Intended for

Viva Energy Australia Ltd

Prepared by

Ramboll Environ Australia Pty Ltd

Date

15 July 2016

Project Number

AS121989

INDEPENDENT ENVIRONMENTAL AUDIT

CLYDE TERMINAL

RAMBOLL ENVIRON

INDEPENDENT ENVIRONMENTAL AUDIT
CLYDE TERMINAL

Revision	**Final F1**
Date	**15/07/2016**
Made by	**Dean Osmond & David Ford**
Checked by	**Victoria Sedwick**
Approved by	**Victoria Sedwick**
Description	**Audit Report**

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1. EXECUTIVE SUMMARY

Viva Energy Australia Ltd (Viva Energy) engaged Ramboll Environ Australia Pty Ltd (Ramboll Environ) to conduct an environment audit (the Audit) of the Clyde Terminal at Durham Street, Camellia (the Site), in New South Wales (NSW). The Site visit components of the Audit were conducted by David Ford and Dean Osmond (the Auditors) on 10 May 2016 and by David Ford and Victoria Sedwick (Lead Auditor) on 24 May 2016.

Clyde Refinery ceased operations in late 2012. The Site continued to operate as a terminal while decommissioning of refinery assets was undertaken. In January 2015, planning approval was granted for the Clyde Terminal Conversion Project (the Project), which is currently underway.

The objective of the Audit was to assess the environmental performance of the Clyde Terminal Conversions Project, including the requirements of the Site's Environmental Protection Licence (EPL), as required under Condition D7 of development consent SSD 5147 which requires that:

> *Within a year of the date of this consent, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the Development. This audit must:*
>
> *(a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;*
>
> *(b) include consultation with the relevant agencies;*
>
> *(c) assess the environmental performance of the Development and whether it is complying with the relevant requirements in this consent and any relevant EPL (including any assessment, plan or program required under these approvals);*
>
> *(d) review the adequacy of any approved strategy, plan or program required under these approvals; and*
>
> *(e) recommend measures or actions to improve the environmental performance of the Development, and/or any assessment, plan or program required under these approvals.*

The following administrative non-compliance with development consent SSD 5147 was identified during the Audit:

- A complaints register has not been published on Viva Energy's website. Ensure that processes are in place for all environmental complaints relating to the Project, including those received directly by contractors, to be included in reporting.

The following administrative non-compliance with EPBC approval 2013/6878 was identified during the Audit:

- An annual compliance report has not been published on Viva Energy's website. Publish a report addressing compliance with the conditions of the EPBC approval on the Viva Energy website and ensure that future annual reports are published by the due date of 16 April each year.

The following administrative non-compliance with the Environment Protection Licence were identified during the Audit:

- Records of water volumes discharged from EPA Point 1 during the 2015-2015 reporting period were not retained. This situation has been corrected and the omission was reported as a non-compliance in the 2014-2015 Annual Return.
- Samples of water collected from EPA Point 26 in January 2016 were not analysed for total petroleum hydrocarbons. This appears to be an isolated occurrence and is not indicative of a

systematic issue. The Auditors have been informed that it will be noted as a non-compliance in the 2015-16 Annual Return.

In addition to these non-compliances, the following recommendations are made relating to observations made during the Audit:

- Continue consideration of options for dust control measures once the demolition contractor has vacated the Site.
- Continue consideration of options for adequate erosion and sediment control measures to be maintained once the demolition contractor has vacated the Site.
- Erect flood warning signs based on the finalised Flood Assessment Report.
- Document how the integrity of bunds is assessed based on visual inspection (e.g. water retention after rain) and the review of groundwater monitoring.
- Consider improvements to the record of wastes received from Gore Bay Terminal to include the quantity in each receipt.
- Continue consultation with the EPA on options for including overflows from the Main Interceptor, Northern Interceptor and Tankfarm B Retention Basin as licensed discharge points on the EPL.
- Ensure that all pages attached to Section C of the EPL Annual Return are initialled by the person(s) who signed the certification section of the Return.
- Improvements to the PIRMP should be considered as part of the next update or test of the plan.
- Ensure consistency in labelling of sample location on water samples collected from monitoring/discharge points and consider options to improve the recording of the name of the sampler.

2. INTRODUCTION

Viva Energy Australia Ltd (Viva Energy) engaged Ramboll Environ Australia Pty Ltd (Ramboll Environ) to conduct an environment audit (the Audit) of the Clyde Terminal at Durham Street, Camellia (the Site), in New South Wales (NSW). The Site visit components of the Audit were conducted by David Ford and Dean Osmond (the Auditors) on 10 May 2016 and by David Ford and Victoria Sedwick (Lead Auditor) on 24 May 2016. The Audit plan, Audit Report and Action Plan were reviewed by Victoria Sedwick.

The Independent Environmental Audit (IEA) is required under Condition D7 of the development consent for the conversion of the former Clyde Refinery into the Clyde Terminal. The Site is identified as part Lot 101 in Deposited Plan (DP) 809340; part Lot 2 DP224288; part Lot 100 DP1168951; and part Lot 1 DP383675 and is located on Durham Street, Camellia, NSW.

2.1 Audit Objective and Scope

The objective of the Audit was to assess the environmental performance (to date) of the Clyde Terminal Conversion Project (the Project), including the requirements of the Site's Environmental Protection Licence (EPL 570), as required under Condition D7 of development consent SSD 5147. As work is continuing on the Project, the findings stated in this report as of the date of the Audit.

Condition D7 of development consent SSD 5147 requires that:

> *Within a year of the date of this consent, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the Development. This audit must:*
>
> *(a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;*
>
> *(b) include consultation with the relevant agencies;*
>
> *(c) assess the environmental performance of the Development and whether it is complying with the relevant requirements in this consent and any relevant EPL (including any assessment, plan or program required under these approvals);*
>
> *(d) review the adequacy of any approved strategy, plan or program required under these approvals; and*
>
> *(e) recommend measures or actions to improve the environmental performance of the Development, and/or any assessment, plan or program required under these approvals.*
>
> *Note. This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.*

Furthermore, Condition D8 of development consent SSD 5147 requires that:

> *Within 3 months of commissioning this audit, or as otherwise agreed by the Secretary, the Applicant shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report and a program for implementation.*

2.2 Exclusions

Development consent SSD 5147 required all prior development consents to be surrendered. Conditions of prior development consents were therefore not considered in this Audit. The primary focus of the Audit has been on the period since development consent SSD 5147 was granted in January 2015.

Development consent SSD 5147 does not include remediation of soil and groundwater at the Site. Remediation will be the subject of a future development application and was not included in this Audit.

Audit against some conditions of SSD 5147, as shown in Table 3, are expected to fall within the scope of the Hazard Audit required under Condition C6 of the consent and were not included in this Audit.

Viva Energy's Parramatta Terminal adjoins the Site to the north and operates under a separate Environment Protection Licence. Parramatta Terminal operations were not included in this Audit.

Activities on land leased from Viva Energy by Autonexus, Lyondell Bassell and SUEZ Environnement (formerly SITA) were not included in this Audit.

2.3 Audit Methodology

The Audit was conducted in accordance with the general requirements of AS/NZS ISO 19011:2014 *Guidelines for quality and/or environmental management systems auditing* and the NSW Department of Planning and Environment (DPE) *Independent Audit Guideline* (October 2015). Compliance has been assessed using the Independent Audit Guideline criteria as shown in Table 1. Non-compliances have been assigned risk levels from the Independent Audit Guideline as shown in Table 2.

The following tasks were completed during the audit:

- Review of Site documentation prior to inspections of the Site.
- Preparation of an audit plan and protocol.
- Inspections of the Site accompanied by Viva Energy personnel.
- Review site records for verification of the audit findings.
- Preparation of a written Audit Report (this report).

The draft Audit Report was provided to Viva Energy to review for factual correctness.

2.4 Audit Team

The audit team including Victoria Sedwick (Lead Auditor), Dean Osmond (Auditor) and David Ford (Auditor) was approved in writing by the DPE in a letter to Viva Energy dated 18 August 2015. Specialist ecological advice was provided by Dr Paul Goldsworthy.

2.5 Agency Consultation

Ramboll Environ consulted with relevant agencies as part of the Audit. Agencies consulted were:

- NSW DPE
- NSW Environment Protection Authority (EPA)
- Parramatta City Council (PCC)

3. AUDIT FINDINGS

This sections contains a summary of the Audit findings. Detailed compliance findings are presented in a tabular format in Tables 3 and 4 and an Action Plan in Table 5 (refer to the Tables section of this report).

3.1 General

Clyde Refinery ceased operations in late 2012. The Site continued to operate as a terminal while decommissioning of refinery assets was undertaken. In January 2015, planning approval was granted for the Clyde Terminal Conversion Project, which is currently underway. In general terms, the Project involves:

- Demolition and removal of refinery assets and processing units that are no longer required;
- Decommissioning and demolition of tanks that will not be required for the terminal final configuration;
- Inspection and, where required, refurbishment of remaining tanks;
- Inspection and where required, improvements to tank bund walls;
- Upgrades to electrical and instrumentation systems, including tank overfill protection;
- Upgrades to piping, valves and manifold systems;
- Cleaning of above ground and below ground drains; and
- Upgrades to fire protection and fire suppression systems.

3.2 Environmental Management

Clyde Terminal operates under Viva Energy's integrated management system which includes health safety and environmental management. In addition to operational management systems, an Environmental Management Strategy for the Project is in place which includes a range of management plans for various aspects of the projects. The Auditors consider that both the operational and Project related environmental management systems are generally adequate. Opportunities for improvement, which have been identified during the Audit, are outlined in the following sections of this report.

3.2.1 Complaints

Viva Energy operates a complaints line. The telephone number for the complaints line is available on the Viva Energy website and is included on community newsletters. No complaints were reported directly to Viva Energy in the current EPL Annual Return reporting period to date or in the prior EPL Annual Return reporting period (i.e. since 2 July 2014). Complaints would be recorded as incidents in Viva Energy's incident management system. A complaint received by the demolition contractor was notified to Viva Energy and, while Viva Energy has a record of this complaint, it has not been recorded in the incident management system and has not been included in an on-line complaints register (required under the development consent). All complaints relating to the licensed premises should be included in Annual Returns and in the on-line complaints register.

***Recommendation*:** Ensure that processes are in place for all environmental complaints relating to the licensed premises, including those received directly by contractors, to be included in complaints register and reporting.

3.3 Planning Approvals

Development consent SSD 5147 was granted on 14 January 2015 by the Planning Assessments Commission, as delegate of the Minister for Planning, for the conversion of the existing Clyde Refinery to a finished petroleum products import, storage and distribution terminal, including demolition of redundant infrastructure. As a condition of the consent, all previous planning development consents were to be surrendered. Although conditions of prior development consents were not considered in this Audit, it is noted that Viva Energy has proposed that some previous approvals be retained as they apply to parts of the Site that fall outside the Project area. This proposal is under consideration by the DPE. The Auditors understand that it was DPE's intent that only one consent, being SSD 5147, would apply to the Clyde Terminal.

Vive Energy has staged the construction of the Project into four "systems" comprising:

- Electrical;
- Product;
- Fire Protection; and
- Butane.

At the time of the Audit, work had commenced on construction of the Electrical and Product systems and commissioning of the Electrical system; however, neither of these systems had become operational.

Ramboll Environ's review of site documentation, audit observations and interviews with site representatives demonstrated the Project has to date been conducted generally in accordance with the terms of the approval, although some non-compliances and opportunities for improvement were observed. Ramboll Environ's compliance findings and recommendations are documented within Table 3 and Table 5 respectively of this report.

3.3.1 EPBC Referral

The Project was referred to the Commonwealth under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and granted approval on April 2014 (EPBC 2013/6878). Conditions of the EPBC approval relate primarily to managing impacts on the Green and Gold Bell Frog, which is known to be present on the Site. Ramboll Environ reviewed the Site's Green and Gold Bell Frog Plan of Management (Biosphere Environmental Consultants, updated 2014) and conservation plan (Conservation of Green and Gold Bell Frogs, Biosphere Environmental Consultants, 2013) and the Project Biodiversity Management Plan and considers them to be adequate. The Auditors observed an Administrative Non-compliance with Condition 7 of the EPBC approval as the first annual compliance report has not been published on Viva Energy's website.

***Recommendation*:** Publish a report addressing compliance with the conditions of the EPBC approval on the Viva Energy website and ensure that future annual reports are published by the due date of 16 April each year (until 2020, being five years from commencement).

3.4 Environment Protection Licence

The facility operates under EPL 570 (refer to Appendix B) issued by the EPA in accordance with Section 55 of the NSW *Protection of the Environment Operations Act 1997* (POEO Act). Viva Energy is the licence holder.

The EPL covers the following Scheduled Activities:

- Chemical Storage.
- Waste Processing (non-thermal treatment).

The EPL covers the following Fee Based Activities and Scale of Activities:

- Petroleum products storage, scale: >100,000 kilolitres (kL).
- Non-thermal treatment of hazardous and other waste, scale: any tonnes (T) treated.

The EPL was been modified a number of times since the cessation of refining activities in late 2012 and it is noted that the EPA was consulted during assessment of the development application for the Project. A review of the site's EPL was carried out as part of this Audit. A full description of the findings and recommendations can be found in Table 4 and Table 5 respectively.

3.5 Pollution Incident Response Management Plan

Under the POEO Act, the holder of an EPL is required to have in place a Pollution Incident Response Management Plan (PIRMP) and to make certain parts of the PIRMP publicly available. The site has prepared a PIRMP, parts of which are available on Viva Energy's website.

The PIRMP was last tested in June 2015 in an exercise involving a pump seal failure during fuel transfer to the road gantry. The PIRMP generally meets the requirements of the POEO Act; however, the following areas are identified as opportunities to improve the PIRMP:

- A PIRMP may form part of another document; however, the information required to be included in the PIRMP should be readily identifiable. The Clyde Terminal PIRMP references several other documents, including the Emergency Response Plan and the Hazard and Effects (HEMP) Register. The sections of these documents that are required for the PIRMP are not readily identifiable.
- The HEMP Register appears to have been issued in 2012 and may require updating.
- Potential pollution incidents are identified; however, the likelihood of an incident occurring is not addressed (POEO Regulation 98C(1)(b)).
- The information required by Section 153C(a)(i) of the POEO Act is not readily identifiable in the public document (POEO Regulation 98D(3)).

Recommendation: Consider the above improvements to the PIRMP as part of the next update or test of the plan.

3.6 Agency Consultation

Ramboll Environ consulted with the NSW EPA and Parramatta City Council a part of this Audit. Comments made by the representatives contacted at these agencies are summarised as follows:

- A representative of the NSW DPE noted that Viva Energy has been active in fulfilling the post-approval requirements for the Project and that Viva Energy has been good in communicating with the DPE. In particular, it was noted that demolition of the stacks was handled well. The DPE is working through the Viva Energy proposal to retain some of the existing development consents that are listed to be surrendered (which Viva Energy believes should not have been included in the list of development consents to be surrendered as they apply to areas outside the Project boundary). The DPE noted that it was their intention that there should only be one consent for the Clyde Terminal. Areas of interest for the DPE include ensuring that each stage of the Project is adequately covered by the required management plans; management of biodiversity and the wetland area; that new substations had been built at appropriate levels for the flood risk; and whether traffic generated by the Project is consistent with forecasts in the Environmental Impact Statement (EIS).
- A representative of the NSW EPA noted that the main environmental issues at the Site are remediation of soil and groundwater contamination (outside the scope of this Audit) and the quality of surface water discharges. In addition to potential entrainment of pollutants in stormwater, it was noted that there is potential for small plastic pellets to be discharged (which the Auditors understand to be a legacy of Lyondell Basell's operations at the site). It was noted that Viva Energy self-reports non-compliances with EPL conditions, each of which is recorded by the EPA as an incident. The EPA noted that Viva Energy has put considerable effort into bunding on the Site. The EPA has not received a complaint concerning the Site since the refinery operation ceased. There were no complaints during the explosive demolition events and the EPA noted that Viva Energy had handled community consultation well through this process. The EPA noted there are other industrial activities near the site that have the potential to cause impacts such as odour and dust.
- A spokesperson for Parramatta City Council advised that Council had a good relationship with Viva Energy and that Viva Energy had been open with its communications and had consulted with Council in the preparation of various management plans for the Project covering areas such as flood risk, traffic, heritage and demolition.

3.7 Environmental Issues

3.7.1 Surface Water Quality

Surface water from the Site is discharged to either the Parramatta River or Duck River via a complex arrangement of open and underground drains. Drains from areas considered clean discharge directly without treatment. Drains from areas where the surface water may be contaminated with hydrocarbons, such as the former processing area and the tank farms, is

normally treated prior to discharge through one of the licensed EPA discharge points. Treatment comprises corrugated plate interceptors (CPIs) at various locations around the site; large retention basins (Main Interceptor, Northern Interceptor and Tankfarm 2 Retention Basin); oil skimming (at the Main Interceptor); and bio-treatment (at the Main Interceptor). There are 11 EPA monitoring/discharge points listed on the EPL, including:

- Point 1 - from the bio-treater;
- Point 2 – pumped discharge from Main Interceptor;
- Point 4 – pumped discharge from Tankfarm 2 Retention Basin; and
- Point 30 – pumped discharge from Northern Interceptor.

After significant rainfall, discharge may occurs via points that are either not included on the EPL (overflow from Main Interceptor) or are included on the EPL but do not have concentration limits specified (EPA Points 28 and 29 – overflow from Northern Interceptor). Viva Energy samples the overflows and the licensed discharges and applies concentration limits for EPA Points 2 and 4 to the overflows. Viva Energy reports exceedances of concentration limits at the licensed EPA discharge points and of the overflows to the EPA, with the most common cause of concentration limit exceedance being total suspended solids. The practice or reporting overflows where there has been an exceedance of concentration limits differs from the practice noted in the EIS, which was to report all overflows to the EPA. According to Site representatives, this change was agreed in discussions with the EPA.

The practice of applying concentration limits for EPA Points 2 and 4 to the overflows may not equate to strict compliance with Section 120 of the POEO Act. Viva Energy has sought confirmation from the EPA that the approach is acceptable, which has led to discussions on whether these discharge points be included on the EPL.

Recommendation: Continue to consult with the EPA on options for including overflows from the Main Interceptor, Northern Interceptor and Tankfarm B Retention Basin as licensed discharge points on the EPL.

When possible, the Main and Northern Interceptors are kept at a low level to maximise retention capacity in the event of heavy rain. The Auditors sighted maintenance records for the cleaning of these interceptors. Site personnel advised that cleaning of interceptors and CPIs is generally in response to observations made during daily rounds, rather than following a fixed schedule.

3.7.2 Emissions Monitoring and Compliance

Water discharge points from the Site are required to be monitored for quality and volume as per the conditions of EPL 570. Viva Energy has undertaken the required monitoring with the following exceptions:

- Records of water volumes discharged from EPA Point 1 during the 2014-2015 reporting period were not retained. This situation has been corrected and the omission was reported as a non-compliance in the 2014-2015 Annual Return.
- Samples of water discharged from EPA Point 26 in January 2016 were not analysed for total petroleum hydrocarbons.

Viva Energy also monitors the quality of overflows as discussed above. Concentration limits are exceeded at times, particularly for total suspended solids, usually after significant rain. Viva Energy reports these exceedances to the EPA and, as now required by development consent SSD 5147, to the DPE.

3.7.3 Storage and Handling of Chemicals

Storage and handling of chemicals, fuels and oils for use on the Site is considered to be appropriate. Storage of petroleum products on the Site is expected to be assessed in detail as part of the Hazard Audit. From an environmental aspect, all above ground hydrocarbon tanks are bunded with walls constructed of concrete; brick, or shotcrete covered earth. As part of the Project, bunds wall that will remain following completion of the Project are being inspected and, where necessary, upgraded. Bund floors are, and will remain, earthen. While engineered earthen

floors can be impervious, the Auditors note that it is difficult to validate the integrity of earthen floors. Viva Energy conducts regular groundwater monitoring and considers the absence of a deterioration of groundwater quality as confirmation that bund integrity is adequate.

Recommendation: Document the integrity of bunds based on visual inspection (e.g. water retention after rain) and document the review of groundwater monitoring as a method of monitoring bund floor integrity.

3.7.4 Air Quality

Potential air quality issues identified are vapour emissions and dust. Viva Energy calculates the emissions of benzene and volatile organic compounds (VOCs) in accordance with EPA methods and is operating within limits imposed by EPL 570. The Auditors did not observe dust emissions from the site; however, following demolition of the refinery processing units, a large area of unsealed ground is present. The demolition contractor is still on site and maintaining dust control measures, such as use of a water cart. When the demolition contractor vacates the site there is potential for this area to be a source of dust in dry weather conditions. The Auditors were shown options that are being considered by the site for dust control after the demolition contractor leaves the site.

Recommendation: Continue to consider options for dust control measures once the demolition contractor has vacated the Site.

3.7.5 Noise and Vibration

Noise and vibration have not been identified as significant issues at the Site. Development consent SSD 5147 includes operational noise conditions. Monitoring has not been undertaken to confirm compliance with the noise conditions; however, no noise complaints have been received since commencement of the Project.

3.7.6 Waste Management

Waste management practices and records are considered to be generally good. Separate waste registers, including waste classification and waste code (where required) are maintained for demolition (by the demolition contractor) and for construction and operations (by Viva Energy). EPL 570 allows for waste to be received from Viva Energy's Gore Bay Terminal without the need for waste tracking; however, records of waste received must be kept. The record of spent activated carbon received is the maintenance work order kept in the SAP system. The amount received is recorded at the weighbridge; however, it is not included in the SAP maintenance work order and it is therefore difficult to reconcile against the amount of activated carbon sent from the Site for disposal.

***Recommendation*:** Consider improvements to the record of wastes received from Gore Bay Terminal to include the quantity in each receipt.

4. CONCLUSIONS

The Auditors consider that overall, the environmental practices at the Site are generally good; however, some non-compliances with consent conditions and EPL conditions have been identified.

The following administrative non-compliance with development consent SSD 5147 was identified during the Audit:

- A complaints register has not been published on Viva Energy's website. Ensure that processes are in place for all environmental complaints relating to the Project, including those received directly by contractors, to be included in reporting.

The following administrative non-compliance with EPBC approval 2013/6878 was identified during the Audit:

- An annual compliance report has not been published on Viva Energy's website. Publish a report addressing compliance with the conditions of the EPBC approval on the Viva Energy website and ensure that future annual reports are published by the due date of 16 April each year.

The following administrative non-compliance with the Environment Protection Licence were identified during the Audit:

- Records of water volumes discharged from EPA Point 1 during the 2015-2015 reporting period were not retained. This situation has been corrected and the omission was reported as a non-compliance in the 2014-2015 Annual Return.
- Samples of water collected from EPA Point 26 in January 2016 were not analysed for total petroleum hydrocarbons. This appears to be an isolated occurrence and is not indicative of a systematic issue. The Auditors were informed that this will be noted as a non-compliance in the 2015-16 Annual Return.

In addition to these non-compliances, the following recommendations are made relating to observations made during the Audit:

- Continue consideration of options for dust control measures once the demolition contractor has vacated the Site.
- Continue consideration of options for adequate erosion and sediment control measures to be maintained once the demolition contractor has vacated the Site.
- Erect flood warning signs based on the finalised Flood Assessment Report.
- Document how the integrity of bunds is assessed based on visual inspection (e.g. water retention after rain) and the review of groundwater monitoring.
- Consider improvements to the record of wastes received from Gore Bay Terminal to include the quantity in each receipt.
- Continue consultation with the EPA on options for including overflows from the Main Interceptor, Northern Interceptor and Tankfarm B Retention Basin as licensed discharge points on the EPL.
- Ensure that all pages attached to Section C of the EPL Annual Return are initialled by the person(s) who signed the certification section of the Return.
- Improvements to the PIRMP should be considered as part of the next update or test of the plan.
- Ensure consistency in labelling of sample location on water samples collected from monitoring/discharge points and consider options to improve the recording of the name of the sampler.

5. LIMITATIONS

5.1 Limitations of this Report

Ramboll Environ prepared this report in accordance with the scope of work as outlined in the proposal (P3033) to Viva Energy dated 7 September 2015, subsequent communications and in accordance with our understanding and interpretation of current regulatory standards.

Sampling and laboratory analyses were not undertaken as part of this investigation.

Site conditions may change over time. This report is based on conditions encountered at the site at the time of the audit and Ramboll Environ disclaims responsibility for any changes that may have occurred after this time.

The conclusions presented in this report represent Ramboll Environ's professional judgement based on information made available during the course of this assignment and are true and correct to the best of Ramboll Environ's knowledge as at the date of the assessment.

Ramboll Environ did not independently verify all of the written or oral information provided to Ramboll Environ during the course of this investigation. While Ramboll Environ has no reason to doubt the accuracy of the information provided to it, the report is complete and accurate only to the extent that the information provided to Ramboll Environ was itself complete and accurate.

This report does not purport to give legal advice. This advice can only be given by qualified legal advisors.

5.2 Reliance

This report has been prepared exclusively for Viva Energy for submission to the NSW Department of Planning and Environment and may not be relied upon by any other person or entity without Ramboll Environ's express written permission.

INDEPENDENT AUDIT CERTIFICATION

Development Name	Clyde Terminal
Development Consent No.	SSD 5147
Description of Development	Conversion of refinery to finished petroleum products storage and distribution terminal.
Development Address	Gate 5, Durham Street, Camellia NSW 2142
Operator	Viva Energy Australia Ltd
Operator Address	GPO Box 872, Melbourne VIC 3001

Independent Audit

Title of Audit	Clyde Terminal Conversion Project

I certify that I have undertaken the independent audit and prepared the contents of the attached independent audit report and to the best of my knowledge:

• The audit has been undertaken in accordance with relevant approval condition(s) and in accordance with the auditing standard AS/NZS ISO 19011:2014 and Post Approval Guidelines – Independent Audits

• The findings of the audit are reported truthfully, accurately and completely;

• I have exercised due diligence and professional judgement in conducting the audit;

• I have acted professionally, in an unbiased manner and did not allow undue influence to limit or over-ride objectivity in conducting the audit;

• I am not related to any owner or operator of the development as an employer, business partner, employee, sharing a common employer, having a contractual arrangement outside the audit, spouse, partner, sibling, parent, or child;

• I do not have any pecuniary interest in the audited development, including where there is a reasonable likelihood or expectation of financial gain or loss to me or to a person to whom I am closely related (i.e. immediate family);

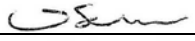
• Neither I nor my employer have provided consultancy services for the audited development that were subject to this audit except as otherwise declared to the lead regulator prior to the audit; and

• I have not accepted, nor intend to accept any inducement, commission, gift or any other benefit (apart from fair payment) from any owner or operator of the development, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so.

Note.

a) The Independent Audit is an 'environmental audit' for the purposes of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, $1 million and for an individual, $250,000.

b) The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (Intention to defraud by false or misleading statement—maximum penalty 5 years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/documents—maximum penalty 2 years imprisonment or $22,000, or both).

Signature	
Name of Lead / Principal Auditor	Victoria Sedwick
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Email Address	vsedwick@ramboll.com
Auditor Certification	Exemplar Global Lead Auditor 13180
Date:	15 July 2016

Table 1: Compliance Assessment Criteria

Assessment	Criteria
Compliant	Where the auditor has collected sufficient verifiable evidence to demonstrate that the intent and all elements of the requirement of the regulatory approval have been complied with within the scope of the audit.
Not verified	Where the auditor has not been able to collect sufficient verifiable evidence to demonstrate that the intent and all elements of the requirement of the regulatory approval have been complied with within the scope of the audit. In the absence of sufficient verification the auditor may in some instances be able to verify by other means (visual inspection, personal communication, etc.) that a requirement has been met. In such a situation, the requirement should still be assessed as not verified. However, the auditor could note in the report that they have no reasons to believe that the operation is non-compliant with that requirement.
Non-compliant	Where the auditor has collected sufficient verifiable evidence to demonstrate that the intent of one or more specific elements of the regulatory approval have not been complied with within the scope of the audit.
Administrative non-compliance	A technical non-compliance with a regulatory approval that would not impact on performance and that is considered minor in nature (e.g. report submitted but not on the due date, failed monitor or late monitoring session). This would not apply to performance-related aspects (e.g. exceedance of a noise limit) or where a requirement had not been met at all (e.g. noise management plan not prepared and submitted for approval).
Not triggered	A regulatory approval requirement has an activation or timing trigger that had not been met at the time of the audit inspection, therefore a determination of compliance could not be made.
Observation	Observations are recorded where the audit identified issues of concern which do not strictly relate to the scope of the audit or assessment of compliance. Further observations are considered to be indicators of potential non-compliances or areas where performance may be improved.
Note	A statement or fact, where no assessment of compliance is required.

