additional sheet if required)

DATE

13/7/17

13/7/17

15/8/18

5/8/18

5/8/18

15/9/18

15/9/18

15/9/18

17/9/18

17/9/18

17/9/18

27/9/18

Animal no.	Species	Dart Time	Recovery Time	Sedation Time	Vol Drug Used	Sex	Age	Condition	Comments ID
1	DINGO	0755	-	-	1.0ml	M	17 Green 17M	GOOD	010 NOT ADMINISTER
1	DINGO	0815	-	-	1.0ml	M	17 Green 17M	GOOD	015 FUR
1	DINGO	0925	Administered	5 hrs 5 min	1.0ml	M	16 Blue 16M	GOOD	16 Blue 16M
1	DINGO	1010	1430 hrs	5 hrs 5 min	0.5ml	M	16 Blue 16M	GOOD	16 Blue 16M
1	DINGO	12.20	1.54 hrs	3 hrs 20 min	0.5ml	M	17 Green 17M	GOOD	17 Green 17M
1	DINGO	0845	-	-	1.0ml	M	16 White 16M	GOOD	16 White 16M
1	DINGO	0855	and injected	-	0.4ml	M	-	GOOD	16 White 16M
1	DINGO	0940	and injected	5 hrs	0.3ml	M	-	GOOD	16 White 16M
1	DINGO	0830	15 min	-	0.9ml	F	SA	GOOD	17 Orange 17F
1	DINGO	0910	and injected	4 hrs 20 min	0.3ml	F	SA	GOOD	17 Orange 17F
1	DINGO	0725	12.50	-	-	-	-	-	-
1	DINGO	0725	11.30	4 hrs 5 min	0.9ml	F	SA	GOOD	Blue 17F
Total volume of drug used for the day					Reconcile with drugs register				

8. Signature of person administering drug/s

Date:

Signature:

Department of National Parks,
Sport and Racing
Queensland Parks and Wildlife Service

Dingo Management Program

Internal Operations Procedural Manual

(Draft: MOCES Ver 2017)
Last saved 13/12/2018 2:16:00 PM

This is a working document, covering all aspects of operations related to monitoring and management of Fraser Island dingoes. It is based upon historic practice and management documents, which have been used as the basis for dingo-related operations on the island. Each revision will be circulated for sign-off by regional management before any implementation in the field.

The MOCES document in this form will form the basis for instruction for management and field staff and clear definition of operational guidelines and responsibilities.

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Internal document

Published under DES Disclosure Log
RTI Act 2009

1. Dingo Trapping and Tagging Guideline

A guide to the safe and humane handling of dingoes

1.1 Purpose

The purpose of this guideline is to detail the method for dingo trapping and tagging. This guideline is produced in response to the Duty of Care to have processes in place for the safe and humane handling of dingoes and staff safety.

1.2 Application

This guideline applies to all instances where dingoes need to be handled.

1.3 Allied Policies and Guidelines

Allied policies and guidelines include:

- Fraser Island Dingo Management Strategy
- Administering drugs to native animals, QPWS guideline
- Risk Management Guideline
- First Aid Guideline
- Working with dingoes on Fraser Island – Draft QPWS Competency Standard (Attachment 3)
- Departmental Firearms Policy
- Health (Drugs and Poisons) Regulation 1996
- Animal Care and Protection Act 2001
- Animal Care and Protection Regulation 2002

1.4 Introduction

Trapping dingoes on Fraser Island is required to effectively manage the population. This includes:

- Tagging a large percentage of dingoes that are seen by visitors with a colour/number1 coded ear tag for positive identification and monitoring.
- Collecting DNA samples.
- Conducting ethics approved research.
- Injecting microchips for secondary identification where an ear tag has been removed (through fighting etc).
- Humane destruction after a dingo has been identified as high risk or seriously injured.

Tagging dingoes with ear tags is essential for individual identification. This proves particularly useful for monitoring each individual's behavioural pattern and movements around Fraser Island. It forms part of the process in ensuring the correct dingo is identified and targeted for humane destruction when a dingo is considered to be high risk. Trapping for the purpose of tagging is mainly carried out after whelping season, when the pups are large enough to be trapped without causing damage to their paws, but still in the vicinity of the natal den. Opportunistic trapping and tagging is also carried out in locations where untagged dingoes are regularly seen.

Dingoes may be trapped using several methods and various types of equipment. Soft catch traps are considered by Department of National Parks, Recreation, Sport and Racing and the Queensland Parks and Wildlife Service (QPWS) to be an effective and humane method of capturing dingoes, and thus play a vital part in dingo management. They are deemed acceptable for use and are approved by QPWS for use in the Fraser Island dingo trapping program.

1.5 Approved Traps

The recommended trap to use is the Duke #3 soft catch trap available from Wildlife Animal and Capture. Only traps with rubber pads covering the steel jaws, protecting the dingo's paw from damage (fig 1), are permitted to be used on Fraser Island.

1.5.1 Other Traps Available for Capture of Dingoes

The *Collarum trap* throws a loop over the animals' head. While this type of trap will target canines, they have not been approved by the Departmental ethics committee. They will not be used unless approval is granted.

Eco-net traps may be effective, but must be checked regularly as the mesh currently used is not strong enough to prevent a dingo from chewing its way out in less than 30 minutes. These traps have been trialled unsuccessfully and are not used in the Fraser Island trapping program.

Large steel cage traps are occasionally used to capture dingoes with limited success and only with highly habituated animals. Most dingoes are wary of the structure and very reluctant to enter the cage.

1.6 Suggested Equipment Required for Trapping

Suggested equipment required for trapping includes:

- Soft catch traps with springs
- 8 x 450-700mm star pickets
- Sledge hammer
- 4 x 4.0-5.0mm galvanised chain in 3-5 metre lengths
- 20 x 5-6mm D-shackles
- Bag of foam, cut into 60mm cubes
- 2 x pin-down poles
- 1 chew-stick (old shovel handle or similar with padding)
- DNA sample tubes
- 1 pair of welding gauntlets
- 2 roles of quality masking or electrical tape
- Digital camera and spare battery/ies
- Profile sheets with clipboard
- Ear tags and current ear tag register
- Ear tag pliers
- Scent/attractant/lure
- Jab-stick/jab-pole
- Vial/s of zoletil in (cooler bag with ice brick)
- 18 & 25G needles
- 1ml & 5ml syringes
- 70% alcohol/betadine/antiseptic swabs
- Water for injection
- Vaseline (for plugging jab pole needle)
- Valabarb (if trapping to destroy a dingo)
- Shovel
- Disposable gloves
- Hand cleaner
- Water container
- Spotlight and or night vision monocular
- Torch with spare batteries
- Head torch and batteries
- First aid kit
- Sharps container
- Safety glasses
- Recovery cage with cover (sheet)
- Foam mat or towel for cage floor
- Weigh scales and weigh mat
- Binoculars
- 'Trapping in progress' signs
- Banister brush for trap clean-off

1.7 Setting Traps

Soft catch traps (rubber padded jaw traps) must be secured by one of the following methods:

- A) Traps and pressure springs attached to a tree with at least a 10cm diameter tree trunk or to a park sign leg or similar using a small length of chain with D-shackles.
- B) Traps attached to a length of chain, including pressure springs, secured to the ground with at least two steel pickets fully imbedded in the ground.

Inspect your traps before use to ensure they are not damaged or faulty (trap chain, D-shackles, springs, trap rubbers and trap). DO NOT USE if faulty in any way. Replace trap rubbers at the first sign of wear.

Any build-up of rust should be removed from traps on a regular basis. Brush traps clean after pulling up, clean regularly and avoid storing traps with scents and food.

Location

Choose a location to trap. This should be a location where the target dingoes are known to frequent, and preferably out of public view. Do not set traps in locations where people may walk over them. Trapping in beach camping areas is preferable where people are not present, or when the traps will be constantly supervised by a Dingo ranger.

Where trapping near campsites is necessary, avoid disruptions to the trapping effort by speaking to campers before setting up the traps and advise them of the trapping effort. Nominate a boundary (i.e. a park sign) that they should not cross for their safety.

Setting traps

Place the sets of traps no more than 30 minutes (15 mins in most visitor-use areas) driving distance apart, to enable regular checking of the traps. Use the 'Trapping in progress' signs near the site. Boundary chain or tape may be attached to suitable tree trunk or sign post. When beach trapping at night a clear mark (driven circle or line from dune to water) should be used to visually identify trap location, along with GPS reading in trapping log.

When a location has been chosen, attach the length of chain to the pickets securely with shackles, and hammer the pickets fully into the ground (check D-shackle security). Leave some slack in the chain if using a trap alert system. Space the traps along the chain. Check the traps are attached securely to the chain with D-shackles every time they are set. Place the individual traps in a desired location along/around the chain.

Wearing safety glasses and gloves dig a small depression in the sand, deep enough for the trap to be set just at surface level.

Place a cube of foam under the pressure pad to stop any sand jamming under the pad and stopping traps from triggering (fig 2).

Hold the jaws open and set the trap. Gently cover the set trap with sand (from the hinged side first or top) or leaf litter.

Trap alert system

High speed motion camera with 3G or wireless capability.

If using trap alert light systems (fig 3), dig a small hole, approximately 35cm deep, about 1 metre away from the length of chain. Attach the light terminal to the gel-cell battery and place the battery in a waterproof bag. Test the switch mechanism to ensure the circuit is operational. Bury the battery and cover with sand.

Attach the light switch to the length of chain.

Set the light up in a nearby structure (tree, sign, bin etc) or attach the light to the end of a stick a metre or more off the ground. Cover the chain and switch lightly with sand.

Baiting-up

Place the attractant or scent around the traps, being careful not to place over the pressure pad of the trap. This will avoid trapping the snout of a dingo. Food based baits can be used with food cages to prevent access to food (fig 4).

Recommended lures include, K9 call, magna gland, tuna oil etc. A bucket, plastic bag or balloon placed within a triangle of chains or in a tree above traps has proven effective for trapping dingoes patrolling beach and dune areas.

It may be necessary to rotate the use of attractants. Dingoes can soon associate a bait with trapping. Do not use bait on traps not being observed at regular intervals during the day where crows or raptors risk being trapped. Some dingoes will also get to know trappers (your scent, smoker, car etc).

Stake-out

Wait for dingoes at a distance depending on the location of traps. Where the traps are near people, watch at a distance where the activity around the traps can be seen, or where the trap alert system can be utilised.

Check to see if dingoes have been to the traps at least every 3 hours or 20-30 minutes in visitor-use areas. Inspect the traps to ensure the attractant hasn't been removed or damaged without trapping the dingo. Replace attractant if necessary.



Figure 1. Duke trap.



Figure 2. Duke trap set.

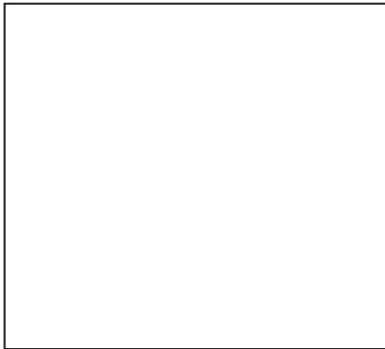


Figure 3. Trap alert light system



Figure 4. Food security cage

1.8 Tagging a Dingo

- A) Trapping and tagging dingoes must be carried out according to conditions of approval under the Health (Drugs and Poisons) regulation 1996 and NPSR Policy – [NPSR/QPWS/op-pk-nrm-admin-sched-drugs-animals.pdf](https://www.npsr.qld.gov.au/npws/op-pk-nrm-admin-sched-drugs-animals.pdf)
- B) **Males are tagged in the LEFT ear, females in the RIGHT ear.**
- C) Animal ethics approval states “Animals that are trapped will be tagged with a coloured or numbered sheep tag.” Any other tag must first receive approval prior to use.
- D) Check ear tags before use, to ensure they are properly welded and stapled to the backing plastic around the inside and outside edges. Return faulty tags to the ranger responsible for tag orders.

1.8.1 Trapping, Tranquillising and Tagging

Once a dingo is caught in a soft catch trap, it may howl, bark or attempt to chew the trap from its paws. Generally dingoes quickly realise that they cannot escape and will sit quietly until approached. They may become more agitated and attempt to free themselves by chewing the trap or trying to run away. It is advisable to prepare for handling (drug set-up, approach plan) before approaching to reduce the time the dingo is distressed.

Restraining the dingo

One person should calmly and cautiously approach the dingo with a chew-stick and long pin down pole. Look at the dingo's legs to see if the trap is holding the paw or toe. If the dingo is trapped by its toe it may escape from the trap at any time before being restrained.

The dingo will usually attempt to lunge at any person approaching, and the person should therefore not approach the dingo any closer than the full extent of the longest pin down pole.

Stand back to a safe distance from the dingo until it has lunged to its full extent towards you. This also prevents the dingo triggering remaining traps. At full arm extension, point the chew-stick at the dingo. When the dingo bites the chew stick, push the dingo to the ground in one quick move by placing the end of the push down pole over the dingo just behind its shoulders. When you have pinned the dingo to the ground, quickly place the shorter pin down pole over the dingo's neck to restrain the head. Place enough weight on the push down poles to restrain the dingo without causing injury. Ensure that you check the dingo's legs are not twisted by trap restraint before pushing weight onto it.

Stand towards the back end of the dingo while restraining the dingo. When the head is restrained by the neck pole, lightly place a foot over the hip to stop the dingo wiggling out of the restraints backwards if necessary. Use a 'pressure-on pressure-off' method of restraint rather than fighting the dingo into submission.

Wait until the dingo stops struggling and becomes submissive. Ask the assisting person to approach slowly from behind you and the dingo. The assisting person may place their weight on to the push poles to allow the handler to quickly inject the Zoetil (see section 1.8.2 – *Tagging with Tranquilisers*) at this point. Once the tranquiliser has been administered both people should move away from the dingo to reduce stress and allow the drug to take effect.

Tagging with tranquilisers.

Once the drugs have taken effect, push the dingo gently with the bite stick to ensure it is sedated by looking for any physical reaction. Their eyes will be glazed and open.

Remove the traps and place the dingo on a mat or weighing mat to prevent sand and vegetation entering the mouth and eyes. Weigh the dingo using calibrated scales.

Check the trapped paw/s for any sign of damage or swelling. Note the trapped paw/s on the profile sheet. Gently promote circulation by stroking trapped paw/s towards toes.

Tagging

Wipe the tagging pliers with alcohol, select an ear tag and place it in the pliers. Wipe the ear with alcohol or antiseptic on both sides where the tag will be applied taking care to keep fluid from entering ear canal. Place the tagging pliers over the corresponding ear according to the sex of the dingo, with the spike touching the back of the ear. The dingo should be tagged near the middle of the ear. This is in cartilage and away from nerves that are located on the perimeter of the ear. If tagged too high, the ear may flop, too low and the tag will be harder to see from the front of the ear.

Hold the top of the ear firmly and apply the tag in one swift movement. The tag should twist freely within the ear once applied. Position the tag so the colours line-up and push the spike further through the button to ensure it is secure. The tag is applied button-out for dingoes north of Indian Head.

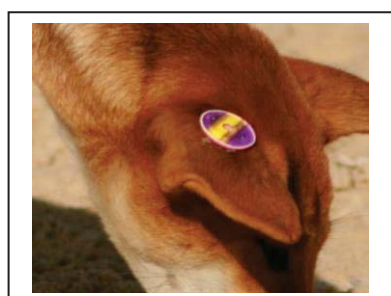


Figure 5. **Southern** tagging style
(South of Indian Head)



Figure 6. **Northern** tagging style
(North of Indian Head)

Micro chipping

When micro chipping the dingo check the microchip syringe contains a microchip and check it's working with a scanner. Press and hold the button on the chip scanner while passing it over the syringe. Check the chip number on the reader with the number on the packet of the microchip. If this matches, pinch some skin between the shoulders towards the neck and gently lift the skin. Wipe the area with alcohol. Push the syringe containing a microchip into the skin. Administer the microchip taking care not to push the needle through the skin at the end of the pinch. Place one of the stickers on the field profile sheet. Keep remaining stickers with files and to use on DNA samples collected.

Data collection

Record the tag colour, estimated or known birth year and other details on a blank dingo profile sheet.

Dingoes are named by the allocated tag colour in **alphabetical order/birth year/gender** i.e. a male dingo with a red blue blue tag born in 2009 would be BBR09m.

-Numbered tags are reserved for the dingo's birth year all other dingoes are to be tagged using letter system or tri-colour tag.

Photographs

Take clear, high quality photographs of the ear tag in the ear (front and back clearly showing location in the ear, staple locations etc), gender, front socks, rear socks, tail tip, stomach colouration, paw base markings and any scars. Most dingoes have distinctive pink and black skin pigment variations on their stomachs, gums and paw bases. Note any distinguishing features on the field profile sheet.

Check the teeth for wear, missing, rotten, broken and or damage caused by fighting or traps. Note any features on the field profile sheet.

Check for external parasites including mange, fleas or ticks mainly in the groin or arm-pit region. Note any parasites and their location on the field profile sheet.

Measure the dingo's neck diameter by placing your index and middle fingers under a measuring tape and pulling till firm. Record all measurements on the field profile sheet.

Pull some hairs including the follicle (at least 20) out of the dingo from its neck/back. Place the hairs into a small tube and write the tag colours on the tube. Add alcohol to the tube when returning to base.

Place the dingo into a recovery cage place in a safe environment (see section 1.8.2 – *Tagging with Tranquilisers*) for recovery.

Reset or remove traps. If removing the traps, be sure to collect the foam from under the pressure pad, and collect any attractant from the area. Always count the traps and cross reference with trapping log (attachment 4) before leaving the site to ensure none are left behind.

1.8.2 Tagging with Tranquillisers

Trapping and tagging dingoes must be carried out according to conditions of approval under the Health (Drugs and Poisons) regulation 1996 and NPSR Policy - administering-scheduled-drugs-animals.

AVOID using Zoletil on pregnant animals unless the animal is to be euthenased. Only officers authorised under the Health (Drugs and Poisons) Regulation 1996 should possess, store and administer the restricted drugs available to tranquillise and euthanase dingoes.

Prepare the Zoletil by mixing water for injection into the vial of Zoletil. It is preferable that a mixture is prepared before, or as you see a potential trapping about to occur.

- 5ml mix is used for injection
- 3ml mix is used for darting

Attach a needle to the jab stick and withdraw Zoletil from the vial using the top of the pole as a syringe. Plug the tip of the needle with Vaseline to prevent fluid loss. Store Zoletil in a cooler bag or with a freezer block when in the field.

Restrain the dingo as outlined in section 1.8.1 using pin down poles. Jab the dingo in the hindquarters with the jab stick, pushing firmly and hold for 2-3 seconds to ensure the Zoletil is injected into the dingo. Stand well clear of the dingo and wait for the Zoletil to take effect (dingo will usually calm down when you have retreated some distance from it). The chew-stick can be left with the dingo as a focus for frustration as the drug takes effect.

After approximately 5 minutes, the dingo will be quite drowsy. When confident the dingo is fully tranquillised, place a mat or towel under the dingo to ensure the eyes and mouth do not fill up with sand or debris.

After processing (weighing, tagging, photographing etc), place the dingo into a recovery cage and monitor its recovery. Recovery cage should be well ventilated and in the shade or covered. Cages should be covered by a sheet if being transported or within sight of the public. The animal is in your care and as such you are responsible for its welfare under the *Animal Care and Protection Act 2001*.

This includes:

- protecting the animal from the elements
- protection from injury due to transportation and cages
- protection from unnecessary attack (dingo or insect attack)
- keeping eyes and mouth clear of sand, vegetation etc. Wash eyes out with saline solution for sand removal or dry eyes due to extended drug time.

Fill in field use drug forms (Attachment 2).

[NPSR/QPWS/fm-pk-nrm-administering-scheduled-drugs-animals](#)

Once the dingo has fully recovered (this may take several hours) release the dingo at the same location it was caught and monitor it's movements immediately after release. Note movements and behaviour on field profile sheet.

1.8.3 Trap and Release without Tranquilisers

Trap as per section 1.8.1, once securely restrained with both pin down poles place a blanket over the dingoes head to calm it.

The assisting person (pole holder) places their weight on to the pin-down poles using a 'pressure-on pressure-off' method of restraint rather than fighting the dingo into submission. Gentle pressure is applied as the dingo struggles, when dingo calms down slightly release pressure. One person must have full control of the poles.

Once dingo has submitted the handler, standing to the side and rear of the dingo, carefully places a looped piece of twine/nylon rope, with a double-overhand knot, from above, over the snout of the dingo and gently secures. Apply secondary loops and secure at the top of the snout. The handler then applies tape or velcroed muzzle. Care should be taken not to suffocate the dingo. Tape the snout as close as possible to the back of the snout to avoid the tape falling off from saliva. Tape can be removed by the dingo if it escapes, and appropriate muzzles incorporate velcro which can likewise be removed by the animal.

Tape the front legs together. This restraint should be sufficient to safely handle a juvenile up to the age of 6 months. For sub-adult and adult dingoes, tape the hind legs together as well. Pin down poles can be removed once dingo is restrained and traps removed.

Check the gender and microchip of the dingo. Weigh, measure and note the tag details on a profile sheet. This will be recorded as a recapture or untagged dingo release (pregnant, under the minimum tag weight). Dingoes that require re-tagging can have new tags inserted in previous tag hole. Take pictures for profile update or untagged profile file.

Release

With the dingo well restrained using the pin down poles if required, remove the tape from the legs first and then tape/muzzle from jaws. While standing at the back end of the dingo, lift the pin-down poles off the dingo and allow it to move off of its own accord. Keep the pin down poles or blanket in front of you for protection if the dingo comes back at you. For most submitted dingoes the person restraining the dingo may be able to release the dingo by simply backing off and removing the blanket, without the need for the pin down poles.

1.9 Post Tagging

As soon as possible create an electronic profile sheet (attachment 5) and photographic file for the dingo using the tag colour. Add appropriate compressed photos of sock markings and other features into the dingo profile sheet or file, develop a coloured replica of the ear tag and include any other good photographs of the dingo. Add a dingo management history sheet to the electronic file.

Dingoes are named on their individual profile sheet and all files by the allocated **tag colour in alphabetical order/birth year/gender**.

For example, **Blue/Red/Yellow/09F** or BRY09F, 17Pink17F (for pink numbered tag).

This would indicate a female dingo tagged BlueRedYellow born 2009. If the year is estimated it will be recognised in the profile sheet. Pink, purple and Black are abbreviated as 'Pi', 'Pu' and 'Bk'.

As soon as possible a complete field sheet is to be scanned and sent to Ear Tag Register administrator for addition. Field sheets are considered to be the master document and should be completed accurately. Field sheets are to be scanned and filed electronically for future reference. File your Trapping Log (Attachment 4).

Display the current ear tag register in the office at your base so other staff are able to correlate and record their dingo sightings in the dingo observation spreadsheet or an interaction report. If required update commonly seen dingo folders.

Ensure other staff on the base know how to access hard and electronic copies of maintained dingo files if this information is required during your absence.

2. HAZING (No longer used as a management tool)

A guide to negative reinforcement as a management action

2.1 Definition and Aim

The Fraser Island Dingo Management Strategy defines hazing as: “Any of the non-lethal methods used to deter dingoes from frequenting an area and to re-instil in them a fear of humans, i.e. avoidance behaviour”. Strategy four therein states that “programs will continue to be implemented to modify dingo behaviour and habits, which threaten human safety and wellbeing.” Such management action looks to reinforce a wild animal’s natural wariness of humans, or reverse potentially dangerous behaviour.

PLEASE NOTE: Hazing of dingoes has not been approved on Fraser Island for several years and is not a preferred management option.

Following the Ecosure review of the Fraser Island Dingo Management Strategy an immediate stop to any hazing has been implemented.

The Ecosure review recommended that if hazing is considered in the future, that it only be conducted on individuals exhibiting or expected to exhibit problematic behaviour, and not indiscriminately on all individuals or individuals only displaying occasional loitering behaviour.

3. INTERACTION REPORTING

Guideline for reporting of interactions involving dingoes and people.

3.1 Definition and Aim

Dingo interaction reporting aims to describe and record significant aspects of behaviour in habituated dingoes and their interactions with humans. It involves a “code” system, wherein behaviours are classified under strict criteria, allowing for uniformity of records and consistency of reporting over time.

The decision to recommend humane destruction should not be an individual decision but a collective assessment made based on all the information available. It is incumbent upon the Senior Ranger and Area Manager to provide regional advice to the delegate in close consultation with the rangers on the ground.

