

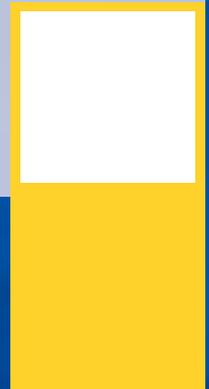


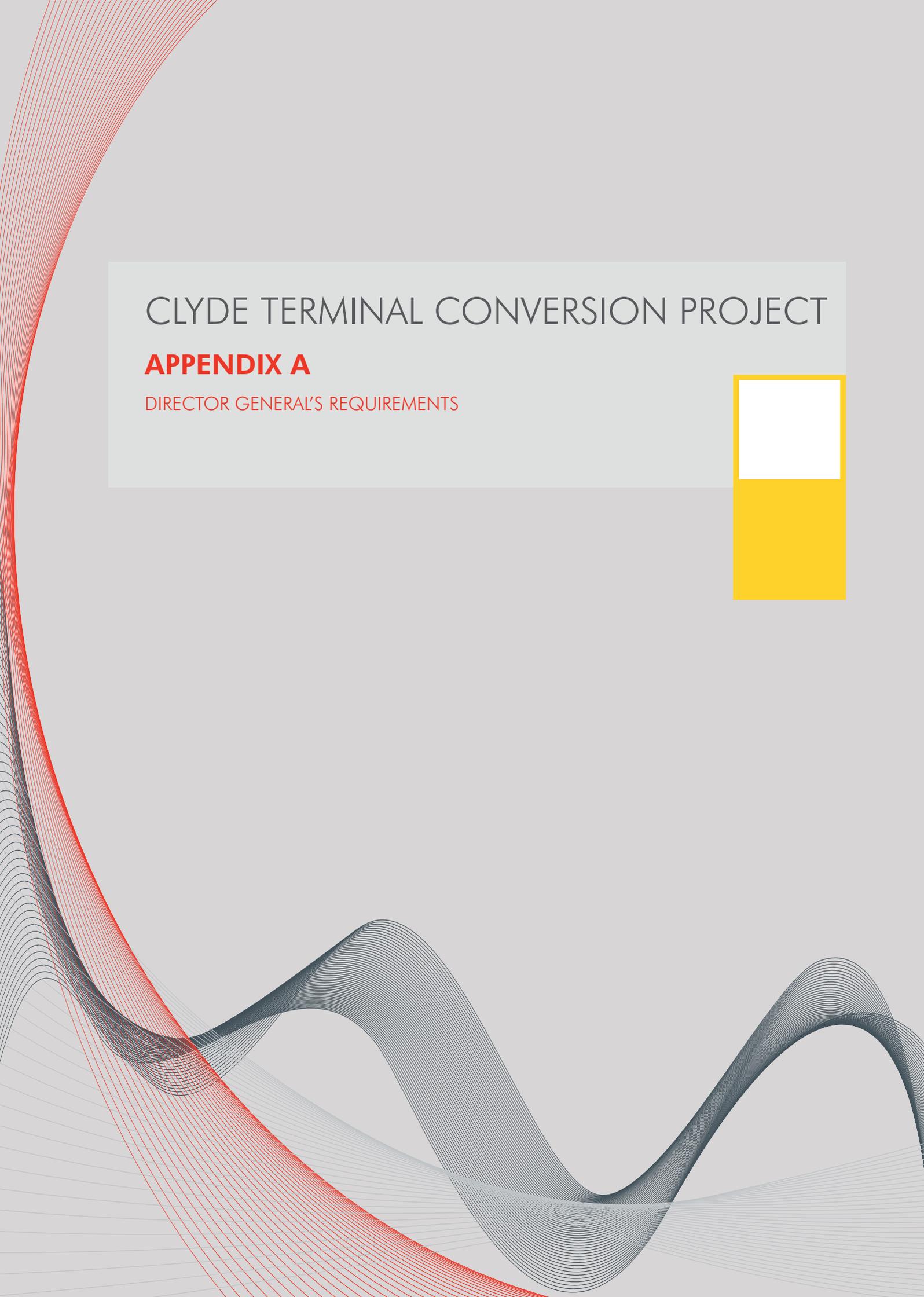
CLYDE TERMINAL CONVERSION PROJECT

ENVIRONMENTAL IMPACT STATEMENT

Volume 2: Appendix A - E

PREPARED FOR THE SHELL COMPANY OF AUSTRALIA LTD
NOVEMBER 2013

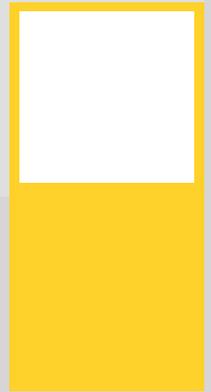




CLYDE TERMINAL CONVERSION PROJECT

APPENDIX A

DIRECTOR GENERAL'S REQUIREMENTS





Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Contact Janne Grose
Phone 02 4729 8262
Fax 02 4729 8141
Email janne.grose@water.nsw.gov.au

Our ref ER21796
Your ref SSD-5147

Attention: Nick Hall

Dear Nick

SSD - 5147 Shell Clyde Refinery Conversion, 9 Devon Street Rosehill Key Issues and Assessment Requirements

I refer to the letter requesting the NSW Office of Water's (Office of Water) key issues and assessment requirements for the above state significant development proposal.

1. Key Issues

The EIS Scoping Report indicates that the final use and redevelopment of the land at the Clyde refinery site will be subject to a future separate development application. The NSW Office of Water (Office of Water) provides the following key issues and assessment requirements for the current conversion project. At the redevelopment stage, the Office of Water will provide other specific requirements in relation to groundwater (should excavation be proposed as part of any redevelopment) and riparian land to ensure riparian areas are adequately protected and enhanced as part of any redevelopment of the site.

The EIS for the current conversion project needs to provide adequate details to assess the impact of the project on surface water and groundwater resources. Due to the close proximity of the Clyde refinery site to the Parramatta and Duck Rivers, the presence of acid sulfate soils and contamination issues at the site, the EIS needs to assess potential impacts on surface water and address if the project is likely to intercept, use or affect groundwater.

