Modification of Development Consent

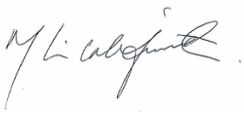
Section 96(1A) of the *Environmental Planning and Assessment Act 1979*

As delegate for the Minister for Planning under delegation executed on 14 September 2011, the Planning Assessment Commission (the Commission) of New South Wales, approves the modification of the development consent referred to in Schedule 1, subject to the conditions in Schedule 2.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the Development.

Mr John Hann (Chair)
Member of the Commission



Dr Marcus Lincoln-Smith
Member of the Commission

Mr Soo-Tee Cheong
Member of the Commission

Sydney 17 November 2017 File: 17/12410

SCHEDULE 1

Application No:	SSD 5544
Applicant:	Caltex Australia Petroleum Pty Ltd
Consent Authority:	Minister for Planning
Development:	Conversion of the existing Kurnell Refinery to a finished product import and distribution terminal
Date of Original Consent:	7 January 2014
Modification:	SSD 5544 MOD 3 – Tank 101 demolition works

SCHEDULE 2

This consent is modified as follows:

1. Delete the definitions for Development and insert the following definitions in alphabetical order:

Development	The development as described in the EIS and RTS, and as generally depicted in Appendix A, being for the conversion of the existing Kurnell Refinery to a finished product import and distribution terminal, including the demolition of redundant infrastructure as described in MOD 1 and its accompanying SEE, the ACS Management Works as described in MOD 2 and its accompanying documents and the Tank 101 demolition works as described in MOD 3 and its accompanying documents.
MOD 3	Modification application to SSD 5544 for the Tank 101 demolition works, as described in the *Statement of Environmental Effects Tank 101 Demolition Works*, prepared by AECOM

Services Pty Ltd, dated August 2017, as modified by the letter dated 3 October 2017 from AECOM Services Pty Ltd

In Schedule B: Administrative Conditions

2. In Condition B2 (d), delete the word "and" after the semicolon.

3. In Condition 1(e), delete the period after the word "MOD 2" and replace with "; and".

4. Insert new Condition 1(f), as follows:

   (f) MOD 3.

In Schedule C: Environmental Performance and Management

5. Insert new Condition C3B, after Condition C3A:

   C3B. Prior to commencement of the Tank 101 demolition works described in MOD 3, the Applicant shall update the Demolition Safety Study prepared by Caltex (approved 11 December 2016), required under Condition C3A(b) to include a demolition management plan for the Tank 101 demolition works. The demolition management plan for the Tank 101 demolition works shall be prepared in consultation with the Department.

6. Insert new Condition C4B, after Condition C4A:

   C4B. Prior to commencement of the Tank 101 demolition works described in MOD 3, the Applicant shall update and implement the Emergency Plan required under Condition C4(a) to incorporate the Tank 101 demolition works. The plan shall include information of the emergency arrangements during the tank demolition works and a copy of the plan shall be submitted to the Secretary.

7. In Condition C19, insert the words "and the Tank 101 demolition works described in MOD 3," after the words "Right of Ways".

In the Appendices

8. In Appendix A – Plans, insert new figure with the title "Figure 5: Tank 101 Demolition Works" after Figure 4 as shown in Attachment A of this modifying instrument.

9. In Appendix C, delete Management and Mitigation Measures and insert instead "Management and Mitigation Measures" as shown in Attachment B of this modifying instrument.

APPENDIX A: Plans

Figure 5: Tank 101 Demolition Works

ATTACHMENT B
Management and Mitigation Measures

Consolidated Management and Mitigation Measures for SSD 5544 (including MOD1, MOD2 and MOD3)
The following acronyms have been used to describe each stage:
CD – Conversion Design; Conv – Conversion; Op – Operation; DD – Demolition Design; Dem – Demolition; and Con – Construction.

Item	Management and Mitigation Measure	Conversion (SSD 5544)			Demolition (SSD 5544 MOD1)		ACS Works (SSD 5544 MOD2)		Tank 101 demolition works (MOD3)	
		CD	Conv	Op	DD	Dem	Con	Op	DD	Dem
General										
A1	Caltex would carry out the proposed works in accordance with the EIS, the SEE**s** and the approval conditions.	✓	✓	✓	✓	✓	✓	✓	✓	✓
A2	Caltex would implement reasonable and practicable measures to avoid, or minimise impacts to the environment that may arise as a result of the Project.	✓	✓	✓	✓	✓	✓	✓	✓	✓
A3	Caltex would ensure that the Project contractor prepares and implements a Construction Environmental Management Plan (CEMP) for the conversion works and a Demolition Environmental Management Plan (DEMP) for the demolition works (inclusive of the ACS Modification works **and Tank 101 demolition works**) to manage any Project impacts. This would be reviewed and approved by a Caltex Environmental Management Representative (EMR). Elements of these plans may be shared as required.		✓			✓	✓			✓
A4	Caltex would appoint an EMR to monitor the implementation of all required environmental mitigation and management measures. The EMR would ensure that all measures were being effectively applied during the proposed works and that the work would be carried out in accordance with the CEMP, the DEMP and all environmental approvals and legislative conditions.		✓			✓	✓			✓
A5	Caltex and the various works' contractor personnel would undergo training in accordance with the CEMP, the DEMP and currently implemented environmental and safety measures agreed as part of the Project approval.		✓			✓	✓			✓
A6	Caltex would provide Sutherland Shire Council the opportunity to review and comment on the CEMP prior to the commencement of conversion works.		✓							

Item	Management and Mitigation Measure	Conversion (SSD 5544)			Demolition (SSD 5544 MOD1)		ACS Works (SSD 5544 MOD2)		Tank 101 demolition works (MOD3)	
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A7	Prior to the demolition works commencing for a particular structure or group of structures, Caltex would develop a specific demolition management plan (DMP) for each structure or group of structures to be demolished. The DMPs would be made available to the appropriate regulators prior to being implemented if requested. The DMPs for the two concrete stacks (power plant and common stacks) and for the tall complex structures (two catalytic cracker units (plants 4 and 34)) would be provided to the EPA for comment ahead of the demolition works for these structures taking place.					✓				✓
A8	Caltex would provide a draft of the DEMP and SWMP to NSW DPI for review and comment prior to finalising.				✓				✓	
A9	Caltex would provide NSW Health with a copy of the DEMP and Asbestos Management Plan (AMP) for review and comment prior to finalising.				✓				✓	
A10	Caltex would provide NSW OEH with a copy of the Biodiversity and Weed Management Plan (BWMP) for review and comment prior to finalising.				✓					
A11	Following the ACS Modification works, Caltex will update the Asbestos Management Plan for the Site and Asbestos Register.							✓		
A12	A Containment Cell Long Term Environmental Management Plan (CCLTEMP) would be prepared in consultation with the EPA prior to the closure of the containment cell. The CCLTEMP would detail the ongoing environmental management of containment cell, including maintenance of the capping and drainage, groundwater monitoring (including groundwater quality and levels), and land use restrictions that will apply to the containment cell. The CCLTEMP would be attached to the positive covenant for the land where the containment cell is located, if required.							✓		
A13	From development consent of SSD 5544 MOD2 until the quarterly community meeting after the containment cell is closed, Caltex will provide an update on the progress of the ACS Modification works, including issues faced or complaints received, at each of the quarterly community meetings.						✓	✓		