3.2 Report writing guidelines

The following points should be considered when preparing interaction reports:

- Use employee number as identifier on interaction reports and management histories
- Information needs to be accurate
- Present all the information to provide a balanced overview of the interaction and history – eg references to escalating behaviour, previous recent interactions, witness interviews
- Information should be presented in chronological order to allow people reading it to get a good feel of the unfolding event
- Where possible identification should be verified. This can be done by photo evidence of tags, comparison of photos showing the animals distinguishing features or by rangers sighting the animal and confirming the animal themselves. Photo and/or video evidence is irrefutable and very useful
- Preference is to use lead in statements such as “It is considered...” rather than “I believe...” followed by reasoning that supports the statement
- Do not make assumptions – all statements must be based on factual information such as management history, ranger observations, and dingo identification (tag, sock markings, scars, age, gender)
- Do not include quotes that are emotive and have no factual basis eg “this animal is dangerous and is going to kill a child”. It is however appropriate and indeed important to record the concerns expressed by witnesses regarding the observed dingo behaviour
- Do not classify behaviour as “inappropriate” – as an alternative use “... did not follow ‘dingo safe’ messaging” or “...did not follow advice given in dingo safety briefing”

- When emailing Code D & E interaction reports ensure:
 - o associated management history is attached
 - o the covering email provides a justification/reason as to why this animal poses a higher than normal risk eg level of habituation, overview of escalating behaviour and occurrence in high use areas
 - o any possible management actions which can mitigate these concerns.

3.2 Reporting Process

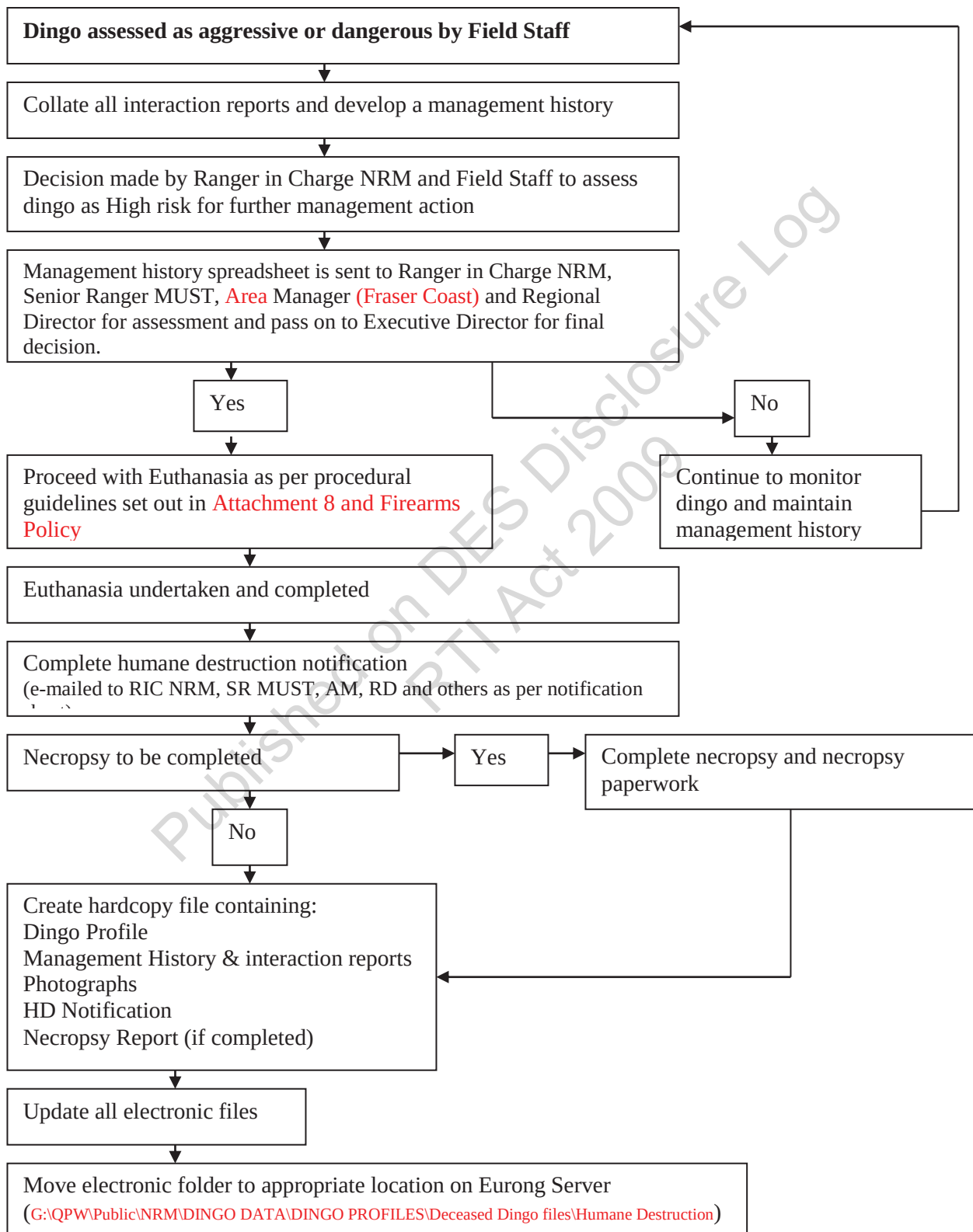
Process for reporting interactions is included as Attachment Six.

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4. Euthanasia of High risk dingoes

Process for euthanasia of high risk and threatening dingoes.

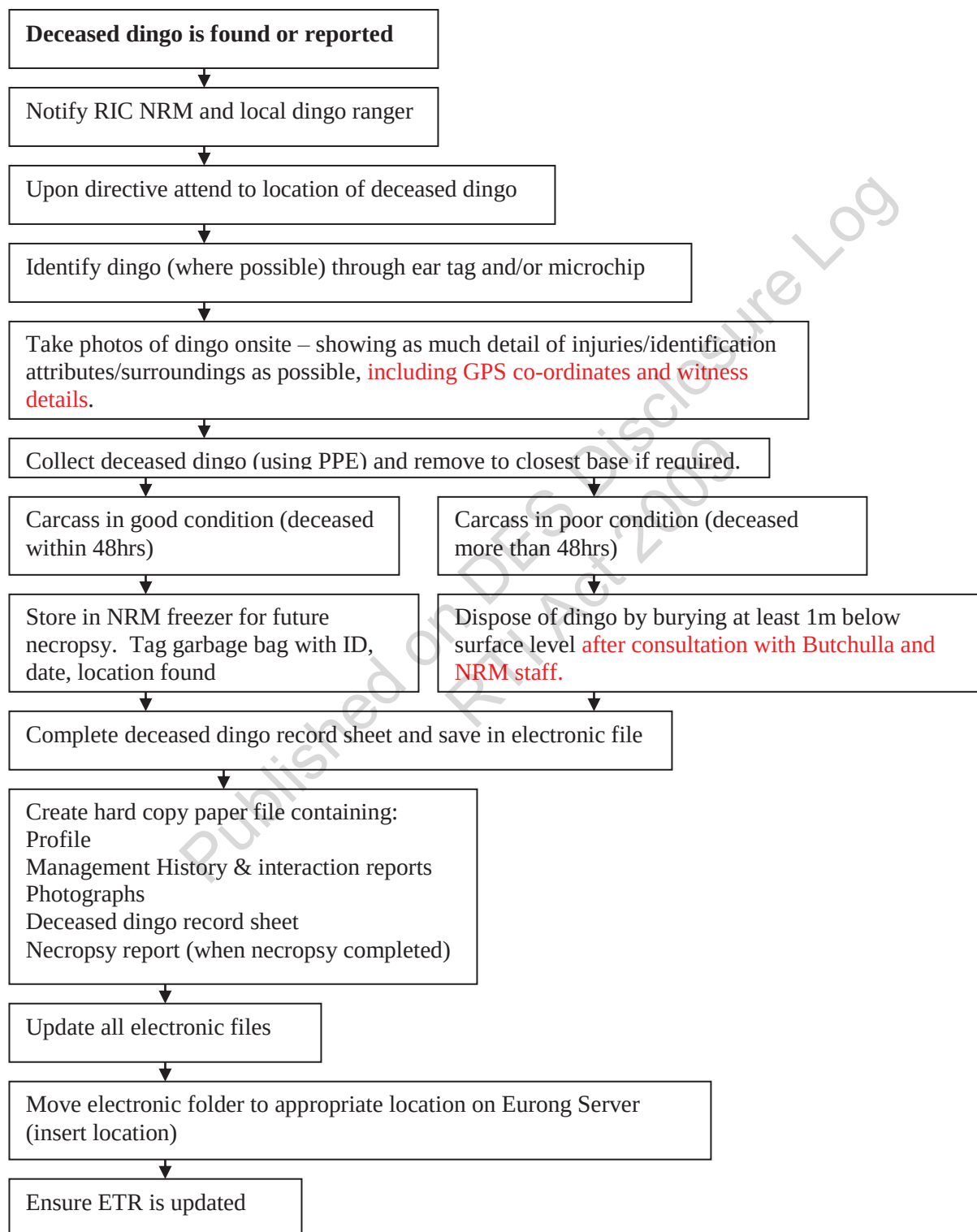
4.1 High Risk dingo euthanasia Flow Chart



5. DECEASED – OTHER (may need to do a flow chart for euthanasia for sick and injured)

Process for the management of deceased dingoes other than those humanely destroyed.

4.1 Deceased – Other Flow Chart



Attachment 1: Drug procedure

Operational policy, Natural resource management - Administering scheduled drugs to animals. Operational policies – <http://portal:6004/sites/PR/Register/Business/NPSR/QPWS/op-pk-nrm-admin-sched-drugs-animals.pdf>

Monitoring Sedated Dingoes (Dr Alan McKinnon)

- Carefully conducted trapping and ear tagging of dingoes benefits strategic management objectives
- Current practice is to sedate trapped animals with Zoletil (average does 7.5mg/kg). Zoletil is administered by rangers who hold a drug authority issued by Q-Health. As per Operational policies – Administering scheduled drugs to animals.
- Sedation is by intramuscular injection and is administered by hand-held syringe, pole syringe or by darting.
- Injection is into the rear of the thigh muscle, taking care to steer clear of the bone (femur).

Monitoring sedated animal

- Sedated animal should be recumbent within 5-10 minutes. If not the dose may have been insufficient and consideration must be given to a second dose.
- Before any procedures are undertaken the animal must be assessed for body condition (including weight), colour of mucous membranes (usually the gums), external injuries and signs of disease.
- The breathing of the sedated animal must be observed at all times. Also the nature of the inspiratory and expiratory effort noted.
- Oxygenation of the blood can be determined by the colour of the mucous membranes. Normally they should be a healthy pink colour, if they appear blue or pale then the cause must be considered (eg check back of throat for a blockage) and/or use of Oximeter.
- Sedated animals must be protected from environmental extremes – kept out of the sun, or covering if cold.

Recovery

- Sedated animals must be observed and kept in a safe environment until fully mobile.
- Recovery should be in a cage which is designed so as to prevent injury during the recovery period.
- Animal must be bright and alert and standing steadily before it is released from the recovery cage.
- Animal must be released into a safe environment and be free from harassment from both other dingoes and members of the public.

Recording and Reporting

- All aspects of the operation must be recorded using the current pro forma – Field Sheet: Administering scheduled drugs to animals (Attachment 2).
- Monthly reports to veterinarian (Allan McKinnon) on all trapping summarizing the outcomes and observations.
- A veterinary surgeon must be contacted to review the administration of the drug within 24 hours (As per conditions of the approval holder).
- Any adverse events reported immediately to ranger in charge and veterinarian.

Form

Natural Resource Management

Administering scheduled drugs to animals

To record details of field operations for administering drugs to animals. One form to be used for each field operations

1. Name and position of person administering drugs

NAME
POSITION

PHONE
EMAIL OR FAX

2. Name and purpose of program

DETAILS

3. Location and date of program

LOCATION	DATE
----------	------

4. Target species

DETAILS

5. Drug and dosage used

DETAILS

6. Field operations checklist

Checklist – Darting program

No.	Item	Description	Tick	Comments
1	RIF Program Plan	Plan of overall operation		
2	Personnel	Assistance required		
3	Transport	Vehicles, quads, etc.		
4	Firearm/s	Rifle, pole syringe, blow pipe		
5	Darts – preloaded	Keep to minimum		
6	Darts – spare	In proper container		
7	Drug – premixed	Keep cool to maximise shelf life		

Form
Administering schedules drugs to animals

Checklist – Darting program				
No.	Item	Description	Tick	Comments
8	Drug container	Lockable esky with ice		
9	Sharps containers	Store used darts & syringes		
10	Blanks	Appropriate power for job		
11	Filler kit	To fill darts in field if required		
12	Field record form	Standard		In folder or clipboard
13	Recovery cage/area	Depends on species		
14	Restraints	Depends on species		
15	PPE	Depends on species and environment		
16	Torches and lights	For night operations		

7. Darting or administering details

(to be completed immediately following field operation – please attach additional sheet if required)

Animal no.	Species	Dart Time	Recovery Time	Sedation Time	Vol Drug Used	Sex	Age	Condition	Comments
Total volume of drug used for the day					Reconcile with drugs register				

8. Signature of person administering drug/s

Date:	Signature:
-------	------------

Attachment 3: In-house Trapping Competency

Performance checklist

Competency: Working with Dingoes on Fraser Island

Candidates name: _____

Candidate's position: _____

Date: ____/____/____

Task/Application: Using the practical information provided in the on-the-job training and the equipment provided in the workplace, demonstrate the ability to safely capture handle, tag and release a dingo using standard dingo equipment with an authorised Dingo ranger, in a staged situation and on a wild dingo in the field.

Conditions: Field training will contain all necessary information pertaining to the appraisal; candidates will have access to trapping and safety equipment necessary to efficiently work in the field.

Standard: As per Draft Competency Standard 'Working with Dingoes on Fraser Island, and the Draft Fraser Island Dingo Trapping and Tagging guideline.

Performance standards

	Competent	Skills required	Not applicable
1.1 Dangers of working with dingoes are understood and verbally confirmed with assessor. 1.2 Appropriate protective clothing and safety equipment (PPE) is used for working with dingoes, in accordance with Agency OH&S procedures. 1.3 Behaviour of dingoes is understood. 1.4 All activities with dingoes are undertaken in accordance with any animal welfare, duty of care and work place health and safety requirements to reduce stress and injury to the animal, and the handlers.			
2.1 Knowledge of the reproductive biology of dingoes.			
3.1 Knowledge of overall duty of care when working is demonstrated. 3.2 Knowledge of the different types of factors that contribute to risk. 3.3 Knowledge of the methods for preventing or minimising exposure to risk.			
4.1 Knowledge of the Basic Life Support flowchart for First Aiders is understood and demonstrated. 4.2 Knowledge of the possible injuries received when working around dingoes.			
5.1 Knowledge of the information staff can provide to the media without prior approval. 5.2 Knowledge of the types of information inquiry that must be referred to the Public Affairs Branch and/or the Ministers office.			
6.1 Knowledge of the importance of trapping or shooting dingoes out of public view where possible.			

6.2 Knowledge of methods for controlling a crowd. 6.3 Ability to identify situations or people who can make crowd control difficult.			
7.1 Knowledge of the equipment used to trap dingoes and its correct use is demonstrated.			
8.1 Knowledge of importance of checking traps for damage or faults before use is demonstrated. 8.2 Knowledge of the setting soft jaw traps is demonstrated. 8.3 Knowledge of securing traps to anchor points is demonstrated. 8.4 Knowledge of baits to use and methods of use. 8.5 Demonstrated knowledge of trap maintenance.			
9.1 Knowledge of suitable and effective locations to set traps. 9.2 Knowledge of probable dingo behaviour whilst restrained in a soft jaw trap. 9.3 Knowledge of when a dingo has become submissive in a soft jaw trap is demonstrated.			
10.1 Knowledge of process to pin a dingo caught in a soft jaw trap is demonstrated. 10.2 Knowledge of safe method of restraining dingo to be in full control at all times is demonstrated. 10.3 Knowledge of the correct techniques for securing the jaws of a dingo is demonstrated. 10.4 Knowledge of releasing the dingo safely from restraint is demonstrated.			
11.1 Knowledge of how and when to extract a soft jaw trap from the dingoes' leg/s is demonstrated			
12.1 Knowledge of use of ear tags and ear tag applicator is demonstrated. 12.2 Knowledge of the correct process for applying the ear tag is demonstrated. 12.3 Knowledge of the correct placement in the ear and according to gender is demonstrated. 12.4 Knowledge of colour selection of the ear tag.			
13.1 Knowledge of microchip application is demonstrated. 13.2 Knowledge of the operation of the associated scanner is demonstrated. WHERE APPLICABLE			
14.1 Knowledge of DNA collection techniques. 14.2 Knowledge of storage of DNA sample.			
15.1 Knowledge of developing and maintaining dingo profile information.			
16.1 Knowledge of the Agency-approved firearms and associated ammunition to kill dingoes. 16.2 Knowledge of the humane and effective shot placement. 16.3 Knowledge of the correct storage of firearms in the field.			
17.1 Knowledge of drugs use and dosage/weight rates to tranquillise and euthanase dingoes. 17.2 Knowledge of safe, correct and effective administration of drugs. 17.3 Knowledge of use of equipment to administer drugs. 17.4 Knowledge of the effect of drugs. 17.5 Knowledge of safe care of the dingo while tranquillised and during recovery. 17.6 Knowledge of when to release a dingo recovered from tranquillisation. 17.7 Knowledge of risks associated with the use of such drugs. 17.8 Knowledge of the correct storage of drugs. 17.9 Knowledge of accountability of drugs. 17.10 Safe handling of injection device syringes, jab poles, blow			

pipes and darts.			
17.11 Accreditation to use restricted drugs.			

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18.1 Knowledge of the personal protective equipment that should be worn when conducting a necropsy on a dead dingo.			
18.2 Knowledge of the anatomy of dingoes.			
18.3 Knowledge of the standard process for performing a necropsy.			
18.4 Knowledge of retention and storage of DNA samples and skulls.			
18.5 Knowledge of common causes of death and their indicators.			
18.6 Knowledge of the correct disposal of a dingo carcass.			

Evidence Guide:

Did the candidate demonstrate the ability to safely and effectively set and check soft jaw traps to the satisfaction of the assessor?

Is competent: ☐ Is not yet competent: ☐

Did the candidate demonstrate the ability to use standard equipment (including safety equipment) to humanely restrain a dingo, remain in control of the dingo, and know when the dingo has become submissive in a soft jaw trap, and release the dingo, to the satisfaction of the assessor?

Is competent: ☐ Is not yet competent: ☐

Did the candidate demonstrate an ability to assist in extracting a dingo from a standard soft jaw trap and then use standard equipment to safely and efficiently restrain the animal?

Is competent: ☐ Is not yet competent: ☐

Did the candidate demonstrate an ability to successfully perform the procedures required to process a dingo including weighing, ear tag placement and insertion, microchip insertion, measurement, identify sock heights, scars and markings and take relevant identification and profile photographs.

Is competent: ☐ Is not yet competent: ☐

Did the candidate demonstrate the ability to produce an accurate profile sheet for an individual dingo, inserting the correct photographs and relevant data?

Is competent: ☐ Is not yet competent: ☐

Results:

Is competent: ☐

Is not yet competent: ☐

Signed:

Assessor

Employee

Attachment 4: Trapping Log

Fraser Island Collar Project

[illegible]

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Dingo Profile Sheet – General - Field Use

Attachment 5a: Field Dingo Profile Sheet

Dingo ID

(Full Dingo ID – for this capture point forward)

		Place microchip sticker here or record current microchip details!	
Microchip:			

History: ☐ New Dingo (primary tag) ☐ Re-capture (primary tag delaminated)
☐ Re-capture (primary tag intact) ☐ Re-capture (tag missing/ripped ear)

Previous tag Id, family comments, etc.):

Capture Details:

Weight: (kg)

Location: Date:/...../..... Time: (24hrs)

GPS: Zone: 56J Easting: Northing:

Tags: left ear ☐ right ear ☐ Tag colour/Number: / /

Button base colour: Stud base colour:

Authorised officer: Additional staff:

Injection Date/Time (24hr)	Part Recovery (head lift) Date/Time (24hr)	Recovery Date/Time (24hr)	Sedation Time Hrs.	Zoetel used	
				Concentration	Volume
1 st					mL
2 nd					mL

Leg/s trapped: Left Front ☐ Right Front ☐ Left Rear ☐ Right Rear ☐

Attractant:

Release Location: Date:/...../..... Time: (24hrs)

Comments (dingo behaviour, movement & direction headed etc.):

Dingo Description:

Male ☐ Testis Descended: Yes ☐ No ☐
 Female ☐ Elongated Nipples (previously bred): Yes ☐ No ☐ Lactating: Yes ☐ No ☐
 Birth year: Known ☐ Estimated ☐ Year:

☐ Pup dependant < 4month ☐ Adult sexually mature bright eyes, dark muzzle (2>5yrs),
☐ Juvenile 4 months < 1 yr ☐ Old adult, cloudy eyes, grey in muzzle 5+yrs
☐ Sub-adult fully grown 1-2yrs,

Identifying features:

White tail tip: Yes ☐ No ☐ Few hairs ☐ Small ☐ Medium ☐ Large ☐

Front White socks: Left Foot: Toes only ☐ Low ☐ Mid ☐ High ☐

Right Foot: Toes only ☐ Low ☐ Mid ☐ High ☐

Scars: Yes ☐ No ☐ Describe:

Wound/Injuries: Yes ☐ No ☐ Describe:

Abdomen markings: Yes ☐ No ☐ Describe:

Paw pad markings: Yes ☐ No ☐ Describe:

Other markings: Yes ☐ No ☐ Describe:

Dingo Profile Sheet	Dingo ID:	Place microchip sticker here or record current microchip details!
----------------------------	------------------	--

Measurements:

Ear: mm **Head:** mm
Height: mm **Tail:** mm
Body Length: mm **Neck:** mm
Measured by:

DNA collected: Yes ☐ No ☐ **Faecal Sample:** Yes ☐ No ☐ **Hair Sample:** Yes ☐ No ☐
Details:

General observations:

Teeth complete: Yes ☐ No ☐ **Teeth worn:** Yes ☐ No ☐
Canines complete: Yes ☐ No ☐ **Canines chipped:** Yes ☐ No ☐
Canines Descended: Yes ☐ No ☐ Descending ☐
Teeth Comments (colour, condition etc.):

Animal condition: Ribs covered ☐ Ribs obvious ☐ Hips covered ☐
 Hips obvious ☐
 1 - Very Poor ☐ 2 - Poor ☐ 3 - Fair ☐ 4 - Good/Optimal ☐ 5 - Overweight ☐

Mucus membrane colour: Pink (normal) ☐ Pale/White ☐ Other ☐ Details:

Ear check: Normal ☐ Abnormal ☐ Comments:

Hydration 'Skin fold test': Adequate ☐ Inadequate ☐ Details:

Scars/Wounds/Injuries: Yes ☐ No ☐ Details:

External parasites: Yes ☐ No ☐ Details:

Tail diamond: Yes ☐ No ☐ Details:

Claw condition: Normal ☐ Abnormal ☐ Details:

All Other Comments:

Photo Checklist: Camera used-

- | | |
|---|--|
| ☐ Dingo full body shot | ☐ Abdominal area incl. gender |
| ☐ Front paw markings | ☐ 4 paw pad markings |
| ☐ Rear paw markings | ☐ Tail tip |
| ☐ Tag front close-up | ☐ Scars if relevant |
| ☐ Tag rear close-up | ☐ Any further pictures for interest |

Attachment 6: Dingo Interaction Reporting Process

QPWS Fraser Island

Current Reporting Process

Dingo Interactions

Code E: High Risk

- **Phone call immediately through supervisors (or duty officer if on weekend) up to DDG (QPWS) until someone answers.**
- **Interaction Report to be compiled within 24 hours and forwarded to; DingoInteractionsCodeE@npsr.qld.gov.au**
- **If further investigation is needed E-mail Preliminary Report as soon as possible.**

Code D: Threatening

- **Phone call immediately through supervisors (or duty officer if on weekend) to Regional Director (Coast and Islands Region)**
- **Interaction Report to be compiled within 24 hours and forwarded to; DingoInteractionsCodeD@npsr.qld.gov.au**
- **If further investigation is needed E-mail Preliminary Report as soon as possible.**

Code C:

- **E-mail Interaction Report by end of shift to; DingoInteractionsCodeC@npsr.qld.gov.au**

Preliminary Reports are only required for Code D and E interactions if complete report needs further preparation and investigation and is not being sent. This is to be done as soon as possible/practical after the initial phone call. *It can be completed by the ranger reporting the interaction, or by a supervisor in the office on-island who has been provided with the basic, accurate details of events.*

Interaction Reports are to be e-mailed, after being reviewed by a RIC or NRM Ranger on island.