Surface Water and Groundwater

The EIS for the current conversion project needs to provide adequate details to assess the impact of the project on surface water and groundwater resources. The EIS needs to assess potential impacts on surface water and address if the project is likely to intercept, use or affect groundwater.

The Office of Water is responsible for the management of the groundwater resources. The proposal needs to demonstrate that it is consistent with NSW State groundwater policies, does not detrimentally impact on groundwater quality or the health of groundwater dependent ecosystems (GDEs).

To enable a comprehensive assessment of potential groundwater impacts associated with the proposal, the EIS needs to provide the following details:

- the predicted highest groundwater table at the site;

- any works likely to intercept, connect with or infiltrate the groundwater sources;
- any proposed groundwater extraction, including purpose, location and construction details of all proposed bores and expected annual extraction volumes;
- a description of the flow directions and rates and physical and chemical characteristics of the groundwater source;
- the predicted impacts of any final landform on the groundwater regime;
- the existing groundwater users within the area (including the environment), any potential impacts on these users and safeguard measures to mitigate impacts;
- an assessment of the quality of the groundwater for the local groundwater catchment;
- how the proposed development will not potentially diminish the current quality of groundwater, both in the short and long term;
- measures for preventing groundwater pollution so that remediation is not required;
- protective measures for any groundwater dependent ecosystems (GDEs);
- proposed methods of the disposal of waste water and approval from the relevant authority; and
- the results of any models or predictive tools used.

