



Caltex Australia

2017 ANNUAL REVIEW

ENVIRONMENTAL PERFORMANCE

DEVELOPMENT APPLICATION SSD 5544

CALTEX AUSTRALIA PETROLEUM PTY LTD
2 SOLANDER STREET
KURNELL NSW 2231

Reporting Period: 1 January 2017 to 31 December 2017

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1 INTRODUCTION

Caltex Refineries (NSW) Pty Ltd (Caltex) has prepared this Progress Report to comply with Condition D4 – Annual Review in accordance with the Development Consent for application SSD 5544 (dated 7 January 2014). Condition D4 of the Consent states:

By 31 December 2014 and annually thereafter, or as otherwise agreed in writing by the Director-General, the Applicant shall review the environmental performance of the Development to the satisfaction of the Director-General. This review must:

- a) *Describe the development that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;*
- b) *Include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, which includes a comparison of these results against;*
 - *The relevant statutory requirements, limits or performance measures/criteria;*
 - *The monitoring results of previous years; and*
 - *The relevant predictions in the EIS;*
- c) *Identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;*
- d) *Identify any trends in the monitoring data over the life of the Development;*
- e) *Identify any discrepancies between the predicted and actual impacts of the Development, and analyse the potential cause of any significant discrepancies; and*
- f) *Describe what measures will be implemented over the current calendar year to improve the environmental performance of the Development.*

This Report presents a summary of the activities undertaken over the past twelve months, the proposed works for the next twelve months and the analysis and review required in the Consent condition. This report is divided in three parts:

- Part 1 – Environmental performance of the Terminal and site development activities
- Part 2 – Environmental performance of Terminal operations activities
- Part 3 – Improvement plan and summary
- Appendix 1 – Status Of Caltex Actions Arising From Independent Environmental Audits - SSD 5544 and SSD 5353 (IEA 2 September 2017 and IEA 1 April 2016)
- Appendix 2 – Environmental Performance Against Active Consent Conditions

Part 1 of this report will also include a description of the activities carried as part of the demolition of the refinery.

PART 1 - ENVIRONMENTAL PERFORMANCE OF THE TERMINAL AND SITE DEVELOPMENT ACTIVITIES

1.1 DEVELOPMENT SUMMARY

The overall works program associated with the Development Approval is summarised on Table 1 below. This table includes the commencement date and completion date for each activity.

TABLE 1- Overview of Activities in Development to Date

Activity	Start	Stop	Status
Tank Farm Automation	July 2012	December 2014	Completed
Tank 613 - Jet Conversion	July 2012	December 2013	Completed
Tank 603 - Jet Conversion	July 2012	May 2014	Completed
Slop Recovery, Storage, Transfer & Injection Upgrade	July 2012	December 2014	Completed
Conversion Tank Bund Modifications	July 2012	June 2015	Completed
Dye, Stadis & Lubricity System	July 2012	September 2014	Completed
Tank 634 - Diesel Conversion	July 2012	April 2014	Completed
Tank 512 - Gasoline Conversion	July 2012	February 2014	Completed
Fire Water System Modifications	October 2012	December 2014	Completed
Electricity Consolidation For Terminal Operation	October 2012	December 2015	Completed
Plant and Instrument Air System	October 2012	April 2015	Completed
Potable Water Modifications	October 2012	March 2015	Completed
OWS System Management	January 2013	December 2014	Completed
Tank Miscellaneous Nozzle Replacement	June 2013	December 2014	Completed
A-Line Gasoline Filter	October 2013	December 2014	Completed
Tank 411 – Gasoline Conversion	October 2014	November 2015	Completed
Tank 413 – Gasoline Conversion	October 2014	March 2016	Completed
Tank 633 – Diesel Conversion	October 2014	June 2016	Completed
Demolition of Refinery Infrastructure	September 2015	December 2017	In Progress

1.2 DEVELOPMENT ACTIVITIES DURING THE LAST TWELVE MONTHS

The Development activities conducted over the previous calendar year is summarised on Table 2 with descriptions of the activities, the associated impacts and the controls provided in the following sub-sections. Included on this table is a summary of the potential environmental impacts which relate to the management plans prepared for the Development. Also included on the table are the actual number of incidents for each activity over the year.

TABLE 2 - Development Activities in 2017

Activity	Potential Environmental Impacts	Number of incidents
Demolition of Refinery Infrastructure	Noise, Air Quality, Water, Biodiversity, Waste	Nil

1.2.1 Tank Conversion

All remaining refinery conversion related works (tanks and infrastructure) were completed by June 2016.

At the completion of the conversion related works, the above-mentioned plans were superseded by the DPE approved Demolition Management Plans. Refer to 1.4 for Management Plans details.

Note: All approved and named Management Plans are published on the Caltex Public Website, in accordance with the Development Approval requirements.

1.2.2 Demolition of Refinery Infrastructure Status

Demolition of the refinery infrastructure commenced in September 2015. Approved demolition activities includes the dismantling and removal of the aboveground redundant refinery process units, tanks, pipelines, buildings, and other structures including vessels/heat-exchangers, piping and valve, pumps and compressors and underground pipes and services. This requires the felling of structures, cutting of vessels, piping and support structures and the excavation of underground pipework. Pipelines from the refinery to the old Continental Carbon site and Tabbigai Gap will also be removed, along with sections of pipeline from the Caltex wharf, Rights of Way and at Silver Beach.

The following table shows progress for the approved demolition scope of works:

TABLE 3 – Detailed Demolition Activities in 2017

Activity	% complete
Civil Work & Buildings	81%
Tank Cleaning	100%
Demo Tanks & Pipeways	77%
Process Plant Demolition	99%
Overall % Completed against Demolition Scope	77%

Details of demolition activities completed in 2017 are as follows;

Refinery Process Units and Associated Infrastructure

- Demolition of all refinery process units, except a small part of the Power Plant (Plant 11).
- Removal of underground structures, piping & infrastructure to at least a 2m depth under all Process Unit plots.
- Crushing of concrete from process plants ~ 15,000T process to date.
- Intermediate storage of demolished materials on the former Caltex Lubricating Oil Refinery (CLOR) site. 38,000T of scrap processed & sorted to end of November 2017, with approximately 30,000T sold & removed from site to date.

Tanks and associated Infrastructure

- Removal from Service, cleaning & disconnection for final tanks in Project scope.
- Demolition of a number of tanks using heavy machinery to cut them up. Only 5 tanks to complete as of end of November 2017.
- Removal of redundant infrastructure associated with the tanks – i.e. water draw equipment and pipelines.

Pipelines/Pipeways

- Removal of 65% of the two cooling water intake lines running from the wharf to the refinery fence line via the Right of Way.
- Rectification of the Continental Carbon right of way running south from the site.
- Commenced removal of the above ground sections of the Tabbagai Gap line
- Removal of all redundant pipes from refinery pipeways.

Buildings

- Demolished 95% of in-scope buildings across the site. Only two remain, which are currently still in use.
- The necessary asbestos removal was completed and clearances were issued for all redundant buildings to be demolished.

1.3 DEVELOPMENT ACTIVITIES FOR NEXT (2018) CALENDAR YEAR

The approved demolition scope of works that will be continued over the next twelve months is summarised on Table 4. Included on this table is a summary of the potential environmental impacts which relate to the management plans prepared for the Development.

TABLE 4 - Development Activities Planned for 2018

Activity	Potential Environmental Impacts
Continue and conclude Demolition of Refinery Infrastructure	Noise, Air Quality, Water, Soil, Biodiversity, Waste

The following provides an overview of the demolition activities planned to be carried out in the 2018 calendar year against approved demolition scope of works;

Continue with Refinery Process Units and Associated Infrastructure

- Demolition of remaining Power Plant structure. Remove associated undergrounds structure.
- Complete the removal of the CLOR area undergrounds infrastructure.
- Complete concrete crushing scope (up to 80,000T).
- Complete disposal or recycling of demolished materials.

Tanks and Associated Infrastructure

- Demolition of remaining tanks and vessels using heavy machinery to cut them up.
- Disposal, recycling or divestment of demolished materials.

Note: Tank 101 has now been included in the demolition work scope for 2018 – refer to SSD5544 MOD3 for details.

Pipelines/Pipeways

- Complete the final scope of removal of the two cooling water intake lines running from Silver Beach through the eastern right of way (ROW) to the Kurnell Terminal.
- Removal of the remaining scope of cooling water outlet running from the Terminal through the western ROW under Silver Beach and into Botany Bay.
- Skimming the contaminated soil / sand from the pipeways & moving it to the approved on-site Asbestos Contaminated Soil Containment Cell – refer to SSD5544 MOD2

Buildings

- Complete remaining scope of demolition and removal of redundant buildings
- Disposal, recycling or divestment of demolished materials.

1.4 ENVIRONMENTAL MANAGEMENT CONTROLS

The activities completed during the previous calendar year involved the implementation of the controls and performance indicators documented in the following approved Demolition environmental management plans:

- Air Quality Management Plan
- Noise (and Vibration) Management Plan
- Waste (and Resource) Management Plan
- Soil and Water Management Plan
- Biodiversity (and Weed) Management Plan

Note that **NIL** amendments to the above-mentioned Management Plans were required during the 2017 reporting period.

These Management Plans will remain in place for the duration of the demolition activities. Included in these management plans are performance indicators and monitoring requirements.

1.4.1 Air Quality Management Plans

The following performance indicators within the Air Quality Management Plans are required to be implemented during the Development are:

- No air quality complaints received.
- No visible emissions of dust from the premises

The key monitoring requirements for air quality for the development are:

- Odour screening of excavated material.
- Contractor will carry out regular visual monitoring to identify equipment producing excessive visible emissions.
- Contractors will carry out regular visual monitoring to identify any area/s generating dust.
- In the event of an odour complaint, an evaluation will be undertaken to confirm that Project works are not a potential source of odours. If Project work is confirmed as a potential ongoing odour source additional mitigation measures will be implemented which will include the use of water sprays to suppress odours and, if necessary, the use of odour suppressants. In the event of ongoing odours, excavation activities will be stopped.
- Daily asbestos monitoring around area of demolition activity.
- Continued dust monitoring around areas of demolition activity.

1.4.2 Noise (and Vibration) Management Plans

The following performance indicators within the Noise Management Plans that are required to be implemented during the Development are:

- No exceedances of the Noise Affected Management Level of LAeq (15min).
- No exceedances of the Structural Damage Vibration Criteria
- No community complaints received regarding conversion project related nuisance noise.
- Works only carried out within the required hours and noise complaints managed in accordance with the Noise Management Plan requirements.

Noise monitoring must be undertaken at the commencement of any work that has the potential to generate noise that could exceed the Noise Criteria Management Levels at the nearest sensitive receiver and the nearest sensitive down-wind receiver.

The key monitoring requirements noise monitoring for this Development are:

- At the beginning of undertaking any high noise generating activities (i.e. paint removal, demolition or metal fabrication) in close proximity (100m) to a specified receptor (R1-R8), measures noise monitoring will be carried.
- If high noise generating works are shown to exceed the required noise limits, or if noise complaints are received related to the high noise work, additional mitigation will be

implemented for these activities (to ensure compliance with the required noise limits to the satisfaction of the Environmental Management Representative). These additional mitigations measures include:

- The substitution of equipment or change the work procedure.
- Acoustic screening.
- Implement periodic breaks in undertaking high noise generating works. For example, working for 3 hours and stopping for 1 hour.
- If noise complaints are received which are determined to be not associated with high noise generating work but do relate to the Project, additional mitigation measures should be undertaken or noise monitoring undertaken.
- Noise monitoring must be undertaken at the nearest residential sensitive receiver to the source of noise and at the nearest residential sensitive receiver downwind from the source. Thus monitoring locations will vary dependent of any source of noise and the wind direction.
- Vibration monitoring will be conducted in the event that demolition is carried out within 20 m of any Site buildings to be retained.

1.4.3 Waste (and Resource) Management Plans

The following performance indicators within the Waste Management Plans are required to be implemented during the Development are:

- No litter present on or around work areas.
- Appropriate segregation, storage and management of all waste and recyclable material.
- Environmental requirements included in procurement and subcontract documentation.
- 90% diversion of waste produced during demolition activities from landfill

The key monitoring requirements for this Development:

- The Contractor will record the types, volumes and management measures (i.e. reuse / recycling / disposal etc.) for wastes generated from its activities.
- The Contractor will carry out weekly inspections of its works areas to ensure any wastes, chemicals and hazardous materials are appropriately stored and all required procedures are being implemented.

1.4.4 Soil and Water Management Plans

The following performance indicators within the Soil and Water Management Plans are required to be implemented during the Development are:

- All stockpiles managed in accordance with the relevant requirements in the latest version of the Managing Urban Stormwater: Soils and Construction Guideline.
- No silt runoff from stockpiles beyond the silt fencing.
- No significant increase in COPC levels in groundwater.
- No impacts to the environment from ASS or PASS.
- No environmental pollution incidents.

The key monitoring requirements for this Development:

- Sampling of all excavations for asbestos and visual and olfactory screening for hydrocarbons, using a PID where appropriate.
- Quarterly groundwater monitoring.
- Inspection of all stockpiles for erosion.
- Inspection of stormwater drains down gradient of work areas if erosion of stockpiles is observed.
- Any collected water within the bunded areas will be field tested for pH (to monitor for ASS). Treatment will be required if less than pH 6.5.

1.4.5 Biodiversity (and Weed) Management Plans

The following performance indicators within the Biodiversity, Pest and Weed Management Plans are required to be implemented during the Development are:

- Limited removal of vegetation.
- No disturbance to 'tall tower' structures used as perches.
- No disturbance to nesting shorebirds.

Minimise potential disturbance to frog populations or habitats. The key monitoring requirements for this Development:

- 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 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.

1.4.6 Pest, Vermin & Noxious Weed Management Monitoring

The effectiveness of the management plan in place to detect and eradicate pest, vermin & noxious weed is measured by:

- Contractor and Caltex employees 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.
- Caltex *Permit to Work* Issuers inspect work areas prior to permits being issued. This inspection also provides an opportunity to check the work area for the presence of noxious and problematic weeds, pests and vermin. If found, the Issuer will inform the Demolition Environment Team (areas under Demolition project control) or the Kurnell Terminal Maintenance Manager to arrange corrective action.
- Demolition Environment Team undertaking monthly site inspections of all demolition work areas to ensure that management plan measures are working effectively, and that pests, vermin or noxious weeds are not present on site in sufficient numbers to pose an environmental hazard, or cause the loss of amenity in surrounding area. The Inspection checklist used includes requirements to check for noxious and problematic

weeds, pests and vermin. If found, the Environment Team arranges for the affected area/s to be treated by approved contractors. All chemicals used are on the Caltex approved list.

1.4.7 Asbestos Contaminated Soil Containment Cell (ACSCC)

The Asbestos Contaminated Soil Containment Cell (ACSCC) will require specific plans to be developed in 2018. They are:

- Construction Quality Assurance Plan
- Remedial Action Plan
- Containment Cell Management Plan
- Long Term Environmental Management Plan

In line with the requirements of SSD5544, D5 'Revision of Strategies, Plans and Resources', the Demolition EMP and Sub Plans will be reviewed and updated where needed to account for the Asbestos Contaminated Soil Containment Cell, specifically:

- Soil and Water Management Plan
- Traffic Management Plan
- Air Quality Management Plan
- Waste Management Plan

1.5 ENVIRONMENTAL PERFORMANCE AND MONITORING

The management plans prepared for this Development incorporate the mitigation measures specified in the EIS for Conversion and SEE for Demolition. Each management plan contains management actions, performance indicators and monitoring requirements.

A summary of the relevant management plan for each activity undertaken in the last twelve months, with potential environmental impacts, is presented in Table 5.

TABLE 5 - Performance against Performance Indicators per Activity

Activity	Environment Aspect	Environment Impact	Performance Indicator	Monitoring Results	Non-Conformances
Demolition Activities	Plant removal	Air quality management	Structure felling and plant removal undertaken with no visible emission of dust or odours from the premises	<p>405 individual spot measurements of dust in air were taken using the Dust track™ monitor. Nil exceedances of the 50ug/m³ standard were detected.</p> <p>1485 individual samples taken for fibres in air. Nil air samples returned a result of >10% of the time weighted average (TWA) Exposure Standard (ES) for fibres in air. i.e. >10 fibres. The peak result achieved was a single result of 8 fibres in an area where Rockwool lagging, a synthetic mineral fibre (SMF), had been removed from piping. An inspection by the independent Occupational Hygienist identified an opportunity for improved housekeeping and wetting down in this area.</p>	No non-conformances and no complaints
	Plant removal	Soil and Water management	<p>Excavated material stockpile with silt control to minimise sediment erosion.</p> <p>Stormwater and groundwater managed during excavations and infrastructure removals</p>	<p>No erosion,</p> <p>Stormwater and groundwater managed on-site without off-site impact</p>	No non-conformances and no complaints

Activity	Environment Aspect	Environment Impact	Performance Indicator	Monitoring Results	Non-Conformances
Demolition Activities (continued)	Plant removal	Noise management	Structure felling undertaken and plant removal completed in designated working hours and without noise or vibration impact	20 attended noise audits were conducted at several different receptor locations. The LAeq 15min readings (dBA) ranged from 40dB to 66.1dB and peak noise was mainly attributed to passing cars, overhead planes and residential construction noise.	No non-conformances and no complaints
	Plant removal	Waste management	All plants and all excavations inspected for hydrocarbons and tested for asbestos. All waste streams classified for disposal	Records of waste volume in the waste database and asbestos waste removed and disposed. ~300 individual samples were taken for proactive identification of asbestos containing materials (ACM). 20% of samples positively identified the presence of ACM's.	No non-conformances and no complaints
	Plant removal	Biodiversity management	No vegetation removed and excavations inspected for frogs and other fauna. Pests and noxious weeds managed	No frogs observed in excavations	No non-conformances

1.6 NON-COMPLIANCE AND CORRECTIVE ACTION

The activities undertaken during the last twelve months had relatively low potential for the generation of environmental impacts. The activities with the highest potential for impacts were concrete crushing and the felling of tall structures. No environmental exceedances or consent condition non-compliances occurred with demolition activities over the 2017 reporting period.

1.7 DATA TREND ANALYSIS

A review of the available data shows that:

- All working hours have been in line with the conditions of consent (C18).
- All high noise generating construction works have been confined to less sensitive times of the day in accordance with conditions of consent (C17).
- All dust monitoring is showing that the development works have no noticeable impact on the air quality in the surrounding community.

1.8 DATA DISCREPANCIES

The management actions within the management plans were developed from the mitigation measures in the EIS for Conversion and SEE for Demolition. Based on the performance of the development activities over the last twelve months, the management actions appear to be appropriate for this project. There were no discrepancies identified over the past year.

1.9 SURRENDER OF EXISTING DEVELOPMENT CONSENTS

In accordance with the requirements of Application No. SSD5544 and Clause 97 of the NSW EPA Regulation, the existing Development Consents were surrendered in 2016 to the issuing Authority, as detailed in conditions:

- B9 and Appendix B;
- B10

The issuing Authorities of the DAs in question were:

- Department of Planning and Environment
- Sutherland Shire Council

As reported previously, both Authorities have provided confirmation of receipt of the DAs being surrendered.

PART 2 - ENVIRONMENTAL PERFORMANCE OF TERMINAL OPERATIONS ACTIVITIES

2.1 TERMINAL OPERATIONS DURING THE PREVIOUS CALENDAR YEAR

The Terminal continues to be a major supplier of transport fuel to NSW. In 2016 the operation of the pipeline between Kurnell and Newcastle transferred to Kurnell from Banksmeadow Terminal and continues to operation without incident. The Terminal continues to operate the site's Waste Water Treatment Plant as is (pending a 'future state' business decision). Transition towards and certification against ISO 900:2015 QMS and 14001:2015 EMS has been achieved with only one minor non-compliance identified. There have been no treated injuries attributed to Terminal operations in 2017.

2.2 TERMINAL ENVIRONMENTAL MANAGEMENT CONTROLS

The Terminal operations are governed by a comprehensive Environment Management System which is ISO14001 certified. The most recent ISO14001 audit was carried out in the period 22 – 25 May, 2017 inclusive with the site transitioning to the 2015 ISO Standard. It is pleasing to confirm that successful certification was achieved with only one minor non-conformances identified. The auditors also highlighted a number of minor opportunities for improvement, most of which have been actioned. (The latest 14001:2015 Certification Audit Report is available on request)

The Terminal's Stage 1 Interim Operational Environment Management Plan (OEMP) is supported by Environmental Stewardship elements of Caltex's Operational Excellence processes (OE) and the Environment Policy. The site's OEMP documents the relevant environmental information, legal requirements and risk controls pertaining to the terminal operations, as well as demolition project and CalSoil activities.

Key to the site's OEMP is the Environment Protection Licence (Lic №: 837). This licence describes the scheduled activities that are performed on the site, as well as the required controls and monitoring activities. The monitoring section of the site licence describes five Monitoring and Discharge Points. For details, see Table 6 below:

TABLE 6 – Description of Kurnell Terminal EPL 837 Monitoring and Discharge Points

EPA Identification No	Type of Monitoring or Discharge Point	Location Description
1	Discharge to waters	<p>Cooling water pipe discharging into Botany Bay labelled “1” on drawing No. 18588 titled “Environment Protection Licence EPA Identification Points” submitted to the EPA with letter on 15 June 2007.</p> <p>Note: Monitoring is undertaken at Point 26 and Point 33 for EPA ID No.1 Cooling Water System has been decommissioned therefore no monitoring has been carried out at Points 26 and 33. Discharge Point 1 will be removed as part of the demolition works.</p>
2	Discharge to waters	<p>Submerged ocean outfall at Yena Gap labelled “2” on drawing No. 18588 titled “Environment Protection Licence EPA Identification Points” submitted to the EPA with letter on 15 June 2007.</p> <p>Note: Monitoring is undertaken at Point 27 for EPA ID No.2</p>
15	Groundwater quality monitoring	<p>Bioremediation plot (landfarm) – permanent monitoring well PWM 8 labelled “15” on drawing No. 18588 titled “Environment Protection Licence EPA Identification Points” submitted to the EPA with letter on 15 June 2007</p>
16	Groundwater quality monitoring	<p>Bioremediation plot – (landfarm) permanent monitoring well (PMW) 33 labelled “16” on drawing No. 18588 titled “Environment Protection Licence EPA Identification Points” submitted to the EPA with letter on 15 June 2007.</p>
27	Effluent quality and volume monitoring	<p>Sampling port in wastewater treatment plant labelled “27” on drawing No. 18588 titled “Environment Protection Licence EPA Identification Points” submitted to the EPA with letter on 15 June 2007.</p> <p>Note: Discharge from wastewater treatment plant at Point 2. (submerged ocean outfall at Yena Gap)</p>

The pollutants monitored at these points, their licence concentration limits and monitoring results are presented in Section 2.3. The prevention of off-site noise, dust and offensive odours are licence and consent requirements. The site's performance against these requirements will also be discussed as part of the overview of the calls made to the 24 Hour Community Hotline in Section 2.3.

