



Planning &
Infrastructure

**STATE SIGNIFICANT DEVELOPMENT ASSESSMENT:
Caltex Kurnell Refinery Conversion
SSD 5544**



Director-General's
Environmental Assessment Report
Section 89E of the
Environmental Planning and Assessment Act 1979

December 2013

Cover photo: Aerial View of Kurnell Refinery Site (Source: *URS, EIS Volume 1, March 2013*).

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EXECUTIVE SUMMARY

Caltex Refineries (NSW) Pty Ltd (hereafter referred to as Caltex) proposes to convert its existing Kurnell Refinery facility into a finished fuel product import and distribution terminal.

The Kurnell refinery was commissioned in 1956 and currently receives and refines crude oil as well as receiving some refined products which are delivered to the site by ship from Botany Bay. The facility is the largest oil refinery in New South Wales, and the second largest in Australia (the largest is the British Petroleum refinery at Kwinana in Western Australia).

A review of the Kurnell refining operations was undertaken in May 2011. The review found that the refining of oil at the site was no longer viable, primarily due to the increased competition from larger and more modern refineries in Asia. This proposal therefore aims to ensure that Caltex's operations within Australia remain viable.

The proposal involves the continued use of parts of the site for the storage and distribution of finished fuel products, and modifications are proposed to other parts of the facility that are currently used for the processing and storage of crude oil to allow the storage of additional finished fuel products. In addition, the installation of some additional pipelines, pumps and ancillary infrastructure would be carried out to facilitate the conversion.

The refinery is entirely reliant on ship movements to deliver crude oil and refined petroleum products to the site. Distribution of fuels would continue in a manner generally consistent with current operations to supply the NSW and ACT markets. The proposal does not relate to the wharf or berthing facilities, and works to these facilities were the subject of a separate State Significant Development (SSD) Application which was approved by the Planning Assessment Commission (PAC) on 19 September 2013 (SSD 5353).

The development has a capital investment value of approximately \$230 million. The number of additional staff employed on the site is expected to fluctuate between 90 and 140 during construction works, however the proposed conversion would result in a reduction in the total number of operational staff employed at the facility (i.e. from approximately 410 Caltex employees and 475 contractors in 2012 to 45 Caltex employees and 55 contractors in 2017).

Construction works are proposed to commence toward the end of 2013 and the conversion would be completed over a period of 3 years until the end of 2016, with the refinery continuing to operate until the second half of 2014.

The proposal is classified as State Significant Development (SSD) in accordance with Clause 10(3) of Schedule 1 of the SRD SEPP as it relates to the storage of dangerous goods in such quantities that constitute the development as a 'major hazard facility' within the meaning of Chapter 6B of the *Work Health and Safety Regulation 2011*. Consequently, the Minister for Planning and Infrastructure is the consent authority for the proposed development.

The Department exhibited the Environmental Impact Statement (EIS) for the development from 23 May 2013 until 28 June 2013 and received a total of 14 submissions on the development from council and government agencies. Two agencies confirmed that they would not be making a formal submission and, while all properties at Kurnell were individually notified of the proposal, no submissions were received from members of the general public.

Of the submissions received, four stated that they had no concerns regarding the development. A number of issues were raised in the remaining submissions in relation to flooding, contamination, stormwater, risks and hazards, noise, air quality, and waste management. Additional information providing clarification on these issues was provided by URS in their Response to Submissions (RTS) report for the development.

In its assessment of the proposal, the Department has fully considered all relevant matters under Section 79C of the EP&A Act, the objects of the EP&A Act and the principles of ecologically sustainable development.

The key issue associated with the development is the potential risk and hazard impacts from the facility on surrounding land uses. The Department therefore engaged Lloyd's Register (Lloyd's) to independently review the Preliminary Hazard Analysis (PHA) for the development. Lloyd's found that the PHA undertaken as part of the EIS applied a sound methodology to estimate and assess the risks from the proposal. In addition, the review determined that the risk assessment demonstrated that the development would comply with all land use safety planning risk criteria for new "potentially hazardous" developments adopted in NSW (per HIPAP 4) once in operation.

In terms of the other issues raised, the Department's assessment found that these issues are generally not new to the site and could be satisfactorily addressed by conditions of consent combined with Caltex's existing maintenance procedures and the environment protection licence.

Overall, the Department found that the proposed development would improve the environmental performance of the site, and concluded that with the implementation of the recommended conditions of consent, the residual impacts of the development can be mitigated and/or managed with an acceptable level.

It has also found that, while the proposal would result in a significant decline in the number of employees at the site, the proposal would ensure that the site remained operational and would therefore continue to provide a contribution to the economy and provide a key role in fuel distribution and fuel security throughout NSW and the ACT.

The Department, in consultation with Council and the Applicant, also proposes to consolidate all possible existing approvals for the site into the recommended instrument. The Department prefers large operations such as the proposed terminal to operate under a single, modern planning approval, so that current environmental requirements and operating conditions are contained within a single document.

Consequently, the Department considers that the development is in the public interest and should be approved, subject to conditions.

1. BACKGROUND

1.1. Background

Caltex Refineries (NSW) Pty Ltd (the Applicant), operates the Kurnell crude oil refinery. The refinery was commissioned in 1956 and was used to receive and refine crude oil into refined petroleum products.

Following a review of its operations, Caltex announced in July 2012 its intention to cease refining operations in mid-2014 and to convert the refinery site into a finished product import and distribution terminal.

To facilitate this conversion, Caltex has submitted two State Significant Development (SSD) applications which cover:

- upgrade of its port and berthing facilities to support the conversion of the refinery – marine based infrastructure upgrades (SSD 5353); and
- the conversion of its existing refinery to a finished petroleum product import and distribution terminal – land based activities focused on the inland refinery (SSD 5544).

This report assesses SSD 5544, the application covering the conversion of the refinery to a finished product import and distribution terminal, herein referred to as the Kurnell refinery conversion proposal (the development). The upgrade works to the port and berthing facility was separately assessed and approved by the Planning Assessment Commission (PAC) on 19 September 2013.

1.2. Site Description

The Kurnell refinery is located on the Kurnell Peninsula, a 2,000 hectare (ha) area of land located within the Sutherland Shire Council area, lying approximately 15km south of Sydney's CBD and 4km south-east of Sydney Airport (see Figure 1).

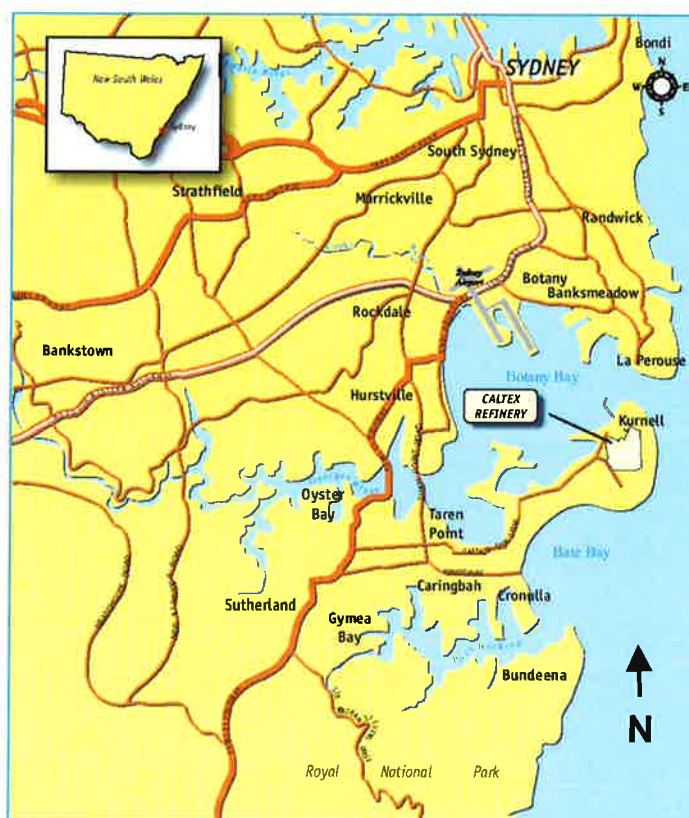


Figure 1: Site Location (Regional Context)

The site has an area of approximately 187 hectares and is relatively level and low lying (at an elevation of approximately 5-10m to Australian Height Datum (AHD)).

The site is owned and occupied by Caltex Australia Ltd, is legally described by multiple lot and deposited plan (DP) numbers, and is zoned 4(c1) Special Industrial (Oil Refining) Zone under *State Environmental Planning Policy (Kurnell Peninsula) 1989*. The proposed development is permissible in this zone with consent.

An existing 'right of way' easement runs in a north-westerly direction from the refinery to Caltex's wharf. The easement contains the pipelines which connect the facility to the two ship berths. The closest residents are about 15 metres away from this 'right of way' easement. No works are proposed within the easement as part of this application.

The site is identified as a local heritage item under the Kurnell Peninsula SEPP as 'Australian Oil Refinery', however the site is considered to have a broader historical significance given that it was only one of two refineries located in NSW.

The site is also subject to an existing Environment Protection Licence (EPL) No. 837 which would need to be amended after refining operations cease in 2014 to reflect the future operation of the facility as a terminal.

1.3. Existing operations

The Kurnell Refinery was commissioned in 1956 and currently receives and refines crude oil as well as receiving some refined products. The facility is the largest refinery in New South Wales with a capacity of 135,000 barrels per day (21.5 million litres), and the second largest of the seven refineries in Australia based on crude oil processing capacity (the largest is the British Petroleum refinery at Kwinana in Western Australia).

The Kurnell Refinery currently receives approximately 75% crude oil and 25% finished petroleum product. These products are delivered to the site by pipeline from ships which dock at the berths associated with the Kurnell wharf in Botany Bay (see Figure 2). The crude oil is processed mainly into gasoline (39.9%), diesel (28.7%) and jet fuel (18.2%), although the volume of each fuel produced varies from year to year depending on demand.

The facility supplies approximately 40% of all transport fuels in NSW. Distribution from the site is currently undertaken via road, sea and by pipeline. The majority of fuel is distributed from the site by pipeline to the existing distribution terminals at Banksmeadow, Silverwater, and the Caltex Wickham terminal in Newcastle (transferred using the Caltex owned and operated 200km pipeline between the refinery and the terminal). Fuel is also distributed by pipeline to Sydney Airport, and a small number of products are currently transported from the site using road tankers, however this method of distribution is proposed to cease.

The existing infrastructure on site includes:

- Refinery processing infrastructure;
- Crude and petroleum products storage facilities;
- Waste water storage and treatment;
- Steam and limited electricity generation;
- Catalysts and chemicals storage;
- Warehousing;
- Workshops; and
- Offices.

The existing site can generally be split into the following key operations components (refer to Figure 2):

- Western Section – crude oil storage;
- Central Section – refining equipment and infrastructure;
- Eastern Section – storage of finished fuel products; and

- South-Western Section - Caltex Lubricating Oil Refinery (CLOR) (now demolished).

The Caltex Lubricating Oil Refinery (CLOR) was previously located in the south-western corner of the site (see Figure 2). It was commissioned in 1964 and was decommissioned and demolished in 2012. The CLOR and was capable of producing 3,000 barrels a day of lubricating base oil using its four principal process units. Following demolition, the operational area of the CLOR site was assessed for soil and groundwater contamination. The remediation works have been completed and further groundwater monitoring of this area has commenced. It has been agreed with the EPA that this monitoring will become part of future site-wide remediation activities.

The site currently operates 24 hours, 7 days and employs a total of approximately 885 employees (including 410 Caltex Employees plus 475 contractors). The facility also employs up to an additional 500 contractors two to three times per year when the facility is shut-down for up to six weeks at a time for routine maintenance.

The existing site layout is shown in Figure 2 below.

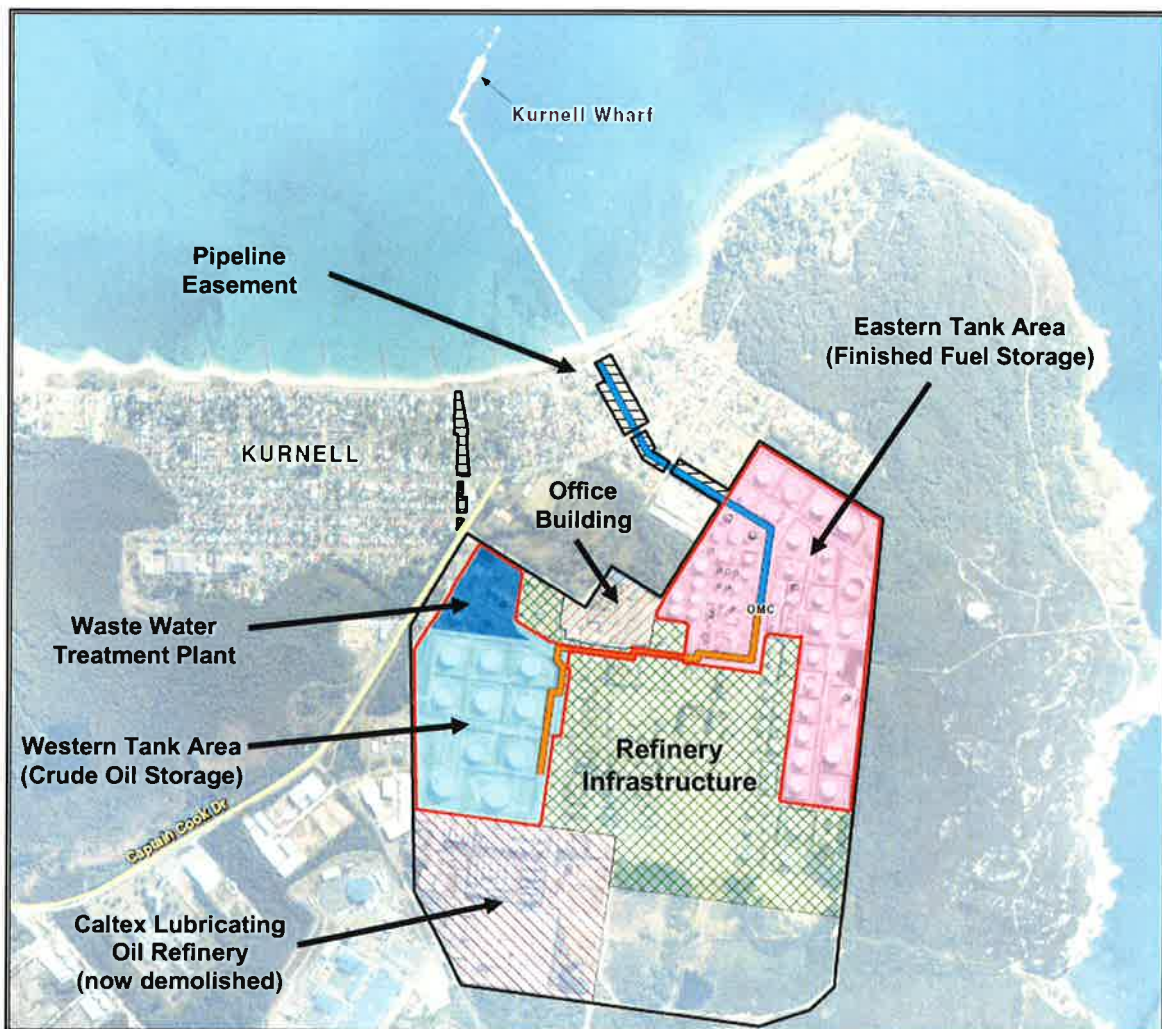


Figure 2: Existing Site Layout and Operations (Source: EIS, March 2013, URS)

