

Kurnell Wharf Infrastructure Upgrade

Air Quality Management Plan

CALTEX REFINERIES (NSW) PTY LTD

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1 INTRODUCTION

Caltex Refineries (NSW) Pty Ltd (Caltex) proposes to undertake port and berthing facility works off Silver Beach in Botany Bay, NSW (the Project). There are two main elements to the (Project):

- Dredging.
- Upgrading existing elements of the berthing infrastructure.

Environmental management requirements for the Project are set out in the following documents:

- Dredge and Sediment Disposal Management Plan (DSDMP)
- Wharf Upgrade Construction Environmental Management Plan (Wharf Upgrade CEMP)
- Installation of a Sheet Pile Wall and Rock Revetment Construction Environmental Management Plan (Sheet Pile Wall and Rock Revetment CEMP).

This management plan has been prepared to support the DSDMP and the CEMPs.

1.1 Location

The Project works are located in the waters of Botany Bay off Silver Beach (Figure 3 -1).

The works are located in close proximity to places with important ecological and heritage values. These include:

- Towra Point Nature and Aquatic Reserves, which contain an internationally important Ramsar-listed wetland habitat (3.5 km to the west)
- Areas of seagrass beds, which support a range of threatened species (100 m to the south)
- Both Taren and Dolls Point (5 km to the west), which both contain important and protected shorebird communities

Kamay Botany Bay National Park is located approximately 700 m to the east. The National Park contains important Aboriginal and historic heritage; which includes the landing place of Captain James Cook. The National Park also serves as a valued recreational and educational asset. The nearest residents to the Project Site are the Rangers House (Alpha House) in Kamay Botany Bay National Park (700 m to the east) and the properties along Prince Charles Parade, Kurnell (800 m to the south).

2 OBJECTIVES

The objective of the Air Quality Management Plan is to ensure that construction activities do not result in decreased air quality or impacts to the surrounding environment during the Project. To address this objective, the Management Plan documents:

- The management measures, actions and associated performance indicators, that will be implemented throughout the Project;
- The proposed monitoring program that will be implemented; and
- Key project management roles and responsibilities and reporting requirements.

3 PROJECT OVERVIEW

The Kurnell Wharf Port and Berthing Facility is the sole entry point for feedstock of crude oil and other finished petroleum product imports to the Kurnell Refinery. At present, it is also used as the distribution point for refined products, which are either shipped interstate or overseas.

The existing facility has operated since 1956. It comprises the Kurnell Wharf (a 1 km jetty structure), at the end of which are two fixed shipping berths (fixed berth #1 and fixed berth #2) located either side of a breasting island. The facility also includes a submarine berth (sub berth), located to the west of the fixed berths, as well as a ship turning circle and associated approaches that interface with the main Botany Bay Shipping Channel.

On the northern side of the wharf, a crude oil submarine pipeline connects the refinery's storage tanks to the sub berth (Figure 3 - 1). Starting adjacent to the wharf, south of the fixed berths, are a series of additional submarine pipelines that transport fuel under Botany Bay. These pipelines head west then north and connect to terminals at Banksmeadow, Silverwater and Newcastle, whilst also servicing Sydney (Kingsford Smith) Airport.

Kurnell Wharf is located, in part, on Lot 456 DP 1413279, within the Sutherland Shire Local Government Area (LGA) and in part on unincorporated land (i.e. not part of any LGA) that is leased to Caltex by the State Government.

Dredging of approximately 153,000 m³ is required from spot locations within the berths, approaches and turning circle over a total area of approximately 178,000 m², to improve shipping access and capacity. Infrastructure works will also be carried out to upgrade mooring and berthing equipment in the sub berth and fixed berth #1. Other ancillary works will include an upgrade to the fire system on the Wharf and construction of a rock revetment and a sheet-piled wall at the southern end of fixed berth #1.

This project does not include shore based excavation activities that would result in the generation of dust or the potential for vehicles to track material on to public roads. All vehicle routes are along paved roadways (including the concrete wharf).

The Right of Way (ROW) is a grass and hardstand area that is currently used as a laydown and parking area for the Wharf. The intensity of use would not change during the Project. However, as the area is included in the site Environmental Protection Licence (EPL), action would be taken to ensure dust emissions comply with EPL. We expect no dust generation during Project.

The Project site and its context are shown in Figure 3 – 1.