Where potential impact/s are identified the assessment will need to identify limits to the level of impact and contingency measures that would remediate, reduce, manage or account for potential impacts to the existing groundwater resource and any dependent groundwater environment or water users, including information on:

- any proposed monitoring programs, including water levels and quality data;
- reporting procedures for any monitoring program including mechanism for transfer of information;
- an assessment of any groundwater source/aquifer that may be sterilised from future use as a water supply as a consequence of the proposal;
- identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency plans would be initiated (this may entail water level triggers or a beneficial use category);
- description of the remedial measures or contingency plans proposed; and
- any funding assurances covering the anticipated post development maintenance cost, for example on-going groundwater monitoring for the nominated period.

Licensing

On 1 July 2011, the Water Sharing Plan (WSP) for *the Greater Metropolitan Region Groundwater Sources* which covers the project area commenced. Upon plan commencement, the licensing provisions of the *Water Management Act 2000* (WMA) also came into effect in the plan area. Information on the WSP can be found at the following link: http://www.water.nsw.gov.au/Water-management/Water-sharing-plans/plans_commenced/default.aspx.

There may be a need for a groundwater licence and this will be decided by the Office of Water once further details are provided in the EIS.

Groundwater Dependent Ecosystems

The EIS should provide details on the presence and distribution of Groundwater Dependent Ecosystems (GDEs) in the vicinity of the site and:

- demonstrate that the proposed development would maintain natural patterns of groundwater flow and not disrupt groundwater levels that are critical to GDEs;
- identify any potential impacts on GDEs as a result of the proposal including:
 - the effect of the proposal on the recharge to groundwater systems;
 - the potential to adversely affect the water quality of the underlying groundwater system and adjoining groundwater systems in hydraulic connections;
 - the effect on the function of GDEs (habitat, groundwater levels, connectivity); and
- provide safeguard measures for any GDEs.

Relevant Instruments and policies

The EIS is required to take into account the following, as applicable:

- the Water Management Act 2000
- the Water Sharing Plan for *the Greater Metropolitan Region Groundwater Sources* which covers the project area
- NSW Groundwater Policy Framework Document - General
- NSW Groundwater Quality Protection Policy
- NSW Groundwater Dependent Ecosystem Policy

The Office of Water comments are provided at **Attachment 1** for consideration

Should you require further information please contact Janne Grose, Planning and Assessment Coordinator on (02) 4729 8262 at the Penrith office.

Yours sincerely



Mark Mignanelli
Manager Major Projects, Mines and Assessment
9 March 2012



The NSW Office of Water provides the following advice for consideration:

Relevant Legislation

The assessment is required to take into account the requirements of the following legislation (administered by the Office), as applicable:

- *Water Management Act 2000 (WMA)* where a Water Sharing Plan (WSP) has commenced.
- *Water Act 1912*, where a WSP is not yet in place.

In particular, proposals and management plans should be consistent with the Objects (s.3) and Water Management Principles (s.5) of the *WMA*.

Water Sharing Plans

Gazetted Water Sharing Plans (WSPs) prepared under the provisions of the *WMA* establish rules for access to, and the sharing of water between the environmental needs of the surface or groundwater source and water users. If the proposal is within a gazetted WSP area the assessment is required to demonstrate how the proposal is consistent with the relevant access and trading rules of the WSP. Refer to: <http://www.water.nsw.gov.au/Water-Management/Water-sharing/default.aspx> The site is covered by the *Greater Metropolitan Region Groundwater Sources*.

Relevant Policies

The assessment is required to take into account the following NSW Government policies, as applicable:

- *NSW Groundwater Policy Framework Document – General (August 1997)*
- *NSW Groundwater Quality Protection Policy (1998)*
- *NSW State Groundwater Dependent Ecosystem Policy (2002)*
- *NSW State Rivers and Estuaries Policy (1993)*
- *NSW Sand and Gravel Extraction Policy for Non-Tidal Rivers (1992)*
- *NSW Wetlands Policy (2010)*
- *Guidelines for the Assessment and Management of Groundwater Contamination (2007)*
- *Guidelines for Groundwater Protection in Australia (1995)*
- *MDBC Guidelines on Groundwater Flow Modelling (2000)*
- *Water Sharing Plan for the NSW Murray-Darling Basin Fractured Rock Groundwater Sources*
- *Water Sharing Plan for the Macquarie-Cudgegong Regulated Rivers Water Source*
- *Draft Water Sharing Plan for the Macquarie Bogan Unregulated and Alluvial Water Sources*