1.4. Surrounding Landuses

The Kurnell Refinery site is bound by Kamay Botany Bay National Park to the east, the community of Kurnell to the north and north-west, Quibray Bay and light-industrial development (including the Kurnell Desalination Plant) to the west and largely undeveloped land which is subject to a range of industrial land use zones prescribed by *State Environmental Planning Policy (Kurnell Peninsula) 1989* to the south (Refer to Figure 3 below).

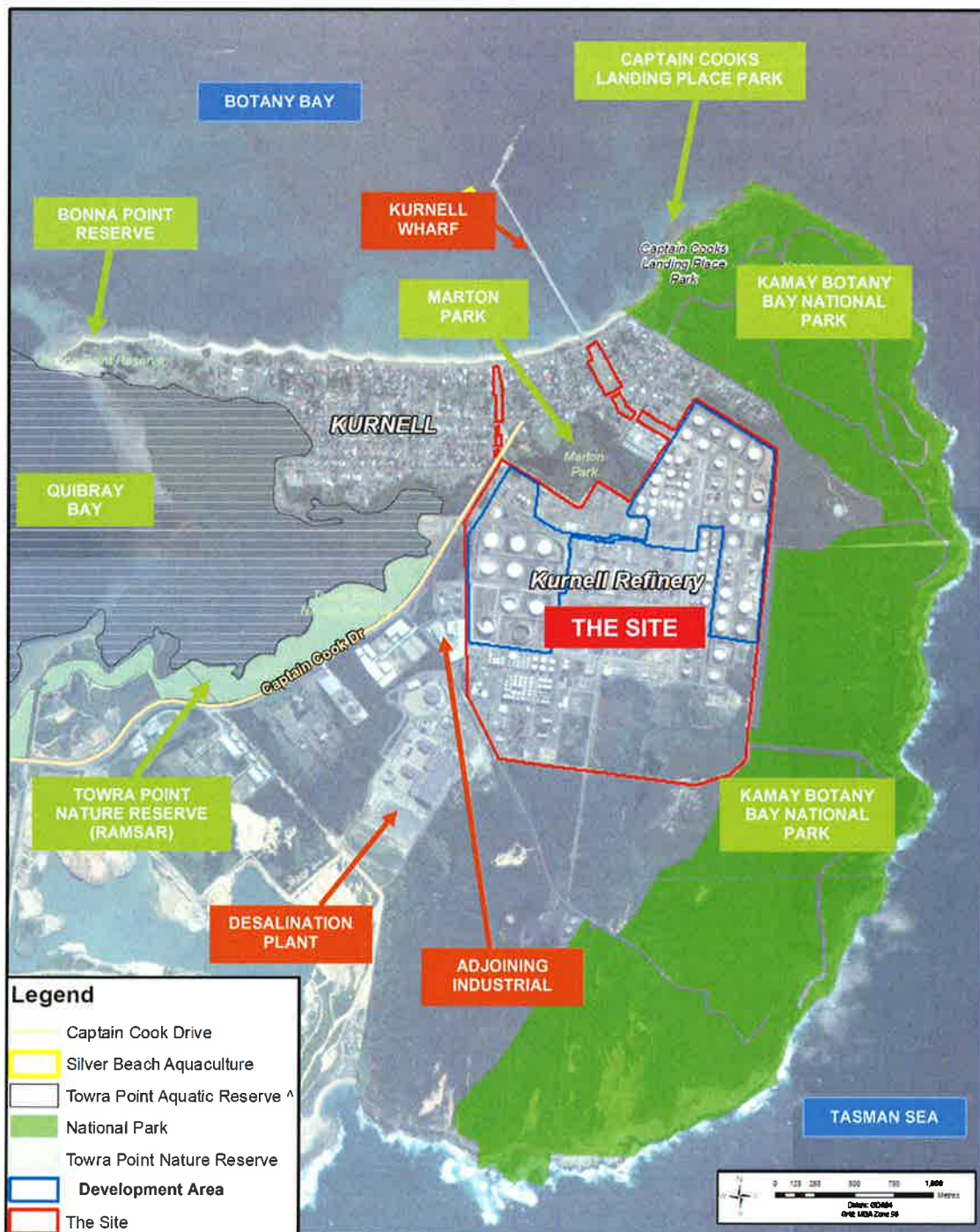


Figure 3: Site and Surrounding Land Uses

The village of Kurnell was established in 1933 and is now home to approximately 2,200 residents and various industrial developments including the Kurnell Oil Refinery. The closest residents to the refinery site itself are located about 30 metres away on Cook Street. Kurnell also contains various public spaces and a public school, and the Botany Environmental Education Centre is located nearby in the National Park. Beyond Kurnell, the nearest suburb of Woolooware is located approximately 5 kilometres south-east of the refinery.

The Kurnell Peninsula contains items of national historic significance (Captain Cook's Landing Place) and national and international environmental significance (Towra Point Nature Reserve – a Ramsar Wetlands Site). The Peninsula also contains a number of other items of national, state and local

heritage significance such as Cape Baily Lighthouse, Cronulla Sewage Treatment Plant and Kurnell Monuments.

The Peninsula also contains a number of other reserves and parks, including Marton Park (a developed recreational park area), Captain Cook's Landing Place Park, Bonna Point Reserve (an undeveloped wetland area located approximately 1.4km to the north west of the site), and Quibray Bay (which also includes the Ramsar listed Towra Point Aquatic Reserve and forms its broader ecosystem). Further to the north of the site is Botany Bay, Banksmeadow and the Botany Industrial Area.

Vehicular access to the Kurnell Peninsula is via Captain Cook Drive only, a generally two lane road with a single lane travelling in each direction.

1.5. Existing Approvals

The refinery was constructed in 1956 following approval under the County of Cumberland Planning Scheme in 1952. The site currently relies on a list of approximately 40 planning approvals that have been issued by the NSW Government or Sutherland Shire Council between 1952 and 2013. In addition, the site also benefits from the *Australian Oil Refining Agreements Act 1954 (AORA Act)* which enabled the procurement of land, construction and use of the site.

The Department, in consultation with Council and the Applicant, proposes to consolidate all existing approvals for the site into the recommended instrument, with the exception of five approvals which shall be retained (see Table 1) given that they relate to current works or additional land (e.g. the Banksmeadow Terminal). The Department prefers large operations such as the proposed terminal to operate under a single, modern planning approval, so that relevant environmental requirements and operating conditions are contained within a single document.

Table 1: Applications that would not be surrendered as part of this proposal.

Application No.	Proposal
SSD 5353	Port and Berthing Works
DA 13/0335	Construction and operation of a Bio-Pile Pilot Trial to treat Hydrocarbon impacted soils;
DA 11/1090	Remediation of Limestone Pits
MP 11_0004	Jet Fuel Pipeline upgrade project (Stage 2)
DA 09/840	Jet Fuel Remediation

The site is also regulated by the NSW EPA under the Protection of the *Environment Operations Act 1997* through Environmental Protection License (EPL) No. 837.

In addition, the site is currently registered as a Major Hazards Facility (MHF) under the *Work Health and Safety Regulation 2011* and the Applicant has submitted a Formal Safety Case as part of this requirement. It is expected that this process will continue for the use of the site as a terminal.

2. PROPOSED DEVELOPMENT

2.1. Development Need

The Kurnell Refinery is currently an important fuel production and distribution point, with capacity to produce 135,000 barrels (21.5 million litres) of refined petroleum product per day. The facility currently supplies between 40-50% of the total fuel required by the NSW and ACT markets.

In May 2011, Caltex undertook a review of the Kurnell refining operations. The review found that the refining of oil at the site was no longer economically viable, primarily given the increased competition from larger and more modern refineries in Asia.

Caltex's review concluded that the refinery operations should be closed down but that the site continue to be used for the storage and distribution of finished fuel products only. This would allow Caltex to utilise their existing network of pipelines which distribute fuel to terminals in Banksmeadow, Silverwater, Sydney Airport and Newcastle for further distribution throughout NSW and the ACT. The proposed works would also allow Caltex to cater for the expected growth in demand for petroleum products in NSW, which is anticipated to be approximately 4-5% per annum.

Consideration was given to alternatives, including the conversion of Caltex's existing terminal sites at Banksmeadow, Silverwater and Newcastle for accepting finished fuel products, however none of these terminals are capable of receiving finished product by ship. The nearest alternative sites that are capable of receiving fuel by ship are Brisbane and Melbourne. However, both of these sites would require significant upgrade works to cater for the additional fuel capacity and would lead to significant and unsustainable increases in interstate tanker truck traffic.

Consideration was also given to other alternatives before reaching the preferred option, including maintaining status quo, expanding the refinery so that it could compete with those in Asia and closing the site entirely. The proposed option was however considered to be the only alternative that would ensure Caltex's operations within Australia remain viable.

2.2. Development Description

Caltex proposes to convert its existing Kurnell Refinery to a finished product import and distribution terminal. The terminal would receive, store and distribute gasoline (Unleaded Petrol, Premium Unleaded Petrol and Super Premium Unleaded Petrol), diesel, jet fuel, and fuel oil. The site would also manage slop and waste-water, both by-products of the facility.

Caltex modified its Application during the assessment process to request approval for the erection of external domes above three existing tanks. The aim of the modification is to provide increased rainwater protection to ensure that the quality of the fuel is not compromised. The amendment was formalised in Caltex's Response to Submissions Report and was accompanied by a supplementary visual impact assessment, heritage assessment, air quality assessment and a hazard and risk assessment. The reports demonstrated that the amendment would result in no increased environmental impacts and that there would be a minor reduction in emissions from these tanks.

The major components of the Development are summarised in Table 2 below, and depicted in Figures 4 and 5. The Development is described in full in URS's Environmental Impact Statement (EIS), which is attached as Appendix D.

Table 2: Main Development Components

ASPECT	DESCRIPTION
Development Summary	Conversion of the existing Kurnell Refinery to a finished product import and distribution terminal.
Modifications to Fuel Storage Tanks	<ul style="list-style-type: none"> Many tanks currently store finished fuel and will be retained for these purposes; Works will be undertaken to 16 tanks to allow additional storage of finished fuel products within the site; One (1) existing finished fuel tank will be replaced in the Eastern Tank Area; and Bund and underfloor liner replacements for 4 tanks.
Pipe & Pump Works	<ul style="list-style-type: none"> Extension of the two gasoline, two diesel and two jet fuel pipelines from the eastern side to the western side of the site; Pipes generally installed within existing pipe racks; and Minor excavation works required for footings associated with 8 new pumps.
Electricals / Instrumentations	<ul style="list-style-type: none"> Various instrumentation would be upgraded within the site.
Utilities	<ul style="list-style-type: none"> The existing air, potable water, firewater, natural gas and nitrogen utilities would remain at the site, however some minor relocation and consolidation of some utilities equipment would be required to cater for the decrease in demand.
Ancillary Facilities	<ul style="list-style-type: none"> A new Diesel additives injection system will be added within Western Tank Area; and A small chemical drum and dosing pump would be installed at Gate 5.

ASPECT	DESCRIPTION		
Road Traffic	<i>Operation (current)</i> <ul style="list-style-type: none"> Staff – 885 return trips / day (max.) Heavy Vehicles – 70-90 return trips per week 	<i>Construction</i> <ul style="list-style-type: none"> In addition to operations: Staff – 140 return trips / day Heavy Vehicles – 20 return trips / day 	<i>Operation (after Closure)</i> <ul style="list-style-type: none"> Staff – 100 return trips / day (max.) Heavy Vehicles – 0 (typical operations)
Hours of Construction	Construction works would generally take place between 7.00am to 10.00pm (Monday to Sunday), however noisy works would be restricted to between 7:00am and 6:00pm. Some works would also occur over a 24 hour period. These works would be consistent with existing maintenance procedures and would be in accordance with the sites noise limits contained within the existing EPL (No. 837).		
Operation	The proposed operations include: <ul style="list-style-type: none"> Delivery of finished product to the site by ship; Distributed of product via existing network of pipelines to/from the site; and Ongoing maintenance and replacement work. 		
Hours of Operation	24 hours, 7 days a week		
CIV	\$230 million		
Employment	<i>Existing (2012)</i> <ul style="list-style-type: none"> 885 employees (including 410 Caltex Employees plus 475 contractors), Plus 500 contractors employed two to three times each year for between 8-12 weeks for routine maintenance shutdown. 	<i>Proposed – 2017 (post-conversion)</i> <ul style="list-style-type: none"> 100 employees (including 45 caltex employees and 55 contractors). Plus 90 contractors employed two to three times each year for between 8-12 weeks for routine maintenance shutdown. 	
Infrastructure Servicing	The site is currently serviced by existing water, gas, electrical and telecommunications infrastructure. In addition, the existing on-site waste water treatment system would be retained.		

