

Kurnell Terminal Demolition Project

Biodiversity and Weed Management Plan

CALTEX REFINERIES (NSW) PTY LTD

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Appendix A Fauna Identification Sheet

Revision History

Revision No.	Date of Revision	Description of Revision	Section / Page No.
A	July 2015	Draft for consultation	-
B	September 2015	Final for Approval	-
C	September 2015	Approved	-

1 INTRODUCTION

Caltex is in the process of converting the petroleum refinery in Kurnell (the 'Site') to a finished fuel Terminal facility (the Project).

The Project is divided into two phases:

- Converting infrastructure to allow the Site to operate as a Terminal and shut down the refinery (the Project).
- Demolition and removal of redundant infrastructure (the demolition works).

This Biodiversity and Weed Management Plan (BWMP) has been prepared in relation to the demolition works.

The objective of the Project is to ensure that Caltex's operations within Australia remain viable and can provide a safe, reliable and sustainable supply of petroleum fuels to NSW and the ACT.

As such the Project will allow the Site to continue to be utilised as a Terminal where finished products can be received by ship, stored in tanks before leaving the Site by pipeline to other terminals.

The demolition works are being undertaken in accordance with Development Consent from the Department of Environment and Planning and the consolidated Management and Mitigation Measures (MMM) (refer to Approval: SSD 5544 MOD1).

This BWMP has been prepared in response to the Development Consent conditions outlined in **Table 1** below.

Table 1 – Development Consent conditions addressed in this Management Plan

Condition Requirement	Reference Section
<i>C43A - The Applicant shall update and implement the Biodiversity and Weed Management Plan for the demolition works to the satisfaction of the Secretary. This plan is to consolidate the plans approved under conditions C42 and C43 and shall also:</i>	This BWMP
<i>(a) be prepared in consultation with the OEH;</i>	Section 1
<i>(b) be approved by the Secretary (Refer to condition D1A for timing); and</i>	Section 1
<i>(c) include details of pre-clearing inspections and frog exclusion measures to be undertaken prior to excavation along the Continental Carbon Pipeway Right of Way.</i>	Section 4, Table 3

This BWMP has also been prepared in accordance with the following:

- SSD 5544 conditions – C42, C43
- MMM – A10, K1, K2, K4, K6 and K7.

1.1 Legislative and Other Requirements

1.1.1 Environment Protection Licence

The Terminal currently operates in accordance with an Environment Protection Licence (EPL) 837 issued by the NSW Environment Protection Authority (EPA). EPL 837 contains numerous operational conditions and Pollution Reduction Programs (PRPs). EPL Condition U2 – PRP U18 requires the preparation and implementation of measures to manage threatened species.

All work undertaken for the demolition works will comply with the conditions within EPL 837.

2 OBJECTIVES

The objectives of this BWMP Plan are to:

- Minimise the potential for impacts to flora and fauna during demolition works;
- To manage pest, vermin and weeds on the Site during demolition works (reference is made to the on-site Weed Management Plan, which includes an integrated approach to managing pests weeds and vermin).

To address these objectives, the BWMP documents:

- Management measures, actions and associated performance indicators that will be implemented throughout the demolition works;
- Proposed monitoring program that will be implemented; and
- Key project management roles and responsibilities and reporting requirements.

3 PROJECT OVERVIEW

The Site has an ISO 14001 accredited Environmental Management System (EMS). This system includes comprehensive management plans and is used Site wide. The BWMP will be implemented in line with the EMS.

The demolition works will broadly involve the following activities within the demolition works area:

- Demolition, dismantling or removal of:
 - refinery process units and associated infrastructure;
 - redundant tanks and associated infrastructure;
 - redundant pipeways and above and underground pipelines; and
 - redundant buildings and services.
- Associated civil works;
- Waste management activities including concrete crushing; and
- Returning the works areas to ground level.

Refer to the Demolition Environmental Management Plan (DEMP) for **Site Location** and **Site Layout and Demolition Works Area** figures.

3.1 Demolition Works Program

Caltex is planning to commence the demolition works during the second half of 2015. The demolition works are likely to be completed by the end of 2017.