These documents can be found at:

<http://www.water.nsw.gov.au/Water-Management/Law-and-Policy/Key-policies/default.aspx>

and

<http://www.water.nsw.gov.au/Water-Management/Water-availability/Groundwater/default.aspx>

Guidelines

The assessment is required to take into account the following Guidelines for Controlled Activities, as applicable:

- Riparian corridors (and associated Vegetation Management Plans)
- Watercourse crossings
- Laying pipes and cables in watercourses
- Outlet structures
- In-stream works

Refer to: <http://www.water.nsw.gov.au/Water-Licensing/Approvals/Controlled-activities/default.aspx>

Groundwater

The Office of Water is responsible for the management of groundwater resources so they can sustain environmental, social and economic uses for the people of New South Wales.

Groundwater Source

The assessment is required to identify groundwater issues and potential degradation to the groundwater source and provide the following:

- Details of the predicted highest groundwater table at the development site.
- Details of any works likely to intercept, connect with or result in pollutants infiltrating into the groundwater sources.
- Details of any proposed groundwater extraction, including purpose, location and construction details of all proposed bores and expected annual extraction volumes.
- Describe the flow directions and rates and the physical and chemical characteristics of the groundwater source.
- Details of the predicted impacts of any final landform on the groundwater regime.
- Details of the existing groundwater users within the area (including the environment) and include details of any potential impacts on these users.
- Assessment of the quality of the groundwater for the local groundwater catchment.
- Details of how the proposed development will not potentially diminish the current quality of groundwater, both in the short and long term.
- Details on preventing groundwater pollution so that remediation is not required.
- Quantification of impacts on groundwater dependent ecosystems (GDEs).
- Details on protective measures to minimise any impacts on groundwater dependent ecosystems.
- Details of proposed methods of the disposal of waste water and approval from the relevant authority.
- Assessment of the potential for saline intrusion of the groundwater and measures to prevent such intrusion into the groundwater aquifer.
- Details of the results of any models or predictive tools used to predict groundwater drawdown, inflows to the site and impacts on affected water sources.

Where potential impact/s are identified the assessment will need to identify limits to the level of impact and contingency measures that would remediate, reduce or manage potential impacts to the existing groundwater resource and any dependent groundwater environment or water users, including information on:

- Details of any proposed monitoring programs, including water levels and quality data.
- Reporting procedures for any monitoring program including mechanism for transfer of information.
- An assessment of any groundwater source/aquifer that may be sterilised as a consequence of the proposal.
- Identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency plans would be initiated (this may entail water level triggers or a beneficial use category).
- Description of the remedial measures or contingency plans proposed.
- Any funding assurances covering the anticipated post development maintenance cost, for example on-going groundwater monitoring for the nominated period.
- Any other assurances to account for the post-closure impacts such as retiring held water licences or ongoing pumping return proposals to minimise base flow losses.

Licensing

- All proposed groundwater works, including bores for the purpose of investigation, extraction, dewatering, testing or monitoring must be identified in the proposal and an approval obtained from the Office of Water prior to their installation.
- All predicted groundwater take must be accounted for through adequate licensing.

Groundwater Dependent Ecosystems (GDEs)

The assessment is required to identify any impacts on GDEs. GDEs are ecosystems which have their species composition and natural ecological processes wholly or partially determined by groundwater. GDEs represent a vital component of the natural environment. GDEs can vary dramatically in how they depend on groundwater from having occasional or no apparent dependence through to being entirely dependent. GDEs occur across both the surface and subsurface landscapes ranging in area from a few metres to many kilometres. Increasingly, it is being recognised that surface and groundwaters are often interlinked and aquatic ecosystems may have a dependence on both.