In association with the Proposal, the refinery plant would be shut down, depressurised, de-inventoried and left in-situ. This process would take place in the middle of 2014, and would be undertaken as part of Caltex's standard maintenance program for the site. These works would therefore not require approval and would be managed and monitored in compliance with the existing procedures and the EPL.

In addition, the excess tanks that are not required for storage purposes would be emptied, isolated, cleaned and left with manhole covers removed. The Proposal does not include demolition, dismantling or site remediation works, which would be the subject of future applications to the Department or Council (if required).

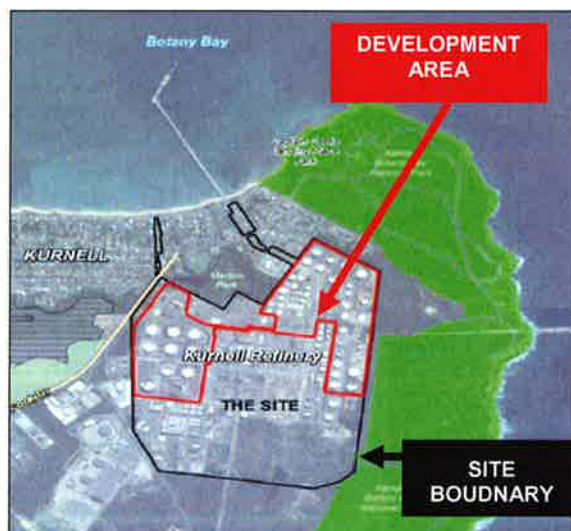


Figure 4: Boundaries of proposed site and works

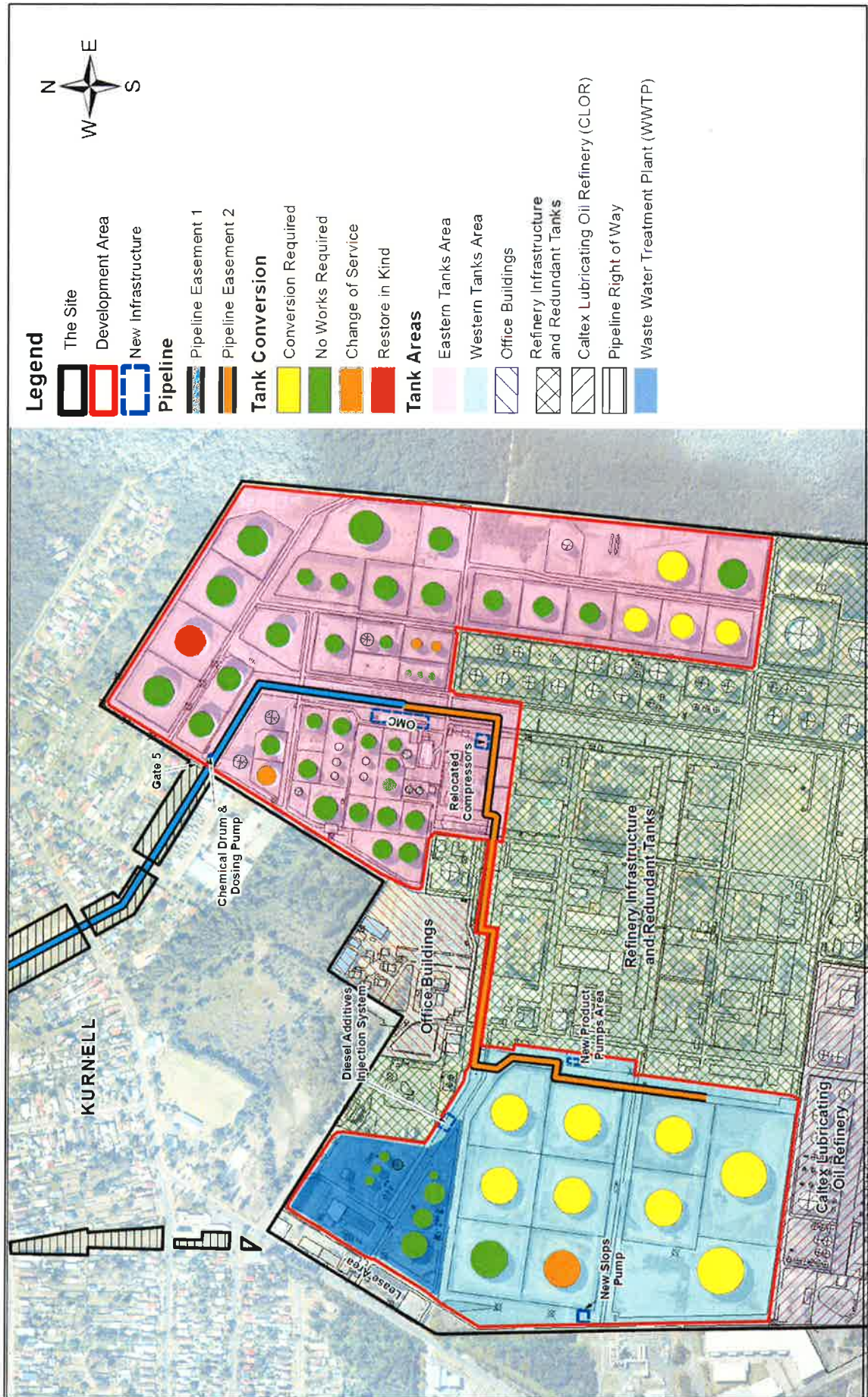


Figure 5: Site Layout and Proposed Works

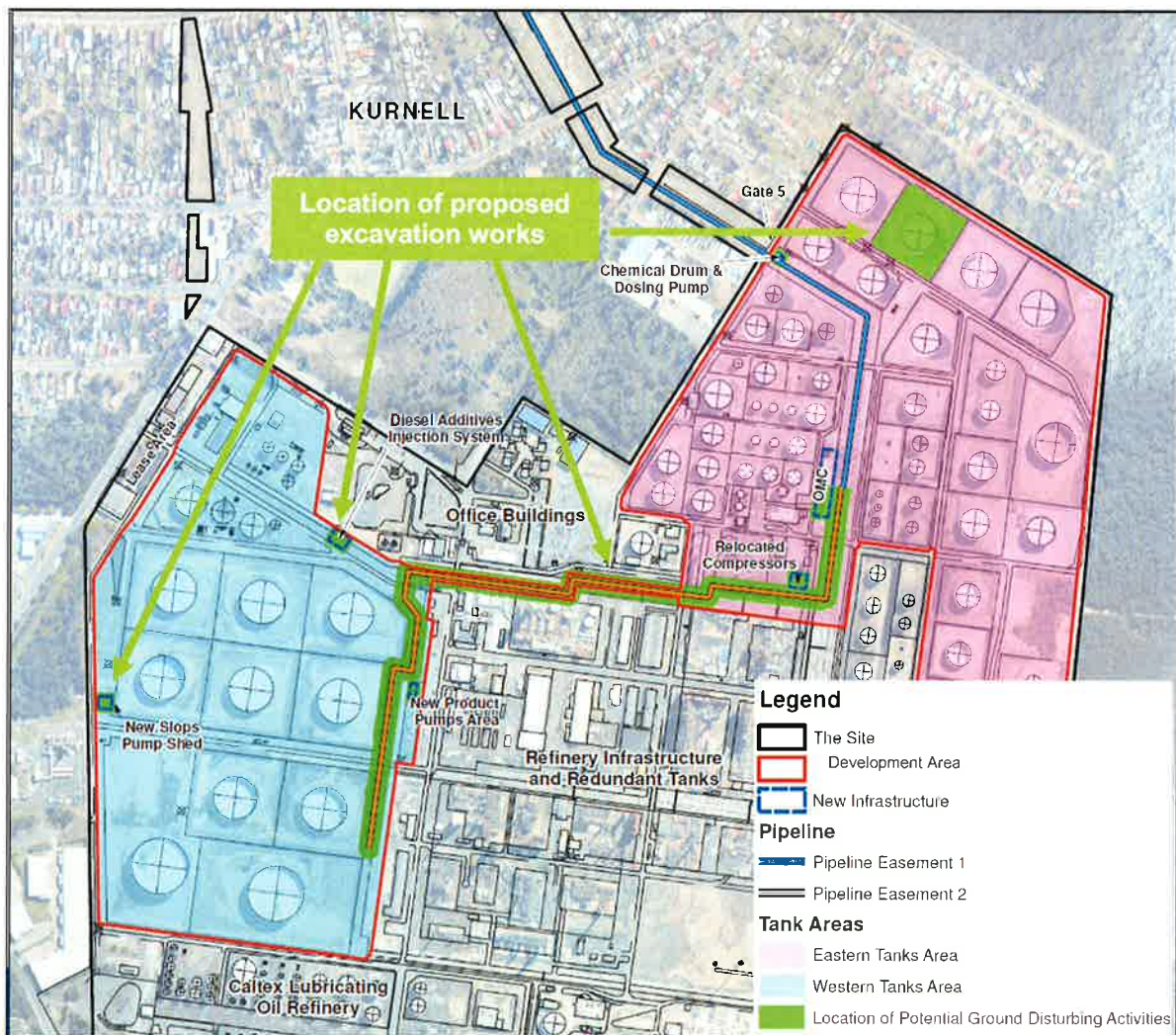


Figure 6: Proposed excavation works

2.3. Construction Staging

Table 3 below identifies the likely staging of the construction works:

Table 3 - Construction Staging

Task	Estimated Date
Tank Conversion Start	Second half 2013
Installation of Piping, Pumps and Associated Infrastructure	Second half 2013
Construction of piping completed	Second Quarter 2014
Kurnell Refinery shut-down	Second half 2014
Continued tank conversions	End 2014 – end 2016
CONVERSION TO TERMINAL COMPLETED	December 2016

2.4. Infrastructure and site servicing

The proposed development is anticipated to have the following implications on the existing resourcing and infrastructure:

- Electricity consumption is anticipated to reduce significantly after the refining operations have been terminated;
- The development is expected to reduce the overall water consumption at the site by 90%;
- No changes are proposed to the existing storm water drainage system which would continue to collect storm water runoff from paved surfaces and direct it to the existing on-site Waste Water Treatment Plan (WWTP) for treatment;

- *No changes are proposed to the existing sewerage system, however the amount of sewerage generated from the site would be significantly reduced given the reduction in the number of staff required to work at the site;*
- *The current operations utilise 7,150 GJ of gas per day to heat the fuel oil to allow for its transfer through the existing pipe network. The proposed operations are anticipated to result in an 80% reduction in the use of gas within the facility;*
- *No changes are proposed to the existing road network; and*
- *The number of shipping movements is expected to decrease, however the average size of ship to access Caltex's berthing facility is expected to increase following completion of works associated with the berthing facilities (refer to SSD 5353).*

3. STRATEGIC AND STATUTORY CONTEXT

3.1. State Significant Development

The proposal is classified as State Significant Development (SSD) under Part 4 of the EP&A Act as it is development involving the storage of dangerous goods in such quantities that constitute the development as a 'major hazard facility' within the meaning of Chapter 6B of the *Work Health and Safety Regulation 2011*. As such, the proposal meets the criteria in Clause 10(3) of Schedule 1 in *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP) and, consequently, the Minister for Planning and Infrastructure is the consent authority for the proposed development.

3.2. Consent Authority

Under the EP&A Act, the Minister is the approval authority for SSD. However, as a reportable political donation was made by Caltex in respect of this application, the application must be determined by the Planning Assessment Commission (PAC) in accordance with the Minister's Instrument of Delegation, dated 14 September 2011.

3.3. Permissibility

Kurnell Refinery is located on land zoned 4(c1) Special Industrial (Oil Refining) zone under *State Environmental Planning Policy (Kurnell Peninsula) 1989* (Kurnell Peninsula SEPP). Following conversion, the site would be defined as a 'liquid fuel depot' which is permissible in the 4(c1) zone with consent. A 'liquid fuel depot' is defined as a '*premises used for the bulk storage of petrol, oil, petroleum or other inflammable liquid for wholesale distribution and at which no retail trade is conducted*'.

The proposed development is also considered to satisfy the objectives of this zone which are:

- *"to recognise land used for oil refinery, liquid fuel depot and liquified petroleum gas extraction purposes,*
- *to ensure that development has regard to environmental safety planning principles, and*
- *to mitigate land use conflicts within and adjacent to the zone and to ensure that adequate provision is made for the supply of water and the disposal in any environmentally sensitive manner of all wastes and stormwater from the land".*

Consequently, under delegated authority of the Minister for Planning and Infrastructure, the Planning Assessment Commission may approve the development.

3.4. Exhibition and Notification

Under Section 89F(1) of the EP&A Act, the Director-General is required to make the DA and any accompanying information of an SSD application publicly available for at least 30 days.

After accepting the Environmental Impact Statement (EIS) for the application, the Department:

- made it publicly available from 24 May 2013 until 28 June 2013:
 - on the Department's website;
 - at the Department's Information Centre (Bridge Street, Sydney);
 - at the Nature Conservation Council's Office (Sydney);

- at Southerland Shire Council customer service centre; and
- at Cronulla Library.
- notified all residents and/or landowners in Kurnell about the exhibition period by letter;
- notified relevant State government authorities and Sutherland Shire Council by letter; and
- advertised the exhibition in the St George and Sutherland Shire Leader, the Sydney Morning Herald and the Daily Telegraph.

Re-exhibition of the amendment to the application was not considered necessary in accordance with Section 89F(4) of the EP&A Act as the proposal does not substantially differ from the original application (refer to Section 4.2).