2.3 TERMINAL ENVIRONMENTAL PERFORMANCE AND MONITORING

In this section, a summary is provided of the environmental performance of the Terminal against its Environmental Protection Licence No 837 and the Conditions of Consent for SSD 5544:

- Table 7A-F shows the summary of monitoring results for the licenced monitoring points 15 and 16 for the calendar years 2017-2013
- Some of the data from Tables 7A-F has also been shown in Figure 1 and 2.
- Table 8 contains the annual summary of the monitoring results for Monitoring Point 27
- Table 9 contains a summary of the asbestos monitoring (air) results during asbestos removal activities in 2015-16. This monitoring will continue for the duration of the asbestos removal program on site
- Table 10 (A, B, C) contains a summary of the dust monitoring during high dust potential during demolition activities. Dust monitoring was started in August 2015. Figure 3 shows the details of the dust deposition monitoring results for the five locations on site for 2017.
- Table 11 and Figure 4 provide an overview of the calls made to the 24 Hour Kurnell Community Hotline

TABLE 7A – Licenced Monitoring/Discharge Points: 2017

Monitoring Period	2017								
Pollutant	Benzene	Ethyl Benzene	Lead	pH	Standing Water Level	Toluene	Total Petroleum Hydrocarbons	Total Phenolics	Xylene
Unit of Measure	mg/L	mg/L	mg/L	pH units	m	mg/L	mg/L	mg/L	mg/L
Licence Limit	None	None	None	None	None	None	None	None	None
Monitoring Frequency Required by Licence	Quarterly								
EPA Point	Point 15, PMW08								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.002	<0.001	5.36	3.555	<0.002	<0.050	<0.05	<0.002
Highest	<0.001	<0.002	<0.001	6.75	4.173	<0.002	<0.050	<0.05	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EPA Point	Point 16, PMW33								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.002	<0.001	5.8	1.742	<0.002	0.04	<0.05	<0.002
Highest	<0.001	<0.002	<0.001	6.03	1.885	<0.002	0.18	<0.05	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TABLE 7A – Licenced Monitoring/Discharge Points: 2016

Monitoring Period	2016								
Pollutant	Benzene	Ethyl Benzene	Lead	pH	Standing Water Level	Toluene	Total Petroleum Hydrocarbons	Total Phenolics	Xylene
Unit of Measure	mg/L	mg/L	mg/L	pH units	m	mg/L	mg/L	mg/L	mg/L
Licence Limit	None	None	None	None	None	None	None	None	None
Monitoring Frequency Required by Licence	Quarterly								
EPA Point	Point 15, PMW08								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.002	<0.001	4.54	3.169	<0.002	<0.050	<0.05	<0.002
Highest	<0.001	<0.002	<0.001	5.31	3.895	<0.002	<0.050	<0.05	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EPA Point	Point 16, PMW33								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.002	<0.001	5.22	1.500	<0.002	<0.050	<0.05	<0.002
Highest	<0.001	<0.002	<0.001	5.85	1.845	<0.002	0.140	<0.05	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TABLE 7B – Licenced Monitoring/Discharge Points: 2015

Monitoring Period	2015								
Pollutant	Benzene	Ethyl Benzene	Lead	pH	Standing Water Level	Toluene	Total Petroleum Hydrocarbons	Total Phenolics	Xylene
Unit of Measure	mg/L	mg/L	mg/L	pH units	m	mg/L	mg/L	mg/L	mg/L
Licence Limit	None	None	None	None	None	None	None	None	None
Monitoring Frequency Required by Licence	Quarterly								
EPA Point	Point 15, PMW08								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.002	<0.001	4.83	3.236	<0.002	<0.050	<0.05	<0.002
Highest	<0.001	<0.002	<0.001	5.57	3.932	<0.002	0.055	<0.05	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EPA Point	Point 16, PMW33								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.002	<0.001	5.548	1.555	<0.002	<0.050	<0.05	<0.002
Highest	<0.001	<0.002	<0.001	5.900	1.814	<0.002	0.017	<0.05	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TABLE 7C – Licenced Monitoring/Discharge Points: 2014

Monitoring Period	2014								
Pollutant	Benzene	Ethyl Benzene	Lead	pH	Standing Water Level	Toluene	Total Petroleum Hydrocarbons	Total Phenolics	Xylene
Unit of Measure	mg/L	mg/L	mg/L	pH units	m	mg/L	mg/L	mg/L	mg/L
Licence Limit	None	None	None	None	None	None	None	None	None
Monitoring Frequency Required by Licence	Quarterly								
EPA Point	Point 15, PMW08								
No. Samples Collected	4	4	4	4	4	4	4	4	
Lowest	<0.001	<0.001	<0.001	4.21	3.433	<0.001	0.035	<0.05	<0.001
Highest	<0.001	<0.001	<0.001	5.86	4.934	<0.001	0.055	<0.05	<0.001
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EPA Point	Point 16, PMW33								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.001	<0.001	5.63	1.779	<0.001	0.035	<0.05	<0.001
Highest	<0.001	<0.001	<0.001	6.49	2.370	<0.001	0.180	<0.05	<0.001
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TABLE 7D – Licenced Monitoring/Discharge Points: 2013

Monitoring Period	2013								
Pollutant	Benzene	Ethyl Benzene	Lead	pH	Standing Water Level	Toluene	Total Petroleum Hydrocarbons	Total Phenolics	Xylene
Unit of Measure	mg/L	mg/L	mg/L	pH units	m	mg/L	mg/L	mg/L	mg/L
Licence Limit	None	None	None	None	None	None	None	None	None
Monitoring Frequency Required by Licence	Quarterly								
EPA Point	Point 15, PMW08								
No. Samples Collected	4	4	4	4	4	4	4	4	
Lowest	<0.001	<0.001	<0.001	4.95	2.925	<0.001	0.035	<0.05	<0.001
Highest	<0.002	<0.002	<0.001	6.40	4.846	<0.002	0.055	<0.05	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EPA Point	Point 16, PMW33								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.001	<0.001	5.91	1.553	<0.001	0.075	<0.05	<0.001
Highest	<0.002	<0.002	<0.001	6.29	2.279	<0.001	0.440	<0.05	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Lowest and highest pH, Standing Water Levels and Total Recoverable Hydrocarbon levels have been depicted in Figures 1 and 2 for Monitoring Points 15 and 16 respectively. Results below the detection limit of the lab’s analytical tests have not been depicted in a graph.

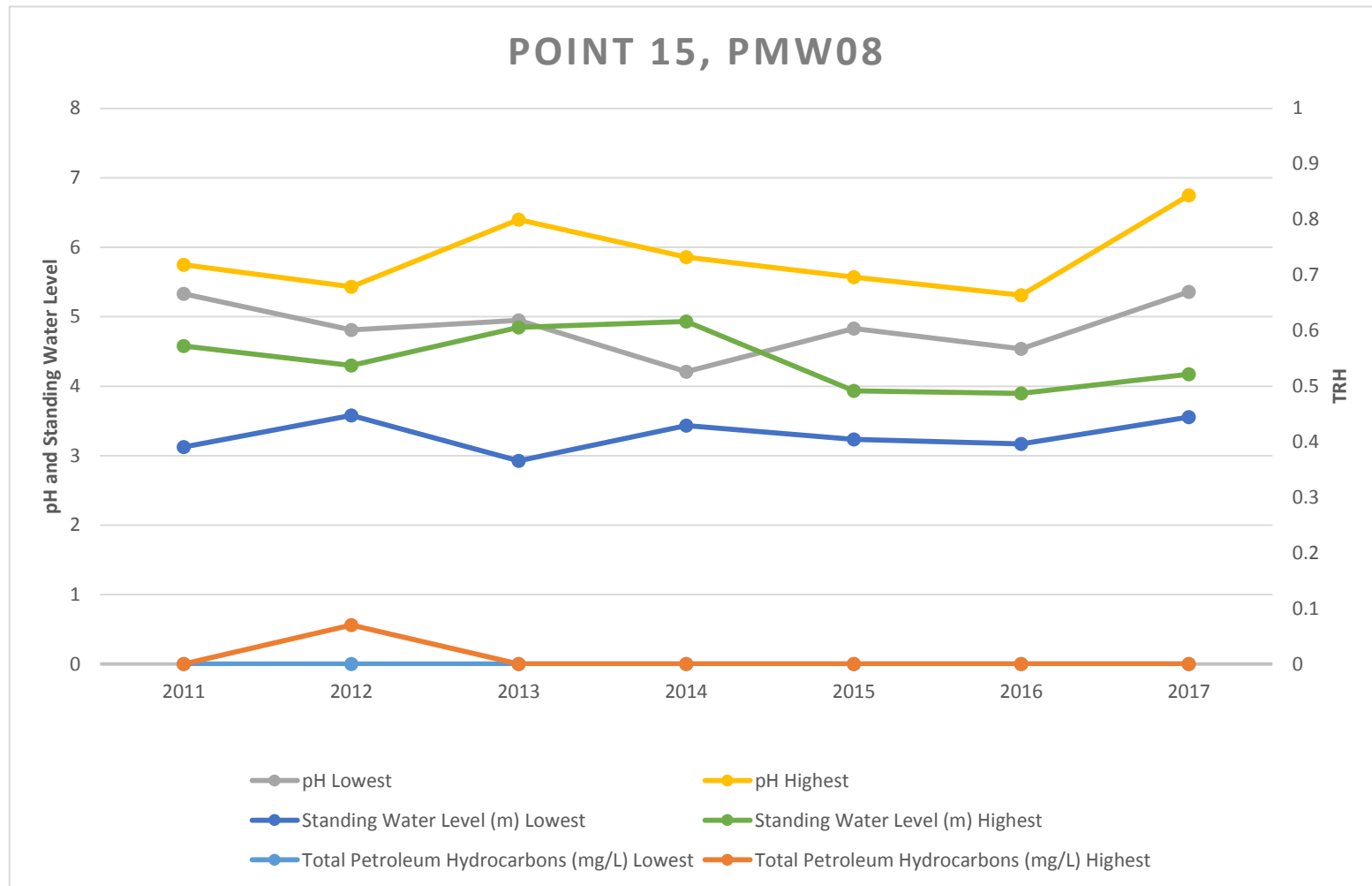


Figure 1. Monitoring Point 15 Data – 2011 to 2017

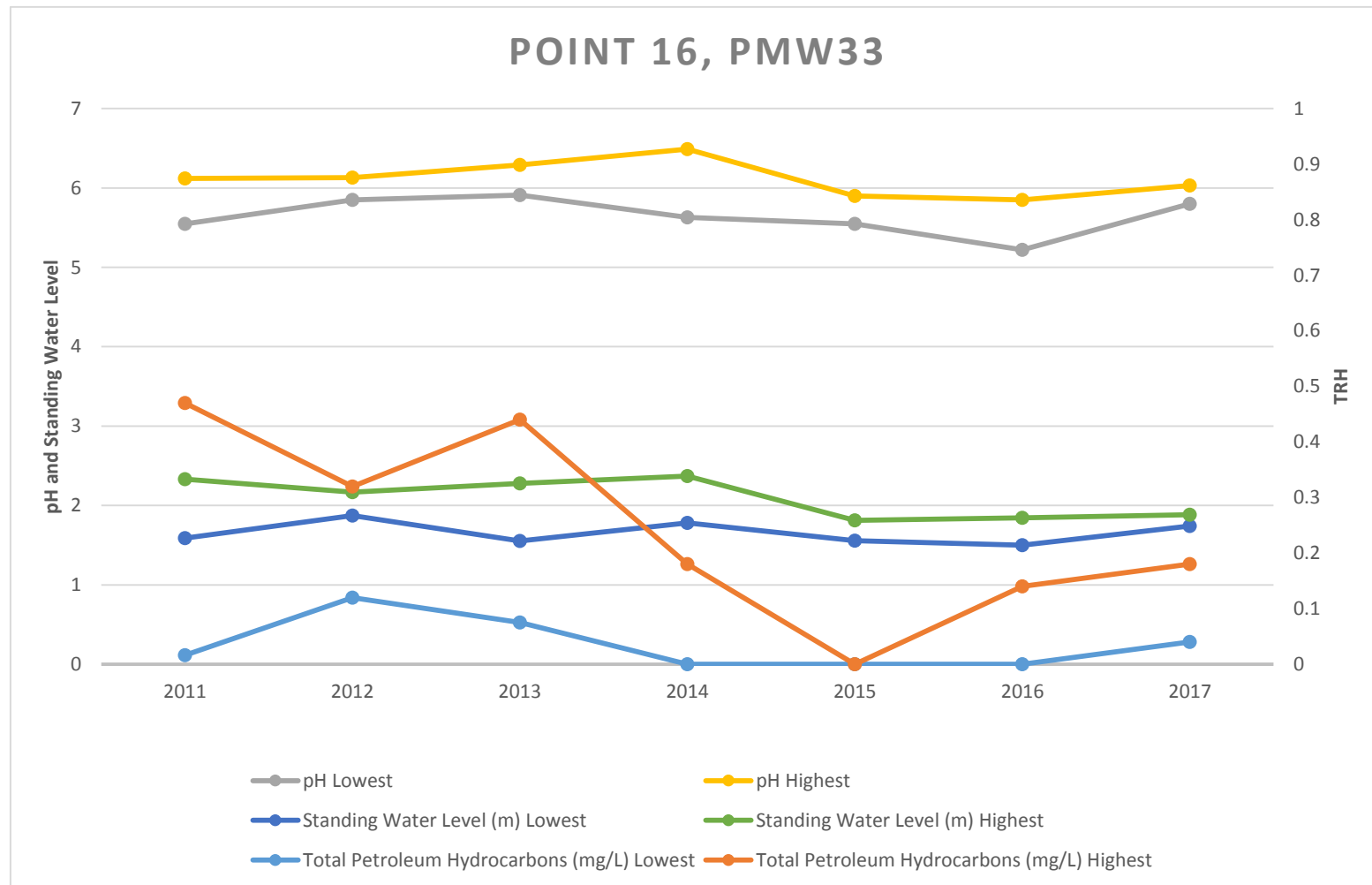


Figure 2. Monitoring Point 16 Data – 2011 to 2017

Table 8A – Point 27: Normal Operation Conditions

Monitoring Period	2017									Reason for Missing Data
EPA Point	Point 27, Yena Gap Effluent, Normal Operating Conditions									
Pollutant	Temperature	pH	Volumetric Flowrate	Oil and Grease	Phenols	Sulfide (un-ionised hydrogen sulfide)	Nitrogen (ammonia)	Total Suspended Solids	Biochemical Oxygen Demand	
Unit of Measure	°C	pH units	kl/day	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Licence Limit	40	6.0 - 9.0	None		2.7	None				
Monitoring Frequency Required by Licence	Continuous			6 Day						
Averaging Period	1 Hour Block	6 Minute Rolling	1 Day Block	Grab Sample						
No. Samples Collected	8760	525600	365	51	51	51	51	51	51	No Missing Data
Lowest	15.6	6.69	0	<1	<0.05	<0.1	<0.01	<0.1	<2	
Highest	28.7	7.82	10019	8	<0.05	<0.1	0.55	18	15	
Exceedance (yes/no)	No	No	N/A	No	No	No	No	No	No	

Table 8B – Point 27: Normal Operation Conditions

Monitoring Period	2017										Reason for Missing Data
EPA Point	Point 27, Yena Gap Effluent, Normal Operating Conditions										
Pollutant	Arsenic	Ethyl Benzene	Lead	Naphthalene	Nickel	Phenanthrene	Benzene	Toluene	Polycyclic Aromatic Hydrocarbons	2,4-Dimethylphenol	
Licence Limit		None		None		None	None	None	0.5	None	
Unit of Measure	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Monitoring Frequency Required by Licence	Monthly										
Averaging Period	24 Hour Composite Sample										
No. Samples Collected	12	12	12	12	12	12	12	12	12	12	
Lowest	0.002	<0.002	<0.001	<0.0002	0.002	<0.0002	<0.001	<0.002	<0.0002	<0.0002	
Highest	0.011	<0.002	0.007	<0.0005	0.005	<0.0005	<0.001	<0.002	<0.0005	<0.0005	
Exceedance (yes/no)	No	N/A	No	N/A	No	N/A	N/A	N/A	N/A	N/A	
											No Missing Data

Table 8C – Point 27: Wet Weather Bypass Conditions

Monitoring Period	2017				Reason for Missing Data
EPA Point	Point 27, Yena Gap Effluent, Wet Weather Bypass Conditions				
Pollutant	Oil and Grease (Wet)	Phenols (Wet)	Total Suspended Solids (Wet)	Biochemical oxygen demand (Wet)	
Unit of Measure	mg/l	mg/l	mg/l	mg/l	
Licence Limit	70	5	100	350	
Monitoring Frequency Required by Licence	Daily during Wet Weather Bypass				
Averaging Period	Grab Sample				
No. Samples Collected	0	0	0	0	Wet Weather Bypass was not used at all during the year.
Lowest	-	-	-	-	
Highest	-	-	-	-	
Exceedance (yes/no)	No	No	No	No	

Table 9: Asbestos Monitoring Results

No. of Air Samples 2015-17 Period	No. of Exceedances	NSW SafeWork >0.02 Fibres/millilitre of air sampled	NSW Depart Health & Caltex Action Level >0.01 Fibres/millilitre of air sampled (new in 2015)
4327	Nil	Nil	Nil

Table 10: Dust Monitoring Results

Table 10 (A) Dust Tracker (Unit used during felling of structures)

Period	No. Dust Samples	No. of Exceedances	Threshold Limit
2017	91	Nil	50 µg/m ³
2016	405	Nil	50 µg/m ³
2015	268	Nil	50 µg/m ³

Table 10 (B) Dust Deposition (5 locations on site)

Period	No. Dust Samples	No. of Exceedances	Threshold Limit
2017	60	nil	4g/m ² /month

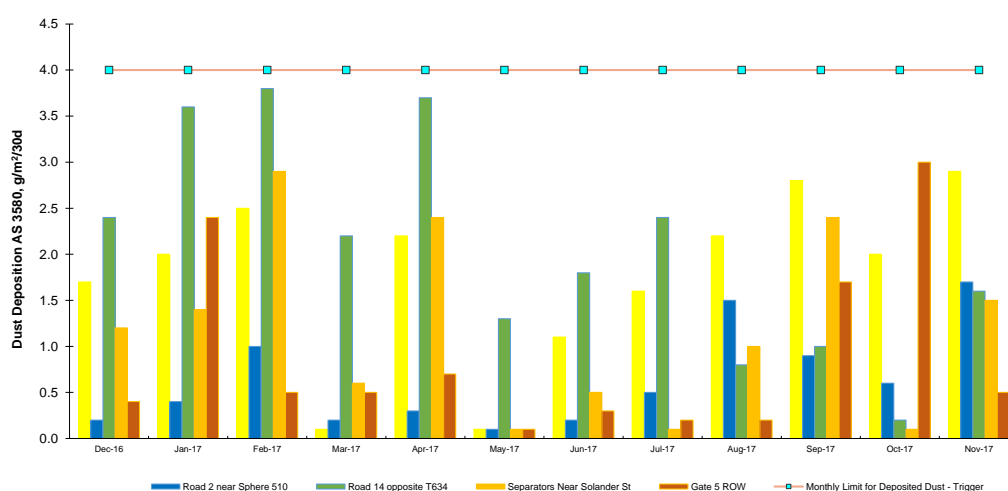


Figure 3. Dust Deposition Monitoring for 2017

Table 10 (C) Concrete Crushing - Dust Tracker

Period	No. Dust Samples	No. of Exceedances	Threshold Limit
Aug –Dec 2017	105	Nil	50 µg/m ³

2.3.1 24 Hour Kurnell Community Hotline

During the reporting period 59 calls to the 24 Hour Kurnell Community Hotline were received. Table 11 shows the breakdown of these calls, based on the category of the complaint. Complaints are followed up immediately with an investigation into the potential cause of the complaint and corrective actions initiated where required. All investigations are tracking in the Caltex LPS to conclusion. The outcome of the investigation and the actions taken is provided either be a face to face meeting or during a phone call to the complainant. Figure 4 shows the breakdown of the complaints by month over the reporting period.