Report Writing:

Dingo interaction reports are to be filled out in *Word* format on the computer. The reports have been shortened and modified to utilise “tick box” menus in response to feedback from rangers in the field.

Report Forms:

Interaction Reports are to be typed up after the appropriate field response and attached to an e-mail to the relevant recipient list. All interactions reports should be checked by at least two staff prior to distribution, one of these should be a RIC or NRM Ranger on island.

Make sure that the subject heading for all e-mails follows the naming convention of the attached interaction report.

Naming - Code C_yyyymmdd_Tag_Location_Description of interaction

Example: - Code C_20160213_15Orange15M_Eur-Poy_Loitering

Unidentified is a dingo that wasn't identified by ranger/s or person/s involved in the interaction. For example, at Eurong the description could fit one of the habituated juveniles except that they were not identified.

Unknown dingo is a dingo that is not known in the area to staff.

AO3 Administration Officer Maryborough collates and enters the individual interaction data to the master Dingo Interaction spread sheet. This data is used for the Quarterly risk assessments, Right To Information and Ministerial requests. Correct file naming at the reporter's end prevents unnecessary reopening and checking of interaction reports by AO3 Administration Officer and NRM rangers collating and double checking the information. The subject heading in each e-mail should be the correctly named interaction. DO NOT SEND MULTIPLE INTERACTION REPORTS IN ONE E-MAIL.

Phone Calls:

Code D and E interactions are to be communicated by telephone immediately as per reporting procedures above.

Current numbers and E-mail addresses:

OO5 NRM Ranger	4127 9128 ext. 236	sch4p3(3) Prejudice the prot	NOVAK Dan <Dan.Novak@npsr.qld.gov.au>
Senior Conservation Officer	4121 1823		MCRAE Moyra <Moyra.McRae@npsr.qld.gov.au>
RIC Fraser South	4127 9128 ext. 246		FLEISCHFRESSER Kim <Kim.Fleischfresser@npsr.qld.gov.au>
RIC Fraser North	4127 9138 ext. 9		LAVENDER Sven <Sven.Lavender@npsr.qld.gov.au>
Senior Ranger (Fraser)	4127 9128 ext. 222		CLIFTON Daniel <Daniel.Clifton@npsr.qld.gov.au>
Administration (Mboro)	4121 1855		EMBREY Teena <Teena.Embrey@npsr.qld.gov.au>
Duty Officer	4121 1609		
Principal Ranger, Fraser Coast Area	4121 1790		BELCHER Ross <Ross.Belcher@npsr.qld.gov.au>
Regional Director	5459 6112		BRITTINGHAM Geoff <Geoff.Brittingham@npsr.qld.gov.au>
Executive Director	3199 7518		CAMBOURN Neil <Neil.Cambourn@npsr.qld.gov.au>

Attachment 7a: Dingo Interaction Report Form

Dingo Interaction Report Form Insert Code:

Dingo ID:

Date (of interaction): Location (of interaction):	Time (of interaction 24hrs): Reporting Officer/s details: Base: Fraser Island																				
<p>Question 1: What were the actions of the dingo(s) during the interaction? <i>(click on box(s) to check/uncheck)</i></p> <p>B) Habituated.</p> <p>☐ not wary of humans</p> <p>☐ moving through common areas to humans</p> <p>☐ curious</p> <p>☐ loitering at recognized visitor sites (no humans present)</p> <p>C) Nuisance or problem.</p> <p>☐ loitering at recognized visitor sites (people nearby)</p> <p>☐ stealing food or property (specify)</p> <p>☐ soliciting food</p> <p>☐ being fed or encouraged</p> <p>☐ living under or in infrastructure</p> <p>☐ following closely (distance)</p> <p>☐ damaging property (specify)</p> <p>☐ tent ripping (vacant campsite or tent)</p> <p>☐ entered dingo deterrent fence line</p> <p>☐ interference with dingoes</p> <p>D) Aggressive.</p> <p>☐ growling/snarling</p> <p>☐ dominant/submissive testing</p> <p>☐ stalking</p> <p>☐ tent ripping (campers inside tent)</p> <p>☐ circling (distance)</p> <p>☐ dominant towards humans</p> <p>☐ incorporate humans into pack behaviour</p> <p>☐ humans regarded as competitors for resources</p> <p>☐ bailing up/ambushing (walking alone or unsupervised)</p> <p>☐ hunting tactics (with intent to test a response)</p> <p>☐ lunging (not attempting to nip or bite)</p> <p>E) Dangerous.</p> <p>☐ nipping/mouthing</p> <p>☐ biting</p> <p>☐ attacking</p> <p>☐ causing casualty</p> <p>☐ hunting tactics (intent to attack)</p> <p>☐ bailing up/ambushing (intent to attack)</p> <p>☐ lunging (attempting to nip or bite)</p>	<p>Question 2: How/why did the dingo(s) leave?</p> <p>☐ voluntarily, for no apparent reason</p> <p>☐ when yelled at</p> <p>☐ when chased away</p> <p>☐ when yelled at and chased away</p> <p>☐ when person stopped moving/making a noise</p> <p>☐ other (specify)</p> <p>Question 3: Dingo numbers and identification</p> <p>a. How many dingoes present click to select</p> <p>b. How many dingoes involved in the interaction (use table below)</p> <table border="1" style="width: 100%;"> <thead> <tr> <th></th> <th>Male</th> <th>Female</th> <th>Sex Unknown</th> </tr> </thead> <tbody> <tr> <td>Adults</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Sub adults</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Juvenile</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Unknown Age</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>c. Were the dingo(s) tagged click to select</p> <p>Details:</p> <p>d. Which ears were tagged click to select</p> <p>Details:</p> <p>e. Distinguishing features on dingo(s) (e.g. white tail tip, socks, scars)</p> <p>Details:</p> <p>Question 4: Details of person(s) involved in dingo interaction.</p> <p>Name:</p> <p>Address:</p> <p>Phone #:</p> <p>Age:</p> <p>Name:</p> <p>Address:</p> <p>Phone #:</p> <p>Age:</p>		Male	Female	Sex Unknown	Adults				Sub adults				Juvenile				Unknown Age			
	Male	Female	Sex Unknown																		
Adults																					
Sub adults																					
Juvenile																					
Unknown Age																					

Questionnaire: Specify visitor type [click to select](#)

Did they receive an information pack with their permits [click to select](#)

Did they read the Dingo Brochure [click to select](#)

Did the people follow 'dingo safe' messaging? (Ranger to assess) [click to select](#)

Comments

Detailed report of events:

Additional comments and notes:

Action taken:

Proposed further action:

Faxed/mailed date:

Reporting Officers details:

Photos

To add pictures, you will need to firstly unlock this form. Select the 'Review Tab', select 'Restrict Editing', then 'stop protection'. You can now insert a picture using the Insert tab. To re-lock the form check the box under step 2, choose 'filling in forms' from the drop down box, select 'Yes, Start Enforcing Protection', click 'OK'.

	Photo 1. Description (who took photo/when):
	Photo 2. Description (who took photo/when):
	Photo 3. Description (who took photo/when):

Attachment 7b: Dingo Activity Categories

Category	Threat to life and property	Attributes	Management action
Code A. H0-H1 - Avoidance or wary *** <ul style="list-style-type: none"> ▪ Notify Dingo Ranger ▪ Fill in the electronic Dingo observation and sighting data base 	Nil	<ul style="list-style-type: none"> • finds the presence of humans threatening • difficult to observe • wild, 'natural' behaviour • avoid people areas within territory 	Nil Fill in the electronic Dingo observation and sighting data base.
Code B. H2 H3 – Habituated *** <ul style="list-style-type: none"> ▪ Notify Dingo Ranger ▪ Fill in the electronic Dingo observation and sighting data base 	Nil	<ul style="list-style-type: none"> • non-aggressive • not wary of humans* • dingoes using common areas to humans, using campgrounds as thoroughfares* • Curious* 	Nil > continue to monitor, deter if assessed and directed. Fill in the electronic Dingo observation and sighting data base.
Code C. H2-H3 - Passive behaviour or activity towards humans *** ASAP: <ul style="list-style-type: none"> ▪ Notify Dingo Rangers and island RICs. ▪ Fill in the Dingo interaction form — <i>Code C</i> send to recipient list. 	<ul style="list-style-type: none"> • Harassment • Nuisance • Inappropriate human behaviour 	<ul style="list-style-type: none"> • loitering at recognized visitor sites* • stealing food & property* • soliciting food* • being fed or encouraged • living under infrastructure* • following closely* • dingo activity associated with human presence* • damaging property* • tent ripping (vacant tent)* • entered fence line* • interference with dingoes* 	Assessment and appropriate action: Deter when assessed and directed. Monitor activity and behaviour, deter if assessed and directed. Discussion with stakeholders if appropriate. Consider camp zone closure/s if activity is maintained or increases.
Code D. H3-H4 - Threatening Intentional activity, behaviour or action towards humans *** IMMEDIATELY: <ul style="list-style-type: none"> ▪ Notify Dingo Rangers, phone Principal Ranger (through RICs, Senior Ranger, Duty Officer or direct). ▪ Fill in the Dingo interaction form — <i>e-mail pro-forma Code D message to recipient list with report through Dingo Rangers and RIC.</i> 	<ul style="list-style-type: none"> • Major harassment / confrontation • Inappropriate human behaviour (involving non-aggressive contact) <p>High risk of injury with potential to move rapidly to Code E.</p>	<ul style="list-style-type: none"> • growling / snarling* • dominant/submissive testing* • stalking* • tent ripping • circling* • dominant toward humans • being fed or encouraged behaviour (involving non-aggressive contact) • incorporate humans into pack behaviour* • humans regarded as competitors for resources* • bailing up/ambushing (walking alone or unsupervised)* • hunting tactics (with intent to test response)* • lunging (no attempt to test response) • clothing ripping* 	Assessment and appropriate action: Deter when assessed and directed. Intense monitoring and documentation of behaviour. Signage erected 'High Risk dingo in area'. Public notification through relevant media (conditions reports, park alerts Public notice). Risk assessment for camp zone closure. Identification and management history collation for possible developed behaviour, following approved procedures.
Code E. H4 - High Risk/Dangerous *** IMMEDIATELY: <ul style="list-style-type: none"> ▪ Notify Dingo Rangers, phone Principal Ranger (through RICs, SR, Duty Officer or direct) ▪ Fill in the Dingo interaction form — <i>e-mail pro-forma Code E message to recipient list with report through Dingo Rangers and RIC</i> 	Threat/immediate danger to person/s	<ul style="list-style-type: none"> • nipping/mouthing* • biting* • attack* • casualty* • hunting tactics: fast approach/ pack action all dependent upon severity and intensity* • bailing up / ambushing* • lunging* 	Assessment and appropriate action: Deter when assessed and directed. Detailed identification and submission for euthanasia if severe / intense and developed behaviour following approved procedures**. Continue intense monitoring and Documentation of behaviour.

Attachment 7c: Dingo Interaction Glossary of Terms

Glossary of Terms

Category B

Not wary of humans – will undertake normal activities and not be influenced by the presence or number of humans. Interaction between humans and animal is uncommon (will result in animal retreating/moving away quickly).

Moving through common areas to humans – Dingo moving through campgrounds, townships or day-use areas, usually looking for food or moving through territory.

Curious – is inquisitive, actively watching the actions of people from within 50 metres. Will move away after a couple of minutes or when approached. *Distinguish from 'loitering at recognised visitor sites'.*

Loitering at recognised visitor sites (no humans present) – spending extended periods of time within campground, townships or day use areas, usually looking for food, will not be deterred away from site easily when approached, or returns within a short period of time (<5 minutes).

Category C – Passive behaviour or activity of dingo towards humans

Loitering at recognised visitor sites (people nearby) – spending extended periods of time within campground, townships or day use areas, usually looking for food, will not be deterred away from site easily when approached, or returns within a short period of time (<5 minutes). Usually associated with '*Dingo activity associated with human presence*' (see below). *Distinguish from 'Curious' and 'Dingo activity associated with human presence.'*

Stealing food or property - takes food or property from a campsite. No deterring as campsite unattended or failed to be aware of animal's presence. When/if confronted animal will move away (may come back). '*Distinguish from Damaging Property*'

Soliciting food – makes appeal for food by persistently raising nose to sniff, not moving away any great distance. This can include sitting and watching intently nearby (<30 m) while people are eating or preparing food.

Being fed or encouraged – **Being called, lured, whistled etc. or** obtaining food from a person or people directly or indirectly such as food scraps or bait and fish scraps thrown or used to influence dingo behaviour, deliberate food drops, local 'feeders'. '*Distinguish from Stealing food or property*' & **Inappropriate human behaviour (involving non-aggressive contact).**

Living under infrastructure – spends extended periods (>1hr) of time sleeping, resting, eating under human dwellings or QPWS infrastructure.

Following closely – actively following a person, change direction to continue to follow. Follow for > 30 seconds and follow within < 30/50 metres. Will stop or move away if confronted, becomes disinterested after a short period of time. *Distinguish from 'stalking'.*

Damaging property – may steal unattended property e.g. jackets/ shoes, will chew containers/ damage tents for food. Usually occurs in unattended camps and dwellings. *Distinguish from tent and clothing ripping.*

Tent ripping (vacant campsite or tent) - will actively destroy tents /camping equipment in search of food. Usually in unattended camps and will usually move away if discovered or confronted. *Distinguish from 'Damaging Property'*

Entered dingo deterrent fence line – Describes a dingo or dingoes that have breached a dingo deterrent fence/perimeter and the known cause of the breach (gate left open, sand in grids, grid electrification wires not active, hole in fence etc.)

Interference with dingoes – Describes unauthorised adverse human behaviour towards dingoes eg vehicles deliberately swerving towards dingoes with the alleged intent to run them over, CTO operators circling and/or hindering dingo movement/natural behaviour.

Inappropriate human behaviour – Human behaviour that increases risk of interaction with a dingo. Children not supervised or within a distance considered reasonable, walking alone if not sufficiently prepared for a dingo interaction (i.e. carrying a stick), poorly secured food, rubbish or bait. *Distinguish from feeding and interference with dingoes & Inappropriate human behaviour (involving non-aggressive contact).*

Category D – Intentional activity, behaviour or actions towards humans

Growling/Snarling – if confronted /approached animal will usually face a person from a short distance (<10 metres) in a dominating manner. Animal will growl and snarl as a warning not to interfere with it *‘Can be associated with dominant submissive testing’*.

Dominate/submissive testing – often described as playful behaviour, prominent amongst younger animals. Animal/s will approach close to humans (<5 metres) and may jump around and yap and nip in an excited manner. Aggression from the animal may escalate if people respond inappropriately such as running away. *‘Can include growling, snarling and stalking’*.

Inappropriate human behaviour (involving non-aggressive contact) - Being called, lured, whistled etc. or obtaining food from a person or people directly leading to non-threatening or aggressive contact with the dingo. Examples include licking by the dingo and patting. *Distinguish from Dominant towards humans.*

Stalking – similar to following closely except can be < 5 metres and will continue to follow despite efforts to deter. Occurs for >30 seconds. Efforts of dingo solely focused on person being followed with no sign of becoming disinterested. *Distinguish from ‘following closely’ and ‘ambushing’*.

Tent ripping (campers inside tent) – will actively destroy tents /camping equipment in search of food with people inside tent. May pull at sleeping bags or take pillows from under the heads of sleeping campers. Will usually move away if discovered or confronted. *Distinguish from ‘Damaging Property’*.

Circling – A single/ numerous animals circle a person from < 20 metres but no attempt is made to stop the progress of the human or bite. Are showing a definite interest in person but can be deterred especially if more than one person is present. *‘Distinguish from Stalking and Bailing up and Ambushing.’*

Dominant towards humans – Animal shows no fear of people and is not easily deterred when confronted or approached. Includes confronting people for food, snatching food from a person’s hand, herding people into the sea or stopping them from walking in a particular direction. *May lead to aggression such as snarling, bailing up, nipping and biting.*

Incorporate humans into pack behaviour – can involve changing original behaviour to approaching humans from > 50 m (sometimes at speed) to investigate human activity. Following behaviour is dependant on human response. *‘Can be associated with dominant/submissive testing and dominance towards humans’*.

Humans regarded as competitors for resources – will aggressively defend food and other pack animals when confronted.

Bailing up/ambushing (walking alone or unsupervised) - similar to *stalking* and *circling* except animal made attempt to stop the progress of a human. *Distinguish from ‘Stalking and Circling’*.

Hunting tactics (with intent to test a response) - May make a fast approach from a distance (>50 metres) to test a prey response from humans. Behaviour appears to be more prominent towards children and women. *Distinguish from code E,*

Lunging (not attempting to nip or bite) – jumping with concerted effort towards person, can also include animal coming quickly from behind at a person’s heels. No obvious attempts made to nip or bite the person.

Stealing/damage to property (directly from person) – **dingo** is actively trying to steal property/ food directly from a person. Includes snatching items from a person’s hand.

Category E –Escalated intentional activity, behaviour or actions towards humans

Nipping – includes mouthing of any description, regardless of whether penetration of the skin or bruising has occurred.

Biting – penetration of skin or bruising has occurred.

Attack – numerous bites have occurred and animal persists despite efforts to deter.

Causing Casualty – First aid or hospitalisation required First aid delivered by a medical professional or hospitalisation required

Hunting tactics (intent to attack) – usually involves more than one animal. May make a fast approach from a distance (>50 metres) to test a prey response from humans and followed on by circling (within 5m radius), multiple attempts to bite (normally from behind) and may involve other behaviour such as *Lunging, Ambushing and Bailing up*. Behaviour appears to be more prominent

towards children and women. Can include more than one dingo and they are not easily deterred. *Distinguish from 'Circling and Stalking'.*

Bailing up/ambushing (intent to attack) – similar to *stalking* and *circling* except animal made attempt to stop the progress/escape of a human. Continues with behaviour despite concerted effort to deter or move away. *Distinguish from 'Stalking and Circling'.*

Lunging (attempting to nip or bite) – jumping with concerted effort towards person, can also include animal coming quickly from behind at a person's heels and attempts to nip and bite. Person/s involved required to actively defend themselves or move away from dingo/es to prevent being bitten or nipped.

"It's always difficult to interpret the intent of dingo behaviour from a description given by an observer whose concurrent actions may have produced or change the dingoes' behaviour. More difficult again when the experience/behaviour of the observer is unknown yet critical to the interpretation – one person's "dingoes playing" behaviour could be another's "tried to kill me" experience.

The distinguishing feature between Code D & E behaviours (from my assessment of them) is that Code D includes dingo actions/behaviours meant to psychologically warn, threaten and/or intimidate human observers (either to elicit food, test or establish dominance or test human reactions to their behaviour). Code E actions/behaviours are attempts to physically injure people for whatever reason. Thus, snarling, circling, lunging, stalking and bailing-up behaviours would be Code D if done at a safe distance, were short lived and when no physical contact was made between dingoes and people but Code E if these same behaviours were within 5m of people, sustained and/or associated with some physical contact like nipping or biting."

Lee Allen

Senior Zoologist

Robert Wicks Pest Animal Research Centre, Biosecurity Queensland

Attachment 8: Protocol for Euthanasing Sedated Dingoes

Euthanasing Sedated Dingoes Fraser Island

PENTOPARBITONE

Administration:

- Pentobarbitone (300-320mg/ml) (eg Valabarb Euthanasia Solution) is to be administered by intracardiac injection for rapid euthanasia after sedation with Zoletil.

Storage:

- Pentobarbitone is to be stored in a locked cupboard or locked refrigerator.
- Access to the key/s to this storage container is restricted to current drug authorised personnel only. The key to this storage area should have coded, restricted access.

Dosage and packaging:

- Pentobarbitone solution should only be purchased in concentration of 300-350mg/ml.
- Pentobarbitone is to be administered at the dose rate recommended by the manufacturer, which is usually 1-2ml/5kg.

Disposal of Carcasses:

- All animals euthanased by Pentobarbitone are to be buried or burnt. Access of other animals to the carcasses must be prevented and carcasses are not to be used for any other purposes.
- Animals must be confirmed dead (no heart beat or breathing) at the completion of the injection.

Equipment for Use:

- A syringe with a volume of up to 10ml attached to an 18 gauge, 1.5inch needle is recommended for intracardiac injections.

Disposal of Equipment:

- Needles and syringes used to administer drugs must be disposed of immediately after use in a sharps container. These containers, once full, are to be given to QAS Happy Valley or a hospital.
- Disposal of out of date Valabarb requires giving remaining contents and bottle to an appropriate pharmaceutical service or Veterinary practice after prior arrangement.

Recording and Reporting:

- Where it is not practicable for the veterinary surgeon to give a verbal direction to administer the Schedule 4 medicine (e.g. remote location), the veterinary surgeon must be contacted to review the administration of the Schedule 4 medicine within 24 hours.
- The approval holder must note the specifics of the review in the relevant record entry.
- All aspects of the operation must be recorded using the current proforma (Appendix 2: Field Sheet – Administering scheduled drugs to animals)
- Monthly reports to veterinarian on all trapping summarizing the outcomes and observations.
- Any adverse events reported immediately to ranger in charge and veterinarian (report also needs to go to ethics committee if the dingo is part of a research project).

Signs that the dingo is deceased:

- The dingo's lips, gums and tongue are purple in colour.
- The dingo is not breathing – you won't see the rib cage moving up and down.
- The dingo has no heart beat – you can put your hands firmly on either side of the dingo's chest to feel the heart beat.
- The dingo's pupils are dilated.
- The dingo's pupils do not react to light.
- The dingo does not blink if you gently touch its eyeball.
- The dingo's eyeballs are dull and seem dry in appearance and no longer shiny.
- The dingo is not moving and is unresponsive.
- The dingo is floppy when picked up or, during the period of rigor mortis, stiff.

Attachment 9: Job Safety Analysis – Trap & Tag for management of dingoes of Fraser Island



Job Safety Analysis/Work Method Statement Trap & Tag for management of dingoes on Fraser Island



Purpose		When to use them
Job Safety Analysis (JSA)	JSA is a systematic and documented analysis of the whole job. These are generally used in complicated jobs and require time and detailed analysis.	JSA should be used for complex tasks or tasks of high, very high or extreme risk. JSAs also provide the information for the completion of a SOP. JSAs are also useful tools to use following an accident to identify the hazards/risks and to develop methods to prevent future incidents.
Work Method Statement (WMS)	WMS are a legislative requirement for carryout out work in high risk construction activities. WMS are a similar tool to the Job Safety Analysis and lead to a document similar to a Standard Operating Procedure (SOP). WMS and the process for developing them while focused on construction work are also useful for other types of work.	Where the Agency is engaged in construction work as per the Health & Safety Regulation, the WMS Regulation and processes must be followed including work with contractors.

Project/Job title: <i>Trapping & Tagging for management of dingoes on Fraser Island</i>		Contractor: _____ ABN: _____ (if applicable)	
Location: Fraser Island		Phone No: _____	
NPRSR ABN: 11 322 391 542		WorkCover Insurance Number: _____	
Division: Parks	Region: Great Sandy	Branch/Unit: NRM / Fraser Island	Location: Eurong
Supervisor: John Stewart / Linda Behrendorff		Author/s: John Dargusch	

Optional section – Delete/edit whichever is NOT required

General Control measures to be used: Examples follow:

1. **Task Briefing** to be conducted prior to each activity commencing or if circumstances changes; (formally or informally)
2. Check if employees have injuries that may impact on the task activities being conducted.
3. Medical condition/s that can impact on activity to be conducted, are to be reported to supervisor
4. Manual Handling Task Risk Assessment to be completed prior to activity if required. (Code of Practice Manual Tasks 2001)
5. Manufacturer's operation manual instructions will be complied with

NOTE: If hazards are identified once the JSA has been read, understood and signed off, then staff are required to read, understand and sign any alterations to the original JSA or WMS.