Table 2: Risk Levels for Non-compliances

Risk level	Colour code	Description
High		Non-compliance with potential for significant environmental con- sequences, regardless of the likelihood of occurrence
Medium		Non-compliance with: • potential for serious environmental consequences, but is unlikely to occur; or • potential for moderate environmental consequences, but is likely to occur
Low		Non-compliance with: • potential for moderate environmental consequences, but is unlikely to occur; or • potential for low environmental consequences, but is likely to occur
Administrative non-compliance		Only to be applied where the non-compliance does not result in any risk of environmental harm (e.g. submitting a report to government later than required under approval conditions)

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
Administrative Conditions			
B1	The Applicant shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, demolition or operation of the Development.	Observation	Viva Energy has developed and implemented the measures required under the development consent to prevent and/or minimise any harm to the environment may result from the construction, demolition or operation. The review of site documentation; observations and interviews with Site representatives demonstrated that the existing environmental management system is considered generally adequate in addressing the development consent (construction, demolition or operation) requirements.
B2	The Applicant shall carry out the Development generally in accordance with the: (a) EIS; (b) site layout plans and drawings in the EIS (see Appendix A); (c) the Management and Mitigation Measures (see Appendix C); and (d) conditions of this consent.	Compliant	The Auditors' review of Project documentation, audit observations and interviews with site representatives demonstrated the Project has to date been conducted generally in accordance with the identified documents and conditions of this consent. The Auditors identified minor issues with the implementation of some actions and measures contained within the approved management plans, as further outlined in this table.
B3	If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.	Note	Noted
B4	The Applicant shall comply with any reasonable requirement(s) of the Secretary arising from the Department's assessment of: a) any reports, plans or correspondence that are submitted in accordance with this consent; and b) the implementation of any actions or measures contained within these reports, plans or correspondence.	Compliant	

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
B5	The Applicant shall not store in excess of: (a) 264 megalitres (ML) of finished petroleum products; and (b) 1,550 cubic metres (m^3) of petroleum gases; on the site at any one time, unless otherwise agreed to in writing by the Secretary.	Compliant	The Site is not currently storing bulk petroleum gases. At the time of the audit the Project was in progress and the quantity of finished petroleum products stored was below the permitted maximum.
B6	Construction shall not extend beyond four (4) years from the date of this consent.	Note	Consent is dated 14 January 2015. Construction may extend until 14 January 2019.
B7	Demolition shall not extend beyond ten (10) years from the date of this consent.	Note	Consent is dated 14 January 2015. Demolition may extend until 14 January 2025.
B8	Within six (6) months of the date of this consent, or as otherwise agreed to in writing by the Secretary, the Applicant shall surrender all existing development consents for the site listed in Appendix B in accordance with Clause 97 of the EP&A Regulation.	Observation	An extension to the six month period was granted by the DPE. The Auditors viewed a letter from Viva Energy to DPE dated 27 April 2016 regarding the surrender of existing development consents. The letter noted a recent review of this list by Viva Energy had identified existing development consents outside the Project boundary that it believed should not have been included in the list of development consents to be surrendered. As such, Viva Energy proposed to replace the list of “Development Consents to be Surrendered” referenced in this condition (B8) with a revised list that includes only the prior development consents within the boundary of the Project. This revised list was provided as an attachment (Appendix D) to the letter. The Auditors understand that the DPE is considering the proposed list.
B9	The Applicant shall ensure that all licences, permits and approval/consents are obtained as required by law and maintained as required throughout the life of the Development. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits or approval/consents.	Note	

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
B10	The Applicant shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures are constructed in accordance with the relevant requirements of the BCA.	Not Verified	The Auditors sighted Construction Certificates issued by Phil Chun & Associates Pty Ltd for the electrical system (2 June 2015) and product system (15 September 2015). A Construction Certificate certifies that the provisions of Clauses 139-148 of the *Environmental Planning and Assessment Amendment Regulations 2000* have been satisfied, including compliance with all relevant conditions of development consent and the *Building Code of Australia*. No Occupation Certificates have yet been issued; however, as Construction Certificates were issued for these systems, the Auditors have no reason to believe the condition has not been complied with.
B11	The Applicant shall ensure that all plant and equipment used for the Development is: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	Compliant	The Auditors observed plant and equipment to be operated and maintained in a proper and efficient manner as far as could be practically reviewed during the Audit.
B12	Prior to the commencement of construction or demolition, the Applicant shall: (a) prepare a dilapidation report of the public infrastructure in the Vicinity of the Site (including roads, kerbs, footpaths, nature trip, street trees and furniture);and (b) submit a copy of this report to the Secretary and Council.	Compliant	The Auditors viewed a letter from the DPE dated 15 January 2015 advising that the DPE was satisfied with the pre-demolition management plans, including the Dilapidation Report – Property Condition Survey dated 28 July 2014 prepared by Australian Dilapidations.
B13	The Applicant shall: (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged during construction or demolition; and (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of construction or demolition.	Not Triggered	
B14	The Applicant shall be responsible for the full costs associated with repairing, replacing, cleanup or compensation of any private or commercial property that is physically damaged by construction and demolition.	Not Triggered	

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
B15	The Applicant shall: (a) contact Ausgrid prior to the commencement of construction or demolition to advise of any planned work within two (2) metres of Ausgrid's underground cables; (b) ensure that no mechanical excavation or boring works occurs within two (2) metres of Ausgrid's underground cables; and (c) ensure that any hand excavation or hand boring works within two (2) metres of Ausgrid's underground cables is classified as Work Near Underground Assets according to WorkCover guidelines and must comply with Ausgrid's Standard: *NS156 Working Near or Around Underground Cables*.	Not Triggered	
B16	With the approval of the Secretary, the Applicant may: (a) submit any strategy, plan or program required by this consent on a progressive basis; and/or (b) combine any strategy, plan or program required by this consent.	Compliant	The Auditors viewed a letter from the DPE dated 16 June 2015 approving staged submission of the Environmental Management Strategy.
B17	Until they are replaced by an equivalent strategy, plan or program approved under this consent, the Applicant shall continue to implement existing strategies, plans or programs for operations on site that have been approved by previous consents or approvals.	Note	
B18	In the event that a dispute arises between the Applicant and Council or a public authority other than the Department, in relation to a specification or requirement applicable under this consent, the matter must be referred by either party to the Secretary, or if not resolved, to the Minister, whose determination of the dispute shall be final and binding to all parties. For the purpose of this condition, 'public authority' has the same meaning as provided under Section 4 of the EP&A Act.	Note	

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
B19	The Applicant shall ensure that employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent relevant to their respective activities.	Compliant	
B20	The Applicant shall be responsible for environmental impacts resulting from the actions of all persons that it invites onto the site, including contractors, sub-contractors and visitors.	Note	
B21	Prior to the issue of a construction certificate, the Applicant shall pay Council $424,000 as a development contribution in accordance with Council's *Section 94A Development Contributions Plan 2013*, to the satisfaction of the Secretary.	Compliant	Sighted receipt for $425,992.80 dated 1 May 2015. The amount paid slightly exceeded the amount required under the condition due to Council indexation since time of the consent.
Environmental Performance and Management			
C1	The Applicant shall: (a) carry out the development in accordance with the PHA; (b) implement all control measures proposed in the PHA; (c) implement all actions proposed by Shell in response to the recommendations from the Buncefield incident investigation report as contained in the supplementary letter received on 28/11/2013 "*Buncefield Response to DPI*"; and (d) implement all proposed actions listed in Shell's response to the Department's requests for additional information and clarifications "*140709 PHA Review Questions V3 3*" (latest response update received by the DPE on 24/07/2014).	Note	The Auditors expect this to be addressed in the Hazard Audit.

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C2	At least one month prior to the commencement of construction or demolition of the proposed development (except for construction of those preliminary works that are outside the scope of the hazard studies) and/or associated demolition works, or within such further period as the Secretary may agree, the Applicant shall prepare and submit for the approval of the Secretary the studies set out under subsections (a) to (d) (the pre- construction studies) of this Condition. Construction, other than of preliminary works, shall not commence until approval has been given by the Secretary and, with respect to the Fire Safety Study, approval has also been given by Fire and Rescue NSW. (a) Construction Safety Study, consistent with the Department of Planning's *Hazardous Industry Planning Advisory Paper No. 7, 'Construction Safety'*; (b) A Fire Safety Study that shall cover the relevant aspects of the Department of Planning's *Hazardous Industry Planning Advisory Paper No. 2. 'Fire Safety Study Guidelines'* and the New South Wales Government's *'Best Practice Guidelines for Contaminated Water Retention and Treatment Systems'*; (c) A Hazard and Operability Study for the proposed development, chaired by a qualified person; and (d) A Final Hazard Analysis of the proposed development, consistent with the Department of Planning's *Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'*.	Compliant	The Auditors viewed a letter from the DPE dated 14/7/2015 confirming that the requirements of this condition had been met to the satisfaction of the department. In the case of the Fire Safety Study, this was conditional upon gaining approval from Fire and Rescue NSW as stated in the condition. At the time of the site visits, Fire and Rescue NSW had not approved the Fire Safety Study and work had not commenced on the Fire Protection system. Fire and Rescue NSW conditionally approved the Fire Safety Study in a letter dated 10 June 2016.

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C3	The Applicant shall develop and implement the plans and systems set out under subsections (a) to (b) of this Condition. No later than two months prior to the commencement of commissioning of any component of the proposed development, or within such further period as the Secretary may agree, the Applicant shall submit, for the approval of the Secretary, documentation describing those plans and systems. Commissioning shall not commence until approval has been given by the Secretary. (a) A comprehensive Emergency Plan and detailed emergency procedures for the proposed development (end-state terminal); and (b) A document setting out a comprehensive Safety Management System, covering all on-site operations and associated transport activities involving hazardous materials.	Compliant	The Auditors sighted a letter from the DPE dated 4 February 2016 confirming that commissioning of the electrical system could commence under the Site's existing Emergency Response Plan and Safety Management System. The Auditors noted during the site inspection the Emergency Response Plan was readily available in the main offices and the control room. The auditors reviewed the *Clyde & Gore Bay Emergency Reponses Plan – Volume 1: Planning and Strategy and Volume 3: Implementation (dated 13 May 2015).* Viva Energy's Integrated Management System includes the Safety Management System. The Safety Management System was not fully reviewed by the Auditors as it is expected to be within the scope of the Hazard Audit.
C4	One month prior to the commencement of operation of each asset or system, the Applicant shall submit to the Secretary, a report detailing compliance with Conditions C1, C2 and C3 of this Schedule, including: (a) dates of study/plan/system submission, approval, commencement of construction and commissioning; (b) actions taken or proposed, to implement the recommendations and safety-related control measures in the studies/plans/systems; (c) a pre-startup safety review/checklist (d) responses to each requirement imposed by the Secretary under Condition C6 of this Schedule.	Note	At the time of the Audit, no systems had commenced operation; however, approval for commencement of electrical system operation was given in an email from the DPE dated 10 February 2016.

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C5	Three months after the commencement of operation of the first asset or system covered by this consent, the Applicant shall submit to the Secretary a report verifying that: (a) the Emergency Plan required under Condition C3(a) is effectively in place and that at least one emergency exercise has been conducted; and (b) the Safety Management System required under Condition C3(b) has been fully implemented and that records required by the system are being kept.	Not Triggered	
C6	Within twelve months of the date of this consent and every three years thereafter, or at such intervals as the Secretary may agree, the Applicant shall carry out a comprehensive Hazard Audit of the proposed development and within one month of each audit submit a report to the Secretary.	Note	The Auditors sighted a letter from the DPE dated 27 October 2015 granting an extension until June 2016 to conduct the Hazard Audit.
C7	The audits shall be carried out at the Applicant's expense by a qualified person or team, independent of the development, approved by the Secretary prior to commencement of each audit. Hazard Audits shall be consistent with the Department of Planning's *Hazardous Industry Planning Advisory Paper No. 5, 'Hazard Audit Guidelines'* (HIPAP No. 5).	Note	

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C8	The audit reports shall, in addition to the requirements provided in HIPAP No 5: (a) verify implementation of all actions proposed by Shell in response to the recommendations from the Buncefield incident investigation report per the supplementary letter from Shell received on 28/1112013 "*Buncefield Response to DPI*", (b) verify implementation of all actions listed in Shell's response to the Department's requests for additional information and clarifications "*140709 PHA Review Questions V3 3*" (latest response update received by the DPE on 24/07/2014); (c) verify that an inspection, testing and preventative maintenance program has been developed, implemented and maintained to ensure the reliability and availability of key safety critical equipment; (d) confirm that the throughput and storage quantities of potentially hazardous materials are consistent with the PHA; (e) verify that the maximum fill levels in Tank 35 and Tank 42 are being maintained to comply with the maximum bund retention capacity; and (f) verify implementation of any measures arising from the reports submitted in respect of Conditions C1 to C5 of this Schedule. The audit report must be accompanied by a program for the implementation of all recommendations made in the audit report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.	Note	
C9	The Applicant shall comply with all reasonable requirements of the Secretary in respect of the implementation of any measures arising from the reports submitted in respect of Conditions C1 to C6 of this Schedule inclusive, within such time as the Secretary may agree.	Note	

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C10	Prior to finalising the design, the Applicant shall meet with WorkCover to discuss preventative and recovery barriers in the tank farms and the implementation of the relevant findings and recommendations of the Buncefield investigation.	Note	The Auditors expect this to be addressed in the Hazard Audit.
C11	Before finalising the FHA, the Applicant shall meet with WorkCover to agree relevant LPG vessel failure modes and their frequency.	Note	The Auditors expect this to be addressed in the Hazard Audit.
C12	The Applicant shall ensure that all demolition associated with the Development is carried out in accordance with Australian Standard *AS 2601:2001: The Demolition of Structures*, or its latest version and the requirements of the *Work Health and Safety Regulation 2011*.	Not verified	A Work Health and Safety Management Plan (29 May 2014) and Demolition Work Plan (3 October 2014) were prepared by the demolition contractor, Liberty Industrial, and are available on the Viva Energy website. The Auditors have no reason to believe the condition has not been met.
C13	The Applicant shall ensure that all demolition is undertaken by licensed demolition experts in accordance with the requirements of WorkCover and the *Work Health and Safety Regulation 2011*.	Compliant	Demolition has been undertaken by Liberty Industrial, which holds the appropriate licence for demolition in NSW.
C14	The Applicant shall prepare and implement a Demolition Management Plan, to the satisfaction of the Secretary – to be prepared in consultation with Council, EPA, WorkCover and RMS and be approved by the Secretary prior to the commencement of any demolition.	Compliant	The Auditors viewed a letter from the DPE dated 15 January 2015 advising that the DPE was satisfied with the pre-demolition management plans, including the Demolition Work Plan prepared by Liberty Industrial.
C15	The Applicant shall prepare and implement a Stack Demolition Management Plan, to the satisfaction of the Secretary - to be approved by the Secretary prior to the demolition of any of the five (5) chimney stacks.	Compliant	The Auditors viewed a letter from the DPE dated 10 February 2016 stating that the DPE was satisfied that Viva Energy had addressed the requirements of this condition.

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C16	The Applicant shall ensure that any asbestos encountered during construction and demolition is monitored, handled, transported and disposed of by appropriately qualified and licensed contractors in accordance with the requirements of WorkCover and relevant guidelines.	Compliant	The demolition contractor prepared an Asbestos Control Plan (dated 26 May 2016) addressing the regulatory, handling, transport and disposal requirements. Liberty Industrial Pty Ltd is licensed to manage Class A and Class B asbestos material. A Waste Audit Report completed by URS (13 November 2015) reported the Asbestos Control Plan was complaint to requirements of WorkCover and relevant guidelines. Ramboll Environ viewed a sample of asbestos clearance certificates; consignment notes; and Confirmation of Asbestos Removal letters.
C17	The Applicant shall prepare and implement a Contamination Management Plan for construction and demolition, to the satisfaction of the Secretary.	Compliant	The Auditors viewed a letter from the DPE dated 15 January 2015 advising that the DPE was satisfied with the pre-demolition management plans, including the Contamination Management Plan (Soil and Water Management Plan, URS, 3 September 2014). A further letter from the DPE dated 5 March 2015 approved a revision of the Soil and Water Management Plan dated 7 October 2014.
C18	The Applicant shall undertake any removal of underground petroleum storage tanks or other infrastructure in accordance with the *Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2008* or its latest version.	Not Triggered	The Auditors understand that some abandoned underground petroleum storage tanks remain on the Site. At the time of the Audit, no underground petroleum storage tanks had been removed as part of the Project.
C19	The Applicant shall provide a contamination report to the EPA detailing any site contamination investigation carried out in the immediate vicinity of any subgrade asset removal. This report shall be provided to the EPA on completion of the removal of sub-grade infrastructure.	Not Triggered	Works to date have not included removal of significant sub-grade infrastructure.

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C20	The Applicant shall prepare and implement an Acid Sulphate Soil Management Plan for construction and demolition in accordance with the NSW State Government's *Acid Sulphate Soils Manual 1998.*	Compliant	Viva Energy prepared the Clyde Terminal Conversion Project - Environmental Management Strategy- Soil and Water Management Plan (SWMP) which fulfils the requirements of the Acid Sulphate Soil Management Plan. The SWMP includes a number of mitigation measures for site personnel and contractors to follow prior to and during any site excavation work(s).
C21	The Applicant shall ensure that noise from the operation does not exceed the limits in Table 1 (of the consent).	Compliant	Noise monitoring has not been conducted that would verify that operational noise limits are not being exceeded; however, the Auditors did not note activities on the Site causing significant noise; the Noise Impact Assessment completed as part of the EIS predicted only minor noise impacts and did not recommend any mitigation or monitoring measures aside from construction blasting activities; and no noise complaints have been received since commencement of the Project.
C22	The Applicant shall comply with the hours detailed in Table 2 (of the consent), unless otherwise agreed in writing by the EPA and the Secretary.	Compliant	It is noted that demolition of the stacks took place on a Sunday, outside the hours permitted in the condition for construction and demolition; however, the necessary approvals had been obtained.
C23	Construction and demolition outside of the hours identified in condition C22 may be undertaken in the following circumstances: (a) works that are inaudible at the nearest sensitive receivers; (b) works that are consistent with Shell's existing maintenance procedures and are in accordance with the EPL; (c) works agreed to in writing by the EPA or the Secretary; (d) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or (e) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.	Note	

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C24	The Applicant shall: (a) implement all reasonable and feasible noise management and mitigation measures to prevent and minimise operational, low frequency and traffic noise generated during operation; (b) maintain the effectiveness of any noise suppression equipment on plant at all times and ensure defective plant that may generate offensive noise is not used operationally until fully repaired; and (c) regularly assess noise monitoring data and relocate, modify and/or stop operations to ensure compliance with the relevant conditions of this consent.	Compliant	Noise mitigation and management measures are outlined in the approved Environmental Management Manual and the Demolition Work Plan. Noise monitoring has not been conducted; however, the Auditors did not note activities on the Site causing significant noise and no noise complaints have been received since commencement of the Project.
C25	The Applicant shall prepare and implement a Noise Management Plan for construction and demolition – to be approved by the Secretary prior to the commencement of construction or demolition.	Compliant	The Auditors viewed a letter from the DPE dated 15 January 2015 advising that the DPE was satisfied with the pre-demolition management plans, including the Noise Management Plan (Construction and Demolition Noise and Vibration Management Plan, URS, 3 September 2014). A further letter from the DPE dated 5 March 2015 approved a revision of the Construction and Demolition Noise and Vibration Management Plan dated 7 October 2014.
C26	The Applicant shall only carry out blasting on site between 9:00am and 5:00pm Monday to Friday inclusive. Blasting is not permitted on Saturday, Sundays, public holidays or at any other time without the written approval of the Secretary.	Compliant	Blasting for demolition of the stacks occurred on Sunday 21 February 2016. The Auditors viewed a letter from the DPE dated 10 February 2016 approving the blasting to be undertaken on this date.
C27	The Applicant shall prepare and implement a Blast Management Plan for demolition, to the satisfaction of the Secretary – to be approved by the Secretary prior to the commencement of blasting.	Compliant	The Auditors viewed a letter from the DPE dated 10 February 2016 stating that the DPE was satisfied that Viva Energy had addressed the requirements of this condition.

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C28	The Applicant shall carry out all reasonable and feasible measures to minimise dust generated during construction, demolition and operation.	Observation	Mitigation measures to dust generation are included in the Construction and Demolition Air Quality Management Plan and Environmental Management Manual which are available of the Viva Energy website. The Auditors did not observe dust emissions from the site despite high winds on one of the site inspection days; however, following demolition of the refinery processing units, a large area of unsealed ground is present. The demolition contractor is still on site and maintaining dust control measures, such as use of a water cart. When the demolition contractor vacates the site there is potential for this area to be a source of dust in dry weather conditions if not managed. Viva Energy is investigating and considering options for management of dust and erosion once the demolition contractor vacates the area.
C29	The Applicant shall not cause or permit the emission of offensive odours from the site, as defined under Section 129 of the POEO Act.	Observation	During demolition of the refinery assets, the demolition contractor received and dealt with an odour complaint relating to cutting up of an item of plant. Odours were noticed on the Site during the first site inspection; however, the source of these odours was likely neighbouring industrial operations. The Auditors did not identify offensive odours being generated on and emitted from the site.
C30	The Applicant shall prepare and implement an Air Quality Monitoring Program for the operation – to be submitted to the Secretary for approval within 3 months of the date of this consent.	Compliant	The Operational Air Quality Monitoring Program is available on the Viva Energy website. The Auditors viewed a letter from the DPE dated 10 February 2016 stating that the DPE was satisfied that Viva Energy had addressed the requirements of this condition.

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C31	The Applicant shall prepare and implement an Air Quality Management Plan for construction and demolition – to be approved by the Secretary prior to the commencement of construction or demolition and be provided to the EPA.	Compliant	The Auditors viewed a letter from the DPE dated 15 January 2015 advising that the DPE was satisfied with the pre-demolition management plans, including the Air Quality Management Plan (Construction and Demolition Air Quality Management Plan, URS, 3 September 2014). A further letter from the DPE dated 5 March 2015 approved a revision of the Construction and Demolition Air Quality Management Plan dated 8 October 2014.
C32	During the life of the Development, the Applicant shall ensure that there is a suitable meteorological station operating in the vicinity of the site that complies with the requirements of the EPA.	Compliant	Viva Energy uses data from the Bureau of Meteorology meteorological monitoring station located at Parramatta North, approximately 4 km to the northwest of the Site, which provides information on conditions in the area surrounding the Site.
C33	The Applicant shall implement all reasonable and feasible measures to minimise energy use and greenhouse gas emissions during construction, demolition and operation.	Compliant	The Project is considered likely to have a neutral impact on the GHG emissions. A committed to in the EIS, an energy audit will be undertaken following the completion of demolition and construction works to identify where significant further energy savings can be made. The Auditors note that solar powered external lights have been installed as part of the Project.

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C34	The Applicant shall ensure that: (a) the operation does not result in any vehicles queuing on the public road network; (b) heavy vehicles and bins associated with operation do not park or stand on local roads or footpaths in the vicinity of the site; (c) all loading and unloading of materials is carried out on site; (d) the proposed turning areas in the car park are kept clear of any obstacles, including parked cars, at all times; (e) all trucks entering or leaving the site with loads have their loads covered; (f) trucks associated with operation do not track dirt onto the public road network; and (g) heavy vehicles use designated routes to minimise impacts on the local and regional road network.	Observation	A Traffic Management Plan was prepared and approved by the DPE, including heavy vehicles access routes. No queuing on the public roads was observed during the site inspections and no complaints relating to traffic had been recorded. No visual signs of dust on roads at entry/exit to the Site were observed. The Auditors did not observe loads leaving the site but were informed that all loads are covered with the exception of ferrous scrap. Given the nature of the material and the vehicles used, this is not considered to be an issue.
C35	The Applicant shall provide sufficient parking facilities on-site, including for heavy vehicles, for construction, demolition and operational personnel, to ensure that traffic associated with the Development does not utilise public and residential streets or public parking facilities.	Compliant	No vehicles related to the Site were observed to be parked on the local roads during the Site inspections. Adequate room is available within the Site for staff and demolition/construction related parking.
C36	The Applicant shall prepare and implement a Traffic Management Plan for construction and demolition, to the satisfaction of the Secretary – to be prepared in consultation with Council and RMS and be approved by the Secretary prior to the commencement of construction or demolition.	Compliant	The Auditors viewed a letter from the DPE dated 15 January 2015 advising that the DPE was satisfied with the pre-demolition management plans, including the Traffic Management Plan (URS, 3 September 2014). A further letter from the DPE dated 5 March 2015 approved a revision of the Traffic Management Plan dated 7 October 2014.
C37	The Applicant shall ensure that all new buildings and structures, and additions to existing buildings and structures are constructed in accordance with the relevant requirements of the City of Parramatta's *Local Floodplain Risk Management Policy, June 2006*.	Not triggered	New buildings and structures is yet to be completed and therefore could not be assessed at this stage of the audit.

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C38	New electrical substations shall be constructed above the 1% Annual Exceedance Probability (AEP) flood level with an appropriate freeboard determined in consultation with Council and to the satisfaction of the Secretary.	Compliant	The Auditors viewed a letter from the DPE dated 29 July 2015 confirming that Viva Energy had adequately satisfied the requirements of this condition.
C39	Within 2 months of the date of this consent, the Applicant shall provide detailed site data, to the satisfaction of Council, to update the *Duck River and Duck Creek Flood Study Review, 2013*. The Applicant shall: (a) provide details of all floodplain obstructions on the site, including bund locations and heights; (b) fund the work required to update Council's flood model with the site specific data; and (c) provide details of all construction and demolition works that would be carried out within areas defined as 'high hydraulic hazard'.	Compliant	The Auditors viewed an email from Parramatta City Council dated 18 May 2016 confirming that Council was satisfied with Flood Assessment Report (WMA Water, rev2, 2 February 2016).
C40	Within 1 month of completing the updates to the flood study, the Applicant shall review the outcomes of the updated study and detail any additional flood management measures to be implemented during construction, demolition and operation. The outcomes of the study shall also inform any revisions to the Flood Emergency Response Plan as required by Condition C42.	Note	There were no addition management measures arising from the Flood Study.
C41	The Applicant shall ensure that flood warning signs are maintained throughout the site, during construction, demolition and operation. The flood warning signs shall indicate the site is prone to flooding and shall show the location of assembly and evacuation points, which are above the 1% AEP.	Observation	No flood warning signs were observed during the Site inspections. Facility personnel advised that signs had not been erected while the Flood Assessment Report was being finalised. Parramatta City Council advised on 18 May 2016 that it was satisfied with the Report.

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C42	The Applicant shall update and implement the Emergency Response Plan for the site to include procedures for flood emergency response during construction, demolition and operation. The Plan must be prepared in consultation with Council and be submitted to the Secretary for approval at least 1 month prior to the commencement of construction or demolition, or as otherwise agreed with the Secretary;	Compliant	The Auditors viewed the *Clyde & Gore Bay Emergency Reponses Plan – Volume 1: Planning and Strategy* and *Volume 3: Implementation* (dated 13 May 2015). Volume 3 provides detailed emergency response procedures (action cards) for various scenarios, including ERG29 – Site Flooding. The Emergency Reponses Plan was readily available in the main offices and the control room. The Auditors viewed a letter from the DPE dated 15 January 2015 advising that the DPE was satisfied with the pre-demolition management plans, including the Flood Emergency Response Plan (ERG29 – Site Flooding, 5 September 2014).
C43	The Applicant shall: (a) ensure that only VENM or ENM or other material approved in writing by the EPA is used as fill on the Site; (b) keep accurate records of the volume and type of fill to be used; and (c) make these records available to the Department upon request.	Compliant	The Auditors sighted a VENM Assessment for Wallacia Soils dated 14 April 2016 for soil used in the former Mobil Tank Farm area.
C44	The Applicant shall prepare and implement an Erosion and Sediment Control Plan for construction and demolition to the satisfaction of the Secretary and in accordance with *Managing Urban Stormwater: Soils and Construction, 2004*, or its latest version.	Compliant	The Soil and Water Management Plan (SWMP) approved by the DPE fulfils the requirement of the Erosion and Sediment Control Plan.

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C45	Prior to the commencement of construction or demolition, the Applicant shall implement suitable erosion and sediment control measures on-site, in accordance with the Erosion and Sediment Control Plan.	Observation	The SWMP required contractors to prepare Progressive Erosion and Sediment Control Plans (PESCPs). The demolition contractor had not prepared PESCPs; however, the contractor was able to describe the measures implemented and the Auditors observed sediment drain covers and socks around drain pits in the construction and demolition area. The Auditors note that, following demolition of the refinery processing units, a large area of unsealed ground is present. Exceedance of total suspended solids criteria in water discharged from the Site can occur after significant rain fall; however, this does not appear to have been exacerbated following demolition of the refinery processing units. When the demolition contractor vacates the site there is potential for this area to be a source sediment in drains unless the control measures are maintained and/or new measures implemented. Viva Energy is investigating and considering options for management of dust and erosion once the demolition contractor vacates the area.
C46	The Development shall comply with section 120 of the *Protection of the Environment Operations Act 1997*, which prohibits the pollution of waters, except as expressly provided in an EPL.	Note	Refer to findings on Condition L1.1 of the EPL in Table 4.
C47	The Applicant shall ensure that signs are displayed and maintained adjacent to all stormwater drains on the site clearly indicating 'Stormwater Only'.	Observation	'Stormwater Only' labels were observed at drains in the western part of the site which discharge directly to Duck River via public stormwater infrastructure. Most Site drainage discharges via the interceptors and biotreatment system.
C48	The Applicant shall ensure the foreshore and inter-tidal areas on the site are fully protected. This includes preventing the storage of any machinery, materials, equipment, supplies, or waste receptacles within or adjacent to the inter-tidal area.	Compliant	The Auditors did not observe materials or equipment stored within or adjacent to the inter-tidal area.

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C49	The Applicant shall store all chemicals, fuels and oils used on-site in appropriately bunded areas in accordance with the requirements of all relevant Australian Standards, and/or the EPA's *Storing and Handling of Liquids: Environmental Protection - Participants Handbook*.	Compliant	Chemicals, fuels and oils for use on the Site are appropriately stored. Storage of petroleum products on the Site is addressed separately in this report and is expected to be assessed in more detail as part of the Hazard Audit.
C50	The Applicant shall update and implement the Water Management Plan for the site for construction, demolition and operation, to the satisfaction of the Secretary – to be approved by the Secretary prior to the commencement of construction or demolition and be provided to the EPA and NOW	Compliant	The Auditors viewed a letter from the DPE dated 15 January 2015 advising that the DPE was satisfied with the pre-demolition management plans, including the Water Management Plan (Soil and Water Management Plan, URS, 3 September 2014). A further letter from the DPE dated 5 March 2015 approved a revision of the Soil and Water Management Plan dated 7 October 2014. A copy was made available to the Auditors.
C51	The Applicant shall assess, classify and manage all liquid and non-liquid wastes generated at the site during construction, demolition and operation in accordance with the EPA's *Waste Classification Guidelines Part 1: Classifying Waste, December 2009*, or its latest version and dispose of all wastes to a facility that may lawfully accept the waste.	Compliant	Separate waste registers, including waste classification and waste code (where required) are maintained for demolition (by Liberty Industrial) and for construction and operations (by Viva Energy).
C52	Waste generated outside the site shall not be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence under the POEO Act, if such a licence is required in relation to that waste.	Note	Refer to findings on Condition L5 of the EPL in Table 4.
C53	The Applicant shall manage the chemical fixation and treatment of organic solvents, contaminated blue metals and empty drums or macro-encapsulation of waste in accordance with the EPA Specific Immobilisation Approval and the EPA *Waste Classification Guidelines Part 2: Immobilisation of Waste, April 2008*, or its latest version.	Note	

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C54	The Applicant shall manage all materials and waste containing Scheduled Chemical Waste and polychlorinated biphenyls in accordance with the applicable Chemical Control Order or in accordance with a licence under the *Environmentally Hazardous Chemicals Act 1985*.	Not Verified	The Auditors sighted waste a tracking certificate for removal of waste containing PCB from the site. It is not known if Scheduled Chemical Waste is present; however, the Auditors have no reason to believe the condition has not been met.
C55	The Applicant shall manage all materials and waste containing radioactive substances in accordance with the *Radiation Control Act 1990, Radiation Control Regulation 2013* and the requirements of the EPA.	Compliant	The Site maintains and hold appropriate licences for radioactive sources in in-line densitometers on the pipeline from Gore Bay.
C56	The Applicant shall retain all sampling and waste classification data for the life of the Development in accordance with the requirements of the EPA.	Note	
C57	The Applicant shall update and implement the Waste Management Plan for the site for construction, demolition and operation to the satisfaction of the Secretary. This Plan shall be approved by the Secretary prior to the commencement of construction or demolition and be provided to the EPA.	Compliant	The Auditors viewed a letter from the DPE dated 15 January 2015 advising that the DPE was satisfied with the pre-demolition management plans, including the Waste Management Plan (Waste and Resource Recovery Plan, URS, 3 September 2014). A further letter from the DPE dated 5 March 2015 approved a revision of the Waste and Resource Recovery Plan dated 7 October 2014. A copy was made available to the Auditors.
C58	The Applicant shall prepare and implement a Biodiversity Management Plan for the Development to the satisfaction of the Secretary. This plan must be prepared in consultation with Council and OEH and be approved by the Secretary prior to the commencement of construction or demolition.	Compliant	The Auditors viewed a letter from the DPE dated 15 January 2015 advising that the DPE was satisfied with the pre-demolition management plans, including the Biodiversity Management Plan (URS, 3 September 2014). A further letter from the DPE dated 5 March 2015 approved a revision of the Biodiversity Management Plan dated 7 October 2014. A copy was made available to the Auditors. Ramboll Environ.
C59	The Applicant shall commission an archival photographic and documentary recording of the existing fabric and operation of the Clyde Refinery.	Compliant	Ramboll Environ viewed a letter from the DPE dated 3 February 2016 acknowledging receipt of information to satisfy Condition C59. The Auditors viewed the archival photographic and documentary recording during the Site Visits.