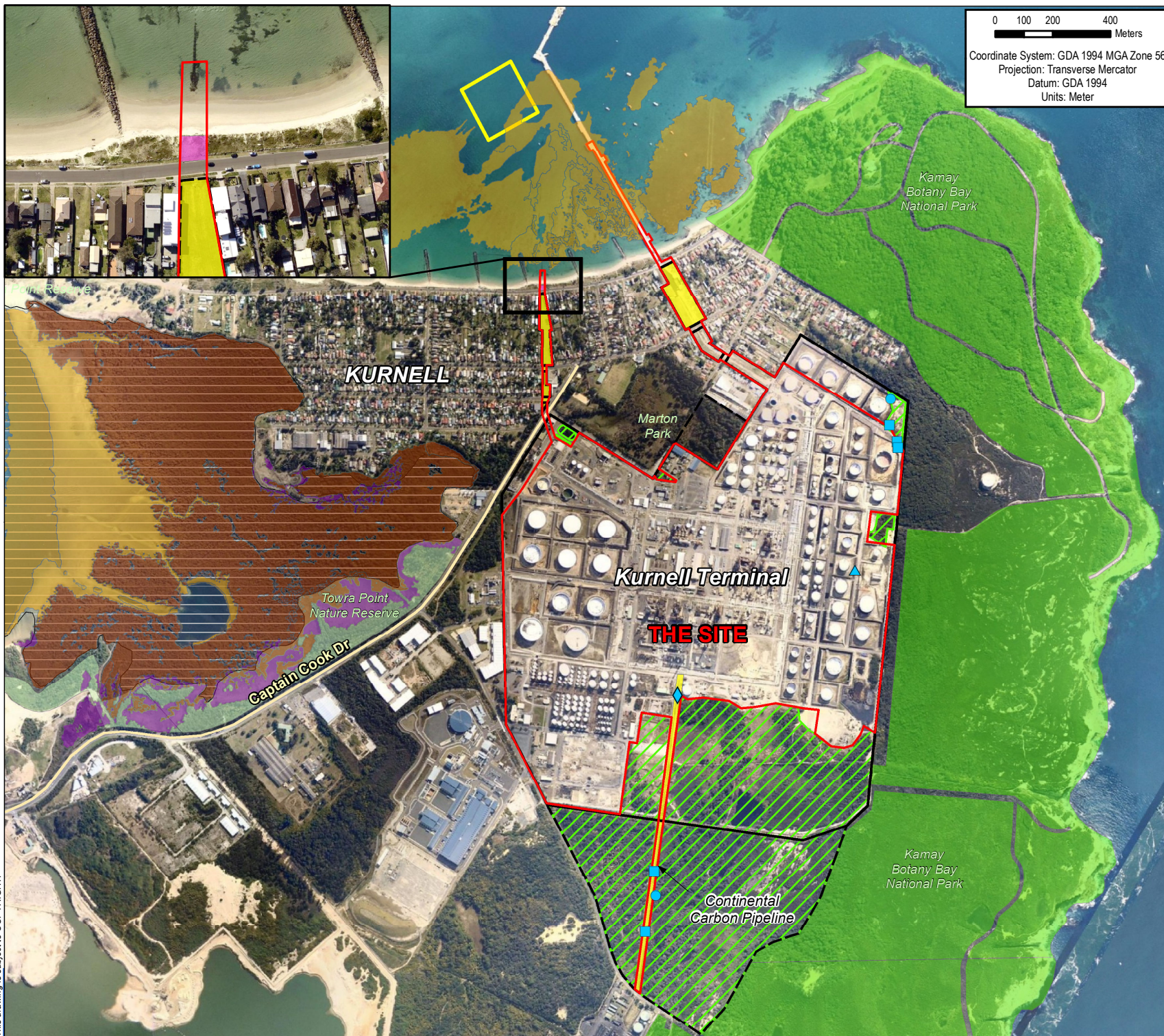
A schedule for demolition works is shown in **Table 2** below.

Table 2 – Proposed Demolition Schedule

Task	Indicative Date
Demolition of refinery process units	3Q 2015 – End 2016
Demolition of tanks	Mid 2016 – Q3 2017
Pipeline removal	Start 2016 – End 2017
Demolition of buildings	Mid 2016 – End 2017
Concrete crushing	Q4 2017

Demolition works associated with the Project will not extend beyond five years from the date of consent of SSD 5544 MOD 1.

Figure 1 shows the locations of the vegetation exclusion areas that will require protection during the demolition works particularly along the Continental Carbon Pipeline ROW and Silver Beach. No demolition works or related plant will be allowed into these areas during the demolition works.