Item No. & Task Step	Equipment/Plant required	Safety Issue/Hazard/Risk	Potential Injury/Risk Level	Risk control methods	Responsibility
Break down the Task into its normal sequence of basic steps. Describe what is done, not the details of how it is done. Include preparation, the task itself, testing, and task wrap-up		For each task step, define the safety hazards, risks and concerns – by answering the “what if” questions about inherent process hazards, procedures, materials, equipment and facility conditions, positional and ergonomic issues, process complexity, required skills, etc.	For each hazard or risk, define the worst potential injury that could occur with greater than negligible probability	For each hazard or risk, define the protective measures to be taken that will prevent injury	Assign responsibility to ensure that the safe procedures and actions identified are implemented, monitored and reviewed
Driving on Fraser Island/Driving at night.	4WD Vehicle	Changing terrain. Soft sand. Washouts. Washed up debris. Pedestrians.	Death/serious injury to persons.	- Drivers experienced in 4wd operations and familiar with vehicles and conditions. - Induction on vehicle and possible hazards prior to operating.	QPWS Staff in field
Vehicle parked during dark hours.	4WD Vehicle	Collision with other beach traffic.	Death/serious injury.	- Reflector panels maintained in clean condition. - Vehicle parked off obvious track.	QPWS Staff in field

Item No. & Task Step	Equipment/Plant required	Safety Issue/Hazard/Risk	Potential Injury/Risk Level	Risk control methods	Responsibility
Staff moving by foot at night.	Steel capped work boots	Fall due to uneven terrain.	Death/serious injury Strains, sprains and breaks.	- Staff to use head torches. - Ensure first aid kits are in vehicles	QPWS Staff in field
Trap setting	Soft Jaw traps, short star pickets, lump hammer & pliers, 'Trapping in progress' signs	Hit self with lump hammer whilst driving in pickets to anchor traps. Fingers being caught in traps whilst setting & covering. Sand being thrown into eyes whilst setting or covering traps. Member of public walking through trap sites.	Cuts and abrasions. Bruising/Cuts. Eye injury from sand. Cuts and abrasions.	- Staff to pay attention whilst hammering pickets. - 'Throw' one of the soft jaw trap arms over the treadle plate whilst setting trap. - Take care whilst covering traps. - Mark locations of treadle plates whilst finishing traps to avoid touching treadle plates. - If possible choose trapping sites that are not likely to be approached by members of the public. - Always erect 'Trapping in progress' signs in the vicinity of the traps. - If it is necessary to trap in areas close to camps/houses/resorts, notify anyone nearby to keep away from trap sites and not to approach dingoes in traps.	QPWS Staff in field

Item No. & Task Step	Equipment/Plant required	Safety Issue/Hazard/Risk	Potential Injury/Risk Level	Risk control methods	Responsibility
Control of trapped dingo/es, Part 1. – Using pin poles for initial control.	2X padded pin poles. Noose pole (optional). Bite stick (optional)	Risk of dingo bite whilst attempting to control with pin poles. Sunburn if doing during day.	Cuts, strains, sprains, bite & bruising leading to possible LTI.	<ul style="list-style-type: none"> - Before attempting to control dingo with pin poles, first gauge how far the dingo can reach whilst it is in the trap. - Look for how far it can lunge, how much play is in the chain anchoring the trap and how many legs are trapped. - By observing these things first, this will determine where it will be safe to stand to pin the dingo. - At least two people to undertake task good communication is paramount whilst pinning dingo. - As per trap and tag MOCES February 2012. 	QPWS Staff in field

Item No. & Task Step	Equipment/Plant required	Safety Issue/Hazard/Risk	Potential Injury/Risk Level	Risk control methods	Responsibility
Control of trapped dingo/es, Part 2. – Sedation of pinned & trapped dingo/es.	Injection administration equipment containing Zoletil 100.	<p>Accidental injection of staff or needle-stick injury.</p> <p>Risk that dingo can squeeze out from pin pole whilst Zoletil is being administered in close proximity to staff.</p> <p>Control not maintained over dingo before drug has taken effect.</p>	<p>Nausea dizziness and disorientation of staff requiring medical attention.</p> <p>Cuts, strains, sprains, bite & bruising leading to possible LTI.</p>	<ul style="list-style-type: none"> - As per Trap and Tag MOCES February 2012. - Staff administering drugs must have current QLD Health drug authorisation. - Prior preparation of Zoletil expected to be needed. - Ensure cap remains on syringe and jab stick is kept in a secure location made known to other staff present, if it is loaded. - Also make clear to staff in control of dingo when approaching to use the jab stick/syringe. - Drug administer must be sure that dingo is secure in pin poles prior to drug administration. - Staff holding pin poles are to be very aware of dingoes movements before drug is administered - After drug is administered, staff are to monitor dingo for signs that the drug is taking effect, such as: Salivation, change in breathing pattern (long slow breaths). 	Drug Authorised staff member.

Item No. & Task Step	Equipment/Plant required	Safety Issue/Hazard/Risk	Potential Injury/Risk Level	Risk control methods	Responsibility
Processing of sedated dingo	- As per trap and tag MOCES April 2011.	Manual handling when lifting dingo for weighing, also whilst in cage. Touching dingo with bare hands. Inserting microchip. Tagging with livestock tagger.	Strains and sprains. Catching fleas/disease carried by dingo. Cuts and abrasions. Cuts and abrasions.	-Exercise correct manual handling lifting techniques. -Wear disposable rubber gloves. - Avoid needle stick injury when inserting microchip. - Keep free hand away from clamp whilst inserting tag or use two hands on the clamp.	QPWS field staff
Humane destruction of dingoes	Syringe Valabarb	Needle stick injury	Nausea dizziness and disorientation of staff requiring medical attention Cuts & abrasions	- Ensure cap remains on syringe and jab stick is kept in a secure location made known to other staff present, if it is loaded.	Drug Authorised staff member who initially sedated dingo.

Item No. & Task Step	Equipment/Plant required	Safety Issue/Hazard/Risk	Potential Injury/Risk Level	Risk control methods	Responsibility
Release of Dingo/es.	Dingo cage	Risk of dingo biting staff after release.	Cuts, strains, sprains & bruising leading to possible LTI.	<ul style="list-style-type: none"> - Drug authorised staff who administered Zoletil are responsible for the appropriate time and place for release of the dingo. - Prior to release, monitor dingo for signs that show it is no longer showing the effects of Zoletil. - Face door of cage away from other staff/cars. - Face door of cage towards an open space. - Make other staff aware of intentions to release dingo. - Person releasing dingo should be prepared to use the cage/blanket as a physical barrier from dingo. <p>All other persons are to stay behind releaser.</p>	Drug authorised staff member who initially sedated dingo
Removal of soft jaw traps	Soft jaw traps Shovel	Sand being thrown into eyes from uncovering traps. Fingers caught uncovering traps. Manual handling issues caused by pulling star picket anchors out of the ground.	Eye injury from sand. Cuts and abrasions. Strains & sprains.	<ul style="list-style-type: none"> - Use shovel or boots and keep distance to carefully find all traps (don't bend down and find traps with hands). - Set traps off carefully with boots/shovel/brush. - Use shovel to dig out star pickets or specially designed jig to lever out. - Wear glasses and leather gloves. 	QPWS staff in field
Working in hot/humid or sunny conditions.		Heat exposure. Sun exposure.	Heat stress. Sunburn. Dehydration.	<ul style="list-style-type: none"> - Staff briefed on need for hydration. - Water carried in vehicle. - Adequate breaks taken. - Hats and sunscreen utilised. 	QPWS staff in field

Item No. & Task Step	Equipment/Plant required	Safety Issue/Hazard/Risk	Potential Injury/Risk Level	Risk control methods	Responsibility
Working in remote areas of Fraser Island.	Radios EPIRBS Mobile Phones	Isolation. Time response for medical assistance.	Death/serious injury	- Personnel to carry EPIRBS - Utilise departmental radios. - Utilise mobile phones. - Minimum of two personnel together at all times.	QPWS staff in field
Public contact with campers and other visitors.		Exposure to aggressive or inebriated people.	Death/serious injury Personal stress	- Personnel work in teams of two - Personnel leave scene and inform police at first indication of trouble.	QPWS staff in field
Irregular work hours maintained.		Fatigue	Personal injury or to others	- Personnel not to work more than 12 hours in 24. - At least one 10 hour break in each 24.	QPWS staff in field

Training required:

- Task specific induction
- Drug authorisation training (One Authorised drug officer)
- Working knowledge of Animal Ethics Committee (AEC) approval.
- Working knowledge of current FI Dingo Management Program – Management objectives, competencies and ethical standards.

Personal Protective Equipment (PPE) required:

Night work: Headlamp torches, goggles, chemical gel “gloves”, disposable gloves and Steel capped boots. (Optional: gaiters).
Day work: Hats, sunscreen, long sleeve shirts, trousers, chemical gel “gloves”, disposable gloves, steel capped boots. (Optional: gaiters).

Licences, qualifications, training or work permits required:

-

Approving Statement:

Name of Person: _____

Date: / /

Review Date: ____ / ____ / ____
(Maximum 12 months)

Signature: _____

Any other identified hazards:

Description	Control Measures	Person Responsible	Date

Employees / Visitors / Contractors / Crew / Volunteers (inducted on Work Method Statements/Job Safety Analysis)*Delete whichever is NOT applicable:*

NAME	SIGNATURE	DATE

Attachment 10: Deceased Dingo Record Sheet

Deceased Dingo Record Sheet ELECTRONIC

Dingo Tag Colour
Microchip #
untagged description

ID/or

Gender: [click to select](#)

Age: [click to select](#)

Reporting
Officer(s)

Date located:

Date of death: [click to select](#)

Time of death
(if known):

Location Found:

Latitude:

Longitude:

Cause of death: [click to select](#)

Details:

Circumstances resulting in death: (i.e. details of cause of death (if known) witness report etc)

Preliminary Post Death Information:

Assessing
Officer(s)

Date information
Time (24hr):

collected:

Autopsy to be undertaken: click to select

If yes by whom: click to select

Last recorded weight (kg)
(If applicable)

Post death weight (kg):

Dingo Condition: Ribs: click to select

Hips: click to select

Description of injuries/condition: (refer to photos, where applicable)

Dingo Carcass Disposal/Storage Details:

Body:

.....

.....

Skull:

.....

.....

Ear:

.....

.....

DNA Sample collected: Yes ☐ No ☐

Details(blood/hair):.....

Post Death Photographs:

	Photo 1: Dingo ID: Photo description:
	Photo 2: Dingo ID: Photo description:
	Photo 3: Dingo ID: Photo description:

	Photo 4: Dingo ID: Photo description:
	Photo 5: Dingo ID: Photo description:
	Photo 6: Dingo ID: Photo description:

Attachment 11: Dingo Management History Spreadsheet

Dingo Identification:

Pack details:

Parents:

Siblings:

Number of reported interactions where members of this pack were identified: Code C - ; Code D - ; Code E - (Current as at)

Date	Code	Location	Interaction/Behaviour	Action/s	Officer
	Click to Select:				
	Click to Select:				
	Click to Select:				
	Click to Select:				
	Click to Select:				
	Click to Select:				
	Click to Select:				

Attachment 12: Humane Destruction Notification

This form is to be fully completed for all dingoes euthanised on Fraser Island

To: Principal Ranger (Great Sandy Area), Coastal and Islands Region

From:

Telephone: 07 4127 9128 (Eurong QPWS Base)

Date of email:

1. Date of Euthanasia:

2. Dingo Identification:

3. Nature of preceding interactions:

4. Action taken:

5. Responsible Officer: Position: Telephone:

6. Further action required or proposed:

7. Report/s attached:

8. Additional comments (if required):

CONTACT	PHONE	After Hours	
Dingo Ranger for area of occurrence	4127 9128	<div>s.73</div>	<div>sch4p3(3) Prejudice the p</div>
OO5 NRM Ranger (K'gari)	4127 9128		
OO5 Indigenous Ranger (K'gari)	4127 9128		
Senior Ranger, K'gari SMU Coastal and Islands Region	4127 9128		
Senior Ranger, K'gari NMU Coastal and Islands Region	4127 9138 Ex 9		
Senior Conservation Officer	(07) 5486 9955		
Principal Ranger, Coastal and Islands Region	4121 1996		
Regional Director, Coastal and Islands Region	(07) 3131 2877		

Euthanasia process checklist (within 24h):

- | | |
|--|--------------------------|
| Update ETR (If applicable) | ☐ |
| Notify chain of command | ☐ |
| Profile transferred (electronic & hardcopy) | ☐ |
| Vet notification of drug use (legal requirement) | ☐ |

Attachment 13: Animal Ethics Application December 2016

	DAF Animal Ethics	Form: AE 03(A)
	Application to Use Animals for a Scientific Purpose	

This form to be used for submission to a DAF Animal Ethics Committee (AEC)

Important Notices

The 'Applicant' is the entity submitting this application. For applications from Queensland Government departments, the applicant must be an individual. However, for non-Departmental entities, the applicant may be an individual or a company or an institution.

DAF Animal Ethics Committees (AECs) deem the applicant to be in charge of the project and to be responsible for:

- The conduct of the project in accordance with AEC approval, the *Animal Care and Protection Act 2001*, the *Australian code for the care and use of animals for scientific purposes* (the Code) and all other relevant Commonwealth and State legislation
- The submission of all necessary reports, notices and advices as required by the AEC.

As an AEC approval is not transferable, it may not be appropriate for an employee of an external entity (e.g. a company or institution) to be the applicant. If an employee is the applicant and leaves the company or institution, the company or institution can't continue to use the approval.

Investigators and teachers have personal responsibility for all matters related to the welfare of the animals they use and must act in accordance with all requirements of the Code. This responsibility extends throughout the animal's involvement in activities and projects including the acquisition and transport stages. Investigators and teachers have an obligation to treat animals with respect and to consider their wellbeing as an essential factor when planning and conducting projects and activities.

Please note that a person must not use an animal for a scientific purpose unless the person is registered or retained by a registered person. If you are not directly employed by the registered person please provide a statement from the registered person that they are willing to take responsibility for your project.

All pages must be submitted electronically in Word format to your AEC contact. For the last page – Section 7 Declarations – either insert a digitised signature or fax a signed hard copy to the AEC Secretary on 07 3844 4529.

AEC USE ONLY			
Application Reference Number:		Date Assessed:	
Assessment Category:			
☐ Approved			
☐ Approved with conditions			
☐ Deferred subject to modification			
☐ Not approved			
Signature of Chair:			
Initials of Members:			
Category A:	Category B:	Category C:	Category D:

Monitoring concerns:

APPLICATION SUMMARY INFORMATION

Have you and the main staff involved in the project successfully completed the LearnWorX 'Using Animals in Science' online course available through DAF? Applicants external to the department should contact the animal ethics unit to organise access to this course.

Name:	Completion Date:
Ross Belcher	27 November 2012
Moyra McRae	21 November 2012
Dan Novak	28 October 2015
Anthony Dargusch	Enrolled
John Dargusch	Enrolled
Jim Kellaway	Enrolled
Noel Reddicliffe	Enrolled
Blair O'Connor	Enrolled
Linda Behrendorff	Enrolled

1.1 Title of project

Fraser Island Dingo (*Canis lupus dingo*) Trapping, Tagging and Management

1.2 Applicant details

Name:	Ross Belcher				
Address:	PO Box 101 Maryborough QLD 4650				
Phone:	07 4121 1790	Mobile:	sch4p3(3) Prejudice the	E-Mail:	ross.belcher@npsr.qld.gov.au

1.3 Applicant's contact person details.

Complete **only** if the applicant is external to DAF **and** is not an individual, e.g. a company.

Name:	Moyra McRae				
Address:	PO Box 101 Maryborough QLD 4650				
Relationship to Applicant (e.g. employee):					
Phone:	07 4121 1823	Mobile:	N/A	E-Mail:	moyra.mcrae@npsr.qld.gov.au

1.4 Description of animals used in project.

Put total for project here with detail in 3.3 for individual trials if required, fill out as appropriate for the species to be used. If rows are insufficient attach a separate appendix detailing complete animal list. A separate pro forma for this purpose is available on the Animal Ethics Ournet site or from the AEC Coordinator.

Animal Type (e.g. Cattle, Poultry, Fish, Koalas)	Scientific name	Class*	Sex	Number**
Dingo	<i>Canis lupus dingo</i>	Adults	M & F	N/A
Dingo	<i>Canis lupus dingo</i>	Juveniles	M & F	N/A
* Use either Prenatal, Newborn, Juvenile / Weaner / Pouch animal, Adults, Genetically Modified Organisms, others (describe)				
** Total number of animals to be used for the duration of this project (inc. control and replacement animals)				

1.5 Project:

Give the proposed start and end dates, of the project.

Start date:

16/11/2015

End date:

(3 years max duration)

15/11/2018

1.6 Special Consideration

1.6.1. Does the project involve any recombinant DNA technology, infectious, toxic, radioactive or carcinogenic agents that may be harmful to other animals or to people? If so you must advise all personnel involved. Provide details below of such agents and their possible impact as well as appropriate licences/permits/authorities.

N/A

1.6.2 Is this project a cooperative or a joint project with another institution or party? If so name parties and explain their roles.

N/A

1.6.3 Is AEC approval also being sought through another AEC? If so name the other AEC and give reasons for proposal for joint approvals

N/A

2. JUSTIFICATION FOR ANIMAL USE (justification)

2.1 Big Picture Background

It is essential that this section is easily understood by those without technical and scientific knowledge. In plain, clear and concise English (use lay language, avoid jargon and acronyms and use a glossary if necessary) put the project into context (the big picture). In particular, write this section so that AEC members without a veterinary or scientific background can understand what has led to the current situation (including reference to earlier work or this project being part of a larger body of work), the need that exists and how this project addresses that need. Describe and where possible quantify the economic, environmental, educational and welfare benefits resulting from the project. Include maps where applicable.

Glossary: {Include here an explanation of acronyms, technical terms and all abbreviations}

The Big Picture:

The management of Fraser Island dingoes is undertaken in accordance with the Fraser Island Dingo Conservation and Risk Management Strategy, which aims to maintain a healthy population of dingoes on the Island, while keeping public safety as a priority.

Trapping of dingoes on Fraser Island is a tool to manage the population. The program includes undertaking the following activities while the animals are in hand:

- tagging the majority of trapped dingoes with a colour-coded ear-tag, to assist positively identifying and monitoring the population;
- collecting DNA samples;

- injecting microchips for secondary identification when an ear-tag has been lost through fighting etc;
- euthanising a dingo that has been positively identified as being a high-risk to humans, or has been seriously injured; or
- fitting high-visibility collars to assist the public identifying high-risk dingoes from a distance, or satellite tracking collars to assist monitoring dingoes of interest for management purposes.

Tagging dingoes with ear-tags has already been proved effective for identifying and recording individual animals. This practise has proven particularly useful for monitoring each individual's behavioural patterns and movements around Fraser Island. If an animal is considered to be a high-risk, positive identification through the use of marking assists in ensuring the correct dingo's negative interactions are recorded, and if euthanasia is authorised the correct dingo is also identified.

Trapping, for the purpose of tagging, collaring and associated DNA collection, is mainly carried out after whelping season, when the pups are large enough (greater than 10 kilograms) to be trapped without causing injury, but still in the vicinity of the natal den. Opportunistic trapping and tagging is also employed at locations where untagged dingoes are regularly seen.

Employing non-lethal aversive conditioning methods designed to stimulate a learned response for an animal to avoid an object, area or undesirable behaviour aim to reduce the requirement for euthanasia of dingoes that have become a high-risk to humans is also intended to be included in the program.

This monitoring and management program is a long term initiative and contributes to gathering information on demographics and spatial and temporal components of dingo pack numbers and territories.

2.2 Objectives and purpose of proposed animal use and alternatives (replacement)

2.2.1 Detail the aims and purpose of animal use

This application is continuing from a previously approved application (SA 2012/12/404) which also includes approved amendments for fitting high-visibility and/or satellite tracking collars, the use of a citronella based spray to distract attacking dingoes, and trialling tubal ligation on highly-habituated female dingoes (please note that this has not been undertaken). In addition to these previously approved measures it is desirable to also include the use of non-lethal aversive conditioning methods to reduce the requirement for euthanasia of dingoes that have become a high-risk to humans. The continuation of this program aims to provide QPWS with an ongoing means to correctly identify individual animals and employ methods which lessen opportunities for dingoes to become habituated toward humans. This program also aims to both improve understanding of the dingo population's behaviour, and inform management decisions and recommendations relevant to Fraser Island dingo management.

2.2.2 Will any animals be used for teaching activities within this project?

Indicate: **YES / NO**

(Delete inappropriate response)

If 'Yes' please complete and attach Form AE 03(B) to the back of this application.

2.2.3. If all or some of this project is a repeat of work that has been done already, provide justification for this project.

This program is largely a repeat of work already undertaken for some of the Fraser Island dingo population, however as the dingo population is dynamic it is necessary to continue the program as part of an annual cycle.

2.2.4. Explain why you need to use live animals to achieve all or some of your aims.

The use of live animals is required as the main objective of the program is to monitor and manage a free-ranging dingo population.

2.2.5. List alternatives to live animals that COULD be used in this project and explain why such alternatives are unsuitable for this project or list those used in conjunction with this project.

N/A

2.2.6. Provide particular justification for the use of animals if the activities involve severe compromise to the animals wellbeing, and for which replacement, reduction and refinement cannot be fully applied. This justification should apply to activities where unrelieved pain and distress, including where the planned endpoints will allow severe adverse effects to occur including:

- death as the endpoint
- reuse and repeated use of animals
- prolonged restraint or confinement
- use of non-human primates

N/A

3. EXPERIMENTAL DESIGN OF PROJECT (reduction/refinement)

3.1 Reuse of animals and/or tissues

3.1.1 Will individual animals be used more than once for a procedure, activity or project? If yes, please justify this reuse and document recovery periods allocated between use, any pain or distress caused by subsequent activities, any potential long-term or cumulative effects and the total time over which an animal will be used. Also state if animals do, or do not, fully recover between activities.

A definitive figure cannot be placed on the number of animals required in the design of this activity, as the program is continuous and part of the annual work cycle

3.1.2 Have any of the animals proposed to be used, already been used in another project? If yes, give the name and approval number of this project (if known) and state how they were used. State why do you consider it beneficial to use these animals again rather than 'new' animals?

The activity primarily aims to trap and tag previously untagged individuals however there may be instances where animals already trapped and tagged under the previous application (SA 2012/12/404) are used. This reuse is regarded as being beneficial to their welfare as it may involve replacing a tag, or fitting them with a collar to aid identification, or deterring them through aversive conditioning to help prevent them from becoming habituated toward humans.

3.1.3 Is there an opportunity to reduce any future use of animals by way of sharing animals/tissues/data with other investigators/teachers? This may involve consultation. What is proposed?

DNA collected during the trapping and tagging procedure has previously been provided to researchers to assist understanding of dingo population dynamics on Fraser Island. Sharing these samples has negated the need for additional handling; this information is also available for other researchers if the need arises.

3.2 Experimental design

3.2.1 If you propose that experimental design is not needed for the justification of this activity, (and therefore do not need to complete sections 3.2.2, 3.3 and 3.4) you must provide your reasoning here. If applicable, justify why the proposed number of animals is appropriate to achieve the aims.

The program design as presented has previously operated successfully on Fraser Island and has proven to be an effective management tool for both identification purposes and the collation of important population data. Trail cameras have been employed at various trapping locations on Fraser Island to assist in monitoring the behaviour of dingoes and dingo packs. Additional remote monitoring techniques involving the use of satellite tracking collars has also been successfully undertaken as part of the program. The lack of reliable mobile reception and difficult terrain can be a limiting factor when incorporating new technology into the management and monitoring of Fraser Island dingoes.

3.2.2 Where applicable provide details of treatments and group sizes and outline the trial design in this table. Please copy the table if more than one design is being used in the project.

Design type (eg Randomised, factorial, latin square, BACI)	
Number of treatments	
List the treatments	
Primary variable	
What is the experimental unit (include the number of animals if the unit is not the individual)?	
Number of replicates	

3.3 Justification for number of animals

Justify why the proposed number of animals is appropriate to achieve the aims. (Please note that the number of animals detailed in section 1.4 should equal the number of treatments x the number of animals per experimental unit x the number of replicates + any extra animals needed).

--

3.4 Biometrician's comments

BIOMETRICIAN USE ONLY	
EXPERIMENTAL DESIGN CONFIRMATION	
Biometrician Name:	
Job Title:	
Organisation:	
Contact details: Include mobile and email	
Please confirm this is an acceptable design. yes/no. Add any comments if required.	
Signature:	Date:

If you propose that input from a biometrician is not needed you must provide your reasoning here.

The Fraser Island dingo management program is not scientific or research based, it instead is undertaken to support the vision outlined in the Fraser Island Dingo Conservation and Risk Management Strategy "A future where Fraser Island (K'gari) supports a sustainable and healthy wild dingo population that is safely appreciated by Butchulla Traditional Owners, residents, tourism operators and visitors alike."

4. SEQUENCE OF PROCEDURES AND THEIR IMPACTS ON ANIMALS (refinement via design and monitoring)

4.1 Sequence of procedures

List the sequence of procedures in the project as an activity schedule or timeline, beginning when animals are allocated to the project and ending with their fate at the completion of the project. The schedule or timeline should identify clearly the timing and duration of every procedure, including the number and duration of any component phases and/or any repetitive activities.