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
C60	The Applicant shall prepare and implement a Heritage Management Plan for the on-going management of heritage items on the site.	Compliant	The auditors viewed a letter from the DPE dated 8 August 2015 which stated that the DPE had reviewed the Historic Archaeological Assessment dated May 2015 and was satisfied that Viva Energy had adequately satisfied the requirements of this condition.
C61	If any archaeological relics are uncovered during the course of the work, then all works shall cease immediately in that area and the OEH Heritage Branch contacted. Depending on the possible significance of the relic, an archaeological assessment and an excavation permit under the *NSW Heritage Act 1977* may be required before further works can continue in that area.	Not Triggered	No archaeological relics are reported to have been uncovered during the demolition and construction works. Subsurface demolition works are yet to be undertaken. Construction works have required only shallow excavation.
C62	If Aboriginal objects are uncovered during work, excavation or disturbance of the area, work must stop immediately. The Regional Operations Group of the OEH is to be contacted. Aboriginal archaeological excavation must be co-ordinated with any proposed investigation of non-indigenous material.	Not Triggered	No Aboriginal objects are reported to have been uncovered during the demolition and construction works. Subsurface demolition works are yet to be undertaken. Construction works have required only shallow excavation.
C63	The Applicant shall ensure that the lighting associated with the Development: (a) complies with the latest version of *AS 4282(/NT) - Control of Obtrusive Effects of Outdoor Lighting*; and (b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.	Not Verified	The site has not reviewed AS4282 to confirm site lighting is in compliance with the Standard. The Auditors noted during the site inspections that lighting was generally directed inwards and not into surrounding vegetation and neighbouring properties. The site is located in an industrial area and has not reported any complaints in relation to lighting.
C64	The Applicant shall not install any advertising signs on site without the written consent of the Secretary.	Compliant	The Auditors did not observe new advertising signs.

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
Environmental Management			
D1	The Applicant shall prepare and implement an Environmental Management Strategy for the Development to the satisfaction of the Secretary.	Compliant	The auditors viewed a letter from the DPE dated 16 June 2015 approving the Environmental Management Strategy for construction and demolition activities. A letter from the DPE dated 17 September 2015 approved the Environmental Management Plan for operational activities.
D2	The Applicant shall ensure that the Management Plans required under this consent are prepared in accordance with any relevant guidelines, and include: (a) detailed baseline data; (b) a description of the relevant statutory requirements; any relevant limits or performance measures/criteria; and the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the Development or any management measures; (c) a description of the measures that will be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria; (d) a program to monitor and report on the impacts and environmental performance of the Development; and effectiveness of any management measures (see (c) above); (e) a contingency plan to manage any unpredicted impacts and their consequences; (f) a program to investigate and implement ways to improve the environmental performance of the Development over time; (g) a protocol for managing and reporting any incidents; complaints; non-compliances with statutory requirements; and exceedances of the impact assessment criteria and/or performance criteria; and (h) a protocol for periodic review of the plan.	Compliant	The Auditors consider that the management plans prepared as required under the development consent meet the requirements of this condition.

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
D3	Within 3 months of the submission of: (a) an annual review under Condition D4 of this schedule; (b) an incident report under Condition D5 and D6 of this schedule; (c) an audit report under Condition D7 of this schedule; and (d) any modifications to this consent, the Applicant shall review, and if necessary revise, the strategies, plans and programs required under this consent to the satisfaction of the Secretary. Note: This is to ensure the strategies, plans and programs are updated on a regular basis and incorporate any recommended measures to improve the environmental performance of the development.	Compliant	a) The auditors noted that Viva has surrendered all consents which were associated with the previous development consent as per a letter by the DPE dated 17 September 2015. b) The site reported no reportable incidents have occurred since development consent. c) No previous Independent Environmental Audit has been conducted for the site under the current development consent. d) To date, there has been no modification to the development consent.
D4	By the end of July each year, or other timing as may be agreed by the Secretary, the Applicant shall review the environmental performance of the Development for the previous calendar year to the satisfaction of the Secretary.	Compliant	The Auditors reviewed a letter from the DPE dated 17 September 2015 which confirmed the DPE was satisfied with the Annual Environmental Performance Review (AEPR) dated 12 August 2015 which covered the first 6 months of 2015. This timing was agreed with the DPE as there had been no Project activity in 2014. The AEPR for the balance of 2015 is due by the end of July 2016, as per the condition.
D5	Within 24 hours of the occurrence of an incident that causes (or may cause) harm to the environment, the Applicant shall notify the Secretary and any other relevant agencies of the incident.	Observation	Viva Energy reports exceedances of licence conditions to the EPA and now copies the DPE on these notifications. On occasions, the EPA requests further information concerning an exceedance, which Viva Energy provides; however, these exceedances are not necessarily events causing or likely to cause material harm to the environment.
D6	Within 7 days of the detection of the incident, the Applicant shall provide the Secretary and any relevant agencies with a detailed report on the incident.	Not Triggered	Refer to findings on Condition D5 above.

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
D7	Within a year of the date of this consent, and every 3 years thereafter unless the Secretary directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the Development. This audit must: (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary; (b) include consultation with the relevant agencies; (c) assess the environmental performance of the Development and whether it is complying with the relevant requirements in this consent and any relevant EPL (including any assessment, plan or program required under these approvals); (d) review the adequacy of any approved strategy, plan or program required under these approvals; and (e) recommend measures or actions to improve the environmental performance of the Development and/or any assessment, plan or program required under these approvals. Note. This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.	Compliant	This Audit. The Auditors sighted a letter from the DPE dated 27 October 2015 granting an extension until June 2016 to conduct the Audit.
D8	Within 3 months of commissioning this audit, or as otherwise agreed by the Secretary, the Applicant shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report and a program for implementation.	Note	

Table 3: Conditions of Development Consent SSD 5147			
Condition		**Compliant**	**Comments**
D9	The Applicant shall, to the satisfaction of the Secretary: (a) make the following information publicly available on its website: • the EIS; • current statutory approvals for the Development; • approved strategies, plans or programs; • a summary of the monitoring results of the Development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent; • a complaints register, updated on a quarterly basis; • copies of any annual reviews (over the last 5 years); • any independent environmental audit, and the Applicant 's response to the recommendations in any audit; and • any other matter required by the Secretary; and (b) keep this information up-to-date. Note. This requirement does not require any confidential information to be made available to the public.	Administrative Non-compliance	A complaints register was not publicly available on the Viva Energy website. No complaints have been received directly by Viva Energy since commencement of the Project; however, an odour complaint was made directly to the demolition contractor.

Table 4: Conditions of Environment Protection Licence 570			
Condition		**Compliant**	**Comments**
A1.1	Scheduled activity (fee based activity) & scale – Waste Processing (non-thermal treatment of hazardous and other wastes) any T treated; Chemical Storage (petroleum products storage) >100,000kL stored.	Note	
A3.1	Ancillary Activity – Electricity Generating Works	Note	
A4.1	Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.	Not Verified	The licence has been in place for over 10 years and has been varied several times, including in recent years to accommodate the transition from refinery to terminal. The EPA was consulted during the assessment of the application for SSD 5147 and had input to the consent conditions as well as the opportunity to vary licence conditions. The Auditors have no reason to believe the condition has not been complied with.
P1.1	The following utilisation areas referred to in the table (in the EPL) are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.	Note	
P1.2	The following points referred to in the table (in the EPL) are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.	Note	
L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	Observation	Discharge to waters occurs after significant rainfall via points that are either not included on the licence (overflow from main interceptor) or are included on the licence but do not have concentration limits specified (EPA Points 28 and 29 – overflow from northern interceptor). Viva Energy samples the overflows and applies concentration limits for EPA Points 2 and 4, which may not equate to strict compliance with section 120 of the POEO Act. Viva Energy reports exceedances of concentration limits at the licensed EPA discharge points and of the overflows to the EPA and has sought confirmation that the approach is acceptable. Viva Energy is consulting with the EPA on whether the overflows should be included as discharge points on the EPL.

Table 4: Conditions of Environment Protection Licence 570			
Condition		**Compliant**	**Comments**
L2.1	The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table (in the EPL).	Compliant	Based on 2014-2015 Annual Return.
L2.2	The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.	Compliant	Pollutant loads calculated using the TANKS software package, which is approved under the EPA's *Load Calculation Protocol* (2009).
L3.1	For each monitoring/discharge point or utilisation area specified in the table(s) (in Condition L3.4), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.	Not Verified	The table in Condition L3.4 contains concentration limits for EPA Points 1, 2, 4, 23, 24, 25, 27 and 30. In 2015 and 2016 to date, there has been little or no discharge from EPA Points 2, 4, 23, 24, 25, 27 and 30; however, discharge from overflow points 28 and 29 might be reported as being from Point 30 and discharge from overflow Point 26 might be reported as being from Point 4, making it difficult to confirm compliance with the condition. Based on information provided, the Auditors have no reason to believe the condition has not been complied with.
L3.2	Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.	Compliant	Based on reported results in 2015 and 2016 to date.
L3.3	To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table(s) (in Condition L3.4).	Note	Also see Condition L1.1
L3.4	Concentration Limit tables	Note	Also see Condition M2.1
L3.5	An exemption exists for Condition L3.3 for concentration limits of Total Suspended Solids (TSS) for Points 2 and 4. Within 48 hours of a rain event, the water that may be discharged at Points 2 and 4 must not exceed 80 milligrams per litre (mg/L) of TSS.	Note	
L3.6	The water that is permissible to be discharged from points 1, 2, 4, 23, 24, 25 and 27 must not contain any visible oil or grease.	Compliant	At the time of the Audit, discharge was only occurring from EPA Point 1 and no visible oil or grease was observed. No incidents of visible oil or grease were reported in 2015 or 2016 to date. The last reported incident of oil in Duck River was in December 2014.

Table 4: Conditions of Environment Protection Licence 570			
Condition		**Compliant**	**Comments**
L4.1	For each discharge point or utilisation area specified (in the condition) (by a point number), the volume/mass of: a) liquids discharged to water; or b) solids or liquids applied to the area; must not exceed the volume/mass limit specified for that discharge point or area.	Not Verified	No mass limits specified. Volumes discharged in the 2015-2016 reporting period to date were within limits. Discharge volumes reported in the 2014-2015 Annual Return were within limits; however, volumes for EPA Point 1 were estimates based on historical data as records had not been retained (see Condition M1.2). While the maximum volume discharged from EPA Point 1 could not be verified, the Auditors have no reason to believe the condition has not been complied with.
L5.1	The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.	Compliant	
L5.2	This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if it requires an environment protection licence.	Note	
L5.3	Except as provided by any other condition of this licence, only the Hazardous and/or Liquid and/or Restricted Solid waste listed (in the EPL) may be generated and/or stored at the premises.	Note	
L5.4	Except as provided by any other condition of this licence, only the Hazardous and/or Liquid and/or Restricted Solid waste listed (in the condition) may be received at the premises from the Viva Energy Gore Bay Terminal (EPL 661) or Viva Energy Parramatta Terminal (EPL 660) for treatment, processing, reprocessing or disposal at the premises.	Observation	Spent activated carbon (N205) is received from Gore Bay Terminal. It is not included in the list in the condition; however, it is not received for treatment, processing, reprocessing or disposal at the premises. It is stored (in compliance with Condition L5.3) until transported for off-site disposal.

Table 4: Conditions of Environment Protection Licence 570			
Condition		**Compliant**	**Comments**
L5.5	The licensee may receive Hazardous and/or Liquid and/or Restricted Solid waste from the Viva Energy Australia Pty Ltd Gore Bay premises EPL 661 without the need for waste tracking but a record of any waste received must be made and retained at the premises.	Observation	Spent activated carbon is the only waste currently received from Gore Bay Terminal. The record of this waste being received is the maintenance work order kept in the SAP system. Each receipt is one bulk bag of approximately 2.5 tonnes; however, actual weight received is not recorded in the maintenance record. The Auditors understand that loads are weighed but that weighbridge records are not currently matched with the maintenance record.
L5.6	Except as provided by any other condition of this licence, only the Hazardous and/or Liquid and/or Restricted Solid waste listed below may be received via pipeline only from Sydney Metropolitan Pipeline EPL 1969 and Joint User Hydrant Installation (JUHI) for treatment, processing, reprocessing or disposal at the premises without the need for waste tracking. a) J120 Waste oil/water, hydrocarbons/water mixtures or emulsions.	Note	The pipelines are not currently used for transferring waste as it is not considered appropriate by the Site.
L5.7	Except as provided by any other condition of this licence, only the Hazardous and/or Liquid and/or Restricted Solid waste listed (in the condition) may be treated, processed, reprocessed or disposed of at the premises.	Note	
L5.8	Except as provided by any other condition of this licence, only the Hazardous and/or Liquid and/or Restricted Solid waste listed below may be received from Park Pty Ltd (EPL 654) for treatment or processing at the premises without the need for waste tracking: (a) J120 Waste oil/water, hydrocarbons/water mixtures or emulsions.	Note	

Table 4: Conditions of Environment Protection Licence 570			
Condition		**Compliant**	**Comments**
L5.9	Except as provided by any other condition of this licence, only Hazardous and/or Liquid and/or Restricted Solid waste listed below may be received from the Viva Energy Australia Pty Ltd refinery at Geelong Victoria (Vic EPA licence number #46555) for treatment, processing reprocessing or disposal at the premises. a) C100 Basic solutions or bases in solid form.	Note	The Site has not yet received a delivery of caustic from the Geelong Refinery.
L5.10	After onsite treatment to reduce hydrocarbon contamination of soil or sediment to less than 1% on a weight basis, such treated waste may be disposed of onsite in the area marked "Treated Material Onsite Disposal Site (TPH < 1%)" as shown on drawing number CLR_0122667_0004 Rev E titled "Clyde Terminal EPL 570 Licensed discharge points."	Note	There has been no recent disposal to the on-site disposal area.
L5.11	The licensee must comply with the conditions as specified in this licence or where no specific conditions are outlined in this licence, the licensee must comply with the *Protection of the Environment Operations (Waste) Regulation 2014*.	Note	
L6.1	No condition in this licence identifies a potentially offensive odour for the purposes of section 129 of the *Protection of the Environment Operations Act 1997*.	Note	
L7.1	The licensee may receive less than 100 tonnes per annum of biotreater sludge from another biological wastewater treatment plant in quantities sufficient for re-seeding (innoculating) the biological wastewater treatment plant. Note: For the purposes of this licence, biotreater sludge used for re-seeding (inoculating) the biological wastewater treatment plant is not considered to be a waste.	Note	The Biotreater has not been re-seeded since refinery operation ceased.
O1.1	Licensed activities must be carried out in a competent manner. This includes: a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	Compliant	The Auditors observed activities to be carried out in a proper and efficient manner as far as could be practically reviewed during the Audit.

Table 4: Conditions of Environment Protection Licence 570			
Condition		**Compliant**	**Comments**
O2.1	All plant and equipment installed at the premises or used in connection with the licensed activity: a) must be maintained in a proper and efficient condition; and b) must be operated in a proper and efficient manner.	Compliant	The Auditors observed plant and equipment to be operated and maintained in a proper and efficient manner as far as could be practically reviewed during the Audit.
O3.1	The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	Observation	The Auditors did not observe dust emissions from the site; however, following demolition of the refinery processing units, a large area of unsealed ground is present. The demolition contractor is still on site and maintaining dust control measures, such as use of a water cart. When the demolition contractor vacates the site there is potential for this are to be a source of dust in dry weather conditions if not managed. Viva Energy is investigating and considering options for management of dust and erosion once the demolition contractor vacates the area.
O4.1	The licensee must ensure that any (liquid and/or non-liquid) waste (generated and/or stored and/or treated and/or processed and/or reprocessed and/or disposed) at the premises is assessed and classified in accordance with the EPA Waste Classification Guidelines as in force from time to time.	Compliant	
O4.2	On-site waste management processes must comply with procedures outlined in the figure attached to the letter dated 4 November 2003 prepared by Shell Refining (Australia) Pty Ltd.	Compliant	
O4.3	Biotreater filter cake must be treated in the drying area as defined by the shaded area labelled “Drying Bays” on drawing number CLR_0122667_0004 Rev E titled “Clyde Terminal, EPL No 570 Licensed Discharge Points."	Note	
O4.4	Soil contaminated with hydrocarbons must be treated in the landfarm area as defined by the shaded area labelled “Landfarm” on drawing number CLR_0122667_0004 Rev E titled “Clyde Terminal, EPL No 570, Licensed Discharge Points."	Note	

Table 4: Conditions of Environment Protection Licence 570			
Condition		**Compliant**	**Comments**
O4.5	Treated soil contaminated with hydrocarbons must be disposed of in the disposal area as defined by the shaded area labelled “Treated Material Onsite Disposal Site (TPH < 1%)” on drawing number CLR_0122667_0004 titled “Clyde Terminal, EPL 570 Licence Discharge Points" or taken offsite to a place that can lawfully accept that class of waste.	Compliant	
O5.1	The licensee must ensure that waste identified for recycling is stored separately from other waste.	Compliant	
O5.2	All above ground tanks containing material that is likely to cause environmental harm must be bunded or have an alternative spill containment system in place.	Observation	All above ground hydrocarbon tanks are bunded. As part of the Clyde Terminal Conversion Project, bunds walls that will remain following completion of the Project are being inspected and, where necessary, upgraded. Bund floors are, and will remain, earthen. While engineered earthen floors can be impervious, the Auditors note that it is difficult to confirm the integrity of earthen floors.
O5.3	The licensee must ensure that suitable measures (e.g. high/low alarms, control valves with interlock control, one way valves) are installed on all tanks, ponds or clarifiers and associated pipes and hoses to prevent the spillage of waste.	Observation	As part of the Clyde Terminal Conversion Project, product tank high level alarms and product handling pipework and control ae being upgraded. It is expected that this will be reviewed as part of the Hazard Audit.
O5.4	Dewatered oily sludge must be treated in the sludge dewatering facility and/or landfarm as defined by the shaded areas labelled “Sludge Dewatering Facility” and “Landfarm” on drawing number CLR_0122667_0004 Rev E titled “Clyde Terminal, EPL No 570 Licensed Discharge Points” or disposed of off site to a place that can lawfully accept that class of waste.	Compliant	
O6.1	Discharges to Duck River at Point 23, 24, and 25 must only be a result of dewatering from bunded areas in the tank farm or from water pressure testing of chemical storage tanks within the premises.	Note	No discharge recorded for these points in 2015 or 2016 to date.

Table 4: Conditions of Environment Protection Licence 570			
Condition		**Compliant**	**Comments**
O6.2	Discharges to Duck River at Point 27: a) must only be a result of dewatering from bunded areas or from water pressure testing of chemical storage tanks within the western tank farms; and b) The licensee must notify the EPA at least 7 days in advance of any discharge; and c) The licensee must undertake water sampling of the subject chemical storage tank prior to any discharge and provide the laboratory results to the EPA.	Note	No discharge recorded for this point in 2015 or 2016 to date.
M1.1	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	Note	
M1.2	All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form; b) kept for at least 4 years after the monitoring or event to which they relate took place; and c) produced in a legible form to any authorised officer of the EPA who asks to see them.	Administrative Non-compliance	Records of volumes discharged from EPA Point 1 during the 2015-2015 reporting period were not retained due to the data recording system not being activated for this point following a software upgrade. This situation has been corrected and the omission was reported as a non-compliance in the 2014-2015 Annual Return.
M1.3	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: a) the date(s) on which the sample was taken; b) the time(s) at which the sample was collected; c) the point at which the sample was taken; and d) the name of the person who collected the sample.	Observation	Laboratory reports record the date, time and location of samples taken. The Auditors not that location descriptions may not be consistent with discharge point identification numbers, making it difficult to reconcile the results. The name of the person who collected the sample is not included in the laboratory reports but can be ascertained from the shift log. While this is considered adequate to satisfy the condition, there is opportunity to improve sample record keeping.

Table 4: Conditions of Environment Protection Licence 570			
Condition		**Compliant**	**Comments**
M2.1	For the purposes of Condition M2.1 (sic) of this licence Special Frequency 1 means that monitoring must be carried out monthly during any discharge, but if results of sample analysis indicate a possible breach of the discharge limits for Point 1 as listed in Condition L3.4 of this licence, sampling from EPA Point 1 must be carried out daily during discharge until sample analysis confirms that levels of contaminants in the discharge are below the discharge limits listed for Point 1 in Condition L3.4 of this licence. Note: Daily sampling from EPA Point 1 as defined by Special Frequency 1 is only required to be carried out for the analyte suspected of breaching licence limits. Note: Results of daily sampling from EPA Point 1 as defined by Special Frequency 1 are not required to be used when calculating compliance with Condition L3.4. The licensee must still provide a representative sample from EPA Point 1 during discharge, as per Condition M2.1.	Compliant	
M2.2	For each monitoring/discharge point or utilisation area specified (in Condition M2.3), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns.	Administrative Non-compliance	Samples discharged from EPA Point 26 in January 2016 were not analysed for total petroleum hydrocarbons. This appears to be an isolated occurrence and not indicative of a systematic issue. The Auditors were informed that it will be noted as a non-compliance in the 2015-16 Annual Return.
M2.3	Water Monitoring Requirements tables.	Note	
M2.4	The monitoring results collected at Point 26 in compliance with Condition M2.1 can be used to determine compliance with the concentration limit specified in Condition L3.4 for discharge from Point 4.	Note	

Table 4: Conditions of Environment Protection Licence 570			
Condition		**Compliant**	**Comments**
M3.1	Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.	Not Verified	Samples are analysed at a NATA accredited laboratory. The Auditors have no reason to believe the condition has not been complied with.
M4.1	Note: Division 3 of the *Protection of the Environment Operations (General) Regulation 2009* requires that monitoring of actual loads of assessable pollutants listed in L2.2 must be carried out in accordance with the relevant load calculation protocol set out for the fee-based activity classification listed in the Administrative Conditions of this licence.	Compliant	Pollutant loads calculated using the TANKS software package, which is approved under the EPA's *Load Calculation Protocol* (2009).
M5.1	The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	Observation	No complaints were reported directly to Viva Energy in the current or prior reporting periods (i.e. since 2 July 2014). Complaints would be recorded as incidents in the incident management system (MyOsh since September 2014 or FIM prior to that). A complaint received by the demolition contractor was notified to Viva Energy and while Viva Energy has a record of this complaint, it has not been recorded in MyOsh.
M5.2	The record must include details of the following: a) the date and time of the complaint; b) the method by which the complaint was made; c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; d) the nature of the complaint; e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and f) if no action was taken by the licensee, the reasons why no action was taken.	Observation	No complaints were reported directly to Viva Energy in the current or prior reporting periods (i.e. since 2 July 2014). A complaint received by the demolition contractor was notified to Viva Energy and while Viva Energy has a record of this complaint, it has not been recorded in MyOsh. The Auditors did not verify that the required details of complaints prior to July 2014 are recorded within the former incident management system (FIM); however, the Auditors have no reason to believe the condition has not been complied with.

Table 4: Conditions of Environment Protection Licence 570			
Condition		**Compliant**	**Comments**
M5.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	Not Verified	No complaints were reported directly to Viva Energy in the current or prior reporting periods (i.e. since 2 July 2014). The Auditors did not verify that complaints prior to this date are recorded within the former incident management system (FIM); however, the Auditors have no reason to believe the condition has not been complied with.
M6.1	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	Compliant	
M6.2	The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	Compliant	The complaints line telephone number is available on the Viva Energy website and is included on community newsletters.
M7.1	For each discharge point or utilisation area specified (in the condition), the licensee must monitor: a) the volume of liquids discharged to water or applied to the area; b) the mass of solids applied to the area; c) the mass of pollutants emitted to the air; at the frequency and using the method and units of measure, specified.	Not Verified	As noted in Condition M2.1, records of volumes discharged from EPA Point 1 during the 2015-2015 reporting period were not retained due to the data recording system not being activated for this point following a software upgrade. The Auditors were therefore not able to verify that volumes discharged from this point were monitored; however, the Auditors have no reason to believe the condition has not been complied with.
R1.1	The licensee must complete and supply to the EPA an Annual Return in the approved form.	Compliant	
R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided (in Conditions R1.3 and/or R1.4).	Compliant	

Table 4: Conditions of Environment Protection Licence 570			
Condition		**Compliant**	**Comments**
R1.3	Where this licence is transferred from the licensee to a new licensee: a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.	Compliant	Licence was transferred from Shell Refining (Australia) Pty Ltd to The Shell Company of Australia Limited in 2013. Annual Returns were submitted for the periods 2 July 2012 to 28 February 2013 and 1 March 2013 to 1 July 2013.
R1.4	Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on: a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.	Not Triggered	
R1.5	The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period.	Observation	The EPA's POEO Public Register shows that Annual Returns for the past four years were received by the EPA on the following dates: • 2015 Annual Return EPA date received: 01 Sep 2015 • 2014 Annual Return EPA date received: 28 Aug 2014 • 2013 Annual Return EPA date received: 30 Aug 2013* • 2012 Annual Return EPA date received: 28 Aug 2012 The 2015 Annual Return was recorded as received by the EPA two days outside the 60 day period after the end of the reporting period; however, it is not known where in the process the delay occurred and is not considered significant. * Two Annual Returns were submitted for 2012-13 due to transfer of the licence. Date shown is for the second return at the end of the normal reporting period.

Table 4: Conditions of Environment Protection Licence 570			
Condition		**Compliant**	**Comments**
R1.6	Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify: a) the assessable pollutants for which the actual load could not be calculated; and b) the relevant circumstances that were beyond the control of the licensee.	Not Verified	The Annual Return submitted for part year 2 July 2012 to 28 February 2013 was submitted without load and load based fee calculations. According to the covering letter this had been discussed with the EPA. The Auditors have no reason to believe the condition has not been complied with.
R1.7	The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	Compliant	
R1.8	Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by: a) the licence holder; or b) by a person approved in writing by the EPA to sign on behalf of the licence holder.	Observation	Pages attached to Section C of the Annual Return should be initialled by the person(s) who sign the certification section of the Return. In the 2015 Annual return, one of two pages attached to Section C had not been initialled.
R2.1	Notifications (of incidents causing or threatening material harm to the environment) must be made by telephoning the Environment Line service on 131 555 (immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act).	Not Triggered	No notifiable incidents in the 2014-2015 reporting period or 2015-2016 reporting period to date.
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.	Not Triggered	

Table 4: Conditions of Environment Protection Licence 570			
Condition		**Compliant**	**Comments**
R3.1	Where an authorised officer of the EPA suspects on reasonable grounds that: a) where this licence applies to premises, an event has occurred at the premises; or b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.	Note	Viva Energy reports exceedances of licence conditions to the EPA. On occasions, the EPA requests further information concerning an exceedance, which Viva Energy provides; however, these exceedances are not necessarily events causing or likely to cause material harm to the environment.
R3.2	The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.	Note	
R3.3	The request may require a report which includes any or all of the information (listed in the condition).	Note	
R3.4	The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.	Note	
G1.1	A copy of this licence must be kept at the premises to which the licence applies.	Compliant	
G2.1	The location of EPA point number(s) 1, 2, 4, 23, 24, 25, 26 must be clearly marked by signs that indicate the point identification number used in this licence and be located as close as practical to the point.	Compliant	Observed signage at Points 1, 2, 4, 25 and 26.

Table 4: Conditions of Environment Protection Licence 570			
Condition		**Compliant**	**Comments**
U1.1	On or before 31 March 2011 and annually thereafter, a report must be submitted to the EPA's Manager Sydney Industry. The report must include: (a) a summary of groundwater monitoring results for the previous 12 months; (b) details of any soil or groundwater investigations undertaken and the results of such investigations; (c) details of the progress against works proposed in the previous year's report; (d) an update of the conceptual site model (CSM) if conditions change significantly; (e) an update of the Soil and Groundwater Monitoring Program (SGMP) if required.	Compliant	Sighted 2015 Annual Progress Report (ERM, March 2016).

Table 5: Action Plan

Item No.	Reference	Recommendation	Timeframe for Completion / Implementation	Action to be Taken	Date Completed
Development Consent SSD 5147					
1	**Condition D9**. A complaints register shall be publicly available on the Viva Energy website and be updated quarterly.	Publish a complaints register on the Viva Energy website. Ensure that processes are in place for all environmental complaints relating to the Project, including those received directly by contractors, to be included in reporting.	07/07/216	Complaints register published on website: https://www.vivaenergy.com.au/operations/clyde/conversion-project	07/07/2016
EPBC Approval 2013/6878					
2	**Condition 7**. Within three months of every 12 month anniversary of commencement (and until five years after commencement), a report must be published on the Viva Energy website addressing compliance with each condition of the approval.	Publish a report addressing compliance with the conditions of the EPBC approval on the Viva Energy website and ensure that future annual reports are published by the due date of 16 April each year.	31/08/2016	Report to be written and published.	
Environment Protection Licence 570					
3	**Condition M2.2**. For each monitoring/discharge point or utilisation area specified (in Condition M2.3), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified.	It should be noted as a non-compliance in the 2015-16 Annual Return that samples collected from EPA Point 26 in January 2016 were not analysed for total petroleum hydrocarbons.	30/08/2016	Report as non-compliance in annual return.	
Recommendations from Observations					
4	Dust Management	Continue consideration of options for dust control measures once the demolition contractor has vacated the Site.	31/12/2016	Complete product selection and implement following completion of demolition.	