3.5. Considerations under Section 79C of the EP&A Act

Under Section 79C of the EP&A Act, in determining a development application, a consent authority is required to take a number of matters into consideration in relation to the proposed development. The Department has given due consideration to the matters prescribed by Section 79C.

The Department's detailed consideration of the proposed development against the provisions of Section 79C of the EP&A Act is contained within Appendix B of this report.

3.6. Environmental Planning Instruments

Under Section 79C of the EP&A Act, the consent authority, when determining a development application, must take into consideration the provisions of any environmental planning instrument (EPI) and draft EPI (that has been subject to public consultation and notified under the EP&A Act).

The Department has considered the development against the relevant provisions of several key environmental planning instruments including:

- *State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)*;
- *State Environmental Planning Policy (Kurnell Peninsula) 1989 (Kurnell Peninsula SEPP)*;
- *State Environmental Planning Policy (Infrastructure) 2007 (the ISEPP)*
- *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33)*;
- *State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)*;
- *State Environmental Planning Policy No. 71 – Coastal Protection (SEPP 71)*;
- *Sutherland Local Environmental Plan 2006 (SLEP 2006)*; and
- *Draft Sutherland Local Environmental Plan 2013 (Draft SLEP 2013)*;

It is noted that as of 1 July 2009, all existing REPs became deemed State Environmental Planning Policies (SEPPs) (refer to clause 120 of Schedule 6 to the EP&A Act), including the Kurnell Peninsula REP No.17.

Development Control Plans (DCPs) do not apply to SSD under Clause 11 of the SRD SEPP. Notwithstanding this, the Department has considered the relevant provisions of *Sutherland DCP 2006* in its assessment of the proposal in Section 5 of this report.

The Department is satisfied that, subject to the implementation of the recommended conditions of consent, the development is generally consistent with the aims and objectives of the relevant EPI's. The Department's detailed consideration of these instruments is contained within Appendix C of this report.

3.7. Objects of the Environmental Planning and Assessment Act 1979

In determining the application, the consent authority should consider whether the proposal is consistent with the relevant objects of the EP&A Act. These objects are detailed in Section 5 of the Act, and include:

- (a) *to encourage:*
 - (i) *the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*

- (ii) *the promotion and co-ordination of the orderly and economic use and development of land,*
- (iii) *the protection, provision and co-ordination of communication and utility services,*
- (iv) *the provision of land for public purposes,*
- (v) *the provision and co-ordination of community services and facilities, and*
- (vi) *the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
- (vii) *ecologically sustainable development, and*
- (viii) *the provision and maintenance of affordable housing, and*
- (b) *to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and*
- (c) *to provide increased opportunity for public involvement and participation in environmental planning and assessment.*

The Department has fully considered the objects of the EP&A Act, including the encouragement of Ecologically Sustainable Development (ESD), in its assessment of the application.

The Department considers that objects 5(a) (i), (ii), (iii), (vi) and (vii) are most relevant to the merit assessment of this application. The Department has given due consideration of these objects in its assessment of the proposal (see Table 4 below).

Table 4: Objects of the EP&A Act and relevance to the development

Object	Consideration
5(a)(i)	The proposal would ensure the proper management and development of suitably zoned (i.e. industrial) land by allowing the on-going use of the site for industrial purposes while reducing impacts to the environment and locality. The proposal would also continue to provide employment opportunities for the local community, while also minimising risks from the facility.
5(a)(ii)	The proposal would ensure the orderly and economic use and development of the land which is strategically identified for industrial uses. The land is currently zoned to allow development of a liquid fuel depot and refinery, and these uses would also be permissible in the IN3 Heavy Industrial zone proposed under the Draft Sutherland Local Environmental Plan 2013. The proposal satisfies the relevant objectives of the current and proposed land use zones.
5(a)(iii)	The proposed development would not affect the provision and supply of communication and utility services.
5(a)(vi)	The Department's assessment in Section 5 of this report demonstrates that with the implementation of recommended conditions of consent, the impacts of the development can be mitigated and/or managed to ensure an acceptable level of environmental performance.
5(a)(vii)	The proposal would have no impact on native flora or fauna, including threatened species, populations and ecological communities, and their habitats and is therefore consistent with the principles of ESD (see Section 3.8 below).

3.8. Ecologically Sustainable Development

The EP&A Act adopts the definition of ESD found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

- (a) *the precautionary principle;*
- (b) *inter-generational equity;*
- (c) *conservation of biological diversity and ecological integrity; and*
- (d) *improved valuation, pricing and incentive mechanisms.*

The proposed works are contained within the existing boundaries of the refinery site, and the proposed closure of the refining operations would reduce environmental impacts resulting from the facility.

The potential environmental impacts of the development have been assessed and, where potential impacts have been identified, mitigation measures and environmental safeguards have been recommended.

As demonstrated by the Department's assessment in Chapter 5 of this report, the development is not anticipated to have any adverse impacts on native flora or fauna, including threatened species,

populations and ecological communities, and their habitats, As such, the Department considers that the Proposal would not adversely impact on the environment and is consistent with the objectives of the EP&A Act and the principles of ESD.

3.9. Integrated Approvals

Under Section 89K of the EP&A Act, a number of approvals are required to be obtained, but must be approved in a manner that is consistent with any Part 4 consent for the SSD under the EP&A Act.

The development would require an Environmental Protection Licence (EPL) from the Environment Protection Authority (EPA) under the *Protection of the Environment Operations Act 1997*.

The proponent has an existing Environmental Protection License (EPL) under the *Protection of the Environment Operations Act 1997 (No. 837)*. This EPL licences a number of activities for Kurnell, including Petroleum Products Storage. Modifications would be required to the existing EPL after shutting down of the refinery. The Department has consulted with the Environment Protection Authority (EPA) (see Chapter 4 of this report), and the EPA has recommended conditions for the development consent.

3.10. Other Approvals

While the EP&A Act provides the framework for planning and development approvals in NSW, there are a number of other State Acts and Regulations that are of relevance to the proposal. In this instance, the proposal may require a separate approval, new license or variation to an existing license under the following legislation:

- *Contaminated Land Management Act 1997*;
- *Environmentally Hazardous Chemicals Act 1985*;
- *Work Health And Safety Act 2011*;
- *Noxious Weeds Act 1993*; and
- *Pipelines Act 1967*.

In the EIS, Caltex has committed to ensuring all appropriate approvals, licenses and/or license variations have been obtained, prior to the relevant development works commencing.

3.11. Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act)

The EPBC Act provides a legal framework for the protection and management of places of national environmental and heritage significance, including Towra Point Nature Reserve, a Ramsar listed wetland of international significance located within two kilometres of the site, the Kurnell Peninsula Headland, located immediately to the north and west of the site, and the Cape Baily Lighthouse, located 750 metres south-east of the site.

The Applicant determined that the proposal would not be considered to be a 'controlled action' under the EPBC Act. As a result the proposed development would not require approval by the Commonwealth Minister for Environment and Heritage under the EPBC Act.

3.12. Strategic Context

State Plan - NSW 2021

The proposal has a capital investment value of \$230 million and would create up to 140 new construction jobs during peak construction works. The development would, however, result in a significant loss of jobs at the facility once the conversion works are completed and would therefore not contribute to the employment target within *NSW 2021*. The site would, however, continue to be used for industrial purposes and would retain the equivalent of approximately 136 full-time equivalent (FTE) operational positions once the refining operations have ceased. In addition, the site would be developed to cater for the anticipated increase in fuel demand in NSW and the ACT, and it is anticipated that redundant land, including the area of the site dedicated to oil refining, would be remediated and could potentially be available for (cleaner) industrial land uses into the future. Therefore, while the development would not contribute to the employment targets of *NSW 2021*, the site will continue to provide employment, play a key role in supplying fuel products to the growing

NSW economy and potentially make additional land available for future economic use and employment purposes.

Draft Metropolitan Strategy for Sydney 2031

The proposal is generally consistent with the goals and priorities of the draft Metropolitan Strategy for Sydney to 2031 (Metro Plan), particularly as the proposal would allow for the continuation of an existing industrial land use while also improving the environmental performance of the site, including a significant reduction in greenhouse gas emissions, improvements in air quality and reductions in noise levels.

As discussed in response to the *State Plan - NSW 2021*, while the proposal would result in a significant loss of jobs, the development would also provide additional employment opportunities during construction and would retain approximately 136 full-time equivalent positions during future operations.

In addition, parts of the site have been previously remediated (e.g. the Lube Oil Refinery) and it is anticipated that further parts of the site will be remediated after refining operations cease. The proposal would therefore ensure the retention of land designated for employment purposes under the draft Metropolitan Strategy which could potentially be used for future (cleaner) industrial development.

3.13. Statement of Compliance

In accordance with Section 89H of the EP&A Act, the Department is satisfied that the Director-General's environmental assessment requirements have been complied with.

4. ISSUES RAISED IN SUBMISSIONS

During the exhibition period, the Department received a total of fourteen (14) submissions on the development. All submissions were from public authorities with no submissions being received from the general public. Of the submissions received, four (4) stated that they had no concerns with the proposed development (RMS, NSW Rural Fire Service, Sydney Water and Crown Lands (Sydney)) and two (2) confirmed they would not be making a formal submission (Sydney Ports and Ausgrid).

The Department received one (1) late submission from the Heritage Council of NSW.

A summary of the issues raised in submissions is provided below. A full copy of these submissions is attached in Appendix E.

4.1. Public Authorities

Sutherland Shire Council (Council) noted that the proposal would have adverse economic impacts on Kurnell and the Sutherland Shire due to job losses, however that it supports the proposal due to the environmental improvements that would result from the conversion works. The improvements include improved safety measures, upgraded bunding, decreased traffic, reduction in waste and emissions and reduced water use. The Council's concerns with flooding, contamination and noise have been resolved by the Applicant, and Council would be given the opportunity to comment on the Construction Environment Management Plan (CEMP) prior to any works commencing.

The **Environment Protection Authority (EPA)** confirmed that it had no objection to the proposal proceeding as detailed in the EIS, subject to resolution of issues relating to licensing and environmental management, water quality, noise, air quality, waste management and reporting. These matters were satisfactorily addressed by the Applicant during the course of the assessment, and the EPA has provided final comments for consideration during preparation of conditions of consent.

WorkCover NSW identified a number of issues with regards to the contents of the Preliminary Hazard Analysis (PHA) which required further clarification or confirmation, including details provided in some of the figures and charts, the use of Australian Standards, the use of control valves, and other technical matters. The matters raised have been satisfactorily addressed by the Applicant and WorkCover has requested that Caltex consult with them in relation to the preparation of the Final Hazard Analysis and other hazard related studies.

Fire and Rescue NSW confirmed that, while the submission process did not follow the normal sequence detailed in the Hazardous Industry Planning and Advisory Paper No. 2 & No. 6 (HIPAP 2 & 6), it was satisfied with the content of the EIS and that it had no specific concerns with the proposal.

The **NSW Office of Water (NOW)** supports the proposed management and monitoring of stormwater flows in consultation with the EPA, and requested that excavation works should cease and that a Groundwater Management Plan be developed should groundwater at the site be intersected during works.

NSW Health (South Eastern Sydney Local Health District) provided a list of provisions that should be preserved throughout the life of the proposal, including consideration of relevant legislation and guidelines to minimise impacts to human health and the environment.

The **Office of Environment and Heritage (OEH)** confirmed that the outline of what would be covered in the Biodiversity and Weed Management Plan and Soil and Erosion Management Plan would be adequate to mitigate the potential indirect impacts to off-site ecosystems resulting from works associated with the disturbance of contaminated material, and direct impacts of trenching on threatened amphibians such as the Green and Golden Bell Frog (Kurnell Key Population).

Fisheries NSW did not raise any objection, however reiterated the importance of the proposed mitigation measures contained in the 'Soils, Groundwater and Contamination' and 'Surface Water, Wastewater and Flooding' chapters of the EIS are implemented.

Department of Education and Communities identified that the Preliminary Hazard Analysis did not contain any reference to the existing Botany Bay Environmental Education Centre, and requested that it be consulted throughout the course of the proposal to ensure that impacts to the schools are minimised. These matters have been addressed by the Applicant during the assessment and the Department of Education and Communities has confirmed that it has no further comments.

The **Heritage Council of NSW** considers that the impacts on the heritage significance of the refinery would be adequately mitigated provided the Applicant implements the various management and mitigation measures and additional commitments contained in the EIS.

Sydney Water confirmed that the change of use would not result in an increased demand for water or wastewater services and that it therefore had no comments regarding the proposal.

4.2. Response to Submissions

Caltex provided a response to the issues raised in submissions which has been made publicly available on the Department's website (see Appendix F).

The Response to Submissions (RTS) report addressed most of the issues raised by Council and agencies identified in Section 4.1 above.

As set out in Section 2, the original DA was amended to include the installation of external domes above three (3) existing tanks located within the site. The RTS also included a supplementary assessment of the potential additional impacts that this could have. It was considered that the proposed amendment would not increase the overall environmental impacts of the proposal as presented in the EIS, and that there would in fact be a minor reduction in the emissions from these tanks. Formal public exhibition would therefore not be required under Section 89F(4) of the EPA Act 1979 (refer to Section 3.4).

The Department has considered the issues raised in submissions, and Caltex's responses to these issues, in its assessment of the development.

5. ASSESSMENT

The Department has considered the EIS, the issues raised in submissions and Caltex's response to these issues in its assessment of the development. The Department considers the key issues to be hazards and risks and human health risk. These issues are addressed further in sections 5.1 to 5.2 below. All other issues are considered to be minor and are addressed in Table 5 below in section 5.3.

The terms 'construction' and 'operation' in this section of the report have the following meanings:

- Construction – includes the demolition of buildings and/or structures, or the carrying out of works including excavation works, conversion works, the erection of other infrastructure and/or commissioning works covered by this consent.
- Operation – means the operation of the Development once the construction works have been fully completed and the site has reached its end state terminal operations, but does not include commissioning trials of equipment or temporary use of parts of the Development during construction.