Ecosystems that can depend on groundwater and that may support threatened or endangered species, communities and populations, include:

- Terrestrial vegetation that show seasonal or episodic reliance on groundwater.
- River base flow systems which are aquatic and riparian ecosystems in or adjacent to streams/rivers dependent on the input of groundwater to base flows.
- Aquifer and cave ecosystems.
- Wetlands.
- Estuarine and near-shore marine discharge ecosystems.
- Fauna which directly depend on groundwater as a source of drinking water or that live within water which provide a source.

The *NSW Groundwater Dependent Ecosystem Policy* provides guidance on the protection and management of GDEs. It sets out management objectives and principles to:

- Ensure the most vulnerable and valuable ecosystems are protected.
- Manage groundwater extraction within defined limits thereby providing flow sufficient to sustain ecological processes and maintain biodiversity.
- Ensure sufficient groundwater of suitable quality is available to ecosystems when needed.
- Ensure the *precautionary principle* is applied to protect GDEs, particularly the dynamics of flow and availability and the species reliant on these attributes.

A number of gazetted WSPs list and map priority GDEs and set out the management strategies and actions for sharing and protecting groundwater quality, quantity and dependent ecosystems. As indicated above, any GDEs that may be affected significantly need to be clearly identified and the impacts quantified to enable proper assessment.

Surface Water

The Office of Water is responsible for the management of rivers, estuaries, wetlands and adjacent riverine plains so they can sustain environmental, social and economic uses for the people in New South Wales.

Watercourse/Riparian

The assessment is required to consider the impact of the proposal on the watercourses and associated riparian vegetation within the site and provide the following:

- Identify the sources of surface water.
- Details of stream order (using the Strahler System).
- Details of any proposed surface water extraction, including quantity, purpose, location of existing pumps, dams, diversions, cuttings and levees.
- Details of available surface water licences that could be purchased to account for any proposed extractions.
- Detailed description of any proposed development or diversion works including all construction, clearing, draining, excavation and filling.
- An assessment of the impacts of the proposed methods of excavation, construction and material placement on the watercourse and associated vegetation.
- A detailed description of all potential water related environmental impacts of any proposed development in terms of riparian vegetation, sediment movement, water quality and hydrologic regime.

- A description of the design features and measures to be incorporated into any proposed development to guard against anything more than minimal long term actual and potential environmental disturbances, particularly in respect of maintaining the natural hydrologic regime and sediment movement patterns and the identification of riparian buffers. (See note below)
- Details of the impact on water quality and remedial measures proposed to address more than minimal adverse effects.

Riparian corridors form a transition zone between terrestrial and aquatic environments and perform a range of important environmental functions. The protection or restoration of vegetated riparian areas is important to maintain or improve the geomorphic form and ecological functions of watercourses through a range of hydrologic conditions in normal seasons and also in extreme events.

Note: Recommended Core Riparian Zones (as applicable):

- Minimum of 10m for any intermittently flowing 1st order watercourse;
- 20m for any permanently flowing 1st order watercourse or any 2nd order watercourse;
- 20m – 40m (merit based assessment) for any 3rd order or greater watercourse.

Refer to NSW Office of Water Guidelines for Controlled Activities (August 2010) - available via: <http://www.water.nsw.gov.au/Water-Licensing/Approvals/Controlled-activities/default.aspx>

Water Management Structures/Dams

The Office is responsible for the management and licensing of these structures under water legislation. If the proposal includes existing or proposed water management structures/dams, the assessment should provide information on the following:

- Date of construction (for existing structure/s).
- Details of the legal status/approval for existing structure/s.
- Details of any proposal to change the purpose of existing structure/s.
- Details if any remedial work is required to maintain the integrity of the existing structure/s.
- Clarification if the structure/s is on a watercourse.
- Details of the purpose, location and design specifications for the structure/s.
- Size and storage capacity of the structure/s.
- Calculation of the Maximum Harvestable Right Dam Capacity (MHRDC) for the site.
- Details if the structure/s is affected by flood flows.
- Details of any proposal for shared use, rights and entitlement of the structure/s.
- Details if the proposed development/activity has the potential to bisect the structure/s.