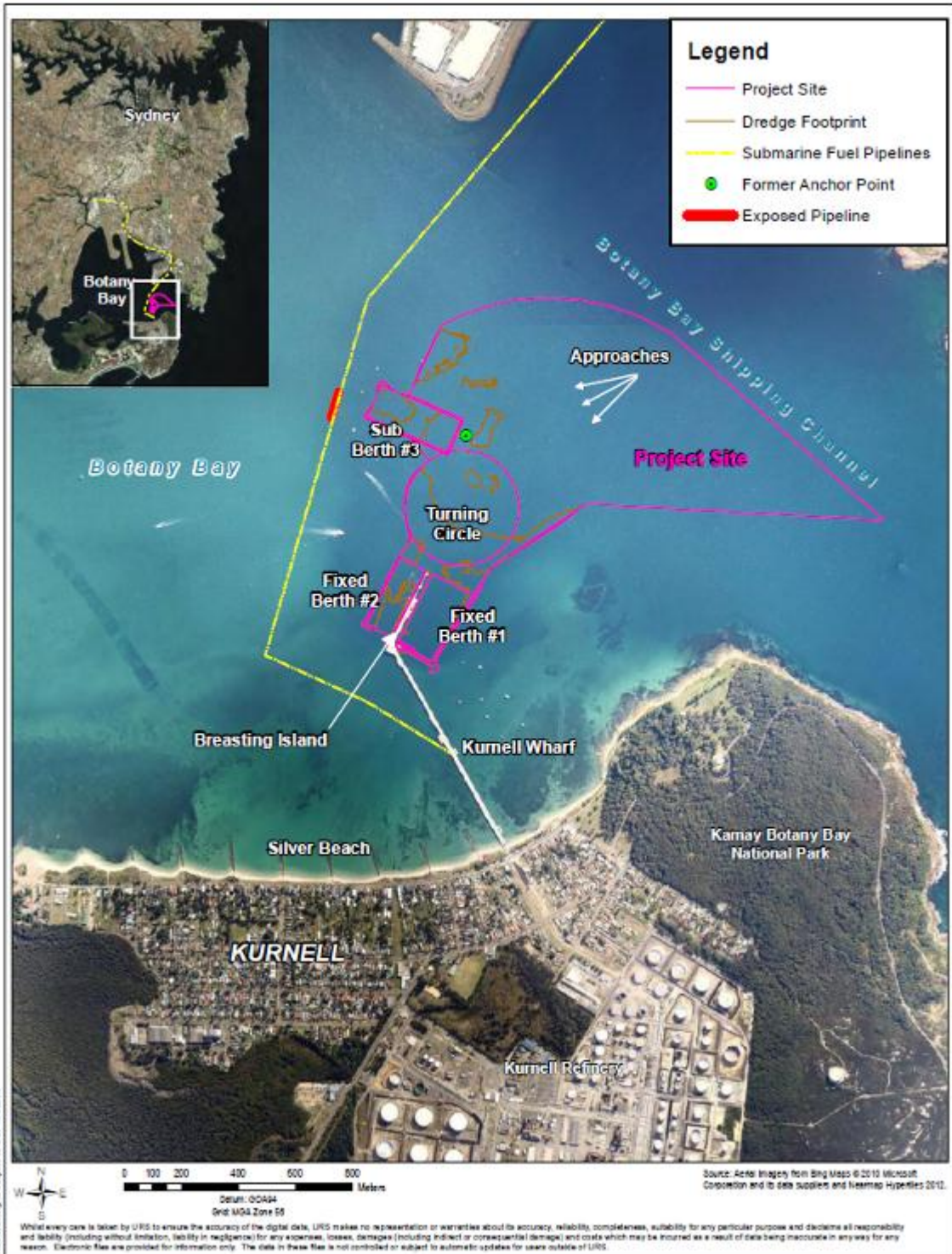


Figure 3 - 1: Project Site and Context (source: URS 2013)

3.1 Project Program

The approximate Project program is shown in Table 3 - 1.

Table 3 - 1: Approximate Project program

Works	Duration	2013			2014			2015		
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Dredging Works (including one week mobilisation / demobilisation)	25 weeks		■	■	■					
Reuse Works	1 week		■							
Sheet Piling Works	3 weeks		■							
Rock Revetment and Scour Protection Works	4 weeks			■	■					
Kurnell Wharf Infrastructure Upgrade Works										
Loading Arms Installation and Manifold Installation	12 weeks			■	■					
Mechanical Loading Arm Removal and New Tie-ins	12 weeks							■	■	
Quick Release Hooks	16 weeks			■						
Fire System	8 weeks						■	■		
Installation of Dolphins, Moorings and Piling	20 weeks (approx.)						■	■	■	■
Sub Berth Upgrade Works	20 weeks (approx.)				■	■				

4 IMPLEMENTATION

4.1 Responsibilities

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

Key Project personnel including the Caltex Project Manager, Caltex Dredging Supervisors, Caltex EMR, 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 dredging. A general outline of responsibilities in relation to environmental management is provided below:

Caltex Project Manager

- Overall accountability for the environmental management of the Project.
- Implementation of the Caltex Environmental Policy with respect to the Project.
- Overall responsibility for development, implementation, maintenance and compliance with this Management Plan.