Item	Management and Mitigation Measure	Conversion (SSD 5544)			Demolition (SSD 5544 MOD1)		ACS Works (SSD 5544 MOD2)		Tank 101 demolition works (MOD3)	
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A14	ACS from the pipeways classified as hazardous waste under the NSW EPA Waste Classification Guidelines would have a minimum cover of at least 500 mm plus the surface cap.						✓			
A15	Within one month after it has been validated that all ACS from the pipeways has been removed, the containment cell would be capped and permanently sealed as per the containment cell design.						✓			
A16	Caltex would prepare an ACS Modification Works Completion Report following the completion and closure of the containment cell. The report would include a summary of the waste classification and environmental monitoring data conducted in accordance with the Environmental Management Plans (and associated Sub Plans). Monitoring data should include but not necessarily be limited to: i. Waste Characterisation and Tracking ii. Air Quality monitoring (including dust and asbestos) iii. Groundwater Monitoring.						✓			
Hazards and Risk										
B1	A program of routine testing, inspection and maintenance would be developed for each new piece of equipment or function of instrumentation to be added to the preventative maintenance program already established for existing plant and equipment.		✓	✓						
B2	The recommendations of the Fire Safety Study would be implemented for the design and operation of the terminal.	✓	✓							
B3	The Process Hazard Analysis Recommendations would be implemented for the design and operation of the terminal.	✓	✓							
B4	The spill response plan for the Site would be updated for the proposed terminal.		✓							
B5	Caltex would review hardware protection in place and proposed to ensure the risk of filling low flash point material into tanks designed for high flash point usage is minimised. Particular attention to human factors issues at manifolds.	✓	✓							
B6	Caltex would determine need for additional means of communication, e.g. for lone worker on the proposed terminal.		✓							

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B7	Caltex would review the procedures used for potentially hazardous manual operation to ensure they are appropriate and sufficient for any increased frequency of use.		✓							
B8	The bullet pointed measures listed in Section 8.7 of the **demolition works** SEE would be implemented to ensure that the conclusions of Appendix C Hazards and Risks Assessment of the SEE remain valid.				✓	✓			✓	✓
B9	Personnel required to work with hazardous/flammable/contaminated materials would be trained in safe use and handling and would be provided with all relevant safety equipment.						✓			
B10	Procedures are currently in place to manage incidents and injuries at the Site. This includes an established incident reporting and response process. These processes would be implemented for the ACS Modification works.						✓	✓		
Soils, Groundwater and Contamination										
C1	**A Soils and Erosion Management Plan would be developed as part of the Construction Environmental Management Plan (CEMP) to manage the excavation, testing, stockpiling, reuse and rehabilitation of soils. This plan would outline:** • the areas where soil disturbance is likely; • soil testing procedures; • soil handling procedures; • locations where soil would be stockpiled on-site for either removal, treatment or reuse; • procedures to reduce erosion and the spread of dust; • restricting traffic to defined roads or tracks where necessary; and • the rehabilitation of bare soil following completion of the construction works.		✓							
C2	**All materials would be stockpiled in accordance with 'The Blue Book' *Managing Urban Stormwater - Soils and Construction Volume 1 and 2* (Landcom, 2004). Principal controls would include the following:**		✓			✓	✓			✓

Item	Management and Mitigation Measure	Conversion (SSD 5544)			Demolition (SSD 5544 MOD1)		ACS Works (SSD 5544 MOD2)		Tank 101 demolition works (MOD3)	
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	• silt fences would be installed around stockpiles to reduce erosion and protect vegetation or Site infrastructure as necessary; • silt and sediment traps would be installed across stormwater drains in proximity to excavation areas; • stockpiles would be restricted to cleared areas and not impact any vegetation; • stockpiles would be placed on impermeable sheeting; • stockpiles would be covered and wetted down in order to reduce dust creation; • stockpiles would not be located in close proximity to any stormwater drainage systems; • Caltex would not stockpile in areas that are prone to flooding as identified in Figure 4-10 of Appendix D of the SEE; and • Stockpile locations and erosion and sediment control requirements associated with the Project would be reviewed by a suitably qualified person to ensure that the recommended measures achieve the environmental outcomes for the Site.									
C3	The Soils and Erosion Management Plan would also outline the inspection program for any erosion control structures and bunded areas.		✓							
C4	Excavated soils would be tested for both contaminants and odour using standard practices (e.g. soil vapour and soil sampling etc.)		✓							
C5	Clean materials would be separated from contaminated materials for reuse as backfill where required.		✓							
C6	A Contamination Management Plan would form part of the CEMP for the Project. This plan would outline measures for testing, classifying, handling, storing and managing contaminated soils and contaminated groundwater.		✓							
C7	Suspected contaminated materials would be assessed and classified in accordance with EPL requirements and NSW (2009) *Waste Classification Guidelines: Part 1: Classifying Waste*, batched, further tested (where required) and disposed by a licenced contractor.		✓							

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C8	Disposal of any contaminated soils or groundwater would be in accordance with EPL requirements and NSW DECCW's *Waste Classification Guidelines* and the Contamination Management Plan (CMP) for the Project. Contaminated materials would be sent to appropriately licensed facilities in accordance with the *Contaminated Land Management Act 1997*.		✓							
C9	If Acid Sulfate Soils (ASS) are encountered during construction or the ACS Modification works, an ASS Management Plan would be prepared in accordance with the ASS Manual (ASS Management Advisory Committee 1998).		✓			✓	✓			✓
C10	**A Groundwater Management Plan (GWMP) would be developed and included within the CEMP. This plan would outline the measures that would be used to manage the testing, dewatering, storage, movement and treatment of any groundwater intercepted during the construction phase. Measures would include:** • the use of appropriate drip trays and interception techniques for any construction specific liquids stored on the Site; • bunding of any fuel or chemical storage area at the construction Site; • regular inspection of construction equipment to ensure any leaks are minimised and rectified; • management of vehicles leaving the Site to reduce soil on roads, production of dust and the introduction of contamination to the groundwater and/or stormwater system; • appropriate and timely disposal of any contaminated soil, water or waste generated during construction; • regular inspection of erosion control structures and bunded areas; and • regular inspection and testing of containment areas, drainage lines and process pipe work.		✓							

Item	Management and Mitigation Measure	Conversion (SSD 5544)			Demolition (SSD 5544 MOD1)		ACS Works (SSD 5544 MOD2)		Tank 101 demolition works (MOD3)	
		CD	Conv	Op	DD	Dem	Con	Op	DD	Dem
C11	Any runoff that may accumulate in excavations would be periodically tested for elevated levels of contamination. Water that is found to have elevated levels of contaminants would be collected and sent to the on-site Wastewater Treatment Plant in accordance with the established refinery wastewater management procedures.		✓							
C12	Runoff entering any excavations would be limited by using bunds or similar structures as required.		✓			✓				✓
C13	Construction/demolition workers would be instructed in appropriate health and safety and handling protocols for minimising human contact with contaminated soils and groundwater.		✓			✓	✓			✓
C14	During the cleaning of the crude and finished fuel tanks, measures would be implemented in line with Caltex's existing Turnaround and Inspection process to contain and collect any potentially contaminating material for appropriate disposal to the on-site wastewater treatment plant, landfarm or appropriate off-site disposal facilities. This process would be detailed within the CEMP.		✓							
C15	Permits would be required to work in the areas where potential soil and groundwater contamination exists. The work permit includes requirements such as monitoring and PPE. No unauthorised entry into these areas is permitted, without a permit.		✓			✓	✓			✓
C16	Appropriate inspection, assessment, maintenance and repair programmes that would be implemented as part of the operation of the Project. These safeguards would be incorporated into the updated management plans for the proposed terminal. The Project would be appropriately licenced under the *Protection of the Environment Operations Act 1997* and would be managed in accordance with EPL requirements.		✓	✓				✓		
C17	A Contamination Management Plan would be developed to outline measures for monitoring, handling, storing and managing contaminated soils and contaminated groundwater. It would include the following: • During excavation visual and olfactory indicators of impact would be monitored. Where there is potential for volatile organic contaminants					✓	✓			✓