Table 11 – 2017 Community Hotline Monitoring

Number of Call Recorded During the Last Twelve Months	
Pollution Complaint Category	Number of Calls
Odour & Air	13
Water	2
Noise	29
Fallout & Waste	0
Miscellaneous	15
Total	59

Note: Miscellaneous calls related to enquiries and concerns that did not fall into the main categories above

Calls to the Community Hotline (January 2017 - December 2017)

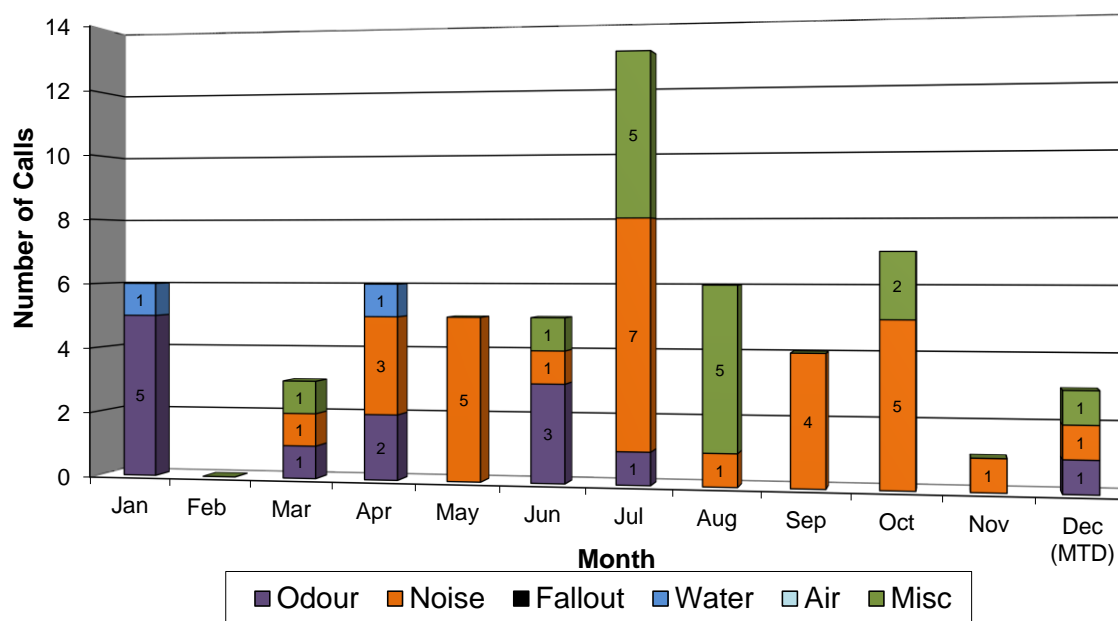


Figure 4. Monthly Calls to the 24 Hour Community Hotline

2.4 TERMINAL NON-COMPLIANCE AND CORRECTIVE ACTION

Based on the data presented in the previous section, no exceedances were recorded against the licence limits for the three monitoring points.

As can be seen from Table 11 above, the main potential impact on the community in this reporting period is odour. All odour complaints are immediately investigated by Terminal operational personnel. It is important to note that not all community odour complaints can be verified nor attributed to the Kurnell Terminal operations. Where odour have been verified and the odour source identified, immediate actions have been taken to eliminate or reduce the odour, then investigate the cause/s of the odour. All investigation findings and actions are recorded in the Loss Prevention System, as well as communicated to the complainant.

All community complaints were investigated immediately and appropriate actions were implemented. Feedback was provided to the complainant regarding the cause of the potential impact and the actions taken to prevent it from happening again. Generally, the community has been appreciative of the way any complaints were handled.

2.4.1 'Smartadata' Unattended Continuous Noise Monitoring System - Kurnell Wharf

During 2017, noise was reported as the second highest potential impact on the community. In particular, members of the community complained mainly about noise emanating from the tanker ships during product discharge activities at the wharf.

Wilkinson Murray, Noise Consultants had been engaged to undertake further noise assessments in the later part of 2016 and early 2017. A report based on the consultant's observations was prepared and issued to Caltex, NSW EPA and DP&E.

In consultation with the two regulators, Alex Lovell, Kurnell Terminal Operations Manager and Jos Kusters, Snr Environment Specialist Licensed Sites, agreed to commission a six month shipping noise trial. Wilkinson Murray have been engaged to supply, install and calibrate a SoundScience 'SmartaData' unattended continuous noise monitoring system on the Kurnell wharf.

The monitoring system comprises a bespoke system utilising proprietary acoustical components, customised power and communications hardware and the SoundScience SmartaData software. The system has been configured to monitor and record single channel 1/3 octave noise levels. This takes noise monitoring information gathered from the wharf, together with meteorological information, and calculations performed using the ENM algorithm to predict noise levels at six receivers along the shoreline on Prince Charles Parade.

The results of this process are presented on the SmartaData website. The system is intended to provide Shore Officers (SO) and other key personnel at the Terminal with real time feedback about the noise output from tanker ships.

Using the noise limits (day and night) set by the site EPL, this system would alert Kurnell SO's (and others) to any event of elevated noise output coming from the tanker ships during their time berthed at the Kurnell wharf and during product discharge activities. The SO can

then instruct the Ship Captain to take all additional mitigation measures to further reduce the noise output.

Wilkinson Murray will be providing detailed analytical reports on the noise monitoring data monthly. The report will also include details of shipping/berthing movements during the month. This will then provide Caltex with objective data on those tanker ships that are not suitable for berthing at Kurnell because of their noise output. This information will be feed back to Ampol via the Marine Assurance group. The report is to be submitted to the NSW EPA within one month after the end of each calendar month.

The commissioning of the monitoring system commenced in late July and was completed by end November 2017. The six month shipping noise monitoring trial commenced on 1 December and will run until 31 May 2018.

Note:

The six month continuous shipping noise monitoring trial is an additional qualitative tool for the site. A standard instruction letter/form is already issued (through shipping agents) to ship captains about the Kurnell Noise Minimisation Program. This letter is used to:

- Alert the ship of the proximity of the wharf to the local community
- Alert the ship to existing noise level restrictions (EPL limits)
- Advise ships on the measures they are required to take to limit noise output whilst in port at Kurnell

When a ship is identified as emitting noise output above the site EPL or as a consequence of the noise complaint, a 'letter of protest' (LoP) is issued to the ship captain. The Caltex Marine Assurance group are also informed that a LoP has been issued.

Details of calls to the Community Hotline (YTD) and general environmental updates are presented to the local community quarterly.

During 2017, one non-compliance was reported to the EPA and DPE.

The details of this non-compliance and a summary of the actions taken can be found in Table 12.

Table 12 Summary of Non-Compliances

Date	Description of Non-Compliance	Cause of Non-Compliance	Corrective Actions to Prevent Non-Compliance
<p>9 November</p> <p>Reported to Caltex on Thursday 16 November</p> <p>Verbal report to EPA and DPE - follow up letter on 27 November 2017</p>	<p>Shipping noise level exceedance (against night time EPL noise limit)</p> <p>Note: Nil community complaints were received during the night of 9-10 November.</p>	<p>Whilst Wilkinson Murray noise consultant was undertaking attended noise monitoring measurements on shipping activities (as part of the commissioning of the SmartaData system), he identified demonstrated a significant (L_{Aeq} 7 dBA.) exceedance of the approved night time Kurnell EPL limit (Gulf Coast (Berth 1) and Pro Sapphire (Berth 2) during discharging activity.</p> <p>At the designated point on the shore, the wharf noise was noted to have a noise contribution of L_{Aeq} 52 dBA. Inclusive of a 5 dB penalty for the significant low frequency component, the penalised contribution is considered to be L_{Aeq} 57 dBA.</p>	<p>All standard procedures were executed by Caltex prior to the arrival of the two ships named above. The shipping agent and the ship captain are issued with a copy of the Kurnell Wharf Noise Management Letter which informs them of the strict noise limits applying to the wharf operation. The ship captain/s are also required to sign the Acknowledgement of Receipt form which confirms they have received the Kurnell Wharf Noise Management Letter and are committed to keeping shipping noise to a minimum.</p> <p>Caltex has now issued both ships with the Letter of Protest in relation to the reported noise exceedance.</p>

Note:

Refer to **Section 1.6 Non – Compliance and Corrective Action** (page 14) for description of non-compliances relating to Demolition Works in 2017

2.5 TERMINAL DATA TREND ANALYSIS

Analysis of the available data show continued sound operation of the Terminal within licence and consent requirements, other than the shipping noise output. None of the compliance and monitoring data reveals a trend that could potentially lead to non-compliance with any licence and/or consent conditions.

2.6 TERMINAL DATA DISCREPANCIES

The Terminal EMS used to manage and monitor the environmental aspects and impacts associated with the development is considered to be appropriate – as indicated by the comments made in the Transition to ISO14001:2015 and Recertification report (LRQA) and 2nd Independent Environmental Audit report in September 2017. The environmental stewardship processes under the EMS ensure that relevant monitoring data is generated, assessed and reported. This also allows for any potential gaps to be identified and corrective and preventative action plans to be developed and implemented.

PART 3 – 2016 ENVIRONMENTAL IMPROVEMENT PLAN AND SUMMARY

This section of the report provides an overview of the improvement works that have been carried out during the reporting period. This includes: works carried out as part of the EPL's Pollution Reduction Program, development of the Terminal's OEMP, Phytoremediation works. An overview of the improvement works planned for 2017 will be provided as well.

3.1 CHANGES MADE TO ENHANCE THE ENVIRONMENTAL PERFORMANCE OF THE DEMOLITION ACTIVITIES.

Audits of the Noise Management Plan were also conducted in January, May, August and November. A gap was identified during the internal audit in September (also documented in the Noise Management Plan November Audit). This gap concerns the communication and response plan following the detection of high noise. The procedure has been updated such that in addition to reporting high noise to the EMR, noise exceeding the Terminal Operating License Limit is communicated in writing to the Terminals Manager and where multiple noise readings are recorded above the Demolition Consent Conditions (Mods 1), even where these noise levels are not attributed to demolition activity, independent monitoring and verification is recommended and to be coordinated by the site EMR.

Enhancement of the local asbestos removal procedure per discussions with demolition contractor - Industrial Demolition Services.

3.2 EPA EPL 837: POLLUTION STUDIES AND REDUCTION PROGRAMS (PRPS) ACTIVITIES IN 2017

This section provides an overview of the PRP projects U2.1 and U4.2. During the last twelve months work has been carried out on both projects.

U2.1 PRP U16.2: Implementation of the Tank Sleeve Program

Caltex has committed to the installation of Tank sleeves on slotted guide poles on twelve External Floating Roof Tanks (EFRT) after the transition from a Refinery to a Terminal. The NSW EPA have agreed to three part implementation program Part 1 has been completed and reported on in the 2015 Annual Return.

Part 2 involves the upgrade of six EFRT's by 31 December 2017. The project is being managed by the Tank Program Team. Of the six tanks in the Part 2 program, four have already been completed. The remaining EFRT's included in Part 2 were:

- TK 104 - completed Qtr.4 2016
- TK 103 - completed Qtr.4 2017

Note: Tank 101 will now be demolished – refer to SSD5544 MOD3

3.3 KURNELL TERMINAL OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN (OEMP) DEVELOPMENT

In line with the requirements of Obligation D2 of SSD 5544 and B19, a Stage 1 Interim Kurnell Terminal Operational Environmental Management (OEMP) was developed. The Plan includes all the stated elements in the sub text of D2 and D3, with a number of Management Plans in common with the .Demolition Project. The Kurnell Terminal OEMP has since been approved

by the DPE. A final Stage 2 Kurnell Terminal OEMP will be finalised and submitted for review and approval prior to the Demolition project concluding in 2018. All Management Plans currently shared with Demolition will be updated to reflect terminal operations only. They will be submitted as part of the Final OEMP.

An internal Audit tool has been developed to assist with monitoring compliance and the effectiveness of the OEMP. It has been reviewed and endorsed by key stakeholders.

3.4 INDEPENDENT ENVIRONMENTAL AUDIT (IEA) OUTCOMES

Independent environmental audits were conducted in April 2016 and September 2017, in accordance with the auditing requirements (D7) of SSD 5544 Conversion of Refinery to Finished Product Import and Distribution Terminal and SSD 5353 (F1) Ports and Berthing Upgrade. The reports, along with the Caltex responses to the non-conformances, have been submitted to the DP&E.

Discussions with the DP&E in relation to the 2016 non-conformances relating to SSD 5544 and SSD 5353 have concluded. The full 2016 IEA reports, including the Caltex responses have been published on the Caltex Public Webpage under Kurnell Conversion.

The 2017 IEA report for SSD 5544 Conversion of Refinery to Finished Product Import and Distribution Terminal SSD5544 MOD1 Demolition and SSD 5353 (F1) Ports and Berthing Upgrade has been submitted to the DP&E, along with Caltex responses.

Refer to Appendix 1 for the status of the Caltex actions arising from the above mentioned Independent Environmental Audits(IEA) - SSD 5544 and SSD 5353.

3.5 PHYTOREMEDIATION AT SPENT CATALYST STORAGE AREA

Over the last 5 and a half years, the Kurnell site has remediated an area where previously spent Phosphoric Acid Catalyst used to be stored. The area was remediated by neutralising and encapsulating the spent catalyst and by planting 100 sterile poplar trees. The poplars have helped to remediate the locally contaminated groundwater, reducing the level of dissolved phosphate. Figure 4 show that reduction in a number of wells over time.

The results indicate that the rate of reduction in phosphate has slowed down. Monitoring will continue.

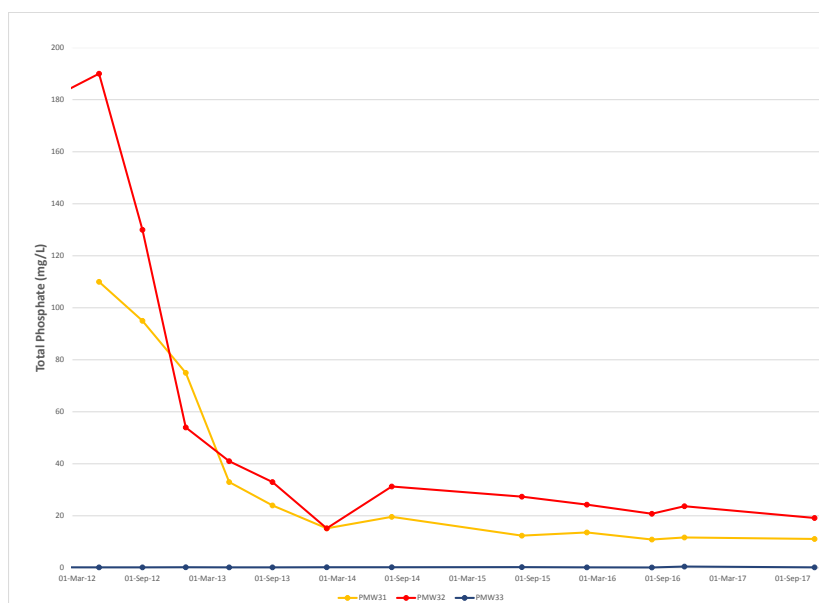


Figure 4, Reduction in Phosphate Concentration in Groundwater

3.6 PLANNED 2018 IMPROVEMENT MEASURES

3.6.1 U2.1 PRP U16.2: Implementation of the Tank Sleeve Program

Caltex has committed to the installation of Tank sleeves on slotted guide poles on thirteen External Floating Roof Tanks (EFRT) after the transition from a Refinery to a Terminal. The NSW EPA have agreed to three part implementation program:

- Part 1, including four tanks has been completed and reported on in the 2015 Annual Return.
- Part 2, including four tanks has been completed and reported to the EPA in December 2017.
Note: Tank 101 was originally part of this program but has been removed since the decision was made to demolish this tank.
- Part 3, involves the upgrade of the remaining 5 EFRT's by 31 December 2022.

The project is being managed by the Tank Program Team. Of the five remaining EFRT's in the Part 3 program, one is programmed for 2018:

- Tank 513

3.6.2. Smartadata' Unattended Continuous Noise Monitoring System

Progress the six month continuous shipping noise monitoring trial, in consultation with the NSW EPA and DP&E. The project will provide:

- a qualitative assessment as to the nature and level of the shipping noise output, specific to named tanker ships berthed at Kurnell
- identification of tanker ships that are unlikely to be able to operate within our EPL noise limits

- progress further mitigation measures for which Caltex has control over

3.6.3 Progress “Future State” Redesign of Kurnell Terminal Waste Water Treatment Plant (WWTP).

At the time of submitting this report, a decision on the best path forward for the WWTP has not been finalised. Caltex is currently assessing the business case for modifying the existing plant infrastructure to better meet the current and predicted future waste water treatment needs of the site or outsource the WWTP to a third party to run, as a waste receiver.

Further work will need be done to implement the redesign of the WWTP, if the business decided on that option.

4 SUMMARY

Over the previous year, activities associated with the development have complied with the Development Consent for Application SSD 5544 (dated 7 January 2014) and Development Consent for Modification 1 (Demolition) of SSD 5544 (dated 10 August 2015).

The environmental management activities developed from the EIS, SEE and the EPL, incorporating the consent conditions, have been effective and will be continued for the current year.

Note:

The works associated with SSD5353 Ports and Berthing Upgrade, dated 19 September 2013 concluded in 2015 and have been previously reported.

APPENDIX 1.

PART 1. STATUS OF THE CALTEX ACTIONS ARISING FROM THE 2017 INDEPENDENT ENVIRONMENTAL AUDIT (IEA)

a) SSD 5544 Conversion of Refinery to Import and Distribution Terminal (including MOD 1 – Demolition Works)

Non-Compliance	Auditor Recommendation (Options)	Caltex Response
<p>1. Odour</p> <p>There were potentially offensive odours emitted from the operations at the Kurnell Terminal. This was shown in the Caltex complaints records which indicate that there were 17 odour issues (in this audit period) reported by neighbours to the Kurnell facility. Caltex reported this as a non-compliance in the annual EPA return 2016 -2017.</p> <p><i>Applicable Consent Condition D2 and EPL 837 Condition L7</i></p> <p>Not caused by the direct development activities but related to Condition D2 requiring the establishment and implementation of an Operational Environmental Management. Note: Caltex Loss Prevention procedures were followed.</p>	<p>Continue investigations in odour complaints and design odour monitoring programs to determine severity / causes.</p> <p>Most odour investigations are post event, so consider a more pro-active approach to internally recording odours before they become potentially offensive to neighbours.</p>	<p>Caltex accepted the audit team's findings and comments.</p> <p>We will continue investigations into any odour complaints received (internal and external).</p> <p>Potential odours sources are already known. Any operation and/or maintenance works in these areas take odour mitigation measures into consideration as a proactive step in preventing offensive odours in the surrounding neighbourhood.</p>
<p>2. Operational Controls – loss of containment</p> <p>Caltex loss prevention records and the annual EPA Return 2016 – 2017 recorded a non-compliance for release of slops (wharf), a spill of 86,000L of hydrocarbon water (land), loss of gasoline from pipeline “Gasoline 1” (land)</p> <p><i>Applicable Consent Condition D2 and EPL 837 Conditions L1 and O1</i></p> <p>Not caused by the direct demolition activities but related to Condition D2 requiring the establishment and implementation of an Operational Environmental Management. Note: Caltex Loss Prevention procedures were followed. Reported to DPE (Annual Review Report December 2016).</p>	<p>Loss Prevention investigations and subsequent actions were satisfactory.</p>	<p>Caltex accepted the audit team's findings and comments.</p> <p>Gasoline 1 Pipeline:</p> <ul style="list-style-type: none"> • Checks were completed on all PSV valves to ensure they are operating as intended • All isolating valves for PSVs to be secured open • An internal memorandum (Loss Prevention System Alert) was issued to raise awareness of working around PSVs.

Non-Compliance	Auditor Recommendation (Options)	Caltex Response
<p>3. Late Submission of Demolition Studies (prior to commencement of Demolition)</p> <p>The following studies were required to be submitted (for approval) to the Secretary at least one month prior to the commencement of demolition works: Firewater System Review Demolition Safety Study Demolition had started prior to submission and approval.</p> <p><i>Applicable Consent Condition C3A</i></p>	<p>Sighted subsequent approval and associated communications between Caltex and DPE</p> <p>Noted that other Plans sampled (including sub-plans) have been submitted and approved within required timeframes. Better diligence demonstrated</p>	<p>Caltex accepted the audit team's findings and comments.</p> <p>As stated by the Auditor, better diligence has been applied to the tracking of Consent Condition requirements, DPE submission dates and the use of the Caltex action tracking system to demonstrate compliance.</p>

b) SSD 5353 Berthing and Ports Upgrade

Non-compliance	Recommendation (Options)	Caltex Response
<p>1. Odour</p> <p>There were potentially offensive odours emitted through the operations at the Kurnell Terminal. This was shown in the Caltex complaints records which indicate that there were 17 odour issues (in this audit period) reported by neighbours to the Kurnell facility. Caltex reported this as a non-compliance in the annual EPA return 2016 -2017.9</p> <p><i>Applicable Condition EPL 837 Condition L7</i></p> <p>Note 1: Not caused by the direct development activities, determined by Caltex to be land operations related (not wharf) but nonetheless related to EPL conditions for the whole terminal.</p> <p>Note 2: Caltex Loss Prevention procedures were followed.</p>	<p>Continue investigations into odour complaints and design odour monitoring programs to determine severity / causes. Most odour investigations are post event, so consider a more pro-active approach to internally recording odours before they become potentially offensive to neighbours.</p>	<p>Caltex accepted the audit team's findings and comments.</p> <p>We will continue investigations into any odour complaints received (internal and external).</p> <p>Potential odours sources are already known. Any operation and/or maintenance works in these areas take odour mitigation measures into consideration as a proactive step in preventing offensive odours in the surrounding neighbourhood.</p>

Non-compliance	Recommendation (Options)	Caltex Response
<p>2. Operational Controls – loss of containment</p> <p>Caltex loss prevention records and the annual EPA Return 2016 – 2017 recorded a non-compliance for release of slops from a concrete tank (wharf related), a spill of 86,000L of hydrocarbon water (land activities), loss of gasoline from pipeline “Gasoline 1” (land activities). <i>Applicable Conditions EPL 837 Conditions L1 and O1</i></p> <p>Note 1: Not caused by the direct development activities but related to Conditions of the EPL (for the whole terminal) Note 2: Caltex Loss Prevention procedures were followed.</p>	<p>Loss Prevention investigations and subsequent actions were satisfactory.</p>	<p>Caltex accepted the audit team’s findings and comments.</p> <p>Caltex and its principal maintenance contractor have reviewed project planning, drilling controls, personnel controls and procedures for undertaking repairs.</p> <p>A Safety Alert was shared with all sections of Caltex and their Contracting groups that emphasised: An extra degree of responsibility and situational awareness is demanded of staff when working on infrastructure around water and when undertaking seemingly relatively routine activities. Targeted Loss Prevention Observations (LPO) will continue with these tasks.</p>

Note:

Both 2017 IEA reports were submitted to the NSW DPE on 28 November 2017.

Caltex has not received any feedback regarding the audit findings from the Compliance Lead, DPE at the time of finalising this update.