5.1. Hazards and Risks

Issue

The current refining operations, which also includes the storage and distribution of finished product, presents various hazards and risks. The site is identified as a Major Hazard Facility (MHF), therefore a detailed risk assessment was undertaken as part of the EIS.

Background and Methodology

The purpose of a risk assessment is to identify potential hazards, analyse consequences and likelihood of occurrence, estimate resultant risks to surrounding land uses, assess against relevant criteria and determine whether a Project would impose an unacceptable level of risk. The risk assessment process is shown diagrammatically in Figure 7.

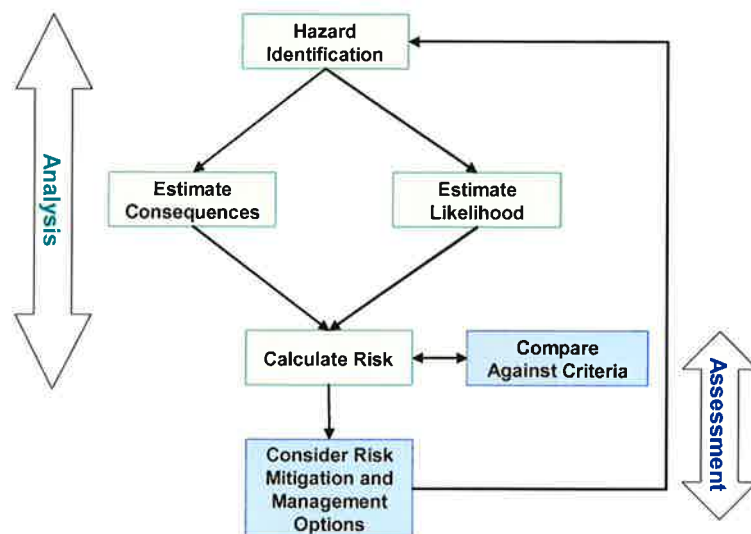


Figure 7: The Elements of Risk Analysis and Assessment

The EIS for the Kurnell Refinery Conversion has identified the risks posed by the existing and proposed operations. The risks associated with the existing operations predominantly relate to the refining of crude oil, which is a material consisting of hydrocarbons which boil at a range of temperatures, from below room temperature to 650°C and higher, and the storage and distribution of product, including flammable liquids such as gasoline.

As described in the EIS, Caltex now proposes to cease all refining operations at the site, and convert the facility into a finished product import and distribution terminal. This would result in the cessation of all high temperature and high pressure processes on site.

The existing and proposed facilities are both deemed as "potentially hazardous industry" as defined under the provisions of *State Environmental Planning Policy No. 33 Hazardous and Offensive Development* (SEPP 33) and therefore a Preliminary Hazard Analysis (PHA) was prepared by Caltex to assess the risk to people, property and the environment.

The methodology of the PHA, as described by the Hazardous Industry Planning Advisory Paper (HIPAP) No. 6 *Hazard Analysis*, is to incorporate:

- identification of the nature and scale of all hazards at the facility, and the selection of representative incident scenarios;
- analysis of the consequences of these incidents on people, property and the biophysical environment;
- evaluation of the likelihood of such events occurring and the adequacy of safeguards;
- calculation of the resulting risk levels of the facility; and
- comparison of these risk levels with established risk criteria and identification of opportunities for risk reduction.

The Department engaged Lloyd's Register (Lloyd's) to independently review the hazards and risks associated with the development in consultation with the Department. Additional information and clarification was sought from Caltex during the assessment process. The Department is satisfied that Caltex has responded appropriately to the requests for additional information and that all of the above elements were adequately addressed in the PHA.

Caltex stores materials at the site which are of a security sensitive nature, and also deals with information that is commercial-in-confidence, and therefore parts of the PHA were segregated as confidential. These parts are not included in the public document but were provided to the Department. The Department's findings are based on the assessment of both the public and confidential reports.

Consideration

The EIS has identified that the major hazardous materials with the potential for off-site safety or environmental effects are:

- Gasoline (ULP / PULP / SPULP);
- Jet Fuel;
- Fuel Oil;
- Diesel; and
- Slop (an industry term used to describe recovered petroleum hydrocarbons in a refinery or terminal which requires further processing to make it suitable for sale and use).

These flammable/combustible liquids have the potential to cause injury or fatality to people, damage to property and/or the biophysical environment. This is due to events such as fires and explosions, particularly following a loss of containment (e.g. a leak from a tank or overfilling of a tank).

The materials proposed to be held on-site generally pose an equivalent or lesser hazard than that posed by the existing refinery operations. For example, the storage of liquefied petroleum gas (LPG) will be discontinued once the refinery is shutdown.

The Department is satisfied that an appropriate approach was taken to identify the causes, consequences and control measures for each hazardous incident, and that the identified representative hazardous scenarios are appropriate for a fuels import, storage and distribution terminal.

The Department is also satisfied that:

- appropriate techniques were used to analyse the potential consequences for each identified representative hazardous scenario, and that the consequence analysis results presented in the PHA are appropriate for each identified representative hazardous scenario;
- appropriate techniques were used to analyse the potential likelihood for each identified representative hazardous scenario, and that the frequency analysis results presented in the PHA are appropriate for each identified representative hazardous scenario; and
- appropriate techniques and software were used to analyse the potential risks, and that the risk assessment methodology is appropriate for this type of facility.

The off-site risks posed by the hazardous incidents were estimated using the results of the consequence and frequency analysis. The risks to people and property were presented for specified levels of heat radiation and overpressure. The following risks were estimated and presented in a manner to assess compliance against the relevant criteria from HIPAP No. 4, *Risk Criteria for Land Use Safety Planning*:

1. Individual fatality risk;
2. Risk of injury from heat radiation and explosion overpressure;
3. Risk of property damage and accident propagation; and
4. Societal risk.

The risk to the biophysical environment was qualitatively assessed.

The Department has formed its opinion on the PHA based on the information provided by Caltex in the PHA, information in the public domain and information subsequently provided by Caltex in response to the Department's requests for additional information and clarification.

The PHA included a quantitative risk assessment (QRA), and the Department is satisfied that the PHA has adequately met the requirements of the Hazardous Industry Planning Advisory Paper (HIPAP) No. 6, *Hazard Analysis*. The methodology adopted for the estimation of consequences, selection of accident likelihood data and risk assessment for hazardous incidents is typical, appropriate and consistent with other similar on-shore quantitative risk assessments (QRAs). The Department considers the methodology of the PHA to be acceptable.

The risk assessment demonstrates that the proposed facility complies with the risk criteria set out in the Department's Hazardous Industry Planning Advisory Paper (HIPAP) No. 4, *Risk Criteria for Land Use Safety Planning*, with the exception of one small exceedence of the Department's individual fatality risk criteria. A risk level of 10 per million per year (pmpy), which is applicable for active open spaces, extends a few metres into the National Park on the eastern boundary of the site (See Figure 8).

However, as per the guidance notes provided in HIPAP 4, consideration to variations in local conditions and to the vulnerability of people and situations may be applied during the interpretation of the risk criteria. It is noted that this part of the National Park, is heavily vegetated and does not involve continuous occupancy by the same people. As such, an individual's occupancy of such area is on an intermittent basis, and the people present are generally mobile (ie bush walkers). Therefore, the Department does not consider this to be a non-compliance for this location.

The injury risk for heat radiation (See Figure 9) extends slightly to the east beyond the sites boundary but does not encroach into a residential area. The injury risk for overpressure did not reach the Department's relevant risk criterion at any location. Therefore, the proposed development complies with the Department's relevant risk criteria for injury.

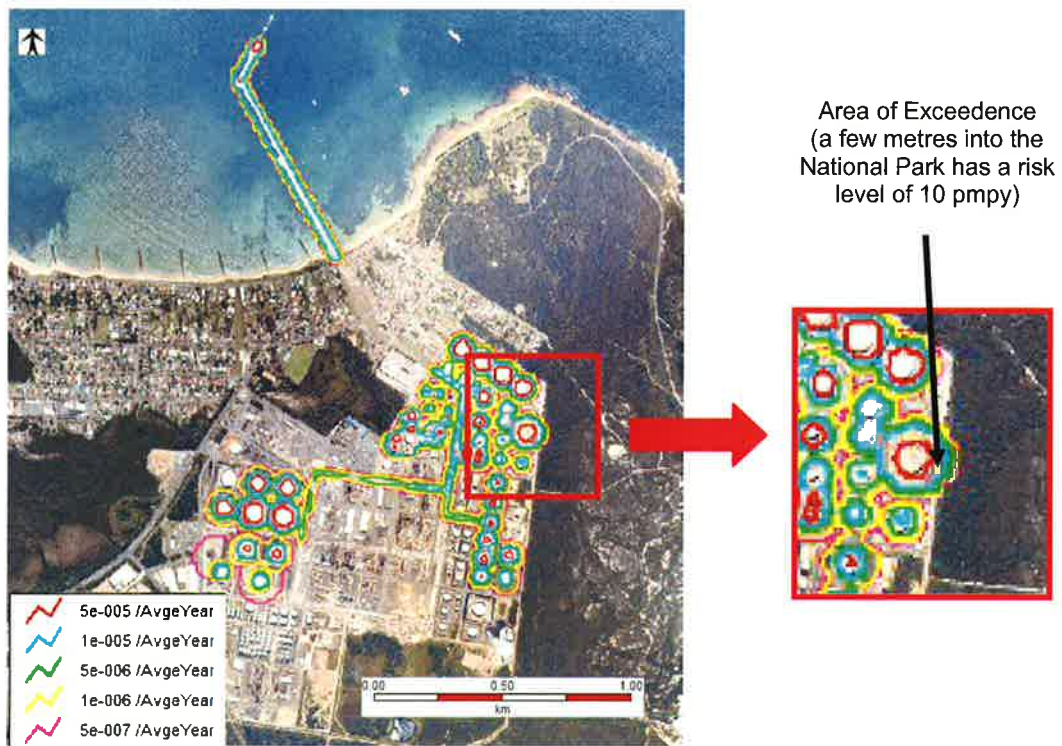


Figure 8: Location-Specific Individual Risk of Fatality (Final)

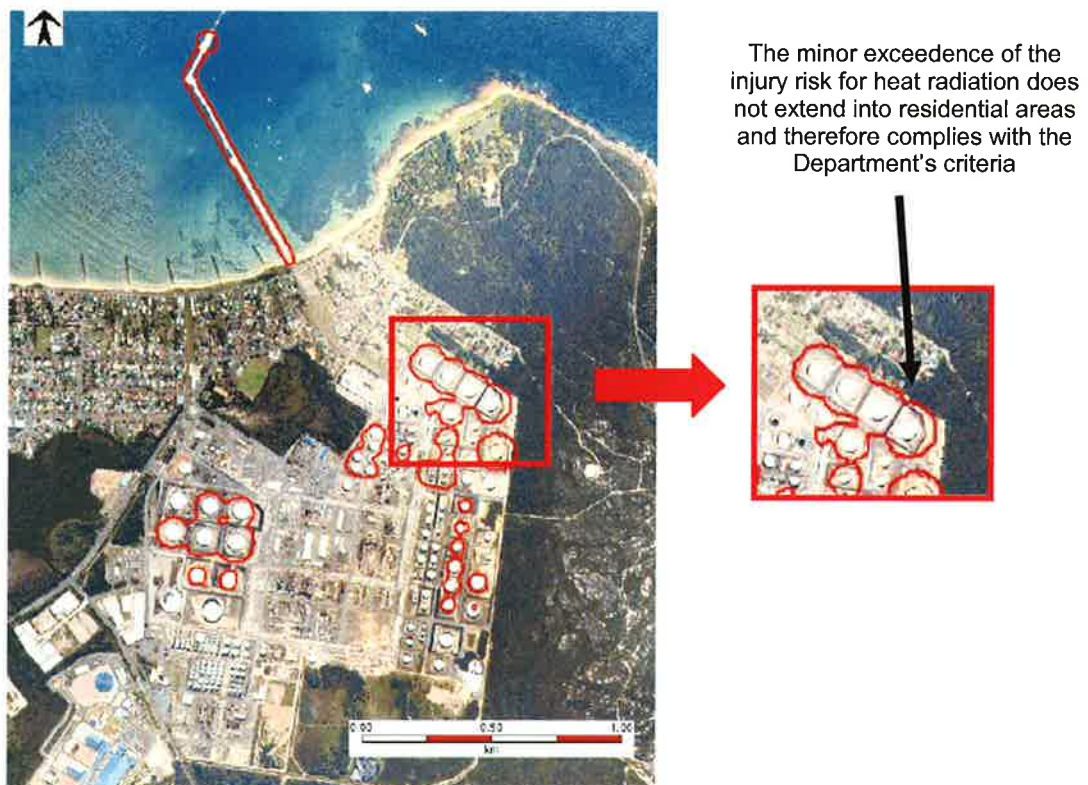


Figure 9: Location-Specific Individual Risk of Injury – Heat Radiation (Final)

The property damage risk from heat radiation and overpressure did not reach the Department's relevant risk criteria at any location outside the site boundary (criteria shown as red and green, with Caltex's estimate shown as black). Therefore, the proposed development complies with the Department's relevant risk criteria for property damage.

The societal risk (Figure 10) is in the 'negligible' region. In this region, the societal risk is not considered significant, provided that the other individual risk criteria are met.