Table 5: Action Plan

Item No.	Reference	Recommendation	Timeframe for Completion / Implementation	Action to be Taken	Date Completed
5	Sediment and Erosion Control	Continue consideration of options to ensure adequate erosion and sediment control measures are maintained once the demolition contractor has vacated the Site.	31/12/2016	As above.	
6	Flood Management	Erect flood warning signs based on the finalised Flood Assessment Report.	30/09/2016	Flood warning signs erected as required	
7	Bunding	Document how the integrity of bunds is assessed based on visual inspection (e.g. water retention after rain) and the review of groundwater monitoring.	31/12/2016	Consider implementation of periodic inspection of bunds. Review whether environmental monitoring results can be interpreted to assess bund integrity.	
8	Waste Management	Consider improvements to the record of wastes received from Gore Bay Terminal to include the quantity in each receipt.	30/09/2016	Add to waste tracking sheet	
9	Surface Water Quality	Continue consultation with the EPA on options for including overflows from the Main Interceptor, Northern Interceptor and Tankfarm B Retention Basin as licensed discharge points on the EPL.	31/10/2016	Submission to EPA regarding recommendation for review of licenced discharge points.	
10	Administration	Ensure that all pages attached to Section C of the EPL Annual Return are initialled by the person(s) who signed the certification section of the Return.	30/08/2016	Pages signed in next annual return due 30 August 2016.	
11	Emergency Response	Improvements to the PIRMP should be considered as part of the next update or test of the plan.	31/10/2016	Review PIRMP at scheduled time	

Table 5: Action Plan

Item No.	Reference	Recommendation	Timeframe for Completion / Implementation	Action to be Taken	Date Completed
12	Surface Water Quality	Ensure consistency in labelling of sample location on water samples collected from monitoring/discharge points and consider options to improve the recording of the name of the sampler.	31/10/2016	Laboratory engaged to pre-label sample bottles completed 06/07/2016. Implementation of sampling log.	

APPENDIX 1
DEVELOPMENT CONSENT SSD 5147

Development Consent

Section 89E of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning under delegation executed on 14 September 2011, the Planning Assessment Commission of NSW (the Commission) approves the development application referred to in Schedule A, subject to the conditions specified in Schedules B to D.

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.

David Johnson
Member of the Commission

Alan Coutts
Member of the Commission

Sydney

14 January 2015

SCHEDULE A

Application No:	SSD 5147
Applicant:	Shell Company of Australia Ltd
Consent Authority:	Minister for Planning
Land:	9 Devon Street, Rosehill Lot 1, DP 109739 Lot 1, DP 383675 Lot 101, DP 809340 Lot 2, DP 224288
Development:	Conversion of the existing Shell Clyde Refinery to a finished petroleum products import, storage and distribution terminal including demolition of the redundant infrastructure

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DEFINITIONS

AEP	Annual Exceedance Probability
Applicant	Shell Company of Australia Limited, or its successor
BCA	Building Code of Australia
Construction	The carrying out of works including excavation, upgrades to tanks, bunds, drainage and instrumentation, replacement of electrical substations, upgrades to the fire water system and revised pumping and piping works, covered by this consent
Clyde Refinery	Import and refining of crude oil to produce finished petroleum products (refining operations ceased on site in 2012)
Council	Parramatta City Council
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Demolition	The removal of redundant refinery processing units, tanks and other infrastructure, covered by this consent
Department	Department of Planning and Environment
Development	The development as described in the EIS and RTS, and as generally depicted in Appendix A, being for the conversion of the existing Clyde Refinery to a finished petroleum products import, storage, product dosing and distribution terminal including demolition of redundant infrastructure
EIS	Environmental Impact Statement titled *Clyde Terminal Conversion Project*, prepared by AECOM Australia Pty Ltd, dated November 2013, and the Response to Submissions report titled *Clyde Terminal Conversion Project – Response to Submissions,* prepared by Shell, dated May 2014
EMP	Environment Management Plan
ENM	Excavated Natural Material
EPA	Environment Protection Authority
EP&A Act	*Environmental Planning & Assessment Act 1979*
EP&A Regulation	*Environmental Planning & Assessment Regulation 2000*
EPL	Environmental Protection Licence
Evening	The period from 6pm to 10pm
Feasible	Feasible relates to engineering considerations and what is practical to build
Finished Petroleum Products	Gasoline, Diesel, Jet Fuel, Fuel Oil and Petroleum Gases
Heritage	Encompasses both Aboriginal and historic heritage including sites that predate European settlement, and a shared history since European settlement
Heritage Item	An item as defined under the *Heritage Act 1977,* and assessed as being of local, State and/ or National heritage significance, and/or an Aboriginal Object or Aboriginal Place as defined under the *National Parks and Wildlife Act 1974*
Incident	An incident causing or threatening material harm to the environment, and/or an exceedance of the limits or performance criteria in this consent
Land	In general, the definition of land is consistent with the definition in the EP&A Act
Licensed Asbestos Assessor	A person licensed by WorkCover NSW under the *Work Health and Safety Regulation 2011* to carry out air monitoring, clearance inspections or the issuing of clearance certificates for removal of friable asbestos
Management & Mitigation Measures	The Applicant's management and mitigation measures contained in the EIS and RTS and included in Appendix C
Material harm to the environment	Harm to the environment is material if it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial

Minister	Minister for Planning (or nominee)
Mitigation	Activities associated with reducing the impacts of the development
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
NOW	NSW Office of Water within the Department of Primary Industries
OEH	Office of Environment and Heritage
Operation	The import, storage, product dosing and distribution of finished petroleum products
PHA	Preliminary Hazard Analysis Revision 1 dated January 2013 prepared by Sherpa Consulting and included as Appendix F of the EIS
POEO Act	*Protection of the Environment Operations Act 1997*
Reasonable	Reasonable relates to the application of judgment in arriving at a decision, taking into account: mitigation benefits, costs of mitigation versus benefits provided, community views, and the nature and extent of potential improvements.
RMS	Roads and Maritime Services
Secretary	Secretary of the Department (or nominee)
Sensitive Receiver	Residence, education institution (e.g. school, university, TAFE college), health care facility (e.g. nursing home, hospital), religious facility (e.g. church) and children's day care facility.
Site	The land listed in Schedule A, and as depicted in Appendix A
VENM	Virgin Excavated Natural Material
Vicinity of the Site	Devon Street and Durham Street, Rosehill

SCHEDULE B

ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

B1. The Applicant shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, demolition or operation of the Development.

TERMS OF CONSENT

B2. The Applicant shall carry out the Development generally in accordance with the:
(a) EIS;
(b) site layout plans and drawings in the EIS (see Appendix A);
(c) the Management and Mitigation Measures (see Appendix C); and
(d) conditions of this consent.

B3. If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.

B4. The Applicant shall comply with any reasonable requirement(s) of the Secretary arising from the Department's assessment of:
(a) any reports, plans or correspondence that are submitted in accordance with this consent; and
(b) the implementation of any actions or measures contained within these reports, plans or correspondence.

LIMITS OF CONSENT

B5. The Applicant shall not store in excess of:
(a) 264 megalitres (ML) of finished petroleum products; and
(b) 1,550 cubic metres (m^3) of petroleum gases;
on the site at any one time, unless otherwise agreed to in writing by the Secretary.

B6. Construction shall not extend beyond four (4) years from the date of this consent.

B7. Demolition shall not extend beyond ten (10) years from the date of this consent.

SURRENDER OF EXISTING DEVELOPMENT CONSENTS

B8. Within six (6) months of the date of this consent, or as otherwise agreed to in writing by the Secretary, the Applicant shall surrender all existing development consents for the site listed in Appendix B in accordance with Clause 97 of the EP&A Regulation.

Note: This requirement does not extend to the surrender of construction and occupation certificates for existing and proposed building works under Part 4A of the EP&A Act. Surrender of a consent or approval should not be understood as implying that works legally constructed under a valid consent or approval can no longer be legally maintained or used.

STATUTORY REQUIREMENTS

B9. The Applicant shall ensure that all licences, permits and approval/consents are obtained as required by law and maintained as required throughout the life of the Development. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits or approval/consents.

STRUCTURAL ADEQUACY

B10. The Applicant shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures are constructed in accordance with the relevant requirements of the BCA.

Notes:
- *Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works; and*
- *Part 8 of the EP&A Regulation sets out the requirements for the certification of the Development.*

OPERATION OF PLANT AND EQUIPMENT

B11. The Applicant shall ensure that all plant and equipment used for the Development is:

(a) maintained in a proper and efficient condition; and
(b) operated in a proper and efficient manner.

PROTECTION OF PUBLIC INFRASTRUCTURE

B12. Prior to the commencement of construction or demolition, the Applicant shall:

(a) prepare a dilapidation report of the public infrastructure in the Vicinity of the Site (including roads, kerbs, footpaths, nature trip, street trees and furniture); and
(b) submit a copy of this report to the Secretary and Council.

B13. The Applicant shall:

(a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged during construction or demolition; and
(b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of construction or demolition.

PROTECTION OF PRIVATE AND COMMERCIAL PROPERTY

B14. The Applicant shall be responsible for the full costs associated with repairing, replacing, cleanup or compensation of any private or commercial property that is physically damaged by construction and demolition.

PROTECTION OF AUSGRID INFRASTRUCTURE

B15. The Applicant shall:

(a) contact Ausgrid prior to the commencement of construction or demolition to advise of any planned work within two (2) metres of Ausgrid's underground cables;
(b) ensure that no mechanical excavation or boring works occurs within two (2) metres of Ausgrid's underground cables; and
(c) ensure that any hand excavation or hand boring works within two (2) metres of Ausgrid's underground cables is classified as *Work Near Underground Assets* according to WorkCover guidelines and must comply with *Ausgrid's Standard: NS156 Working Near or Around Underground Cables*.

STAGED SUBMISSION OF PLANS OR PROGRAMS

B16. With the approval of the Secretary, the Applicant may:

(a) submit any strategy, plan or program required by this consent on a progressive basis; and/or
(b) combine any strategy, plan or program required by this consent.

B17. Until they are replaced by an equivalent strategy, plan or program approved under this consent, the Applicant shall continue to implement existing strategies, plans or programs for operations on site that have been approved by previous consents or approvals.

Notes:

- *If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program shall clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages and the trigger for updating the strategy, plan or program; and*
- *There must be a clear relationship between the strategy, plan or program that are to be combined.*

DISPUTE RESOLUTION

B18. In the event that a dispute arises between the Applicant and Council or a public authority other than the Department, in relation to a specification or requirement applicable under this consent, the matter must be referred by either party to the Secretary, or if not resolved, to the Minister, whose determination of the dispute shall be final and binding to all parties. For the purpose of this condition, 'public authority' has the same meaning as provided under Section 4 of the EP&A Act.

COMPLIANCE

B19. The Applicant shall ensure that employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent relevant to their respective activities.

B20. The Applicant shall be responsible for environmental impacts resulting from the actions of all persons that it invites onto the site, including contractors, sub-contractors and visitors.

SECTION 94A CONTRIBUTIONS

B21. Prior to the issue of a construction certificate, the Applicant shall pay Council $424,000 as a development contribution, in accordance with Council's *Section 94A Development Contributions Plan 2013*, to the satisfaction of the Secretary.

SCHEDULE C

ENVIRONMENTAL PERFORMANCE AND MANAGEMENT

HAZARDS AND RISKS

TERMS OF APPROVAL

C1. The Applicant shall:

(a) carry out the development in accordance with the PHA;
(b) implement all control measures proposed in the PHA;
(c) implement all actions proposed by Shell in response to the recommendations from the Buncefield incident investigation report as contained in the supplementary letter received on 28/11/2013 "*Buncefield Response to DPI*"; and
(d) implement all proposed actions listed in Shell's response to the Department's requests for additional information and clarifications "*140709 PHA Review Questions V3 3*" (latest response update received by the DPE on 24/07/2014).

PRE-CONSTRUCTION

C2. At least one month prior to the commencement of construction or demolition of the proposed development (except for construction of those preliminary works that are outside the scope of the hazard studies) and/or associated demolition works, or within such further period as the Secretary may agree, the Applicant shall prepare and submit for the approval of the Secretary the studies set out under subsections (a) to (d) (the pre-construction studies) of this Condition. Construction, other than of preliminary works, shall not commence until approval has been given by the Secretary and, with respect to the Fire Safety Study, approval has also been given by Fire and Rescue NSW.

CONSTRUCTION/DEMOLITION SAFETY STUDY

(a) A Construction Safety Study, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 7, 'Construction Safety'. For developments in which the construction period exceeds six (6) months, the commissioning portion of the Construction Safety Study may be submitted two months prior to the commencement of commissioning of each discrete component/system of the development per the development's commissioning plan (e.g. individual tank systems). The Construction Safety Study shall identify and assess construction and demolition related hazards and the control measures that will be put in place to prevent and/or mitigate such hazards.

The Construction/Demolition Safety Study shall include the identification of all significant demolition related hazards, and the assessment of the risks associated with these hazards. The analysis shall cover all phases of the proposed development (i.e. de-inventorisation, demolition/removal of redundant assets and infrastructure, and the construction of new assets), and include all equipment and systems covered by the scope of the project (e.g. demolition of refinery process units, stacks, buildings, tanks, pipelines, etc). The demolition hazards identification and risk assessment shall particularly examine the following:

- the potential risk impacts from the proposed demolition works onto the existing simultaneous terminal operations; and
- the potential for any of the identified demolition related risks to alter, during the proposed works, individually or through interaction with existing operations, the offsite risk profile of the facility as assessed in the PHA.

FIRE SAFETY STUDY

(b) A Fire Safety Study that shall cover the relevant aspects of the Department of Planning's Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study Guidelines' and the New South Wales Government's 'Best Practice Guidelines for Contaminated Water Retention and Treatment Systems'. The study shall also be submitted for approval to Fire and Rescue NSW. The study shall reflect the "end-state terminal" fire prevention, detection, and protection arrangements.

HAZARD AND OPERABILITY STUDY

(c) A Hazard and Operability Study for the proposed development, chaired by a qualified person, independent of the development, approved by the Secretary prior to the commencement of the study. The study shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 8, 'HAZOP Guidelines'. The study report must be accompanied by a program for the implementation of all recommendations made in the report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.

FINAL HAZARD ANALYSIS

(d) A Final Hazard Analysis of the proposed development, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'. The FHA shall report on the implementation of the recommendations of the Preliminary Hazard Analysis. The FHA also shall:

- demonstrate that the tank overfill protection system (for all tanks) reduces the risk so far as reasonably practicable without the use of gas detection in the bunds. The following shall be included as part of this demonstration requirement:
  - a sample bow-tie analysis of the tank overfill protection system;
  - the safety integrity level (SIL) allocation and verification report for the tank overfill protection system;
- include the assessment of all hazards from the Parramatta Terminal;
- confirm the quantity and type of dangerous goods stored in the onsite warehouses and include the associated warehouse fire analysis;
- include the number and assessment of LPG tanker transfer operations. The following items shall be included in the analysis;
  - the analysis of all butane pool fire scenarios;
  - the analysis of leaks from butane road tanker pumps;
- justify the limitation of hole sizes (i.e. a maximum of 100 mm) considered in the analysis, or revise the model accordingly to include larger hole sizes appropriate to the actual pipe diameters;
- re-evaluate and confirm all relevant data and assumptions from the Preliminary Hazard Analysis; and
- re-evaluate and confirm all control measures proposed for the prevention and mitigation of incidents.

PRE-COMMISSIONING

C3. The Applicant shall develop and implement the plans and systems set out under subsections (a) to (b) of this Condition. No later than two months prior to the commencement of commissioning of any component of the proposed development, or within such further period as the Secretary may agree, the Applicant shall submit, for the approval of the Secretary, documentation describing those plans and systems. Commissioning shall not commence until approval has been given by the Secretary.

EMERGENCY PLAN

(a) A comprehensive Emergency Plan and detailed emergency procedures for the proposed development (end-state terminal). This plan shall include consideration of the safety of all people outside of the development who may be at risk from the development. The plan shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'. The plan shall include interim emergency management arrangements (if any) which may be introduced between the commencement of commissioning and reaching end-state terminal operations.

SAFETY MANAGEMENT SYSTEM

(b) A document setting out a comprehensive Safety Management System, covering all on-site operations and associated transport activities involving hazardous materials. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. Records shall be kept on-site and shall be available for inspection by the Secretary upon request. The Safety Management System shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'.

An inspection, testing and preventive maintenance program should be developed, implemented and maintained to ensure the reliability and availability of the key safety critical equipment is, at a minimum, consistent with the data estimated in the PHA.

PRE-STARTUP

Pre-Startup Compliance Report

C4. One month prior to the commencement of operation of each asset or system, the Applicant shall submit to the Secretary, a report detailing compliance with Conditions C1, C2 and C3 of this Schedule, including:

(a) dates of study/plan/system submission, approval, commencement of construction and commissioning;
(b) actions taken or proposed, to implement the recommendations and safety-related control measures in the studies/plans/systems;
(c) a pre-startup safety review/checklist
(d) responses to each requirement imposed by the Secretary under Condition C6 of this Schedule.

POST STARTUP

Post Startup Compliance Report

C5. Three months after the commencement of operation of the first asset or system covered by this consent, the Applicant shall submit to the Secretary, a report verifying that:

(a) the Emergency Plan required under Condition C3(a) is effectively in place and that at least one emergency exercise has been conducted; and
(b) the Safety Management System required under Condition C3(b) has been fully implemented and that records required by the system are being kept.

ONGOING

Hazard Audit

C6. Within twelve months of the date of this consent and every three years thereafter, or at such intervals as the Secretary may agree, the Applicant shall carry out a comprehensive Hazard Audit of the proposed development and within one month of each audit submit a report to the Secretary.

C7. The audits shall be carried out at the Applicant's expense by a qualified person or team, independent of the development, approved by the Secretary prior to commencement of each audit. Hazard Audits shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 5, 'Hazard Audit Guidelines' (HIPAP No. 5).

C8. The audit reports shall, in addition to the requirements provided in HIPAP No 5:

(a) verify implementation of all actions proposed by Shell in response to the recommendations from the Buncefield incident investigation report per the supplementary letter from Shell received on 28/11/2013 *"Buncefield Response to DPI"*;
(b) verify implementation of all actions listed in Shell's response to the Department's requests for additional information and clarifications "140709 PHA Review Questions V3 3" (latest response update received by the DPE on 24/07/2014);
(c) verify that an inspection, testing and preventative maintenance program has been developed, implemented and maintained to ensure the reliability and availability of key safety critical equipment;
(d) confirm that the throughput and storage quantities of potentially hazardous materials are consistent with the PHA;
(e) verify that the maximum fill levels in Tank 35 and Tank 42 are being maintained to comply with the maximum bund retention capacity; and
(f) verify implementation of any measures arising from the reports submitted in respect of Conditions C1 to C5 of this Schedule.

The audit report must be accompanied by a program for the implementation of all recommendations made in the audit report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.

Further Requirements

C9. The Applicant shall comply with all reasonable requirements of the Secretary in respect of the implementation of any measures arising from the reports submitted in respect of Conditions C1 to C6 of this Schedule inclusive, within such time as the Secretary may agree.

WORKCOVER REQUIREMENTS

C10. Prior to finalising the design, the Applicant shall meet with WorkCover to discuss preventative and recovery barriers in the tank farms and the implementation of the relevant findings and recommendations of the Buncefield investigation.

C11. Before finalising the FHA, the Applicant shall meet with WorkCover to agree relevant LPG vessel failure modes and their frequency.

DEMOLITION

Approvals/Licensing

C12. The Applicant shall ensure that all demolition associated with the Development is carried out in accordance with *Australian Standard AS 2601:2001: The Demolition of Structures*, or its latest version and the requirements of the *Work Health and Safety Regulation, 2011*.

C13. The Applicant shall ensure that all demolition is undertaken by licensed demolition experts in accordance with the requirements of WorkCover and the *Work Health and Safety Regulation, 2011*.

Demolition Management Plan

C14. The Applicant shall prepare and implement a Demolition Management Plan, to the satisfaction of the Secretary. This plan must:

(a) be prepared by a suitably qualified and experienced demolition contractor;
(b) be prepared in consultation with Council, EPA, WorkCover and RMS and be approved by the Secretary prior to the commencement of any demolition;
(c) identify the statutory requirements that apply to the demolition works;
(d) provide specific details of the proposed demolition process and methods, structures to be demolished, a program for the sequencing of demolition and details of materials handling and management;
(e) detail the process and techniques for demolishing the key pieces of redundant equipment and details of how this would be managed;
(f) describe in detail the procedures for independent testing and analysis (by a NATA accredited laboratory) of all items to be demolished or disturbed during construction for the presence of asbestos;
(g) include copies of asbestos clearance certificates from an independent Licensed Asbestos Assessor for all items to be demolished;
(h) describe the role, responsibility, authority and accountability of all key personnel involved in the management of the demolition;
(i) describe in general how the environmental performance of the demolition would be monitored and managed; and
(j) describe the consultation procedures for informing the community and relevant agencies about the demolition works and environmental performance, including procedures for responding to, recording and handling complaints and non-compliances.

Stack Demolition Management Plan

C15. The Applicant shall prepare and implement a Stack Demolition Management Plan, to the satisfaction of the Secretary. This plan must:

(a) be prepared by a suitably qualified and licensed demolition expert whose appointment has been endorsed by the Secretary;
(b) be prepared in consultation with Council, EPA, WorkCover and RMS and be approved by the Secretary prior to the demolition of any of the five (5) chimney stacks;
(c) be independently reviewed by a certified structural engineer, including a review of the demolition methodology and blast calculations;
(d) detail the process, timing and techniques for demolition of each chimney stack and how this would be managed;
(e) include copies of asbestos clearance certificates for each stack, prepared by a Licensed Asbestos Assessor;
(f) describe the role, responsibility, authority and accountability of all key personnel involved in the management of the stack demolition;
(g) describe in general how the environmental performance of the stack demolition would be monitored and managed;
(h) describe the specific consultation procedures for informing the community, nearby businesses and relevant agencies about the timing and method for stack demolition works, any required road closures or exclusion areas and environmental management, including procedures for responding to, recording and handling complaints and non-compliances; and
(i) detail the timeframe for removal of the waste materials generated by stack demolition, including the requirement for any interim measures to manage dust and surface water.

ASBESTOS MANAGEMENT

Asbestos Handling, Transport, Disposal and Clearance

C16. The Applicant shall ensure that any asbestos encountered during construction and demolition is monitored, handled, transported and disposed of by appropriately qualified and licensed contractors in accordance with the requirements of WorkCover and relevant guidelines, including:

(a) *Work Health and Safety Regulation 2011*;
(b) *Model Code of Practice – How to Manage and Control Asbestos in the Workplace, 2011* Safe Work Australia;
(c) *Model Code of Practice – How to Safely Remove Asbestos, 2011* Safe Work Australia; and
(d) *Protection of the Environment Operations (Waste) Regulation 2005.*

CONTAMINATION

Contamination Management Plan

C17. The Applicant shall prepare and implement a Contamination Management Plan for construction and demolition, to the satisfaction of the Secretary. The Plan shall:

(a) be prepared by a suitably qualified and experienced expert;
(b) be prepared in consultation with the EPA;
(c) be approved by the Secretary prior to the commencement of construction or demolition;
(d) identify all potential contaminants that could be disturbed, mobilised and discharged to receiving waters during construction and demolition;
(e) detail the procedures for testing, classifying, handling, storing and disposing of contaminated soils and groundwater encountered in excavations;
(f) detail measures for periodically testing surface water run-off that may accumulate in excavations, and the procedures for transfer of contaminated water to the on-site wastewater treatment plant; and
(g) detail any required updates to the *Soil and Groundwater Management Plan Shell Clyde Refinery and Parramatta Terminal, Durham Street, Rosehill, 2010* to address construction and demolition.

Removal of Sub-Grade Infrastructure

C18. The Applicant shall undertake any removal of underground petroleum storage tanks or other infrastructure in accordance with the *Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2008* or its latest version.

C19. The Applicant shall provide a contamination report to the EPA detailing any site contamination investigation carried out in the immediate vicinity of any subgrade asset removal. This report shall be provided to the EPA on completion of the removal of sub-grade infrastructure.

Acid Sulphate Soils Management Plan

C20. The Applicant shall prepare and implement an Acid Sulphate Soil Management Plan for construction and demolition in accordance with the NSW State Government's *Acid Sulphate Soils Manual 1998.*

NOISE

Noise Limits

C21. The Applicant shall ensure that noise from the operation does not exceed the limits in Table 1.

Table 1: Noise Limits dB(A)

Noise Receiver Location	Location	Day	Evening	Night	
		$L_{Aeq\ (15\ min)}$	$L_{Aeq\ (15\ min)}$	$L_{Aeq\ (15\ min)}$	$L_{A1\ (1\ minute)}$
R1 – R3	Any residence in the suburb of Rosehill	38	38	35	45
R4	Any residence in the suburb of Silverwater	37	37	36	45
R5	Any residence in the suburb of Newington	36	36	35	45
R6 – R7	Any residence in the suburb of Rydalmere	40	40	36	45

Notes:

- *To identify a noise receiver location, refer to the figure in Appendix D; and*
- *Noise generated during operation is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.*

Hours of Work

C22. The Applicant shall comply with the hours detailed in Table 2, unless otherwise agreed in writing by the EPA and the Secretary.

Table 2: Construction, Demolition & Operation Hours

Activity	Day	Time
Construction and Demolition	Monday – Friday Saturday	7:00am to 6:00pm 8:00am to 5:00pm
Operation	Monday – Sunday	24 hours

C23. Construction and demolition outside of the hours identified in condition C22 may be undertaken in the following circumstances:

(a) works that are inaudible at the nearest sensitive receivers;
(b) works that are consistent with Shell's existing maintenance procedures and are in accordance with the EPL;
(c) works agreed to in writing by the EPA or the Secretary;
(d) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or
(e) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.

Operating Conditions

C24. The Applicant shall:

(a) implement all reasonable and feasible noise management and mitigation measures to prevent and minimise operational, low frequency and traffic noise generated during operation;
(b) maintain the effectiveness of any noise suppression equipment on plant at all times and ensure defective plant that may generate offensive noise is not used operationally until fully repaired; and
(c) regularly assess noise monitoring data and relocate, modify and/or stop operations to ensure compliance with the relevant conditions of this consent.

Construction & Demolition Noise Management Plan

C25. The Applicant shall prepare and implement a Noise Management Plan for construction and demolition. The plan shall:

(a) be prepared and implemented by a suitably qualified and experienced expert;
(b) be prepared in consultation with the EPA;
(c) be approved by the Secretary prior to the commencement of construction or demolition;
(d) describe the measures that will be implemented to minimise noise from construction and demolition including:
    - all reasonable and feasible measures being employed on site;
    - maintenance of equipment to ensure that it is in proper and efficient condition;
    - procedures to ensure that all construction and demolition equipment does not operate simultaneously, where practicable;
    - traffic noise is effectively managed;
    - identification of high noise generating construction and demolition works, including proposed times when these works will be carried out, respite periods and mitigation measures, including the use of temporary noise barriers where necessary;
(e) includes a noise monitoring program that:
    - is capable of evaluating noise impacts from construction and demolition;
    - includes a protocol for determining exceedances of relevant noise criteria; and
    - includes procedures for responding to complaints.

BLASTING

Blasting Hours

C26. The Applicant shall only carry out blasting on site between 9:00am and 5:00pm Monday to Friday inclusive. Blasting is not permitted on Saturday, Sundays, public holidays or at any other time without the written approval of the Secretary.

Blast Management Plan

C27. The Applicant shall prepare and implement a Blast Management Plan for demolition, to the satisfaction of the Secretary. This plan must:

(a) be prepared by a suitably qualified and experienced expert;
(b) be prepared in consultation with the EPA;
(c) be approved by the Secretary prior to the commencement of blasting;
(d) describe the program for undertaking test blasts to determine appropriate blasting parameters to ensure compliance with the limits in this consent;
(e) describe the measures that would be implemented to:
- ensure compliance with the blasting limits in this consent;
- protect the safety of people in the surrounding area;
- protect public and private infrastructure and property in the surrounding area from any damage; and
- minimise the dust and fume emissions of any blasting; and

(f) include a monitoring program for evaluating and reporting on compliance with the blasting limits in this consent; and
(g) describes the procedures for early notification to the public, nearby businesses and relevant authorities of proposed blasting times, duration and any required exclusion areas and/or road closures.

AIR QUALITY

Dust Minimisation

C28. The Applicant shall carry out all reasonable and feasible measures to minimise dust generated during construction, demolition and operation.

Offensive Odour

C29. The Applicant shall not cause or permit the emission of offensive odours from the site, as defined under Section 129 of the POEO Act.

Operational Air Quality Monitoring Program

C30. The Applicant shall prepare and implement an Air Quality Monitoring Program for the operation. The plan shall:

(a) be prepared and implemented by a suitably qualified and experienced expert;
(b) be prepared in consultation with the EPA;
(c) be submitted to the Secretary for approval within 3 months of the date of this consent;
(d) describe an air quality monitoring program that is capable of evaluating the performance of the operation and determining compliance with key performance indicators agreed in consultation with the EPA;
(e) includes record keeping, a complaints register and response procedure and compliance reporting.

Construction & Demolition Air Quality Management Plan

C31. The Applicant shall prepare and implement an Air Quality Management Plan for construction and demolition. The plan shall:

(a) be prepared and implemented by a suitably qualified and experienced expert;
(b) be approved by the Secretary prior to the commencement of construction or demolition and be provided to the EPA;
(c) describe the measures that would be implemented on site to ensure:
- the control of air quality and odour impacts;
- that these controls remain effective over time;
- that all reasonable and feasible air quality management practice is employed;

- the air quality impacts are minimised during adverse meteorological conditions and extraordinary events; and
- compliance with the relevant conditions of this consent.

(d) includes record keeping, a complaints register and compliance reporting.

Meteorological Monitoring

C32. During the life of the Development, the Applicant shall ensure that there is a suitable meteorological station operating in the vicinity of the site that complies with the requirements of the EPA.

ENERGY EFFICIENCY AND GREENHOUSE GAS EMISSIONS

C33. The Applicant shall implement all reasonable and feasible measures to minimise energy use and greenhouse gas emissions during construction, demolition and operation.

TRANSPORT AND ACCESS

Operating Conditions

C34. The Applicant shall ensure that:

(a) the operation does not result in any vehicles queuing on the public road network;
(b) heavy vehicles and bins associated with operation do not park or stand on local roads or footpaths in the vicinity of the site;
(c) all loading and unloading of materials is carried out on site;
(d) the proposed turning areas in the car park are kept clear of any obstacles, including parked cars, at all times;
(e) all trucks entering or leaving the site with loads have their loads covered;
(f) trucks associated with operation do not track dirt onto the public road network; and
(g) heavy vehicles use designated routes to minimise impacts on the local and regional road network.

Car Parking

C35. The Applicant shall provide sufficient parking facilities on-site, including for heavy vehicles, for construction, demolition and operational personnel, to ensure that traffic associated with the Development does not utilise public and residential streets or public parking facilities.

Traffic Management Plan

C36. The Applicant shall prepare and implement a Traffic Management Plan for construction and demolition, to the satisfaction of the Secretary. The plan must:

(a) be prepared by a suitably qualified and experienced person;
(b) be prepared in consultation with Council and RMS;
(c) be approved by the Secretary prior to the commencement of construction or demolition;
(d) detail the measures that would be implemented to ensure road safety and network efficiency during construction and demolition;
(e) detail heavy vehicle routes, access and parking arrangements;
(f) include a Driver Code of Conduct to:
  - minimise the impacts of construction and demolition on the local and regional road network;
  - minimise conflicts with other road users;
  - ensure truck drivers use specified routes;
(g) include a program to monitor the effectiveness of these measures; and
(h) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.