PART 2. STATUS OF THE CALTEX ACTIONS ARISING FROM THE 2016 INDEPENDENT ENVIRONMENTAL AUDIT (IEA)

a) SSD 5544 Conversion of Refinery to Import and Distribution Terminal

Non-Compliance	Caltex Response (Summary)	Status	2017 IEA – Auditor Review of 2016 Actions
<p>1, Noise Management Plan</p> <p>Noise monitoring, indicating a high level of Leq > 60, at the boundary (Road 7) on 4th November 2014 was not further investigated / monitored to determine causes and resolution. It was not entered in the Caltex Loss Prevention System (or equivalent).</p> <p>Note: based on evidence sampled, this was an isolated example.</p> <p>Applicable Consent Conditions: C22</p>	<p>Ensure LPS (or equivalent) is used to capture high noise readings to facilitate (and have a record) of cause analysis and reporting to the</p>	<p>Communication of requirements to document all such events in LPS and Lessons Learnt session to Terminal and Demolition Project Team completed.</p> <p>Ensured effective recording and use of LPS for various issues e.g. odour, dust etc.</p>	<p>IEA Team Comments:</p> <p>Sighted communication of requirements and Lessons Learnt session.</p> <p>Sighted effective recording and use of LPS for various issues e.g. odour, dust etc.</p> <p>From environmental data sampled on this audit, no examples sighted where LPS was not used when applicable.</p>
<p>2. Air Quality Management Plan</p> <p>Air Quality Management Plan (Jan. 2014) requires that fortnightly reports (dust, odour observations / inspections) are submitted to the Caltex EMR by relevant contractors. There were no records available.</p> <p>Applicable Consent Condition: C28</p>	<p>Ensure specified monitoring activities (in Management Plans) are complied with. Include more information in the Management Plan as what the format of such reporting will be rather than a general reference.</p> <p>CEMP and sub-plan audits can be used to verify specified activities are being complied with and records are available to demonstrate it.</p>	<p>Lessons Learnt being carried forward into the demolition works phase.</p> <p>Consistent records now exist of regular audits and inspections conducted by contractor (IDES) and the Caltex Project Audit Schedule – all plans and sub-plans audited (each plan at least bi-monthly) as specified in each plan.</p>	<p>IEA Team Comments:</p> <p>Sighted evidence of Lessons Learnt being carried forward into the demolition phase.</p> <p>Sighted records of regular audits and inspections conducted by contractor (IDES) and the Caltex Project Audit Schedule – all plans and sub-plans audited (each plan at least bi-monthly) to ensure all inspections and monitoring is conducted as specified in each plan.</p>

<p>3. Construction Environment Management Plan (CEMP) Audits</p> <p>The CEMP (Jan. 2014) section 4.1 requires the following:</p> <ul style="list-style-type: none"> • Implementation of the CEMP will be audited by Caltex within 6 weeks of the commencement of site construction works • Contractor will submit copies of completed monthly HSE audits <p>The CEMP audit was not done; only one contractor monthly HSE audit was in evidence.</p> <p>Applicable Consent Condition: D1</p>	<p>Improve prominence of specified CEMP audits and use them as intended. Feature as a critical milestone to be tracked.</p> <p>Establish a better long-term record keeping system for information (e.g. HSE audits) from contractors.</p>	<p>Communication of requirements and Lessons Learnt session to Terminal and Demolition Project Team completed.</p> <p>DEMP audits. Project Audit Schedule covers all management plans (including sub-plans) on a regular basis. Internal audit status (Caltex and IDES) reviewed at weekly team meetings</p>	<p>IEA Team Comments:</p> <p>Sighted application of Lessons Learnt in the DEMP audits. Project Audit Schedule covers all management plans (including sub-plans) on a regular basis. Sighted audit reports and subsequent actions on findings.</p> <p>Contractor audit reports (IDES) were readily available.</p>
<p>4. Independent Environmental Audit</p> <p>This IEA was conducted past the approved extension date of October 2015.</p> <p>Applicable Consent Condition: D7</p>	<p>Clarify IEA timeframes with other / future Development Consents.</p>	<p>Proactively scheduled 2017 IEA to occur before the Demolition Project wind downs in late 2017 and the Project members start to leave Caltex. – 4th Qtr. 2017</p> <p>Engaged with DPE representatives to discuss scope of the next IEA early.</p>	<p>IEA Team Comments:</p> <p>IEAs for SSD 5544 and SSD 5353 back on track with required timeframes.</p>

b) SSD 5353 Berthing and Ports Upgrade

Non-Compliance	Caltex Response (Summary)	Status	2017 IEA – Auditor Review of 2016 Actions
<p>1. Compliance Tracking Program</p> <p>Although the Compliance Tracking Program has been submitted and approved by the DG, there was no evidence available to demonstrate implementation of some elements of it.:</p> <ul style="list-style-type: none"> • Compliance status report within 6 weeks of the commencement. Pre-construction compliance, construction, pre-operation compliance reports were not available • Regular compliance audit frequency was not defined (“will be based on risk” but no further information) • No evidence of compliance audits sighted (daily inspections were seen during dredging, further inspections were sighted for piling). <p>Applicable Consent Condition D7</p>	<p>Future Compliance Tracking Programs will contain clearly defined requirements for compliance audits including frequency (based on defined risk approach).</p>	<p>Application of Lessons Learnt by:</p> <p>Compliance against audit frequencies and reports for the demolition project (SSD 5544)</p> <p>Compliance audit frequencies and reports for the Kurnell Operational Management Plan (OEMP) assessed as effective during ISO 14001:2015 audits by LRQA (May 2017).</p>	<p>IEA Team Comments:</p> <p>Evidence of application of Lessons Learnt was observed in:</p> <ul style="list-style-type: none"> • Compliance audit frequencies and reports for the demolition project (SSD 5544) were observed as effective during the IEA of that Development Consent <p>Compliance audit frequencies and reports for the Kurnell Operational Management Plan (OEMP) assessed as effective during ISO 14001:2015 audits by LRQA (May 2017).</p>
<p>2. Vibration Measurement and Evaluation</p> <p>Vibration measurement and evaluation methods specified in DIN 4150-3 were not used to determine whether the construction vibration goals would be achieved in accordance with limits in this Standard.</p> <p>Applicable Consent Condition C19</p>	<p>Caltex accepted the need to clarify the non-applicability of Consent Conditions with the Lead Regulator formally.</p> <p>It is noted that this issue resulted in an official caution letter from the Department (January 2017) as the Department considered that some form of vibrational monitoring should have been conducted.</p>	<p>To demonstrate the application of Lessons Learnt, there has been vibrational monitoring done during the demolition project (SSD 5544 Mods 1) e.g. during felling of tall structures in 2016. Vibration monitoring planned for removal of Cooling Water Line in 2017.</p>	<p>IEA Team Comments:</p> <p>Obviously it is not possible to retrospectively take actions for vibration measurements.</p> <p>It is noted, although in a different context, there has been applicable vibrational monitoring done during the demolition project (SSD 5544) i.e. application of Lessons Learnt.</p>

<p>3. Inconsistency between Consent Condition and CEMP Plan</p> <p>The Sediment & Water Quality Management Plan (SWQMP) contained a variation to method of monitoring Tributyltin (TBT) – the variation was clearly identified and formally approved by the DPE. However, this variation (from real-time monitoring of TBT to grab sampling) was inconsistent with Consent Condition C3 and C35f states that a Consent Condition shall prevail over a CEMP (irrespective of whether it is approved).</p> <p>The change was relatively minor and communicated transparently and consistent with the Environment Protection License. Thus the IEA team assessed this as an administrative non-compliance – not using correct variation protocols.</p> <p>Applicable Consent Conditions C3, C35f</p>	<p>In future projects, where there is a need to seek a waiver or variation to requirements within a Development Consent, Caltex will use correct variation protocols described in the Development Consent.</p>	<p>Lessons Learnt taken forward into other projects and the demolition project (SSD 5544 Mods1);</p> <p>Early engagement of DPE</p>	<p>IEA Team Comments:</p> <p>Retrospective issue; Lessons Learnt taken forward into other projects and the demolition project (SSD 5544 MOD 1); no recurrence of this issue observed by the IEA Team on the SSD audit.</p>
<p>4. Submission of documents to external parties</p> <p>The Development Consent specifies that certain documents must be submitted to various authorities e.g. Director-General, EPA, DPI (Fisheries), SPC as applicable.</p> <p>There was no direct evidence available that some of the required documents had been submitted.</p> <p>Applicable Consent Conditions C4 – Post Dredging Water Quality Report C12 – Coastal and Hydrodynamic Processes C28 – Post Construction Road Dilapidation Report D7 – Compliance Tracking Reports</p>	<p>Future such projects will establish a central repository for registering all document submissions and any Regulatory approvals associated with the project, any communications with the authorities and other external interested parties.</p>	<p>Internal audit completed to confirm remaining submission requirements (Mods 1)</p> <p>Making better use of Caltex tools (Cintellate) to track document submissions, due dates and responsibilities, etc.</p>	<p>IEA Team Comments:</p> <p>Sighted effective application of the Lessons Learnt on the IEA of SSD 5544 demolition project. No recurrence of the issue from records sampled.</p>

<p>5. Public Communications</p> <p>Although Caltex has shown evidence of various means of communication with interested parties and stakeholders, communication on the current implementation status of the project was not available on the public website.</p> <p>Applicable Consent Condition</p> <p>D6</p>	<p>The Kurnell Site Conversion page within the Caltex Public website was previously updated to confirm that the SSD5353 had been completed.</p> <p>An improved process has been put in place to monitor the status of the current Refinery Demolition project on a quarterly basis. The Kurnell Site Conversion page within the Caltex Public website is now updated when the status changes.</p>	<p>In addition to the comments made previously, an additional Cintellate action is in place to undertake a quarterly review of the Public website to ensure that all data is current.</p>	<p>IEA Team Comments:</p> <p>Caltex Website reviewed this audit – up-to-date. Action effective.</p>
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APPENDIX 2. ENVIRONMENTAL PERFORMANCE AGAINST ACTIVE CONSENT CONDITIONS

1. SSD5544 (includes MODS 1 Demolition Works)

	CONDITIONS	Applicable Phase: Conversion (C) Demolition (D) Terminal Ops (T) or General (applies to all phases) (G)	Activity Status: Completed Active/ongoing Inactive Statement	Compliance Status: Compliant Non-Compliant Not Triggered	Comments/Actions Note: Also refer to the 2017 IEA auditor comments – submitted to DPE 28 November 2017
	OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT				
B1	The Applicant shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction or operation of the development.	G	Active/ongoing	Compliant	
	TERMS OF CONSENT				
B2	The Applicant shall carry out the Development generally in accordance with the: (a) EIS; (b) RTS; (c) site layout plans and drawings in the EIS (see Appendix A); (d) MOD 1; and (e) conditions of this consent	G	Active/ongoing	Compliant	
B3	If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this Consent shall prevail to the extent of any inconsistency.	G	Statement	Compliant	
B4	The Applicant shall comply with any reasonable requirement(s) of the Secretary arising from the Department's assessment of: (a) any reports, plans or correspondence that are submitted in accordance with this consent; and (b) the implementation of any actions or measures contained within these reports, plans or correspondence.	G	Active/ongoing	Compliant	

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B5	Subject to confidentiality, the Applicant shall make all documents required under this consent available for public inspection on request.	G	Statement	Compliant	
LIMITS OF CONSENT					
B6	The Applicant shall not store in excess of 925 mega litres (ML) of refined product on the Site at any one time, unless otherwise agreed to in writing by the Secretary.	G	Active/ongoing	Compliant	
B7	The construction works associated with the Development shall not extend beyond five (5) years from the date of approval.	G	Active/ongoing	Not triggered	
B7A	The demolition works associated with the development shall not extend beyond three (3) years from the date of consent of MOD 1.	D	Active/ongoing	Not triggered	
LAPSING OF CONSENT					
B8	This consent shall lapse on 1 December 2018 unless any part of the Project is physically commenced (within the meaning of section 95 of the EP&A Act) on or before that day, in accordance with any consent or development consent, on the Land to which the consent or consent relates.	G	Completed	Not triggered	
SURRENDER OF EXISTING DEVELOPMENT CONSENTS					
B9	Within six (6) months of ceasing refining operations, or as otherwise agreed in writing by the Secretary, the Applicant shall surrender all existing development consents for the site listed in Appendix B in accordance with Clause 97 of the EP&A Regulation.	G	Completed	Compliant	
B10	Within six (6) months of the issue of a Compliance Certificate or Occupation Certificate for the following development consents, or as otherwise agreed in writing by the Secretary, the Applicant shall surrender these consents in accordance with Clause 97 of the EP&A Regulation. (a) DA 13/0195 – Stormwater Drainage Upgrade; and (b) DA 12/0238 – Construction of a switch room.	G	Completed	Compliant	
B11	Nothing in this consent alters or modifies the following development consents: (a) SSD 5353 – Port and Berthing Works;	G	Statement	Statement	

	(b) DA 13/0335 – Construction and operation of a Bio-Pile Pilot Trial to treat Hydrocarbon impacted soils; (c) DA 09/840 – Jet Fuel Remediation; and (d) DA 11/1090 – Remediation of Limestone Pits."				
	STATUTORY REQUIREMENTS				
B12	The Applicant shall ensure that all licences, permits and approval/consents are obtained as required by law and maintained as required throughout the life of the Development. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits or approval/consents.	G	Active/ongoing	Compliant	
	AMENDED ENVIRONMENT PROTECTION LICENCE (EPL) REQUIREMENT				
B13	Prior to the commencement of construction, the Applicant must apply to the EPA to vary the Environment Protection Licence (EPL) for the Kurnell Refinery (Licence No. 837) to permit the Development.	G	Completed	Compliant	
B13 A	The Applicant shall apply to the EPA to vary the EPL if additional scheduled activities are required to be undertaken as result of the demolition works.	G	Active/Ongoing	Compliant	Note: Soil Regeneration Facility (A1.1), inclusion of waste type of petroleum hydrocarbon contaminated soil (L4.1), new offensive odour condition (L6.1) and Bio-Pile Trial removed and added to the completed special conditions table.

STRUCTURAL ADEQUACY					
B14	The Applicant shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures are constructed in accordance with the relevant requirements of the BCA. Notes: Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.	C	Active/ongoing	Compliant	
B15	The Applicant shall ensure that all demolition work is carried out in accordance with Australian Standard AS 2601:2001: The Demolition of Structures, or its latest version.	D	Active/ongoing	Compliant	
OPERATION OF PLANT AND EQUIPMENT					
B16	The Applicant shall ensure that all plant and equipment used for the Development is: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	G	Active/ongoing	Compliant	
B16 A	The cooling water outlet pipeline shall be removed from beneath Silver Beach north of Prince Charles Parade and up to 20 metres seaward from the low tide mark in Botany Bay as shown in Appendix A of this consent.	D	Due to Start in 2017	Not triggered	
PROTECTION OF PUBLIC INFRASTRUCTURE					
B17	Prior to the commencement of construction, the Applicant shall: (a) prepare a dilapidation report of the public infrastructure in the vicinity of the site (including roads, gutters and footpaths); and (b) submit a copy of this report to the Secretary and Council.	C	Completed	Compliant	
B17 A	Prior to the commencement of <u>demolition</u> works, the Applicant shall: (a) prepare a dilapidation report of the public infrastructure in the vicinity of the site (including roads, gutters and footpaths); and (b) submit a copy of this report to the Secretary and Council.	D/T	Completed	Compliant	
B18	The Applicant shall: (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.	G	Active/ongoing	Compliant	

STAGED SUBMISSION OF PLANS OR PROGRAMS					
B19	<p>With the approval of the Secretary, the Applicant may:</p> <p>(a) submit any strategy, plan or program required by this consent on a progressive basis; and/or</p> <p>(b) combine any strategy, plan or program required by this consent.</p> <p>Notes:</p> <p>If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program shall clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages and the trigger for updating the strategy, plan or program.</p> <p>There must be a clear relationship between the strategy, plan or program that are to be combined."</p>	G	Active/ongoing	Compliant	<p>Approval for Staged Submission of Terminal OEMP & Management Plans</p> <p>Plan to stage Cooling Water Line Removal (B16A) – three stages proposed for 2017/18.</p>
DISPUTE RESOLUTION					
B20	<p>In the event that a dispute arises between the Applicant and Council or a public authority other than the Department, in relation to a specification or requirement applicable under this consent, the matter must be referred by either party to the Secretary, or if not resolved, to the Minister, whose determination of the dispute shall be final and binding to all parties. For the purpose of this condition, 'public authority' has the same meaning as provided under Section 4 of the Act.</p>	G	Statement	Not triggered	
B21	<p>The Applicant shall ensure that employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent relevant to their respective activities.</p>	G	Statement	Compliant	
B22	<p>The Applicant shall be responsible for environmental impacts resulting from the actions of all persons that it invites onto the site, including contractors, sub-contractors and visitors.</p>	G	Active/ongoing	Compliant	

HAZARDS AND RISKS					
Terms of Approval					
C1	The Applicant shall: (a) carry out the Development in accordance with the PHA; (b) implement all control measures proposed in the PHA; (c) implement all actions proposed by Caltex in response to the recommendations from the Buncefield incident investigation report (Kurnell Buncefield Review - Final, submitted to the Department May 2013). (d) implement all proposed actions listed in Caltex's response to the Department's requests for additional information and clarifications (Caltex Response to D&I Queries of Caltex Submitted QRA – August 2013).	G	Active/ongoing	Compliant	
C1A	The Applicant shall implement the recommendations in section 6 of the document titled <i>Hazard and Risk Analysis</i> of the proposed <i>Caltex Kurnell Refinery Demolition Works</i> (HRA), prepared by Planager Pty Ltd and enclosed in Appendix B of the SEE.	G	Active/ongoing	Compliant	
Demolition					
C1B	The Applicant shall ensure that relevant demolition work associated with the development is carried out in accordance with Australian Standard AS 2601:2001: The Demolition of Structures, or its latest version and the requirements of the <i>Work Health and safety Regulation 2011</i> .	D	Active/ongoing	Compliant	
C1C	The Applicant shall ensure that major demolition works as defined under the <i>Work Health and safety Regulation 2011</i> are undertaken by licensed demolition experts.	D	Active/ongoing	Compliant	

Commissioning																				
C2	<p>The Applicant shall commission the development in accordance with Table 1 below:</p> <table border="1"> <thead> <tr> <th>System Description</th> <th>Estimated Commencement of Commissioning</th> <th>Estimated Commencement of Operation of System</th> </tr> </thead> <tbody> <tr> <td>Jet</td> <td>1 March 2014</td> <td>1 June 2014</td> </tr> <tr> <td>Diesel</td> <td>1 April 2014</td> <td>1 July 2014</td> </tr> <tr> <td>Gasoline</td> <td>1 May 2014</td> <td>1 August 2014</td> </tr> <tr> <td>Slop</td> <td>1 May 2014</td> <td>1 August 2014</td> </tr> </tbody> </table>	System Description	Estimated Commencement of Commissioning	Estimated Commencement of Operation of System	Jet	1 March 2014	1 June 2014	Diesel	1 April 2014	1 July 2014	Gasoline	1 May 2014	1 August 2014	Slop	1 May 2014	1 August 2014	C	Completed	Compliant	
System Description	Estimated Commencement of Commissioning	Estimated Commencement of Operation of System																		
Jet	1 March 2014	1 June 2014																		
Diesel	1 April 2014	1 July 2014																		
Gasoline	1 May 2014	1 August 2014																		
Slop	1 May 2014	1 August 2014																		
Pre-construction																				
C3	<p>At least one month prior to the commencement of construction of the proposed Development (except for construction of those preliminary works that are outside the scope of the hazard studies), or within such further period as the Secretary may agree, the Applicant shall prepare, in consultation with WorkCover NSW, and submit for the approval of the Secretary, the studies set out under subsections (a) to (d) (the pre-construction studies) of this Condition. Construction, other than for preliminary works, shall not commence until approval has been given by the Secretary and, with respect to the Fire Safety Study, approval has also been given by Fire and Rescue NSW.</p> <p>(a) <u>Construction Safety Study</u></p> <p>A Construction Safety Study, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 7, 'Construction Safety'. For developments in which the construction period exceeds six (6) months, the commissioning portion of the Construction Safety Study may be submitted two months prior to the commencement of commissioning.</p>	C	Completed	Compliant																

<p>(b) <u>Fire Safety Study</u></p> <p>A Fire Safety Study for the proposed Development. This study shall cover the relevant aspects of the Department of Planning's Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study Guidelines' and the New South Wales Government's 'Best Practice Guidelines for Contaminated Water Retention and Treatment Systems'. The study shall also be submitted for approval to Fire and Rescue NSW.</p> <p>(c) <u>Hazard and Operability Study</u></p> <p>A Hazard and Operability Study for the proposed Development, chaired by an independent qualified person. The study shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 8, 'HAZOP Guidelines'.</p> <p>The study report must be accompanied by a program for the implementation of all recommendations made in the report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.</p> <p>(d) <u>Final Hazard Analysis</u></p> <p>A Final Hazard Analysis of the proposed Development, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'.</p> <p>The FHA shall re-evaluate and confirm all relevant data and assumptions from the Preliminary Hazard Analysis.</p>				
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Pre-Demolition					
C3A	<p>At least one month prior to the commencement of demolition works (except for those preliminary works that are outside the scope of the hazard studies), or within such further period as the Secretary may agree, the Applicant shall prepare and submit for the approval of the Secretary the studies set out under subsections (a) to (b). Demolition, other than of preliminary works, shall not commence until approval has been given by the Secretary.</p> <p>(a) <u>FIRE WATER SYSTEM REVIEW</u> A review of the Firewater System to detail which parts of the system will be removed and/or retained. This review shall include a list of measures that will be implemented to ensure that the firefighting capabilities of the Caltex Terminal will not be compromised during or as a result of the demolition works.</p> <p>(b) <u>DEMOLITION SAFETY STUDY</u> The study shall report on the status of implementation of the recommendation outlined in the HRA for the demolition works, enclosed as Appendix B of the SEE. The study shall include examples of the hazards control plans developed for high risk activities and task based risk assessments of the process safety related hazards.</p>	D	Completed	Non-compliant Administrative	<p>Note: demolition had already started prior to submission and approval. Thus non-compliant with the timeframe required; all plans subsequently approved.</p> <p>Subsequent submissions of management plans has been within timeframes</p>
Pre-commissioning					
C4	<p>The Applicant shall develop, in consultation with WorkCover NSW, and implement the plans and systems set out under subsections (a) to (b) of this Condition. No later than two months prior to the commencement of commissioning of the proposed Development, or within such further period as the Secretary may agree, the Applicant shall submit, for the approval of the Secretary, documentation describing those plans and systems. Commissioning shall not commence until approval has been given by the Secretary.</p> <p>(a) <u>Emergency Plan</u> A comprehensive Emergency Plan and detailed emergency procedures for the proposed Development. This plan shall include consideration of the safety of all people outside of the Development who may be at risk from the Development. The plan shall be consistent with the Department of</p>	G	Completed	Compliant	