Item	Management and Mitigation Measure	Conversion (SSD 5544)			Demolition (SSD 5544 MOD1)		ACS Works (SSD 5544 MOD2)		Tank 101 demolition works (MOD3)	
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	(based on known ground conditions) or where hydrocarbons are seen or smelt during excavations, soils would be inspected for hydrocarbon impacts using a PID and/or testing. Excavated soils would not be used for backfill if they are impacted at levels exceeding commercial/industrial as defined by Schedule B1 Guidelines, *Investigation Levels for Soil and Groundwater, National Environment Protection Measure (Assessment of Site Contamination) Amendment Measure 2013*. • All excavations would be sampled for asbestos. Asbestos assessment would be undertaken in accordance with Schedule B1 Guidelines, *Investigation Levels for Soil and Groundwater, National Environment Protection Measure (Assessment of Site Contamination) Amendment Measure 2013.* • Asbestos impacted soil not found in the pipeways would be disposed of at the ACS containment cell or removed from the Site as soon as practicable if excavated. If these soils need to be temporarily stockpiled they would be stored at a defined location at the former CLOR site, covered and labelled as asbestos waste. Asbestos impacted soil would be classified in accordance with NSW EPA guidelines for transport and disposal at either the ACS containment cell or a licensed landfill (and in accordance with the Site waste management system and the Demolition Waste and Resource Management Plan (DWRMP) for the demolition works. The excavation, transport and disposal of asbestos impacted soil would be undertaken by a licenced contractor and comply with NSW WorkCover requirements. • Hydrocarbon impacted soil would not be temporarily stockpiled adjacent to the excavation. If these soils need to be temporarily stockpiled they would be stored at a defined location at the former CLOR site. • Excavated soils would be separated into stockpiles according to odours, staining and other environmental indicators. Soils that are potentially contaminated (following visual and olfactory inspection and or use of monitoring equipment) would be placed on impermeable sheeting into uniquely identified stockpiles and appropriately bunded and managed. The bunds would be impermeable and of sufficient capacity to ensure that runoff from these stockpiles is contained prior to being sent to the WWTP.									

Item	Management and Mitigation Measure	Conversion (SSD 5544)			Demolition (SSD 5544 MOD1)		ACS Works (SSD 5544 MOD2)		Tank 101 demolition works (MOD3)	
		CD	Conv	Op	DD	Dem	Con	Op	DD	Dem
	• Where no contamination issues are identified, excavated material would be used as backfill to bring the excavated area back to grade as soon as practicable. If required, certified VENM, ENM or appropriated remediated material would be used to provide additional backfill material. • If excavated material cannot be re-used or managed on-site then it would be removed off-site as waste to an appropriately licensed facility. • Further, excavated material; would be classified in accordance with EPL condition O5.1 which requires "any liquid and/or non-liquid waste generated and/or stored [at the Site] is assessed and classified in accordance with the NSW (2009) *Waste Classification Guidelines: Part 1: Classifying Waste*, batched and further tested (where required, for example Toxicity Characteristics Leaching Procedure (TCLP) testing)". • The method of disposal or reuse would be in line with the materials' classification in accordance with specifications set out in a DWRMP. • Where soils are reused on Site (i.e. are not considered to be impacted at levels exceeding commercial/industrial as defined by *Schedule B1 Guidelines, Investigation Levels for Soil and Groundwater, National Environment Protection Measure (Assessment of Site Contamination) Amendment Measure 2013)* a record would be kept (in the Waste Management Database) of where these soils are reused, the volumes reused; the type and levels of contaminants present in the soils and the soil classification.									
C18	**The Soil and Water Management Plan would outline management measures for any soils that are excavated or stored on-site during the demolition works and ACS Modification works and water management requirements. It would identify:** • the areas where soil disturbance is likely; • how excavations would be staged so that the length of time that excavations are left open and temporary stockpiles are required is minimised; • locations where soil would be stockpiled on-site for either removal, treatment or reuse;					✓	✓			✓

Item	Management and Mitigation Measure	Conversion (SSD 5544)			Demolition (SSD 5544 MOD1)		ACS Works (SSD 5544 MOD2)		Tank 101 demolition works (MOD3)	
		CD	Conv	Op	DD	Dem	Con	Op	DD	Dem
	• that if additional backfill material is required, only certified VENM, ENM or appropriated remediated material would be used; • procedures to reduce erosion and the spread of dust; • restricting traffic to defined roads or tracks where necessary; • measures to protect excavations from increased stormwater runoff (e.g. by using bunds or similar structures where required); • measures to manage the storage of demolition and ACS Modification works specific liquids at the Site and the appropriate bunding or containment of demolition related fuel or chemical storage areas; • demolition and ACS Modification works equipment is maintained and operated in a proper and efficient condition to reduce the likelihood of spills or leaks; • measures to manage vehicles leaving the Site to reduce soil on roads, production of dust and the introduction of contamination to the groundwater and/or stormwater system; • measures for the dewatering, storage, movement and treatment of groundwater encountered in excavations. Dewatered groundwater would be collected and sent to the on-site Wastewater Treatment Plant in accordance with the established Site wastewater management procedures, unless it is tested and is of suitable quality to be directed to stormwater; • procedures for dewatering, including the need to liaise with NOW to ensure the necessary water licences are obtained, if required; and • how the rehabilitation of bare soil would be managed across the Site once areas are returned to grade.									
C19	The Soil and Water Management Plan would also: • be developed in accordance with *'The Blue Book' Managing Urban Stormwater – Soils and Construction Volume 1 and 2* (Landcom, 2004); • outline the inspection program for erosion control structures and bunded areas; • continue the existing groundwater monitoring program; and • include a plan for corrective action should an unexpected increase in COPC be observed in the groundwater monitoring					✓	✓			✓

Item	Management and Mitigation Measure	Conversion (SSD 5544)			Demolition (SSD 5544 MOD1)		ACS Works (SSD 5544 MOD2)		Tank 101 demolition works (MOD3)	
		CD	Conv	Op	DD	Dem	Con	Op	DD	Dem
C20	An Asbestos Management Plan would be developed in accordance with the relevant guidelines. Caltex would utilise existing registers, procedures and plans in place for the Site for the preparation of an Asbestos Management Plan.					✓	✓			
C21	Additional sampling would be undertaken to ensure that the area of soil disturbance is restricted as far as practicable to asbestos impacted areas only.						✓			
C22	ACS in the pipeways would be wetted down prior to excavation, loading and transport.						✓			
C23	ACS classified as general or restricted under the Waste Classification Guidelines would be transported directly to the containment cell. Excavation works would be staged to allow placement of ACS directly into the containment cell to minimise the need to stockpile ACS.						✓			
C24	Where hazardous ACS cannot be appropriately managed on-site, it would be taken off-site for treatment and disposal at an appropriately licensed facility.						✓			
C25	All vehicle tyres would be cleaned before exiting the containment cell works area a temporary truck wash system.						✓			
C26	During the works, the containment cell area would remain bunded to prevent water flowing out of the respective areas except via the OWSS and WWTP.						✓	✓		
C27	During the works, stormwater within the containment cell works area would be directed to the OWSS and treated at the WWTP.						✓			
C28	Stormwater from within excavated areas of the pipeways would be sent to the WWTP unless it is tested and is of suitable quality to be directed to stormwater, as per normal operation of the pipeways.						✓			
C29	Two groundwater monitoring bores would be installed at the north and west of the containment cell. Quarterly monitoring would be undertaken during construction, filling and closure of the cell.						✓	✓		
C30	A marker layer would be installed during the final capping of the containment cell to identify the presence of asbestos as a safeguard for potential future use.						✓			