NSW Office of Water's Farm Dams Assessment Guide provides details on harvestable rights and the calculation of the MHRDC. Refer to: <http://www.water.nsw.gov.au/Water-Licensing/Basic-water-rights/Harvesting-runoff/Harvesting-runoff/default.aspx>

Basic Landholder Rights

The WMA identifies Basic Landholder Rights (BLRs) for access to water whereby landholders over an aquifer or with river or lake frontage can access water for domestic (household) purposes or to water stock without the need for a water licence (although a works approval may still be required for a bore utilising BLR). Pipeline constructions and easements may therefore affect existing BLR users and therefore all potentially affected BLR users need to be identified and the impacts quantified.

Sustainable Water Supply

Competition for water in NSW is extremely high. In areas where a Water Sharing Plan (WSP) has commenced, a long term average extraction limit has been established which constrains overall growth in extractions in an area. In these areas there are limited types of new licenses that can be issued, for example for aboriginal cultural purposes or growth in town water supplies. Therefore in most instances new enterprises are required to enter the water market to purchase adequate water licences to meet their water demand requirements.

In areas where a WSP has not yet commenced, the NSW Government has established embargoes on applying for new licences. There are limited exemptions in some areas which need to be considered and applied for by a proponent. If an exemption does not apply, then again new enterprises need to enter the water market to purchase the required water licences. In some areas where a WSP has not yet commenced, there is still available water and the proponent may be able to apply for a new licence to account for the water taken from that water source.

The onus is on the proponent to assess which of the above is relevant and identify the potential sources of water of an appropriate reliability and quantity to meet their water supply requirements. The water supply requirements and potential water available should be identified in the EA to enable NOW to assess the viability of the water supply required. Assurances should also be made that the proponent will enter the water market as required.

Therefore the assessment is required to address the issue of provision of a sustainable water supply for any project proposal. The assessment should include Water Management Plans detailing how a sustainable water supply can be sourced and implemented. Through the implementation of BASIX, Integrated Water Cycle Management and Water Sensitive Urban Design, any proposed development should also exhibit high water use efficiency.

**End Attachment 1
9 March 2012**



Your Reference : Shell Clyde Refinery
Our reference : LIC07/87
Contact : Steve Durrington, 9995 6826

Mr Chris Ritchie
Manager Industry
Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Mr Ritchie,

**RE: Request for Key Issues and Assessment requirements
State Significant Development Proposal – Shell Clyde Refinery Conversion (SSD-5147)**

I refer to your letter requesting advice from the Environment Protection Authority (EPA) to provide details of key issues and assessment requirements for the Shell Gore Bay Terminal Conversion.

EPA has considered the details of the proposal as provided by the Department of Planning and Infrastructure and has identified the information it requires to issue its general terms of approval in Attachment A. In summary, EPA's key information requirements for the proposal are:

1. potential air quality impacts on neighbouring properties,
2. potential impacts of noise over the life of the development,
3. water pollution implications,
4. waste generation, storage and management on site,
5. water pollution implications,
6. biodiversity
7. contaminated sites
8. Aboriginal cultural heritage
9. details of all pollution control equipment to minimise water, air and noise pollution,
10. cumulative impacts on sensitive receivers from existing and proposed activities, and
11. cumulative impacts of similar activities locally and regionally.



The Department of Environment, Climate Change and Water is now known as the Office of Environment and Heritage, Department of Premier and Cabinet

Notwithstanding the above, the premises holds an Environment Protection Licence (licence) with EPA to operate the facility. The proponent is required to comply with the conditions of the licence.