	<p>Planning's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'.</p> <p>(b) <u>Safety Management System</u></p> <p>A document setting out a comprehensive Safety Management System, covering all on-site operations and associated transport activities involving hazardous materials. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. Records shall be kept on-site and shall be available for inspection by the Secretary upon request. The Safety Management System shall be consistent with the</p> <p>Department of Planning's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'.</p> <p>An inspection, testing and preventive maintenance program should be developed, implemented and maintained to ensure the reliability and availability of the key safety critical equipment is, at a minimum, consistent with the data estimated in the PHA.</p>				
C4A	<p>No later than one month prior to the commencement of the demolition works, or within such a further period as the Secretary may agree, the Applicant shall submit for the approval of the Secretary an updated Emergency Plan and detailed emergency procedures. The plan shall be in accordance with the Department of Planning's Hazardous Industry Planning Advisory Paper No.1 'Industry Emergency Planning Guidelines' and shall provide information of the emergency arrangements during the demolition works.</p>	D	Completed	Compliant	
C5	<p>Prior to the Commencement of commissioning the first asset within each system (see Condition C2), the Applicant shall submit a Pre-Commissioning Plan and Pre-Startup Safety Review Checklists to the Secretary.</p>	C	Completed	Compliant	

Pre-Startup					
C6	<p>Pre-Startup Compliance Report</p> <p>One month prior to the commencement of operation of the first asset in each of the four systems (see Condition C2), the Applicant shall submit to the Secretary, a report detailing compliance with Conditions C3, C4 and C5 of this consent. The report shall be prepared in consultation with WorkCover NSW, and shall include:</p> <p>(a) dates of study/plan/system submission, approval, commencement of construction and commissioning; (b) actions taken or proposed, to implement the recommendations and safety-related control measures in the studies/plans/systems; and (c) responses to each requirement imposed by the Secretary under Condition C7 of this consent.</p> <p>Note: Compliance with Condition C4 may not be achievable until after such time as the documentation describing the plans and systems required under that condition have been developed. A subsequent report may therefore be required to be prepared and submitted after the documentation required by Condition C4 has been developed.</p>	T	Completed	Compliant	
Post-Startup					
C7	<p>Post-Startup Compliance Report</p> <p>Three months after the refinery process units shut down, the Applicant shall submit to the Secretary, a report that has been prepared in consultation with WorkCover NSW verifying that:</p> <p>(a) the Emergency Plan required under Condition C4(a) is effectively in place and that at least one emergency exercise has been conducted; and (b) the Safety Management System required under Condition C4 (b) has been fully implemented and that records required by the system are being kept.</p> <p>The report shall be prepared in consultation with WorkCover NSW.</p>	T	Completed	Compliant	

C7A	<p><u>Fire Safety Study Review</u></p> <p>One month prior to the completion of demolition works, or within such further period as the Secretary may agree, the Applicant shall submit for the approval of the Secretary, a revised Fire Safety Study for the Caltex Terminal. This study shall cover the relevant aspects of the Department's <i>Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study Guidelines' and the New South Wales Government's Best Practice Guidelines for Contaminated Water Retention and Treatment Systems.</i> The study shall also be submitted to NSW Fire and Rescue for approval.</p>	D	Inactive	Not triggered.	Demolition still in progress. Has been scheduled for May 2018.
C8	<p><u>Hazard Audit</u></p> <p>Twelve months after all four systems being fully operational and every three years thereafter, or at such intervals as the Secretary may agree, the Applicant shall carry out a comprehensive Hazard Audit of the proposed Development and within one month of each audit submit a report to the Secretary.</p> <p>The audits shall be carried out at the Applicant's expense by a qualified person or team, independent of the Development, approved by the Secretary prior to commencement of each audit. Hazard Audits shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 5, 'Hazard Audit Guidelines' (HIPAP No. 5). The audit reports shall, in addition to the requirements provided in HIPAP No 5:</p> <p>(a) verify implementation of all actions proposed by Caltex in response to the recommendations from the Buncefield incident investigation report (Kurnell Buncefield Review - Final, submitted to the Department May 2013).</p> <p>(b) verify implementation of all actions listed in Caltex's response to the Department's requests for additional information and clarifications (Caltex Response to DP&I Queries of Caltex Submitted QRA – August 2013)</p> <p>(c) confirm that the throughput and storage quantities of potentially hazardous materials are consistent with the PHA.</p> <p>(d) verify that an inspection, testing and preventative maintenance program has been developed, implemented and maintained to ensure the reliability and availability of the key safety critical equipment.</p>	T	Completed	Compliant	Hazard Audit (October 2015) Audit report and proposed actions submitted to DPE and DPE Response (Jan. 2016).

	(e) verify implementation of any measures arising from the reports submitted in respect of Conditions C2 to C5 of this consent. The audit report must be accompanied by a program for the implementation of all recommendations made in the audit report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.				
C9	Further Requirements The Applicant shall comply with all reasonable requirements of the Secretary in respect of the implementation of any measures arising from the reports submitted in respect of Conditions C2 to C8 of this consent inclusive, within such time as the Secretary may agree.	G	Statement	Compliant	
Fire Risk Management During Demolition					
C9A	The Applicant shall: <ul style="list-style-type: none"> a) ensure the emergency procedures detailed in condition 9A, address and mitigate, as far as reasonably practical, the consequences of potential fire and hazmat incidents during demolition works and the potential health risks to firefighters undertaking emergency operations in relation to foreseeable fire/hazmat scenarios; b) ensure two copies of the emergency procedures detailed in condition a) above are located in demolition areas; c) ensure appropriate first aid firefighting equipment is provided on site; d) ensure that plant operators and demolition contractors are trained to undertake first aid firefighting in the event of an incident; and e) ensure that comprehensive and specific risk control measures are developed and implemented for Scenario 5 detailed in Table 3, Section 4 of the HAZDEM. The control measures developed must incorporate comprehensive training of demolition contractors in regard to the requirements for the control of ignition sources at the site. 	D	Active/ongoing	Compliant	

SOIL AND WATER					
Discharge of Water					
C10	The Development shall comply with section 120 of the Protection of the Environment Operations Act 1997, which prohibits the pollution of waters, except as expressly provided in an EPL.	G	Active/ongoing	Compliant	
Erosion and Sediment Control					
C11	During the construction and demolition works associated with the Development, the Applicant shall implement suitable erosion and sediment control measures on-site, in accordance with the relevant requirements in the latest version of the Managing Urban Stormwater: Soils and Construction Guideline and the relevant Management and Mitigation measures contained within Appendix C of this consent.	T & D	Active/ongoing	Compliant	
Imported Soil					
C11 A	<p>The Applicant shall:</p> <ul style="list-style-type: none"> a) ensure that only VENM or any other material approved in writing by the EPA issued as fill in the Eastern ROW and Western ROW; b) ensure that the material used as backfill for Solver Beach is of similar grain size and colour characteristics; c) be permitted to use only VENM or any other material that meets all of the conditions of a Resource Recovery Order issued by the EPA under the <i>Protection of the Environment Operations (Waste) Regulation 2014</i> for use in the Caltex Terminal. d) ensure that any VENM or other materials used by the Applicant are fit for purpose and are only used as specified by the relevant Resource Recovery Exemption issued by the EPA. e) keep accurate records of the volume and type of fill to be used; and f) make these records available to the Department upon request. 	G	Active/ongoing	Compliant	

C11 B	During demolition works, the Applicant shall implement erosion and sediment control measures for managing temporary stockpiles, in accordance with the relevant requirements in the latest version of the <i>Managing Urban Stormwater: Soils and Construction – Volume 1</i> and the relevant Management and Mitigation measures contained within Appendix C of this consent.	D	Statement	Compliant	Refer to Soil & Water Management Plan
Water Management Plan					
C12	<p>The Applicant shall prepare and implement a Water Management Plan for the Development to the satisfaction of the Secretary. This plan must:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with the EPA; (b) be approved by the Secretary (refer to Conditions D1 and D2 for timing); (c) In addition to the standard requirements for management plans (see Condition D3), this plan must include a Surface Water Management Plan, that: <ul style="list-style-type: none"> · includes a description of the water management system on site, including the: <ul style="list-style-type: none"> • stormwater system; and, • oily water / wastewater system. • includes plans for the above two components of the systems: • Demonstrates compliance with any requirements of the EPL and/or the EPA. 	T & D	<p>Plan Completed & Approved</p> <p>Active/ongoing</p>	Compliant	
C12 A	<p>The Applicant shall update and implement the Soil and Water Management Plan for demolition works to the satisfaction of the Secretary. This plan is to update the plan approved under condition C12 and shall also:</p> <ul style="list-style-type: none"> (a) be submitted to the Secretary for approval (See condition D1A for timing); (b) include a description of soil and water issues associated with the demolition works; (c) include measures for managing soils that are excavated and stockpiled on site including erosion and sediment control measures for stockpiles and disturbed areas; (d) include details of water management and monitoring requirements during demolition works; and 	D	<p>Plan Completed & Approved</p> <p>Active/ongoing</p>	Compliant	

	(e) include procedures for corrective action in the event that potential contaminants of concern are identified in the groundwater from the quarterly groundwater monitoring program.				
Groundwater					
C13	In the event that groundwater is intersected during construction and demolition works the Applicant shall: (a) obtain the necessary water related approvals from NOW; (b) develop a Groundwater Management Plan for the testing, dewatering, storage, movement and treatment of any groundwater in consultation with the NOW, to the satisfaction of the Secretary.	C , D& T	Completed Active/ongoing	Compliant	
Acid Sulphate Soils (ASS) Management Plan					
C14	If Acid Sulfate Soils (ASS) are encountered during construction and demolition works, the Applicant shall take steps to prevent further oxidation of exposed ASS and will cease all work until an ASS Management Plan is prepared for the Development to the satisfaction of the Secretary. This Plan must: (a) be prepared in consultation with the EPA and Council by a suitably qualified and experienced expert; (b) be approved by the Secretary prior to the continuation of any excavation works; (c) outline the investigations that have be undertaken to test for the presence of ASS in accordance the NSW State Government's Acid Sulphate Soils Manual (ASSMAC 1998); (d) detail the protocols to be put in place and followed; (e) detail how the ASS will be tested, handled and stockpiled; (f) detail measures to prevent erosion and sedimentation of ASS; and, if necessary (g) outline how the ASS will be disposed of off-site (e.g. at a licensed facility).	C & D	Active/ongoing	Not triggered.	

Contamination Management					
C15	<p>The Applicant shall prepare and implement a Contamination Management Plan for the Development prior to commencement of construction. The Plan shall:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with the EPA and NSW Health; (b) be to the satisfaction of the Secretary (refer to Condition D1 for timing); (c) outline measures for managing potentially contaminated soil and groundwater, including soil testing, classification, handling, storing and disposal; (d) detail the measures that will be employed to prevent erosion and sedimentation of contaminated soil; (e) detail measures for periodically testing surface water run-off that may accumulate during excavation works for elevated levels of contamination, with any water that is found to have elevated levels of contaminants being disposed of via the on-site Wastewater Treatment Plant. (f) detail measures for managing asbestos encountered during works, including disturbances of soil and release of asbestos into the air; (g) outline how contaminated soil and water would be classified and disposed of in accordance with the <i>Protection of the Environment Operations Act 1997</i> and associated regulations and characterised in accordance with the <i>EPA's Waste Classification Guidelines</i>. g) Detail how the storage ,disposal and transport of asbestos waste would be undertaken in with the Protection of the Environment Operations (Waste) regulations ; and h) assess any likely impact on existing remediation projects and, if any impacts are identified, provide details as to the measure that shall be taken to reduce or avoid that impact. 	G	<p>Plan Completed & Approved</p> <p>Completed</p>	Compliant	
C15 A	<p>The Applicant shall update and implement the Contamination Management Plan for the demolition works to the satisfaction of the Secretary. This plan is to update the plan approved under condition C15 and shall also:</p> <ul style="list-style-type: none"> a) be submitted to the Secretary for approval (See condition D1A for timing); b) detail measures for the identification and monitoring of potentially contaminated soils and groundwater including the use of excavation visual and olfactory indicators; and 	D	<p>Completed</p> <p>Active/ongoing</p>	Compliant	

	c) include measures for managing potentially contaminated soils and groundwater during ground disturbance and excavation works.																
Asbestos Management																	
C15 B	<p>The Applicant shall ensure that any asbestos encountered during the demolition works is monitored, handled, transported and disposed of by appropriately qualified and licensed contractors in accordance with requirements of Workcover and relevant guidelines, including:</p> <p>a) <i>Work Health and Safety Regulation 2011;</i> b) <i>Model Code of Practice – How to Manage and Control Asbestos in the Workplace, 2011 Safe Work Australia</i> c) <i>Model Code of Practice – How to Safely Remove Asbestos, 2011 Safe Work Australia;</i> and d) <i>Protection of the Environment (Waste) Regulation 2005.</i></p>	D	Active/ongoing	Compliant													
NOISE AND VIBRATION																	
Construction Noise Limits																	
C16	<p>The Applicant shall ensure that the construction noise generated by the development does not exceed the criteria in Table 2 below.</p> <p><i>Table 2: Construction Noise Criteria (dB(A))</i></p> <table border="1" data-bbox="168 874 864 1133"> <thead> <tr> <th>Location</th> <th>Day LA_{eq} (15min)</th> <th>Evening LA_{eq} (15 min)</th> </tr> </thead> <tbody> <tr> <td>R2-30D Cook Street</td> <td>46</td> <td>40</td> </tr> <tr> <td>At any other residence or other noise sensitive receiver</td> <td>50</td> <td>45</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Location	Day LA _{eq} (15min)	Evening LA _{eq} (15 min)	R2-30D Cook Street	46	40	At any other residence or other noise sensitive receiver	50	45				C, D	Active/ongoing	Compliant	
Location	Day LA _{eq} (15min)	Evening LA _{eq} (15 min)															
R2-30D Cook Street	46	40															
At any other residence or other noise sensitive receiver	50	45															

Operational Noise Limits															
C17	<p>The Applicant shall ensure that the operational noise generated by the Development does not exceed the Criteria for residential receivers are summarised in Table 3 below:</p> <p>Table 3: Operational Noise Limits dB(A)</p> <table border="1"> <thead> <tr> <th>Location</th> <th>Day L_{Aeq} (15min)</th> <th>Evening L_{Aeq} (15min)</th> <th>Night L_{Aeq} (15min)</th> <th>Night L_{Amax}</th> </tr> </thead> <tbody> <tr> <td>At any private residential receiver</td> <td>60</td> <td>50</td> <td>50</td> <td>55</td> </tr> </tbody> </table> <p>Notes:</p> <ul style="list-style-type: none"> To identify a residential receiver location, refer to Appendix F of the EIS Noise generated by the Development is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy These criteria have been developed for this specific Development, however it is recognised that the site is zoned for heavy industrial purpose and that ultimately the amenity of the area should be controlled by the criteria contained in Table 2.1 of the Industrial Noise Policy. 	Location	Day L _{Aeq} (15min)	Evening L _{Aeq} (15min)	Night L _{Aeq} (15min)	Night L _{Amax}	At any private residential receiver	60	50	50	55	G	Active/ongoing	Not verified	<p>An external noise consultant (Wilkinson Murray) had been engaged to undertake attended noise measurements during demolition works and evaluate compliance with the approved noise limits. The conclusion in the report was that, in most instances, levels were controlled by extraneous noise sources and “therefore these levels do not represent noise generated by the Caltex demolition activities”.</p> <p>It is also noted that no community noise complaints have been attributed to the demolition activities – all were allocated otherwise by the Terminal Operations. EPA and DPE aware of these monitoring results.</p> <p>Note: Agreed Shipping Noise Monitoring Six Month Trial commenced 1 Dec 2017</p>
Location	Day L _{Aeq} (15min)	Evening L _{Aeq} (15min)	Night L _{Aeq} (15min)	Night L _{Amax}											
At any private residential receiver	60	50	50	55											

Hours of Construction and Operation																				
C18	<p>With exception of the works identified in conditions C19 and C20, the Applicant shall comply with the hours detailed in table 4.</p> <p><i>Table 4: Construction, Demolition & Operation Hours</i></p> <table border="1"> <thead> <tr> <th>Activity</th> <th>Day</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>Construction</td> <td>Monday - Sunday</td> <td>7.00am – 10.00pm</td> </tr> <tr> <td>Demolition</td> <td>Monday - Sunday</td> <td>7.00am – 10.00pm</td> </tr> <tr> <td>Operation</td> <td>Monday - Sunday</td> <td>7.00am – 10.00pm</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Activity	Day	Time	Construction	Monday - Sunday	7.00am – 10.00pm	Demolition	Monday - Sunday	7.00am – 10.00pm	Operation	Monday - Sunday	7.00am – 10.00pm				C, T & D	Active/ongoing	Compliant.	
Activity	Day	Time																		
Construction	Monday - Sunday	7.00am – 10.00pm																		
Demolition	Monday - Sunday	7.00am – 10.00pm																		
Operation	Monday - Sunday	7.00am – 10.00pm																		
C19	High noise generating construction and demolition works, including the pipeline removal works within the Eastern and Western Right of Ways, shall be confined to less sensitive times of the day, and shall not be undertaken on Sundays or public holidays or outside of the hours 7.00am and 6.00pm Monday to Saturday.	C & D	Active/ongoing	Compliant																
C20	<p>Construction works outside of the work hours identified in condition C18 above may be undertaken in the following circumstances:</p> <ul style="list-style-type: none"> (a) works that are inaudible at nearest sensitive land receivers; (b) works that are consistent with Caltex's existing maintenance procedures and are in accordance with the existing EPL; (c) works agreed to in writing by the EPA or the Department; (d) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or (e) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm. 	C & D	Completed	Compliant																

Operating Conditions					
C21	<p>The Applicant shall:</p> <ul style="list-style-type: none"> (a) implement best management practice, including all reasonable and feasible noise management and mitigation measures to prevent and minimise operational, low frequency and traffic noise generated by the proposal; (b) minimise the noise impacts of the development during adverse meteorological conditions when noise criteria do not apply; (c) maintain the effectiveness of any noise suppression equipment on plant at all times and ensure defective plant is not used operationally until fully repaired; and (d) regularly assess noise monitoring data and relocate, modify and/or stop operations to ensure compliance with the relevant conditions of this consent. 	T	Active/ongoing	Compliant	
Noise Management Plan					
C22	<p>The Applicant shall prepare and implement a Noise Management Plan for construction works and site operations. The plan (s) shall:</p> <ul style="list-style-type: none"> (a) be prepared and implemented by a suitably qualified and experienced person, in consultation with the EPA; (b) be approved by the Secretary (refer to Conditions D1 and D2 for timing); (c) describe the measures that will be implemented to minimise noise from the construction and operation of the development including: <ul style="list-style-type: none"> · all reasonable and feasible measures being employed on site; · maintain equipment to ensure that it is in good order; · traffic noise is effectively managed; and · the noise impacts of the development are minimised during any meteorological conditions when the noise criteria in this consent do not apply; · identification of high noise generating construction activities, including proposed times when these works will be carried out (including respite periods if required) and mitigation measures to minimise adverse impacts from these activities; · compliance with the relevant conditions of this consent. (d) includes a noise monitoring program that: <ul style="list-style-type: none"> · shall be carried out until otherwise agreed to in writing by the Secretary; · is capable of evaluating the performance of the Development; and · includes a protocol for determining exceedances of the relevant conditions of this consent and responding to complaints. 	C & T	<p>Plan Completed & Approved</p> <p>Active/ongoing</p>	<p>Compliant for Plan but non-compliant for recording events.</p> <p>Refer to Appendix 1: Status of Caltex Actions Arising from 2016 IEA.</p>	<p>Note:</p> <p>Site wide approach to noise management with special measure in place for shipping noise.</p> <p>All maintenance and demolition work covered by PTW requirements.</p> <p>Both Demolition and the Terminal Noise Management Plans have been approved by DPE</p>

C22 A	<p>The Applicant shall update and implement the Noise Management Plan for the demolition works to the satisfaction of the Secretary. This plan is to update the plan approved under condition C22 and shall also:</p> <ul style="list-style-type: none"> a) be approved by the Secretary (refer to conditions D1A and D2 for timing); b) outline the procedures for the notification of all potentially affected persons at least one week prior to and during high noise generating works; c) implement reasonable and feasible noise and vibration management and mitigation measures during demolition activities within the Caltex Terminal; d) implement reasonable and feasible noise and vibration monitoring and management measures during removal of pipelines from the Eastern and Western ROW to minimise noise and vibration impacts generated by the pipeline removal works; and e) include strategies for monitoring vibration impacts on buildings with medium to high heritage significance proposed to be retained within the Caltex Terminal. f) 	D	<p>Plan Completed & Approved</p> <p>Active/ongoing</p>	Compliant	
Construction Vibration					
C23	<p>The Applicant shall aim to achieve the following construction and demolition vibration goals:</p> <ul style="list-style-type: none"> (a) for structural damage, the vibration limits set out in the <i>German Standard DIN 4150-3: Structural Vibration - effects of vibration on structures</i>; and (b) for human exposure, the acceptable vibration values set out in the <i>Environmental Noise Management Assessing Vibration: A Technical Guideline (Department of Environment and Conservation, 2006)</i>. 	C & D	Active/ongoing	<p>Compliant (for land based works)</p> <p>Refer to b) SSD5533 for details</p>	