FLOODING

Flood Design and Structural Certification

C37. The Applicant shall ensure that all new buildings and structures, and additions to existing buildings and structures are constructed in accordance with the relevant requirements of the City of Parramatta's *Local Floodplain Risk Management Policy, June 2006*.

C38. New electrical substations shall be constructed above the 1% Annual Exceedance Probability (AEP) flood level with an appropriate freeboard determined in consultation with Council and to the satisfaction of the Secretary.

Flood Study

C39. Within 2 months of the date of this consent, the Applicant shall provide detailed site data, to the satisfaction of Council, to update the *Duck River and Duck Creek Flood Study Review, 2013*. The Applicant shall:

(a) provide details of all floodplain obstructions on the site, including bund locations and heights;
(b) fund the work required to update Council's flood model with the site specific data; and
(c) provide details of all construction and demolition works that would be carried out within areas defined as 'high hydraulic hazard'.

C40. Within 1 month of completing the updates to the flood study, the Applicant shall review the outcomes of the updated study and detail any additional flood management measures to be implemented during construction, demolition and operation. The outcomes of the study shall also inform any revisions to the Flood Emergency Response Plan as required by Condition C42.

Flood Warning Signs

C41. The Applicant shall ensure that flood warning signs are maintained throughout the site, during construction, demolition and operation. The flood warning signs shall indicate the site is prone to flooding and shall show the location of assembly and evacuation points, which are above the 1% AEP.

Flood Emergency Response Plan

C42. The Applicant shall update and implement the Emergency Response Plan for the site to include procedures for flood emergency response during construction, demolition and operation. The Plan must:
(a) be prepared by a suitably qualified and experienced expert;
(b) be prepared in consultation with Council;
(c) be submitted to the Secretary for approval at least 1 month prior to the commencement of construction or demolition, or as otherwise agreed with the Secretary;
(d) detail the procedures for managing flood risks during construction, demolition and operation, including flood recovery measures, sufficient warning time for flash flooding and procedures for ensuring the protection of infrastructure and human safety; and
(e) identify assembly points, emergency evacuation routes, flood warning alarms and evacuation procedures.

SOIL & WATER

Imported Soil

C43. The Applicant shall:

(a) ensure that only VENM or ENM or other material approved in writing by the EPA is used as fill on the Site;
(b) keep accurate records of the volume and type of fill to be used; and
(c) make these records available to the Department upon request.

Erosion and Sediment Control Plan

C44. The Applicant shall prepare and implement an Erosion and Sediment Control Plan for construction and demolition to the satisfaction of the Secretary and in accordance with *Managing Urban Stormwater: Soils and Construction, 2004,* or its latest version.

C45. Prior to the commencement of construction or demolition, the Applicant shall implement suitable erosion and sediment control measures on-site, in accordance with the Erosion and Sediment Control Plan.

Discharge Limits

C46. The Development shall comply with section 120 of the *Protection of the Environment Operations Act 1997,* which prohibits the pollution of waters, except as expressly provided in an EPL.

C47. The Applicant shall ensure that signs are displayed and maintained adjacent to all stormwater drains on the site clearly indicating 'Stormwater Only'.

Foreshore Management

C48. The Applicant shall ensure the foreshore and inter-tidal areas on the site are fully protected. This includes preventing the storage of any machinery, materials, equipment, supplies, or waste receptacles within or adjacent to the inter-tidal area.

Bunding

C49. The Applicant shall store all chemicals, fuels and oils used on-site in appropriately bunded areas in accordance with the requirements of all relevant Australian Standards, and/or the EPA's *Storing and Handling of Liquids: Environmental Protection – Participants Handbook*.

Water Management Plan

C50. The Applicant shall update and implement the Water Management Plan for the site for construction, demolition and operation, to the satisfaction of the Secretary. The plan must:

(a) be approved by the Secretary prior to the commencement of construction or demolition and be provided to the EPA and NOW;
(b) include mitigation measures for managing surface water and industrial water including, but not limited to the Management and Mitigation Measures in Appendix C;
(c) include a Surface Water Management Plan, that:
- describes the water management system on site, including plans of the stormwater system and oily water/wastewater system;
- demonstrates compliance with any requirements of the EPL and/or Council with respect to stormwater and wastewater management;

(d) include a Groundwater Management Plan, that:
- details the procedures for testing, dewatering, storage, movement and treatment of any groundwater; and

(e) include a Leachate Management Plan describing procedures for preventing the generation of leachate from waste stockpiles.

WASTE MANAGEMENT

C51. The Applicant shall assess, classify and manage all liquid and non-liquid wastes generated at the site during construction, demolition and operation in accordance with the *EPA's Waste Classification Guidelines Part 1: Classifying Waste, December 2009*, or its latest version and dispose of all wastes to a facility that may lawfully accept the waste.

C52. Waste generated outside the site shall not be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence under the POEO Act, if such a licence is required in relation to that waste.

C53. The Applicant shall manage the chemical fixation and treatment of organic solvents, contaminated blue metals and empty drums or macro-encapsulation of waste in accordance with the EPA Specific Immobilisation Approval and the *EPA Waste Classification Guidelines Part 2: Immobilisation of Waste, April 2008*, or its latest version.

C54. The Applicant shall manage all materials and waste containing Scheduled Chemical Waste and polychlorinated biphenyls in accordance with the applicable Chemical Control Order or in accordance with a licence under the *Environmentally Hazardous Chemicals Act, 1985*.

C55. The Applicant shall manage all materials and waste containing radioactive substances in accordance with the *Radiation Control Act, 1990*, *Radiation Control Regulation, 2013* and the requirements of the EPA.

C56. The Applicant shall retain all sampling and waste classification data for the life of the Development in accordance with the requirements of the EPA.

Waste Management Plan

C57. The Applicant shall update and implement the Waste Management Plan for the site for construction, demolition and operation to the satisfaction of the Secretary. This Plan shall:

(a) be approved by the Secretary prior to the commencement of construction or demolition and be provided to the EPA;
(b) detail the type and quantity of waste to be generated during construction, demolition and operation;
(c) detail the materials to be reused or recycled, either on or off site;
(d) detail the procedures for handling, storage, collection of recycling and disposal of waste;
(e) include measures to manage stockpiles, including ensuring stockpiles are covered or stored undercover on sealed and bunded areas, are no higher than 5 metres and have height markers installed; and
(f) include the Management and Mitigation Measures included in Appendix C.

BIODIVERSITY

Biodiversity Management Plan

C58. The Applicant shall prepare and implement a Biodiversity Management Plan for the Development to the satisfaction of the Secretary. This plan must:

(a) be prepared in consultation with Council and OEH;
(b) be approved by the Secretary prior to the commencement of construction or demolition;
(c) include measures to be taken to minimise impacts on flora and fauna, including inspection of exterior casings and insulations on stacks and buildings to be demolished for the presence of Grey-headed Flying-foxes and microbats and procedures for their safe relocation;
(d) include an updated *Plan of Management: Restoration of Green and Golden Bell Frog Habitat, Clyde, October 2013* for the construction, demolition and operation, incorporating:
- specific measures to be implemented such as frog-proof fences to exclude Green and Golden Bell Frogs from construction and demolition areas;
- plans for the implementation and ongoing management of artificial breeding habitats;
- monitoring protocols including long-term low frequency frog monitoring and a *Gambusia* monitoring program of the ponds and artificial breeding habitats;
- active management procedures for ensuring ponds remain free of *Gambusia* including manually drying out small and intermediate ponds on an annual basis;

(e) include an updated Wetland Management Plan to include the creation of habitat opportunities for the Green and Golden Bell Frog; and
(f) include a pest, vermin and noxious weed management plan.

HERITAGE MANAGEMENT

Archival Record

C59. The Applicant shall commission an archival photographic and documentary recording of the existing fabric and operation of the Clyde Refinery. The archival recording must:

(a) be prepared by an appropriately qualified heritage expert, in accordance with the *Heritage Council Guidelines on Photographic Recording of Heritage Items Using Film or Digital Capture 2006*;
(b) ensure the photographic recording is undertaken prior to demolition works taking place;
(c) be submitted to the Heritage Council of NSW, the Council Library and the NSW State Library one month prior to the completion of demolition of the key refinery processing units;
(d) include the recording of oral histories from past and present staff regarding the operations of the Clyde Refinery;
(e) ensure the documentary recording contains a detailed timeline of representative pieces of equipment and tankfarms, together with copies of plans and schematics;
(f) include a photographic archival recording of the former Clyde Refinery infrastructure. These may be staged to capture those elements being deconstructed prior to demolition works and the broader context of the equipment should be captured prior to its removal; and
(g) include a photographic archival recording of the stacks.

Heritage Management Plan

C60. The Applicant shall prepare and implement a Heritage Management Plan for the on-going management of heritage items on the site. The plan shall:

(a) be prepared by an appropriately qualified heritage expert in consultation with Council;
(b) be submitted to the Secretary for approval no later than 3 months from the date of this consent;
(c) include an Archaeological Research Design and Methodology to manage subsurface impacts (if they occur), to the area of archaeological potential identified around the Bitumen Gantry through the removal of foundations or other invasive works;

(d) include details for the relocation of the memorial to John Simpson Fell, Horace Liddon Spencer and Albert Edward Ward to a publicly accessible area, to be agreed in consultation with Council; and
(e) include measures for the management of archaeological potential at the historical residential area along Devon Street and the second bitumen gantry.

Unexpected Finds Protocol

C61. If any archaeological relics are uncovered during the course of the work, then all works shall cease immediately in that area and the OEH Heritage Branch contacted. Depending on the possible significance of the relics, an archaeological assessment and an excavation permit under the *NSW Heritage Act 1977* may be required before further works can continue in that area.

C62. If Aboriginal objects are uncovered during work, excavation or disturbance of the area, work must stop immediately. The Regional Operations Group of the OEH is to be contacted. Aboriginal archaeological excavation must be co-ordinated with any proposed investigation of non-indigenous material.

LIGHTING & SIGNAGE

Lighting

C63. The Applicant shall ensure that the lighting associated with the Development:

(a) complies with the latest version of *AS 4282(INT) – Control of Obtrusive Effects of Outdoor Lighting*; and
(b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.

Signage

C64. The Applicant shall not install any advertising signs on site without the written consent of the Secretary.

SCHEDULE D

ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

D1. The Applicant shall prepare and implement an Environmental Management Strategy for the Development to the satisfaction of the Secretary. This strategy must:

(a) be submitted to the Secretary for approval within 3 months of the date of this consent;
(b) provide the strategic framework for environmental management of the Development;
(c) identify the statutory approvals that apply to the Development;
(d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Development;
(e) describe the procedures that would be implemented to:
- keep the local community and relevant agencies informed about the construction, demolition and operation and environmental performance of the Development;
- receive, handle, respond to, and record complaints;
- resolve any disputes that may arise during the course of the development;
- respond to any non-compliance;
- respond to emergencies; and

(f) include:
- copies of any strategies, plans and programs approved under the conditions of this consent; and
- a clear plan depicting all the monitoring required to be carried out under the conditions of this consent.

Management Plan Requirements

D2. The Applicant shall ensure that the Management Plans required under this consent are prepared in accordance with any relevant guidelines, and include:

(a) detailed baseline data;
(b) a description of:
- the relevant statutory requirements (including any relevant approval, licence or lease conditions);
- any relevant limits or performance measures/criteria; and
- the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the Development or any management measures;

(c) a description of the measures that will be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
(d) a program to monitor and report on the:
- impacts and environmental performance of the Development; and
- effectiveness of any management measures (see (c) above);

(e) a contingency plan to manage any unpredicted impacts and their consequences;
(f) a program to investigate and implement ways to improve the environmental performance of the Development over time;
(g) a protocol for managing and reporting any:
- incidents;
- complaints;
- non-compliances with statutory requirements; and
- exceedances of the impact assessment criteria and/or performance criteria: and

(h) a protocol for periodic review of the plan.

Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.

Revision of Strategies, Plans & Programs

D3. Within 3 months of the submission of:

(a) an annual review under Condition D4 of this schedule;
(b) an incident report under Condition D5 and D6 of this schedule;
(c) an audit report under Condition D7 of this schedule; and
(d) any modifications to this consent,

the Applicant shall review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Secretary.

Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development.

REPORTING

Annual Review

D4. By the end of July each year, or other timing as may be agreed by the Secretary, the Applicant shall review the environmental performance of the Development to the satisfaction of the Secretary. This review must:

(a) describe the construction and demolition activities that were carried out in the previous calendar year, and the construction and demolition activities proposed to be carried out in the coming calendar year;
(b) include a comprehensive review of the monitoring results and complaints records of the Development over the previous calendar year, which includes a comparison of these results against:
- the relevant statutory requirements, limits or performance measures/criteria;
- the monitoring results of previous years; and
- the relevant predictions in the EIS;

(c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
(d) identify any trends in the monitoring data over the life of the Development;
(e) identify any discrepancies between the predicted and actual impacts of the Development, and analyse the potential cause of any significant discrepancies; and
(f) describe what measures will be implemented over the current calendar year to improve the environmental performance of the Development.

Incident Reporting

D5. Within 24 hours of the occurrence of an incident that causes (or may cause) harm to the environment, the Applicant shall notify the Secretary and any other relevant agencies of the incident.

D6. Within 7 days of the detection of the incident, the Applicant shall provide the Secretary and any relevant agencies with a detailed report on the incident.

INDEPENDENT ENVIRONMENTAL AUDIT

D7. Within a year of the date of this consent, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the Development. This audit must:

(a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
(b) include consultation with the relevant agencies;
(c) assess the environmental performance of the Development and whether it is complying with the relevant requirements in this consent and any relevant EPL (including any assessment, plan or program required under these approvals);
(d) review the adequacy of any approved strategy, plan or program required under these approvals; and
(e) recommend measures or actions to improve the environmental performance of the Development, and/or any assessment, plan or program required under these approvals.

Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.

D8. Within 3 months of commissioning this audit, or as otherwise agreed by the Secretary, the Applicant shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report and a program for implementation.

ACCESS TO INFORMATION

D9. The Applicant shall, to the satisfaction of the Secretary:

(a) make the following information publicly available on its website:
- the EIS;
- current statutory approvals for the Development;
- approved strategies, plans or programs;

- a summary of the monitoring results of the Development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent;
- a complaints register, updated on a quarterly basis;
- copies of any annual reviews (over the last 5 years);
- any independent environmental audit, and the Applicant's response to the recommendations in any audit; and
- any other matter required by the Secretary; and

(b) keep this information up-to-date.

Note: This requirement does not require any confidential information to be made available to the public.

APPENDIX A
DEVELOPMENT PLANS

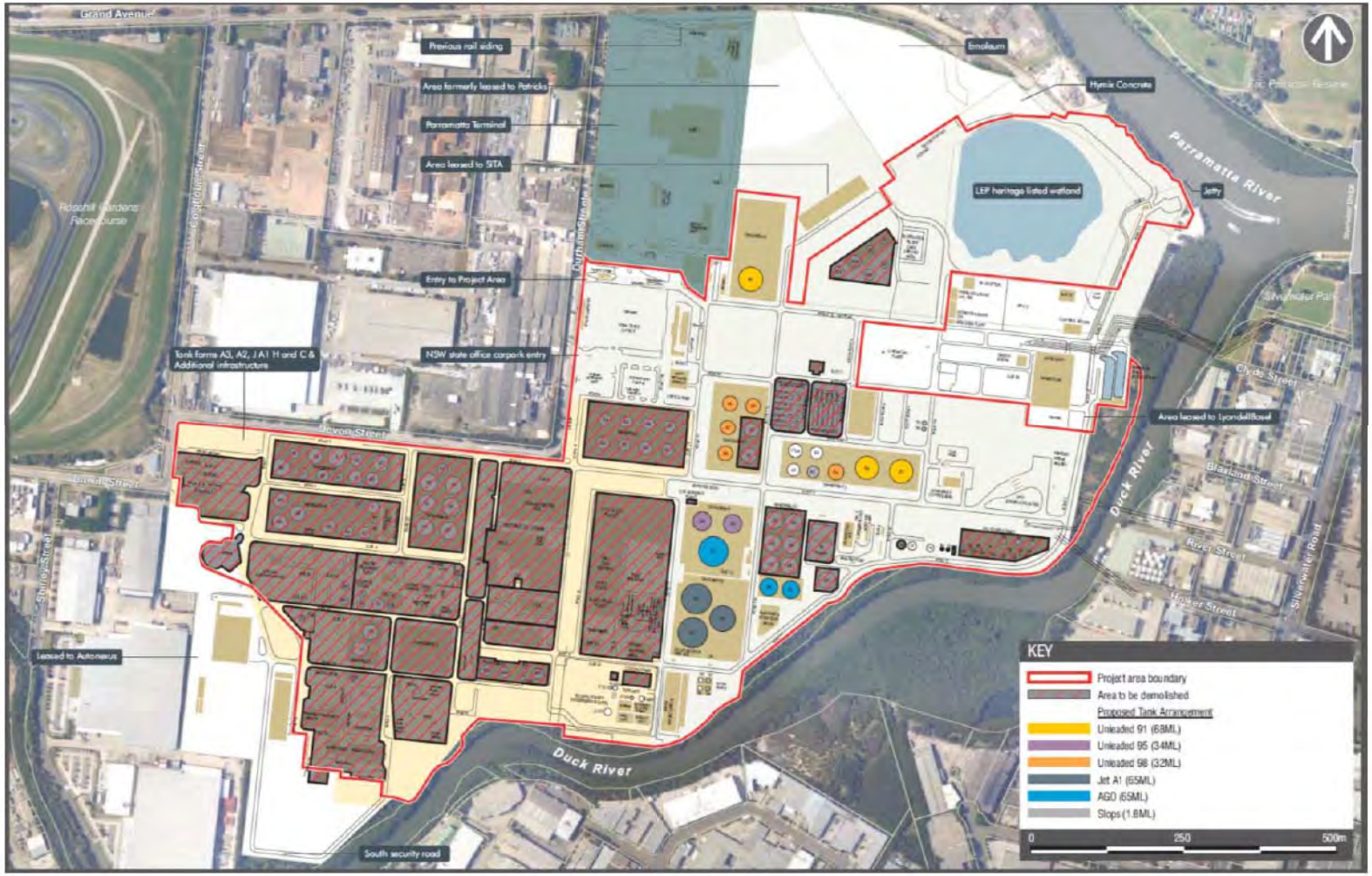


Figure 1: Conversion of Existing Infrastructure

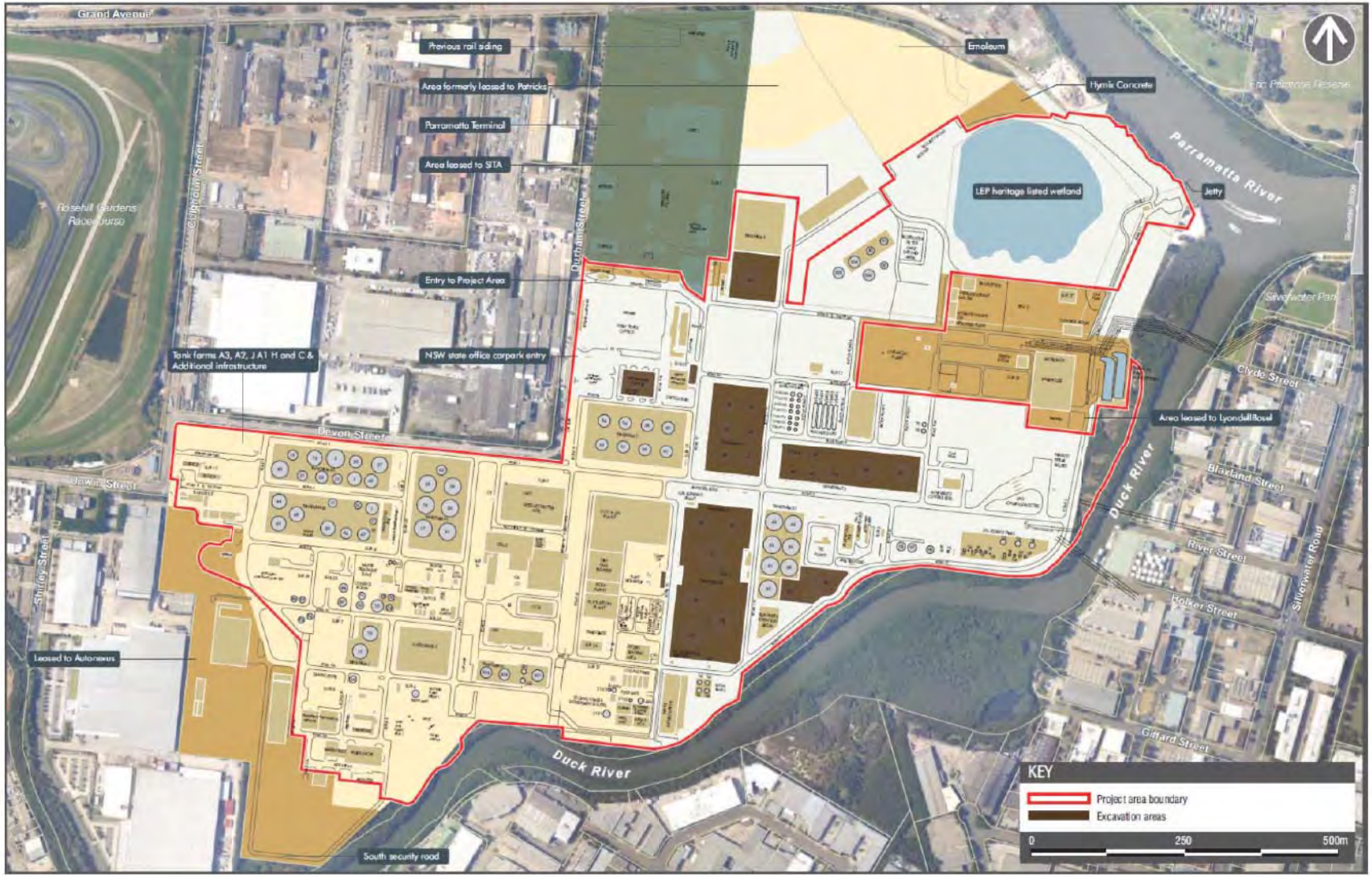


Figure 2: Excavation, Profiling and Grading Activities

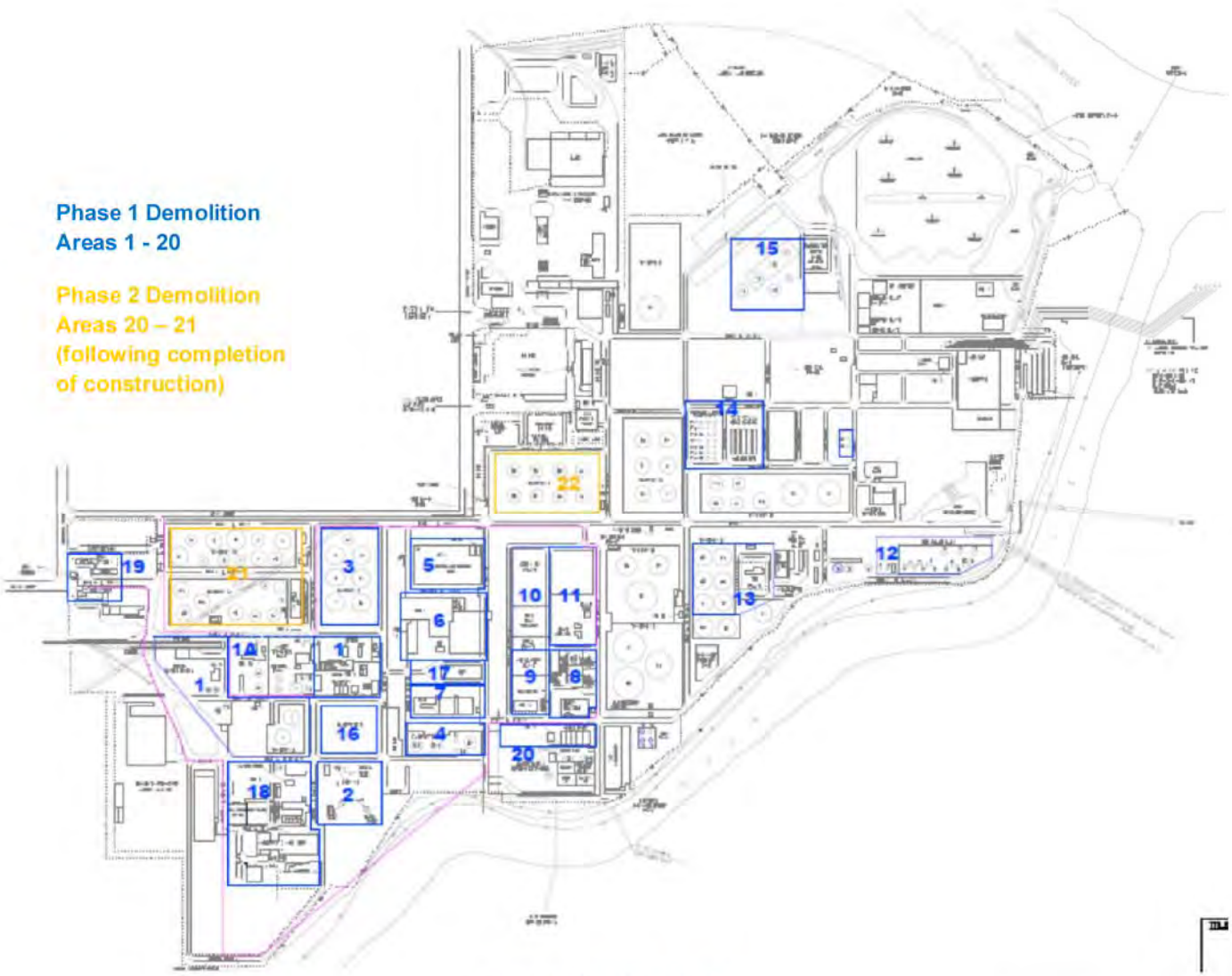


Figure 3: Demolition Phasing

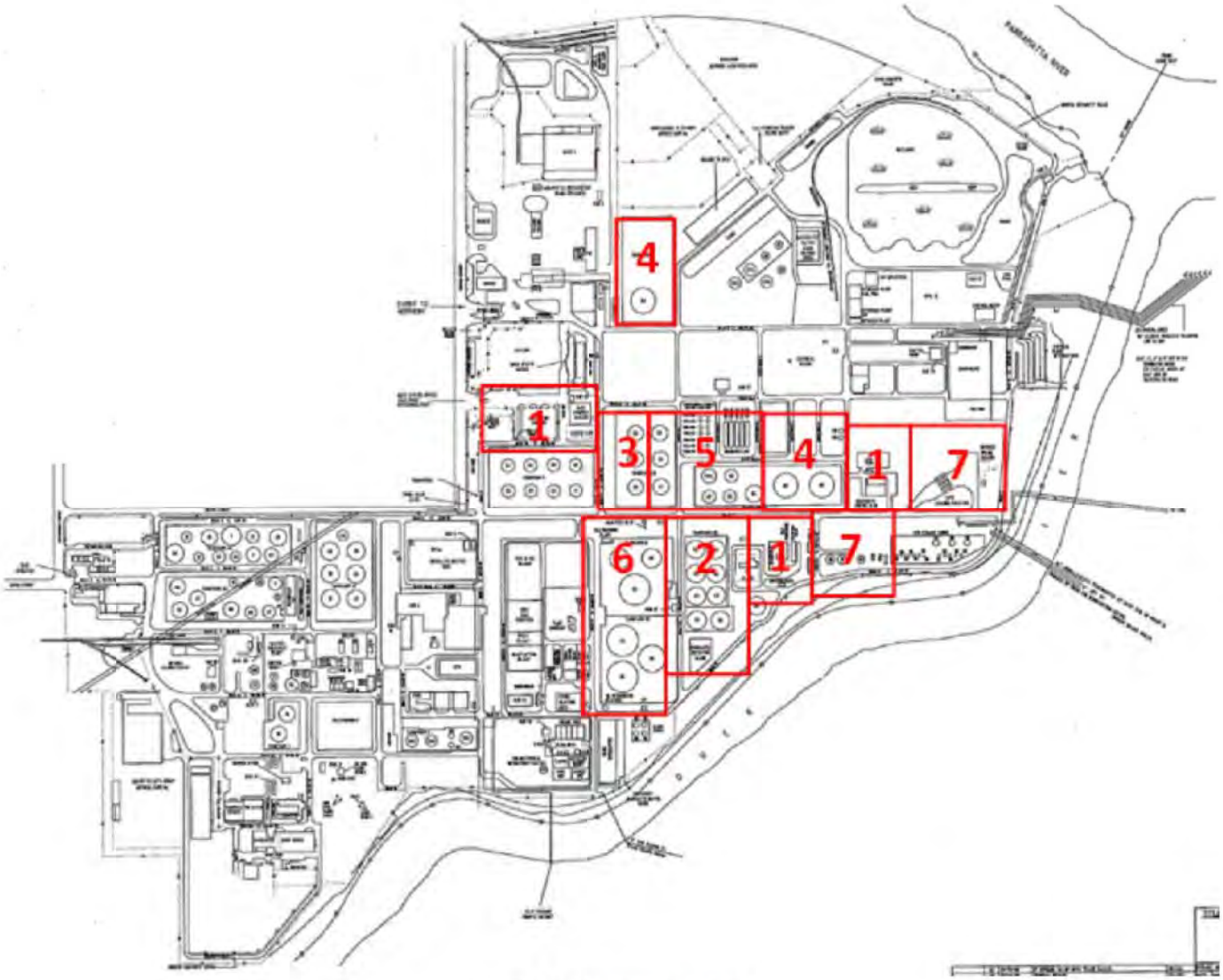


Figure 4: Construction Phasing

APPENDIX B
DEVELOPMENT CONSENTS TO BE SURRENDERED

DA	Year DA was approved	Details of DA
DA/205/2013	2013	Construction of a new concrete slab and fire water storage tank. (Submitted: 15/04/2013).
CC/147/2013	2013	Construction of a new concrete slab and water tank at industrial premises. (Submitted: 15/04/2013).
DA/65/2012	2012	Construction of a building for use as a dangerous good store for an existing plastic production plant. The development is defined as a "Nominated Integrated Development" as an activity approval is required under the Water Management Act 2000. (Submitted: 06/02/2012).
DA/90/2012	2012	Construction of Replacement Vapour Recovery Unit (VPU) at the Shell Refinery, Clyde. (Submitted: 15/02/2012).
DA/925/2010	2010	Installation of an automated crude dehydrator to replace existing manual system. (Submitted: 17/11/2010).
DA/87/2009	2009	Refurbishment of administration precinct, within the Shell refinery complex. (Submitted: 19/02/2009).
DA/103/2008	2008	Alterations and additions to the existing Basell Polypropylene Plant within the Shell Refinery complex including the provision of a water cooling tower. (Submitted: 18/02/2008).
TA/306/2008	2008	Removal 1 Tree (Submitted: 05/05/2008).
TA/364/2008	2008	Removal of 2-4 Trees (Submitted: 29/05/2008).
DA/695/2008	2008	Construction of a workshop within Shell's Clyde Refinery. (Submitted: 23/09/2008).
DA/912/2008	2008	Alterations and additions to the Shell Employee Credit Union Building within the Shell Refinery Complex, including the placement of a pre-fabricated portable office building on the site with an associated walkway. (Submitted: 27/11/2008).
CC/722/2008	2008	A pre-fabricated portable office with a linkway connection to an existing brick veneer office. (Submitted: 27/11/2008).
DA/07/0067	2008	Hydrodesulphurisation unit upgrade of existing unit and associated infrastructure to reduce sulphur content in Diesel (HDS2).
DA/06/0013	2008	Upgrade to fluidised catalytic cracking unit .
DA/26/2007	2007	To install 4 underground storage tanks in the existing Shell Clyde Refinery. (Submitted: 16/01/2007).
DA/96/2007	2007	Storage and distribution of motor vehicles, and for the premises to be used for the registration of and/or wholesale of motor vehicles. No public access to the site is permitted. (Submitted: 12/02/2007).
DA/163/2007	2007	Alterations and additions to a wholesale car distribution yard including the installation of portable building, tree removal, landscaping and removal of a portion of the hail netting. (Submitted: 05/03/2007).
DA/184/2007	2007	Alterations and additions to a wholesale car distribution yard including the installation of a fuel dispensing facility. (Submitted: 13/03/2007).
DA/296/2007	2007	Installation of four 110kL underground storage tanks for the storage of neat ethanol. (Submitted: 20/04/2007).
DA/397/2007	2007	Installation of one 30kl underground storage tank for storage of petroleum slops within the Shell Refinery complex. (Submitted: 25/05/2007).
DA/769/2007	2007	Demolition and alterations and additions to old lift and stairwell (Submitted 17/09/2007).
DA/769/2007	2007	Demolition and alterations and additions to old lift and stairwell (Submitted: 17/09/2007).
DA/975/2007	2007	Construction of two new awnings and provision of additional waste types at the existing resource recovery facility. (Submitted: 12/11/2007).