I hope the above information is helpful to you, however, if you wish to discuss the matter further, please contact Mr Steve Durrington on (02) 9995 6826.

Yours sincerely



8 Mar 2012

KIERAN HORKAN
Unit Head Sydney Industry
Environment Protection and Regulation

Attachment A

**EPA's Recommended Director
General's Requirements
For Shell Clyde Refinery conversion**

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1 Environmental impacts of the project

1. Impacts related to the following environmental issues need to be assessed, quantified and reported on:

- Air Issues
 - air quality
 - greenhouse gas
- Noise and vibration
- Waste including hazardous materials and radiation
 - Waste DGRs for waste facilities
 - General waste – any proposal
 - Chemicals subject to Chemical Control Orders
 - Hazardous materials and radiation
- Water and Soils
 - Acid sulfate soils
 - Contaminated sites
 - Soils - general
 - Water quality

- Biodiversity

- Contaminated sites

- Aboriginal Cultural Heritage

Environmental Impact Assessments (EISs) should address the specific requirements outlined under each heading below and assess impacts in accordance with the relevant guidelines mentioned.

2 Licensing requirements

1. The premises carries out a scheduled activity under the *Protection of the Environment Operations Act 1997* (POEO Act) and holds an Environment Protection Licence (EPL) No 570.).

SPECIFIC ISSUES

3 Air issues

3.1 Air quality

The Proponent must conduct air quality impact assessments (AQIAs) for the proposal Clyde Refinery Conversion, SSD-5147 in accordance with the requirements of these framework documents:

- *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW 2005;*
- *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW 2005;*
- *Assessment and Management of Odour from Stationary Sources in NSW: Technical Framework 2006;*
- *Assessment and Management of Odour from Stationary Sources in NSW: Technical Notes 2006;* and,
- *Protection of the Environment Operations (Clean Air) Regulation 2002.*

Key issues that air quality impact assessments for the two proposals must address are:

- Identify all point and fugitive sources of pollutants of concern including, but not limited to:
 - principal and individual toxic air pollutants;
 - odours; and,
 - Dust.
- Assess project impacts of during:
 - all stages of proposed modification works; and,
 - Operational phase of the modified facility.
- Justify dispersion modelling approach, including relevance of:
 - activity rates and source emission profiles applied to project emissions inventory;
 - ambient air quality data used to establish background concentrations of project-relevant pollutants;
 - meteorological data used; and,
 - Dispersion model used.
- Assess the significance of pollutant ground level concentrations with respect to effects on the environment, human health, amenity and ambient air quality standards or goals of the *Protection of the Environment Operations (Clean Air) Regulation 2002* and the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW 2005*.

- Demonstrate that emissions will be minimised to the maximum extent achievable through the application of best practice process design and/or emission controls, and propose air quality management plans (AQMPs) outlining the following for principal toxic air pollutants, odour, and, dust emissions:
 - major emission sources of pollutant;
 - monitoring and process design protocols; and,
 - Specifications for proposed pollution control equipment.

DETAILED REQUIREMENTS

PROJECT EMISSIONS

- Identify and describe all processes and sources of odour, dust and air toxics from all aspects of the projects that could result in air emissions.
- Note that sources can be classed as either:
 - Point – stack or vent; or,
 - Fugitive – e.g. excavation and construction works, wind erosion, volatilisation, loading or unloading activities, storage facilities, vehicle movements (road dust, exhausts, loss from load), and land clearing).
- Sources may include, but not be limited to, emissions from:
 - Activities such as decommissioning, demolishing/excavation and re-configuring. For example, emissions during demolition works for existing on-site infrastructure such as:
 - Fluidised Catalytic Cracking Unit (FCCU);
 - Hydrodesulphurisation (HDS) unit;
 - Storage tanks, in particular, those in unprocessed/odourous feed service; and,
 - Various other ancillary structures.
 - Fuel handling during operational phase (receival, blending, storage, transfer)
- Provide project details essential to predicting and assessing air impacts including:
 - Quantities and physico-chemical parameters of materials to be used, transported, produced or stored (e.g. concentration, moisture content, source areas, particle sizes etc);
 - Sufficient detail to identify emitted pollutants' characteristics (fuel types and compositions) and quantity (fuel throughput) during operational phase.
 - Clear diagrams illustrating:
 - the physical layout of the plant and pollution control equipment; and,
 - the material and air flows through the plant and any pollution control equipment, including structures or enclosures for controlling air and odour emissions.