Caltex Environmental Management Representative (EMR)

- Accountable for environmental matters on the Project.
- Provide support to Caltex personnel and the Contractor as required to ensure this Management Plan is implemented and complied with.
- Review effectiveness and implementation of this Management Plan.
- 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 EMR).

All Personnel (Caltex and the Contractor)

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

4.2 Induction

Caltex has a site induction program that all contractors and employees are required to complete prior to undertaking any work.

All Caltex employees and the Contractor are required to undertake the Caltex Project Induction before they can commence work on the Project.

4.3 Training

All Project 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 Management Plan.

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.

4.4 Incident Management

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

A comprehensive Emergency Management System is currently implemented at the Kurnell Refinery, with associated response and safety equipment held on site. Key personnel are trained to support the implementation of the system. Regular training exercises are carried out by Caltex

4.5 Compliance Management

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

Caltex manages all 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 all complaints made to Caltex and its Contractors, including:
 - The date and time of the complaint
 - The method by which the complaint was made
 - Any personal details of the complainant which were 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 Project. All feedback and complaints will be relayed to the EMR and relayed to the Refinery Manager, Community Relations Manager and the Environmental Protection Superintendent, as relevant depending on their nature.

Any 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 ENVIRONMENTAL PROCEDURES

Specific control measures required to undertake the Project including the Performance Objectives, Management Actions, Performance Indicators, Monitoring, Reporting and Corrective Actions 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 Project.

5.1 Management Actions

The management actions include;

- Odour screening for sediments excavated during dredging. This screening will include odour observations at the dredge to evaluate the intensity and characterise any odours. The odour intensity will be ranked (from very weak, to weak, to distinct, to strong, to very strong) and the character described. Where distinct, strong or very strong odours are observed then screening along the southern shore of Botany Bay, down-wind, will be undertaken.
- Vessels and equipment will be maintained in good working order to minimise air emissions.
- Regular maintenance of dredging equipment will be scheduled and carried out by the Contractor.
- Vehicles, vessels and equipment, including generators, will be turned off when not in use.
- Dust control measures will be implemented wherever relevant throughout construction works. Traffic generated dust is not anticipated as all roadways are sealed.
- Material stockpiles that have the potential to generate dust will be covered.
- Material loads that have the potential to generate dust will be covered during transport.
- Dust generating activities will not be carried out during periods of high wind.
- Contractors will notify the Caltex EMR of any anomalous odours identified during construction.

5.2 Performance Indicators

The following performance indicators will be implemented during the project:

- No air quality complaints received
- No odour complaints received
- Odours generated during dredging do not exceed 2 odour units at the nearest residential receptor.

5.3 Monitoring

The key monitoring requirements for this Project:

- Odour screening of excavated material at the commencement loading each split hopper barge
- Continual observations will be made for unanticipated odours (particularly “rotten egg gas” or H₂S) during dredging works.
- The Contractor will carry out regular visual monitoring to identify equipment producing excessive visible emissions.

- Contractors will carry out regular visual monitoring to identify areas generating dust.
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- In the event of odour complaint an evaluation will be undertaken, as soon as practicable (but at least within 1 hour), to confirm dredging activities are a potential source of odours. Once dredging activities have been confirmed as a potential ongoing odour source a survey will be undertaken as soon as practicable to measure the odours. A specialist odour consultant would be notified immediately and attend as soon as available (within the same day during normal work hours). Odour survey would be conducted at the nearest residential receivers, downwind of any odour source. Additional mitigation measures will be implemented if odours greater than 2 odour units are measured during the survey. In the event that an odour survey is required work should not continue at that location until the survey has been conducted.

5.4 Reporting

The reporting requirements include:

- The Contractor will notify the EMR of any odour screening results where excessive odour is observed.
- Log books will be maintained to record instances where adverse odours are apparent, and what corrective action was taken.
- The dates and outcomes of visual emissions monitoring will be reported by the Contractor to the Caltex EMR fortnightly.

5.5 Corrective Action

The corrective actions to be implemented during the Project include:

- Sources of dust emissions will be covered, or if required, wet down.
- Equipment observed to be creating excessive emissions will be replaced or serviced within 48 hours.
- Where adverse odours are identified, during odour screening, the Contractor, in collaboration with Caltex, will:
 - Identify prevailing wind direction and strength and the potential for odours to reach sensitive receptors;
 - Where necessary, limit the rate of dredging to reduce the odour emissions.
- Where odour complaints received are attributable to dredging, odour monitoring will be carried out in accordance with the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (Department of Environment and Conservation 2006).
- Where odour monitoring determines that odours generated during dredging exceed 2 odour units at the nearest residential receptor, the Contractor, in collaboration with Caltex, will investigate the cause of odours and implement appropriate management actions to reduce odours associated with dredging to 2 odour units or less at the nearest residential receptor. These management actions could include the wetting of the odorous sediments to minimise odour flux, the cessation of works at that location until the wind direction changes and odours are blown offshore or the reduction in the rate of dredging.