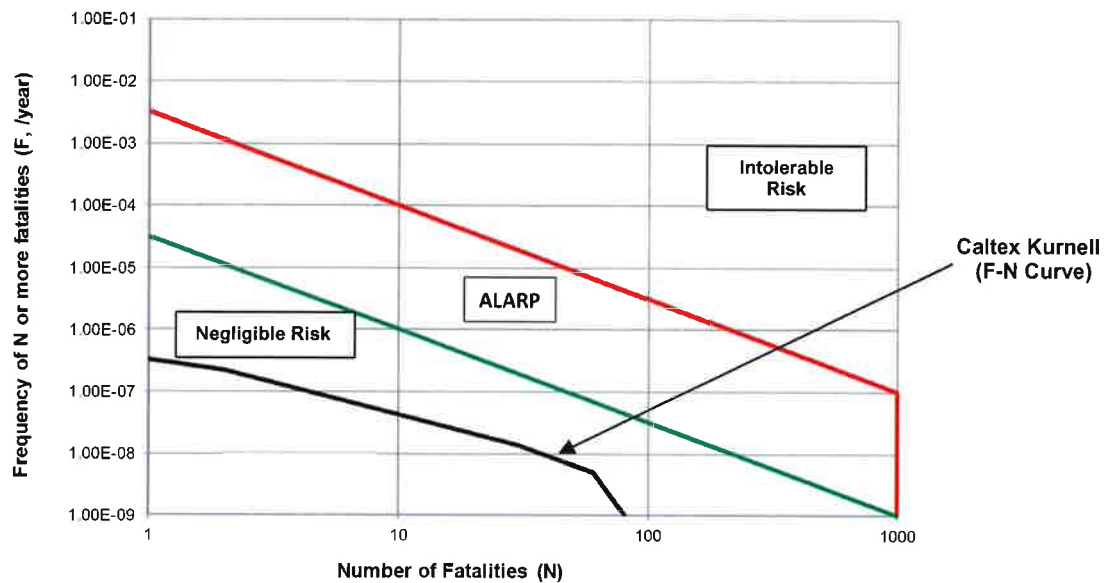


Figure 10: Societal Risk – F-N Curve (Note: Caltex's estimate shown as black)

The Department is satisfied that the proposed development meets the quantitative risk criteria for new developments set out in the Department's Hazardous Industry Planning Advisory Paper (HIPAP) No. 4, *Risk Criteria for Land Use Safety Planning*.

The Department also required Caltex to address the findings of the Buncefield incident investigation report (UK Health and Safety Executive, "Buncefield Explosion Mechanism Phase 1", RR718, 2009). Each recommendation from the report was addressed by Caltex, and a detailed description of the actions undertaken by Caltex was presented to the Department. The Department is satisfied that these recommendations have been adequately addressed by the applicant.

Conclusion

Based on the information provided in the EIS and after implementation of the risk reduction measures and the recommendations of the PHA and QRA, the Department is satisfied that the development would meet all of the Department's relevant risk criteria.

Notwithstanding, to ensure safe operations throughout the life of the facility, the Department has recommended a number of key hazard related conditions of approval at certain milestones of the facilities operation. This includes conditions at the pre-construction, pre-commissioning, pre-startup, post-startup phases and conditions relating to the on-going operation of the site. This includes the requirement for Caltex to submit the following for review and approval:

- a Fire Safety Study considering and, if necessary, implementing measures to ensure acceptable fire protection levels at the site/s;
- a Final Hazards Analysis in accordance with the Department's relevant guideline/s;
- a Hazard and Operability Study consistent with the Department's relevant guideline/s;
- a Construction Safety Study consistent with the Department's relevant guideline/s;
- an updated Emergency Plan and Safety Management System to incorporate any changes associated with the project;
- Pre and Post-Startup Compliance Reports detailing compliance with all conditions required to be satisfied prior to and after operation has commenced; and
- on-going independent Hazard Audits for the project to ensure safety and compliance with all statutory documents and approvals.

The Department considers that these measures would ensure that hazards and risks are continually monitored and managed to acceptable levels.

5.2. Human Health Risk

Issue

The site has been operating as a refinery since its construction in 1956, and over time parts of the site have been contaminated, potentially as a result of leaks, spills and waste management practices. Contamination of some parts of the site may also be due to the movement of contaminants from other sections of the refinery.

The proposal therefore has the potential to impact on human health primarily from:

- construction – involving disturbance of soil that may contain contaminants; and
- operation – potential for spills and leaks of fuels and chemicals.

This may result in risks to human health from exposure to contaminants of potential concern (CoPC) known to occur on site, including total petroleum hydrocarbons (TPHs), benzene, toluene, ethyl benzene, xylene (BTEX), polycyclic aromatic hydrocarbons (PAH's), phenols, lead and asbestos.

The potential health risks associated with exposure to CoPC include:

- damage to human organs and tissue function; and
- modification to cells in the form of cancer.

Other potential health risks are associated with the development include emissions from the refining processes and the storage of finished products such as gasoline. Refining operations will cease in 2014 and there would be a significant reduction in odour and air emissions from the site, with emissions of NO_x, CO, SO₂, Hydrogen sulphide (which possesses a potent rotten egg-like odour) and particulate matter reducing to almost nil, combined with an approximate halving of total VOC emissions (see Figure 11).

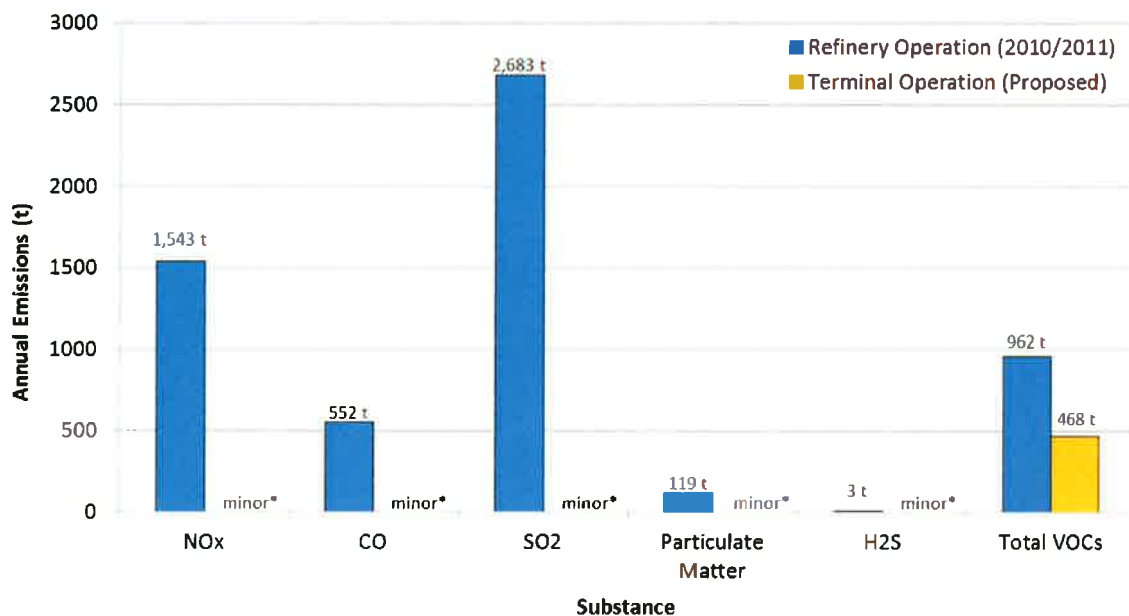


Figure 11: Change in emissions profile with conversion of the site

(Note: * Emissions would be primarily limited to those from vehicles and other mobile plant on the site)

Consideration

The EIS included a human health risk assessment (HHRA) for chemical contaminants present on the site, prepared by URS. The HHRA was a qualitative assessment carried out in accordance with relevant guidelines.

The primary construction activities that may disturb contaminated soils include tank refurbishment works, excavation for footings and foundations for pipelines and pump installation. Approximately 180m³ of soil would be disturbed to a depth of up to 1 metre in various locations on the site as shown on Figure 6. The volume of excavated material is relatively small, and in some cases would involve excavation under existing hardstand areas. At a proposed depth of 1 metre, it is unlikely that groundwater would be intercepted.

The proposed development involves considerable operational changes, including the cessation of refining operations, cessation of product transport via road and the increased automation of finished product transfer from ship berths, via pipelines into tank storage on site. The primary operational activities with the potential to impact on human health include spills and leaks from product tanks and pipelines.

The HHRA utilised existing data from previous contamination studies of the site and noted that the development would be carried out within Contaminant Management Zones B, C, D, E, F, I, K and L. These zones primarily contain the following CoPCs - TPH, PAHs and BTEX. Other contaminants, or potential contaminants, located within these zones include asbestos, lead, phenols and metals associated with the Oily Water Management System (OWMS).

The HHRA identified exposure pathways for CoPC for on-site workers during construction, including direct contact with soil, ingestion of soil/dust and inhalation of vapour, dust or asbestos fibres. For residents off-site, the HHRA concluded that given the small volume of excavation proposed and with the implementation of standard dust control measures, it would be unlikely that contaminated dust would disperse off-site, therefore further risk assessment for off-site residents was not considered to be necessary.

The HHRA compared known concentrations of contaminants within the soil on site with relevant health based investigation levels (for industrial land use). The assessment concluded that the overall risks to workers on-site would be low and acceptable. However, the assessment noted the following:

- friable asbestos is known to occur in Zone L where excavation works would be undertaken for pipeline works;
- TPH (C6-C9) and benzene occur in Zone F at concentrations significantly higher than the relevant investigation levels, therefore there is potential for exposure to vapours if excavations were to extend beyond the proposed 1 metre in depth; and
- non-aqueous phase liquids (NAPL) are present in Zones B, I and F and whilst excavations are unlikely to encounter NAPL, they present a risk to human health if encountered.

The HHRA notes that these matters would need to be addressed in a Construction Environmental Management Plan (CEMP) for the development. The control measures proposed include identification of potentially contaminated areas, continued monitoring of groundwater quality in areas known to be potentially contaminated, induction and training of staff who may deal with contaminated soil, and management measures for dealing with any NAPL found on site. The Department agrees that control measures should be included in a CEMP and has included a requirement for a CEMP in the recommended conditions.

During operation, the cessation of refining operations would significantly reduce the risk of exposure to airborne contaminants (see Figure 11), with the remaining emissions relating primarily to Volatile Organic Compounds (VOCs) emanating from the storage of finished fuel products. The air quality modelling provided by the applicant demonstrated that the concentration of VOCs at the boundary of the site, and at residential premises outside the site, would be below the OEH impact assessment criteria and the NEPM (Air Toxics) Criteria.

In addition, the proposed upgrade to pipes, pumps and control systems would improve the ability for Caltex to prevent, detect and control leaks from tanks and pipelines, thereby reducing overall risks for human health during operations. Furthermore, issues associated with the cleaning of tanks will continue to be managed in accordance with Caltex's existing management procedures.

The EPA raised no concerns with human health risks, and NSW Health reviewed the assessments and raised no issues, listing the relevant legislation that must be complied with during construction and operation of the development.

Conclusion

The Department is satisfied that the potential risks during construction can be managed via specific controls included in a CEMP and has included this requirement in the recommended conditions. Once the conversion works have been completed, the Department is satisfied that there would be a significant reduction in odour and air emissions from the site, and that the operational impacts of the development can be adequately mitigated through implementation of required management plans and the EPL.

Overall, the Department is satisfied that the risks to human health have been assessed in accordance with relevant guidelines and concludes that the risks would be low subject to imposition of recommended conditions.

5.3. Other Issues

The Department's assessment of other issues is provided in Table 5 below.

Table 5: Assessment of other issues

Consideration	Recommended Conditions
Soil and Water	
<ul style="list-style-type: none"> • Historic operations on the site have resulted in levels of soil and groundwater contamination, primarily with TPH, PAHs, BTEX and asbestos. Potential acid sulphate soils (ASS) are also present. • As excavation works will be minimal (approx. 180m³), potential impacts on contaminated areas and ASS would therefore be low and can be adequately managed through the recommended conditions of consent. • Other potential contaminating works stem from tank cleaning, leaks or spills which would also be managed by standard on-site prevention and management controls, and the recommended conditions of consent. • OEH and the Department are satisfied that erosion and sediment impacts would be adequately managed and mitigated through the measures outlined in the EIS and the recommended conditions. • Office of Water requested that excavation works cease if groundwater is encountered and appropriate approvals be obtained. • Surface water during construction and operations would continue to be managed via the two existing surface water systems for the site: <ul style="list-style-type: none"> (i) The stormwater management system which collects runoff from areas of the site that have a low risk of interaction with petroleum products. This water is discharged from the site to Quibray Bay, Botany Bay and Marton Park Reserve; and (ii) The oily water management system handles water that is, or may be, impacted by petroleum products, such as tank bunds and refinery process areas. This water is treated by the on-site Wastewater Treatment Plant (WWTP) prior to discharge to the Tasman Sea via the Yena Gap outfall in accordance with the EPL. • In addition, a Stormwater Management Plan (SMP) prepared in response to a Pollution Reduction Program under the EPL is currently being implemented in a staged manner in consultation with the EPA. • During operations, the potential environmental impacts from leaks or spills from bunded areas that are of natural ground construction would be satisfactorily managed in accordance with the EPL and commitments made by Caltex in the EIS. Caltex has also committed to install 4 bund floors throughout the development and will continue to replace bund floors during its ongoing maintenance program. • Due to the anticipated reduction in wastewater volume and contaminant load, a significant reduction in wastewater volume is expected to be discharged from the site. • Council requested additional flooding analysis. However, as the proposal would have minimal impacts on surface water flows, the Department considered it would be more appropriate that this issue be addressed as part of future applications when works may impact on surface water flows. Notwithstanding, Caltex has included Council's request in its management and mitigation measures. • The quality of stormwater is also expected to improve once refining operations cease. • Overall, the Department considers that the potential impacts from proposed construction works and future site operations would be satisfactorily managed and mitigated through implementation of the existing and proposed measures detailed in the EIS, in combination with the EPL and recommended conditions of consent. 	<p>Require Caltex to:</p> <ul style="list-style-type: none"> • manage construction works in accordance with a Soils and Erosion Management Plan, Groundwater Management Plan and Contamination Management Plan, which would be contained within the Construction Environment Management Plan; • comply with section 120 of the <i>Protection of the Environment Operations Act 1997</i>, which prohibits the pollution of waters, except as expressly provided in an EPL; • cease works should groundwater be encountered and obtain and comply with any licence requirements to the satisfaction of the Office of Water; • prepare an Acid Sulfate Soils (ASS) Management Plan should ASS be encountered; • dispose of any contaminated soils to an appropriately licensed facility; • assess and classify suspected contaminated soils in accordance with EPA and <i>Waste Classification Guidelines</i>; and • test accumulated run-off during construction and operations and treat via the wastewater treatment plant, if required.
Noise and Vibration	
<ul style="list-style-type: none"> • The Caltex refinery is the main industrial noise source in Kurnell, and the site immediately adjoins a number of residential properties. • Construction works that may create adverse noise impacts include minor excavation and construction works, tank conversion and 	<p>Require Caltex to:</p> <ul style="list-style-type: none"> • implement management and mitigation measures agreed in the EIS;