Item	Management and Mitigation Measure	Conversion (SSD 5544)			Demolition (SSD 5544 MOD1)		ACS Works (SSD 5544 MOD2)		Tank 101 demolition works (MOD3)	
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C31	Following excavation of ACS, an independent licenced asbestos inspector would be employed to verify that the friable asbestos has been removed from the pipeways and that the Exemption Order under Section 419 of the Work, Health and Safety Regulation 2011 is no longer required.						✓			
C32	The OEMP for the Site would be updated to include the following measures: • Quarterly groundwater monitoring for two years for the two installed monitoring wells. Following this time, annual groundwater monitoring would be undertaken to provide ongoing demonstration that the containment cell liner is operating effectively. Monitoring of these bores would occur in accordance with the existing groundwater monitoring program for the Site. • Regular inspections of the containment cell to monitor the effectiveness of the erosion and sediment control measures incorporated into the design of the containment cell, in line with the Site's existing Inspection Checklist and following heavy rain events.							✓		
Human Health and Ecological Risk										
D1	Construction/demolition personnel would be made aware of the potential presence of Non Aqueous Phase Liquids (NAPL) and would be shown how to identify its presence. The CEMP/DEMP would include management measures to appropriately deal with any NAPL found on Site.		✓		✓		✓		✓	✓
D2	Construction/demolition staff would be inducted and provided with training prior to working with potentially contaminated soil as part of the Project, to prevent unnecessary disturbance (e.g. dust generation, asbestos fibre liberation, contaminant mobility and volatilisation).		✓		✓		✓		✓	✓
D3	The location of potentially contaminated areas would be noted in the CEMP/DEMP and provided to construction/demolition personnel involved in soil excavation and handling. The CEMP/DEMP would also identify the type of contamination found in each area. Where necessary, safety training and appropriate PPE would be provided.		✓	✓	✓	✓	✓		✓	✓

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D4	Caltex would continue to monitor groundwater quality in areas that are known to contain impacts to ensure that significant mobilisation of COPC from groundwater to surface water is not occurring.		✓	✓	✓	✓			✓	✓
Waste Management										
E1	The Project would be integrated into existing resource efficiency, waste management and handling, emergency response and preparedness plans for the existing Site.	✓	✓	✓	✓	✓	✓	✓	✓	✓
E2	Construction and Operation Waste and Resource Management Plans (WRMP) and Demolition Waste and Resource Management Plans (DWRMP) would be compiled prior to the each phase commencing. The DWRMP would be updated to include reference to management of waste generated by the ACS Modification works prior to construction works commencing.	✓			✓		✓		✓	
E3	The WRMPs and DWRMP would: • identify requirements consistent with the waste and resource hierarchy; • ensure resourcing efficiency is delivered through the design and responsible construction, demolition and operational practices; • ensure procurement of pre-fabricated materials to eliminate off-cuts on-site, and the re-use of materials where possible; • provide consistent clear direction on waste and resource handling, storage, stockpiling, use and reuse management measures (consistent with current management practices relating to Caltex's Kurnell Waste Management System); • provide separate waste containers/skips to ensure waste material segregation and maximise the opportunities for re-use and recycling; • identify disposal and management routes consistent with current management practices as adapted for the Project; • set out clear requirements for meeting legislative and regulatory requirements; • ensure safe storage and disposal of waste ensuring least amount of harm to surrounding environment;	✓	✓	✓	✓	✓	✓		✓	✓

Item	Management and Mitigation Measure	Conversion (SSD 5544)			Demolition (SSD 5544 MOD1)		ACS Works (SSD 5544 MOD2)		Tank 101 demolition works (MOD3)	
		CD	Conv	Op	DD	Dem	Con	Op	DD	Dem
	• define requirements to support Caltex's sustainable procurement objectives through effective, design, construction, operation and procurement; and • set out processes for disposal, including on-site transfer, management and the necessary associated approvals.									
E4	The WRMP and DWRMP would incorporate the requirements of the waste and resource hierarchy and cleaner production initiatives.	✓	✓	✓	✓	✓	✓		✓	✓
E5	The WRMP and DWRMP would include a process for auditing, monitoring and reporting, which would include regular inspections off-site activities and the waste management area(s). The WRMP and DWRMP would be subject to regular auditing and a system would be used to record and report the types, volumes and management measures for all waste and resource arising from/used for the works.	✓	✓	✓	✓	✓	✓		✓	✓
E6	Project-generated waste would be segregated at the source and stored in accordance with current Site practices. Site management practices would potentially need adapting to consider additional storage requirements. Regardless, all waste would be stored in suitable containers and designated waste management areas.		✓	✓		✓	✓			✓
E7	Caltex's existing procedures for the disposal of sewage, greywater, hazardous materials, general waste and recyclable materials would be adopted for the Project (and modified if required). This would include using licensed contractors to remove and transport waste from the Site.						✓	✓	✓	

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E8	A Waste Register would be prepared, used and maintained by the Demolition Contractor to track all wastes generated from demolition works. The Demolition Contractor would retain waste receipts to indicate evidence of waste disposal. The database would also be used to track all materials reused at the premises including its reuse location, type of waste and classification. A Waste Register would be prepared, used and maintained by the Contractor to track all wastes generated from the ACS Modification works and used to record and report the types, volumes and management measures for all waste and resources arising from/used for the works. This would be subject to regular auditing.				✓	✓	✓		✓	✓
E9	**Stockpiled wastes would be:** • appropriately segregated to avoid mixing and contamination; • clearly labelled; • contained in bunded areas and if necessary on an appropriate lining; • less than 5m in height; and • located >40m away from any sensitive receivers, heritage, ecological areas and watercourses.				✓	✓	✓		✓	✓
E10	Materials to be re-used would be analysed to ensure material is not contaminated and re-use is appropriate.				✓	✓	✓		✓	✓
E11	An Asbestos Management Plan would be prepared and implemented in accordance with relevant legislative and other requirements. This plan would outline proposed methods of managing asbestos waste by the contractor. The Asbestos Management Plan would be updated to include the ACS Modification works.				✓	✓	✓			
E12	The Site's existing Asbestos Waste Register would be amended as appropriate, implemented and maintained to track asbestos wastes generated during the works.				✓	✓	✓	✓	✓	✓

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E13	If stored on-site, asbestos wastes would be located away from operational areas and properly sealed and contained to minimise human exposure and clearly labelled. Signage and barriers/fencing would be installed to ensure all employees, contractors and visitors would keep away from the area at all times.					✓	✓			✓
E14	The removal and disposal of asbestos wastes would be undertaken by a licenced asbestos contractor.					✓	✓			✓
E15	A Decontamination Area would be provided on-site for all authorised personnel handling asbestos.				✓	✓	✓			
E16	Wastes (both liquid and non-liquid) generated from the works would be assessed, classified and managed. Wastes would be disposed of at an appropriately licenced facility.					✓	✓			✓
E17	Recyclable wastes would be stored in suitable containers and designated waste management areas, to be transferred by a licensed waste contractor to an appropriate recycling facility where possible.						✓			
E18	Treated soils from the CSRF would be used where possible for the containment cell construction works in accordance with the conditions of the Caltex treated soil exemption 2016.						✓			
E19	New waste streams would be addressed as they arise and assessed to determine the most suitable management measures to use when handling, storing, transporting and disposing of the waste.						✓			
E20	Unidentifiable waste streams would be analysed and sent for testing in an accredited laboratory to assess the risks associated with handling and disposal of the waste.						✓			
E21	Additional sampling will be undertaken in the pipeways to further delineate the areas classified as asbestos contaminated in order to minimise the volume of soil classified as Special Waste and disposed of in the containment cell.						✓			
E22	Caltex would complete inspections following periods of extended heavy rainfall to confirm that pumps within the containment cell sumps are directing leachate to the Site's WWTP.						✓	✓		