0 100 200 400 Meters
Coordinate System: GDA 1994 MGA Zone 56
Projection: Transverse Mercator
Datum: GDA 1994
Units: Meter

- ### Legend
- Demolition Works Area
 - The Site
 - Caltex Land Ownership
 - Silver Beach Aquaculture
 - Towra Point Aquatic Reserve¹
 - National Park
 - Towra Point Nature Reserve
 - Captain Cook Drive
 - Mangrove²
 - Saltmarsh²
 - Seagrass²
- ### Vegetation
- Exotic Grassland³
 - Silver Beach Foreshore Vegetation³
 - Vegetation Exclusion Zones³
- ### Noxious Weeds
- Chrysanthemoides monilifera subsp. rotunda*
 - Lantana camara*
 - Ludwigia peruviana*
 - Ricinus communis*

Source: Aerial Imagery - © NearMap '23 October 2013'
Streets and Protected Area - © Mapinfo Australia Pty Ltd and PSMA Australia Ltd
¹ Office of Environment and Heritage (OEH)
² NSW DPI 2008
³ Biosis, 'Conversion Works' report 2012 and 'Demolition Works' report 2014.
within the study area', 02 October 2014.
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KURNELL TERMINAL

DEMOLITION PROJECT

BIODIVERSITY AND
WEED MANAGEMENT PLAN

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4 BIODIVERSITY AND WEED MANAGEMENT PROCEDURES

Specific control measures required to undertake the demolition works including the Performance Objectives, Management Actions, Performance Indicators, Monitoring, Reporting and Corrective Actions are set out in the following Sections.

Suitable equipment, facilities, training, work practices and other necessary precautions will be taken to minimise impacts to the environment and the risk of pollution.

All Caltex and Contractors personnel will implement reasonable and practicable measures to avoid or minimise impacts to the environment that may arise from the demolition works.

Generally, the demolition works will be undertaken in a highly modified and disturbed area; however, there is potential for ecological impacts on existing vegetation or fauna outside the demolition works area. This vegetation potentially includes remnants of endangered ecological communities (EECs), as well as the potential for the threatened Wallum Froglet, Green and Golden Bell Frog and Botany Bay Beaded Greenhood to be present. There is a low potential for these species to occur/disperse within the demolition works area due to its highly modified and disturbed nature.

The potential ecological impacts from demolition works include:

- Discharge of stormwater runoff, sediment laden water, contaminated water and oily water off-site and into the groundwater system affecting nearby natural areas and groundwater dependent ecosystems (GDEs) including potential EECs;
- Potential impacts on fauna including accidental trapping of reptiles and amphibians in trenches;
- Removal of perching and nesting habitats for large birds; and
- Further spread of existing noxious weed infestations.

The management of pest, vermin and weeds during the demolition works will primarily be through the existing on-site Weed Management Plan. However, some additional specific mitigation measures for avoiding the further spread of existing noxious weed infestations are provided in Table 3.

4.1 Mitigation Measures

The following biodiversity and weed mitigation measures will be implemented during the demolition works:

Table 3 – Mitigation Measures

Potential Impact	Mitigation Measure
Discharge of stormwater runoff, sediment laden water, contaminated water and oily water off-site and into the groundwater system affecting nearby natural areas and groundwater dependent ecosystems (GDEs)	<ul style="list-style-type: none"> Refer to the Soil and Water Management Plan for management of surface water.
Potential impacts on fauna	<ul style="list-style-type: none"> Demolition workers will be provided with identification sheets relating to the threatened fauna species predicted to occur on the Site. A fauna identification sheet is presented in Appendix A. This information is especially relevant when demolition works are occurring in the Continental Carbon Pipeline Right of Way. <p><u>Threatened Frogs</u></p> <ul style="list-style-type: none"> When open trenching/digging/excavating, exclusion fencing will be established prior to works commencing and inspected daily. Trenches will be backfilled daily or covered overnight or other measures to prevent and/or mitigate fauna entrapment. Trenches/holes will be inspected daily prior to commencing works. Injured frogs that become trapped within trenches will be assessed by a veterinarian or qualified zoologist. Uninjured frogs will be captured and released as near as possible to the location found, in suitable habitat to the south of the demolition works area. Stop work procedures will apply during the works on the chance encounter of any threatened frogs (to avoid death or injury to frogs). If threatened frogs such as Green and Golden Bell Frog or Wallum Froglet are identified during demolition works, active searching will be undertaken by a qualified zoologist experienced in the identification and management of the these species.
Removal of perching and nesting habitats for large birds	<ul style="list-style-type: none"> If practical, works to remove tall structures on-site will be completed outside of the known nesting periods the threatened bird species (July to September for Osprey and June to January for White-bellied Sea-eagle). If not practical then tall structures will be inspected for active nests prior to commencing the demolition works. Stop work procedures will apply during the works on the identification of threatened nesting birds, including the Pied Oystercatcher, Little Tern, Osprey or White-bellied Sea-eagle (to avoid disturbed nesting threatened birds). If nesting birds are encountered, a qualified zoologist will be consulted and appropriate actions will be implemented, prior to works recommencing.

