

Sydney Port Botany Terminal 3 Project

Feral Animal Management Plan

Terms and Definitions

The following terms, abbreviations and definitions are used in this plan:

Terms	Explanation
SPBT3	Sydney Port Botany Terminal 3
CEMP	Construction Environmental Management Plan
EM	Environmental Manager
EPA	Environmental Protection Agency
ERAP	Environmental Risk Action Plan
OEH	Department of Climate Change and Water
FAMP	Feral Animal Management Plan
EIS	Environmental Impact Statement
MCoA	Ministers Conditions of Approval

Distribution

The master 'controlled' Feral Animal Management Plan (FAMP) document forms part of the project's CEMP as an Appendix. The controlled copy will be retained in TeamBinder, the Laing O'Rourke document management system, where it can be accessed by personnel as necessary.

All paper copies of this FAMP will be considered as 'uncontrolled' unless they have been allocated a 'copy number' in a colour other than black.

The client representative will be provided with a copy in conjunction with the submission of the CEMP.

Issue, Revision and Re-issue

The initial issue of this FAMP has been reviewed by Laing O'Rourke's Regional Environmental Manager to ensure it meets the requirements of the current EMS and policy, contract, specifications and standards. The plan is approved for use on the project by the Project Director. Evidence of initial review and approval is by signatures on the cover sheet.

In conjunction with the submission of the FAMP, Laing O'Rourke will coordinate and facilitate an initial FAMP Workshop with representatives from the client and Laing O'Rourke to discuss the contents and application of the FAMP to facilitate the approval of the FAMP and agree the proposed management measures and controls.

Revisions of this FAMP may be required throughout the duration of the project to reflect changing circumstances or identified opportunities for improvement.

Revisions may result from:

- Management Review
- Changes to the Company's standard system
- Audit (either internal or by external parties)
- Client complaints or non-conformance reports.

Revisions shall be reviewed and approved by the Project Manager prior to issue. Updates to this FAMP are numbered consecutively and transmitted to holders of controlled copies.

Contents

Terms and Definitions	1
Distribution.....	1
Issue, Revision and Re-issue	1
1. Introduction	4
1.1 Objective	4
1.2 Targets.....	4
1.3 Statutory provisions and guidelines.....	5
2. References	5
3. Strategic Approach	5
3.1 Background.....	5
3.2 Construction Issues	6
3.3 Pest Control Methods	6
3.3.1 1080 Baiting of Red Fox	6
3.3.2 Controlling Feral Cats	7
3.3.3 Controlling Domestic Dogs	7
3.3.4 Controlling Rabbits.....	7
3.3.5 Controlling Introduced Mice & Rats	7
4. Mitigation Measures.....	7
5. Monitoring.....	8
6. Training	8
7. Monitoring of Controls	8

1. Introduction

This Feral Animal Management Plan (FAMP) has been developed to address the construction activities associated with the Sydney Port Botany Terminal 3 (SPBT3) Project. In particular, the plan has been developed to address the requirement for a Feral Animal Management Plan as outlined in the Framework Construction Environmental Management Plan.

Development of Sydney Port Botany Terminal 3 will involve the construction of onshore civil infrastructure including container stacking areas. The proposed Terminals have four berths with a total length of 1,180 m. The approximate Terminal area, excluding the Wharf area is 46 ha.

The key components of the Sydney Port Botany Terminal 3 include:

- Ground treatment and consolidation measures
- Drainage, utilities, services
- Container yard
- HV & LV electrical
- Buildings
- Rail yard.

1.1 Objective

This FAMP seeks to ensure feral animals are managed effectively to prevent any negative environmental impact on Botany Bay and associated ecosystems. Appropriately trained personnel and experience gained from previous projects will be used to achieve high environmental performance on the SPBT3 Project.

It is recognised that during construction some specific areas will require alterations to the planned control measures due to changing circumstances. In these situations, the planned control measures will be reviewed, risk assessed and, where appropriate and practical, amended as necessary prior to commencing new or modified activities.

This FAMP aims to satisfy the following objectives:

- Address the requirements of the planning approval for the SPBT3 Project
- Address the requirements of the Environmental Impact Statement (EIS) for the Port Botany expansion
- Address the requirements outlined in the Aurecon Framework Construction Environmental Management Plan
- Address the requirements of the relevant environmental legislation as it applies to this project
- Address the requirements of the Environment Protection Licence issued for the works undertaken for the SPBT3 Project
- Summarise potential impacts on the environment from the proposed works
- Document environmental procedures to control potential environmental impacts.

Responsibilities for the implementation and management of this FAMP are in accordance with the Project's Construction Environmental Management Plan.

1.2 Targets

The following targets have been identified in terms of feral animal management for the project:

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- Protect shorebirds by monitoring, actively managing and if necessary, controlling pest predators.
 - Protect vegetation by managing rabbits and controlling disease.
 - Control pest species within Penrhyn Estuary through active management if necessary
 - Monitor the effects of activities and the effectiveness of mitigation measures
 - Ensure all personnel are appropriately trained in environmental awareness and the significance of the ongoing health of the surrounding Bay.