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Surface Water, Wastewater and Flooding										
F1	**The Construction Environmental Management Plan (CEMP) for the Project would include a Soil and Erosion Management Plan. This plan would include the following measures:** • All materials would be stockpiled in accordance with '*The Blue Book' Managing Urban Stormwater – Soils and Construction Volume 1 and 2* (Landcom, 2004); • Silt fences would be installed around stockpiles to reduce erosion and the movement of suspended solids as necessary; • Soil stockpiles and any polluted materials would be stored in designated areas which are not in close proximity to any stormwater drainage systems; • Erosion control structures, bunded areas, containment areas, drainage lines and interception measures would be subject to regular inspection; • Clean materials would be separated from contaminated materials; and • Soil erosion and sedimentation devices would remain in place until the disturbed ground surface is restored. These devices would also capture any gross pollutants.		✓							
F2	A Soils and Water Management Plan would be developed as a sub plan to the DEMP. Measures to be included in the plan and implemented during the demolition works to protect stormwater quality would include: • Stormwater or groundwater ponded in excavations would be sent to the WWTP, unless it is tested and is of suitable quality to be directed to stormwater; • Stormwater that is captured in the bunds around the contaminated soil stockpiles would be collected and sent to the WWTP; • Silt fencing and/or alternate sediment control measures would be installed around soil stockpiles and disturbed areas or areas where dust suppression is being undertaken; • Regular inspection would be undertaken of soil stockpiles/excavation areas, including following rainfall events; • Regular inspection of excavation areas *and* containment cell area, including following rainfall events;					✓	✓			

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	• Regular inspections would be undertaken of stormwater drains down hydraulic gradient of disturbed areas; • Stormwater management measures incorporated into the design of the containment cell would be regularly inspected during operation in line with the Site's existing Inspection Checklist and following heavy rain events; • If stormwater quality is impacted during the demolition works and ACS Modification works in areas that have been disturbed, water would be diverted to the intermediate sewer system; and • During the demolition works and ACS Modification works, following notable but prolonged rainfall events (over three days) or following heavy rainfall events over a shorter timescale, water sampling would be completed at the stormwater retention basin to ensure that the quality of the water is of an appropriate standard to be discharged from the Site. Water that is not of an appropriate quality would be either treated in situ or directed to the WWTP.									
F3	Caltex would continue to implement the measures within the Stormwater Management Plan (SMP) for the Site. This plan has been produced in response to Environment Protection Licence No. 837, PRP U24.1: Stormwater Catchment and Management Plan. The SMP has committed Caltex to implementing a Stormwater Management Strategy and completing a number of stormwater management measures in a staged manner. Measures include: • Ongoing maintenance of the existing stormwater system; • Implementation of a number of projects to improve the infrastructure, reduce the potential for the refinery to flood, and prevent contaminated stormwater leaving the refinery premises; • Working with the NSW Office of Environment and Heritage (OEH), NSW EPA and Sutherland Shire Council to divert to flow of stormwater from the National Park away from the Site's stormwater system to the Sutherland Shire Council's stormwater infrastructure; • Carrying out stormwater flow monitoring; and • Updating the Site's stormwater system performance model to account for the changes to the stormwater system infrastructure that can then be used as a tool to assess future modifications, as necessary.	✓	✓	✓	✓	✓	✓	✓	✓	✓

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	This work would be completed in consultation with NSW EPA.									
F4	Discharges from the Wastewater Treatment Plant would be within existing EPL limits during demolition, construction and operation. Any required change to this Oily Water Management System would be discussed and agreed with NSW EPA.	✓	✓			✓	✓	✓		✓
F5	The measures and processes currently in place at the Site to prevent any loss of contaminant would be maintained throughout the demolition, construction and operation phases of the Project. All bunds on tanks which are retained in service would meet the capacity requirements of *Australian Standard AS1940* during the operation of the Project.	✓	✓			✓	✓	✓		✓
F6	**Improvements to monitoring would be initiated to ensure that if a loss of containment into a bund occurs it is detected early and contingency actions can be taken promptly.** **The measures for tanks containing low flash materials include:** • explosive vapour detectors within the bunds; • triple infrared scanners on tank roofs; and • CCTV in conjunction with infrared cameras as a confirmation for alarms. **All tanks on-site would be subject to:** • an automated high level shut off system; and • continuance of a comprehensive inspection/repair program.			✓						

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F7	Caltex undertakes a flood study, commencing in March 2018 that assesses potential flood risks from the Site to the Kurnell township, with a particular emphasis on the impacts from surface water entering the Site from land to the east and south of the Site and whether current diversion methods are appropriate. The flood study would consider the Sutherland Shire Council's *Draft Sea Level Rise Policy* (May 2016), or a latest revision. Caltex to remain in consultation with Sutherland Shire Council throughout the flooding investigation works to identify a mutually acceptable solution to potential flood risks along the north eastern boundary of the Site. The timing and form of consultation is to be mutually agreed by both parties (Caltex and Sutherland Shire Council) and outlined within a written document to be produced by Caltex prior to March 2018. It shall include regular reporting updates and milestone meetings, for example, at the Scope of Works, concept design, at the issuing of the draft report to discuss results and recommendations as a result of the study.			✓		✓		✓		✓
F8	The following measures would be employed during and following the demolition of the refinery process units and associated infrastructure: • Appropriate bunding and controls would be put in place to prevent stormwater runoff from the demolition works area entering the stormwater system. • Following the completion of the demolition works and removal of redundant infrastructure, the former refinery process area would be regraded. The regrading would aim to ensure that water does not pool in this area. • As part of the regrading works, the surface material in this area would meet the commercial/industrial criteria as defined by Schedule B1 Guidelines, *Investigation Levels for Soil and Groundwater, National Environment Protection Measure (Assessment of Site Contamination) Amendment Measure 2013*. A crushed aggregate made from clean concrete and asphalt from the demolition works would also be spread across the surface to help reduce soil erosion. • Stormwater runoff collected in the stormwater system would be subject to the controls within this system (such as the oily water separators) prior to being discharged.					✓				✓

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F9	Excavation of the pipeways would be staged, effectively minimising the area of disturbance at one time. The ACS Modification works would be undertaken in a manner to minimise the potential for soil erosion and sedimentation.						✓			
F10	Local weather patterns would be monitored to ensure that workers completing the ACS Modification works at the Site were aware of predicted heavy rainfalls so that work could be stopped in the pipeways prior to them containing surface water flows.						✓			
F11	The OEMP for the Site would be updated to include the following measures: • the new stormwater management infrastructure for the containment cell would be regularly maintained to ensure that stormwater flows are properly conveyed to the wider catchment; and • the leachate collection system including the tank would be regularly inspected to ensure that it is operating effectively and that no leaks have occurred.							✓		
Noise and Vibration										
G1	The CEMP/DEMP for the Project would include a Noise and Vibration Management Plan (NVMP). The NVMP would outline: • The locations of noise sensitive receptors; • Construction noise monitoring procedures; and • Construction equipment maintenance to ensure good working order.		✓			✓				
G2	Low-noise plant and equipment would be selected, where practicable, in order to minimise potential for noise and vibration. All equipment would be regularly checked to ensure that the mufflers and other noise reduction equipment are working correctly.		✓			✓	✓			✓

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G3	Community consultation with local residents would be undertaken to assist in the alleviation of community concerns. Prior to the proposed demolition works commencing within the Eastern and Western Right of Ways, at Silver Beach, on the Wharf or prior to particularly loud demolition works occurring on the main terminal site, potentially affected residents within Kurnell would be notified in advance. Should complaints be received, the complaints register would continue to be maintained and managed in line with the existing feedback process at the Site.		✓	✓		✓	✓			✓
G4	Any noise complaint(s) would be investigated immediately. Reasonable and feasible measures would to be implemented to reduce noise impacts.		✓	✓		✓	✓	✓		✓
G5	Construction/demolition equipment would be located to reduce noise emission to sensitive receptors, where practicable.		✓			✓	✓			✓
G6	The majority of the conversion works for the Project would typically be completed between 7.00am to 10.00pm seven days a week. Some works consistent with Caltex's existing day-to-day operational and maintenance procedures would occur over a 24 hour period as regulated by the Environmental Protection Licence (No. 837) (EPL) for the Site.		✓			✓	✓			
G7	Construction/Demolition staff and contractors would undergo training in environmental noise issues including: • minimising the use of horn signals and maintaining a low volume. Alternative methods of communication should be considered; • avoiding any unnecessary noise when carrying out manual operations and when operating plant; and • switching off any equipment not in use for extended periods during construction work. • ensuring works occur within approved hours.		✓			✓	✓			✓
G8	Should any unexpected construction activities occur which could potentially generate significant noise not described in this report, monitoring would be undertaken to ensure construction noise emission levels do not exceed EPL limits.		✓				✓			