AIR QUALITY MANAGEMENT					
Dust Generation During Construction					
C24	The Applicant shall carry out all reasonable and feasible measures to minimise dust generated during construction works and demolition works.	C & D	Active/ongoing	Compliant	
C25	During construction and demolition works, the Applicant shall ensure that: <ul style="list-style-type: none"> (a) all trucks entering or leaving the site have their loads covered; (b) trucks associated with the Development do not track dirt onto the public road network; and (c) any dirt on public roads as a result of the development is promptly removed. 	C & D	Active/ongoing	Compliant	
Offensive Odour					
C26	The Applicant shall not cause or permit the emission of offensive odours from the site, as defined under Section 129 of the POEO Act.	G	Active/ongoing	Compliant	
Operating Conditions					
C27	The Applicant shall: <ul style="list-style-type: none"> (a) implement all reasonable and feasible dust and odour mitigation measures to prevent and minimise odour and dust emissions from operations; (b) prevent and minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events; (c) minimise any visible off-site air pollution; and (d) minimise surface disturbance of the site, other than as permitted under this consent. 	G	Active/ongoing	Compliant	

Air Quality Management Plan					
C28	<p>The Applicant shall prepare and implement an Air Quality Management Plan for the proposed construction works. The plan shall:</p> <ul style="list-style-type: none"> (a) be prepared and implemented by a suitably qualified and experienced expert in consultation with the EPA and NSW Health; (b) be approved by the Secretary (refer to Condition D1 for timing); (c) describe the measures that would be implemented on site to ensure: <ul style="list-style-type: none"> i. the control of air quality and odour impacts of the Development; ii. that these controls remain effective over time; iii. that all reasonable and feasible air quality management practices is employed; iv. the air quality impacts are minimised during adverse meteorological conditions and extraordinary events; and v. compliance with the relevant conditions of this consent. <ul style="list-style-type: none"> (d) describes the air quality & odour management system; (e) includes an air quality monitoring program that: <ul style="list-style-type: none"> i. is capable of evaluating the performance of the proposal; ii. includes a protocol for determining any exceedances of the relevant conditions of consent and responding to complaints; iii. adequately supports the air quality management system; and iv. evaluates and reports on the effectiveness of the air quality management system. 	C	<p>Plan Completed & Approved</p> <p>Active/ongoing</p>	Compliant for Conversion works and Terminals	
28A	<p>The Applicant shall update and implement the Air Quality Management Plan for the demolition works to the satisfaction of the Secretary. This plan is to update the plan approved under condition C28 and shall also:</p> <ul style="list-style-type: none"> (a) be approved by the Secretary (refer to conditions D1a and D2 for timing); (b) outline procedures for VOC, odour and dust deposition monitoring and suppression methods during excavation works and where potential hydrocarbon contamination is present; and (c) include dust suppression measures and procedures for dust monitoring during operation of the concrete crusher. 	D	<p>Plan Completed & Approved</p> <p>Active/ongoing</p>	Non-Compliant for <u>Demolition</u> works	<p>Identified as a low risk Non-Compliance in 2016 IEA</p> <p>Refer to Appendix 1: Status of Caltex Actions Arising from IEA.</p>

Air Quality Verification					
C29	<p>The Applicant shall carry out an air quality verification study for the development. The study shall:</p> <ul style="list-style-type: none"> (a) be prepared by a suitably qualified expert; (b) be completed within 24 months of the commencement of operations or as otherwise agreed to by the Secretary; (c) be based on the average of emissions over a continuous 12 month period after commencement of operations, taking into account the throughput and type of fuel; (d) include a validation of the accuracy of the modelling predictions in the EIS; (e) verify that compliance with any limits or conditions in the EPL are achieved; (f) verify, using reasonable means, the effectiveness of any emission control measures that have been implemented to minimise air quality impacts; and (g) demonstrate compliance with the relevant regulatory criteria. 	T	Inactive (Due 2017)	Not triggered	The 24 month trigger point has been taken as after the removal of crude oil (related to refinery activities and included in NPI calculations for air emissions) in May 2016.
HERITAGE MANAGEMENT					
Archival Record					
C30	<p>The Applicant shall commission an appropriately qualified heritage expert to undertake an archival photographic recording of the existing fabric and operation of the Kurnell Refinery while the plant is still operational and during the decommissioning process. The recording should include a range of media and shall be undertaken in accordance with the current Heritage Council Guidelines on Photographic Recording of Heritage Items Using Film or Digital Capture (2006).</p> <p>The archival recording shall be submitted to the Heritage Council of NSW, Sutherland Shire Library and the NSW State Library within 12 months of the closure of the refinery and prior to the removal or demolition of any existing elements.</p>	C	Completed	Compliant	

Heritage Management Strategy					
C31	<p>The Applicant shall prepare and implement a Heritage Management Strategy for the Australian Oil Refinery site prior to shut-down of the refinery plant. The Strategy must:</p> <ul style="list-style-type: none"> (a) be prepared by a suitably qualified person in consultation with Council and the Heritage Council of NSW; (b) be submitted to the Secretary for approval at least 2 months prior to the shut-down of the refinery plant; (c) review the heritage significance of the Australian Oil Refinery site; and (d) set out a framework to minimise or mitigate the loss of heritage value during the decommissioning process, and for the ongoing management of the Site's heritage during present and future works. 	C	Completed	Compliant	
31A	<p>The Applicant shall:</p> <ul style="list-style-type: none"> (a) continue to implement the Heritage Management Strategy prior to and during the demolition works; and (b) implement the recommendations stated in Chapter 4 and 5 of the document titled: <i>Caltex Kurnell Refinery Demolition: Heritage Impact Statement by Australian Museum Consulting for URS Australia Pty Ltd, October 2014.</i> (c) 	D	Active/ongoing	Compliant	
Other Heritage Management and Mitigation Measures					
32	<p>The Applicant shall, prior to shut-down of the refinery:</p> <ul style="list-style-type: none"> (a) form an in- house team to manage documentation and interpretation of the history of the refinery, including the production of a colour book; (b) liaise with the Mitchell Library to prepare a photographic record of the site and people associated with the refinery for inclusion in the library's archives; and (c) engage a professional photographer to prepare a photographic exhibition of the refinery. The location(s) and duration of the exhibition shall be to the satisfaction of Council and the NSW Heritage Council. 	C	Completed	Compliant	

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32A	Within two months of its scheduled demolition, the Applicant shall undertake a final review of the adaptive reuse capabilities of highly significant buildings which are proposed to be demolished as per the recommendations of the Heritage Management Strategy.	D	Completed	Compliant	There were 7 buildings identified in this category (Demolition Heritage Impact Assessment pg. 105).
32B	Within two months of its scheduled demolition, the Applicant shall complete appropriate archival records of items to be demolished as per the recommendations of the Heritage Management Strategy and other initiatives supported by the Heritage Division of the OEH.	D	Completed	Compliant	
32C	The Applicant shall implement the recommendations in section 5.2 of the document titled Caltex Kurnell Refinery Demolition: Heritage Impact Assessment, prepared by Australian Museum Consulting and enclosed in Appendix F of the SEE, for the pipeline removal works on Silver Beach to the satisfaction of Council.	D	Completed	Compliant	
Potential for Discovery of Aboriginal and Non-Aboriginal Heritage Objects					
C33	If during the course of construction and demolition the Applicant becomes aware of any previously unidentified heritage object(s), all work likely to affect the object(s) shall cease immediately and the Heritage Council of New South Wales shall be notified immediately in accordance with section 146 of the Heritage Act 1977. Relevant works shall not recommence until written authorisation from the Heritage Council of NSW is received by the Applicant.	C & D	Active/ongoing	Compliant	
C34	If during the course of construction and demolition the Applicant becomes aware of any previously unidentified Aboriginal object(s), all work likely to affect the object(s) shall cease immediately and the OEH informed in accordance with section 89A of the National Parks and Wildlife Act 1974. Relevant works shall not recommence until written authorisation from OEH is received by the Applicant.	C & D	Active/ongoing	Compliant	

Energy Efficiency And Greenhouse Gas Emission					
Managing Energy Efficiency & Greenhouse Gas Emissions					
C35	<p>The Applicant shall implement all reasonable and feasible measures to minimise:</p> <p>(a) energy use; and (b) greenhouse gas emissions, throughout the life of the development, to the satisfaction of the Secretary.</p>	G	Active/ongoing	Compliant	
TRANSPORT AND ACCESS					
Traffic Management Plan					
C36	<p>The Applicant shall prepare and implement a Traffic Management Plan for the Development, to the satisfaction of the Secretary. The plan must:</p> <p>(a) be prepared and implemented by a suitably qualified and experienced person; (b) be approved by the Secretary (refer to Conditions D1 and D2 for timing); (c) detail the measures that would be implemented to ensure road safety and network efficiency during construction and operation including (but not limited to):</p> <ul style="list-style-type: none"> · installation of signage and implementation of maximum speeds limits on internal roads; and · final details of the proposed traffic control measures. <p>· details for rationalisation of the entry and exit to the site, particularly if the weigh bridge is no longer required, to improve the management of traffic and parking for members of the general public in this area</p> <p>(d) include a plan showing the route to be used by heavy vehicles during construction and operation; (e) detail the access and parking arrangements for the site during construction and operation; (f) include a Driver Code of Conduct that details the traffic management measures to be implemented during construction and operation to:</p> <ul style="list-style-type: none"> · minimise the impacts of the development on the local and regional road network; · minimise conflicts with other road users; and · ensure truck drivers use specified routes. <p>(g) describe the measures that will be implemented to ensure:</p> <ul style="list-style-type: none"> · the nominated heavy vehicle route is used; · drivers adhere to the code of conduct; and 	G	Completed	Compliant	<p>Note</p> <p>Traffic Management Plan will be reviewed and updated at the end of the demolition works.</p> <p>The revised plan will be submitted as part of Stage 2. Final Terminal OEMP:</p>

	<ul style="list-style-type: none"> · compliance with the relevant conditions of this consent. (h) include a program to monitor the effectiveness of these measures; and (i) (i) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes. 				
C36 A	<p>The Applicant shall update and implement the Traffic Management Plan for the demolition works to the satisfaction of the Secretary. This plan is to update the plan approved under condition C36 and shall also:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with Council; (b) be approved by the Secretary (refer to conditions D1A for timing); (c) include the designated routes for demolition traffic to the demolition areas within the site; (d) include details of traffic management arrangements for the cooling water outlet and intake pipeline removal works within the road reserves; and (e) outline the procedures for the notification of all potentially affected persons prior to and during the pipeline removal works within the road reserves. 	D	Completed	Compliant	Note: currently shared with Terminal operations
C36 B	<p>The Applicant shall ensure that the pipeline removal works along the road reserves on Captain Cook Drive, Prince Charles Parade and Cook Street are undertaken in consultation with Council and do not take place during public events or public holidays in Kurnell.</p>	D	Inactive	Not triggered	These works are yet commence; now scheduled for early 2018
Car Parking					
C37	<p>The Applicant shall provide sufficient parking facilities on-site for construction, demolition and operational personnel, and heavy vehicles, to ensure that construction and operational traffic associated with the Development do not utilise public and residential streets or public parking facilities for parking.</p>	G	Active/ongoing	Compliant	

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C37 A	Within 18 months after commencement of the demolition works, the Applicant shall: (a) complete a review, in consultation with Council, of the Cook Street approach to the Caltex Terminal site considering issues relating to signage, car parking arrangements, vehicle flows and the future of the weighbridge; and (b) include a timetable of implementation of the findings of this review. Note: The implementations of the findings of this review may require further approval under the EP&A Act.	D	Inactive	Not triggered	DPE Letter approving a staged submission of revised traffic management plans until after completion of demolition works in mid-2018.
WASTE MANAGEMENT					
Waste Management On-Site					
C38	The Applicant shall (a) minimise the waste generated on site; and (b) ensure that the waste generated by the development is appropriately stored, handled and disposed of, to the satisfaction of the Secretary.	G	Active/ongoing	Compliant	
C39	The Applicant shall ensure that any waste generated on the site during construction and demolition is classified in accordance with the EPA's Waste Classification Guidelines and disposed of to a facility that may lawfully accept the waste.	C & D	Active/ongoing	Compliant	
C39 A	The Applicant shall ensure that all hazardous materials identified in the structures to be demolished are removed prior to demolition where it is safe and practical to do so.	D	Completed	Compliant	
C39 B	The Applicant shall ensure that the reuse of any materials (including soil, scrap metal or building materials) on site must be fit for purpose and must not result in any adverse impacts to the environment.	D & T	Active/ongoing	Compliant	
C39 C	Where it is safe and practical to do so, the Applicant should as far as practicable sort all waste materials generated during demolition works to maximise opportunities for the beneficial reuse and recycling of such waste materials.	D	Active/ongoing	Compliant	

Waste Management Plan					
C40	<p>The Applicant shall prepare and implement a Waste Management Plan for the development to the satisfaction of the Secretary. This Plan shall:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with the EPA; (b) be approved by the Secretary (refer to timing in Conditions D1 and D2) (c) detail the type and quantity of waste to be generated by construction and operational phases of the development; (d) detail the materials to be reused or recycled, either on or off site; and (e) detail the procedures for handling, storage, collection of recycling and disposal of waste." 	G	<p>Plan Completed & Approved</p> <p>Active/ongoing</p>	Compliant	
Demolition Waste and Resource Management Plan					
C40 A	<p>The Applicant shall prepare and implement a Demolition Waste and Resource Management Plan for the demolition works to the satisfaction of the Secretary. This plan is to update the plan approved under condition C40 and shall also:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with the EPA; (b) be approved by the Secretary (refer to condition D1a for timing); (c) outline the measures for the removal, storage and disposal of all waste materials generated during the demolition works; and (d) outline the waste reuse and recovery strategy for the demolition works. 	D	<p>Plan Completed & Approved</p> <p>Active/ongoing</p>	Compliant	
Waste Received from Off-Site					
C41	<p>The Applicant shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997, if such a licence is required in relation to that waste.</p>	D	Completed	Compliant	
C41 A	<p>The Applicant shall ensure that the removal of the cooling water outlet pipeline 20 metres seaward from the low tide mark in Botany Bay is carried out in a manner that minimises the potential for disturbance and/or spread of <i>Caulerpa taxifolia</i>.</p>	D	Inactive	Not triggered	Stage 2 Cooling Water Outlet Management Plan (yet to be approved by DPE)

BIODIVERSITY & ECOLOGY					
Biodiversity Management Plan					
C42	<p>The Applicant shall prepare and implement a Biodiversity Management Plan for the development to the satisfaction of the Secretary. This plan must:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with the EPA; (b) be approved by the Secretary (refer to Conditions D1 and D2 for timing);; (c) include measures to be taken to minimise impacts on flora and fauna; (d) include a program with timeframes for implementation of the relevant recommendations contained in the Ecology Impact Assessment in Appendix I of the EIS, and the Management and Mitigation Measures contained in Chapter 19 of the EIS to minimise impacts on flora and fauna and maintain the biodiversity value of the site and surrounding environment. 	G	<p>Plan Completed & Approved</p> <p>Active/ongoing</p>	Compliant	
Pest, Vermin & Noxious Weed Management					
C43	<p>The Applicant shall:</p> <ul style="list-style-type: none"> (a) implement suitable measures to manage pests, vermin and declared noxious weeds on site; (b) measures to be taken to prevent the spread of any identified noxious/exotic weeds off site; and (c) inspect the site on a regular basis to ensure that these measures are working effectively, and that pests, vermin or noxious weeds are not present on site in sufficient numbers to pose an environmental hazard, or cause the loss of amenity in surrounding area. <p><i>Note: For the purposes of this condition, noxious weeds are those species subject to an order declared under the Noxious Weed Act 1993.</i></p>	G	Active/ongoing	Compliant	

C43 A	<p>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:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with the OEH; (b) be approved by the Secretary (Refer to condition D1A for timing); and NSW Government 9 Department of Planning and Environment (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. 	G	<p>Plan Completed & Approved</p> <p>Active/ongoing</p>	Compliant	
Continental Carbon Pipeline					
C43 B	<p>Within three months after the removal of the Continental Carbon Pipeline, the Applicant shall prepare a strategy, in consultation with the OEH, for the active management of the former pipeline route including a program for weed management and removal as outlined in Management and Mitigation Measure K6 in Appendix C of this consent. The Applicant shall have commenced implementation of this strategy six months after the removal of the Continental Carbon Pipeline.</p>	D & T	Completed	Compliant	

Cooling Water Outlet Management Plan					
C43 C	<p>The Applicant shall prepare and implement a Cooling Water Outlet Management Plan for the demolition works. The plan must:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with Council; (b) be approved by the Secretary (see condition D1A for timing); (c) include details of the timing and excavation program for pipeline removal, demolition methods, details of stockpiling, removal or reuse of excavated materials and the use of imported soils; (d) outline the measures to be taken to minimise potential marine ecology impacts including measures to: <ul style="list-style-type: none"> • minimise sediment plumes particularly during backfilling activities; • minimise the potential for hydrocarbon contamination from the pipeline; • minimise disturbance and impact on any seagrass communities; and • maintain machinery and equipment; and • exclude people and animals from the works both landward and seaward; (e) include details of the odour suppression measures during the pipeline removal works; and (f) include details of the works on Silver Beach including: <ul style="list-style-type: none"> • measures to minimise impacts to the affected sand dunes on Silver Beach including dune erosion and damage to vegetation; and • strategies for stabilising and restoring the affected sand dunes including exclusion measures and revegetation strategies. 	D	Inactive	Not triggered	<p>Planned for 2017-18</p> <p>To be completed in stages</p> <p>Stage 2 Cooling Water Outlet Management Plan (yet to be approved by DPE)</p>
Protection of Marton Park Wetlands					
C44	<p>To ensure that the measures implemented to protect Marton Park Wetland from sedimentation, erosion and possible contaminants related to the stormwater drainage upgrade works approved by Sutherland Shire Council (DA 13/0195) are successful, monitoring of Marton park Wetland must be undertaken after completion of the stormwater upgrade works, until otherwise agreed with Council, to ensure there are no detrimental impacts on the wetland. Caltex is to prepare a monitoring plan and submit it to Council for approval prior to completion of stormwater drainage upgrade works.</p>	G	Completed	Compliant	<p>Caltex has surrendered the DA (March 2016).</p>

	VISUAL				
	Lighting				
C45	<p>The Applicant shall ensure that the lighting associated with the development:</p> <p>(a) complies with the latest version of AS 4282(INT) – <i>Control of Obtrusive Effects of Outdoor Lighting</i>; and</p> <p>(b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.</p>	G	Statement	Compliant	
	Signage and Fencing				
C46	The Applicant shall not install any advertising on site without the written approval of the Secretary.	G	Statement	Compliant	
	SITE SECURITY				
	Site Security				
C47	<p>The Applicant shall ensure that:</p> <p>(a) site fencing and security gates are installed to the satisfaction of the Secretary; and</p> <p>(b) the security gates on site are locked whenever the site is unattended.</p>	G	Statement	Compliant	

ENVIRONMENTAL MANAGEMENT					
Construction Environment Management Plan					
D1	<p>The Applicant shall prepare and implement a Construction Environmental Management Plan for the Development to the satisfaction of the Secretary. The Plan must:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with Sutherland Shire Council and the EPA; (b) be submitted to the Secretary for approval no later than four (4) weeks prior to the commencement of construction or demolition, or within such period otherwise agreed by the Secretary; (c) identify the statutory Consents that apply to the Development; (d) consolidate all relevant management plans and monitoring programs required in the conditions of this Consent; (e) outline all environmental management practices and procedures to be followed during construction and demolition works associated with the Development; (f) describe all activities to be undertaken on the site during construction of the Development, including a clear indication of construction stages; (g) incorporate all relevant management and mitigation measures contained in the EIS and RTS; (h) detail how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts. In particular, the following environmental performance issues shall be addressed in the Plan: <ul style="list-style-type: none"> (i) Human Health and Ecological Risk management - which shall be mitigated and managed in accordance with Section 6.2 of the "Human Health and Ecological Qualitative Risk Assessment" report prepared by URS, dated 28 February 2013 and the relevant Management and Mitigation Measures contained in Appendix C of this consent; (ii) Biodiversity and Weed management; (iii) Soils and Erosion management; (iv) Contamination management; (v) Noise and Vibration management; (vi) Air Quality management; (vii) Stormwater and Wastewater management; (viii) Traffic management; 	C	Plan Completed & Approved	Non- Compliant against (h)	<p>Identified as an Administrative Non-Compliance in 2016 IEA</p> <p>Refer to Appendix 1: Status of Caltex Actions Arising from IEA.</p> <p>Note:</p> <p>Conversion works now completed</p>

<p>(ix) Heritage management (Aboriginal and non-Aboriginal); (x) Waste and Resource management; (xi) Groundwater management; (xii) Acid Sulfate Soils management – if required; (xiii) Emergency (including spill) management; (xiv) means for assessing (and where identified) for managing interactions and cumulative impacts from the concurrent construction of other development works in the area should these coincide with the Development (e.g. the Caltex Ports and Berthing upgrade, remediation projects);</p> <p>(i) describe the roles and responsibilities for all relevant employees involved in construction and demolition works associated with the Development;</p> <p>(j) include arrangements for community consultation, including consultation with the NSW Department of Education and local schools at key stages of the development that may affect school operations, to identify issues and mitigate impacts throughout the course of the Development.</p> <p>(k) Include a complaints handling procedure during construction and demolition and operation; and,</p> <p>(l) include appropriate procedures to allow the regular review of the requirements of each plan to ensure that they are effective and allow for adaptive management to address contingencies that may arise over the life of the development.</p> <p>The approval of a Construction Environmental Management Plan does not relieve the Applicant of any requirement associated with this development consent. If there is an inconsistency with an approved Construction Environmental Management Plan and the conditions of this development consent, the requirements of this development consent prevail</p> <p>Construction of the development shall not commence until written consent of this plan has been received from the Secretary.</p>				
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Demolition Environmental Management Plan					
D1A	<p>The Applicant shall prepare and implement a Demolition Environmental Management Plan for the demolition works to the satisfaction of the Secretary. This plan must:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with Council, EPA and NSW Health; (b) be submitted to the Secretary for approval no later than four (4) weeks prior to the commencement of the demolition works, or within such period otherwise agreed by the Secretary; (c) identify the statutory approvals and consents that apply to the development; NSW Government 10 Department of Planning and Environment (d) consolidate all relevant management plans and monitoring programs required in the conditions of this Consent; (e) outline all environmental management practices and procedures to be followed during demolition works associated with the development; (f) describe all activities to be undertaken on the site during demolition works associated with the development, including a clear indication of demolition stages; (g) incorporate all relevant management and mitigation measures contained in the SEE; (h) detail how the environmental performance of the demolition works will be monitored, and what actions will be taken to address potentially adverse environmental impacts. In particular, the following environmental performance issues shall be addressed in the Plan: <ul style="list-style-type: none"> i. Biodiversity and weed management(See Condition C43A); ii. Soils and water management (See Condition C12A); iii. Contamination management (See Condition C15A); iv. Noise and vibration management (See Condition C22A); v. Air quality management (See Condition C28A); vi. Stormwater and wastewater management (See Condition C12A); vii. Traffic management (See Condition C36A); viii. Demolition waste and resource management (See Condition C40A); ix. Groundwater management, including measures which are consistent with the relevant Management and Mitigation Measures contained in Appendix C of this consent; x. Acid sulfate soils management (See Condition C14); xi. Heritage management strategy (See Condition C31); 	D	Plan Completed & Approved	Compliant	