Consideration	Recommended Conditions
<p>restoration works, and the replacement of Tank 102, which is the closest tank to residential properties.</p> <ul style="list-style-type: none"> • Construction works are proposed between 7:00am and 10:00pm, 7 days a week, however some conversion works consistent with Caltex's routine maintenance procedures are proposed to occur 24 hours a day consistent with, and managed by, the existing EPL. • The acoustic report found that these works would comply with the <i>Interim Construction Noise Guideline (ICNG)</i> Noise Management Levels for all sensitive receivers during the day, evening and night time periods, with the exception of some minor exceedances at two (2) residential receivers (R2 & R3) for out of hours works related to the replacement of Tank 102. • As Caltex has clarified that tank replacement works would not necessarily need to be a 24 hour activity, the Department recommended a condition requiring all noisy construction works, including tank replacement works, be restricted to the hours of 7:00am – 6:00pm. • The EPA recommended that all construction activities comply with the Noise Management Levels contained in the EIS, and that only activities relating to day-to-day operations continue to be regulated under the existing EPL limits for noise. • The Department is satisfied that construction noise impacts would be satisfactorily managed through the proposed mitigation measures, the EPL and the recommended conditions of consent. • Operational noise would generally include noise from ships, pumps, compressors and the wastewater treatment plant. • Operational noise levels would be substantially lower than at present due to closure of the refining equipment, and are predicted to comply with the noise criteria contained in the <i>Industrial Noise Policy (INP)</i> at all receivers. • Site specific operational noise criteria for the Development have been developed based on the acoustic report and in consultation with the EPA, which are at, or below, the INP amenity criteria. • The Department is therefore satisfied that noise impacts from proposed operations would be satisfactory. • Overall, the Department is satisfied that the noise impacts can be adequately managed through a series of recommended conditions in the development consent, combined with the existing EPL conditions. • Once refining operations cease, the site specific operational noise criteria established in the development consent would be reflected in the amended EPL for the converted terminal facility. • Notwithstanding, the Department recognises that the site is zoned for heavy industrial uses and is suited for the proposed terminal operations given its long standing industrial use. As such, it is considered that future development in the area should be controlled by the criteria for industrial premises set out within the <i>Industrial Noise Policy</i>. 	<ul style="list-style-type: none"> • prepare a Noise Management Plan; and • undertake construction works between 7:00am – 10:00pm, except for certain works, including noisy construction works which are restricted to between 7:00am – 6:00pm.
<p>Air Quality and Odour</p> <ul style="list-style-type: none"> • Construction works may impact air quality and odour primarily in the form of Volatile Organic Compounds (VOCs) emissions from tank works and excavations, particulate emissions from metal fabrication and combustion emissions from portable generators and compressors. • Emissions from construction works would be managed by standard controls, such as water sprays, utilising sealed roads and limit works during windy conditions. These measures would be outlined in a detailed Air Quality Management Plan (AQMP). • Odour impacts from existing refining operations have been a key issue of the community over recent years. • The closure of the refining operations would result in a significant reduction in odour and air emissions from the site, with emissions of NO_x, CO, SO₂, Hydrogen sulphide (ie rotten egg-like odour) and particulate matter reducing to almost nil, combined with an approximate halving of total VOC emissions. • Emissions following conversion would generally be limited to fugitive emissions of hydrocarbon materials during importation, storage and exportation of product from the site. • Modelling found that the key pollution sources for the proposal would be well below relevant criteria at the site boundary, therefore the 	<p>Require Caltex to:</p> <ul style="list-style-type: none"> • prepare and implement an Air Quality Management Plan (AQMP) for construction works; • carry out all reasonable and feasible measures to minimise dust generation; • ensure the development does not cause or permit the emission of offensive odours under Section 129 of the POEO Act; and • carry out an air quality verification study for the end state terminal operations to validate modelling predictions, verify compliance with the EPL and the effectiveness of any emission control measures.

Consideration	Recommended Conditions
<p>potential for the site to result in adverse air quality impacts during operation is considered to be negligible.</p> <ul style="list-style-type: none"> • However to manage air quality and odour impacts from the site, Caltex have committed to: <ul style="list-style-type: none"> ○ continuing the existing Leak Detection and Repair (LDAR) Program and Odour Reduction Program (ORP) under the EPL after refining operations cease (until otherwise agreed with the EPA); ○ install tank sleeves on the guide poles of all External Floating Roof Tanks (EFRTs) that would be in gasoline service to minimise VOC emissions from these tanks in accordance with the EPL; and ○ continue evaluating alternative options for managing oily wastes/sludges to allow them to cease land farming at the site. • The EPA has not raised any concerns with respect to odour or air emissions and it has confirmed that the licence requirements, including discharge limits and associated monitoring, would be reviewed after refining operations cease. • Given the minor scale of construction works in the context of existing site operations, and the significant reduction in emissions from the future site operations, the Department is satisfied that the potential for the Development to create adverse air quality or odour impacts would be satisfactorily minimised by implementation of the proposed management and mitigation measures combined with recommended conditions of consent and the EPL. 	
<p>Heritage</p>	
<p><u>Non-Aboriginal Heritage</u></p> <ul style="list-style-type: none"> • The site is located in close proximity to a number of historic heritage items or places, and the Caltex Refinery itself is listed as a local item (known as the Australian Oil Refinery). • The submitted Heritage Impact Assessment (HIA) found that only the Australian Oil Refinery would be impacted by the proposal. • The local heritage value arises from the fact that it is only one of two refineries in the Sydney area. • The HIA found that the conversion of the site to a finished product terminal would have a significant adverse impact on the technical and scientific values of the Australian Oil Refinery site, with decommissioning of the plant diminishing its ability to demonstrate the technological significance and its historical contribution to the development of oil refining in NSW and Australia. • Caltex is aware of the heritage significance of the site, and has previously undertaken a number of measures to document the site's history, including a DVD capturing 50 years of refining at Kurnell. • Caltex has committed to three mitigation measures in its EIS, including the preparation of a Heritage Management Strategy, an archival recording of the site's existing fabric and operations, and a standard stop works measure should any further heritage items be discovered during works. • The Heritage Council of NSW considers that the impacts to the heritage significance of the refinery would be adequately mitigated through implementation of these three mitigation measures, combined with the three additional commitments made by Caltex in the EIS, including: <ul style="list-style-type: none"> ○ formation of a team to manage documentation and interpretation of the history of the refinery including the production of a colour book; ○ liaising 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 ○ engaging a professional photographer to prepare a photographic exhibition of the refinery. <p><u>Aboriginal Heritage</u></p> <ul style="list-style-type: none"> • The HIA found that the site has been subject to significant disturbance, and that it is therefore unlikely that midden deposits, subsurface artefacts or burials would be encountered. • The HIA therefore concluded that further Aboriginal assessment is not required in accordance with the Interim Community Consultation Requirements for Applicants (DEC 2004). <p><u>Conclusion</u></p> <ul style="list-style-type: none"> • Neither Council nor OEH raised any issues in relation to heritage, and 	<p>Require Caltex to:</p> <ul style="list-style-type: none"> • prepare a Heritage Management Strategy for the overall site, based on a detailed review of the heritage significance of the Australian Oil Refinery; • prepare an archival recording of the existing fabric and operations of the Australian Oil Refinery site; • stop work if any further heritage items are discovered during construction, until an assessment is carried out by a qualified heritage professional. • form a team to manage documentation and interpretation of the history of the refinery including the production of a colour book; • 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 • engage a professional photographer to prepare a photographic exhibition of the refinery.

Consideration	Recommended Conditions
<p>the Department is satisfied that the impacts to the locally listed Refinery would be adequately mitigated through implementation of the mitigation measures and commitments contained in the EIS, to be formalised through recommended conditions of consent.</p>	
Ecology	
<ul style="list-style-type: none"> • The EIS included an ecological risk assessment (ERA) that considered vegetation on-site, threatened species that may utilise the site, and ecologically important areas close to the site, such as the Towra Point Nature Reserve (RAMSAR wetland) and Kamay Botany Bay National Park. • The ERA identified potential risks to terrestrial and aquatic ecology during construction, including: <ul style="list-style-type: none"> ○ threats to fauna (frogs) from trenching works; ○ threats to flora from exposure to contaminated groundwater; and ○ discharge of contaminated groundwater or stormwater to adjacent RAMSAR wetlands. • However, the ERA concluded that the identified risks are low given the limited extent and duration of excavation and that potential impacts would be minimised by the implementation of erosion and sediment controls and the existing Stormwater Management Plan for the site. • Potential risks during operation would reduce due to the cessation of refining operations, with spills and leaks of fuels effectively managed via existing site procedures and management plans. • The ERA also recommended management measures (such as fencing vegetated areas and inspection and relocation procedures for frogs), which will be implemented by Caltex. • OEH agreed with the conclusions of the assessment and was satisfied that impacts could be adequately managed via the proposed Biodiversity and Weed Management Plan and Soil and Erosion Management Plan. • The Department is satisfied with the conclusions of the ERA and is satisfied that the development is unlikely to impact on terrestrial and aquatic ecology on and near the site. 	<p>Require Caltex to:</p> <ul style="list-style-type: none"> • implement erosion and sediment controls during construction; and • prepare and implement a Biodiversity and Weed Management Plan during construction and operation.
Greenhouse Gas Emissions	
<ul style="list-style-type: none"> • The majority of greenhouse gas (GHG) emissions generated during construction works would be Scope 1 emissions as fuel is combusted in construction plant and equipment. • These emissions are considered to be insignificant in comparison with the emission from the existing operations. • Caltex's conversion project would reduce GHG emissions from 965.2 kilo tonnes to 23.6 kilo tonnes of CO_{2-e}. This is approximately 2.5% of the emissions from existing site operations. • The estimated GHG emissions from the proposed operations would represent approximately 0.02% of the NSW inventory, which would represent a negligible impact on the overall inventory for the State. • In addition, Caltex has committed to minimise GHG emissions and to reduce energy consumption by inspecting and maintaining equipment, using local supplies and/or facilities, and using energy efficient opportunities where reasonable and feasible. • In addition, with more than 50 sites around Australia, Caltex is currently required to report its GHG emissions under the Commonwealth's Clean Energy Legislative Package and carbon pricing mechanism which commenced on 1 July 2012. • This legislation aims to provide a coordinated nationwide response to greenhouse gas management, reduce Australia's carbon pollution and provide incentives for industry to move to using clean energy. • Overall, the Department notes the significant reduction in GHG emissions that would result from the cessation of refining operations, and that proposed site operations would represent a minor source of greenhouse gas emissions in terms of Australia's national emissions and is unlikely to contribute significantly to climate change. 	<p>Require Caltex to:</p> <ul style="list-style-type: none"> • include relevant measures in the CEMP to reduce GHG emissions during construction; and, • implement all reasonable and feasible measures to minimise the greenhouse gas emissions and energy consumption from the Development.
Traffic, Access and Parking	
<ul style="list-style-type: none"> • Access to the site is via Captain Cook Drive, which reduces to an undivided carriageway with one lane in each direction east of Woollooware Road to Kurnell. • Construction traffic generated by the proposal would include a mix of 	<p>Require Caltex to:</p> <ul style="list-style-type: none"> • ensure that residents and the Department of Education are informed of any works that would