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G9	Pipeline removal works would be confined to 7.00 am to 6.00 pm Monday to Saturday as per Condition C19 (for SSD 5544).					✓	✓			
G10	Demolition works near 30D Cook Street (i.e. within 500m) would be confined to 7.00am to 6.00 pm Monday to Saturday as per Condition C19.					✓				✓
G11	Demolition noise monitoring would be undertaken when necessary to ensure compliance with demolition noise criteria.					✓	✓			✓
G12	Caltex would ensure that the noise generated by the demolition works does not exceed the criteria defined in Table 2 (from Condition of Consent C16 of SSD 5544) unless the reasonable and feasible noise mitigation strategies outlined within the DNVMP have been implemented. Reasonable and feasible noise mitigation strategies would include appropriate respite periods during particularly noisy or prolonged activities.					✓				✓
G13	The DNVMP would describe where demolition noise limits from Table 2 (from Condition of Consent C16 of SSD 5544) are likely to be exceeded and what reasonable and feasible noise mitigation would be employed to minimise noise.					✓				✓
G14	To help ensure that the structures on Site that are to be retained with high or medium heritage significance are protected from potential vibration impacts, the DNVMP would also • Utilise Appendix H Heritage Impact Assessment to identify the medium to high heritage significance buildings to be retained; • Identify where works to demolish redundant structures are occurring within 20 m of a medium to high significance heritage building and the requirement to undertake vibration monitoring and management for these buildings to protect their integrity; and • Outline general monitoring and management measures to monitor vibration and manage buildings.				✓				✓	
G15	The Tank 101 demolition works would be coordinated with other nearby demolition works to reduce the potential for cumulative impacts.									✓

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Air Quality and Odour										
H1	Dust emissions from the construction phase of the Project and during the demolition works would be monitored by construction/demolition staff. Visual inspections would be completed by demolition staff during the works. Demolition staff would also complete dust deposition monitoring during the demolition works (as per AS/NZS 3580) in appropriate locations on the Site boundary and in Kurnell. Staff would also monitor dust (PM_{10}) levels using the on site real time ambient air quality monitoring station. When required, during activities likely to cause high dust levels or adverse weather conditions etc., a designated worker would continuously monitor downwind emissions to the community or local residents, using the methods described above, and call a halt to activities if sensitive receptors are likely to be affected by airborne particulate matter. Should significant impacts be likely, appropriate measures would be taken to mitigate adverse air quality impacts.		✓			✓	✓			✓
H2	Within the refinery, vehicles would only travel on designated roads where possible and would be limited to a maximum speed of 10 km/hr in offroad areas, and 25 km/hr elsewhere.		✓			✓	✓			✓
H3	Where there is the potential for dust or odour generation from trucks carrying spoil, loads would be covered and all tailgates would be securely fastened. Vehicles would not be loaded higher than the sides and tailboard.		✓			✓	✓			✓
H4	Construction and potentially dust generating demolition activities would be limited during high wind events if sensitive receivers are likely to be significantly impacted.		✓			✓	✓			✓
H5	All plant would be maintained and operated in line with the manufacturer's specifications in order to minimise the emission of air pollutants and offensive odours. Plant and construction vehicles would be turned off when not in use.		✓			✓	✓			✓
H6	Stockpiled material would be assessed for the potential for causing odorous or particulate emissions. If air pollutants and offensive odours are likely, controls would be put into place to manage adverse impacts.		✓			✓				✓
H7	All concrete cutting and coring would to be undertaken using "wet tools".		✓			✓				✓

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H8	An odour reduction program would be implemented in accordance with the existing EPL.		✓	✓						
H9	The guidepoles on the EFRTs in gasoline service would be fitted with sleeves.		✓	✓						
H10	Caltex's Leak Detection and Repair (LDAR) Program would continue in accordance with the Environment Protection Licence.		✓	✓						
H11	All reasonable and feasible measures would be implemented to minimise dust and odour emissions during the demolition works					✓	✓			✓
H12	VOC and Odour Monitoring would be undertaken by demolition workers or ACS Modification workers (i.e. visual and olfactory monitoring) and monitoring equipment during excavation activities where potential hydrocarbon contamination is present. Contractors would notify the Caltex Environment Specialist of any significant odours identified during demolition.					✓	✓			✓
H13	Soils or concrete with significant hydrocarbon staining or obvious hydrocarbon odours would be transported to the former CLOR area and stored appropriately. Stockpiles of contaminated soil stored on-site would be managed to prevent odorous VOC emissions and windblown particulate emissions.					✓				✓
H14	Excavation would be staged to manage potential VOC and odour emissions. Where practical, excavations would not commence prior to 8am nor after 4pm as weather conditions at these times are generally conducive to adverse odour air quality situations from fugitive emissions.					✓	✓			✓
H15	In unfavourable weather conditions (e.g. dry and windy conditions) or where dust sources are present near sensitive receivers, water sprays would be used to dampen down soils prior to excavation, handling and/or loading/unloading materials. All exposed surfaces (from recent excavations) and stockpiles (of excavated material) would also be watered, sprayed or covered where required, to minimise nuisance dust and odours.					✓	✓			✓

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H16	**During adverse meteorological conditions and extraordinary events, such as events where elevated background dust is present, additional mitigation measures would be considered to prevent and minimise air quality impacts from demolition works. These measures would include, but not be limited to implementing the following during high wind events (e.g. > 8m/s hourly average):** • Reducing working surface area • Commencing excavation during favourable wind conditions • Increase wetting agents for exposed surfaces • Increase covering of exposed surface areas.					✓	✓			✓
H17	Surface disturbance would be minimised. Exposed ground would be rehabilitated as soon as practicable.					✓	✓			✓
H18	Real-time dust monitoring would be undertaking during the operation of the concrete crusher. Details of this monitoring (and associated response actions) would be incorporated into the AQMP for the demolition works.					✓				✓
H19	During crushing, a number of dust suppression measures would be implemented. These could include regular watering of stockpiles, dust curtains and other measures as appropriate.					✓				✓
H20	Where biological matter is present within cooling water inlet pipework, the pipework would be removed be as soon as possible. This would help to minimise the potential for odour issues associated with the degradation and then exposure of the biological matter.					✓				
H21	Where visible dust emissions are observed appropriate management actions would be implemented to prevent impact.					✓				✓

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H22	In the event of an odour complaint, an evaluation would be undertaken to confirm if the demolition works are the source of the odours. If the demolition works are confirmed as a potential ongoing odour source additional mitigation measures would be implemented which could include the use of water sprays to suppress odours and, if necessary, the use of odour suppressants. Off-site olfactory observations and VOC monitoring using equipment would also be undertaken if necessary. In the event of ongoing odour issues, excavation activities would be stopped and if necessary the excavation covered or backfilled.					✓	✓			✓
H23	In line with Caltex's existing procedure, following a complaint and its subsequent investigation, feedback regarding the source and nature of the complaint would be provided to the affected community members.					✓	✓			✓
H24	Dust deposition monitoring would be undertaken during the demolition works (as per AS/NZS 3580). This would include monitoring points in appropriate locations on the Site boundary and in Kurnell.					✓				✓
H25	The on-site real time ambient air quality monitoring station would continue to operate throughout the demolition works. This station continuously monitors for PM_{10}, wind direction and speed, temperature and humidity and rainfall.					✓	✓			✓
H26	A summary of the air quality monitoring data for the demolition works would be provided to the community during Caltex's quarterly community meeting.					✓	✓			✓
H27	The DEMP would include a subplan: the Containment Cell Management Plan. With regards to air quality, this subplan would include: • A brief overview of the containment cell operations relevant to potential air emission sources. • Identification of mitigation measures for each respective emission source including those measures outlined in the DEMP for the Site (where relevant to operations within the containment cell area). • Details of proposed monitoring and recordkeeping procedures. During the production of this plan the NSW EPA *Guidelines for Environmental Management On-Site Remediation*, would be reviewed and if necessary relevant measures incorporated.						✓			