<p>xii. Cooling water outlet management (see Condition C42B);</p> <p>xiii. pipeline removal works on Kurnell Wharf, including details of the timing and program of works, demolition and removal techniques, and the measures to manage traffic and access to the wharf.</p> <p>xiv. means for assessing (and where identified) for managing interactions and cumulative impacts from the concurrent construction of other development works within the site should these coincide with the Development (e.g. the Caltex Ports and Berthing upgrade, remediation projects).</p> <ul style="list-style-type: none"> (i) describe the roles and responsibilities for all relevant employees involved in the demolition works associated with the Development; (j) include details of a community notification protocol to notify potentially affected persons (including the local community and surrounding industries) of works which are likely to cause significant adverse impacts to the environment; (k) include a complaints handling procedure; and (l) include appropriate procedures to allow the regular review of the requirements of each plan to ensure that they are effective and allow for adaptive management to address issues that may arise over the life of the development. <p>The approval of a Demolition Environmental Management Plan does not relieve the Applicant of any requirement associated with this development consent. If there is an inconsistency with an approved Demolition Environmental Management Plan and the conditions of this development consent, the requirements of this development consent prevail.</p> <p>Demolition works shall not commence until written approval of this plan has been received from the Secretary.</p>				
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Operational Environmental Management Plan					
D2	<p>The Applicant shall prepare and implement an Operational Environmental Management Plan for the project to the satisfaction of the Secretary. This Plan must:</p> <ul style="list-style-type: none"> (a) be approved by the Secretary prior to the completion of the Development; (b) provide the strategic framework for environmental management of the project; (c) identify the statutory approvals that apply to the project; (d) include a copy of all relevant management plans and monitoring programs relevant under this consent; (e) outline all environmental management practices and procedures to be followed during operation; (f) describe all activities to be undertaken on the site during operation; (g) detail how the environmental performance of the operation of the project will be monitored, and what actions will be taken to address identified adverse environmental impacts; (h) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project; (i) describe the procedures that will be implemented to: <ul style="list-style-type: none"> · keep the local community and relevant agencies informed about the operation and environmental performance of the project; · receive, handle, respond to, and record complaints; · resolve any disputes that may arise during the course of the project; · respond to any non-compliance; and · respond to emergencies; and (j) include: <ul style="list-style-type: none"> · copies of any strategies, plans and programs approved under the conditions of this consent; and · a clear plan depicting all the monitoring required to be carried out under the conditions of this consent. 	T	Plan Completed & Approved	<p>Noise requirements Not Verified</p> <p>Odour Not Compliant LOW</p> <p>Other EPL conditions Not Compliant LOW</p>	Refer to Section 1.6 Non-Compliance and Corrective Action for details

	Management Plan Requirements				
D3	<p>The Applicant shall ensure that the Management Plans required under this consent are prepared in accordance with any relevant guidelines, and include:</p> <ul style="list-style-type: none"> (a) detailed baseline data; (b) a description of: <ul style="list-style-type: none"> · the relevant statutory requirements (including any relevant approval, licence or lease conditions); · any relevant limits or performance measures/criteria; and · the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures; (c) a description of the measures that will be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria; (d) a program to monitor and report on the: <ul style="list-style-type: none"> · impacts and environmental performance of the development; and · effectiveness of any management measures (see (c) above); (e) a contingency plan to manage any unpredicted impacts and their consequences; (f) a program to investigate and implement ways to improve the environmental performance of the development over time; (g) a protocol for managing and reporting any: <ul style="list-style-type: none"> · incidents; · complaints; · non-compliances with statutory requirements; and · exceedances of the impact assessment criteria and/or performance criteria; and (h) a protocol for periodic review of the plan. <p><i>Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.</i></p>	G	Completed	Compliant	

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Annual Review					
D4	<p>By 31 December 2014, or as otherwise agreed in writing by the Secretary, the Applicant shall review the environmental performance of the Development to the satisfaction of the Secretary. This review must:</p> <p>(a) describe the development that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;</p> <p>(b) include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, which includes a comparison of these results against:</p> <ul style="list-style-type: none"> · the relevant statutory requirements, limits or performance measures/criteria; · the monitoring results of previous years; and · the relevant predictions in the EIS; <p>(c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;</p> <p>(d) identify any trends in the monitoring data over the life of the Development;</p> <p>(e) identify any discrepancies between the predicted and actual impacts of the Development, and analyse the potential cause of any significant discrepancies; and</p> <p>(f) describe what measures will be implemented over the current calendar year to improve the environmental performance of the Development.</p>	G	<p>Completed for 2014, 2016 and 2016</p> <p>Active/ongoing</p>	Compliant	<p>Note:</p> <p>This is the 2016 Amended Annual Review report</p>

Revision of Strategies, Plans & Programs					
D5	<p>Within 3 months of the submission of an:</p> <p>(a) annual review under Condition D4 of this schedule; (b) incident report under Condition D6 of this schedule; (c) audit report under Condition D8 of this schedule; and (d) any modifications to this consent, the Applicant shall review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Secretary.</p> <p><i>Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development.</i></p>	G	Active/ongoing	Compliant	Refer to Part 3 Improvement Plan and Summary
REPORTING					
Incident Reporting					
D6	<p>The Applicant shall notify the Secretary and any other relevant agencies of any incident or potential incident with actual or potential significant off-site impacts on people or the biophysical environment associated with the development as soon as practicable after the Applicant becomes aware of the incident. Within 7 days of the date of this incident, the Applicant shall provide the Secretary and any relevant agencies with a detailed report on the incident.</p>	G	Active/ongoing	Compliant	
INDEPENDENT ENVIRONMENTAL AUDIT					
D7	<p>Within a year of the date of this consent, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:</p> <p>(a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary; (b) include consultation with the relevant agencies; (c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL and/or Water License (including any assessment, plan or program required under these approvals); (d) review the adequacy of any approved strategy, plan or program required under these approvals; and</p>	G	Active/ongoing	Non- Complaint	<p>Identified as an Administrative Non-Compliance in 2016 IEA</p> <p>Refer to Appendix 1: Status of Caltex Actions Arising from IEA</p> <p>2016 IEA Report, including Caltex responses, is posted on the Caltex Public Website</p>

	(e) recommend measures or actions to improve the environmental performance of the development, and/or any assessment, plan or program required under these approvals. <i>Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.</i>				2017 IEA (includes MOD1 Demolition) completed September 2017 IEA report sent to DPE 28 Nov 2017
D8	Within 3 months of commissioning this audit, or as otherwise agreed by the Secretary, the Applicant shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.	G	Completed for 2016 IEA	Compliant	
ACCESS TO INFORMATION					
D9	The Applicant shall, to the satisfaction of the Secretary: (a) make the following information publicly available on its website: <ul style="list-style-type: none"> · the EIS; SEE and MOD 1; · current statutory approvals for the Development; · approved strategies, plans or programs; · a summary of the monitoring results of the Development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent; · a complaints register, updated on a quarterly basis; · copies of any annual reviews (over the last 5 years); · any independent environmental audit, and the Applicant's response to the recommendations in any audit; and · any other matter required by the Secretary; and (b) keep this information up-to-date, <i>Note: This requirement does not require any confidential information to be made available to the public</i>	G	Active/ongoing	Compliant	

SSD5353 PORTS AND BERTHING UPGRADE **Note: Project completed in 2015**

SCHEDULE B – ADMINISTRATIVE CONDITIONS					
	Conditions	Applicable Phase: Conversion (C) Demolition Terminal Operations (D/T) or General (applies to all phases) (G)	Activity Status: Completed Active/ongoing Inactive	Compliance Status Compliant Not Compliant Not Triggered	Comments/Actions
TERMS OF CONSENT					
B1	The Applicant shall carry out the development generally in accordance with the: (a) State Significant Development Application No_5353; (b) Environmental Impact Statement, Kurnell Ports and Berthing Facility (URS, February 2013); (c) Response to Submissions, Kurnell Ports and Berthing Facility (URS, June 2013); (d) Proposed Change to the Kurnell Port and Berthing Facility Upgrade (SSD: 5353) (URS, 30 August 2013); and (e) conditions of this consent.	C	Completed	Not triggered	
B2	In the event of an inconsistency between: (a) the conditions of this consent and any document listed from condition B1(a) to B1(d) inclusive, the conditions of this consent shall prevail to the extent of the inconsistency; and (b) any document listed from condition B1(a) to B1(d) inclusive, and any other document listed from condition B1(a) to B1(d) inclusive, the most recent document shall prevail to the extent of the inconsistency.	G	Completed	Compliant	
B3	The Applicant shall comply with any reasonable requirement(s) of the Director General arising from the Department's assessment of: (a) any reports, plans or correspondence that are submitted in accordance with this consent; and (b) the implementation of any actions or measures contained within these reports, plans or correspondence.	G	Completed	Compliant	Since the IEA (April 2016), the non-compliances have been responded to by Caltex to the satisfaction of the DPE
B4	Subject to confidentiality, the Applicant shall make all documents required under this consent available for public inspection on request.	G	Completed	Compliant	

LIMITS OF CONSENT					
B5	The Applicant may carry out dredging for a period of no more than six (6) months, unless otherwise agreed to in writing by the Director-General.	C	Completed	Not triggered.	
LAPSING OF CONSENT					
B6	This consent shall lapse five (5) years from the date of this approval unless the works associated with the development have physically commenced.	C	Completed	Not triggered.	
STATUTORY REQUIREMENTS					
B7	The Applicant shall ensure that all licences, permits and approval/consents are obtained as required by law and maintained as required throughout the life of the Development. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits or approval/consents.	G	Completed	Not triggered	
STAGING					
B8	The Applicant may elect to construct and/ or operate the Development in stages. Where staging is proposed, the Applicant shall submit a Staging Report to the Director General prior to the commencement of the first proposed stage. The Staging Report shall provide details of: (a) how the Development would be staged, including general details of work activities associated with each stage and the general timing of when each stage would commence; and (b) details of the relevant conditions of consent, which would apply to each stage and how these shall be complied with across and between the stages of the Development.	C	Inactive	Not triggered.	
B9	Where staging of the Development is proposed, these conditions of consent are only required to be complied with at the relevant time and to the extent that they are relevant to the specific stage(s).	C	Inactive	Not triggered.	
B10	The Applicant shall ensure that an updated Staging Report (or advice that no changes to staging are proposed) is submitted to the Director General prior to the commencement of each stage, identifying any changes to the proposed staging or applicable conditions.	C	Inactive	Not triggered.	
B11	The Applicant shall ensure that all plans, sub-plans and other management documents required by the conditions of this consent and relevant to each stage (as identified in the Staging Report) are submitted to the Director	C	Plan Completed & Approved	Not triggered	

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	General no later than one month prior to the commencement of the relevant stages, unless otherwise agreed by the Director General. Note: Conditions B8 to B11 do not relate to staged development within the meaning of section 83B of the Act.				
B12	The Applicant shall ensure that employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent relevant to their respective activities.	C	Completed	Not triggered.	
B13	The Applicant shall be responsible for environmental impacts resulting from the actions of all persons that it invites onto the site, including contractors, sub-contractors and visitors.	G	Completed	Not triggered	
B14	In the event of a dispute between the Applicant and a public authority, in relation to an applicable requirement in this consent or relevant matter relating to the Development, either party may refer the matter to the Director General for resolution. The Director General's determination of any such dispute shall be final and binding on the parties.	G	Statement	Not triggered.	
SCHEDULE C – ENVIRONMENTAL PERFORMANCE AND MANAGEMENT					
SEDIMENT, WATER QUALITY AND HYDROLOGY					
C1	The Development shall comply with section 120 of the Protection of the Environment Operations Act 1997, which prohibits the pollution of waters, except as expressly provided in an EPL.	G	Statement	Not triggered.	
C2	The Applicant shall implement all feasible and reasonable mitigation and management measures for the duration of dredging to minimise the dispersion of dissolved and sediment-bound TBT and suspended sediment concentrations outside the Development site during construction, including: (a) no overflow dredging within the fixed berths and in the front of the submarine berths; and(b) installing and maintaining a silt boom around the dredger head to capture sediment that falls into the water across the slewing zone.	C	Completed	Not triggered.	
Sediment and Water Quality Management Plan					

C3	<p>Prior to commencement of construction, or as otherwise agreed by the Director-General, the Applicant shall prepare (and implement following approval) a Sediment and Water Quality Management Plan in consultation with the EPA and DPI (Fisheries). The Plan must:</p> <p>(a) be prepared by a suitably qualified expert and be approved in writing by the Director-General;</p> <p>(b) identify representative monitoring locations which can be used to determine the extent to which TBT in the water column (dissolved) and sediment-bound TBT, suspended sediment concentrations, pH and Dissolved Oxygen generated and dispersed by dredging has affected the distribution and condition of sensitive marine receivers;</p> <p>(c) identify specific measures to minimise the generation and dispersion of these sediments outside the Development site during dredging in addition to those identified in Condition C2;</p> <p>(d) include dry weather baseline water quality monitoring data at these locations, including dissolved and sediment-bound TBT and suspended sediment concentrations against which levels during construction can be compared; (e) include a sediment and water quality monitoring program to be followed during and post dredging including the frequency and procedures for water quality monitoring (including in real-time) of dissolved and sediment bound TBT and suspended sediment concentrations, and other water quality parameters at the identified water quality monitoring locations; and</p> <p>(f) establish upper threshold water quality performance criteria and interim threshold water quality performance criteria and identify contingency measures to be implemented where these water quality performance criteria are triggered at sensitive marine receivers, including temporarily ceasing and reducing the rate of dredging (including overflow dredging) operations.</p>	C	Completed	Not triggered.	<p>Identified as an Administrative Non-Compliance in 2016 IEA</p> <p>Refer to Appendix 1: Status of Caltex Actions Arising from IEA.</p>
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C4	Within three (3) months of completing the post-dredging water quality monitoring required by Condition C3(e),the Applicant shall submit a report to the Director-General, the EPA, DPI (Fisheries) and SPC documenting the results of the baseline water quality monitoring undertaken before construction and the sediment and water quality monitoring program to be followed during and post dredging, to confirm that residual sediment and water quality is consistent with the predictions made in the EIS, with particular consideration to dissolved and sediment-bound TBT concentrations and impacts to the aquatic health of sensitive marine receivers (condition C8	C	Completed	Non-Compliant	Identified as an Administrative Non-Compliance in 2016 IEA Refer to Appendix 1: Status of Caltex Actions Arising from IEA.
BIODIVERSITY					
Aquatic Weeds					
C5	The Applicant shall implement all mitigation and management measures during construction to avoid the introduction or spreading of pest flora and fauna species including Caulerpa taxifolia consistent with the NSW Control Plan for the Noxious Marine Alga Caulerpa taxifolia (DII, 2009).	G	Statement	Not triggered	
Marine Fauna					
C6	The Applicant shall implement measures and management to minimise the risk of ship collision and minimise underwater noise generation with marine fauna with particular consideration of cetaceans, pinnipeds, marine turtles and dugongs. This shall include (but not necessarily be limited to): (a) carrying out observations for cetaceans, pinnipeds, marine turtles and dugongs within 420 metres of dredging, piling or rock revetment works; (b) temporary cessation of dredging and dredger tugboat reduced to a speed of 4 knots if the marine fauna comes within the 420 metres of dredging; (c) the temporary cessation of underwater noise generating activities associated with piling and rock revetment where marine fauna comes within the 250 metres of these activities. Noise generating activities shall not recommence until 30 minutes after the fauna has left the zone; and (d) the temporary cessation of dredging where marine fauna comes within the 150 metres of dredging. Dredging shall only recommence when marine fauna has moved out of this zone. Noise generating activities would not commence until 30 minutes following the fauna leaving the zone.	C	Completed	Not triggered	

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	Ausgrid Seagrass Rehabilitation Plan				
C7	Prior to commencement of construction, the Applicant shall notify DPI (Fisheries) and Ausgrid of the commencement date and schedule of dredging operations and keep them informed during dredging operations.	C	Completed	Not triggered	
	Aquatic Health Management Plan				
C8	<p>Prior to commencement of construction, or as otherwise agreed by the Director-General, the Applicant shall prepare (and implement following approval) an Aquatic Health Management Plan in consultation with OEH and DPI (Fisheries). The Plan must:</p> <p>(a) be prepared by a person who has been approved in writing by the Director-General;</p> <p>(b) include baseline aquatic surveys and data to confirm the distribution and condition of sensitive marine receivers, with appropriate consideration of seasonal variations, and identification of potential no-go areas;</p> <p>(c) identify representative monitoring locations which can be used to determine the distribution and condition of sensitive marine receivers, taking into account the Ausgrid seagrass rehabilitation project;</p> <p>(d) identify performance measures to assess the distribution and condition of the sensitive marine receivers during dredging; and</p> <p>(e) include an aquatic health monitoring program to be followed for the duration of dredging including the frequency and procedures for surveys, monitoring and visual observations.</p>	C	Completed	Not triggered	
C9	Within twelve (12) months of completing the post dredging water quality monitoring required by Condition C3(e), unless otherwise agreed to in writing by the Director-General, the Applicant shall submit a report to the Director-General, EPA, OEH, DPI (Fisheries) and SPC setting out whether dissolved and sediment-bound TBT and suspended sediment concentrations generated and dispersed by dredging are likely to have affected the distribution and condition of the sensitive marine receivers compared to baseline conditions drawing on all sediment and water quality and aquatic health monitoring data required to be collected by conditions C3 and C8.	C	Completed	Not triggered	

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C10	If considered necessary by the Director-General, the Applicant shall identify rehabilitation (and monitoring) or offset measures to be implemented to compensate for any adverse impacts to sensitive marine receivers identified in the report required by condition C9 attributable to the Development to the written satisfaction of the Director-General.	C	Completed	Not triggered	
COASTAL AND HYDRODYNAMICS					
C11	Pre, during and post dredging, the Applicant shall (unless otherwise agreed to in writing by the Director General) undertake monitoring of coastal and hydrodynamic processes on Silver Beach.	C	Completed	Not triggered	
C12	Within three (3) months of completing the post dredging monitoring, the Applicant shall submit a report to the Director General and SPC documenting the results of this monitoring to confirm that impacts to coastal and hydrodynamic processes on Silver Beach are no greater than those predicted in the EIS and will not result in significant ongoing residual impacts to the beach (including impacts to associated aquatic habitat such as intertidal habitat at Silver Beach).	C	Completed	Non-Compliant	Identified as an Administrative Non-Compliance in 2016 IEA Refer to Appendix 1: Status of Caltex Actions Arising from IEA.
C13	Where Development related impacts are identified to be significantly higher than those predicted, the Applicant shall identify measures to counteract any beach depletion impacts at Silver Beach and identify whether monitoring of other locations in Botany Bay are warranted and/or require rehabilitation.	C	Statement	Not triggered	
C14	If considered necessary by the Director-General, the Applicant shall identify rehabilitation (and monitoring) or offset measures to be implemented to compensate for any adverse impacts to coastal and hydrodynamic processes identified in the report required by condition C13 attributable to the Development to the written satisfaction of the Director-General.	C	Completed	Not triggered	

NOISE AND VIBRATION					
Construction Hours					
C15	With the exception of dredging and sub berth upgrade works, all construction works including all high noise generating works (such as piling and rock revetment) shall be confined to standard working hours: (a) 7:00am to 6:00pm Mondays to Fridays, inclusive; and (b) 8:00am to 1:00pm Saturdays; and (c) at no time on Sundays or public holidays. The upgrade of the sub berth may be undertaken during the additional hours of 1.00 pm and 6.00 pm on Saturdays and 8.00 am and 6.00 pm on Sundays. Dredging associated with the Development may be undertaken on a 24 hour basis, 7 days a week.	C	Completed	Not triggered	
C16	Construction works outside of the work hours identified in condition C15 may be undertaken in the following circumstances: (a) works that are inaudible at nearest sensitive land receivers; (b) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; (c) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm; (d) works approved through an approved EPL; or (e) works as approved through the out-of-hours work protocol outlined in the Construction Noise and Vibration Management Plan required under condition C36(b).	C	Completed	Not triggered	
Construction Noise and Vibration					
C17	The Development shall be constructed with the aim of achieving the construction noise management levels detailed in the Interim Construction Noise Guideline (DECC, 2009). All feasible and reasonable noise mitigation measures shall be implemented and any activities that could exceed the construction noise management levels shall be identified and managed in accordance with the Construction Noise and Vibration Management Plan required under condition C36(b). This shall include the implementation of respite periods in response to noise complaints, particularly in relation to high noise generating activities (including piling and rock revetment).	C	Completed	Not triggered	