Trapping, Tagging and collar application

- Animals will be observed and assessed for suitability based on location, age, size and condition.
- Suitable animals will be trapped by trained staff, and in some instances a contractor, using current QPWS trapping procedures then either drugged with Zoletil, darted as per QPWS Operational Policy 'Administering scheduled drugs to animals', or processed without drugs.
- Trapping will be undertaken using Soft Catch jaw traps and cages. Rangers and contractors conducting trapping are trained in the use of these devices. Trap lines will be patrolled at maximum three hour intervals to ensure that an animal spends the minimum time possible in the trap. Animals will be approached carefully and then secured with pinning poles and/or head noose with pin down poles. In most instances Zoletil will be administered. A drug authorised officer will make the decision as to whether drugging of the animal is required, based on the animal's response to trapping and safety considerations for the animal and attending staff.
- Animals that are trapped will be tagged with a coloured or numbered sheep tag if this has not previously occurred, or the tag replaced if the animal already has a tag. Standard colour-coded sheep tags, currently in use on Fraser Island for management purposes will be used. NB: Where deemed appropriate a high-visibility (light-weight collars attached by velcro) or tracking collar (maximum weight of 407 grams and a drop-off system 40 – 50 grams) would also be fitted after trapping has been undertaken).
- The animals will be micro-chipped, weighed, and tagged. A documented condition assessment and health assessment will also be undertaken (15 to 30 minutes) as part of the standard trapping and tagging process.
- Drugged animal(s) will be left in a recovery cage until the Zoletil wears off (up to 5 hours to ensure full recovery) before being released at the location of capture. At this stage the dingo can be observed and its condition assessed. Dingoes not drugged will be released immediately.
- Please refer to example flow chart for sequence (Attachment 1).

Citronella based spray deterrent

- Citronella is recognised as an active ingredient which presents a strong odour and has been proven to be effective in distracting an attacking dog. The typical make up of this product is: Active Ingredient Citronella = 1% and Inert Ingredients Water, Glycerine, Co2 = 99%. In an attack situation the product will be sprayed at or near the nose of the animal to distract it which is anticipated to allow more time for retreat to a safe place for those involved. The product has been formulated to minimise eye irritation.

Tubal ligation

- This procedure is recognised by qualified veterinarians as being safe and effective as a birth control option for canines (dingoes). It will prevent pregnancy but not prevent oestrous cycling; as such the female dingo will continue to come into heat and display sexual behaviours. NB: this procedure has previously received animal ethics approval but has never been performed on Fraser Island dingoes. If undertaken it would be conducted as a pilot program, to determine its effectiveness as a means of breaking the cycle of habituated adult female dingoes. These females breed annually and produce litters which they in turn teach habituated behaviour. This results in increased risk to humans, and the potential for the continued euthanasia of dingoes.

Aversive conditioning

- This procedure will be undertaken as a management tool to help deter dingoes from attractants such as food storage containers (esbies etc), bait buckets, tents and campgrounds. Electrical tapes/fences which conform to Australian Standards will be used to act as a deterrent to dingoes seeking these items and areas, in anticipation that the negative stimuli will deter them from undertaking the same behaviour on repeated occasions in public areas.

4.2 Details of procedures

In plain English give details of each procedure listed in 4.1. Use a heading for each explanation of procedure, which is the same as the procedures used in Table 4.1 Details provided should include, but need not be limited to, the following as appropriate to the application). Include images where applicable.

- All administered substances (name, toxicity, action, route, dose, frequency).
- All procedures carried out on animals (e.g. sampling method, frequency, amount, special housing, handling and restraint).
- How each procedure may impact negatively on the animals (including any expected mortality rates).
- How any negative impacts on animals will be minimised.
- How the impact on animals will be monitored, assessed and managed including method and frequency of monitoring (during and after procedures).

Trapping

Selected dingoes will be trapped using current QPWS trapping procedures or darted where appropriate. If a decision is made to anaesthetise an animal, the product Zoletil will be administered. Details of dosage rates using Zoletil are as follows:

- Zoletil 100 1 amp dry added to 5mls water for injection;
- Up to 1ml depending on size and weight of dingo (average .5ml/kg);
- Zoletil 100 1 amp dry added to 3mls water for darting

Animals not drugged will be released immediately.

Tagging

Animals will be tagged (if tagged previously the tag will be removed for the new tag), weighed, measured, (body, skull, tail, neck, ear, height) – 15 to 30 minutes. Body heat and eye dryness will be monitored.

DNA collection

Hair samples with follicles and/or saliva and/or blood from a pin prick and/or a skin sample from initial tagging procedure will be taken for potential future DNA studies. DNA samples will be stored in a freezer at the Eurong, Dundabara or Waddy Point ranger bases, depending on the location of the collection site.

Micro-chipping

Microchips will be inserted subcutaneously between the shoulder blades of previously unchipped dingoes. Injecting microchips for secondary identification is required if for example an ear-tag has been lost through fighting

High visibility collars and/or tracking collar

Fitted around the neck of a dingo and only employed if the animal has been identified as a high-risk animal or an animal requiring monitoring for management purposes.

Citronella spray

Rangers approved under this program will be provided with a canister of citronella based spray which will be sprayed toward dingoes engaged in aggressive interactions with humans (members of the public and QPWS staff).

Aversive conditioning

Aversion stimulus delivered through bait buckets, food storage containers and “dummy” camps will be established at strategic locations away from public areas. Utilising an energiser unit to deliver a 20-300 microseconds (not last long enough to stop bodily functions), high voltage pulse every 1-2 seconds if a dingo is in contact with the device. This form of aversive conditioning is aimed at dingoes that are likely to become habituated to these human items and areas to associate them with a negative stimulus.

4.2.1 Voucher specimens. If voucher specimens are to be collected please include numbers and species (if known) and justify why any specimens will be taken. Include details of how the number of vouchers will be kept to a minimum and how the specimens will be lodged with publicly accessible collection.

N/A

4.3 Management procedures differing from Code of Practice

Will any routine husbandry or management procedures be done which are not compliant with any of the relevant Codes of Practice? If so, detail and justify.

No

4.4 Animal treatment/withdrawal and euthanasia decision

4.4.1 Detail the specific criteria which will result in animals being treated or withdrawn from project or euthanased. Describe what will be done. Insert a decision tree for enacting treatment, withdrawal or euthanasia (specifying the method) in each case as applicable to this project.

An animal will be euthanased in the following instances as per current practice:

- A debilitating injury sustained from fighting, vehicle strike or other activity that causes broken bones, internal injuries or would result in the eventual death of the animal
- An animal determined to pose a high-risk to humans by documented threatening and high-risk behaviour towards humans (lunging, nipping, biting, attacking, bailing up, ambushing and hunting tactics).

4.4.2 What arrangements are in place for contacting somebody who is competent and authorised to treat/withdraw animals (including euthanasing) in an emergency?

Staff on-site are drug and firearms qualified. If required a qualified veterinarian will be contacted. Main contacts include:

sch4p4(6) Personal information

sch4p3(3) Prejudice the protec

sch4p4(6) Personal information

4.4.3 Emergency contact details. In the event of an emergency involving animal in this project, please provide after hours contact numbers for the appropriate people.

Name	Phone	Role	Comments
Geoff Brittingham	sch4p3(3) Prejudice the	Support	Regional Manager, Sunshine and Fraser Coast Region
Ross Belcher		Activity leader	Principal Ranger, Fraser Coast Area
Dan Novak		Project Manager	Team Leader, Natural Resource Management
Dan Clifton		Support	Senior Ranger, Fraser Island South

4.5 Fate of the animals at the end of the project:

If sold give details of expected fate; if euthanased, detail method of euthanasia; if to be transferred to another project, give details.

Animals are to be released back into the wild, at the same location of capture, once processed.

4.6 Death as an End Point

If your project requires animals to die as a deliberate measure for evaluating biological or chemical processes, responses or effects (as opposed to being euthanased) justify this here.

N/A

4.7 Animal monitoring and assessment

How will the animals be routinely monitored and assessed throughout the project, other than during specific experimental or teaching procedures? Specify the frequency and details of this monitoring and assessment.

In a situation where the anaesthetic Zoletil is used, animals will be housed in cages following tagging and sample collection. Cages are wire collapsible dog cages used previously for trapping and tagging dingoes on Fraser Island.

Cages are stored off the ground on the tray of a vehicle or in a sheltered area where the cage is covered by hessian or a cotton sheet to minimise stress during recovery from Zoletil. The animal is constantly monitored and padding provided to prevent inadvertent injury while coming out of the anaesthetic.

Where collars are applied, aversive conditioning is undertaken, or a tubal ligation pilot program is commenced, monitoring will be also undertaken through the installation of trail cameras and general observations from field staff.

4.8 Animal monitoring and assessment issues

If problems are identified during routine monitoring and assessment please provide the criteria for intervention points and humane endpoints.

Animals will be closely monitored during the project. If any vital signs are identified by trained ranger staffs that are likely to compromise the animal's health and welfare, expert advice will be sought from a qualified veterinarian.

5. ANIMAL OWNERSHIP, LOCATION, HOUSING AND MANAGEMENT (refinement via management)

5.1 Sources of animals

5.1.1 Name the source(s) of the animals and list any permits necessary to acquire, transport or use these animals

Animals are to be sourced from a wild population on Fraser Island, with no additional permits required for the project.

5.1.2 For privately owned animals. Please answer yes or no to each question.

<i>Do you assure the AEC that all people involved in the care and use of such animals are aware of and accept their responsibilities relating to the animals?</i>	Yes
<i>Do you assure the AEC that people responsible for the daily management of the animals during the project are familiar with and understand the Code, and are competent?</i>	Yes
<i>Have you provided the owner of the animal with a document clearly stating the details and duration of the owner's responsibilities?</i>	Yes
<i>Has owner acknowledged their acceptance of these responsibilities in writing and is a copy of this signed document included with this application?</i>	Yes

5.1.3 Describe transport arrangements for animals acquired for this project. (It's your responsibility to ensure that animals being transported specifically for this project are transported in a manner that is cognisant of the species special needs and will minimise the chance of stress or injury at all stages of the transport operation. Where possible, this should involve following SCARM codes for the transport of animals).

Where animals are to be caged due to the use of Zoletil, they will be transported on the tray of a 4WD vehicle to either of the locations detailed below. Cages will be covered with hessian or cotton blankets to reduce stress and will be appropriately padded to provide comfort for the animal.

5.2 Location of Project

Where applicable, give the name and location of sites with a contact phone and fax number. State who will own the animals whilst they are in the project.

Animals will be trapped at various locations on Fraser Island and returned to the location of capture, after being held in captivity for up to five hours. If housed for a period of time this will involve the use of cage that is large enough to comfortably hold the animal.

Specific locations used to house the animals during captivity include:

- QPWS Eurong Office, Southern Fraser Island: Ph (07) 4127 9128 (ext 9) Fax (07) 4121 1650
- QPWS Dundabara Office, Northern Fraser Island: Ph (07) 4127 9138 (ext 9) Fax (07) 4127 9254
- QPWS Waddy Point Office, Northern Fraser Island: Ph (07) 4127 9190 (ext 9) Fax (07) 4127 9253

The person-in-charge of animals during the project will be Dan Novak, Team Leader, Natural Resource Management.

5.3 Detail and description of Housing Facilities and/or Wildlife Management Equipment

5.3.1 Name the type of facilities (e.g. animal house, paddock, experimental pens, yards, ponds, tanks, cages, traps & nets) where the animals will be kept/held routinely and where any specific procedures will be carried out. Name any special features of the facilities or management, which could impact on the animals' welfare (such as confinement of individuals in metabolism crates, ponds, tanks, traps, nets, etc; abnormal group size; stocking rate; biosecurity/hygiene measures used, and exposure).

In situation where the anaesthetic Zoletil is used, animals will be housed in cages following tagging and sample collection. Cages are wire collapsible dog cages used previously for trapping and tagging dingoes on Fraser Island.

Cages are stored off the ground on the tray of a vehicle or in a sheltered area where the cage is covered by hessian or a cotton sheet to minimise stress during recovery from Zoletil. The animal is constantly monitored and padding provided to prevent inadvertent injury while coming out of the anaesthetic

5.3.2 Give a description of each facility/piece of equipment listed in 5.3.1 (e.g. dimensions, materials, feed and water supply, environmental control, or protection shelter, bedding, hiding areas, environmental enrichment). List the relevant Codes of Practice or other approved standards that are applicable (include actual information from the code on minimum standard).

Holding areas and containers will be safe, quiet and hygienic. Each holding cage is of an appropriate length, height and width to allow the animals to rest comfortably. Cages are padded to reduce the chance of injury and are secured to minimise the risk of escape. Cages will be located in quiet, adequately ventilated areas with appropriate consideration of prevailing environmental conditions. Best practise hygiene procedures will be employed to minimise the risk of disease transmission.

5.3.3 Give details of group size and composition and stocking rate/space allocation. (Include information from Codes of Practice or other applicable standards as a comparison where applicable)

Only one dingo will be held in each cage at a given time while recovering from the anaesthetic Zoletil. If more than one animal is trapped in the same trapping run, they will be housed separately. Adequate ventilation and protection is provided while the animals are caged.

Animals will be monitored until fully conscious and responsive prior to release, and released at the same location of capture.

5.3.4 If the animal facilities/equipment do not comply with the relevant Codes of Practice or other agreed standards then describe and justify.

N/A

6. PEOPLE & PROCEDURES INVOLVED IN PROJECT

6.1 People and procedures

Provide details for each person who will be involved in the project. Please note that any future change to the list of people involved in the project and/or their details requires AEC approval of the amendment. Additional rows can be added by using the "Tab" key or a separate pro forma for this purpose is available on the Animal Ethics Ournet site or from the AEC Coordinator.

Person's name, location and organisation	Role in Project	List each procedure the person may perform in the project (may enter 'all in 4.1' if appropriate)	Relevant qualifications and experience	Do you assure the AEC that this person is competent to perform each listed procedure <u>or</u> will be supervised by a competent person? (Y/N)	Legal basis for this person's use of animals * (e.g. enter '2' for staff acting in the course of their retainer)	Name of registered person to whom this person is responsible: (enter name shown on Scientific User Registration Certificate)	Registration Number and expiry date: (enter number shown on Scientific User Registration Certificate)
Ross Belcher, Maryborough, Queensland Parks and Wildlife Service	Project leader	Animal handling Animal Trapping	Assoc. Dip. Parks and Wildlife Mgmt. B. App. Sc. Parks and Wildlife Management Parks and wildlife management in Northern Territory, South Australia and Qld.	Y	2		

Daniel Novak, Fraser Island, Queensland Parks and Wildlife Service	Project Manager	Animal handling Animal husbandry	B. Sc. 2 year's experience with Fox Eradication Project (included trapping, micro chipping and release of native wildlife) - Tasmanian DPIWE Aggressive Dog Behaviour and Bite Prevention Training – Gary Jackson MNK9 4 and ½ years' experience handling aggressive dogs as a Compliance Officer with Fraser Coast Council	Y	2		
John Dargusch, Fraser Island, Queensland Parks and Wildlife Service	Support	Animal trapping Animal handling	B. Sc. Env.Sc. QPWS dingo management	Y	2		
Jim Kellaway, Fraser Island, Queensland Parks and Wildlife Service	Support	Animal trapping Animal handling	QPWS dingo management	Y	2		

Gordon Murrell, Fraser Island, Queensland Parks and Wildlife Service	Support	Animal trapping Animal handling Drugging	Diploma Conservation and Land Management Diploma Horticulture and Arboriculture Wildlife Victoria Certificate in Animal Husbandry and Wildlife Rehabilitation QPWS dingo management	Y	2		
Jenna Tapply, Fraser Island, Queensland Parks and Wildlife Service	Support	Animal trapping Drugging Animal handling	Bachelor of Park Management Park Management, Parks Victoria (10 years) QPWS dingo management	Y	2		
Anthony Dargush, Fraser Island, Queensland Parks and Wildlife Service	Support	Animal Trapping Drugging Animal handling	B. Sc. Env.Sc. QPWS dingo management	Y	2		
Noel Reddicliffe, Fraser Island, Queensland Parks and Wildlife Service	Support	Animal Trapping Drugging Animal handling	QPWS dingo management	Y	2		
Blair O'Connor, Fraser Island, Queensland Parks and Wildlife Service	Support	Animal Trapping Drugging Animal handling	QPWS dingo management	Y	2		

Gavin O'Connor, Fraser Island, Queensland Parks and Wildlife Service	Support	Animal Trapping Drugging Animal handling	QPWS dingo management	Y	2		
Jeremy Thompson, Queensland Parks and Wildlife Service	Support	Animal trapping Animal handling	QPWS dingo management	Y	2		
Linda Behrendorff, Fraser Island, Queensland Parks and Wildlife Service	Support	Animal Trapping Drugging Animal handling	B. App. Sc. Protected Area Management Assoc. Dip. Wilderness Reserves and Wildlife Zoo keeping, wildlife response, wildlife caring, trapping and handling. Animal husbandry QPWS dingo management	Y	2		
Daniel Clifton, Fraser Island, Queensland Parks and Wildlife Service	Support	Animal trapping Animal handling	QPWS dingo management	Y	2		

Kim Fleischfresser, Fraser Island, Queensland Parks and Wildlife Service	Support	Animal Trapping Drugging Animal handling	B. App. Sc. (Natural Systems and Wildlife Management) Honours Class One Statement of Attainment for Training Program in Native Animal Conservation QPWS dingo management	Y	2		
Sven Lavender, Fraser Island, Queensland Parks and Wildlife Service	Support	Animal trapping Animal handling	B. App Sc. (Natural Systems and Wildlife Management) QPWS dingo management	Y	2		
Matt Palmer, Fraser Island, Queensland Parks and Wildlife Service	Support	Animal trapping Animal handling	QPWS dingo management	Y	2		
Gordon Maag, Hermitage, Queensland Parks and Wildlife Service	Support	Animal trapping Animal handling	QPWS dingo management	Y	2		
Bernard Shakeshaft, Armidale	Contractor Support	Animal trapping Animal handling	Dingo trapping Dog handling	Y	2		
Moyra McRae, Maryborough, Queensland Parks and Wildlife Service	Reporting Support	Animal trapping Animal handling	B. App.Sc. (Parks and Wildlife Management)	Y	2		

* Use the following numeric code to describe the legal basis on which the person is authorised to use animals for scientific purposes under the *Animal Care and Protection Act 2001* (Section 51):

- 1 A registered person;
- 2 An individual retained (i.e. employed or engaged whether or not for remuneration) by a registered person acting in the course of their retainer;
- 3 A student at a college, institute, school, university or other institution that is registered and acting in the course of their studies with the institution.

6.2 Routine monitoring and euthanasia (including the holding of wildlife)

These are the people who will provide monitoring and care during weekdays and at weekends and holidays or while animals are held (in the case of wildlife/fish). Please ensure those indicated as authorised to treat animals comply with the Veterinary Surgeons Act 1936. If rows are insufficient, copy table to new page or a separate pro forma for this purpose is available on the Animal Ethics Ournet site or from the AEC Coordinator.

Person's name, location and organisation.	Person's contact details.	Indicate the procedure the person may perform (Y/N)	Relevant Qualifications and experience	Do you assure the AEC that this person is competent to perform each listed procedure or will be supervised by a competent person? (Y/N)
s.73 Fraser Island, Queensland Parks and Wildlife Service	s.73 @npsr. gld.gov.au 4127 9128 (ext 9) sch4p3(3) Prejudice th	Undertake routine animal monitoring Recognise sick, injured, or moribund animals Treat animals Euthanase animals	Y Y Y Y QPWS dingo management 2 year's experience with Fox Eradication Project (included trapping, micro chipping and release of native wildlife) - Tasmanian DPIWE B. Sc. and 5 years experience trapping and destruction of feral animals (efforts employed to reduce non-target species capture) – Jericho Shire Council & Specialist Consulting Services.	Y
s.73 Fraser Island, Queensland Parks and Wildlife Service	s.73 @npsr. gld.gov.au 41279138 (ext 9) sch4p3(3) Prejudice th	Undertake routine animal monitoring Recognise sick, injured, or moribund animals Treat animals Euthanase animals	Y Y Y Y QPWS dingo management	Y
s.73 Fraser Island, Queensland Parks and Wildlife Service	s.73 @npsr .gld.gov.au 4127 9190 (ext 9)	Undertake routine animal monitoring Recognise sick, injured, or moribund animals Treat animals Euthanase animals	Y Y Y Y QPWS dingo management	Y
s.73 Fraser Island, Queensland Parks and Wildlife Service	s.73 @nps r.gld.gov.au 4127 9138 (ext 9)	Undertake routine animal monitoring Recognise sick, injured, or moribund animals Treat animals Euthanase animals	Y Y Y Y QPWS dingo management	Y
s.73 Fraser Island, Queensland Parks and Wildlife Service	s.73 @nps r.gld.gov.au 4127 918 (ext 9)	Undertake routine animal monitoring Recognise sick, injured, or moribund animals Treat animals Euthanase animals	Y Y Y Y QPWS dingo management	Y

s.73 Fraser Island, Queensland Parks and Wildlife Service	s.73 @ npsr.qld.gov.au 4127 9190 (ext 9) sch4p3(3) Prejudice the	Undertake routine animal monitoring Recognise sick, injured, or moribund animals Treat animals Euthanase animals	Y Y Y Y	B. Sc. Env.Sc QPWS dingo management	Y
s.73 Fraser Island, Queensland Parks and Wildlife Service	s.73 @ npsr.qld.gov.au 4127 9128 (ext 9) sch4p3(3) Prejudice the	Undertake routine animal monitoring Recognise sick, injured, or moribund animals Treat animals Euthanase animals	Y Y Y Y	B.Appl. Sc. Protected Area Management Ass.Dip. Wilderness Reserves and Wildlife Zoo keeping, wildlife response, wildlife caring, trapping and handling for fauna surveys QPWS dingo management Has captured and handled dangerous animals since 1993. This has also included assisting vets where necessary. Experience ranges from zoo keeping, wildlife response, wildlife caring, trapping and handling for fauna surveys etc	Y
s.73 Fraser Island, Queensland Parks and Wildlife Service	s.73 @npsr. npsr.qld.gov.au 4127 9128 (ext 9) sch4p3(3) Prejudice the	Undertake routine animal monitoring Recognise sick, injured, or moribund animals Treat animals Euthanase animals	Y Y Y Y	B. Science. Env.Sc QPWS dingo management 5 years trapping experience and 9 years animal handling	
s.73 Fraser Island, Queensland Parks and Wildlife Service	s.73 @nps npsr.qld.gov.au 4127 9128 (ext 9)	Undertake routine animal monitoring Recognise sick, injured, or moribund animals Treat animals Euthanase animals	Y Y Y Y	QPWS dingo management 23 years animal handling experience	Y
s.73 Fraser Island, Queensland Parks and Wildlife Service	s.73 @npsr. npsr.qld.gov.au 4127 9128 (ext 9) sch4p3(3) Prejudice the	Undertake routine animal monitoring Recognise sick, injured, or moribund animals Treat animals Euthanase animals	Y Y Y Y	Bachelor of Park Management Four years involvement in program	Y

7. DECLARATIONS

Title of project

Repeat here as this page sometimes is faxed separately with all signatures.

Fraser Island Dingo (*Canis lupus dingo*) Trapping, Tagging and Management

Applicant

I, being the applicant or its duly authorised agent, assure the AEC that:

- *Adequate resources will be available to undertake the project*
- *I and all others involved in the project are familiar, and will comply with the requirements of the Animal Care and Protection Act 2001, the Australian code for the care and use of animals for scientific purposes and all other relevant Commonwealth and State legislation*
- *I and all others involved in the project will adhere to all requirements of the AEC including the provision of reports, notices and advices.*
- *I and all others involved in the project have read, understood, and will follow, all guidelines and protocols nominated in this application.*

Name: Ross Belcher	Position: Principal Ranger
Signature:	Date: 2 November 2015

Person-in-Charge of Animals and/or Facilities at Departmental Site

(complete only if the project will be conducted on a Queensland Government managed research site)

Site: Great Sandy National Park (Fraser Island section)

I assure the AEC that:

- *The nominated locations/facilities for the animals on this site will be available as detailed in the application*
- *Staff directly responsible to me will be available to undertake the nominated tasks as detailed in the application.*

Name: Dan Novak	Position: Team Leader, Natural Resource Management, QPWS
Signature:	Date: 2 November 2015

Applicant's supervising manager *(complete only if the applicant is a Queensland Government Departmental officer)*

I assure the AEC that:

- *This project meets government priorities, agency objectives and is aligned to program benefits.*
- *Adequate resources will be available to undertake this project.*
- *I will notify the AEC immediately if the applicant ceases involvement with this project and will apply to amend this AEC application.*

7. DECLARATIONS

Title of project

Repeat name as this page as many times as needed separately with all signatures.