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H28	The Containment Cell Management Plan would be prepared and include the following mitigation measures: • A Soil Acceptance Criteria which identifies: - Only soil contaminated with airborne asbestos* (referred to in the ACS Modification works as ACS) from the Site (as defined by Figure 1-2 in the SEE) would be accepted into the containment cell. - Soils entering the containment cell from the Site but outside of the pipeways must be classified in accordance with the NSW EPA Waste Classification Guidelines 2014, as either special general solid waste or special restricted solid waste. - All soils, regardless of their classification under the NSW EPA Waste Classification Guidelines 2014 from the pipeways on the Site (as shown on Figure 1.2 of the SEE) would be disposed of in the containment cell. - The total volume of ACS would be limited by the design specifications final landform. • Prior to the commencement of filling activities dust and aerosol monitoring stations would be placed at a minimum of six locations around the working area with the objective of monitoring prevalent upwind and downwind locations. • Soil moisture content will be managed to ensure that it is greater than 15% in order to minimise potential particulate matter and asbestos [fibre] emissions to the maximum extent practicable by wetting of soils during filling of cell to minimise the generation of dust. • Directed water sprays will be used when required throughout ACS handling operations. • A biodegradable cover would be sprayed over ACS in the containment cell to minimise the generation of dust. The cover would be applied following the placement of ACS within the containment cell, and at the end of each day. • Limiting potentially dust generating activities during high wind events (i.e. >8m/s hourly average or in severe wind gust conditions) • Stockpiles will be maintained in a moist condition when not covered, and be covered if not in use or left overnight.						✓			

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	• Completed areas of the works area will be revegetated with native grasses as soon as is practicable. *Note - Airborne asbestos means any fibres of asbestos small enough to be made airborne (Safe Work Australia, April 2016, Code of Practice: How to Safely Remove Asbestos)									
H29	The DEMP and relevant sub plans (e.g. Asbestos Management Plan and Containment Cell Management Plan) would be revised to include the following measures: • a defined exclusion zone around the work area within which only staff who have been appropriately inducted in relation to the site procedures are permitted entry • wetting of soils during excavation and disturbance works to minimise the generation of dust • an Asbestos Removal Control Plan which identifies appropriate procedures for personal protective equipment; staff induction and decontamination of equipment • preparation of an asbestos monitoring and management plan to account for the activities that may liberate asbestos into the atmosphere. Dust and aerosol monitoring would occur in areas of the Site where asbestos in soil has been identified or is suspected to occur (including the pipeways) together with monitoring and analysis methods, exposure and control criteria and contingencies that will be implemented in the event specific exposure control criteria are exceeded.						✓			
Transport and Access										
I1	Local Authorities and Kurnell residents would be informed of any Project related work which would affect the road network.		✓			✓	✓			✓
I2	A Traffic Management Plan would be developed for the construction/demolition phase. The Traffic Management Plan would comply with all relevant Regulations and By-Laws and in particular address safe access and egress to the public road network. The Transport Management Plan would include: • hours of permitted vehicle activity; • designated routes for construction and demolition traffic and defined access points to the Site and demolition works area;		✓			✓	✓			

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	• duration of works; • permitted demolition vehicle types; • designated areas within the Site and demolition works area for truck turning movements, parking, loading and unloading to allow heavy vehicles to enter and leave the Site and demolition works area in a forward direction; • sequence for implementing traffic management measures should these be required; and • procedures and/or principles for construction and demolition vehicle speed limits and the safe operation of construction and demolition vehicles; and • coordination of off-site heavy vehicle movements from the demolition works and ACS Modification works to ensure that heavy vehicle movements do not exceed 60 movements per day.									
I3	Works to remove pipelines from under the road reserves in Kurnell would not take place before a road opening application has been approved by Sutherland Shire Council and on the days the following events are taking place: • Australia Day (January); • The Festival of Kites (May); • The Boree Regatta (October). and • Water events for the Australian Scout Jamboree (first two weeks of January 2016).				✓	✓				
I4	Traffic related to the ACS Modification works would be managed under the Traffic Management Plan that forms a sub-plan to the DEMP						✓			

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Heritage										
J1	A Heritage Management Strategy would be prepared for the Australian Oil Refinery prior to shut-down of the refinery plant, to provide Caltex with a basic framework for the ongoing management of the Site's heritage during present and future works. The Strategy would include a review of the heritage significance of the overall Site. The review would clarify the extent and relative heritage value of the place by identifying key elements of industrial and built heritage as well as social values of the refinery, and the relative contribution of these elements to the overall significance of the Site. Recommendations would also address the future assessment and management of memorabilia and other significant items of moveable heritage maintained on-site.	✓								
J2	If any further heritage items were discovered throughout the Project, work would cease until an assessment is carried out by a qualified heritage professional.	✓	✓			✓	✓			✓
J3	An archival photographic record of the existing fabric and operations of the Kurnell Refinery would be prepared while the plant is still operational, and during the decommissioning process. The recording would be undertaken in accordance with the Heritage Council guidelines on *Photographic Recording of Heritage Items Using Film and Digital Capture* (2006). The archival recording would be maintained for the appreciation of present and future generations. To this end, the recording would be lodged with the Sutherland Shire Library and NSW State Library.	✓	✓							
J4	The Heritage Management Strategy (HMS) and the management strategies within it would continue to be implemented.				✓	✓			✓	✓
J5	Opportunities to adaptively reuse redundant buildings identified in the HMS as having high or moderate heritage significance would continue to be reviewed prior to final demolition works.				✓	✓				
J6	The sculptural panels by Bert Flugelman would be retained and preserved.				✓	✓				
J7	Sandstone blocks from the informal sandstone wall along Silver Beach would be set aside in a secure location prior to works, and reinstated in the same location following removal of the cooling water outlet pipeline.				✓	✓				

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J8	Appropriate mitigation measures would be implemented to reduce the likely damage to the interpretive footpath in front of the driveway entrance to the Kurnell Wharf. Measures would include: • Making a record of the current state of the pavement. • Removing the affected pavement in sections and storing these sections in a secure location. • Reinstating the pavement in the same location following the removal of pipelines; • If this is not practicable, a similar pavement treatment and a matching or compatible interpretative design would be reinstated.				✓	✓				
J9	If historical archaeological relics are unexpectedly found during the demolition works, works in the area of the relics would cease and the Heritage Council of NSW would be notified.					✓	✓			✓
J10	A Stop Works procedure would be implemented should any Aboriginal Heritage items be found. Works would cease at the vicinity of the item and OEH would be notified as soon as possible					✓	✓			✓
J11	If any human remains are disturbed, all work in the vicinity of the remains would stop immediately and the remains would not be further disturbed or moved. Works would cease at the vicinity of the item and OEH and NSW Police would be notified as soon as possible.					✓	✓			✓
J12	Prior to works commencing, all personnel and contractors involved in ground disturbance works would be briefed on the procedures to follow if human remains or unexpected heritage items are found.				✓	✓	✓		✓	✓
J13	As part of the DEMP, a Heritage Management Section will be developed. This will incorporate previous Management and Mitigation Measures that are not already included in the HMS.				✓	✓	✓			