DA	Year DA was approved	Details of DA
DA/163/2007/A	2007	Section 96(1a) modification to approved alterations and additions to a wholesale car distribution yard. Modifications include: 1. Addition to an existing office; and 2. Modification and replacement of an existing carport structure. (Submitted: 13/12/2011).
TA/849/2006	2006	Pruning of 42 Tree/s (Submitted: 28/09/2006).
DA/1022/2006	2006	Construction of two metal cat walks within the Shell refinery site. (Submitted: 10/11/2006)
CC/752/2006	2006	Construction 2 metal catwalks (Submitted: 10/11/2006).
TA/277/2005	2005	Removal of 5 trees (Submitted: 03/03/2005).
TA/597/2005	2005	Removal of 41 trees (Submitted: 31/05/2005).
DA/222/2006	2005	Construction of a 26,000m3 unleaded petrol storage tank (known as Tank No. 93) within Tank Farm K in the Shell Clyde Refinery. (Submitted: 24/03/2006)
TA/399/2006	2005	Removal of 1 Tree (Submitted: 16/05/2006).
DA/967/2004	2004	Use of part of an existing building as a cafe. (Submitted: 03/08/2004)
DA/1023/2004	2004	Reduction in height of existing above ground storage tank No 28 within the Shell Refinery complex. (Submitted: 13/08/2004)
CC/595/2004	2004	Reduction in height of storage tanks (Submitted: 24/09/2004).
DA-140-6-2004i	2004	Benzene reduction unit – Mogas improvement .
TA/388/2003	2003	Removal of 37 trees Various species In decline & inappropriate location (Submitted: 25/02/2003).
DA/764/2003	2003	Minor alterations to existing amenities/office building (Submitted: 14/04/2003).
CC/206/2003	2003	Minor alterations to existing amenities/office building (Submitted: 14/04/2003).
DA/2145/2003	2003	To erect and operate a waste transfer reprocessing and resource recovery facility. (Submitted: 02/12/2003)
DA/2145/2003/A	2003	Amended application to rotate the footprint of the office building, increase the length of the storage building by 18 metres and reconfigure the footprint of the waste processing building. (Submitted: 03/11/2004)
	2002	Establishment of proposed landfarm area.
DA/868/2001	2001	Alterations to the existing amenities building (Submitted: 15/05/2001).
CC/363/2001	2001	Alterations to the amenities building (Submitted: 15/05/2001).
DA/2384/2001	2001	to construct land farming facility (oily sludge) ancill to existing refinery (Submitted: 11/12/2001).
	2001	Gasoline tankage construction.
DA/249/09/01	2001	Upgrade to Hydrodesulphurising unit (HDS1).
DA/284/1999	1999	Use part of the site for car storage, including. erection of nail netting, etc. (Submitted: 03/03/1999).
CC/228/1999	1999	alterations to existing refinery plant (Submitted: 03/03/1999).
DA/1612/1999	1999	Erection of silos for the transfer, storage & distribution of polypropylene (Submitted: 20/10/1999).
DA/1661/1999	1999	Erect a prefabricated housing module to be used as a display & admin. office, part of shell (Submitted: 27/10/1999).
DA/176/1997	1997	Erect a vapour storage tank and associated pipework. (Submitted: 07/04/1997)
DA/378/1997	1997	The erection of a twin pylon sign. (Submitted: 07/07/1997)
DA/28/1996	1996	additions to the side of the existing control room (Submitted: 09/01/1996).
DA/405/1996	1996	an industrial storage shed (Submitted: 05/07/1996).
DA/7/1995	1995	Refurbishing of the existing office building, with a minor atrium extension (Submitted: 05/01/1995).
DA/112/1993	1993	To construct a new rail tank car loading facility and extend the railtracks. (Submitted: 03/03/1993)

DA	Year DA was approved	Details of DA
DA/172/1993	1993	Construction of a selective hydrogenation unit (Butane/Butlene Treater) (Submitted: 24/03/1993).
	1993	Laboratory upgrade.
	1993	Polypropylene solids handling upgrade.
DA/4233/1992	1992	Monomer Recovery Project (Submitted 21/02/1992).
DA/5819/1992	1992	Request for modification of council's consent for the erection of a bulk store and admin building (Submitted: 16/03/1992).
DA/11078/1992	1992	Construction of a new gatehouse fire tender parking area and associated new concrete roadworks (Submitted: 29/05/1992).
DA/14244/1992	1992	Installation of one additional cell to the water cooling tower (Submitted: 08/07/1992).
DA/26534/1991	1991	Bitumen loading gantry (Submitted: 11/07/1991).
DA/42517/1991	1991	One analyser house (Submitted: 23/12/1991).
NA	1991	Hydrogen purification plant.
NA	1991	Bitumen substation installation.
NA	1991	Provision of drainage connection to river.
NA	1990	Prefabricated analyzer house installation.
NA	1990	Platformer 3 motor upgrade.
NA	1990	Refinery drainage upgrade.
NA	1990	Alkylation operator amenities building.
NA	1989	Poly II construction.
NA	1989	Alkylation plant change room.
NA	1988	Construction of catalytic reformer and gas turbine co-generation units.
NA	1988	Canteen awning.
NA	1987	Construction of new control centre.
NA	1987	Hydrocarbon gas absorption unit.
NA	1986	Installation of second desalter unit.
NA	1986	Interceptor drainage improvements.
NA	1986	Catalytic cracking unit auxilliary control room extension.
NA	1986	Administration building gatehouse and entrance Colquhoun St.
NA	1986	Polypropylene blend bunkers.
NA	1986	Main office building extension.
NA	1986	Establishment of a solid waste drying facility.
NA	1985	LPG recovery facility.
NA	1985	TA3 building.
NA	1985	CPU 5600 LPG recovery system.
NA	1985	Fire bin work area.
NA	1985	Turbo alternator No.3.
NA	1985	Catalytic reformer and gas turbine co-generation.

DA	Year DA was approved	Details of DA
NA	1984	Construction of Platformer II Texas tower.
NA	1984	Construction of oil storage tanks for interceptor skimming.
NA	1984	Improved heat recovery system.
NA	1984	Excess stabliization biomass drying area.
NA	1984	Storage and mooring facilities and skimmer boat Clyde wharf works.
NA	1984	Oil boom, work boat and oil skimming at wharf.
NA	1982	Construction of Crude Distillation Unit Column C304.
NA	1982	Construction of oil storage tank 12.
NA	1982	Consruction of oil storage tank 90.
NA	1981	Construction of polypropylene unit warehouse awning.
NA	1981	Berthing facilities upgrade.
NA	1981	Construction of new distillation column.
NA	1981	Mesityl oxide storage tank.
NA	1981	Construction of awning at loading/unloadingarea for PPU warehouse.
NA	1980	Installation of mounded LPG bullets.
NA	1980	Construction of oil storage tanks 88 and 89.
NA	1980	Construction of main transformer substation no.2.
NA	1980	Construction of field office.
NA	1980	Construction of Rosehill Service Station.
NA	1980	Repairs and upgrades to Parramatta River wharf.
NA	1980	Construction of 2 tanks for batching hexylene glycol.
NA	1980	Construction of 1 solvent tank.
NA	1980	Field office, drawing office, training centre construction.
NA	1980	Construction of 2 new water tanks.
NA	1980	Construction of tanks 737 A/B.
NA	1979	Construction of Boiler no.9.
NA	1979	Crude Distillation Unit control room extension.
NA	1979	Ethylene plant modifications.
NA	1979	Construction of LPG storage facilities.
NA	1979	Conversion of existing office, workshop/amenities, provision of additional car parking and extension of loading platform.
NA	1978	Install Crude Distillation Unit heat recovery plant.
NA	1978	Installation of building No.3 for quality testing instrumentation.
NA	1978	Installation of building No.2 for quality testing instrumentation.
NA	1978	Operators amenities building extension project.
NA	1978	Polypropylene storage silos.

DA	Year DA was approved	Details of DA
NA	1978	Installation of radio antenna on main administration building.
NA	1977	Installation of a sulphur reduction unit.
NA	1977	Modify and extend the Crude Distillation Unit control centre.
NA	1977	Extension to substation V.
NA	1977	Extension to substation No.6.
NA	1977	Construction of oil storage tanks 86 and 87.
NA	1977	Installation of building No.1 for quality testing instrumentation.
NA	1977	Construction of butane storage spheres.
NA	1977	Construction of 4 buildings for testing instruments and amenities.
NA	1977	Construction of heat recovery unit.
NA	1977	Construction of Catalytic Cracking Unit and Alkylation complex.
NA	1976	Additional sour water stripper.
NA	1976	Construction of substation No.23.
NA	1976	Catalytic Cracking Unit control room extension.
NA	1976	Catalytic Cracking Unit Colum C404 installation.
NA	1976	Installation of an additional bathroom facility in the training centre.
NA	1976	Construction of gas oil storage.
NA	1976	Construction of epikote storage tanks.
NA	1976	BDA project office.
NA	1976	Flare area modifications.
NA	1976	Polypropylene rain shelter.
NA	1976	Sour water stripping unit and sulphur recovery unit.
NA	1976	Chemical solvents plant.
NA	1976	CCU control room and substation no.5.
NA	1976	Construction of Sulphur Recovery Unit.
NA	1976	Construction of electrical substation.
NA	1975	Epikote plant extention.
NA	1975	BDA rebuild.
NA	1975	Construction of tankfarm H and tanks.
NA	1975	Construction of gas oil storage.
NA	1975	Bus shelter and bike storage.
NA	1975	Installation of substation No. 24.
NA	1975	Building of gatehouse and change rooms.
NA	1975	Construction of fire training grounss.
NA	1975	Tank 505 oil storage tank.
NA	1975	Butane de-asphalting unit.

DA	Year DA was approved	Details of DA
NA	1975	Construction of 600t Butane storage vessel.
NA	1975	Primary crude distillation unit expansion.
NA	1974	Construction of Movements Control Room.
NA	1974	Construction of oil storage tank 4.
NA	1974	Polypropylene loading facilities.
NA	1973	Laboratory bottle loading platform.
NA	1972	Main refinery entrance modifications.
NA	1971	Polypropylene Unit upgrade project.
NA	1971	Lawn locker.
NA	1971	Construction of fire station extension.
NA	1971	Shelter for Siebe Gorman trolley.
NA	1970	Constructionof contractor amenities building.
NA	1970	Construction of oil storage tanks 93, 85, 84.
NA	1970	Power station installation.
NA	1970	Construction of oil storage tanks 84, 85 & 93.
NA	1969	Polypropylene Unit plant.
NA	1969	CO boiler.
NA	1968	Installation of interceptor adjacent to Duck River.
NA	1968	Construction of oil storage tank 33.
NA	1968	Construction of laboratory and office extention for No.2 pumphouse.
NA	1968	Refinery drainage system modifications.
NA	1967	Installation of hydrocarbon solvents unit and chemical solvents unit.
NA	1967	Construction of chemical and hydrocarbon solvents plant.
NA	1967	Refinery extension for capacity increase.
NA	1966	Extension to sewer system.
NA	1966	Construction of new hydrotreater and boiler.
NA	1966	Construction of 2 concrete chimney stacks.
NA	1966	Construction of CDU and NDT stacks.
NA	1966	Construction of control room and switchrooms.
NA	1966	Installation of cool water pump.
NA	1966	Construction of heat exchanger.
NA	1966	Construction of polypropylene storage sphere.
NA	1966	Construction of polypropylene bullets V134/135.
NA	1966	Construction of oil storage tanks 50 & 51.
NA	1966	Construction of boiler no.7.
NA	1966	Construction of polypropylene treater and splitter units.

DA	Year DA was approved	Details of DA
NA	1966	Construction of chimney stack.
NA	1966	Construction of CDU, Hydrotreater, Tail gas treater, polypropylene/propane splitter, 7 oil storage tanks and utilities.
NA	1965	Modifications to roadway 9 and 12.
NA	1962	HVU Control room.
NA	1962	Construction of ethylene plant, control room, tea room, wet weather and field stores.
NA	1962	Construction of catalyst store building.
NA	1962	Addition to the Catalytic Cracking Unit control room.
NA	1961	Construction of LPG storage.
NA	1961	Crude oil storage tanks.
NA	1961	Waiting room and pay office construction.
NA	1960	Major extension to the Clyde Refinery.
NA	1958	Solvents tank fire water and foam lines.
NA	1957	Construction of oil storage tank 34.
NA	1957	Construction of vacuum bitumen plant.
NA	1957	Renovation and modifications to solvents plant.
NA	1957	Construction of column 5501.
NA	1956	Construction of 3 monocrete residences.
NA	1952	Construction of amenities building.
NA	1951	Construction of laboratory.
NA	1949	Construction of workshop.
NA	1949	Construction of lubricating oil refinery processing units and storage tanks.
NA	1949	Construction of various refinery buildings.

APPENDIX C
MANAGEMENT AND MITIGATION MEASURES

Summary of Mitigation Measures	Project Phase
Commitment	
The Project is to be undertaken in accordance with the commitments provided within this EIS.	All
Transport	
The TIA prepared by AECOM has concluded that the Project would not create significant impacts for the surrounding road network. However, it is nevertheless proposed that: - Vehicular traffic would be minimised during peak hour traffic periods where practical do to so; - A Construction Traffic Management Plan be prepared prior to the works commencing; and - Demolition and construction generated traffic would be parked at the Project Area to limit the numbers of vehicles situated in the streets surrounding the Clyde Terminal.	Demolition and Construction
Social and Economic Effects	
Mitigation measures proposed to minimise potential social and economic impacts of the Project on the surrounding Parramatta LGA during the demolition and construction works, and during the continued operation of the converted Clyde Terminal include: - Shell would continue to undertake stakeholder engagement and consultation regarding the Project; - Environmental reporting procedures would continue to be implemented, including a complaints register; - A Construction Traffic Management Plan would be prepared to avoid and minimise potential impacts associated with access routes and major intersections; - A CEMP would be prepared to minimise potential environmental, heritage and social impacts during the demolition and construction works (refer to **Section 28.1**); and - An OEMP would be prepared to minimise potential environmental and social impacts during operation of the converted Clyde Terminal (refer to **Section 28.2**). Shell would continue to communicate and consult with staff regarding possible alternative redeployment opportunities for those that would no longer be required at the Clyde Terminal once the conversion works have been completed, where this is reasonable and feasible. Further, mechanical trade and instrument electrical trade apprenticeship roles would be retained where possible to enable completion of those apprenticeships. Shell would also continue to support its Employee Assistance Program.	All

Surface Water, Industrial Water and Flooding	
In managing surface water, industrial water and flooding at the Project Area, Shell would implement the following mitigation measures:	
- A detailed ESCP is to be compiled and included in the CEMP; - Demolition and construction waste would be stored on a sealed and bunded surface whilst awaiting transfer or processing; - Dust suppression and sediment runoff prevention would be undertaken during the demolition and construction works to prevent impacts to surface water quality as follows: • Areas of demolition and construction activities would be watered down as required in order to suppress the migration of dust; • In the event that excess industrial water is required, e.g. for dust suppression, sediment traps would be employed around the Project Area to prevent runoff and ensure that any contaminated water is treated and managed appropriately; • Where excavation activities are undertaken soil exposure would be minimised where possible and land disturbance would occur for the shortest time possible. Access to the demolition and construction areas would be controlled and vehicles and machinery would be kept to well defined areas away from excavation sites; • Runoff generated outside of demolition and construction areas would be diverted away from those areas to decrease the potential for contaminated runoff to migrate throughout the Project Area; and • Stockpiles of excavated material would be clearly labelled, located away from trafficked areas and other potential disturbances, placed on geo-fabric lining prevent leachate and erosion, be no more than 5 m tall, and allow adequate room for transport around and management of each stockpile. - Wastewater that has been potentially contaminated during the demolition and construction works would be directed via CPIs to allow for sediment and oil to be removed; - Temporary stormwater management measures (such as sandbags, sediment fences and berms) wouldto be used to minimise the risks of sediment-laden runoff and other construction pollutants entering downstream systems; - During demolition works, potential chemical pollutants (e.g. fuels, oils, lubricants, paints, herbicides, etc.) would be stored in appropriate containers within bunded areas within construction compounds to minimise the risk of spillages and mobilisation of these pollutants into aquatic environments; and - Water saving devices would be installed wherever possible during the conversion works to reduce wastage.	Demolition and Construction
- Surface water quality and volume limits for discharge from the Project Area would continue to be monitored, for example as per the sampling of discharge points identified in EPL No. 570, or any replacement/ amended EPL as provided under the POEO Act; - All fuel products and other potentially hazardous substances at the Project Area would continue to be stored in sealed, bunded areas that would prevent their migration offsite in the event that a storm surge or flood event impacts the Project Area; - The Project would not involve the construction of extensive new infrastructure on land lying within the 1:100 year flood event; - Any new development or infrastructure at the Project Area would be constructed with regard to the design principles and standards outlined in the Floodplain Matrix of Planning and Development Controls identified in the Floodplain Risk Management Policy; - Shell would consult with Parramatta City Council and WMA concerning the results of *Duck River and Duck Creek Flood Study Review: Final Draft Report* (WMA, 2011) whilst this report is still in draft format; - In consultation with Parramatta City Council as the WMA Final Draft Report is finalised	All

Summary of Mitigation Measures	Project Phase
and is officially adopted by Council, Shell would develop a site specific Emergency Response Flood Plan demonstrating Shell's ability to secure or move plant, goods and substances above the one percent AEP flood level within the flood warning time that is likely to be available. This Emergency Response Flood Plan would also include requirements for personnel evacuation drills and procedures for equipment and product protection; - Infrastructure at the Project Area would continue to be located outside of the riparian buffer zone along the southern and eastern borders of the Project Area; and - The Project would not result in a reduction of wetland or riparian vegetation.	
- The *Clyde Terminal Conversion Project: Clyde Waste Water Management System* (Shell, 2012a) would be revised once the demolition and construction activities are complete, so that it is up to date for operation of the converted Clyde Terminal; and - Once operation of the converted Clyde Terminal commences, Shell would undertake an internal audit of the Project Area to take stock of how reduced operations have reduced water consumption and improved water efficiency. Further recommendations of the audit would then be taken into consideration if further potential water resource savings or opportunities for reuse are identified.	Operation
Land Use	
It is considered that the Project would not have any significant impacts on land use as it would involve the continued use of the Project Area for purposes similar to its current use. Shell would continue its dialogue with land users who are currently leasing land adjacent to the Project Area from Shell. In considering a future use of the surplus land in the western and north-eastern sections of the Project Area, Shell would take into account: - The extent of any contamination that is discovered in the western and north-eastern sections of the Project Area; - The extent of any remediation that is required subsequent to those contamination investigations; and - Consultation with relevant Government departments and agencies such as the EPA, DP&I and Parramatta City Council, and Council's desired strategic planning outcomes for the Camellia Industrial Estate.	All
Air Quality and Odour	
Potential fugitive dust and odour impacts resulting from demolition and construction works would be managed by the CEMP which would include the following measures: - Loads would be covered during transportation; - Exposed surfaces and roads would be watered as required; - Measures would be implemented to modify or suspend dust-generating activities during periods of high wind speeds or whenever dust plumes from the works are visible. A high wind value should be decided though discussions with regulators, however a typical value is 8 m/s averaged over a 1-hour period; - Regularly trafficked surfaces would be sealed as soon as possible after construction; - Roadway use would be controlled i.e. through defined road access to minimise dust; - Complaints management system would be in place; and - Accidental spills would be immediately cleaned up. Potential fuel combustion emissions resulting from vehicles and equipment associated with the demolition and construction works would be managed with the following measures: - Engines would be turned off while parked onsite; - Vehicular access would be confined to designated, sealed access roads; - Equipment, plant and machinery would be regularly tuned, modified or maintained to minimise visible smoke and emissions; - Project Area speed limits would be implemented; and	Demolition and Construction

Summary of Mitigation Measures	Project Phase
- Haul road lengths would be minimised.	
Ecology	
It is considered that the Project would not have a significant effect on the GGBF, Microbats, Grey-headed Flying-fox or any other flora and fauna in the vicinity of the Project Area. Any impacts to species can be adequately managed through development of the following mitigation measures. For the conversion works, measures shall be incorporated into a CEMP.	
Green and Golden Bell Frog A GGBF specific mitigation strategy is to be prepared and included as a sub-plan to the CEMP for the proposed Project, in consultation with the NSW OEH OEH. The CEMP GGBF sub-plan shall include, but not be limited to: - Design and implementation of pre-works surveys (conducted by a suitably qualified ecologist) to identify and, if necessary, relocate frogs found within the footprint of the actual conversion works; and - Any frogs found would be relocated to the remnant wetland (within the Project Area boundary), by appropriately trained personnel adopting the *Frog Hygiene Protocol* (Department of Environment and Climate Change, 2008d). This would not require licensing for translocation of threatened species under the NSW TSC Act. Compensatory actions considered to date for the loss of opportunistic habitat sites within certain tankfarm bunds include those in accordance with Shell's *Wetland Management Plan – Clyde Wetlands Shell Refinery Rosehill, 2007*. This management plan would be updated to include management measures for GGBF, and would continue to be applied to the remnant wetlands as follows: - Creation and management of refuge habitat such as rock piles (being a less complicated refuge habitat option) for long term placement within the subject areas to provide over-wintering habitat; - Replacement of non-endemic vegetation such as *Juncus acutus* (Spiny rush) within the remnant wetland with alternative native sedges, rushes and grasses to provide GGBF shelter habitat; - Additional enhancement of land within the boundary of the remnant wetland to suit GGBF habitat such as developing additional pondage and/or by the placement of smaller prefabricated ponds to provide additional habitat during breeding season; and - Design and implementation of a systematic monitoring, reporting and feedback program to assess GGBF relocation, mitigation measures undertaken, and population dynamics for this site. ***Management of Impacts*** A suitably qualified ecologist is to be engaged prior to the issue of plans for demolition and construction works to improve tankfarm drainage to advise on the following: - Proposed works to reduce the risk of potential impacts to GGBF, and - Proposed specific mitigation strategies contained within the CEMP. The CEMP GGBF sub-plan is also to include: - Management of site demolition and construction works such that disinfection of demolition and construction plant and equipment is carried out at a safe distance from the remnant wetland, so that excess disinfecting solution or material does not contaminate waterways; and - Site inductions for all workers are to include emphasis on the special requirements for identifying and protecting GGBF. Inductions are to be mandatory prior to access permission to the construction site. Routine updates of the induction are to be provided at routine 'toolbox' meetings.	All (as appropriate)
Grey-headed Flying Fox and Microbat Species Prior to demolition works, inspection of exterior casings and insulations on towers (i.e. potential habitat where microbats have historically been observed) is to be undertaken	Demolition and Construction

Summary of Mitigation Measures	Project Phase
regularly for signs of microbat occurrence. Regular inspections would also be undertaken of buildings scheduled for demolition.	
Protection of Flora While it is recognised that the proposed Project would require negligible vegetation clearing, the following measures are proposed to ensure that minimal potential impacts occur to vegetation in and adjacent to the proposed works areas: - The final demolition plan should minimise the construction footprint and the requirement for clearing of native vegetation wherever possible and within reason given the need to minimise fire hazard risks onsite; - There would be clear marking and delineation of the boundaries between the designated construction sites and "no-go" zones, including vegetation that is to be retained, prior to the commencement of construction. This would include signage, barrier fencing and tree guards, wherever they would be appropriate. There would be no storage of soil, building materials, tools, paints, fuel or contaminants, etc. within the no-go areas; - The Australian Standard 4970 (AS4970) for the protection of trees on development sites should be adopted to reduce the impact of incursions into the root zone of trees to be retained; - Shell would continue to undertake ongoing bush regeneration in and around the vicinity of the Project Area; - If any damage occurs to vegetation beyond the nominated work area the Project Manager should be notified so that appropriate remediation strategies can be developed and implemented; - Should the proposed demolition footprint be changed such that works would encroach into more densely vegetated areas, then it is recommended that a suitably qualified ecologist is to be engaged to: • Conduct pre-clearance surveys of the final footprint immediately prior to demolition commencing, and • Undertake additional impact assessment if required. - The riparian vegetation along the southern and eastern borders of the Project Area would continue to be preserved.	Demolition and Construction
Weed Management The following measures would be put in place to manage weeds: - Weed infestations found within the Project Area would be removed or controlled prior to works commencing; - Earth-working equipment and vehicles would be cleaned of excess soil by brushing and/or hosing at the start and finish of construction works to minimise the risk of spreading of weed seeds and plant pathogens; - Sediment fences and sediment traps would be installed for the duration of the construction works and stabilisation of disturbed areas by rehabilitation works. This is to contain any sediments containing weed seeds, propagules or plant pathogens at the Project Area; - Soil and vegetation removed would be covered during transport and taken to an approved disposal sites to minimise the risks of spreading weeds and pathogens beyond the work sites; - Weeds (including vegetation, fruit and seed) removed during clearance would be disposed at an approved green waste site. Weed seed heads or flowers should be carefully removed and bagged immediately onsite before appropriate disposal; - Where applicable, weed control would be undertaken in accordance with NSW Agriculture's noxious and environmental weeds control handbook; and - Contractors undertaking weed removal or control would be trained or experienced in weed identification and removal (as per the *Pesticide Act 1999*).	All
Plant Pathogen Hygiene *Phytophthora cinnamomi* is not known to be present in the Project Area and there is little likelihood that the proposed Project would lead to its establishment or spread. However, the	Demolition and Construction

Summary of Mitigation Measures	Project Phase
consequences of infection can be severe. Therefore, the mitigation proposed for consideration for weed management would also provide a precautionary measure for limiting the risk of spread of soils and vegetation of origin other than the Clyde Terminal.	
Protection of Aquatic Environments The following additional measures are recommended to minimise potential impacts to aquatic flora and fauna and water quality of the aquatic environment of the Duck and Parramatta rivers. - A detailed ESCP is to be compiled and included in the CEMP; - Demolition and construction waste would be stored on a sealed and bunded surface whilst awaiting transfer or processing; - Dust suppression and sediment runoff prevention would be undertaken during the demolition and construction works; - Wastewater that has been potentially contaminated during the demolition and construction works would be properly treated via the Clyde Terminal wastewater treatment facilities to ensure compliance with the conditions of Shell's EPL No. 570; - Temporary stormwater management measures (such as sandbags, sediment fences and berms), are to be used to minimise the risks of sediment-laden runoff and other construction pollutants entering downstream systems; - During demolition works, potential chemical pollutants (e.g. fuels, oils, lubricants, paints, herbicides, etc.) are to be stored in appropriate containers within bunded areas within construction compounds to minimise the risk of spillages and mobilisation of these pollutants into aquatic environments; - All fuel products and other potentially hazardous substances at the Project Area would continue to be stored in sealed, bunded areas that would prevent their migration offsite in the event that a storm surge or flood event impacts the Project Area; - Manage ASS in accordance with the mitigation measures detailed in **Section 17.3** and the Soil and Groundwater Contamination section below. - The riparian buffer zone along the southern and eastern borders of the Project Area, which has the potential to further minimise the impacts of flooding at the Project Area, would continue to be preserved as follows: • Contaminated stormwater and wastewater generally would continue to be treated before they are discharged in the vicinity of this riparian buffer zone; • Infrastructure at the Project Area would continue to be located outside of this riparian buffer zone; and • The Project would not result in a reduction of wetland or riparian vegetation.	Demolition and Construction All Demolition and Construction All All
Soil and Groundwater Contamination	
Currently, soil and groundwater conditions at the Clyde Terminal site are regulated by Condition U1 of EPL No. 570 which references the need for the SGMP 2010 and an associated annual report. The ongoing operations at the Project Area would also continue to be regulated by the requirements of the POEO Act and CLM Act.	
Demolition and Construction Mitigation Measures - Prior to demolition and construction activities taking place, Shell would develop an ESCP to manage those risks at the Project Area. The ESCP would be incorporated as part of the CEMP and would be developed in accordance with *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004); - The SGMP 2010 would be revised as part of the conversion activities where necessary to take account of demolition and construction activities; - Shell would undertake the following actions in accordance with the CEMP for the Project. During the limited excavation activities that are planned for the conversion works, the following management measures would be applied: • Reference would be made to the identification of certain Contaminants of Concern in specific areas of the Project Area as per Conceptual Site Model 2012; • With reference to the Conceptual Site Model 2012, soil and groundwater conditions at the Project Area would continue to be managed through a series of triggers and appropriately designed response mechanisms;	Demolition and Construction