1.3 Statutory provisions and guidelines

The following statutory provisions and guidelines are applicable to the Project, with regards to water quality:

- Sydney Port Botany Terminal 3 Expansion Planning Approval
- Threatened Species Conservation Act 1995 (NSW)
- Pesticides Act 1999 (NSW)
- Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)
- Rural Lands Protection Act 1998 (NSW)
- Pesticide Regulation 1999 (NSW)
- Pesticide Control Order
- POEO Act 1997.

2. References

- Port Botany Expansion Environmental Impact Statement
- Aurecon Framework Construction Environmental Management Plan Sydney Terminal 3 Sydney International Container Terminals Pty Limited, Revision 3
- Predation by the Red Fox – Threat Abatement Plan (DECC, December 2001)
- Penrhyn Estuary Habitat Enhancement Plan (PEHEP)
- Reference is also made to the NSW Protection of the Environment Operations Act which integrates into one Act all of the controls necessary to regulate pollution and reduce degradation of the environment. The Act also provides for licensing of scheduled development work, scheduled activities and for offences and prosecution under this Act.

3. Strategic Approach

3.1 Background

Key Threatening Processes listed under both the TSC and EPBC Acts relevant to the study area and the Port Botany Expansion comprise of the following:

- Predation by the European Red Fox; and
- Predation by Feral Cats.

Domestic dogs are also a disturbance threat for shorebirds.

Penrhyn Estuary is located close to major population centres and access routes and has traditionally been used for recreational purposes including dog walking.

Use of 1080 poison (sodium monofluoroacetate) is heavily restricted by the National Registration Authority. Its use is currently precluded at Port Botany due to distance from habitation regulations. An exemption must be applied for its use under current licensing conditions.

3.2 Construction Issues

Fencing is not a practical option to completely exclude foxes, dogs or cats in this environment as they will walk around fencing at low tide. It may, however, reduce the number of pest species within the estuary, especially if used in conjunction with other control measures.

Baiting of foxes using 1080 would only be undertaken where a demonstrated need arises, such as evidence of prolonged predation. The presence of foxes would not in itself justify implementation of a 1080 fox control program. It would be carried out in conjunction with OEH National Parks and other relevant authorities.

Pest control required outside the terminal 3 work site is considered to be outside of Laing O'Rourke's scope. Any required actions will be in consultation with SICTL and Sydney Ports.

3.3 Pest Control Methods

A range of pest species have the potential to impact upon shorebirds at Penrhyn, however the two species most likely to pose threats are foxes and feral cats. Domestic dogs pose a significant disturbance threat to shorebirds and can harass shorebirds to the point of causing them to desert a site. Therefore domestic dogs are also considered.

3.3.1 1080 Baiting of Red Fox

The Red Fox is present at Penrhyn Estuary as well as adjacent areas and nearby Botany Bay National Park. Broad scale baiting using the toxin 1080 is generally considered the most effective method of fox control currently available. Baiting with 1080 is accepted practice in many areas, including Botany Bay National Park.

The effective use of 1080 baiting is limited by various factors, and must be implemented in conjunction with OEH and other authorities.

The National Registration Authority (NRA) places restrictions on the use of 1080 poison. These restrictions are to reduce risk to people and non-target animals. For example, baits must not be laid where specified distance restrictions cannot be met. In these instances other methods of control should be sought.

Rainfall and ground water saturation results in the rapid breakdown of 1080 baits, rendering them ineffective as control agents. Periods of rainfall can preclude the use of 1080 as a control method, and in these circumstances other methods of control should be sought. Being an estuary, Penrhyn Estuary has a high water table and receives regular tidal exchanges. This, combined with any rainfall, potentially reduce the effectiveness of any 1080 baiting program.

Some foxes may develop a condition known as 'bait shyness'. This condition may be a natural awareness in some individuals or arise from exposure to a sub-lethal dose of 1080 toxin. These individuals may refuse to take further baits and cannot therefore be targeted through a 1080 program. Other control methods should be sought to manage bait shy individuals.

Under certain circumstances parts of the estuary may be closed to staff for management reasons. While closures of this nature are likely to be infrequent, they may restrict staff movements. Under these circumstances the effectiveness of reserve baiting programs is severely limited. Bait placement and the presence of domestic dogs would be considered in establishing the programs.

Some alternatives to 1080 baiting used in NSW are aerial baiting, den fumigation, soft jaw trapping, dogging, biological control, exclusion fencing, ground and aerial shooting. These alternatives are difficult to implement in the context of Penrhyn Estuary.

1080 Baiting will only be undertaken in consultation with SICTL and is not expected to be within Laing O'Rourke's scope of works.