C18	The Applicant shall undertake attended monitoring on a monthly basis during construction works outside of standard construction hours and at the commencement of and during high noise generating works (including piling and rock revetment) to confirm noise levels at residences along Prince Charles Parade and at the Ranger's residence at Kamay Botany Bay National Park.	C	Completed	Not triggered	
C19	The Development shall be constructed with the aim of achieving the following construction vibration goals: (a) for structural damage, the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration - effects of vibration on structures; and (b) for human exposure, the acceptable vibration values set out in the Environmental Noise Management Assessing Vibration: A Technical Guideline (Department of Environment and Conservation, 2006).	C	Statement	Non-Compliant	<p>Identified as a Low Risk Non-Compliance in 2016 IEA.</p> <p>Refer to Appendix 1: Status of Caltex Actions Arising from IEA.</p> <p>Learnings from this non-compliance have been applied to the Demolition project.</p> <p>Vibration monitoring has been employed for felling of large structures and all other activities where vibration is seen as a potential risk.</p>
HERITAGE MANAGEMENT					
Maritime Management					
C20	Prior to the commencement of construction, the Applicant shall commission an appropriately qualified maritime archaeologist to: (a) undertake magnetic or side sonar scans of the Development site to determine the presence of any previously unidentified items of maritime heritage (including ship wrecks) to the satisfaction of the Heritage Council of NSW; and (b) should any items be identified, develop a management strategy for the items during the construction and operation of the Development in consultation with the Heritage Council of NSW.	C	Completed	Not triggered	

C21	The management strategy shall be submitted for the Director General's approval providing written evidence of consultation and agreement with the recommendations from the Heritage Council of NSW. Construction must not commence in the area where items have been uncovered until written approval has been received from the Director General for the management strategy.	C	Completed	Not triggered	
Archival Record					
C22	Prior to the commencement of construction, the Applicant shall commission an appropriately qualified heritage expert to undertake archival recording of the existing fabric and operation of the Kurnell Wharf, in particular the existing infrastructure at Fixed Berth 1, which would be replaced as part of the Development. The archival recording shall be submitted to the Heritage Council of NSW Library prior to the removal or demolition of any existing elements.	C	Completed	Not triggered	Undertaken in combination with the equivalent actions in SSD5544
Potential for Discovery of Aboriginal and Non-Aboriginal Heritage Objects					
C23	If during the course of construction the Applicant becomes aware of any previously unidentified heritage object(s), all work likely to affect the object(s) shall cease immediately and the Heritage Council of New South Wales shall be notified immediately in accordance with section 146 of the Heritage Act 1977. Relevant works shall not recommence until written authorisation from the Heritage Council of NSW is received by the Applicant.	C	Statement	Not triggered	
C24	If during the course of construction the Applicant becomes aware of any previously unidentified Aboriginal object(s), all work likely to affect the object(s) shall cease immediately and the OEHL informed in accordance with section 89A of the National Parks and Wildlife Act 1974. Relevant works shall not recommence until written authorisation from OEHL is received by the Applicant.	C	Statement	Not triggered	

AIR QUALITY MANAGEMENT					
Odour Impacts					
C25	The Applicant shall implement an odour screening protocol for sediments excavated during dredging and implement all feasible and reasonable mitigation measures to ensure that odour generation during dredging do not exceed an odour limit of 2 odour units at the nearest residential receivers during the construction works.	C	Statement	Not triggered	
Dust Generation					
C26	The Applicant shall implement all feasible and reasonable mitigation measures to ensure that the Development is constructed in a manner that minimises dust emissions from the site, including wind-blown and traffic-generated dust and tracking of material onto public roads. All works shall be undertaken with the objective of preventing visible emissions of dust from the site. Should such visible dust emissions occur at any time, the Applicant shall identify and implement all feasible and reasonable dust mitigation measures, including cessation of relevant works, as appropriate, such that emissions of visible dust cease	C	Project Completed	Not triggered	
TRANSPORT AND ACCESS					
Construction Access					
C27	The designated construction access route for the delivery of materials for construction purposes shall be via Captain Cook Drive, Prince Charles Parade and Solander Street. Unless otherwise agreed to by the Director General (supported by appropriate traffic and transport justification), at no time shall construction vehicles use residential streets in Kurnell for construction access. Should any additional roads be agreed to by the Director General for construction access, these roads would be subject to the requirement for a road dilapidation survey and report to be prepared prior to their use as identified in condition C28.	C	Project Completed	Not triggered	

Road Dilapidation					
C28	Prior to the commencement of construction, The Applicant shall commission an independent and qualified person or team to undertake a road dilapidation survey of all roads proposed to be used for construction material haulage as specified in condition C27 and prepare a Road Dilapidation Report. The report shall assess the current condition of the road and describe mechanisms to restore any damage that may result due to traffic and transport related to the construction of the Development. The Report shall be submitted to the relevant road authority for review prior to the commencement of construction vehicle haulage. Following completion of construction, a subsequent report shall be prepared to assess any damage that may have resulted from the construction of the Development. Measures undertaken to restore or reinstate roads affected by the Development shall be undertaken in a timely manner, in accordance with the reasonable requirements of the relevant road authority, and at the full expense of the Applicant.	C	Completed	Non-Compliant	Identified as an Administrative Non-Compliance in 2016 IEA Refer to Appendix 1: Status of Caltex Actions Arising from IEA.
C29	The Applicant shall provide sufficient parking facilities at its temporary laydown facility for construction personnel and heavy vehicles to ensure that construction traffic associated with the Development does not utilise public and residential streets or public parking facilities for parking.	C	Statement	Not triggered	
PROPERTY IMPACTS					
C30	Any damage caused to property or public infrastructure as a result of the Development shall be rectified or the property or asset owner appropriately compensated, within a reasonable timeframe, with the costs borne by the Applicant.	C	Statement	Not triggered	
WASTE MANAGEMENT					
Waste Management On-site					
C31	The Applicant shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997, if such a licence is required in relation to that waste.	C	Statement	Not triggered	

C32	The Applicant shall maximise the reuse and/or recycling of waste materials generated on site, to minimise the need for treatment or disposal of those materials outside the site.	C	Statement	Not triggered	
C33	The Applicant shall ensure that all liquid and/or non-liquid waste generated on the site is assessed and classified in accordance with Waste Classification Guidelines (DECC, 2008), or any future guideline that may supersede that document and where removed from the site is only directed to a waste management facility lawfully permitted to accept the materials.	C	Statement	Not triggered	
ENVIRONMENTAL REPRESENTATIVE					
C34	<p>Prior to the commencement of construction, or as otherwise agreed by the Director General, the Applicant shall nominate for the approval of the Director General a suitably qualified and experienced Environmental Representative(s) that is independent of the design, construction and operational personnel. The Applicant shall employ the Environmental Representative(s) for the duration of construction, or as otherwise agreed by the Director General. The Environmental Representative(s) shall:</p> <p>(a) be the principal point of advice in relation to the environmental performance of the Development;</p> <p>(b) monitor the implementation of environmental management plans and monitoring programs required under this consent and advise the Applicant upon the achievement of these plans/ programs;</p> <p>(c) have responsibility for considering and advising the Applicant on matters specified in the conditions of this consent, and other licences and consents related to the environmental performance and impacts of the Development;</p> <p>(d) be given the authority to review and confirm whether works associated with the Development are classified as Construction (or not) under this development consent, and if classified as Construction, advise on the relevant pre-Construction and Construction requirements that the works would be subject to under this consent;</p> <p>(e) be given the authority to approve/ reject minor amendments to the Construction Environment Management Plan. What constitutes a “minor”</p>	C	Completed	Not triggered	

	<p>amendment shall be clearly explained in the Construction Environmental Management Plan required under condition C35;</p> <p>(f) be given the authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, to direct that relevant actions be ceased immediately should an adverse impact on the environment be likely to occur; and</p> <p>(g) be consulted in responding to the community concerning the environmental performance of the Development where the resolution of points of conflict between the Applicant and the community is required.</p>				
CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN					
C35	<p>Prior to the commencement of construction, or as otherwise agreed by the Director General, the Applicant shall prepare and implement (following approval) a Construction Environmental Management Plan for the Development. The Plan shall outline the environmental management practices and procedures that are to be followed during construction, and shall be prepared in consultation with the relevant government agencies and in accordance with the Guideline for the Preparation of Environmental Management Plans (Department of Infrastructure, Planning and Natural Resources, 2004). The Plan shall include, but not necessarily be limited to:</p> <p>(a) a description of activities to be undertaken during construction of the Development (including staging and scheduling);</p> <p>(b) statutory and other obligations that the Applicant is required to fulfil during construction, including approval/consents, consultations and agreements required from authorities and other stakeholders under key legislation and policies;</p> <p>(c) a description of the roles and responsibilities for relevant employees involved in the construction of the Development, including relevant training and induction provisions for ensuring that employees, including contractors and sub-contractors are aware of their environmental and compliance obligations under these conditions of consent;</p>	C	Completed	Not triggered	<p>Identified as an Administrative Non-Compliance in 2016 IEA</p> <p>Refer to Appendix 1: Status of Caltex Actions Arising from IEA.</p>

<p>(d) an environmental risk analysis to identify the key environmental performance issues associated with the construction phase; and</p> <p>(e) details of how environmental performance would be managed and monitored to meet acceptable outcomes, including what actions will be taken to address identified potential adverse environmental impacts (including any impacts arising from the staging of the construction of the Development). In particular, the following environmental performance issues shall be addressed in the Plan:</p> <ul style="list-style-type: none"> (i) sediment and water quality management within the Bay; (ii) marine ecology management; (iii) noise and vibration; (iv) odour and air quality management; (v) traffic and access (vi) management of Aboriginal and non-Aboriginal heritage; (vii) waste management; (viii) emergency, including spill management; (ix) compounds and ancillary facilities management; (x) operational and navigation safety during construction within the Bay; and (xi) means for assessing (and where identified) for managing interactions and cumulative impacts from the concurrent construction of other development works in the area should these coincide with the Development (e.g. the Caltex Refinery upgrade works). <p>(f) The Plan shall be submitted for the approval of the Director General prior to the commencement of construction. The Plan may be prepared in stages, however, construction works shall not commence until written approval has been received from the Director General. The approval of a Construction Environmental Management Plan does not relieve the Applicant of any requirement associated with this development consent. If there is an inconsistency with an approved Construction Environmental</p> <p>Management Plan and the conditions of this development consent, the requirements of this development consent prevail.</p>				
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C36	<p>As part of the Construction Environmental Management Plan for the Development required under condition C35 the Applicant shall prepare and implement (but not necessarily be limited to) the following:</p> <p>(a) a Dredging and Spoil Management Plan to address the management of sediment and water quality during dredging within the Bay, prepared in consultation with the EPA and including, but not necessarily be limited to:</p> <ul style="list-style-type: none"> (i) a Sediment and Water Quality Monitoring Program in accordance with the requirements of condition C3; (ii) measures to address the management and monitoring of any potential acid sulphate soils excavated during dredging in the Bay to prevent their oxidation into actual acid sulphate soils prior to: <ul style="list-style-type: none"> final re-use or disposal, including contingency measures to be implemented in case of acid generation; and (iii) a Spill Control Plan; <p>(b) a Construction Noise and Vibration Management Plan to detail how construction noise and vibration impacts will be minimised and managed. The Plan shall be consistent with the guidelines contained in the Interim Construction Noise Guidelines (DECC, 2009) be prepared in consultation with the EPA. The Plan shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> (i) identification of sensitive land receivers and relevant construction noise and vibration goals applicable to the Development stipulated in this consent; (ii) details of construction activities and an indicative schedule for construction works; including the identification of key noise and/or vibration <p>Generating construction activities (based on representative construction scenarios, including at ancillary facilities) that have the potential to generate noise and/or that have the potential to generate noise and/or vibration impacts on surrounding sensitive land receivers, particularly residential areas that have the potential to generate noise and/or vibration impacts on surrounding sensitive land receivers, particularly residential areas;</p> <ul style="list-style-type: none"> (iii) identification of feasible and reasonable measures proposed to be implemented to minimise and manage construction noise and vibration impacts with particular consideration to works outside of standard construction hours; (iv) a description of how the effectiveness of these actions and measures would be monitored during the proposed works, clearly indicating how often his monitoring would be conducted, the locations where monitoring would 	C	Completed	Not triggered	
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<p>take place, how the result of this monitoring would be recorded and reported, and, if any exceedance is detected, how any non-compliance would be rectified; and</p> <p>(v) an out-of-hours work (OOHW) protocol for the assessment, management and approval of works outside of standard construction hours (not already allowed under this consent) as defined in condition C16, including a risk assessment process under which an Environmental Representative may approve out-of-hour construction activities deemed to be of environmental risk and refer high risk works for the Director General's approval. The OOHW protocol shall detail standard assessment, mitigation and notification requirements for high and low risk out-of-hour works, and detail a standard protocol for referring applications to the Director General;</p> <p>(c) an Air Quality Management Plan outlining procedures to be implemented to monitor and manage odour and dust generation from the Development site in accordance with conditions C25 and C26; and</p> <p>d) a Construction Traffic and Access Management Plan to manage and minimise access and traffic impacts associated with the Development particular to residential streets at Kurnell, focusing on those periods (such as the concrete pour period) when peaks in traffic generation are expected to occur. The sub-plan shall include, but not necessarily be limited to:</p> <p>(i) identification of designated construction traffic access routes and periods of high traffic generation;</p> <p>(ii) details of designated vehicle parking, turning areas and ingress and egress points into temporary construction work compounds/ laydown areas; and</p> <p>(iii) how shift changes and delivery times shall be restricted to standard day time hours where practicable; (iv) details of management measures to minimise traffic impacts, including avoiding vehicle queuing and parking on public roads, safe pedestrian access and disruptions to traffic.</p>				
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SCHEDULE D – COMMUNITY INFORMATION AND REPORTING					
COMMUNITY INFORMATION AND REPORTING					
COMMUNITY INFORMATION, CONSULTATION AND INVOLVEMENT					
Community Consultation					
D1	The Applicant shall continue the existing community consultative committee for the life of the Development with the Kurnell community.	C	Active/ongoing	Compliant	
D2	<p>Prior to the commencement of construction the Applicant shall prepare (and following approval) implement a Community Consultation Plan, for the approval of the Director General to identify the consultation and notification procedures that would be undertaken during the construction of the Development to keep the general community and stakeholder groups informed of the construction works and measures to minimise impacts to these groups. The Plan shall include but not be limited to:</p> <p>(a) identification of key stakeholder groups that require notification and engagement on the construction works including (but not necessarily limited to):</p> <ul style="list-style-type: none"> (i) recreational users of the Bay such as recreational fishing and boating groups and divers; (ii) users of Silver Beach; (iii) residents along Prince Charles Parade; (iv) the local community at Kurnell; (v) DPI (Fisheries) personnel working on the Ausgrid cable laying project seagrass rehabilitation site; and (vi) Local Council; <p>(b) key matters on which these stakeholders groups would be kept informed of including: the commencement of construction works, access restrictions and exclusion zones within the Bay and near Silver Beach, the commencement and location of dredging, high noise generating works, traffic disruptions and means for providing comment or complaints on the Development;</p> <p>(c) procedures for engagement with and notification of these stakeholder groups by means that best targets each stakeholder group (e.g. on site signage, newspaper notifications, letter box drops, website updates, community meetings, notifications in stakeholder specific websites such as recreational fishing posts etc.), including frequency of notification; and</p>	C	Completed	Compliant	Note: The Kurnell terminal continues to use the Community Consultation/Engagement Plan.

	(d) the means for ongoing engagement (as required) with relevant public authorities (e.g. EPA, OEH, DPI (Fisheries), Sydney Ports Corporation, Council and the Department) and notification in the case of an environmental incident.				
Complaints and Enquiries Procedure					
D3	Prior to the commencement of construction, or as otherwise agreed by the Director General, the Applicant shall ensure that the following are available for community enquiries and complaints for the duration of construction: (a) a 24 hour telephone number(s) on which complaints and enquiries about the Development may be registered; (b) a postal address to which written complaints and enquires may be sent; (c) an email address to which electronic complaints and enquiries may be transmitted; and (d) a mediation system for complaints unable to be resolved.	G	Active/ongoing	Compliant	
D4	The telephone number, the postal address and the email address shall be published in newspaper(s) circulating in the local area prior to the commencement of construction and prior to the commencement of operation. This information shall also be provided on the website (or dedicated pages) required by this consent.	G	Completed	Not triggered	
D5	Prior to the commencement of construction, or as otherwise agreed by the Director General, the Applicant shall prepare and implement a Construction Complaints Management System consistent with AS 4269: Complaints Handling and maintain the System for the duration of construction and up to 12 months following completion of the Development. Information on all complaints received, including the means by which they were addressed and whether resolution was reached, with or without mediation, shall be maintained as part of the System and included in the construction compliance reports required by this consent. The information contained within the System shall be made available to the Director General on request.	G	Active/ongoing	Compliant	
Provision of Electronic Information					
D6	Prior to the commencement of construction, or as otherwise agreed by the Director General, the Applicant shall establish and maintain a new website, or dedicated pages within an existing website, for the provision of electronic information associated with the Development, for the duration of construction and for 12 months following completion of the Development. The Applicant	G	Active/ongoing	Compliant	

<p>shall, subject to confidentiality, publish and maintain up-to-date information on the website or dedicated pages including, but not necessarily limited to:</p> <ul style="list-style-type: none">(a) information on the current implementation status of the Development;(b) a copy of the documents referred to under condition B1 of this consent, and any documentation supporting modifications to this consent that may be granted from time to time;(c) a copy of this consent and any future modification to this consent;(d) a copy of each relevant environmental approval/consent, licence or permit required and obtained in relation to the Development;(e) a copy of each current strategy, plan, program or other document required under this consent;(f) the outcomes of compliance tracking in accordance with condition D7 of this consent; and(g) details of contact point(s) to which community complaints and enquiries may be directed, including a telephone number, a postal address and an email address.				
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COMPLIANCE MONITORING AND TRACKING					
Compliance Tracking program					
D7	<p>The Applicant shall develop and implement a Compliance Tracking Program to track compliance with the requirements of this consent. The Program shall be submitted to the Director General for approval prior to the commencement of construction and operate for a minimum of one year following commencement of operation, subject to the Director General's review of the outcomes of the environmental auditing referred to in condition F1. The Program shall include, but not necessarily be limited to:</p> <p>(a) provisions for the notification of the Director General prior to the commencement of construction and prior to the commencement of operation of the Development (including prior to each stage, where works are being staged);</p> <p>(b) provisions for periodic review of the compliance status of the Development against the requirements of this consent;</p> <p>(c) provisions for periodic reporting of compliance status to the Director General, including a Pre- Construction Compliance Report, construction reporting, and a Pre-Operation Compliance Report;</p> <p>(d) a program for independent environmental auditing in accordance with ISO 19011:2003 - Guidelines for Quality and/ or Environmental Management Systems Auditing during construction;</p> <p>(e) mechanisms for recording environmental incidents during construction and actions taken in response to those incidents;</p> <p>(f) provisions for reporting environmental incidents to the Director General and relevant public authorities during construction;</p> <p>(g) procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management; and</p> <p>(h) provisions for ensuring all employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent relevant to their respective activities.</p>	G	Completed for the project	Non-Compliant	<p>Identified as a Low Risk Non-Compliance in 2016 IEA. Refer to Appendix 1: Status of Caltex Actions Arising from IEA.</p> <p>The Loss prevention system (LPS) is in place which includes Recording complaints and incidents</p> <p>LPS handbook available on the Caltex safety homepage</p> <p>LPS is included in staff training. Sighted training records indicating inductions and environmental awareness training has been completed for staff and contractors.</p> <p>LPS observations (LPO) sighted; 10/7/17 ship unloading 11/7/17 Tank dipping and gauging</p> <p>LPS procedures were verified to be established</p>

	Incident Reporting				
D8	The Applicant shall notify the Director General of any incident with actual or potential significant off-site impacts on people or the biophysical environment within 24 hours of becoming aware of the incident. The Applicant shall provide full written details of the incident to the Director General within seven days of the date on which the incident occurred.	G	Active/ongoing	Compliant	Refer to Sections 1.6 and Table 12 of this report for details of the events reported to the EPA and DPE
D9	The Applicant shall meet the requirements of the Director General to address the cause or impact of any incident, as it relates to this consent, reported in accordance with condition D8 of this consent, within such period as the Director General may require.	G	Project Completed	Compliant	
	SCHEDULE E – OPERATION ENVIRONMENTAL MANAGEMENT				
	HAZARD AND RISK				
	Safety Management System				
E1	At least two months prior to the commencement of commissioning, the Applicant shall update its Safety Management System to include any changes due to the development. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. Records shall be kept on-site and shall be available for inspection by the Director General upon request. The updated Safety Management System shall be developed in accordance with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'.	G	Completed A Safety Case has been submitted to SafeWork 13/1/17	Compliant	
	OPERATIONAL ENVIRONMENTAL MANAGEMENT				
E2	Prior to the commencement of operation, the Applicant shall incorporate the Development into any existing environmental management systems administered by the Applicant and prepared in accordance with the AS/NZS ISO 14000 Environmental Management System series.	G	Completed	Compliant	

SCHEDULE F – ENVIRONMENTAL MONITORING AND AUDITING					
ENVIRONMENTAL MONITORING AND AUDITING					
F1	Environmental Auditing				
	<p>Within one year of the commencement of operations and for a period of at least 5 years thereafter (unless otherwise agreed to by the Director General), the Applicant shall fund a full independent environmental audit. The audit shall be undertaken by a suitably qualified person/team approved by the Director General. The audits shall be made publicly available and would:</p> <p>(a) be carried out in accordance with ISO 14010 – Guidelines and General Principles for Environmental Auditing and ISO 14011 –Procedures for Environmental Auditing;</p> <p>(b) assess compliance with the requirements of this consent, and other licences and approvals that apply to the development;</p> <p>(c) assess the construction against the predictions made and conclusions drawn in the development application and EIS;</p> <p>(d) review the effectiveness of the environmental management of the development, including any environmental impact mitigation works and mitigation implemented to address matters identified in pervious audits; and</p> <p>(e) where required identify any additional or ongoing monitoring or mitigation measures to be put in place to manage residual environmental impacts associated with the Development. A copy of the audit report and the measures proposed by the Applicant to respond to matters identified in the audit including timeframe for their implementation shall be submitted for the Director General’s approval within three months of the completion of the audit, unless otherwise agreed to by the Director General.</p>	G	Completed First IEA conducted in April 16	Compliant	<p>2016 IEA Report, including Caltex responses, is posted on the Caltex Public Website</p> <p>2017 IEA completed September 2017</p> <p>IEA report sent to DPE 28 Nov 2017</p>