Fraser Island Dingo (Canis lupus dingo) Trapping, Tagging and Management

Applicant

I, being the applicant or its only authorised agent, assure the AEC that:

- Adequate resources will be available to undertake the project
- I and all others involved in the project are familiar, and will comply with the requirements of the Animal Care and Protection Act 2001, the Australian code for the care and use of animals for scientific purposes and all other relevant Commonwealth and State legislation
- I and all others involved in the project will adhere to all requirements of the AEC including the provision of reports, notices and notices.
- I and all others involved in the project have read, understood, and will follow, all guidelines and protocols mentioned in this application.

sch4p3(3) Prejudice the protection

Name: Rod	Position: Principal Ranger
Signature:	Date: 2 November 2015

Person-in-Charge of Animals and/or Facilities at Departmental Site

(complete only if the project will be conducted on a Queensland Government managed research site)

Site: Great Sandy National Park (Fraser Island section)

I assure the AEC that:

- The nominated locations/facilities for the animals on the site will be available as detailed in the application
- Staff directly responsible to me will be available to undertake the nominated tasks as detailed in the application.

Name: Dan Newell	Position: Team Leader, Natural Resource Management, QPWS
Signature:	Date: 2 November 2015

sch4p3(3) Prejudice the protection

Applicant's supervising manager (complete only if the applicant is a Queensland Government Departmental officer)

I assure the AEC that:

- This project meets government priorities, agency objectives and is aligned to program benefits.
- Adequate resources will be available to undertake this project.
- I will notify the AEC immediately if the applicant ceases involvement with this project and will apply to amend this AEC application.

Name: Geoff Br	Position: Regional Director, Sunshine and Fraser Coast Area, QPWS
Signature:	Date: 2/11/2015

sch4p3(3) Prejudice the

Attachment 14: Animal Ethics Approval 2011

	DERM Animal Ethics	
ANIMAL ETHICS COMMITTEE (AEC)		
RESPONSE TO APPLICANT		

1. Activity Leader details

Name: Peter Wright		
Organisation: DERM		Centre: Maryborough
Postal Address: PO Box 101 Maryborough 4650		
Phone: 41211990	Fax: 41211650	E-Mail: peter.wright@derm.qld.gov.au

2. Activity Details

Title of the Activity	AEC Approved Application Number
Fraser Island Dingo (Canis lupus dingo) trapping and tagging	DERM/2011/12/06

3. AEC Decision

The application has been considered by the AEC and is:

- ☐ Approved as submitted
- ☒ Approved subject to modification/conditions*
- ☐ Pending*
- ☐ Rejected*

Any inquiry regarding this response should be directed to the AEC Chair, in the first instance.

	DERM Animal Ethics	
ANIMAL ETHICS COMMITTEE (AEC) RESPONSE TO APPLICANT		

*** Comments/Reasons:**

The Committee discussed the project at length with respect to whether it involved the scientific use of animals. Considering the guidance offered by DEEDI that the project does involve a scientific use, the Committee would like the Project Leader to consider how the application in future can be written to better integrate scientific methodologies. For example, utilising the optimal catch effort and number of animals is consistent with the principle of Reduction and Refinement set out in the national Code. The Committee therefore suggests the Project leader seek advice from a biometrician (see section 3 of the application).

The project is approved for 12 months to give time for the Project Leader to consult with a biometrician and other experts so that a revised application can be prepared that addresses in further detail the above issues.

The Project leader is to advise how the DNA samples are being stored.

It is noted that the dosage rate mentioned in section 6.2, first dot point, should read "...Up to 1 ml depending on size and weight of dingo."

On reapplication the Committee suggests the Project Leader explain progress being made toward developing techniques for remotely monitoring trap sites.

Approval granted for the period: Until 21/12/2012

Approved starting date: Immediate

	DERM Animal Ethics	
ANIMAL ETHICS COMMITTEE (AEC)		
RESPONSE TO APPLICANT		

Please note

1. **Confidentiality:** The information in this response is confidential and all records pertaining to applications to AECs are managed in accordance with the requirements of the *Privacy Act 1992*. Disclosure of information to third parties is not carried out without the knowledge of the applicant.
2. **The AEC requires the Activity Leader to:**
 - Comply with all conditions set out in this response in addition to the general requirements of the *Australian code of practice for the care and use of animals for scientific purpose*;
 - Submit an Amendment Request for any proposed change to an approved activity prior to that change being implemented.
 - Report immediately in writing to the Animal Ethics Committee any unexpected animal welfare problems or any written complaint or grievance received in relation to the activity.
 - Submit Annual Reports during February of each year.
 - Submit an Activity Completion Advice within two months of the project finishing.
3. **Endorsement:** Approval of your application by the AEC is not an endorsement of the application by either DERM or the Queensland Government and is not an endorsement of the applicant, its products or its processes generally by the AEC, DERM or the Queensland Government and no one should assert any such endorsement.
4. **Correspondence:** All correspondence with the AEC in relation to this application should cite the name of the Activity Leader, title of the activity and the AEC approved application number.
5. **Grievance:** If the applicant feels that the AEC has erred in its rejection of the application, he/she can instigate a grievance procedure. The activity must not start unless the grievance process has been finalised. The grievance process is final. The DERM AEC will not assess an application that has been rejected by another AEC.

Name of AEC Chair	Dr Jeremy Thompson	
Signature	sch4p3(3) Prejudice the protection of an individuals	
Date	9/1/11	

Attachment 15: Animal Ethics Approval 2012

Attachment 15: Animal Ethics Approval 2012

Dear Ross,

Your project: Fraser Island Dingo (*Canis lupis dingo*) Trapping and Tagging..... SA 2012/12/404 has been granted approval and you may commence your activity after the approved date. You are reminded that on completion of this activity a project completion advice must be submitted to the animal ethics committee. As this project has been approved to continue into other calendar years than annual progress reports are also required. Please ensure your supervisor is aware of the approval. It may be best to forward this email.

Any adverse or unexpected events are to be reported promptly and any variations to the proposal require an amendment that is approved before any changes can be made.

Cheers,

Lex Turner
Chairman, Staff Access Animal Ethics Committee
Agri-Science Queensland

Department of Agriculture, Fisheries and Forestry
Level 4, 80 Ann Street, Brisbane Qld 4000
GPO Box 46, Brisbane Qld 4001
T: (07) 3239 3494
F: (07) 3239 3504
M: sch4p3(3) P
E: lex.turner@daf.qld.gov.au

Business Information Centre 13 25 23
www.deed.qld.gov.au

Published on DES Disclosure Log
RTI Act 2009

Attachment 16: NPSR/QPWS Firearms Policy and Procedures Manual

Firearms Policy and Procedures Manual	tm-pk-cm-firearms	QPW/2015/1456
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Published on DES Disclosure Log
RTI Act 2009

Attachment 17: Veterinary Observations: Fraser Island Dingo Capture and Tagging 7th March 2013

Veterinary Observations: Fraser Island Dingo Capture and Tagging 7th March 2013

Purpose of visit: To observe and comment on the methods used and treatment of Fraser Island Dingoes by Queensland Parks and Wildlife Rangers as part of their management program.

Ranger in Charge: Linda Behrendorff

Veterinarian: Dr Grant Belonje BVSc (Pret 1996)

Process:

An hour long meeting was held on the afternoon of the 7th with the rangers involved to detail the evening's events and to ensure that all care was taken to protect the welfare of the dingoes and minimise the stress and time taken to complete the procedure.

Then from about 4pm the rangers headed out to known dingo walking tracks and began the process of laying the traps. Three sites were chosen and 3 traps were laid at each site. The traps are rubberised and cause negligible harm (padded leg-hold traps). A ranger demonstrated this by setting a trap off over his fingers. The rubber grips the animal without causing irreversible damage. The traps are inspected frequently and the animal released as soon as possible to reduce potential swelling and bruising. The traps are attached to pickets that are driven deeply into the ground so a dingo can't run off with a trap still attached.

Later that evening the traps were baited with scented lures - a cocktail of attractive food smells that are painted in tiny amounts onto vegetation over the traps. The traps are then monitored frequently throughout the whole night and then removed as soon as the regular monitoring of them ceases.

That night a young untagged female dingo was caught. We were taken to the site to witness the procedure. The rangers took great care to park far from her and care was taken to minimise light and noise. Two rangers using poles with soft round hoops on the end briefly secured her while a third ranger injected a safe and commonly used sedative into her hindquarters. The sedative is renowned for it's safety and is used extensively in wildlife management and in private veterinary practices.

Everyone then retreated while the sedative took effect to reduce stress. Once she was sedated, which only took a few minutes, the trap was released and she was transported to a well lit workstation nearby. Her condition was frequently monitored and she was stable throughout.

The rangers worked quickly as a team to weigh and measure her, details her overall condition were documented and she was extensively photographed. I inspected the trapped leg and found nothing more than small amounts of black rubber that had rubbed onto the fur. There was no bruising or swelling.

She was then microchipped and a uniquely coloured ear tag was placed for identification.

The ear tags are those used extensively throughout Australia to tag sheep. Care was taken to apply antiseptic to the tag site.

She was then allowed to recover in a large animal carrier and after about 25 minutes she was deemed alert enough to be driven back to the region of the capture site.

She was released about 90 minutes later when fully recovered. This was done by regularly monitoring her in a calm environment until all the effects of the sedation had worn off.

Comments:

I found the whole procedure to be quick and professional with the welfare of the dingo given top priority.

The use of sedatives and the restraining techniques applied by the rangers are the same as those used daily by veterinarians around the world to protect staff from injury without harming the animal.

I was impressed with the overall concern for the long term sustainability and management that the rangers showed for the Fraser Island dingoes. This is in stark contrast to the treatment of dingoes on the mainland that are trapped, shot and poisoned in large numbers with little or no concern for their welfare.

Dr Grant Belonje BVSc (Pret 1996)

Published on DES Disclosure Log
RTI Act 2009

Attachment 18: Dingo Identification – Age Classes

Fraser Island Dingo Age Classes

Class	Age	Description	Photo Example(s)
Pup	< 4mths	Dark colouring over entire body. Cloudy eyes. Stocky/compact/robust. Milk teeth.	 <p>The photo examples for the 'Pup' class consist of four images. The top row features three individual photos of dingo pups: the first is a pup sitting on the ground near a metal structure; the second is a close-up of a pup's face; the third is a pup standing in a wooded area. The bottom row features a larger photo of a group of approximately eight pups huddled together in a dark, sheltered area, possibly a den, with a date stamp '15 / 4 / 2001' in the bottom right corner.</p>

Juvenile	4 mths to 12 mths	<p>Limbs elongating. Dark colouring on head, back and tail. Chest and legs lightening in colour. Obvious sock markings. Hips obvious. Ears look large. Testes dropping. Canines descending Eyes clear</p>	<div data-bbox="880 571 996 603">4-6mths</div> <div data-bbox="857 994 996 1026">6-12mths</div> <div data-bbox="1003 180 1339 598"></div> <div data-bbox="1384 180 1854 598"></div> <div data-bbox="1003 603 1361 1026"></div> <div data-bbox="1384 603 1888 1026"></div>
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Published on 12/01/2019

Sub Adult	1 - 2 Years	<p>Body filling out. Back lightening. Testes dropped. Bright eyes. Canine teeth descended. Paws fully grown Fully grown Full height Can have distinctive white face 'mask' Loose dark fur at front of neck and chest. Tail lightens up</p>	 
Adult	2 – 5 Years	<p>Bright eyes. Muzzle lightening. Definite nipples from previous litters. Paw sock delineation not as sharp. Tail light except for dark spot if they have one.</p>	 

5yo

Mature Adult	>5 Years	<p>Cloudy eyes. Muzzle and legs going white – sock markings blending. Can have old scars. Definite nipples from previous litters (females).</p>	   
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Published on D... Disclo...
RTI Act 2009

Attachment 19: Dingo Identification – Sock Markings

Fraser Island Dingo Sock Markings

Description	Photo Example(s)
Sockless	GPuW06m (dec, Waddy) – PAUL??
<p> Toes Only From toe tip to toe creases </p> 	
<p> Low Fore paw (toe creases to MP joint) </p> 	

<p>Mid Forepaw to wrist</p> 	  <p>GGG13m (JIM)</p>
<p>High wrist and above</p> 	
<p>Low-Mid</p>	
<p>Mid-High</p>	

*Note: MP Joint = metacarpophalangeal joint

Find and photographs for all heights. Add illustrations for example description in each section. Define low-mid, mid-high, low-high and from inside to outer leg or outer leg to inside leg or lowest to highest??

Toes only to mid or toes only to low???? Find egs and clarify.

None, Toes only, Low, mid, high descriptions only. Remove others.

Add one leg description illustration.

Find same sock height pictures.

Attachment 20: Dingo Identification – Condition Ratings DRAFT

Fraser Island Dingo Condition Ratings

Condition		Description	Photo Example(s)
1	Very poor	Emaciated Ribs, lumbar vertebrae, pelvic bones and all extended bony prominences evident from a distance. Minimal muscle tissue No discernible body fat. Obvious loss of muscle mass. No subcutaneous abdominal fat. Severe abdominal tuck. No muscle in face-ears look Looks sickly and unhealthy	
2	Poor	Hips and ribs obvious. Ribs, vertebrae, pelvic bones prominent. Reduced muscle tissue Obvious abdominal tuck. Up to 1mm subcutaneous abdominal fat.	
3	Fair	Hips and ribs obvious. Ribs, lumbar vertebrae, pelvic bones visible. 2mm subcutaneous abdominal fat. Could describe a healthy lactating female.	
4	Good	Optimal condition. Ribs easily palpable with minimal fat covering. Waist easily noted, viewed from above. Abdominal tuck evident. 2-3mm subcutaneous abdominal fat.	

5	Overweight (above average), (Labrador)	Hip and ribs well covered. Overhead view is broadened. Ribs palpable with excess fat covering (necropsy 5+ fat score). Excess amentum and mesentery fat stores. 5+mm subcutaneous abdominal fat.	
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Notes:

- Animals such as whelping females and juveniles need to be assessed separately taking into consideration the extenuating circumstances of their possible lower body condition rating.
- Photos may not show an accurate representation of an individual dingoes body condition.

4-5 picture eg of female in 12 mth breeding cycle – PiPiPi08f/2Yellow06f, 6red10f, BGB01f

Summer coat to winter coat examples 1 male 1 female maybe juv eg, male/female adult egs etc. 5 red eg.

Attachment 21: Dingo Identification – Habituation Classifications

Fraser Island Dingo Habituation Classifications (to be approved)

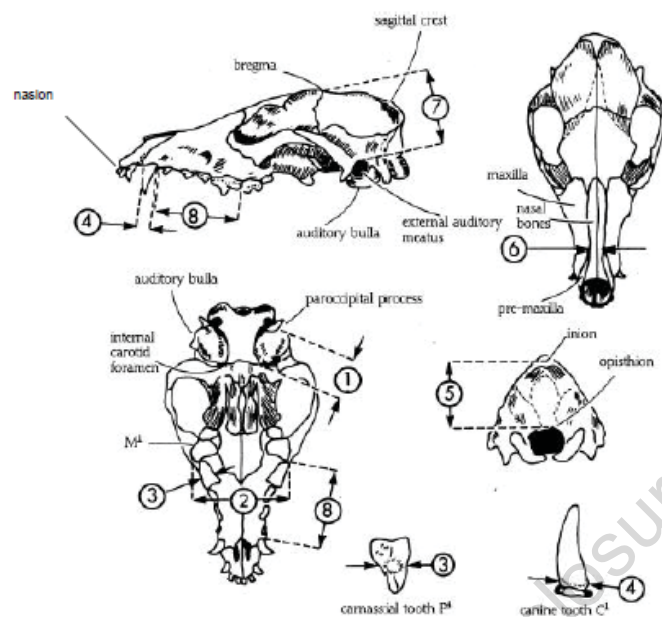
This is to be assessed at the time of request based on information obtained from an individual animal's current management history, profile and knowledge of NRM rangers on the ground.

Habituation Code	Description
H0	Very wary towards humans and not likely to be seen. Mainly a remote area dweller. Example 1Yellow09f
H1	Displays wariness towards humans. Will approach human-use areas when humans not present. Example 16Blue09f
H2	Displays curious behaviour towards humans. May display some Code C behaviour and will loiter.
H3	Regular to dominant presence in or around residential, visitor and human-use areas. Code C and/or D behaviour. May display nuisance behaviour. Approaches and loiters around human (fishers, residents etc).
H4	Dominant presence through residential and human-use areas. Displays code D and/or E behaviour.
Unknown	Dingo has no known history.

Habituation definition – an animal that displays familiarisation towards humans or human-use areas. Not an indication of aggressive or dominant behaviour towards humans.

Attachment 22: Dingo Skull Measurements – Corbett

40



X₁ = Length of auditory bulla (measured from where it abuts the paroccipital process to the internal carotid foramen, excluding any projection on the foramen).

X₂ = Maximum maxillary width (measured at about the junction of the P₄ and M₁ teeth).

X₃ = Mid-crown width of the P₄ tooth (measured through the highest cusp in a lateral direction).

X₄ = Basal crown length of C₁ (measured along the tooth row).

X₅ = Opisthion toinion (measured from a central inion point and not including the notch in the opisthion, if present).

X₆ = Width of both nasal bones (measured at premaxilla-maxilla suture).

X₇ = Cranial height (measured from the upper notch of the external auditory meatus to the bregma, including the sagittal crest).

X₈ = Distance between the posterior alveolar rims of C₁ - P₄.

X₉ = Skull length (measured between inion and nasion) Distance between the posterior alveolar rims of C₁ - P₄.

Data from Corbett 2001a.



X1 Length of auditory bulla. Note that the measurement is the large internal (central) carotid foramen and excludes any projections on the foramen



X2 Maximum maxillary width



X₃ Mid-crown width of the P⁴ tooth (caninial tooth). This is measured at the point of the highest cusp



X₄ Basal crown length of C1 (canine tooth). This is measured at the 'enamel line'



X₅ Opisthion to inion. This is measured from a central inion point (pencil in intersecting lines from the sagittal crest and skull ridge. Do not include the notch in the opisthion, if present



X₆ Width of both nasal bones. This is measured at premaxilla-maxilla suture



X₇ Cranial height. This measurement excludes the sagittal crest. Do not insert the callipers deeply into the upper notch of the external auditory meatus ('ear hole')



X₈ Distance between the posterior alveolar rims of C₁ - P₄

Further chapters/sections to be added to document:

- Storing and maintaining traps, boiling (JK)
- Setting traps (JD)
- Document/Information Management (JT)
- Identification – age classes, sock heights, etc (LB & JT)
- Ear Tag Register Master and Humane Destruction Register?
- Ear Tag Ordering
- Blow pipes/darting SOP (LB)
- Necropsy (LB)
- Drug Administration & Auditing procedure (PF)
- Trail Camera (setting/use/filing/etc) (GM & JT)

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Restricted drugs (schedule 4)



Queensland
Government

*List the medicine as it appears in the Standard for Uniform Scheduling of Medicines and Poisons (The Poisons Standard – Therapeutic Goods Act 1989)

[illegible]

Fraser Island Trapping Log 2018 KBRV

Trap #	Date/ Time Set	Date/Time Removed	Staff	Location Site	GPS		Trap # Per Site	Lure	Trap Check History	Result
1	01/08/18 15:20	01/08/18 20:15	JK + MN	Dundango Creek	25-38489	153-03505	3	tuna scent	16:45, 18-15, 19.10	Nil
2	01/08/18 17:33	01/08/18 20:35	JK + MN	KBRV - 100m N of jetty	25.38899	153-02942	3	gravy	18:35, 19:30	Nil
3	01/08/18 16:28	01/08/18 20:00	CH + DN	KBRV - 100m S of Sunset Beach overhanging	25.39143	153-02760	3	BBQ grease	17:34, 18:40, 19.30	Nil
4	01/08/18 17:34	01/08/18 20:05	CH + DN	KBRV - overhanging rocks, 50m N Sunset Beach	25.39180	153-02680	3	empty chip packet	18:45, 19:35	Nil

Fraser Island Trapping Log 2018 KBRV

Trap #	Date/ Time Set	Date/Time Removed	Staff	Location Site	GPS		Trap # Per Site	Lure	Trap Check History	Result
1	02/08/18 16:20	02/08/18 22:50	JK + MW	Dundonga	25.38489	153.03505	3	gravy	17:20, 18:00, 19:00 , 19:35, 20:20, 21:00, 22:00	Nil
2	02/08/18 17:15	02/08/18 23:20	SK + MW	KBRV 100m N Jetty	25.38899	153.02942	3	gravy	18:15, 19:00, 20:25, 21:15, 22:10, 22:40	Nil - evidence of activity (tracks at trap site) -
3	02/08/18 20:15	02/08/18 23:10	SK + MW	Sunset Beach	25.39173	153.02694	3	tuna scent	21:10, 22:15	Nil

Published on DES Disclosure
RTI Act 2009

ISSUED: 01 February 2018

SAFETY DATA SHEET**Section 1: IDENTIFICATION of CHEMICAL PRODUCT and COMPANY**

Product Name: Valabarb Euthanasia Solution

Product Identifier: 300 mg/mL sodium pentobarbitone solution for injection.

Product Code: 504385 (250 mL), 60020 (500 mL)

Recommended Use: Injection for animal euthanasia. For use only by registered veterinary surgeons or persons authorised under relevant State or Territory legislation.

Restrictions on Use: For animal treatment only.
Not for use in animals intended for human or animal consumption.

Company Identification: Jurox Pty Limited

Address: 85 Gardiner Street,
Rutherford, NSW 2320,
Australia

Customer Centre: 1800 023 312

Email: customerservice@jurox.com.au

National Poisons Information Centre: 13 1126 (24 hours)

Emergency Telephone Number: 1800 023 312 (9am – 5pm, Monday to Friday)

Section 2: HAZARDS IDENTIFICATION

GHS Hazard Classifications: This product has been assessed according to GHS and is classified as follows:

GHS Category	Hazard code	Hazard Statement
Acute Toxicity Oral Category 3	H301	Toxic if swallowed
Eye Irritation Category 2A	H319	Causes serious eye irritation
Reproductive Toxicity Category 2	H361	Suspected of damaging fertility or the unborn child
Specific Target Organ Toxicity – Single Exposure Category 1	H370	Causes damage to organs
Chronic Aquatic Hazard Category 3	H412	Harmful to aquatic life with long lasting effects

GHS Label Elements:

Signal Word:

DANGER

Pictograms:

Skull &
CrossbonesExclamation
MarkHealth
Hazard

Precautionary Statements:Prevention

P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear eye protection/face protection/protective gloves.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe vapours.
P273 Avoid release to the environment.

Response

P301+P310 IF SWALLOWED: Immediately call a POISON CENTRE or doctor.
P330 Rinse mouth.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 IF eye irritation persists: Get medical advice/attention.
P308+P313 IF exposed or concerned: Get medical advice/attention.

Storage

P405 Store locked up.

Disposal

P501 Dispose of container and any unused product by wrapping with paper and putting in garbage.

N.B.: The above statements are determined by Work Health and Safety regulations and may not reflect Signal Headings and First Aid and Safety statements on product labelling, which are determined by a competent authority during assessment for registration.

Other hazards: May irritate the skin due to its high pH (alkalinity).

Section 3: COMPOSITION / INFORMATION on INGREDIENTS

INGREDIENT	CAS No.	CONTENT
Pentobarbitone sodium	57-33-0	30%
Ethanol	64-17-5	<15%
Ingredients not contributing to hazardous	-	30 – 60%

Section 4: FIRST AID MEASURES

General Information: Consult the National Poisons Centre on 13 1126 or a doctor immediately in every case of suspected chemical poisoning. Never give fluids or induce vomiting if a patient is unconscious or convulsing regardless of cause of injury. If medical advice/attention is needed, have this SDS, product container or label at hand.

Symptoms and Effects of Exposure: CNS depressant. May cause sedation, respiratory depression and hypotension as well as susceptibility to infection and inadequate temperature regulation.

Inhalation: If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary. If respiratory symptoms occur, remove patient to fresh air. Lay patient down and keep warm and rested. If breathing is shallow or has stopped, ensure airway is clear and apply resuscitation. If breathing is difficult, give oxygen and seek medical assistance immediately.

Ingestion: If swallowed, DO NOT induce vomiting. Rinse mouth. Keep subject warm and at rest. For advice, contact a doctor or the National Poisons Centre on 13 1126.

Skin: If skin contact occurs, remove contaminated clothing and wash affected area thoroughly with plenty of soap and water for at least 20 minutes. If skin irritation or rash occurs, get medical advice/attention.

Eye: If eye contact occurs, rinse cautiously with water for at least 20 minutes. Continue rinsing. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. If eye irritation persists, get medical advice/attention.

Injection: Urgently seek medical assistance. No antidote available. Treat symptomatically.

Recommended First Aid Facilities: Ready access to running water and soap is required. Accessible eyewash is required.