3.3.2 Controlling Feral Cats

Feral cats are known to prey on many small native animals. 1080 programs cannot be used to control feral cats. Trapping is the preferred method for controlling feral cats. Any cats trapped during this project will be taken to a veterinarian.

3.3.3 Controlling Domestic Dogs

Penrhyn Estuary has a history of usage by recreational dog walkers. Domestic dogs pose a disturbance risk and may harass and chase shorebirds from the site. Many shorebirds undertake long distance migrations, and whilst in Australia seek areas with low levels of disturbance to reach peak condition prior to migration.

Persistent interruptions to foraging and roosting regimes may cause shorebirds to temporarily or permanently desert a site. The population of shorebirds at Penrhyn is in decline, which may be due to increased disturbance over time.

Recreational users and domestic dogs are to be excluded from the estuary and construction site as early as possible and in accordance with the construction timetable. Signage will be introduced and exclusion fencing installed at certain parts of the site.

3.3.4 Controlling Rabbits

The extent of rabbit populations at Penrhyn Estuary is not adequately known. Pindone baiting is recommended for use at sites with medium to high rabbit density. Alternative control methods e.g. trapping are recommended for sites exhibiting low rabbit density. In the event that rabbits become a nuisance pest i.e. impacting upon landscaping etc, a monitoring and control program is recommended in conjunction with an ecologist and OEH.

3.3.5 Controlling Introduced Mice & Rats

Introduced mice and rats may be present within Penrhyn Estuary. Maintaining an environment free of food scraps and periodic waste collection will limit the numbers of introduced rodents. Where numbers dictate, controls may include trapping and poisoning. This would be done in consultation with an ecologist to minimise the risk to non-target species.

4. Mitigation Measures

Mitigation measures for soil and water quality management for the construction phase of the project are outlined below.

Mitigation Measures	Responsibility	Source of Requirement	Timing
Design rubbish bins to be bird and animal proof	Environment Manger Superintendent	EIS Ch 20.8.4	Throughout construction
Restrict public access to the estuary through signage, fencing	Project Engineer	EIS Ch 20.8.4	Site establishment
Collect and dispose of litter daily to reduce attraction of target species	Superintendent	Best Practice	Throughout construction

Mitigation Measures	Responsibility	Source of Requirement	Timing
If required, trial and operate pest control measures involving animal trapping or other methods to control domestic and feral animals on site.	Environment Manger	EIS Ch 20.8.4	If required
If required, prior to any use of 1080 poison to control foxes consult with OEH, DPI Fisheries and the Rural Lands Protection Board, and undertake control works in accordance with National Registration Authority conditions of use.	Environment Manger	EIS Ch 20.8.4	If required
If pesticides are used, follow contract requirements and SPC's Pesticide Use Notification Plan	Environment Manger	Contract	If required

5. Monitoring

Monitoring Item	Frequency	Responsibility
Reporting presence of foxes/cats	Ongoing daily	All personnel
If required, effectiveness of pest controls to ensure that no build up of target species occurs.	If required	Environmental Manager
Presence of pests and weeds in landscaped areas.	Monthly, following landscaping	Environmental Manager
Auditing correct waste procedures on site	Monthly	Environmental Manager

6. Training

All site personnel shall undergo site specific induction training which will include environmental awareness. It will also include training in feral animal management on site. The need for any controls will be emphasised.

Toolbox meetings will also be undertaken as and when required. They will cover specific environmental issues and shall include feral animal control measures.

Personnel directly involved in implementing feral animal control measures on site will be given specific training in the construction, operation and maintenance of the various measures to be implemented. Training of site personnel will be ongoing through the project to ensure environmental awareness and competency is incorporated into all work during the project.

Personnel conducting measuring, monitoring and reporting activities are to be suitably trained or experienced in the activity. Records of all training are to be filed in accordance with the project filing system.

7. Monitoring of Controls

Items that require repair or action will be documented on the weekly checklist or on form F 1228 as seen in the CEMP. Items that require specific and detailed action will be recorded on the Project's Corrective Action Register.

A detailed inspection will also be conducted three to four days prior to long weekends, RDO weekends or other periods when the site will be shut down for a lengthy time period. This will enable items requiring attention to be identified, raised on an Environmental Improvement Request (EIR) (Form F 1228) and implemented. An example of an EIR is seen in the CEMP.

The Superintendent will be responsible for providing appropriate resources in terms of labour, plant and equipment to enable the items to be rectified in the nominated timeframes.

Inspections to be recorded on Form 1227 Weekly Environmental Inspection Checklist. If deemed necessary, additional sedimentation control measures will be implemented to ensure that water quality is maintained throughout the works.

Improvement requests received from the Client's Environmental Representative or other appropriate agencies shall be assessed and responded to within 24 hours if the issue is not environmentally threatening.

The following forms and check sheets shall be utilised to inspect, monitor and record erosion and sediment controls and water quality on this project and filed in accordance with the project filing system.

- Form F 1227 Weekly Environmental Checklist
- Form F 1228 Environmental Improvement Request.