Potential Impact	Mitigation Measure
Temporary impacts to the Silver Beach Foreshore, which is considered potential foraging (and limited) breeding habitat for shorebirds	<ul style="list-style-type: none"> Existing vegetation on Site will be clearly marked on all Site plans and construction diagrams. Vegetation clearing will be minimised as far as practical. Works will be limited to the defined construction/demolition footprint. Following excavation and disturbance of Silver Beach, rehabilitation to restore the area will occur in accordance with the Cooling Water Management Plan.
Further spread of existing noxious weed infestations	<ul style="list-style-type: none"> Comply with the site-wide Weed Management Plan. Noxious weed information sheets will be provided to demolition contractors to help identification of relevant noxious weeds. All personnel undertaking routine management activities of noxious weeds will be appropriately trained and all contractors will hold the necessary permits and licences. Washdown facilities including cleaning equipment will be established for effective removal of noxious plants from vehicles, plant and equipment to help prevent their spread. Demolition vehicles, plant and equipment travelling on un-sealed areas where required will be washed to prevent the spread of root-rot fungus (<i>Phytophthora cinnamomi</i>) and noxious weeds. Stockpiles and disturbed areas will be managed in accordance with the Soil and Water Management Plan and monitored to help prevent spread of noxious weeds as per NSW DPI specifications for Sutherland Shire LGA. Where practical, soils will be re-used in the area from which they were excavated and not moved around the Terminal to minimise the spread of noxious weeds. The use of herbicides in areas where frogs have been identified will be avoided where practicable. Where not practicable 'frog-friendly' and 'wetland-friendly' glyphosate based herbicides, including, but not limited to the following will be used for the control of noxious weeds: <ul style="list-style-type: none"> Glyphocycle 360 Frog Friendly - Weed Control®; Sickle 540®; Roundup Biactive® (360); and WEEDMASTER® Duo Dual Salt Technology Herbicide
Existing vegetation disturbed	<ul style="list-style-type: none"> Existing vegetation on Site will be clearly marked on all Site plans and diagrams, with clear indications of no-go zones within all vegetated areas. Existing vegetation will be clearly signposted and fenced off prior to the commencement of demolition activities and should remain fenced off until the completion of works.
Flora and Fauna disturbed along Continental Carbon Right of Way	<ul style="list-style-type: none"> Pre-clearing inspections will be conducted by a qualified zoologist prior to excavation along the Continental Carbon Right of Way.

5 IMPLEMENTATION

5.1 Roles and Responsibilities

Overall responsibility for the implementation of the BWMP rests with Caltex. All employees and the Contractor will meet the requirements of the BWMP and associated procedures. Management actions set out in the BWMP may be delegated in writing by Caltex to the specific Contractor.

Key demolition works personnel including the Demolition Project Lead (and their delegate), Caltex ER, Contractor Project Manager and each Contractor's Environment / HSE Representative, will ensure that all management actions are undertaken to a satisfactory standard and that all personnel are aware of their responsibilities with respect to environmental matters. There will be dedicated staff to manage environmental issues (or integrated HSE matters) during the implementation and operational phase of the demolition works. A general outline of responsibilities in relation to environmental management is provided below:

Demolition Project Lead / Demolition Execution Superintendent / Demolition Support Services Superintendent

- Overall accountability for the environmental management of the demolition works.
- Implementation of the Caltex Environmental Policy with respect to the demolition works.
- Overall responsibility for development, implementation, maintenance and compliance with the BWMP.

Caltex Environmental Representative (ER)

- Accountable for environmental matters on the demolition works.
- Provide support to Caltex personnel and the Contractor as required to ensure the BWMP is implemented and complied with.
- Review effectiveness and implementation of this Management Plan following a regulatory non-compliance or incident, or at a minimum of every 12 months during the demolition works.
- Monitor the implementation of all required environmental management actions and compliance with legislation.
- Undertake environmental auditing as required.
- Implement *Protection of the Environment Operations Act 1997* (POEO Act) notification requirements in the event of a pollution incident (these requirements can be delegated to appropriate personnel by the ER).

All Personnel (Caltex and the Contractor)

- Comply with the requirements of this BWMP.
- Report all environmental incidents as they occur.
- Attend environmental inductions or any other training as required.

5.2 Induction

Caltex has a Site induction program that contractors and employees are required to complete prior to undertaking work on the Site.