Advice to Doctor: Contains pentobarbitone, a barbiturate, at a high concentration.

Section 5: FIRE FIGHTING MEASURES

Flash Point: Unknown.

Hazardous Combustion Products: If involved in a fire, may emit noxious fumes. Non-combustible – not considered to be a significant fire risk.

Extinguishing Media: There is no restriction on the type of extinguisher which may be used. Use extinguishing media suitable for surrounding area.

Protective Equipment: Protective gloves and boots and breathing apparatus.

Hazchem Code: 2X.

Section 6: ACCIDENTAL RELEASE MEASURES

Spills and Disposal: Wear appropriate protective clothing. For small spills, wash area well with excess water. For large spills, exclude non-essential people from the area. Contain spill and absorb with inert material such as soil, sand or absorbent granules and place in a sealable waste container. Ventilate area and wash spill site after pick-up complete. Dispose of waste safely in an approved landfill.

Protective Clothing: For appropriate personal protective equipment see section 8.

Environmental Precautions: Prevent from entering drains, waterways or sewers. If contamination of drains and waterways occurs, advise local authority.

Section 7: HANDLING AND STORAGE

Handling: The product should be handled with care to avoid exposure. Keep out of reach of children. Avoid self-injection, ingestion, contact with skin or eyes and inhalation of vapours. Use personal protective equipment as required. Do not eat, drink or smoke while handling product. Wash any protective clothing after use.

Storage: Valabarb Euthanasia Solution is a Scheduled Poison (S4) and therefore must be stored and maintained in accordance with the relevant State Poisons Act. Store in original container, away from foodstuffs. Store below 30°C (room temperature). Protect from light.

Other Information: Always read the label before use. See label for further information on handling and storage.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

This SDS describes personal protective measures relating to long term industrial and manufacturing exposure and emergency situations, such as accidents and spills. See product label for personal protective measures during normal use of the marketed product.

Exposure Limits: No exposure limits have been assigned for this product. Known exposure limits for ingredients are as follows:

Occupational Exposure Limits (OEL)

Australian Exposure Standards

INGREDIENT	TWA	STEL
Ethanol	1880 mg/m ³ / 1000 ppm	Not available

Emergency Limits

INGREDIENT	TEEL-1	TEEL-2	TEEL-3
Pentobarbitone sodium	0.35 mg/m ³	3.9 mg/m ³	23 mg/m ³
Ethanol	Not available	Not available	15000 ppm

Engineering Controls: Use only in a well ventilated area. Ensure that the work environment remains clean.

Personal Protective Equipment (PPE):

Eye Protection: Protective glasses or goggles are recommended when handling bulk quantities of this product.

Skin Protection: When handling bulk product, prevent skin contact by wearing chemical protective gloves e.g. PVC.

Respiratory Protection: Not required for the normal use of this product.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear green fluorescent liquid.	Upper / Lower Flammability Limits:	Not available.
Odour:	Not available.	Vapour Pressure:	Not available.
Odour Threshold:	Not available.	Vapour Density:	Not available.
pH:	10 – 11.5	Relative Density / Specific Gravity:	1.075
Melting Point / Freezing Point:	Not available.	Solubility:	Miscible.
Boiling Point and Boiling Range:	Not available.	Partition Coefficient (n-octanol/water):	Not available.
Flash Point:	Not available.	Auto-Ignition Temperature:	Not available.
Evaporation Rate:	Not available.	Decomposition Temperature:	Not available.
Flammability:	Not available.	Viscosity:	Not available.

Section 10: STABILITY AND REACTIVITY

Reactivity: This product is unlikely to react or polymerise under normal storage conditions.

Chemical Stability: When stored appropriately this product should show no significant degradation within the expiry period shown on the label.

Conditions to Avoid: Extreme temperatures.

Incompatible Materials: None known.

Hazardous Decomposition Products: Decomposes on heating and may produce toxic fumes of carbon monoxide. Decomposition may produce toxic fumes of carbon dioxide, nitrogen oxides, other pyrolysis products typical of burning organic material.

Section 11: TOXICOLOGICAL INFORMATION**Acute Toxicity:**

Ingestion: Based on available data for the ingredients, the mixture is classified as **Acute Toxicity Oral Category 3**. Toxic effects may result from ingestion of this product. Animal experiments indicate that ingestion of less than 40 g of pentobarbitone sodium may be fatal or produce serious damage to the health of the individual.

Pentobarbitone sodium: (oral) LD₅₀: 60 mg/kg (guinea pig), (oral) TDLo: 6.43 mg/kg (man), (intravenous) LD₅₀: 81 mg/kg (mouse), (intravenous) LD₅₀: 40 mg/kg (rabbit), (oral) LD₅₀: 118 mg/kg (rat).

Inhalation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be acutely toxic if inhaled. Not normally a hazard due to the non-volatile nature of the product.

Dermal: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be acutely toxic by the dermal route.

Injection: Injection of barbiturates produces CNS depression ranging from sleep to profound coma to death.

Aspiration Hazard: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be an aspiration hazard.

Respiratory Irritation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a respiratory irritant.

Skin Corrosion / Irritation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a skin irritant. However, may irritate the skin due to its high pH (alkalinity).

Serious Eye Damage / Irritation: Based on available data for the ingredients, the mixture is classified as **Eye Irritation Category 2A**. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. Direct contact of the eye with ethanol may cause an immediate stinging and burning sensation, with reflex closure of the lid, and a temporary, tearing injury to the cornea together with redness of the conjunctiva. Discomfort may last 2 days but usually the injury heals without treatment.

Respiratory or Skin Sensitisation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a skin sensitizer.

Germ Cell Mutagenicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be mutagenic.

Carcinogenicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be carcinogenic.

Reproductive Toxicity: Based on available data for the ingredients, the mixture is classified as **Reproductive Toxicity Category 2**. Neonates born to women who receive barbiturates throughout the last trimester of pregnancy may show withdrawal symptoms from 1-14 days after birth. Pentobarbital is excreted into breast milk.

Specific Target Organ Toxicity (STOT): Single exposure: Based on available data for the ingredients, the mixture is classified as **Specific Target Organ Toxicity – Single Exposure Category 1**. Exposure to pentobarbitone produces acute systemic effects on the cardiovascular, neurological and respiratory systems.

Specific Target Organ Toxicity (STOT): Repeated exposure: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a specific target organ toxicant after repeat exposure. However, barbiturates cause an alcoholism-like syndrome when used long term. Symptoms include disorientation, mental confusion, incoordination, dizziness, depression and skin rashes. Prolonged exposure to ethanol may cause damage to the liver and cause scarring. It may also worsen damage caused by other agents.

Narcotic Effects: Continued misuse of very small amounts can lead to barbiturate dependence.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Based on available data for the ingredients, the mixture is classified as **Chronic Aquatic Hazard Category 3**.

Pentobarbitone sodium:

LC₅₀ (96 hr): 49.5 mg/L (fish).

Ethanol:

LC₅₀ (96 hr): 42mg/L (fish);

EC₅₀ (48 hr): 2mg/L (crustacea);

EC₅₀ (96 hr): 17.921mg/L (algae or other aquatic plants).

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
Pentobarbitone sodium	HIGH	HIGH	LOW (LogKOW = 2.0043)	LOW (KOC = 114.4)
Ethanol	LOW (Half-life = 2.17 days)	LOW (Half-life = 5.08 days)	LOW (LogKOW = -0.31)	HIGH (KOC = 1)

Section 13: DISPOSAL INFORMATION

Product Disposal: Dispose of product only by using according to label or at an approved landfill.

Container Disposal: Dispose of empty container by wrapping with paper and putting in garbage.

Section 14: TRANSPORT INFORMATION

Dangerous Goods Classification: Classified as a Dangerous Good according to the criteria of the Australian Dangerous Goods (ADG) Code.

UN Number: 1851

Proper Shipping Name: MEDICINE, LIQUID, TOXIC, N.O.S. (contains pentobarbitone sodium).

DG Class: 6.1

Packing Group: III

Hazchem Code: 2X

Limited quantity: 5 L

Section 15: REGULATORY INFORMATION

Poisons Schedule: S4

APVMA Registration No: 36208

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations.

SUSMP: Pentobarbitone sodium is mentioned in SUSMP.

Section 16: OTHER INFORMATION

Legend:

ADG	Australian Dangerous Goods
AICS	Australian Inventory of Chemical Substances.
APVMA	Australian Pesticides and Veterinary Medicines Authority
CAS No.	Chemical Abstracts Service Registry Number.
CNS	Central Nervous System.
DG	Dangerous goods.
EC₅₀	The median effect concentration, being a statistically derived concentration of a substance that can be expected to cause an adverse reaction in 50% of organisms or a 50% reduction in growth or in the growth rate of organisms.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals.
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters.
KOC	Soil-Water Partition Coefficient. The ratio of a chemical's concentration that is adsorbed in the soil to the concentration of chemical in solution.
KOW	Octanol Water Partition Coefficient. The ratio of a compound's concentration in a known volume of n-octanol to its concentration in a known volume of water after the octanol and water have reached equilibrium.
LC₅₀	The median lethal concentration, being a statistically derived concentration of a substance that can be expected to cause death in 50% of animals.
LD₅₀	The median lethal dose, being a statistically derived single dose of a substance that can be expected to cause death in 50% of animals.
N.O.S.	Not Otherwise Specified.
NICNAS	National Industrial Chemicals Notification and Assessment Scheme.
OEL	Occupational Exposure Limits.
PPE	Personal Protective Equipment.
PVC	Polyvinyl chloride.
STEL	Short term exposure limit.
STOT	Specific Target Organ Toxicity.
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons.
TEELs	Temporary Emergency Exposure Limits. Guidelines designed to predict the response of members of the general public to different concentrations of a chemical during an emergency response incident.
TEEL-1	The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic, nonsensory effects. However, these effects are not disabling and are transient and reversible upon cessation of exposure.
TEEL-2	The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting, adverse health effects or an impaired ability to escape.
TEEL-3	The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience life-threatening adverse health effects or death.
TWA	Time-Weighted Average. The average exposure over a specified period, usually a nominal eight hours.
UN Number	Number identifying a hazardous substance, assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods.

References:

ChemID Plus

EPA New Zealand Chemical Classification and Information Database (CCID)

HSDB (Hazardous Substances Data Bank)

This version issued: 01 February 2018 and is valid for 5 years from this date.

Supersedes: This SDS supersedes the version issued on 16 April 2015.

Revision History:

Date of Revision	Reason
01 FEB 2018	Minor updates to all the sections of SDS and addition of Revision History in Section 16.

This information is based on data believed by Jurox Pty Limited to be accurate at the time of writing but is subject to change without notice. It is given in good faith, but no warranty expressed or implied is made as to its accuracy, completeness otherwise and no assumption of liability from howsoever arising is made by Jurox Pty Limited by reason of the provision of this information. Every person dealing with the materials referred to herein do so at his/her own risk absolutely and must make independent determinations of suitability and completeness of information from all sources to ensure their proper use.

END OF SDS

Published on DES Disclosure Log
RTI Act 2009

Fraser Island Trapping Log

Trap #	Date/ Time Set	Date/Time Removed	Staff	Location Site	GPS		Trap # Per Site	Lure	Trap Check History	Result
1	22/7/18 6:00pm	23/7	B.O.C S.D	Water Tanks			2	Scent	1st 9:00pm, 11pm, 2am 5am	- Traps set off (2am) - Recapture Set
2	22/7/18 6:30	23/7	B.O.C S.D	Sth Waddy Access Rd.	S 24° 58.015	E 153° 20.132	3	Meat Scent	1st 9:10, 11:15pm, 2:15am, 5:15am	
3	22/7/18 7:00	23/7	B.O.C S.D	Connors Corner	S 24° 57.888	E 153° 19.663	2	Fish	2st 9:15, 11:30pm, 2:30am, 5:30am	Captured untagged juvenile female
4	22/7/18 9:30pm	23/7	B.O.C S.D	North Ramp Orchid	S 24° 57.307	E 153° 18.662	2	Cat food	1st 9:30, 11:45, 2:45am 5:55am	Tracks present



COASTAL AND ISLAND REGION - Great Sandy Area (K'gari Section) Dingo Humane Destruction Notification

This form is to be fully completed for all dingoes euthanised on Fraser Island

To: Principal Ranger, Great Sandy Area From: 1423322		
Telephone: 07 4127 9128		Mob: <input type="text" value="sch4p3(3) Prejudice the p"/>
Date of email: 03/07/2018		
1. Date of Euthanasia: 02/07/2018 at 17:25		
2. Dingo Identification: YYYellow17M		Dingo Weight: 15.9 kg
3. Nature of preceding interactions: Two (3) Code E High-risk interactions: - Code E_20180630_YYYellow17M_Eur-Poy_Biting - Code E_20180701_YYYellow17m_Eur-Poy_Biting - Code E_20180702_YYYellow17m_Eur-Poy_Lunging 3 Code D (Threatening) interactions reported. 21 Code C (Nuisance) interactions reported.		
4. Action taken: YYYellow17 male was approved for humane destruction on the 02.07.2018. YYYellow17M was sedated with zoletil at 15:45 on Monday 2nd July 2018, at Eurong beach front, K'gari (Fraser Island). YYYellow17M was humanely destroyed by lethal injection (pentobarbital sodium) at 17:25 on Monday 2nd July 2018.		
5. Responsible Officer: 1423322 Position: 005 Dingo Management Telephone: 07 41279128		
6. Further action required or proposed: Continue to monitor dingo behaviour between Dilli Village and Poyungan rocks. Continue efforts patrolling camping areas and beachfront, briefing all visitors, residents on recommended departmental dingo safe messaging. Continue compliance activities.		
7. Report/s attached: Detailed management history		
8. Additional comments (if required): Butchulla Traditional owners involved in management actions		
9. CONTACT	PHONE	After Hours
NRM Ranger in Charge Fraser Island	4127 9128	<input type="text" value="sch4p3(3) Prejudice the prd"/>
Senior Conservation Officer NRM	4302 8563	
Principal Ranger, Fraser coast, Maryborough	4121 1996	
Regional Manager, Sunshine Fraser coast	4121 1609	
Senior Ranger Fraser Island	4127 9128	
Dingo Ranger for area of occurrence	4127 9128	

Zoletil 100 Injectable Anaesthetic/Sedative for Dogs, Cats, Zoo and Wild Animals

Virbac (Australia) Pty Limited

Chemwatch Hazard Alert Code: 1

Chemwatch: 6978267

Issue Date: 05/06/2016

Version No: 3.1.1.1

Print Date: 05/19/2016

Safety Data Sheet according to WHS and ADG requirements

Initial Date: Not Available

L.GHS.AUS.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	Zoletil 100 Injectable Anaesthetic/Sedative for Dogs, Cats, Zoo and Wild Animals
Synonyms	APVMA No.: 38837
Other means of identification	Not Available

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	For the anaesthesia and immobilisation of dogs, cats, zoo and wild animals.
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Details of the supplier of the safety data sheet

Registered company name	Virbac (Australia) Pty Limited
Address	361 Horsly Road Milperra NSW 2214 Australia
Telephone	1800 242 100
Fax	+61 2 9772 9773
Website	www.virbac.com.au
Email	au_customerservice@virbac.com.au

Emergency telephone number

Association / Organisation	Poisons Information Centre
Emergency telephone numbers	13 11 26
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

NON-HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

CHEMWATCH HAZARD RATINGS

	Min	Max
Flammability	1	2
Toxicity	1	2
Body Contact	1	2
Reactivity	1	2
Chronic	0	1

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

Poisons Schedule	S4
Classification	Not Applicable

Label elements

Zoletil 100 Injectable Anaesthetic/Sedative for Dogs, Cats, Zoo and Wild Animals

GHS label elements	Not Applicable
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SIGNAL WORD	NOT APPLICABLE
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Hazard statement(s)

Not Applicable

Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**Substances**

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
14176-50-2	10-30	<u>tiletamine hydrochloride</u>
33754-49-3	10-30	<u>zolazepam hydrochloride</u>
	balance	Ingredients determined not to be hazardous

SECTION 4 FIRST AID MEASURES**Description of first aid measures**

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation	<ul style="list-style-type: none"> If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor.
Ingestion	<ul style="list-style-type: none"> If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Seek medical advice.

Indication of any immediate medical attention and special treatment needed

In the use of psychoactive substances, four recognised chronic reactions have been reported

- Prolonged psychotic reactions
- Depression sufficiently severe to be life-threatening
- Flashbacks
- Exacerbation of pre-existing psychiatric illness

Some persons who have experienced many psychedelic trips, especially those who have had acute adverse reactions, develop what appears to be

Zoletil 100 Injectable Anaesthetic/Sedative for Dogs, Cats, Zoo and Wild Animals

serious long-term personality disruption.

These prolonged psychotic reactions have similarities to schizophrenic reactions and appear to occur most often in persons with pre-existing psychological difficulties - primarily pre-psychotic or psychotic personalities.

Psychedelic-induced personality disorders can be severe and prolonged.

Appropriate treatment often requires antipsychotic medication (antipsychotics, neuroleptics, major tranquillisers) and residential care in a mental health facility.

In certain cases, psychedelic-induced chronic psychological problems lead to complicated patterns of polydrug abuse that requires additional treatment approaches.

Note:

Antipsychotics are associated with a range of side effects. It is well-recognized that many people stop taking them (around two-thirds even in controlled drug trials) due in part to adverse effects.

Notable and relatively common adverse effects of antipsychotics include extrapyramidal symptoms (which involve motor control) and hyperprolactinaemia primarily in typical's and weight gain and metabolic abnormalities mostly in atypicals. Temporary withdrawal symptoms including insomnia, agitation, psychosis, and motor disorders may occur during dosage reduction of antipsychotics, and can be mistaken for the return of the underlying condition.

Many psychoactives are also monoamine oxidase inhibitors (MAOIs):

Special care should be taken with any drug therapy in view of the many hazards of monoamine oxidase inhibitor interactions. In particular metaraminol and other sympathomimetic agents are not suitable for the treatment of hypotension, which should be managed with intravenous fluids and, in severe shock, intravenous hydrocortisone

Treat symptomatically.

For severe benzodiazepine overdose the stomach should be emptied by aspiration and lavage. Recovery usually follows symptomatic relief.

Dialysis is of no value. [Martindale]

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- ▶ Water spray or fog.
- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

Special hazards arising from the substrate or mixture

Fire Incompatibility	▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
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Advice for firefighters

Fire Fighting	<ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves. ▶ Prevent, by any means available, spillage from entering drains or water courses. ▶ Use water delivered as a fine spray to control fire and cool adjacent area. ▶ DO NOT approach containers suspected to be hot. ▶ Cool fire exposed containers with water spray from a protected location. ▶ If safe to do so, remove containers from path of fire. ▶ Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	<ul style="list-style-type: none"> ▶ Combustible solid which burns but propagates flame with difficulty; it is estimated that most organic dusts are combustible (circa 70%) - according to the circumstances under which the combustion process occurs, such materials may cause fires and / or dust explosions. ▶ Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions). ▶ Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust (420 micron or less) may burn rapidly and fiercely if ignited - particles exceeding this limit will generally not form flammable dust clouds; once initiated, however, larger particles up to 1400 microns diameter will contribute to the propagation of an explosion. ▶ In the same way as gases and vapours, dusts in the form of a cloud are only ignitable over a range of concentrations; in principle, the concepts of lower explosive limit (LEL) and upper explosive limit (UEL) are applicable to dust clouds but only the LEL is of practical use; - this is because of the inherent difficulty of achieving homogeneous dust clouds at high temperatures (for dusts the LEL is often called the "Minimum Explosible Concentration", MEC). ▶ When processed with flammable liquids/vapors/mists, ignitable (hybrid) mixtures may be formed with combustible dusts. Ignitable mixtures will increase the rate of explosion pressure rise and the Minimum Ignition Energy (the minimum amount of energy required to ignite dust clouds - MIE) will be lower than the pure dust in air mixture. The Lower Explosive Limit (LEL) of the vapour/dust mixture will be lower than the individual LELs for the vapors/mists or dusts. ▶ A dust explosion may release of large quantities of gaseous products; this in turn creates a subsequent pressure rise of explosive force capable of damaging plant and buildings and injuring people.

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- Usually the initial or primary explosion takes place in a confined space such as plant or machinery, and can be of sufficient force to damage or rupture the plant. If the shock wave from the primary explosion enters the surrounding area, it will disturb any settled dust layers, forming a second dust cloud, and often initiate a much larger secondary explosion. All large scale explosions have resulted from chain reactions of this type.
- Dry dust can be charged electrostatically by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport.
- Build-up of electrostatic charge may be prevented by bonding and grounding.
- Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.
- All movable parts coming in contact with this material should have a speed of less than 1-meter/sec.
- A sudden release of statically charged materials from storage or process equipment, particularly at elevated temperatures and/or pressure, may result in ignition especially in the absence of an apparent ignition source.
- One important effect of the particulate nature of powders is that the surface area and surface structure (and often moisture content) can vary widely from sample to sample, depending of how the powder was manufactured and handled; this means that it is virtually impossible to use flammability data published in the literature for dusts (in contrast to that published for gases and vapours).
- Autoignition temperatures are often quoted for dust clouds (minimum ignition temperature (MIT)) and dust layers (layer ignition temperature (LIT)); LIT generally falls as the thickness of the layer increases.

Combustion products include: carbon monoxide (CO) carbon dioxide (CO₂) hydrogen chloride phosgene hydrogen fluoride, nitrogen oxides (NO_x) sulfur oxides (SO_x) other pyrolysis products typical of burning organic material May emit poisonous fumes.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills	<ul style="list-style-type: none"> ▸ Clean up waste regularly and abnormal spills immediately. ▸ Avoid breathing dust and contact with skin and eyes. ▸ Wear protective clothing, gloves, safety glasses and dust respirator. ▸ Use dry clean up procedures and avoid generating dust. ▸ Vacuum up or sweep up. NOTE: Vacuum cleaner must be fitted with an exhaust micro filter (HEPA type) (consider explosion-proof machines designed to be grounded during storage and use). ▸ Dampen with water to prevent dusting before sweeping. ▸ Place in suitable containers for disposal.
Major Spills	<p>Moderate hazard.</p> <ul style="list-style-type: none"> ▸ CAUTION: Advise personnel in area. ▸ Alert Emergency Services and tell them location and nature of hazard. ▸ Control personal contact by wearing protective clothing. ▸ Prevent, by any means available, spillage from entering drains or water courses. ▸ Recover product wherever possible. ▸ IF DRY: Use dry clean up procedures and avoid generating dust. Collect residues and place in sealed plastic bags or other containers for disposal. IF WET: Vacuum/shovel up and place in labelled containers for disposal. ▸ ALWAYS: Wash area down with large amounts of water and prevent runoff into drains. ▸ If contamination of drains or waterways occurs, advise Emergency Services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	<ul style="list-style-type: none"> ▸ Avoid all personal contact, including inhalation. ▸ Wear protective clothing when risk of exposure occurs. ▸ Use in a well-ventilated area. ▸ Prevent concentration in hollows and sumps. ▸ DO NOT enter confined spaces until atmosphere has been checked. ▸ DO NOT allow material to contact humans, exposed food or food utensils. ▸ Avoid contact with incompatible materials. ▸ When handling, DO NOT eat, drink or smoke. ▸ Keep containers securely sealed when not in use. ▸ Avoid physical damage to containers. ▸ Always wash hands with soap and water after handling. ▸ Work clothes should be laundered separately. Launder contaminated clothing before re-use. ▸ Use good occupational work practice. ▸ Observe manufacturer's storage and handling recommendations contained within this SDS. ▸ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained. ▸ Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended
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	<ul style="list-style-type: none"> ▶ in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions) ▶ Minimise airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, and flame. ▶ Establish good housekeeping practices. ▶ Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds. ▶ Use continuous suction at points of dust generation to capture and minimise the accumulation of dusts. Particular attention should be given to overhead and hidden horizontal surfaces to minimise the probability of a "secondary" explosion. According to NFPA Standard 654, dust layers 1/32 in.(0.8 mm) thick can be sufficient to warrant immediate cleaning of the area. ▶ Do not use air hoses for cleaning. ▶ Minimise dry sweeping to avoid generation of dust clouds. Vacuum dust-accumulating surfaces and remove to a chemical disposal area. Vacuums with explosion-proof motors should be used. ▶ Control sources of static electricity. Dusts or their packages may accumulate static charges, and static discharge can be a source of ignition. ▶ Solids handling systems must be designed in accordance with applicable standards (e.g. NFPA including 654 and 77) and other national guidance. ▶ Do not empty directly into flammable solvents or in the presence of flammable vapors. ▶ The operator, the packaging container and all equipment must be grounded with electrical bonding and grounding systems. Plastic bags and plastics cannot be grounded, and antistatic bags do not completely protect against development of static charges. <p>Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.</p> <ul style="list-style-type: none"> ▶ Do NOT cut, drill, grind or weld such containers. ▶ In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.
Other information	<p>NOTE: Special security requirements may be mandated under Federal/State Regulation(s).</p> <ul style="list-style-type: none"> ▶ Store in original containers. ▶ Store in vault fitted with warning devices or detectors recommended by various Federal/State authorities. ▶ Store in vault used only for the purpose of storage of drugs of addiction. ▶ Vault must be locked at all times except when the materials stored therein are required. ▶ Keep storage area free from debris, wastes and combustibles. ▶ Keep dry. ▶ Keep containers securely sealed. ▶ Protect containers against physical damage. ▶ Check regularly for spills and leaks.

Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none"> ▶ Packaging as recommended by manufacturer. ▶ Check that containers are clearly labelled. ▶ Tamper-proof containers. ▶ Polyethylene or polypropylene containers. ▶ Metal drum with sealed plastic liner. ▶ Glass container is suitable for laboratory quantities
Storage incompatibility	<ul style="list-style-type: none"> ▶ Avoid reaction with oxidising agents

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
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Ingredient	Original IDLH	Revised IDLH
tiletamine hydrochloride	Not Available	Not Available
zolazepam hydrochloride	Not Available	Not Available

MATERIAL DATA

Continued...

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Enclosed local exhaust ventilation is required at points of dust, fume or vapour generation.

HEPA terminated local exhaust ventilation should be considered at point of generation of dust, fumes or vapours.

Barrier protection or laminar flow cabinets should be considered for laboratory scale handling.

A fume hood or vented balance enclosure is recommended for weighing/ transferring quantities exceeding 500 mg.

When handling quantities up to 500 gram in either a standard laboratory with general dilution ventilation (e.g. 6-12 air changes per hour) is preferred. Quantities up to 1 kilogram may require a designated laboratory using fume hood, biological safety cabinet, or approved vented enclosures. Quantities exceeding 1 kilogram should be handled in a designated laboratory or containment laboratory using appropriate barrier/ containment technology.

Manufacturing and pilot plant operations require barrier/ containment and direct coupling technologies.

Barrier/ containment technology and direct coupling (totally enclosed processes that create a barrier between the equipment and the room) typically use double or split butterfly valves and hybrid unidirectional airflow/ local exhaust ventilation solutions (e.g. powder containment booths). Glove bags, isolator glove box systems are optional. HEPA filtration of exhaust from dry product handling areas is required.

Fume-hoods and other open-face containment devices are acceptable when face velocities of at least 1 m/s (200 feet/minute) are achieved. Partitions, barriers, and other partial containment technologies are required to prevent migration of the material to uncontrolled areas. For non-routine emergencies maximum local and general exhaust are necessary. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, etc. evaporating from tank (in still air)	0.25-0.5 m/s (50-100 f/min.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)

Appropriate engineering controls

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2.5 m/s (200-500 f/min.) for extraction of gases discharged 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

The need for respiratory protection should also be assessed where incidental or accidental exposure is anticipated: Dependent on levels of contamination, PAPR, full face air purifying devices with P2 or P3 filters or air supplied respirators should be evaluated.

The following protective devices are recommended where exposures exceed the recommended exposure control guidelines by factors of:

10; high efficiency particulate (HEPA) filters or cartridges

10-25; loose-fitting (Tyvek or helmet type) HEPA powered-air purifying respirator.

25-50; a full face-piece negative pressure respirator with HEPA filters

50-100; tight-fitting, full face-piece HEPA PAPR

100-1000; a hood-shroud HEPA PAPR or full face-piece supplied air respirator operated in pressure demand or other positive pressure mode.

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Personal protection	   
Eye and face protection	<p>When handling very small quantities of the material eye protection may not be required. For laboratory, larger scale or bulk handling or where regular exposure in an occupational setting occurs:</p> <ul style="list-style-type: none"> ▸ Chemical goggles. ▸ Face shield. Full face shield may be required for supplementary but never for primary protection of eyes. ▸ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]
Skin protection	See Hand protection below
Hands/feet protection	<p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:</p> <ul style="list-style-type: none"> ▸ frequency and duration of contact, ▸ chemical resistance of glove material, ▸ glove thickness and ▸ dexterity <p>Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).</p> <ul style="list-style-type: none"> ▸ When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. ▸ When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. ▸ Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use. ▸ Contaminated gloves should be replaced. <p>Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.</p> <ul style="list-style-type: none"> ▸ Rubber gloves (nitrile or low-protein, powder-free latex, latex/ nitrile). Employees allergic to latex gloves should use nitrile gloves in preference. ▸ Double gloving should be considered. ▸ PVC gloves. ▸ Change gloves frequently and when contaminated, punctured or torn. ▸ Wash hands immediately after removing gloves. ▸ Protective shoe covers. [AS/NZS 2210] ▸ Head covering. <p>Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.</p> <ul style="list-style-type: none"> ▸ polychloroprene. ▸ nitrile rubber. ▸ butyl rubber. ▸ fluorocautchouc. ▸ polyvinyl chloride. <p>Gloves should be examined for wear and/ or degradation constantly.</p>
Body protection	See Other protection below
Other protection	<ul style="list-style-type: none"> ▸ For quantities up to 500 grams a laboratory coat may be suitable. ▸ For quantities up to 1 kilogram a disposable laboratory coat or coverall of low permeability is recommended. Coveralls should be buttoned at collar and cuffs. ▸ For quantities over 1 kilogram and manufacturing operations, wear disposable coverall of low permeability and disposable shoe covers. ▸ For manufacturing operations, air-supplied full body suits may be required for the provision of advanced respiratory protection. ▸ Eye wash unit. ▸ Ensure there is ready access to an emergency shower. ▸ For Emergencies: Vinyl suit
Thermal hazards	Not Available

Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:000 & 149:001, ANSI Z88 or national equivalent)

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Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	P1 Air-line*	- -	PAPR-P1 -
up to 50 x ES	Air-line**	P2	PAPR-P2
up to 100 x ES	-	P3	-
		Air-line*	-
100+ x ES	-	Air-line**	PAPR-P3

* - Negative pressure demand ** - Continuous flow

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Yellow crystalline freeze-dried solid; soluble in water.		
Physical state	Divided Solid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"> ► Unstable in the presence of incompatible materials. ► Product is considered stable. ► Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

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Information on toxicological effects

Inhaled	<p>The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of dusts, or fumes, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.</p> <p>Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual.</p> <p>Ketamine exposure may produce psychological manifestations such as hallucinations, dream-like states.</p> <p>Recovery from ketamine-induced anaesthesia may produce adverse emergence reactions including delirium, vivid, often, unpleasant dreams, confusion, hallucination, irrational behaviour and increased muscle tone. Blood pressure and heart-rate may be temporarily increased although hypotension, arrhythmias and bradycardia may also occur. Ketamine may produce tonic and clonic movements that resemble seizure. Depressed respiration, apnoea, laryngospasm, diplopia, nystagmus, anorexia, nausea, vomiting, headache and transient skin rashes have been reported. Biological action involves antagonism of the neuroreceptor, NMDA.</p> <p>Pharmacologically, ketamine is classified as an NMDA receptor antagonist, but it also acts at numerous other sites (including opioid receptors and monoamine transporters). It is classified as a dissociative agent. The state it induces is described as a "trancelike cataleptic state of 'sensory isolation' [which] is characterized by potent analgesia, sedation, and amnesia while maintaining cardiovascular stability and preserving spontaneous respirations and protective airway reflexes</p> <p>Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.</p> <p>If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.</p>
Ingestion	<p>Accidental ingestion of the material may be damaging to the health of the individual.</p> <p>Dopamine reuptake inhibitors (DRIs) are notorious for their high abuse potential and liability to cause cravings, addiction, and dependence. Pure DRIs such as cocaine and combination releasing agents such as amphetamine, methamphetamine, MDMA ("Ecstasy"), and 4-methylaminorex are widely abused throughout the world.</p> <p>Notably, some DRIs have a lower abuse potential than others. Those that have a slow onset and long duration of action such as bupropion and methylphenidate (Ritalin) are typically much less reinforcing than faster acting ones which produce a rush like cocaine. In fact, bupropion is often used as a maintenance therapy for treating stimulant addiction. However, depending on the route of administration (e.g., insufflation, inhalation, or injection), the pleasurable effects of the DRI in question can be dramatically enhanced, potentially rendering those with only mild rewarding effects to become far more reinforcing than they would be under normal circumstances.</p> <p>DRIs can induce a wide range of physiological and psychological effects, including the following:</p> <p>Physiological: dizziness, lightheadedness, or vertigo; mydriasis or pupil dilation; xerostomia or dry mouth; nausea and/or emesis or vomiting; gastrointestinal disturbances such as diarrhea and/or constipation; headache or migraine; trembling, shakiness, or muscle tremors; anorexia or decreased appetite and subsequent weight loss; insomnia or inability to fall asleep; analgesia or pain relief; hypertension or increased blood pressure; tachycardia or increased heart rate; hyperthermia or increased body temperature; hyperhidrosis or increased perspiration or sweating.</p> <p>Psychological: A general and subjective alteration in consciousness; stimulation, arousal, and hyperactivity; Increased alertness, awareness, and wakefulness; increased energy and endurance; agitation or restlessness; enhanced attention, focus, and concentration; increased desire, drive, and motivation; improved cognition, memory, and learning; goal-oriented thoughts or organized behavior; rapid speech and/or racing thoughts; antidepressant benefits or mood lift; euphoria and/or rushes of pleasure; anxiolysis and/or stress reduction; sociability and/or talkativeness, as well as enhanced charisma and/or humor; increased self-confidence, arrogance, and/or egotism; feelings of power, grandiosity, and superiority; irritability, aggression, anger and/or rage; impulsivity or impetuousness; hypersexuality and aphrodisiac effects.</p> <p>Miscellaneous: increased or decreased drug cravings and/or addiction (depending on the setting and usage); drug tolerance with time and/or chronic administration, potentially resulting in dependence; drug interactions such as abolished effects from dopamine releasing agents like amphetamine.</p> <p>It should be noted, however, that many of these properties are dependent on whether the DRI in question is capable of crossing the blood-brain-barrier. Those that do not will only produce peripheral effects.</p> <p>Overdose: At very high doses and/or with chronic administration characterized by overdose, stimulant psychosis may develop, the symptoms of which can include the following:</p> <p>Physiological; myoclonus or involuntary and intense muscle twitching; hyperreflexia or overresponsive/overreactive reflexes.</p> <p>Psychological : disorientation and/or confusion; anxiety, severe paranoia, and/or panic attacks; hypervigilance or increased sensitivity to perceptual stimuli, accompanied by significantly increased threat detection; hypomania or full-blown mania; derealization and/or depersonalisation; hallucinations and/or delusions; thought disorder or disorganised thinking; cognitive and memory impairment potentially to the point of retrograde or anterograde amnesia; delirium and/or insanity.</p> <p>Miscellaneous: syncope or fainting or loss of consciousness; seizures or convulsions; neurotoxicity or brain damage; coma and/or death.</p> <p>Additionally, potential incarceration, hospitalisation, institutionalization, and/or death, on account of extreme erratic behavior which may include acts of crime, assault, accidental or intentional self-injury, and/or suicide, as well as illicit drug abuse, may ensue under such circumstances.</p> <p>As a reuptake inhibitor, for the dopamine, DRIs block the action of the dopamine transporter (DAT) This in turn leads to increased extracellular concentration dopamine and, therefore, an increase in dopaminergic neurotransmission. A condition known as dopamine dysregulation syndrome (DDS), sometimes known as hedonistic dysregulation is encountered in dopamine replacement therapies used in the treatment of Parkinson's disease. This is due to a long exposure to dopamine replacement therapy (DRT) and is characterised by self-control problems such as addiction to medication, gambling, or hypersexuality.</p> <p>NMDA receptor antagonism may produce anaesthetic, amnesic, dissociative, and hallucinogenic effects. NMDA antagonists</p>

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	<p>have been used as neuroprotective agents counteracting the effects of overactivation of the receptor; however such antagonists may also be harmful, at high doses, as the neuron also needs calcium for normal function. Very high doses may produce irreversible damage (including the psychomimetic effects caused by PCP - "angel dust"- abuse). Certain NMDA antagonists (notably those used to produce anaesthetics) induce arousal and even seizures. This class of drug has also produced a model psychosis indistinguishable from schizophrenia.</p> <p>Although benzodiazepine overdose is frequent, severe poisonings are rare. Ingestion of massive amounts have been reported without the occurrence of coma, hypotension or respiratory depression. Interactions with alcohol may potentiate the effects of the benzodiazepines. Side-effects of benzodiazepines are usually mild and infrequent. Drowsiness and lightheadedness and ataxia (loss of muscle coordination) are the most common and are dose-related. Other effects may include hypotension, respiratory depression, nausea and constipation, changes in salivation, blurred vision and diplopia (double vision), dysarthria (speech difficulty), skin rashes, urinary detention, incontinence, mental depression, tremor, libido. Blood changes and jaundice may occur occasionally. In an occupational setting, incidental exposure to the material may produce identical effects to those produced in therapy. Individual workers are expected to exhibit the same range of responses as those receiving the drug under supervision. Because individuals with a history of psychiatric disorders of addiction to, or abuse of, drugs and alcohol are at increased risk of habituation and dependence, they should be under surveillance when receiving any hypnotic drug. The most common side-effects of sleep medicines include drowsiness, dizziness, lightheadedness and difficult coordination. Alcohol may increase the side-effects of these drugs. Sleep medicines may also cause a special type of memory loss or "amnesia". When this occurs an individual may not remember events occurring several hours after taking the drug. When taking sleep drugs every night for several weeks, tolerance may develop and may lead to the individual increasing the dose to elicit earlier effects. When used at high doses for several weeks, dependence or "addiction" may also occur. Withdrawal symptoms may include unpleasant feelings in mild cases, whilst in more severe cases there may be abdominal and muscle cramps, vomiting, sweating, shakiness, and rarely, seizures. Rebound insomnia may also occur after withdrawal of the drug; an individual may have more trouble sleeping the first few nights after the drug is stopped than before starting treatment. Less common amongst individuals using hypnotic drugs are behavioural changes: these include loss of personal identity, confusion, strange behaviour, agitation, hallucinations, worsening of depression and suicidal thoughts. Sleep drugs may also cause sedation of the unborn baby when used during the last weeks of pregnancy.</p>
Skin Contact	<p>The material is not thought to be a skin irritant (as classified by EC Directives using animal models). Abrasive damage however, may result from prolonged exposures. Good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.</p> <p>Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>
Eye	<p>Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may cause transient discomfort characterised by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result. The material may produce foreign body irritation in certain individuals.</p>
Chronic	<p>Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.</p> <p>Exposure to the material may cause concerns for humans owing to possible developmental toxic effects, on the basis that similar materials tested in appropriate animal studies provide some suspicion of developmental toxicity in the absence of signs of marked maternal toxicity, or at around the same dose levels as other toxic effects but which are not a secondary non-specific consequence of other toxic effects.</p> <p>With sustained use of some substances, psychological and physical dependence ("addiction") may develop, making the cycle of abuse even more difficult to interrupt.</p> <p>Psychoactive drugs operate by temporarily affecting a person's neurochemistry, which in turn causes changes in a person's mood, cognition, perception and behavior. There are many ways in which psychoactive drugs can affect the brain. Each drug has a specific action on one or more neurotransmitter or neuroreceptor in the brain.</p> <p>Exposure to a psychoactive substance can cause changes in the structure and functioning of neurons, as the nervous system tries to re-establish the homeostasis disrupted by the presence of the drug. Exposure to antagonists for a particular neurotransmitter increases the number of receptors for that neurotransmitter, and the receptors themselves become more sensitive. This is called sensitisation. Conversely, overstimulation of receptors for a particular neurotransmitter causes a decrease in both number and sensitivity of these receptors, a process called desensitisation or tolerance. Sensitisation and desensitisation are more likely to occur with long-term exposure, although they may occur after only a single exposure. These processes are thought to underlie addiction.</p> <p>Addiction can be divided into two types: psychological addiction, by which a user feels compelled to use a drug despite negative physical or societal consequence, and physical dependence, by which a user must use a drug to avoid physically uncomfortable or even medically harmful withdrawal symptoms. Not all drugs are physically addictive, but any activity that stimulates the brain's dopaminergic reward system - typically, any pleasurable activity - can lead to psychological addiction. Drugs that are most likely to cause addiction are drugs that directly stimulate the dopaminergic system, like cocaine and amphetamines. Drugs that only indirectly stimulate the dopaminergic system, such as psychedelics of the tryptamine class, are not as likely to be addictive.</p> <p>The first large-scale, longitudinal study of ketamine users found current frequent (averaging 20 days/month) ketamine users had increased depression and impaired memory by several measures, including verbal, short-term memory, and visual memory. Current infrequent (averaging 3.25 days/month) ketamine users and former ketamine users were not found to differ from controls in memory, attention, and psychological well-being tests. This suggests the infrequent use of ketamine does not cause cognitive deficits, and that any deficits that might occur may be reversible when ketamine use is discontinued. However, abstinent, frequent, and infrequent users all scored higher than controls on a test of delusional symptoms. Irritative urinary tract symptoms from ketamine abuse have been reported. Urinary tract symptoms have been collectively</p>

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referred as "ketamine-induced ulcerative cystitis" or "ketamine-induced vesicopathy", and they include urge incontinence, decreased bladder compliance, decreased bladder volume, detrusor overactivity, and painful haematuria (blood in urine). Bilateral hydronephrosis and renal papillary necrosis have also been reported in some cases. The pathogenesis of papillary necrosis has been investigated in mice, and mononuclear inflammatory infiltration in the renal papilla resulting from ketamine dependence has been suggested as a possible mechanism. The time of onset of lower urinary tract symptoms varies depending, in part, on the severity and chronicity of ketamine use; however, it is unclear whether the severity and chronicity of ketamine use corresponds linearly to the presentation of these symptoms. All reported cases where the user consumed greater than 5 g/day reported symptoms of the lower urinary tract. Urinary tract symptoms appear to be most common in daily ketamine abusers who have abused the drug for an extended period of time. These symptoms have presented in only one case of medical use of ketamine. However, following dose reduction, the symptoms remitted.

Studies of ketamine-induced neurotoxicity have focused on primates in an attempt to use a more accurate model than rodents. One such study administered daily ketamine doses consistent with typical recreational doses (1 mg/kg IV) to adolescent cynomolgus monkeys for varying periods of time. Decreased locomotor activity and indicators of increased cell death in the prefrontal cortex were detected in monkeys given daily injections for six months, but not those given daily injections for one month. A study conducted on rhesus monkeys found a 24-hour intravenous infusion of ketamine caused signs of brain damage in five-day-old but not 35-day-old animals. Some neonatal experts do not recommend the use of ketamine as an anesthetic agent in human neonates because of the potential adverse effects it may have on the developing brain. These neurodegenerative changes in early development have been seen with other drugs that share the same mechanism of action of NMDA receptor antagonism as ketamine.

Prolonged use of the benzodiazepines may lead to the development of dependence of the barbiturate-alcohol type. They have a low ability for abuse. Tolerance, physical dependence and a withdrawal syndrome are now recognised as possible consequences of long-term high dose therapy. Benzodiazepine withdrawal syndrome - often abbreviated to "benzo withdrawal" - is the cluster of symptoms that emerge when a person who has taken benzodiazepines and has developed a physical dependence undergoes dosage reduction or discontinuation. It is characterised by often severe sleep disturbance, irritability, increased tension and anxiety, panic attacks, hand tremor, sweating, difficulty with concentration, confusion and cognitive difficulty, memory problems, dry retching and nausea, weight loss, palpitations, headache, muscular pain and stiffness, a host of perceptual changes, hallucinations, seizures, psychosis, and suicide. Further, these symptoms are notable for the manner in which they wax and wane and vary in severity from day to day or week by week instead of steadily decreasing in a straightforward monotonic manner. Benzodiazepine withdrawal can be severe and can provoke life-threatening withdrawal symptoms, such as seizures, particularly with abrupt or over-rapid dosage reduction from high doses or long time users.

Benzodiazepines are thought to produce extrapyramidal effects and may precipitate tardive dyskinesia (characterised by continual chewing movements with intermittent darting movements of the tongue). Medical conditions aggravated by benzodiazepines include arteriosclerosis and renal, hepatic and respiratory dysfunction.

Benzodiazepines rapidly penetrate membranes and, therefore, rapidly cross over into the placenta with significant uptake of the drug. Use of benzodiazepines in late pregnancy, especially high doses, may result in hypotonia, also known as floppy infant syndrome.

An increased risk of congenital malformation has been associated with some benzodiazepine derivatives. The substance diffuses readily across the placenta and may cause defects (including cleft lip and palate). This finding, however, is equivocal. The risk for a variety of cancers potentially induced by the benzodiazepines has been the subject of several studies. One case-control study of ovarian cancer reported an increased risk for diazepam use; this was not confirmed by another study. Other studies have not found a positive association with benzodiazepine use and other types of cancer, including breast cancer. Children borne of mothers taking sedative/hypnotic drugs may be at risk for withdrawal symptoms from the drug during the postnatal period. In addition, neonatal flaccidity has been reported in infants born of mothers who receive sedative/hypnotic drugs during pregnancy.

Long term exposure to high dust concentrations may cause changes in lung function (i.e. pneumoconiosis) caused by particles less than 0.5 micron penetrating and remaining in the lung. A prime symptom is breathlessness. Lung shadows show on X-ray.

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	Not Available	Not Available
tiletamine hydrochloride	TOXICITY	IRRITATION
	Not Available	Not Available
zolazepam hydrochloride	TOXICITY	IRRITATION
	Not Available	Not Available
Legend:	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances	

TILETAMINE HYDROCHLORIDE & ZOLAZEPAM HYDROCHLORIDE	No significant acute toxicological data identified in literature search.
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Acute Toxicity	⊖	Carcinogenicity	⊖
Skin Irritation/Corrosion	⊖	Reproductivity	⊖
Serious Eye Damage/Irritation	⊖	STOT - Single Exposure	⊖
Respiratory or Skin sensitisation	⊖	STOT - Repeated Exposure	⊖
Mutagenicity	⊖	Aspiration Hazard	⊖

Legend: ✗ – Data available but does not fill the criteria for classification

✓ – Data required to make classification available

⊖ – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
tiletamine hydrochloride	EC50	96	Algae or other aquatic plants	3.891mg/L	3
tiletamine hydrochloride	EC50	96	Algae or other aquatic plants	6.978mg/L	3
tiletamine hydrochloride	LC50	96	Fish	11.488mg/L	3

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
tiletamine hydrochloride	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
tiletamine hydrochloride	LOW (LogKOW = 2.7904)

Mobility in soil

Ingredient	Mobility
tiletamine hydrochloride	LOW (KOC = 1013)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	<p>Valuable substance, hold all residues for recovery. Disposal of the material must be carried out in accordance with the requirements of the relevant Federal/State Act(s) or Code(s) regulating the disposal of Drugs of Addiction.</p> <ul style="list-style-type: none"> ▶ Consult manufacturer/supplier for recycling options. ▶ Decontaminate empty containers with water; incinerate plastic bags. ▶ DO NOT reuse containers. Bury empty containers in an authorised landfill. <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> ▶ Reduction ▶ Reuse ▶ Recycling ▶ Disposal (if all else fails) <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. In most instances the supplier of the material should</p>
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be consulted.

- ▶ **DO NOT** allow wash water from cleaning or process equipment to enter drains.
- ▶ It may be necessary to collect all wash water for treatment before disposal.
- ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- ▶ Where in doubt contact the responsible authority.

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

TILETAMINE HYDROCHLORIDE(14176-50-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

ZOLAZEPAM HYDROCHLORIDE(33754-49-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Not Applicable

National Inventory	Status
Australia - AICS	N (tiletamine hydrochloride; zolazepam hydrochloride)
Canada - DSL	N (tiletamine hydrochloride; zolazepam hydrochloride)
Canada - NDSL	N (tiletamine hydrochloride; zolazepam hydrochloride)
China - IECSC	N (tiletamine hydrochloride; zolazepam hydrochloride)
Europe - EINEC / ELINCS / NLP	N (tiletamine hydrochloride)
Japan - ENCS	N (tiletamine hydrochloride; zolazepam hydrochloride)
Korea - KECI	N (tiletamine hydrochloride; zolazepam hydrochloride)
New Zealand - NZIoC	Y
Philippines - PICCS	N (tiletamine hydrochloride; zolazepam hydrochloride)
USA - TSCA	N (tiletamine hydrochloride; zolazepam hydrochloride)
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average

Continued...

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PC—STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit.
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index

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TEL (+61 3) 9572 4700.

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