Summary of Mitigation Measures	Project Phase
• Identify any required occupational hygiene monitoring for demolition and construction personnel in relation to VOCs; • Any subsurface works would be designed to control and protect the health and safety of people onsite; • The use of geotextile liners or temporary capping would be used to reduce infiltration of surface water runoff where soil is to be excavated during demolition and construction; • Groundwater routine reporting would continue to be undertaken as per Shell's GWSAP, which would be revised as part of the Project; and • If trigger values are exceeded at the Project Area for soil and groundwater quality as outlined in the Environmental Conditions Summary Report (ERM, 2012), the Conceptual Site Model 2012 would be used to guide appropriate clarification or mitigation measures. - If contaminated soils are discovered during excavations, they would be separated and managed in accordance with Shell's existing waste management system for the Project Area (refer to **Section 20.0**), which would be incorporated as part of the Project CEMP; - Further investigations would be undertaken in areas that are currently unable to be accessed due to plant and equipment on these areas, once the aboveground infrastructure is removed and access to the relevant areas is available; - Throughout the Project, Shell would continue to undertake the following management measures as part of the SGMP 2010: • Contaminants of Concern would continue to be monitored as part of the ongoing SGMP 2010. A data gap would be identified in the event that one or more of these Contaminants of Concern are detected at concentrations exceeding their applicable groundwater screening criteria and may have the potential to pose a risk to identified receivers. Additional evaluation would then be completed to fill in those data gaps to confirm whether there is a risk that warrants further action; and • In the event that remedial actions are required to mitigate the risk of pathway exposure to contamination, the Conceptual Site Model 2012 would serve as a design basis for that remedial action. - In general, Shell would continue to use a hierarchy of controls, including engineering controls, to mitigate risks and prevent loss of containment during both the conversion works and operation of the converted Clyde Terminal. Shell would continue to focus its incident prevention at the Project Area on strengthening preventative barriers against spills. The infrastructure upgrades undertaken as part of the conversion works would assist in preventing loss of containment by: • Upgrading safeguards to prevent tank overfills; and • Ensuring pipelines continue to be designed to withstand greater pressures than the maximum pump discharge pressures. - Existing bund walls at the Clyde Terminal would be inspected prior to the conversion works commencing to identify any necessary improvements. These improvements would include either: • The demolition of the existing bund walls; or • Injection of concrete into the existing bund walls to strengthen the structure or repair any faults. - ASS would be managed according to an ASSMP which would be incorporated into the existing *Soil and Groundwater Management Plan Shell Clyde Refinery and Parramatta Terminal, Durham Street, Rosehill, NSW* (Shell, 2010), the WMP 2013 and the CEMP to be prepared for the conversion works; - Identify any ASS impacted soils within the Project Area before excavation activities are undertaken; - Any ASS impacted soils excavated from the Project Area would be kept wet at all times until it is disposed of and managed in accordance with the *Waste Classification Guidelines Part 4: Acid Sulphate Soils* (Department of Environment and Climate Change, 2008e); and	

Summary of Mitigation Measures	Project Phase
- Any residual impacts caused by lapses in the effectiveness of the ASSMP are likely to be identified through the continued implementation of the Soil and Groundwater Management Plan. The ASSMP would also include a contingency plan to manage impacts that have the potential to occur if specified management strategies fail, and to outline any remediation and restoration actions that may therefore be required. This would ensure that the ASSMP addresses its own effectiveness and reliability in managing any residual ASS impacts.	
Ongoing Operational Mitigation Measures - The SGMP 2010 would be revised as part of the operation of the converted Clyde Terminal to take account of the upgraded operations; - Shell would determine if the surplus land in the western and north-eastern portion of the Project Area is to be made available for an alternative use and a separate development application would need to be submitted so that any necessary remediation and also redevelopment of this land can take place (the Clyde Remediation and Redevelopment Application); - Following the conversion works and when unimpeded site access is re-established in certain areas, additional investigation and remediation can be completed as required; - The three key barriers to receivers' exposure would be maintained: primary source management; operational area (internal) monitoring; and boundary containment monitoring. These three key barriers would continue monitoring to evaluate barrier effectiveness on a quarterly basis and when otherwise triggered; - Shell's risk management systems would continue to be reviewed and amended before critical changes throughout the conversion works to identify and assess the risks that these changes pose both onsite and offsite, and to ensure multiple layers of controls exist to minimise the opportunity for incidents to occur; - Shell would notify WorkCover of any changes to the levels of risk before critical changes occur throughout the conversion works and would submit safety reports to WorkCover as required, ensuring WorkCover's oversight of the risks and controls at the Clyde Terminal; - Shell would continually review and amend the Emergency Procedure Plans to account for the changes in risks and the changes in fire fighting equipment at the Clyde Terminal throughout the conversion activities, and consult with Fire and Rescue NSW during this process; - The following management measures would be incorporated as part of the OEMP and undertaken to prevent and manage the implications of any loss of containment scenarios: • Current systems in place at the Project Area that would continue to prevent loss of primary containment and spill incidents include: ▪ Log checklists carried out every shift by operators to ensure that equipment such as valves are in the correct position; ▪ Water drain tanks through quick flush tanks to separate water from fuels, returning fuel to tanks and draining water to wastewater treatment facility, thus minimising the opportunity for fuel to enter the interceptor system; ▪ Decontaminate the tankfarms, drainage and wastewater systems across the Clyde Terminal area to ensure minimal opportunity for stormwater to be impacted by remnant hydrocarbon contact; ▪ Re-profile tankfarm floors to ensure adequate and effective stormwater draining and bund capacity is preserved to serve its primary purpose of protection of the environment from hydrocarbon spillage; and ▪ Review and repair tankfarm bund walls where required to ensure integrity in the event of a spill incident.	All (as appropriate)

Summary of Mitigation Measures	Project Phase
• Tank overfill would continue to be prevented through a combination of: ▪ An automatic tank level gauging system with multiple level alarms including: target fill level; high level alarm with time for appropriate operator action at each point and before the next level; an alarm point; and manual dips to provide accuracy of the tank level gauging system; ▪ A final independent high-high level alarm system that provides an alarm independently from the other alarms and tank level gauging system. This system provides for sufficient response time before overfill is anticipated to occur and would trip inflow facility pumps shutting down product inflow to tanks; ▪ The movement management system that provides for the analysis of data and tank movement management; and ▪ Operational readiness planning with procedural support.	
• A series of facility integrity checklists would be developed consistent with other Shell terminal facilities to ensure inspections and maintenance of safety and environmentally critical equipment and repairs are undertaken in a timely manner; • Shell's existing Permit to Work system would be changed to be appropriate for converted Clyde Terminal operations and would be introduced with appropriate training and mentoring to ensure controls are in place across the Clyde Terminal to control all works, and to integrate these with non-routine activities during operation of the converted Clyde Terminal; • Operators would continue to be trained to look for spills and leaks in the course of their shift rounds; • Operators would be trained in the new environmental controls appropriate for the converted Clyde Terminal operations and specifically in the use of newly installed environmental control equipment; • Existing interceptors within the Project Area would continue to be maintained as a means of tertiary containment; and • Spill incidents would be reported within the Shell incident reporting system and, where required, to the EPA and WorkCover. - If a release event is known or suspected to have occurred, additional assessment may be justified to determine if there have been any soil and groundwater impacts under the SGMP 2010 as follows: • A program of works would be developed to cover any data gaps and determine whether any associated risks are within acceptable levels; • Investigation techniques to be employed would include, where relevant: ▪ Trial pit excavations; ▪ Advancement of soil bores; ▪ Monitoring well installations; and ▪ Analytical sampling of soil and groundwater quality. • If investigation shows that risks are greater than acceptable levels identified in the SGMP 2010, some form of remedial action would be warranted in order to eliminate or reduce potential exposure pathways. This would be likely to involve one or more of the following: ▪ Excavation of surface soil and removal or treatment before reinstatement; ▪ Excavation of interception trenches and associated pumps as needed to remove and prevent further spread of shallow groundwater contamination; ▪ Installation of pumps in groundwater wells to remove or control the spread of contamination; and ▪ Emplacement of impermeable materials in soil trenches to contain the spread of contaminated groundwater.	
European Heritage	
It is anticipated that the impacts to the historical and technical significance of the Refinery can be managed through a full photographic and documentary archival recording of the facility. Specifically, the following mitigation measures are recommended for the Project to minimise impacts on heritage significance.	

Summary of Mitigation Measures	Project Phase
- Parramatta Council requires consideration be given to provision of an Arts Plan. As such, oral histories are to be recorded from past and present staff regarding the operations of the former Clyde Refinery, and a full photographic and documentary archival recording of the Project Area would be used to manage the impact to the historical and technical significance of the former Clyde Refinery; - Photographic recording would be undertaken in accordance with the NSW Heritage Branch guidelines *How to prepare archival records of heritage items* (NSW Heritage Office, 1998) and *Photographic recording of heritage items using film or digital capture* (NSW Heritage Office, 2006); - Archival recordings would be undertaken to capture, prior to demolition works taking place, and for infrastructure that would be demolished; - Documentary recording would contain a detailed timeline of each piece of equipment and tankfarm, together with copies of plans and schematics; - A photographic archival recording would be undertaken prior to the demolition of the stacks. The recording would include broad views of the larger Clyde Refinery area; - Subsurface impacts to the area of archaeological potential identified around the bitumen gantry through the removal of foundations or other invasive works, are to be managed through the preparation and implementation of an Archaeological Research Design and Methodology; - The memorial to John Simpsom Fell, Horace Liddon Spencer and Albert Edward Ward, located near the bitumen gantry, is to be relocated to a publicly accessible area (e.g. visitor car park or Project Area). Shell would investigate the feasibility of undertaking a memorial relocation ceremony involving family and descendants of the three men and use of the plaque as a teaching aid for the importance of workplace safety; and - A brief management section is to be prepared within the Project Area's OEMP to guide the management of archaeological potential at the historical residential area along Devon Street and at the second bitumen gantry.	Demolition and Construction
Hazard and Risk	
Risk Management in Design All tanks converted as part of the Project would be constructed to recognised Australian and International Standards, in line with the existing tanks at the Clyde Terminal. The design would be subject to the Shell risk management process. Risk management activities that directly relate to the NSW Seven Stage Planning Process are outlined below: - Preliminary Hazard Analysis; - Shell's Hazard and Effects Management Process; - Hazard and Operability Study; - Fire Safety Study; - Final Hazard Analysis; - Emergency Response Plan Review annually or prior to each critical modification; - Construction Safety Study; - Commissioning review; and - Safety Management System Update.	Design and Construction
Terminal Safety Systems Safety Systems proposed for the Project are as follows: - Process Control: The process control system (i.e. tank level gauging) is integrated with the existing Clyde Terminal process Distributed Control System; - Process Shutdown Systems: Existing pump interlocks would be retained and new tank high level trips would be provided as required to demonstrate as low as reasonably practicable risk; - Bund Walls and Drains: The existing bunds and drains would be retained; - Articulated and remotely operated foam application system would be installed; - Fire Water: The existing firewater main, monitors and hydrants would be modified for the converted Clyde Terminal operations;	All

Summary of Mitigation Measures	Project Phase
- Tank Rim Seam Foam Pourers: Rim seal foam pourers would be modified or installed to meet the revised tank configuration; and - Hazardous Area Classification: Ignition sources would be controlled by the application of suitable hazardous area classification standards.	
Safety in Operation The existing Clyde Terminal and Gore Bay Terminal Management System would be updated to align with operation of the modified Gore Bay Terminal and converted Clyde Terminal. The ERP 2012 would also be updated again as required before operation of the converted Clyde Terminal commences, and in particular the Final Hazard Analysis would be prepared at this time. The implementation of the ERP would include the activation of external emergency services if required.	Operation
Proposed Automation and Safeguarding Operation The following safeguards and automation upgrades are proposed: - Yokogawa Prosafe SGS would be installed to replace the functionality of the existing relay logic; - Permissives (interlocks) would be improved to prevent the incorrect valves being opened; - Motorised valves would be installed inside tank bunds to allow quicker acting valves and remote operation; - The reliability of telemetry between Clyde/Gore Bay would be improved; - The Independent High Level Alarm and tank gauging systems would be improved; - Pump trip systems would be improved; - The site fire system and dump valve logic would be improved; and - Non-safeguarding controls would also be upgraded.	Design and Construction
Waste Management	
Demolition and Construction Waste Mitigation Measures Demolition, construction and operational waste would be managed and disposed of in accordance with relevant State legislation and Government requirements. The existing WMP 2013 would be prepared for demolition and construction works, and this would be incorporated into the CEMP. The following waste management mitigation measures would be incorporated as part of the CEMP for the Project to eliminate or reduce the risk of environmental impacts: - Demolition and construction contractors would be required to provide a detailed waste management plan and tracking system that incorporates available recycling options; - Before transfer to the designated locations as per the waste permit system, wastes may require stockpiling. Wastes would be: • Clearly labelled, to ensure that all such waste is clearly identified and stored separately from other types of materials and wastes, and particular to ensure that contaminated and non-contaminated wastes are stockpiled separately; • Located away from trafficked areas and other potential disturbances; • Placed on geo-fabric lining and covered to prevent leachate and erosion; and • Be no more than 3 to 5 m tall depending in the type of wastes stockpiled, and allow adequate room for transport around and management of each stockpile. - Demolition and construction waste would be stored on a sealed and bunded surface whilst awaiting transfer or processing; - Radioactive substances waste would be disposed of as per the requirements of the *Radiation Control Regulation 2003* and the *Waste Classification Guidelines Part 3: Waste Containing Radioactive Material* (Department of Environment and Climate Change, 2008e); - A small amount of asbestos is present on the Project Area and would require removal during demolition activities. As such, Shell and its contractors would comply with the following obligations set out in Chapter 8 of the WH&S Regulation: • Ensure that exposure to asbestos at the Project Area is eliminated as far as reasonably practicable; • Ensure an asbestos register is maintained; • Ensure an asbestos management plan is in place for the Project Area;	Demolition and Construction

Summary of Mitigation Measures	Project Phase
• Engage a licensed asbestos contractor to carry out the removal of asbestos from the Clyde Terminal; • Ensure that health monitoring is provided to those personnel undertaking asbestos works as part of the Project; • Ensure access to the asbestos removal area is limited to those who are actually involved in the removal of the asbestos, including the placement of relevant signage and barriers; • If there is uncertainty as to whether the exposure standard is likely to be exceeded, Shell would engage a competent contractor to perform air quality monitoring in the area; • Decontamination facilities would be provided at all times at the Project Area; and • Ensure that asbestos waste, and asbestos contaminated plant or clothing is decontaminated, sealed and labelled before it is removed from the Project Area to a site that is authorised to receive asbestos waste. - As per the requirements of clause 42 the POEO Waste Regulation, asbestos waste would be securely packaged, be in a sealed container, be wetted down, or be contained in a covered, leak-proof vehicle.	
Operational Waste Mitigation Measures Waste management mitigation measures for operation of the Clyde Terminal would be incorporated into an updated version of the WMP 2013. Operational waste management mitigation measures include: - Waste management would continue to be undertaken in accordance with the *Waste Avoidance and Resource Recovery Act 2001* and the *Waste Avoidance and Resource Recovery Strategy 2007* (Department of Environment and Conservation, 2007), in that resources would be used efficiently, and the hierarchy of waste avoidance, recovery and disposal would be followed; - Waste would continue to be identified, characterised, classified and separated in accordance with the *Waste Classification Guidelines* (Department of Environment and Climate Change, 2008e), and records of these procedures would be maintained for the life of the conversion works, and beyond that, for the required statutory period; - The waste permit system for the onsite and offsite transfer and disposal of waste would continue to be followed; - EPL No. 570 would continue to provide the key guidelines for waste management at the Project Area. In particular: • Waste designated for recycling would be stored separately from other wastes; • All above ground tanks containing material with the potential to cause environmental harm would be bunded or have an alternative spill containment system in place; and • Dewatered oily sludge would be treated in an onsite landfarm or disposed of offsite to a place that can lawfully accept that class of wastes. - Waste materials would be stored in the designated locations as per EPL No. 570 and the WMP 2013; - Wastes scheduled under the POEO Waste Regulation would continue to be subject to waste tracking requirements, except where an exemption exists under EPL No. 570. A record of these waste movements would nevertheless be maintained by Shell; - Leachate or residual water from waste dewatering activities would be directed to the interceptors for treatment before being released as licensed discharge. Waste materials separated out at the interceptors would be disposed at an offsite licensed facility; - In the unlikely event that waste or its leachate is released to the environment, the investigation and remediation measures outlined in the SGMP 2010 would be adhered to; and - PCB wastes would be managed and disposed of according to the CCO issued by the EPA for the handling of PCB wastes.	Operation

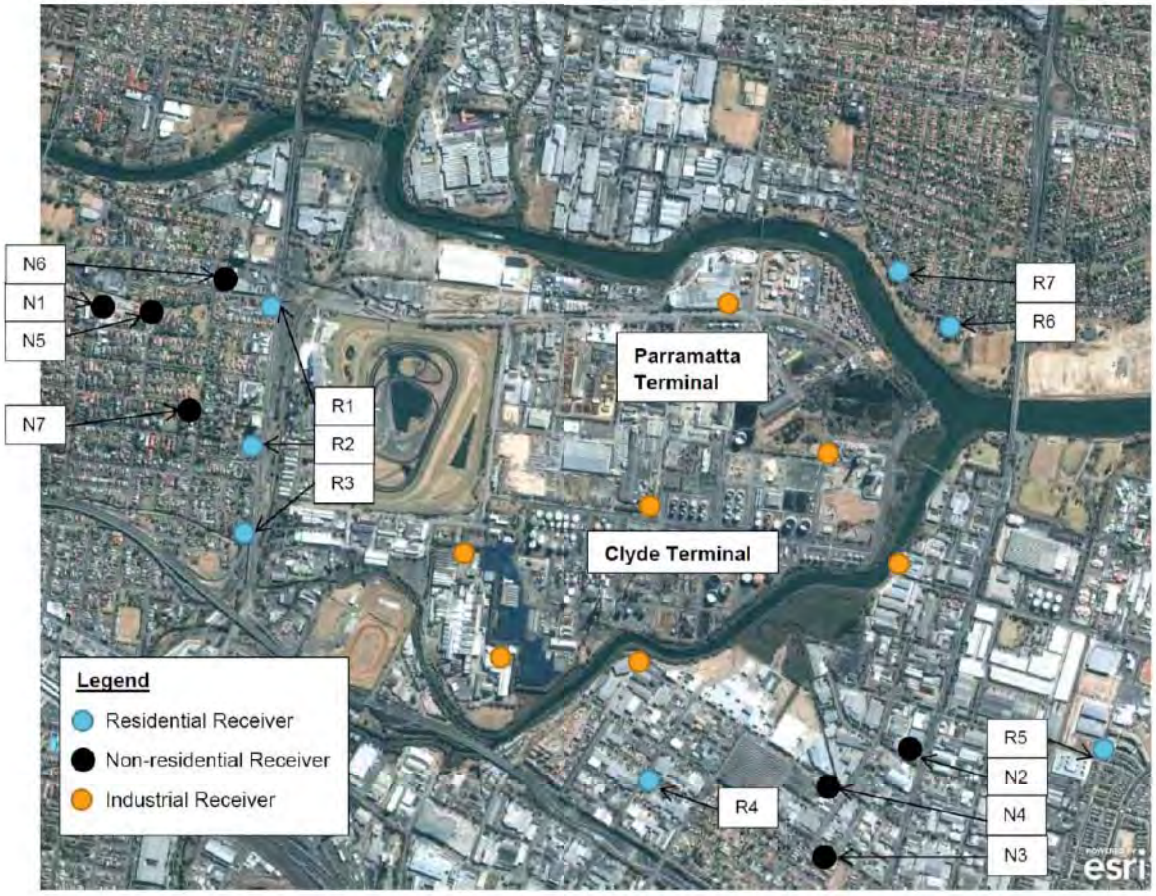
Summary of Mitigation Measures	Project Phase
Hazardous Waste Mitigation Measures Hazardous wastes generated during demolition and construction activities, and/or operation of the converted Clyde Terminal would be treated or immobilised in the following manner before being transported offsite by a licensed waste contractor: - Asbestos wastes according to the requirements of the POEO Waste Regulation, that it be securely packaged in a sealed container and wetted down or contained in a covered, leak-proof vehicle; - PCB wastes according to the CCO issued by the EPA for the handling of PCB wastes; - Oil filters and packing and used oily rags would be managed as prescribed waste. Any powdery used oil-absorbent materials would be bagged or drummed or otherwise contained to facilitate their safe handling and disposal; - Oily sludges (for example, from tank cleaning during the ongoing operation of the Clyde Terminal) would continue to be treated in the sludge dewatering facility and/or the landfarm area, as per EPL No. 570; - Redundant equipment containing any radioactive isotopes would be disposed of as per the requirements of the *Radiation Control Regulation 2003* and the *Waste Classification Guidelines Part 3: Waste Containing Radioactive Material* (Department of Environment and Climate Change, 2008e); and - Organic solvents, contaminated blue metal and empty drums would be managed by chemical fixation to convert the hazardous contaminants to a chemically stable form. Where this is not possible, macroencapsulation would be used to place a physical barrier between those contaminated wastes and the surrounding environment.	All
Aboriginal Heritage	
Whilst the ACHA predicts that the Project would not impact on the Aboriginal heritage values of the area, the following management measures would nevertheless be implemented if any potential Aboriginal objects or human remains are discovered at the Project Area.	
- Should any suspected Aboriginal objects be uncovered during demolition or construction works, all works in the vicinity should cease immediately to prevent any further impacts and a qualified archaeologist be brought onsite to make an assessment. If the object is found to be an Aboriginal object, it would be notified under the *National Parks and Wildlife Act* as soon as possible; - If suspected human remains are exposed, all construction work is to cease immediately in the near vicinity of the find location and the Project Manager is to be immediately notified to allow assessment and management: • An area of 20 m radius is to be cordoned off by temporary fencing around the exposed human remains site - construction work can continue outside of this area as long as there is no risk of interference to the human remains or the assessment of human remains; • The Police and the OEH are to be contacted immediately; and • A physical or forensic anthropologist would be commissioned by the Police to inspect the remains in situ (organised by the Police unless otherwise directed), and make a determination of ancestry (Aboriginal or non-Aboriginal) and antiquity (pre-contact, historic or modern). - Subsequent management actions would be dependent on the findings of the forensic anthropologist: • If the remains are identified as modern and human, the area would become a crime scene under the jurisdiction of the NSW Police; • If the remains are identified as pre-contact or historic Aboriginal, the site would be secured and OEH and all Registered Aboriginal Parties notified in writing. Where impacts to exposed Aboriginal skeletal remains cannot be avoided, remains would be retrieved via controlled archaeological excavation and reburied outside of the Disturbance Boundary in a manner and location determined by Registered Aboriginal Parties; • If the remains are identified as historic non-Aboriginal, the site is to be secured and	Demolition and Construction

Summary of Mitigation Measures	Project Phase
the NSW Heritage Branch contacted; and • If the remains are identified as non-human, work can recommence immediately. - The above process functions only to appropriately identify the remains and secure the site. From this time, the management of the area and remains is to be determined through one of the following means: • If the remains are identified as a modern matter liaise with the Police; • If the remains are identified as Aboriginal liaise with the proponent, OEH and Aboriginal stakeholders; • If the remains are identified as non-Aboriginal (historical) liaise with the DP&I and the Heritage Office; and • If the remains are identified as not being human then work can recommence immediately.	
Noise and Vibration	
Demolition and Construction Waste Contractors would demonstrate best practicable means and include noise mitigation measures in the CEMP plan, which could include: - Construction activities to be limited to between 7am and 6pm Monday to Friday and 8am to 1pm Saturday; - Where work is undertaken outside of the standard working hours it would be in accordance with the *Interim Construction Noise Guideline* (EPA, 2009); - Construction of noise bunds or barriers, where feasible and effective for noise suppression, at the early demolition and construction stage; - Use of temporary barriers for stationary noisy equipment; - Possible restrictions to construction hours (beyond the above hours) where noise impacts are significant; - All plant items should be properly maintained and operated according to manufacturers' recommendations in such a manner as to avoid causing excessive noise; - All pneumatic tools would be fitted with silencers or mufflers; - Any compressors brought on to site should be silenced or sound reduced models fitted with acoustic enclosures; - Consultation with property owners likely to be affected prior to works being carried out; and - Noise monitoring at sensitive locations as agreed with EPA for any excessive noise or noise complaints being assessed with appropriate action taken.	Demolition and Construction
Traffic Noise The existing OEMP includes provisions for vehicle protocols in and around the Clyde Terminal and the Parramatta Terminal. This would be revised for operations once the demolition and construction works have been completed.	Operation
Blasting The CEMP would include a blast plan and control measures to minimize the impact of ground vibration and noise as a result of blasting at a particular site. Items to be considered in the development of this part of the CEMP are: - Reducing maximum instantaneous charge, for example by reducing blasthole diameter or deck loading; - Using a combination of appropriate delays; - Allowing for excessive humps or toe in the blast design; - Optimising blast design by altering drilling patterns, delaying layout or altering blasthole inclination from the vertical; - Exercising strict control over the location, spacing and orientation of all blastholes and using the minimum practicable sub-drilling that gives satisfactory to conditions; and - Establishing times of blasting to suit the situation; - Using experienced blast contractor to be used; - Using a series of test blasts to be used to determine site specific conditions. As a result	Demolition

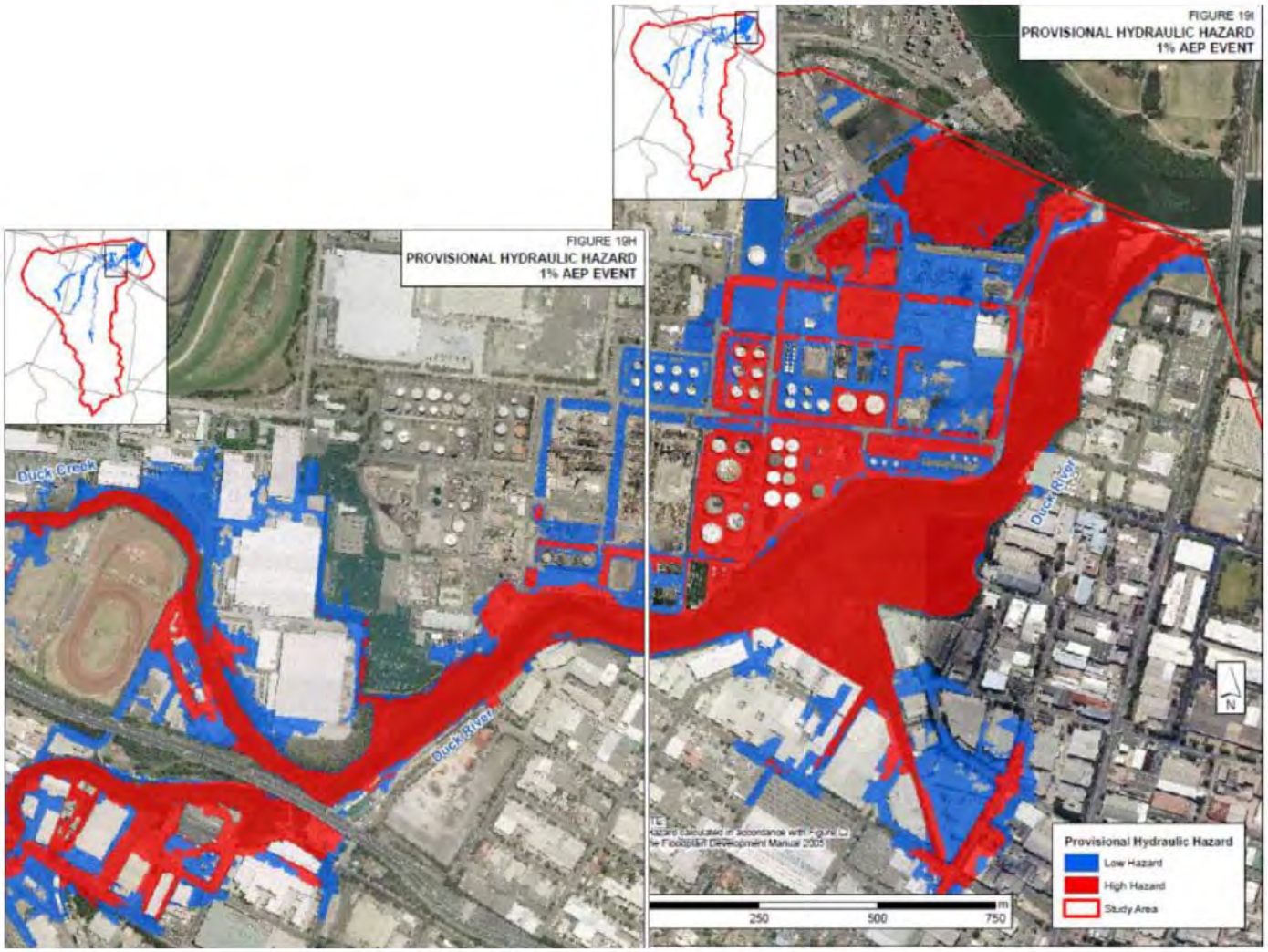
Summary of Mitigation Measures	Project Phase
of these tests the maximum instantaneous charge should be determined; - Restricting blasting or ceasing blasting if the predictions indicate that air blast overpressure levels are likely to be exceeded at neighbouring dwellings unless agreed with the owner(s); - Ensuring all reasonable attempts are made to contact sensitive receivers located within 500 m of a blast location; - Using linear enclosures or shielding would be used to assist in airblast attenuation if required; - Ensuring stemming type and length is adequate; - Eliminating exposed detonating cord and investigating alternative initiation method; - Making extra efforts to eliminate the need for two shots (e.g. better control of drill patterns); - Using survey methods, as appropriate, to ensure burden is adequate; - Considering delaying or cancelling the blast by not loading if the weather forecast is unfavourable; - Allowing for the effects of temperature inversion and wind speed and direction on the propagation of airblast to surrounding areas; - Orientating faces where possible so that they do not directly face residences; - Varying the direction of initiation; - Exercising strict control over the burden, spacing and orientation of all blastholes; - Taking particular care where the face is already broken or where it is strongly jointed, sheared or faulted; - Considering deck loading where appropriate to avoid broken ground or cavities in the face (e.g. from back break); - Adequately monitoring the blasts to help minimise complaints and also to provide documentation in the event of any claims for damages arising from blasting; and - Recording of complaints associated with blasting, identifying the nature of the complaint, the particular operation that initiated the complaint, and documenting action taken.	
GHG Emissions	
Shell would undertake an internal energy audit of the Project Area following completion of the demolition and construction works to take stock of how the operation of the Clyde Terminal has reduced electricity consumption and improved energy efficiency. Recommendations arising from the audit would then be taken into consideration where significant further energy savings can be made.	Operation
Landscape and Visual Amenity	
Dust control measures included in the CEMP and outlined in the **Surface Water, Industrial Water and Flooding** section of this table would avoid or minimise potential visual impacts from dust.	Demolition and Construction
The riparian vegetation within the wetlands would be retained thereby conserving the visual amenity and landscape character of the area.	All

Summary of Mitigation Measures	Project Phase
Ongoing Monitoring at the Converted Clyde Terminal	
Shell would continue to undertake existing environmental and safety monitoring at the Project Area following completion of the conversion including: - Interceptor sampling; - Wetlands management; - Waste management; - Groundwater sampling and analysis; - Safety critical equipment inspection and maintenance; - Safety management system auditing; - Process safety observations and audits; - Emergency response exercises and plan reviews; - Hazard and effect management process reviews; and - Competency assessment of all operational staff.	All

APPENDIX D
NOISE RECEIVER LOCATIONS



APPENDIX E
HIGH HYDRAULIC HAZARD AREAS



APPENDIX 2
ENVIRONMENT PROTECTION LICENCE 570

Environment Protection Licence

Licence - 570

Licence Details	
Number:	570
Anniversary Date:	02-July

Licensee
VIVA ENERGY AUSTRALIA PTY LTD
GPO BOX 872
MELBOURNE VIC 3001

Premises
CLYDE TERMINAL
DURHAM STREET
CAMELLIA NSW 2142

Scheduled Activity
Chemical Storage
Waste Processing (non-thermal treatment)

Fee Based Activity	Scale
Non-thermal treatment of hazardous and other waste	Any T treated
Petroleum products storage	> 100000 kL stored

Region
Metropolitan - Sydney Industry
Level 13, 10 Valentine Ave PARRAMATTA NSW 2150
Phone: (02) 9995 5000
Fax: (02) 9995 6900
PO Box 668 PARRAMATTA
NSW 2124

Environment Protection Licence

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Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

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The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

VIVA ENERGY AUSTRALIA PTY LTD
GPO BOX 872
MELBOURNE VIC 3001

subject to the conditions which follow.