All Caltex employees and the Contractor are required to undertake the Caltex Project Induction, which includes this BWMP before they can commence work.

5.3 Training

All demolition works personnel will have the experience and necessary training to carry out their required tasks, including in the use of equipment and the implementation of this BWMP.

Caltex and the Contractor will each maintain a Training Register that records all environmental training completed by its personnel, including records of attendance at awareness training and toolbox talks, as well as competency assessments.

5.4 Incident Management

Caltex will continue to implement its existing incident management procedures, including response to, investigation and reporting of incidents.

If fauna are killed, injured or are involved in an incident, work in the immediate area is to stop. If uninjured the fauna are to be allowed to move off freely, or relocated by a qualified zoologist to an area outside the demolition area. In the event that the fauna appears to be shocked, is injured or killed a qualified zoologist would be consulted immediately and appropriate actions would be implemented to assist the fauna, prior to works recommencing.

In the event of an incident causing environmental harm occurs as a result of demolition works, the Kurnell Pollution Incident Response Management Plan (PIRMP) will be implemented. The PIRMP is designed to manage environmental incidents which may occur on site.

5.5 Complaints Management

Caltex has a complaint management procedure for the investigation, response and reporting of complaints.

Caltex manages community complaints in accordance with the requirements of EPL 837, including:

- Reporting complaints in the Annual Return for EPL 837
- Keeping a legible record of complaints made to Caltex and its Contractors, including:
 - The date and time of the complaint
 - The method by which the complaint was made
 - Personal details of the complainant provided by the complainant or, if no such details were provided, a note to that effect
 - The nature of the complaint
 - The action taken by Caltex in relation to the complaint, including any follow-up contact with the complainant
 - If no action was taken by Caltex, the reasons why no action was taken

Caltex will continue to operate its 24-hour hotline number (1800 802 385 toll free) to receive feedback and complaints associated with the demolition works. Feedback and complaints will be relayed to the ER and relayed to the Caltex Project Manager, Demolition Project Lead (or delegate), Terminal Manager and the Senior Environmental Specialist (Licensing), as relevant depending on their nature.

Feedback and complaint records will be logged in the Complaints Register, tracked and where relevant, responded to. Responses to complaints will be made, where reasonably possible, within 48 hours of receiving the complaint.

5.6 Performance Indicators

The following performance indicators will be implemented during demolition works, as far as practicable:

- Limited removal of native vegetation.
- No disturbance to 'tall tower' structures whilst being used for nesting by the Osprey or White-bellied Sea-eagle.
- No disturbance to nesting shorebirds.
- Minimise potential disturbance to frog populations.

5.7 Monitoring

The key monitoring requirements for the demolition works are:

- The Contractor will undertake pre-works inspections for frogs in excavations or work areas and take appropriate actions if observed.
- The Contractor will undertake pre works inspections for nesting shorebirds in work areas and take appropriate actions if observed.
- The Contractor will monitor potential impacts to Marton Park Wetland after completion of the stormwater upgrade works, until otherwise agreed with Sutherland Shire Council, in accordance with the monitoring plan prepared by Caltex.
- The Contractor will undertake regular (weekly or as required) inspections of demolition areas as well as stockpiles for the presence of noxious and problematic weeds on site and in the surrounding areas and take appropriate actions if observed.

5.8 Reporting

The reporting requirements for biodiversity and weed management include:

- The Contractor will report the presence of any frogs in work areas of excavations to the Caltex ER as soon as possible.

5.9 Corrective Action

The corrective actions to be implemented during demolition works include:

- Stop work if frogs are encountered. Use the identification sheets attached in Appendix A to identify if the frogs are Green and Golden Bell frogs or Wallum froglet. A qualified zoologist is to undertake frog surveys if Green and Golden Bell frogs or Wallum froglet are encountered. Relocate any frogs within excavations or work areas in accordance with this BWMP (Section 4.1).
- Stop work if nesting birds or shorebirds are encountered (i.e. on tall structures within the main Site or within the rights of way/Silver beach). If nesting birds or shorebirds are encountered, a qualified zoologist will be consulted and appropriate actions implemented, prior to works recommencing.

Appendix A – Fauna Identification Sheet

APPENDIX A – Fauna and Flora Identification Sheet

Kurnell Demolition

Threatened fauna species



Green and Golden Bell Frog



Wallum Froglet

Threatened birds



Pied Oystercatcher



Little Tern



Osprey or White-bellied Sea-eagle

Threatened flora



Botany Bay Bearded Orchid