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Ecology										
K1	**A Biodiversity and Weed Management Plan (BWMP) would be prepared in order to limit and control the spread of noxious weeds within the Site/demolition works area. It would include the following:** • wash down procedures to reduce the spread of weeds via vehicles and machinery; • measures to target potential new weed outbreaks including soil stockpiles and any other disturbed areas; • outline monitoring programs for noxious and problematic weeds on site and in the surrounding areas; • measures for strict stockpiling control to help eradicate all noxious weeds as per NSW DPI specifications for Sutherland Shire LGA; • include a list of 'frog-friendly' and 'wetland friendly' herbicides such as Roundup Biactive or Weedmaster DUO for the control of noxious weeds; and ensure that only amphibian friendly herbicides are used; • wash down protocols for construction/demolition vehicles and machinery to prevent the spread of root-rot fungus (*Phytophthora cinnamomi*) and noxious weeds; • all personnel undertaking routine management activities of any noxious weeds should be appropriated trained and all contractors should hold the necessary permits and licenses. Noxious weed information sheets would be provided to demolition contractors to help identification of relevant noxious weeds.	✓	✓	✓	✓	✓				

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K2	A BWMP would be prepared in order to limit potential impacts to existing vegetation outside of the area of proposed works, but within the Site. It would include the following: • existing vegetation on Site would be clearly marked on all Site plans and construction diagrams, with clear indications of no-go zones within all vegetated areas; • existing vegetation would be clearly signposted and fenced off prior to the commencement of construction activities, and should remain fenced off until the completion of works (as per the Vegetation Exclusion Zones shown on Figure 17-1); and • absolutely all works would be limited to the defined construction/demolition footprint.	✓	✓	✓	✓	✓				
K3	To minimise the potential for impacts to native fauna species, the BWMP would be developed and include following measures: • if any frogs are found within the Project Area, works would cease until frogs have been relocated to areas outside the area of impact; • if any threatened frogs e.g. Green and Golden Bell Frog or Wallum Froglet are identified within the Site, works would cease and active searching should be undertaken by a qualified zoologist experienced in the identification and management of the Green and Golden Bell Frog and Wallum Froglet; • all trenches would be inspected prior to works each morning. Any frogs that become trapped within trenches would be assessed by a suitably qualified ecologist or veterinarian and then released into the nearest suitable habitat if uninjured; • identification sheets would be provided to all construction workers on Site for the two threatened frog species predicted to occur within the Site; • wash down protocols to prevent the spread of Amphibian Chytrid Disease (chytridiomycosis) would be implemented at relevant work areas. Protocols would be consistent with OEH guidelines (DECC, 2008b); • 'frog-friendly' and 'wetland friendly' herbicides such as Roundup Biactive or Weedmaster DUO would be used for the control of noxious weeds; and	✓	✓	✓						

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	• if fauna are found to be utilising the Site, or a nest, den or roost is found, work in the immediate area is to stop and the animals are to be allowed to move off freely, or relocated by an authorised person to an area outside the construction footprint.									
K4	To minimise the potential impacts to native fauna during the demolition works the following measures would be included in the BWMP: • demolition workers would be provided with identification sheets relating to the threatened fauna species predicted to occur within the Site. • Stop work procedures would be implemented during the works on the chance encounter of any dispersing threatened frogs or the identification of nesting Pied Oystercatcher, Little Tern, Osprey or White-bellied Sea-eagle to avoid death or injury to frogs dispersing across the study area, or disturbance to nesting threatened birds. • Trenches/holes would be back-filled daily or covered overnight. Where this is not possible, other measures would be considered to prevent and/or mitigate fauna entrapment. Trenches/holes would be inspected prior to works each morning. Injured frogs that become trapped within trenches would be assessed by a veterinarian or ecologist. Uninjured frogs would be captured and released into the nearest suitable habitat to the south of the study area. • If threatened frogs, Green and Golden Bell Frog or Wallum Froglet are identified during demolition works, active searching would be undertaken by a qualified zoologist experienced in the identification and management of the Green and Golden Bell Frog and Wallum Froglet. • When open trenching/digging/excavating, Caltex would ensure that exclusion fencing is erected prior to works commencing each morning. Exclusion fencing shall be maintained during all seasons of the year, given the active season for the Green and Golden Bell Frog extends from September to April and the Wallum Froglet peak activity period occurs during the colder months. • If practicable, works at Silver Beach to remove the cooling water outlet should be completed outside of the known nesting periods for Pied Oystercatcher (August to January) and Little Tern (Spring/Summer). If				✓	✓				

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	nesting shorebirds are encountered in the Silver Beach foreshore area in the vicinity of works (within 20 m), works at Silver Beach would cease, a qualified zoologist would be consulted and appropriate actions would be implemented, prior to works recommencing. • If practical, works to remove tall structures on-site should be completed outside of the known nesting periods the threatened bird species (July to September for Osprey and June to January for White-bellied Sea-eagle). If not practical then tall structures would be inspected for active nests prior to commencing the demolition works.									
K5	The following recommendations, would be contained in the Cooling Water Outlet Management Plan for managing the potential marine ecology impact and implemented during demolition works: • silt curtains would be installed seaward of the demolition works area but not directly above existing seagrass communities; • all plant and equipment used in the water column would be appropriately prepared, checked and cleaned to avoid potential release of contaminants; • plant and equipment used in the water column would be inspected to ensure fragments of the invasive algae Caulerpa taxifolia are not present; • spill kits would be used to contain and clean up any spills from demolition plant and equipment. Spill kits would be located within 20 m of demolition plant and equipment; and • demolition works at Silver Beach (particularly those located in the water column) would be timed such that they do not coincide with high-tide conditions or during significant wave action.				✓	✓				

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K6	Following the removal of the continental carbon pipeline and other infrastructure Caltex would develop a strategy to manage the redundant right of way (CCROW). The strategy would include measures to: • remove fencing, reprofile and allow natural regeneration the southern part of the CCROW (beyond the southern boundary of the Site) to promote consistent and connected vegetative communities across the southern part of Caltex's ownership; • remove and keep out noxious and invasive weeds, especially during the regeneration phase; and • reprofiling of the CCROW could include creating gaps in the raised easement to allow for hydrological exchange and habitat regeneration.					✓				
K7	Caltex would undertake the following prior to excavation along the Continental Carbon Right of Way: • pre-clearing inspections; and • implementing frog exclusion measures to ensure dispersing frogs are not captured and trapped in trenches during pipeline removal (e.g. exclusion fencing).					✓				
Coastal Processes										
L1	A Cooling Water Outlet Management Plan would be developed as part of the Demolition Environment Management Plan (DEMP). Rehabilitation works at Silver Beach would be in accordance with this Cooling Water Outlet Management Plan. The following measures would be included:				✓	✓				
L2	A detailed survey of the likely extent of the disturbed area at Silver Beach would be undertaken prior to commencing demolition works to ensure that the pre-existing topography is re-established following the works.					✓				
L3	The affected sand dunes (including the back-beach and sub-aerial beach) would be re-instated using the stockpiled overburden sand and if necessary, additional sand. Additional sand used for reinstating sand dunes would be of similar particle size and composition as the overburden sand.					✓				

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L4	The affected sand dunes would be restored to match the previously surveyed topography. A smooth profile from the back-beach area to the dune would be re-established to ensure the aerodynamics are as consistent as possible with the undisturbed areas adjacent to the disturbed area. If necessary, liquid sprays or geotextiles would be used to help stabilise the beach and protect against erosion.					✓				
L5	The affected sand dunes would be re-vegetated using indigenous, native flora. The existing vegetation is limited to grasses, with no woody vegetation. The area would be re-planted with similar grass species in a manner that ensures minimal loss of wind-blown sand from the dune while the area is re-vegetating. All re-vegetated areas would: • contain signage to highlight these areas as rehabilitation zones that prohibit public and vehicular access; • be temporarily fenced, and • be maintained and monitored until vegetation is established using approved dune rehabilitation methods.							✓		
L6	Material of a similar sediment size and colour characteristics would be used as back fill material for the trench below the low tide mark. To account for later settling and consolidations, some overfilling would be undertaken to account for later consolidation (approximately 10 % would be recommended).							✓		