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1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Waste Processing (non-thermal treatment)	Non-thermal treatment of hazardous and other waste	Any T treated
Chemical Storage	Petroleum products storage	> 100000 kL stored

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
CLYDE TERMINAL
DURHAM STREET
CAMELLIA
NSW 2142
PART LOT 2 DP 224288, PART LOT 1 DP 383675, PART LOT 101 DP 809340, PART LOT 100 DP 1168951

A2.2 In relation to condition A2.1 the premises is defined on the drawing labelled "Clyde Terminal EPL No.570 Licenced Discharge Points, drawing No. CLR_0126667_0004 Rev F"

A3 Other activities

A3.1 This licence applies to all other activities carried on at the premises, including:

Ancillary Activity
Electricity Generating Works

A4 Information supplied to the EPA

A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to Air and Water and Applications to Land

P1 Location of monitoring/discharge points and areas

P1.1 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

Water and land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1	Discharge to waters Effluent quality and volume monitoring	Discharge to waters Effluent quality and volume monitoring	The biotreater effluent discharge steel pipe (200mm diameter) labelled "EPA ID No. 1" on drawing number CLR_0122667_0004 Rev E titled "Clyde Terminal, EPL No 570 Licenced Discharge Points".
2	Discharge to waters Effluent quality and volume monitoring	Discharge to waters Effluent quality and volume monitoring	Outlet serving main interceptor pumpout labelled "EPA ID No. 2" on drawing number CLR_0122667_0004 Rev E titled "Clyde Terminal, EPL No 570 Licenced Discharge Points.
4	Discharge to waters Volume monitoring	Discharge to waters Volume monitoring	Outlet on the southeast bank of Duck River serving B2 system pumpout labelled "EPA ID No. 4" on drawing number CLR_0122667_0004 Rev E titled "Clyde Terminal, EPL No 570 Licenced Discharge Points".
23	Discharge to waters Volume monitoring	Discharge to waters Volume monitoring	Flexihose outlet into concrete box pit labelled "EPA ID No. 23" on drawing number CLR_0122667_0004 Rev E titled "Clyde Terminal, EPL No 570 Licenced Discharge Points".

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24	Discharge to waters Volume monitoring	Discharge to waters Volume monitoring	Flexihose outlet into B2 basin labelled "EPA ID No. 24" on drawing number CLR_0122667_0004 Rev 0004 titled "Clyde Terminal, EPA Licence 570 Licenced Discharge Points".
25	Discharge to water Volume monitoring	Discharge to water Volume monitoring	Flexihose outlet into concrete retention basin labelled "EPA ID No. 25" on drawing number CLR_0122667_0004 Rev E titled "Clyde Terminal, EPL No 570 Licenced Discharge Points".
26	Effluent quality and volume monitoring		B2 system monitoring point adjacent to pump serving B2 system labelled "EPA ID No. 26" on drawing number CLR_0122667_0004 Rev E titled "Clyde Terminal EPL No 570 Licenced Discharge Points".
27	Discharge to water Volume monitoring	Discharge to water Volume monitoring	Flexible discharge point
28	Discharge to waters Water quality monitoring	Discharge to waters Water quality monitoring	Overflow from API Bays 1 & 2 as marked "EPA ID No. 28" on plan titled " Clyde Terminal EPL No. 570 Licenced Discharge Points, Drawing No. CLR_01256667_0004-RevF" submitted to the EPA in a letter dated 29 May 2014.
29	Discharge to waters Water quality monitoring	Discharge to waters Water quality monitoring	Overflow from API Bays 3 & 4 as marked "EPA ID No. 29" on plan titled " Clyde Terminal EPL No. 570 Licenced Discharge Points, Drawing No. CLR_01256667_0004-RevF" submitted to the EPA in a letter dated 29 May 2014.
30	Discharge to waters Water quality monitoring	Discharge to waters Water quality monitoring	Outlet serving interceptor as marked "EPA ID No. 30" on plan titled " Clyde Terminal EPL No. 570 Licenced Discharge Points, Drawing No. CLR_01256667_0004-RevF" submitted to the EPA in a letter dated 29 May 2014.

3 Limit Conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Load limits

L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.

L2.2 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
Benzene (Air)	26000.00
Volatile organic compounds - Summer (Air)	
Volatile organic compounds (Air)	1250000.00

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

L3 Concentration limits

L3.1 For each monitoring/discharge point or utilisation area specified in the table\s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\s.

L3.4 Water and/or Land Concentration Limits

POINT 1

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Biochemical oxygen demand	milligrams per litre	45	95		n/a
Fluoride	milligrams per litre	25	40		n/a
Nitrogen (ammonia)	milligrams per litre	6	30		n/a

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Oil and Grease	milligrams per litre	8	10		n/a
pH	pH				6.0-9.0
Phenols	milligrams per litre				0.5
TN	milligrams per litre	35	100		n/a
Total Phosphorus - unfiltered sample	milligrams per litre	1.5	6		n/a
Total suspended solids	milligrams per litre	30	60		n/a

POINT 2

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
pH	pH				6.0-9.0
Phenols	milligrams per litre				0.5
Total organic carbon	milligrams per litre				100
Total suspended solids	milligrams per litre				50

POINT 4

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
pH	pH				6.0-9.0
Phenols	milligrams per litre				0.5
Total organic carbon	milligrams per litre				100
Total suspended solids	milligrams per litre				50

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POINT 23,24,25

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
pH	pH				6.0-9.0
Total organic carbon	milligrams per litre				100
Total suspended solids	milligrams per litre				50

POINT 27

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
pH	pH				6.0-9.0
Total organic carbon	milligrams per litre				100
Total suspended solids	milligrams per litre				50

POINT 30

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Oil and Grease	milligrams per litre				10
pH	pH				6.0-9.0
Total organic carbon	milligrams per litre				100
Total suspended solids	milligrams per litre				50

Note: TN refers to Total Nitrogen

L3.5 An exemption exists for Condition L3.3 for concentration limits of Total Suspended Solids (TSS) for Points 2 and 4. Within 48 hours of a rain event, the water that may be discharged at Points 2 and 4 must not exceed 80 milligrams per litre (mg/L) of TSS.

L3.6 The water that is permissible to be discharged from points 1, 2, 4, 23, 24, 25 and 27 must not contain any visible oil or grease.

L4 Volume and mass limits

L4.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:
a) liquids discharged to water; or;
b) solids or liquids applied to the area;
must not exceed the volume/mass limit specified for that discharge point or area.

Point	Unit of Measure	Volume/Mass Limit
1	kilolitres per day	4000
2	kilolitres per day	5000
4	kilolitres per day	5000
30	kilolitres per day	5000

L5 Waste

L5.1 The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.

L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if it requires an environment protection licence.

L5.3 Except as provided by any other condition of this licence, only the Hazardous and/or Liquid and/or Restricted Solid waste listed below may be generated and/or stored at the premises.

a) A100 Waste resulting from surface treatment of metals and plastics;
b) B100 Acidic solutions or acids in solid form;
c) C100 Basic solutions or bases in solid form;
d) D120 Mercury; mercury compounds;
e) D140 Chromium compounds (hexavalent and trivalent);
f) D210 Nickel compounds;
g) D220 Lead; lead compounds;
h) D270 Vanadium compounds;
i) D330 Inorganic sulfides;
j) D360 Phosphorus compounds excluding mineral phosphates;
k) F100 Waste from the production, formulation and use of inks, dyes, pigments, paints, lacquers and varnish;
l) G110 Organic solvents excluding halogenated solvents;
m) J100 Waste mineral oils unfit for their original intended use;
n) J120 Waste oil/water, hydrocarbons/water mixtures or emulsions;
o) J160 Waste tarry residues arising from refining, distillation, and any pyrolytic treatment;
p) M100 Waste substances and articles containing or contaminated with polychlorinated biphenyls (PCB’

s), polychlorinated napthalenes (PCN's), polyterphenyls (PCT's) and/or polybrominated biphenyls (PBB's).
q) M150 Phenols, phenol compounds including chlorophenols;
r) M250 Surface active agents (surfactants), containing principally organic constituents and which may contain metals and inorganic materials;
s) M260 Highly odorous organic chemicals (including mercaptans and acrylates);
t) N100 Containers and drums which are contaminated with residues of substances referred to in this list;
u) N120 Soils contaminated with a waste;
v) N140 Fire debris and fire wash waters;
w) N160 Encapsulated, chemically-fixed, solidified or polymerised wastes;
x) N190 Filter cake;
y) N230 Ceramic-based fibres with physicochemical characteristics similar to those of asbestos;
z) R100 Clinical and related wastes;
aa) T190 (or N205) Residues from industrial waste treatment/disposal operations;
bb) Z100 Organic compounds nos (i.e. aliphatic nitrogen compounds); and
cc) Z110 Inorganic compounds nos.

L5.4 Except as provided by any other condition of this licence, only the Hazardous and/or Liquid and/or Restricted Solid waste listed below may be received at the premises from the Viva Energy Australia Pty Ltd Gore Bay Terminal, Environment Protection Licence (EPL) 661 or Viva Energy Australia Pty Ltd Parramatta Terminal EPL 660 for treatment, processing, reprocessing or disposal at the premises:
a) J100 Waste mineral oils unfit for their original intended use;
b) J120 Waste oil/water, hydrocarbons/water mixtures or emulsions;
c) M260 Highly odorous organic chemicals (including mercaptans and acrylates); and
d) N120 Soils contaminated with a controlled waste.

L5.5 The licensee may receive Hazardous and/or Liquid and/or Restricted Solid waste from the Viva Energy Australia Pty Ltd Gore Bay premises EPL 661 without the need for waste tracking but a record of any waste received must be made and retained at the premises.

L5.6 Except as provided by any other condition of this licence, only the Hazardous and/or Liquid and/or Restricted Solid waste listed below may be received via pipeline only from Sydney Metropolitan Pipeline EPL 1969 and Joint User Hydrant Installation (JUHI) for treatment, processing, reprocessing or disposal at the premises without the need for waste tracking.
a) J120 Waste oil/water, hydrocarbons/water mixtures or emulsions.

L5.7 Except as provided by any other condition of this licence, only the Hazardous and/or Liquid and/or Restricted Solid waste listed below may be treated, processed, reprocessed or disposed of at the premises.

a) A100 Waste resulting from the surface treatment of metals and plastics,
b) C100 Basic solutions or bases in solid form,
c) J120 Waste oil/water, hydrocarbons/water mixtures or emulsions,
d) M260 Highly odorous organic chemicals (including mercaptans and acrylates),
e) N120 Soils contaminated with a controlled waste,
f) N160 Encapsulated, chemically-fixed, solidified or polymerised wastes, and
g) T190 Residues from industrial waste treatment/disposal operations.

L5.8 Except as provided by any other condition of this licence, only the Hazardous and/or Liquid and/or Restricted Solid waste listed below may be received from Park Pty Ltd (EPL 654) for treatment or processesing at the premises without the need for waste tracking:

(a) J120 Waste oil/water, hydrocarbons/water mixtures or emulsions.

L5.9 Except as provided by any other condition of this licence, only Hazardous and/or Liquid and/or Restricted Solid waste listed below may be received from the Viva Energy Australia Pty Ltd refinery at Geelong Victoria (Vic EPA licence number #46555) for treatment, processing reprocessing or disposal at the premises.

a) C100 Basic solutions or bases in solid form.

L5.10 After onsite treatment to reduce hydrocarbon contamination of soil or sediment to less than 1% on a weight basis, such treated waste may be disposed of onsite in the area marked “Treated Material Onsite Disposal Site (TPH < 1%)” as shown on drawing number CLR_0122667_0004 Rev E titled “Clyde Terminal EPL 570 Licenced discharge points."

L5.11 The licensee must comply with the conditions as specified in this licence or where no specific conditions are outlined in this licence, the licensee must comply with the Protection of the Environment Operations (Waste) Regulation 2014.

L6 Potentially offensive odour

L6.1 No condition in this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

Note: Section 129 of the Protection of the Environment Operations Act 1997 provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

L7 Other limit conditions

L7.1 The licensee may receive less than 100 tonnes per annum of biotreater sludge from another biological wastewater treatment plant in quantities sufficient for re-seeding (innoculating) the biological wastewater treatment plant.

Note: For the purposes of this licence, biotreater sludge used for re-seeding (inoculating) the biological wastewater treatment plant is not considered to be a waste.

4 Operating Conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.
This includes:
a) the processing, handling, movement and storage of materials and substances used to carry out the

activity; and
b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
a) must be maintained in a proper and efficient condition; and
b) must be operated in a proper and efficient manner.

O3 Dust

O3.1 The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.

O4 Processes and management

O4.1 The licensee must ensure that any $Parameter1$ waste $Parameter2$ $Parameter3$ at the premises is assessed and classified in accordance with the EPA Waste Classification Guidelines as in force from time to time.

O4.2 On-site waste management processes must comply with procedures outlined in the figure attached to the letter dated 4 November 2003 prepared by Shell Refining (Australia) Pty Ltd.

O4.3 Biotreater filter cake must be treated in the drying area as defined by the shaded area labelled “Drying Bays” on drawing number CLR_0122667_0004 Rev E titled “Clyde Terminal, EPL No 570 Licenced Discharge Points."

O4.4 Soil contaminated with hydrocarbons must be treated in the landfarm area as defined by the shaded area labelled “Landfarm” on drawing number CLR_0122667_0004 Rev E titled “Clyde Terminal, EPL No 570, Licenced Discharge Points."

O4.5 Treated soil contaminated with hydrocarbons must be disposed of in the disposal area as defined by the shaded area labelled “Treated Material Onsite Disposal Site (TPH < 1%)” on drawing number CLR_0122667_0004 titled “Clyde Terminal, EPL 570 Licence Discharge Points" or taken offsite to a place that can lawfully accept that class of waste.

O5 Waste management

O5.1 The licensee must ensure that waste identified for recycling is stored separately from other waste.

O5.2 All above ground tanks containing material that is likely to cause environmental harm must be bunded or have an alternative spill containment system in place.

O5.3 The licensee must ensure that suitable measures (e.g. high/low alarms, control valves with interlock

control, one way valves) are installed on all tanks, ponds or clarifiers and associated pipes and hoses to prevent the spillage of waste.

O5.4 Dewatered oily sludge must be treated in the sludge dewatering facility and/or landfarm as defined by the shaded areas labelled “Sludge Dewatering Facility” and “Landfarm” on drawing number CLR_0122667_0004 Rev E titled “Clyde Terminal, EPL No 570 Licenced Discharge Points” or disposed of off site to a place that can lawfully accept that class of waste.

O6 Other operating conditions

O6.1 Discharges to Duck River at Point 23, 24, and 25 must only be a result of dewatering from bunded areas in the tank farm or from water pressure testing of chemical storage tanks within the premises.

O6.2 Discharges to Duck River at Point 27:
a) must only be a result of dewatering from bunded areas or from water pressure testing of chemical storage tanks within the western tank farms; and
b) The licensee must notify the EPA at least 7 days in advance of any discharge; and
c) The licensee must undertake water sampling of the subject chemical storage tank prior to any discharge and provide the laboratory results to the EPA.

5 Monitoring and Recording Conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:
a) in a legible form, or in a form that can readily be reduced to a legible form;
b) kept for at least 4 years after the monitoring or event to which they relate took place; and
c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
a) the date(s) on which the sample was taken;
b) the time(s) at which the sample was collected;
c) the point at which the sample was taken; and
d) the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

M2.1 For the purposes of Condition M2.1 of this licence Special Frequency 1 means that monitoring must be carried out monthly during any discharge, but if results of sample analysis indicate a possible breach of the discharge limits for Point 1 as listed in Condition L3.4 of this licence, sampling from EPA Point 1 must be carried out daily during discharge until sample analysis confirms that levels of contaminants in the discharge are below the discharge limits listed for Point 1 in Condition L3.4 of this licence.

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Note: Daily sampling from EPA Point 1 as defined by Special Frequency 1 is only required to be carried out for the analyte suspected of breaching licence limits.

Note: Results of daily sampling from EPA Point 1 as defined by Special Frequency 1 are not required to be used when calculating compliance with Condition L3.4. The licensee must still provide a representative sample from EPA Point 1 during discharge, as per Condition M2.1.

M2.2 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.3 Water and/ or Land Monitoring Requirements

POINT 1

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Special Frequency 1	Grab sample
Fluoride	milligrams per litre	Special Frequency 1	Grab sample
Nitrogen (ammonia)	milligrams per litre	Special Frequency 1	Grab sample
Oil and Grease	milligrams per litre	Special Frequency 1	Grab sample
pH	pH	Special Frequency 1	Grab sample
Phenols	milligrams per litre	Special Frequency 1	Grab sample
TN	milligrams per litre	Special Frequency 1	Grab sample
Total petroleum hydrocarbons	milligrams per litre	Special Frequency 1	Grab sample
Total Phosphorus - unfiltered sample	milligrams per litre	Special Frequency 1	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 1	Grab sample

POINT 2

Pollutant	Units of measure	Frequency	Sampling Method
pH	pH	Daily during any discharge	Grab sample
Phenols	milligrams per litre	Daily during any discharge	Grab sample
Total organic carbon	milligrams per litre	Daily during any discharge	Grab sample
Total suspended solids	milligrams per litre	Daily during any discharge	Grab sample

POINT 23,24,25

Pollutant	Units of measure	Frequency	Sampling Method

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pH	pH	<24hrs prior to discharge	Grab sample
Total organic carbon	milligrams per litre	<24hrs prior to discharge	Grab sample
Total suspended solids	milligrams per litre	<24hrs prior to discharge	Grab sample

POINT 26

Pollutant	Units of measure	Frequency	Sampling Method
pH	pH	Daily during any discharge	Grab sample
Phenols	milligrams per litre	Daily during any discharge	Grab sample
Total organic carbon	milligrams per litre	Daily during any discharge	Grab sample
Total petroleum hydrocarbons	milligrams per litre	Daily during any discharge	Grab sample
Total suspended solids	milligrams per litre	Daily during any discharge	Grab sample

POINT 27

Pollutant	Units of measure	Frequency	Sampling Method
pH	pH	<24hrs prior to discharge	Grab sample
Total organic carbon	milligrams per litre	<24hrs prior to discharge	Grab sample
Total suspended solids	milligrams per litre	<24hrs prior to discharge	Grab sample

POINT 28

Pollutant	Units of measure	Frequency	Sampling Method
pH	pH	Each overflow event	Grab sample
Total organic carbon	milligrams per litre	Each overflow event	Grab sample
Total suspended solids	milligrams per litre	Each overflow event	Grab sample

POINT 29

Pollutant	Units of measure	Frequency	Sampling Method
pH	pH	Each overflow event	Grab sample
Total organic carbon	milligrams per litre	Each overflow event	Grab sample
Total suspended solids	milligrams per litre	Each overflow event	Grab sample

POINT 30

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Pollutant	Units of measure	Frequency	Sampling Method
Oil and Grease	milligrams per litre	Daily during any discharge	Composite sample
pH	pH	Daily during any discharge	Composite sample
Total organic carbon	milligrams per litre	Daily during any discharge	Composite sample
Total suspended solids	milligrams per litre	Daily during any discharge	Composite sample

M2.4 The monitoring results collected at Point 26 in compliance with Condition M2.1 can be used to determine compliance with the concentration limit specified in Condition L3.4 for discharge from Point 4.

M3 Testing methods - concentration limits

M3.1 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M4 Testing methods - load limits

Note: Division 3 of the *Protection of the Environment Operations (General) Regulation 2009* requires that monitoring of actual loads of assessable pollutants listed in L2.2 must be carried out in accordance with the relevant load calculation protocol set out for the fee-based activity classification listed in the Administrative Conditions of this licence.

M5 Recording of pollution complaints

M5.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M5.2 The record must include details of the following:
a) the date and time of the complaint;
b) the method by which the complaint was made;
c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
d) the nature of the complaint;
e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
f) if no action was taken by the licensee, the reasons why no action was taken.

M5.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M5.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M6 Telephone complaints line

M6.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M6.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M6.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

M7 Requirement to monitor volume or mass

M7.1 For each discharge point or utilisation area specified below, the licensee must monitor:
a) the volume of liquids discharged to water or applied to the area;
b) the mass of solids applied to the area;
c) the mass of pollutants emitted to the air;
at the frequency and using the method and units of measure, specified below.

POINT 1

Frequency	Unit of Measure	Sampling Method
Daily during any discharge	kilolitres per day	Flow meter and continuous logger

POINT 2

Frequency	Unit of Measure	Sampling Method
Daily during any discharge	kilolitres per day	By Calculation (volume flow rate or pump capacity multiplied by operating time)

POINT 4

Frequency	Unit of Measure	Sampling Method
Daily during any discharge	kilolitres per day	By Calculation (volume flow rate or pump capacity multiplied by operating time)

POINT 23

Frequency	Unit of Measure	Sampling Method
Daily during any discharge	kilolitres per day	By Calculation (volume flow rate or pump capacity multiplied by operating time)

POINT 24

Frequency	Unit of Measure	Sampling Method
Daily during any discharge	kilolitres per day	By Calculation (volume flow rate or pump capacity multiplied by operating time)

POINT 25

Frequency	Unit of Measure	Sampling Method
Daily during any discharge	kilolitres per day	By Calculation (volume flow rate or pump capacity multiplied by operating time)

POINT 27

Frequency	Unit of Measure	Sampling Method
Daily during any discharge	kilolitres per day	By Calculation (volume flow rate or pump capacity multiplied by operating time)

POINT 30

Frequency	Unit of Measure	Sampling Method
Daily during any discharge	kilolitres per day	Inspection

6 Reporting Conditions

R1 Annual return documents

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
a) a Statement of Compliance; and
b) a Monitoring and Complaints Summary.
At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

R1.3 Where this licence is transferred from the licensee to a new licensee:
a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

R1.6 Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than

the due date. The notification must specify:
a) the assessable pollutants for which the actual load could not be calculated; and
b) the relevant circumstances that were beyond the control of the licensee.

R1.7 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

R1.8 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
a) the licence holder; or
b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R2 Notification of environmental harm

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
a) where this licence applies to premises, an event has occurred at the premises; or
b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:
a) the cause, time and duration of the event;
b) the type, volume and concentration of every pollutant discharged as a result of the event;
c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
d) the name, address and business hours telephone number of every other person (of whom the licensee

is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

7 General Conditions

G1 Copy of licence kept at the premises or plant

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

G2 Signage

G2.1 The location of EPA point number(s) 1, 2, 4, 23, 24, 25, 26 must be clearly marked by signs that indicate the point identification number used in this licence and be located as close as practical to the point.

G3 Other general conditions

G3.1 **Completed Pollution Studies and Reduction Programs (PRPs)**

PRP	Description	Completed Date
Flare Noise Reduction	Flare Noise Reduction Report - assessment of reasonable and feasible measures to achieve further flare noise reduction. Report only (but includes details of reduction in noise achieved by a range of measures).	07-April-2005
Second stage - assessment of removing hydrocarbons	Second stage - assessment of effectiveness of options to remove phase-stable hydrocarbons. Report only.	30-April-2004
Stage 2 works and reports - wet weather discharges	Stage 2 of works and reports to improve water quality of wet weather discharges; nine items were involved in these works.	01-January-2006

Tank farm leachate collection	Landfarm leachate collection system installed - redirect discharge to treatment plant instead of discharge to stormwater system.	21-May-2004
Remediation plan - groundwater contamination	PRP 6 - To develop a remedial action plan for trialing groundwater technologies to reduce groundwater contamination.	07-April-2005
VOC Air Quality Impact Assessment	The objective was to investigate the impact of VOC emissions from the premises.	28-September-2008
Boilers stack nitrogen oxides emission limit	Boilers 7 and 9 Nitrogen oxides (NOx) Emission Limit. The aim was to develop a concentration limit for NOx for the common stack for Boilers 7 and 9. A licence limit was introduced that takes into account the EPA ground level concentration criteria specified in the Approved Methods.	31-October-2007
Nitrogen oxide emission reduction study	PRP 11 - NOx emission reduction study. The aim of this study was to investigate industry best practise technologies for reducing NOx emissions across the site. Investigation phase was completed complete. Low NOx producing burners were introduced during migration to Group 6.	30-July-2008
Noise Investigation and Mitigation	PRP 12 - Noise Investigation and Abatement Measures. The aim of this PRP was to undertake investigations and implement noise abatement measures and/or strategies so that noise generated does not exceed the PSNL in the INP at the most affected receiver. Reduction in noise generated from the site has been achieved.	31-December-2009
Polychlorinated biphenyls (PCBs) Removal Program	PRP 13 - PCB Removal Program. The aim of this PRP was to develop a plan to remove PCB from the site in accordance with the PCB Chemical Control order. Authorised removal and destruction of PCB contaminated oil from the site was completed.	29-February-2008
Soil and Groundwater Management Monitoring Program	Soil and Groundwater Management Monitoring Program (SGMP) Review	29-March-2011

8 Pollution Studies and Reduction Programs

U1 Soil and Groundwater monitoring program

Reporting on Soil and Groundwater Monitoring and Investigation Activities

U1.1 On or before 31 March 2011 and annually thereafter, a report must be submitted to the EPA's Manager Sydney Industry. The report must include:

(a) a summary of groundwater monitoring results for the previous 12 months;

(b) details of any soil or groundwater investigations undertaken and the results of such investigations;

(c) details of the progress against works proposed in the previous year's report;
(d) an update of the conceptual site model (CSM) if conditions change significantly;
(e) an update of the Soil and Groundwater Monitoring Program (SGMP) if required.

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Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

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flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environmen t Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 mo nths. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.

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TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-putrescible), special waste or hazardous waste

Mr Warren Hicks

Environment Protection Authority

(By Delegation)

Date of this edition: 27-November-2000

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End Notes

1	Licence varied by notice 1007241, issued on 18-Sep-2002, which came into effect on 19-Sep-2002.
2	Licence varied by notice 1026907, issued on 06-Apr-2004, which came into effect on 01-May-2004.
3	Licence varied by notice 1038405, issued on 13-Jul-2004, which came into effect on 07-Aug-2004.
4	Licence varied by notice 1072337, issued on 20-Apr-2007, which came into effect on 20-Apr-2007.
5	Licence varied by notice 1072642, issued on 29-Jun-2007, which came into effect on 29-Jun-2007.
6	Licence varied by change to legislation, issued on 30-Jun-2007, which came into effect on 30-Jun-2007.
7	Licence varied by notice 1077898, issued on 10-Sep-2007, which came into effect on 10-Sep-2007.
8	Licence varied by notice 1078818, issued on 22-Nov-2007, which came into effect on 22-Nov-2007.
9	Licence varied by notice 1083061, issued on 10-Jul-2008, which came into effect on 10-Jul-2008.
10	Licence varied by notice 1097601, issued on 19-Feb-2009, which came into effect on 19-Feb-2009.
11	Licence varied by notice 1103064, issued on 30-Jun-2009, which came into effect on 30-Jun-2009.
12	Licence varied by notice 1104053, issued on 14-Jul-2009, which came into effect on 14-Jul-2009.
13	Licence varied by notice 1104346, issued on 23-Jul-2009, which came into effect on 23-Jul-2009.
14	Licence varied by notice 1106244, issued on 09-Sep-2009, which came into effect on 09-Sep-2009.
15	Licence varied by notice 1107091, issued on 12-Oct-2009, which came into effect on 12-Oct-2009.
16	Licence varied by notice 1110022, issued on 17-Dec-2009, which came into effect on 17-Dec-2009.
17	Licence varied by notice 1113120, issued on 09-Apr-2010, which came into effect on 09-Apr-2010.
18	Licence varied by notice 1115148, issued on 08-Jun-2010, which came into effect on 08-Jun-2010.

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19	Licence varied by notice 1115589, issued on 16-Aug-2010, which came into effect on 16-Aug-2010.
20	Licence varied by notice 1119052, issued on 15-Sep-2010, which came into effect on 15-Sep-2010.
21	Licence varied by notice 1119637, issued on 05-Nov-2010, which came into effect on 05-Nov-2010.
22	Licence varied by notice 1124116, issued on 01-Feb-2011, which came into effect on 01-Feb-2011.
23	Licence varied by notice 1126504, issued on 17-May-2011, which came into effect on 17-May-2011.
24	Licence varied by notice 1128639, issued on 24-May-2011, which came into effect on 24-May-2011.
25	Licence varied by notice 1503483 issued on 21-Dec-2011
26	Licence varied by notice 1504844 issued on 11-Apr-2012
27	Licence varied by notice 1505973 issued on 09-May-2012
28	Licence varied by notice 1506538 issued on 10-Jul-2012
29	Licence varied by notice 1507399 issued on 19-Jul-2012
30	Licence varied by notice 1509941 issued on 21-Dec-2012
31	Licence transferred through application 1514237 approved on 17-May-2013 , which came into effect on 01-Mar-2013
32	Licence varied by notice 1522608 issued on 13-Jun-2014
33	Licence varied by notice 1523183 issued on 30-Jun-2014
34	Licence varied by notice 1523429 issued on 22-Jul-2014
35	Licence varied by notice 1530825 issued on 21-May-2015
36	Licence varied by notice 1532177 issued on 20-Jul-2015
37	Licence varied by notice 1533863 issued on 11-Jan-2016