Consideration	Recommended Conditions
<p>construction plant vehicles, delivery vehicles and construction personnel movements.</p> <ul style="list-style-type: none"> • During the peak construction period, there would be a maximum of 140 light and 20 heavy vehicle movements per day. • Caltex's Traffic Impact Assessment, completed in line with the RTA's <i>Guide to Traffic Generating Development (2002)</i>, concluded that the number of trips generated by construction activities would represent approximately 1% of the total traffic on Captain Cook Drive. • Caltex has committed to implementing a Traffic Management Plan (TMP) for the construction phase of the development, and to ensure the community are kept informed about any works that may affect the road network. • Operationally, the site currently generates a maximum of 885 light vehicle and 12 heavy vehicle (finished fuel haulage) movements per day. Up to an additional 500 light vehicle movements per day also occur during maintenance shutdown periods, which are two or three times per year for 8-12 week periods. • Once the site is converted, the operational traffic would significantly reduce, with existing heavy vehicle movements ceasing and a reduction in light vehicle movements from 885 to 100 per day. • Council raised no major traffic issue, however requested that Caltex rationalise access to the site, which has been included as a condition of consent. • The RMS raised no objections to the development. • The Department is satisfied that the impact of traffic on the existing road network would be minimal and satisfactory, subject to conditions. 	<p>affect the road network to, and within, Kurnell; and</p> <ul style="list-style-type: none"> • prepare a Traffic Management Plan (TMP) for the Development, including details for rationalisation of the site access.
Waste Management	
<ul style="list-style-type: none"> • Construction waste includes potentially contaminated materials from excavations and tank cleaning, and asbestos material from old pipes within the easements and old waste disposal areas. • All construction waste would be classified in accordance with EPA's requirements, and waste would be disposed of to either the wastewater treatment plant, the landfarm (existing bio-remediation site) or to an appropriately licensed facility for disposal. • The EPA raised no concerns with construction waste, however requested that the quantity of oily wastes/sludges to be placed in the landfarm during construction be minimised as far as practicable. • The Department has therefore recommended that Caltex prepare the proposed Construction Waste Management Plan in consultation with the EPA. • Operationally, waste is currently managed in accordance with Caltex's Integrated Waste Management Strategy (IWMS) 2012 prepared under the EPL. • Operational waste would reduce significantly when compared with the existing operations due to the closure of refinery operations and the significant reduction in staff numbers. It would primarily be related to maintenance (i.e. tank, pipeline and pump maintenance) and administration activities (e.g. water treatment and sewerage). • Caltex has committed to the preparation of a Construction and Operation Waste Management Plan to ensure that all waste generated by the development is classified in accordance with the EPA's <i>Waste Classification Guidelines</i> and disposed of appropriately. • Overall, the Department is satisfied that waste generated during the construction and operation of the site would be satisfactorily minimised and managed, subject to recommended conditions. 	<p>Require Caltex to:</p> <ul style="list-style-type: none"> • prepare and implement a Waste Management Plan for the development; • include the construction waste management plan in the CEMP; and • ensure that all waste generated by the development is classified in accordance with the EPA's <i>Waste Classification Guidelines</i> and disposed of to a facility that may lawfully accept the waste.
Socio-Economic Impacts	
<ul style="list-style-type: none"> • Caltex undertook a Socio-Economic Impact Assessment of the development generally in accordance with the methodologies contained in the <i>Draft Economic Evaluation in Environmental Impact Assessment</i> (Planning NSW, 2003). • Caltex's assessment found that the proposed construction works would generate a positive economic impact as it would involve the expenditure of \$230 million, of which \$166 is expected to be spent in NSW (including the generation of approximately 140 full time equivalent (FTE) positions during the peak construction period). • Once conversion works are completed, the site would employ 136 	<ul style="list-style-type: none"> • N/A

Consideration	Recommended Conditions
<p>FTE positions, a reduction of around 949 FTE positions. The economic impact of this reduction is estimated to be approximately \$172 million per year for the NSW economy.</p> <ul style="list-style-type: none"> The proposal would, however, ensure that the facility would continue to operate and provide a reliable source of finished product to the growing NSW fuel market. Additionally, Caltex has indicated that \$80 million is budgeted to be spent on redundancies, retraining and supporting works for staff. The Department is satisfied that the proposal would provide a positive socio-economic impact. Once complete, the site would be retained as employment land in accordance with the draft Metropolitan Strategy, employing 136 FTE positions during operations and continue to support the growth of the NSW economy through ongoing supply of fuel to the growing NSW and ACT markets. In addition, the Department notes that parts of the site have been remediated and that further parts of the site are expected to be remediated once refining operations cease. This would provide potential future opportunities for future industrial developments. On balance, the proposed socio-economic impacts are therefore considered to acceptable in this case. 	

6. CONCLUSION

The Department has assessed the merits of the development having regard to the objects of the EP&A Act and the principles of ecologically sustainable development.

This assessment has concluded that with the implementation of the recommended conditions of approval, the impacts of the development can be mitigated and/or managed to ensure an acceptable level of environmental performance.

While the Department acknowledges that the proposal would result in a decline in the number of employees at the site, the proposal would however ensure that the site remained operational and would therefore continue to provide a significant contribution to the economy and provide a key role in fuel distribution and fuel security throughout NSW and the ACT. In addition, the proposal is also expected to make land available for future economic use and employment purposes in the area.

Consequently, the Department considers that the development is in the public interest and should be approved, subject to conditions.

Caltex, the EPA and Council have reviewed and generally accepted the draft recommended conditions.

7. RECOMMENDATION

It is recommended that the Planning Assessment Commission:

- **consider** the findings and recommendations of this report;
- **approve** the development application under section 89E of the EP&A Act; and
- **sign** the attached development approval (refer Appendix A).

Pascal van de Walle
Senior Planning Officer, Industry


Chris Ritchie
Manager – Industry
23/12/13


Chris Wilson
Executive Director
Development Assessment Systems and Approvals
23.12.13

APPENDIX B:

CONSIDERATIONS UNDER SECTION 79C

Section 79C of the EP&A Act requires that the consent authority, when determining a development application, must take into consideration the following matters:

<p>(a) the provisions of:</p> <p>(i) any environmental planning instrument, and</p> <p>(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Director-General has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and</p> <p>(iii) any development control plan, and</p> <p>(iiia) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and</p> <p>(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), and</p> <p>(v) any coastal zone management plan (within the meaning of the <i>Coastal Protection Act 1979</i>)</p> <p>that apply to the land to which the development application relates,</p>	<p>Detailed consideration of the provisions of all environmental planning instruments (including draft instruments subject of public consultation under this Act) that apply to the proposed development is provided in Appendix C of this report.</p> <p>The site is subject to the Kurnell Peninsula SEPP, and as such there are no DCP relevant to the subject site.</p> <p>The Applicant has not entered into any planning agreement under section 93F.</p> <p>The Department has undertaken its assessment of the proposed development in accordance all relevant matters as prescribed by the regulations, the findings of which are contained within this report.</p> <p>The site is not located within the coastal zone and the Department is not aware of any coastal zone management plan that applies to the land to which the development application relates.</p>
<p>(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,</p>	<p>The Department has considered the likely impacts of the development in detail in Section 5 of this report. The Department is satisfied that all environmental impacts can be appropriately managed and mitigated through recommended conditions of consent.</p>
<p>(c) the suitability of the site for the development,</p>	<p>Parts of the site currently operate as a terminal, and the proposed development will convert other parts of the site for terminal purposes. The site is located on land zoned for industrial purposes, and the proposal is therefore permissible with development consent on the subject site. In addition, the draft Sutherland LEP proposes a heavy industrial IN3 zoning for the land. The draft LEP is neither imminent or certain at the current time, however the terminal use would be permissible in the intended zone.</p>
<p>(d) any submissions made in accordance with this Act or the regulations,</p>	<p>All matters raised in submissions have been summarised in Section 4 of this report and given due consideration as part of the assessment of the proposed development in Section 5 of this report.</p>

<p>(e) the public interest.</p>	<p>The proposal would result in environmental improvements for the locality, and recommended conditions of consent impose a range of controls which the Department considers would minimise the potential environmental impacts of the proposed development.</p> <p>While the proposal would result in a significant loss of jobs at the site, Caltex has allocated money to be spent on redundancies, retraining and supporting staff working at the facility. In addition, the proposed terminal would be able to cater for the expected increase in fuel demand in NSW and the ACT, and the proposal may result in additional land being made available for other employment generating development.</p> <p>On balance, the proposed development is considered to be in the public interest.</p>
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APPENDIX C:

CONSIDERATION OF ENVIRONMENTAL PLANNING INSTRUMENTS

State Environmental Planning Policy (State and Regional Development) 2011 (State and Regional Development SEPP)

The proposal involves the storage of dangerous goods in quantities exceeding the criteria for a Major Hazard Facility, and as such meets the criteria in Clause 10(3) of Schedule 1 in the SRD SEPP.

Consequently, the proposal has been identified as State Significant Development and the Minister for Planning and Infrastructure (or his delegate) is the consent authority for the proposed development. The SRD SEPP is discussed in Section 3.1 of this report.

State Environmental Planning Policy (Kurnell Peninsula) 1989 (Kurnell Peninsula SEPP)

The Kurnell Peninsula SEPP applies to the land within the Shire of Sutherland known as Kurnell Peninsula, and adjacent waterways. The SEPP relates to land which contains items of the natural and built environment which are of state, national and international environmental, cultural and historic significance. The SEPP aims to conserve these items while encouraging and facilitating opportunities for commercial, industrial and tourist development which are consistent with these unique attributes of the Peninsula,

Kurnell Refinery is located on land zoned 4(c1) Special Industrial (Oil Refining) zone pursuant to the SEPP, and the proposed use as a "liquid fuel depot" is permissible with consent. "Liquid fuel depots" are defined in the *Standard Instrument* as follows:

Liquid fuel depot means premises used for the bulk storage of petrol, oil, petroleum or other inflammable liquid for wholesale distribution and at which no retail trade is conducted.

'Liquid fuel depots' are a type of 'heavy industrial storage establishment' which is defined as follows:

Heavy industrial storage establishment means a building or place used for the storage of goods, materials, plant or machinery for commercial purposes and that requires separation from other development because of the nature of the processes involved, or the goods, materials, plant or machinery stored, and includes any of the following:

- (a) a hazardous storage establishment,
- (b) a liquid fuel depot,
- (c) an offensive storage establishment.

The objectives of the zone 4(c1) zone are:

- "to recognise land used for oil refinery, liquid fuel depot and liquified petroleum gas extraction purposes,
- to ensure that development has regard to environmental safety planning principles, and
- to mitigate land use conflicts within and adjacent to the zone and to ensure that adequate provision is made for the supply of water and the disposal in any environmentally sensitive manner of all wastes and stormwater from the land".

The proposed development is considered to be consistent with the above objectives as it would continue to allow the storage of liquid fuels within the site, while improving the environmental performance of the site and appropriately manage risks associated with the storage of fuel products. The Departments detailed assessment of the proposal is contained in Section 5 of this report.

Consequently, under delegated authority of the Minister for Planning and Infrastructure, the Planning Assessment Commission, may approve the development.

State Environmental Planning Policy 14 – Coastal Wetlands (SEPP 14)

SEPP 14 aims to ensure that the coastal wetlands are preserved and protected in the environmental and economic interests of the State.

The provisions of SEPP 14 do not apply to wetlands located within the Sydney Metropolitan Region.

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33)

SEPP 33 aims to identify proposed developments with the potential for significant off-site impacts, in terms of risk and/or offence (odour, noise etc). A development is defined as potentially hazardous and/or potentially offensive if, without mitigating measures in place, the development would have a significant risk and/or offensive impact, on off-site receptors.

The proposed quantities of dangerous goods to be stored at the facility exceed the threshold limits established for SEPP 33, and the Applicant has therefore submitted a Preliminary Hazard Analysis (PHA) with the EIS. The PHA concludes that the proposal would not contravene any NSW land-use safety criteria contained in the Hazardous Industry Planning Advisory Papers (HIPAPs) and that the proposal would not pose unacceptable risks to the surrounding land uses.

The Department has reviewed the proposal, the EIS and the PHA prepared by the Applicant and is satisfied that, subject to the full implementation of all safety measures set out in the EIS and PHA and the Department's recommended conditions of consent, the facility would not pose an unacceptable level of risk to surrounding properties.

The Department's detailed assessment of hazards and risk is contained in Section 5.1 of this report.

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)

SEPP 55 aims to ensure that potential contamination issues are considered in the determination of a development application.

The Department has reviewed all contamination issues associated with the development and outlined in the EIS. An assessment of these issues is provided in Section 5.3 of this report.

The Department is satisfied that the site is suitable for the proposed development and has recommended conditions of approval that would require Caltex to ensure suitable measures are in place to control erosion manage and dispose of contaminated material in accordance with the relevant EPA guidelines during construction and operation (in the unlikely event that a spill or leak occurs).

The Department is satisfied that, subject to the implementation of recommended conditions of approval, the development would not result in adverse impacts on the environment as a result the potential presence of contaminated material on the site, and that the site would be suitable for use as a finished product import and distribution terminal.

State Environmental Planning Policy No. 71 – Coastal Protection (SEPP 71)

SEPP 71 commenced on 1 November 2002 and aims to ensure that:

- *development in the NSW coastal zone is appropriate and suitably located;*
- *there is a consistent and strategic approach to coastal planning and management; and*
- *there is a clear development assessment framework for the Coastal Zone.*

The site is not located within the area affected by the SEPP, however the site's remaining outfall is located on land to which SEPP 71 applies. There will be no change to the outfall, however the proposal would result in a reduction in the quantity of treated wastewater disposed of through the outfall. The quality of the water will continue to be managed through the EPL and the proposal is therefore considered to be satisfactory with regards to SEPP 71.

State Environmental Planning Policy (Infrastructure) 2007 (the ISEPP)

The ISEPP aims to facilitate the effective delivery of infrastructure across the State by improving regulatory certainty and efficiency, identifying matters to be considered in the assessment of development adjacent to

particular types of infrastructure development, and providing for consultation with relevant public authorities about certain development during the assessment process.

The development constitutes traffic generating development under Schedule 3 of the ISEPP and was referred to the RMS for comment. RMS confirmed that they have no objection to the proposed development. The development is considered to be consistent with the aims and objectives of the ISEPP, and the requirements of Clause 104 of the SEPP, as demonstrated by the response received from the RMS and in the assessment of the proposal contained in Chapter 5 of this report.

Draft Sutherland Local Environmental Plan 2013 (Draft SLEP 2013)

The draft SLEP 2013 was originally placed on public exhibition from 19 March 2013 to 1 May 2013, and was subsequently re-exhibited from 20 August 2013 to 1 November 2013. It is therefore required to be considered in the assessment of the proposal in accordance with Section 79C(i)(b) of the EP&A Act 1979.

The draft instrument is currently on hold and pending review. It is therefore considered to be neither imminent nor certain, and is therefore given limited weight.

Notwithstanding, the draft SLEP 2013 proposes a Heavy Industrial IN3 zone for the subject site and the proposed *'liquid fuel depot'* would be permissible with consent in the zone.

The proposal is also considered to be consistent with the objectives of the Heavy Industrial IN3 zone as it maintains industrial zoned land for industrial purposes, retains employment opportunities and minimises adverse impacts on adjoining land uses as detailed in the assessment of the proposal in Chapter 5 of this report. The objectives of the zone are:

- *To provide suitable areas for those industries that need to be separated from other land uses;*
- *To encourage employment opportunities;*
- *To minimise any adverse effect of heavy industry on other land uses; and*
- *To support and protect industrial land for industrial uses.*

The proposal is therefore consistent with draft SLEP 2013.