- An outline of procedures for handling, transport, production, storage and management of solid, liquid and gaseous waste streams with potential for significant air impacts.
- For potentially odorous emissions provide the emission rates must be reported in terms of odour units, and determined within OEH/EPA guidelines using, as appropriate, sampling and analysis techniques relevant to individual or complex odours and point or diffuse sources.

PROJECT CONTEXT

The proposal must be contextualised within the receiving environment (local, regional and inter-regional as appropriate) relevant to each of the projects. The EA must provide a description of existing air quality and meteorology, using existing information and site representative ambient monitoring data, and include the following:

- Detailed description of the receiving environment, including but not limited to descriptions of:
 - exact locations of sensitive receptors;
 - meteorology and climate;
 - topography;
 - surrounding land-uses; and,
 - surrounding buildings that may effect plume dispersion.
- Site-specific meteorological data for the study area /project site including:
 - temperature and humidity;
 - wind speed and direction;
 - rainfall, evaporation and cloud cover;
 - atmospheric stability class; and,
 - mixing height (the height that emissions will be ultimately mixed in the atmosphere).
- Source existing ambient air quality data and establish background concentrations of key project-relevant air pollutants at potentially affected sensitive receptor locations; and,
- A perspective view of the study area such as the terrain file used in dispersion models (where appropriate).

ASSESSMENT OF PROJECT IMPACTS

The EA must demonstrate that Proponent has:

- Estimated resulting ground level concentrations of all pollutants based on emissions estimates emissions (by quantity (and size for particles)), source and discharge point from all sources;
- Used an appropriate dispersion model to estimate ambient pollutant concentrations. Discussed choice of model and parameters with the OEH where necessary (e.g. potentially significant impacts and complex terrain effects);

- Detailed how background levels and emissions from other potential sources of the key air pollutants have been cumulatively assessed at sensitive receptor locations;
- Described the effects and significance of pollutant concentration on the environment, human health, amenity and regional ambient air quality standards or goals;
- Assessed the risk associated with potential discharges of emissions for all stages of the proposals. Assessment of risk relates to environmental harm, risk to human health and amenity; and,
- Demonstrated the proposal's ability to comply with the relevant regulatory framework, specifically the *Protection of the Environment Operations (POEO) Act (1997)* and the *POEO (Clean Air) Regulation (2002)*.

MANAGEMENT AND MITIGATION MEASURES

The Proponent must outline proposed air quality management and monitoring procedures during each stage of the two projects detailing:

- how potentially offensive odour will be eliminated at source;
- for all point and fugitive sources emitting principal toxic air pollutants, demonstrate that emissions will be minimised to the maximum extent achievable through the application of best practice process design and/or emission controls for both point and fugitive emissions by specifying proposed management protocols; and, pollution control equipment and emission control techniques/practices that will be employed by the proposal.

3.2 Greenhouse gas

1. The EIS should include a comprehensive assessment of, and report on, the project's predicted greenhouse gas emissions (tCO₂e). Emissions should be reported broken down by:
 - a) direct emissions (scope 1 as defined by the Greenhouse Gas Protocol – see reference below),
 - b) indirect emissions from electricity (scope 2), and
 - c) upstream and downstream emissions (scope 3)

before and after implementation of the project, including annual emissions for each year of the project (construction, operation and decommissioning).

2. The EIS should include an estimate of the greenhouse emissions intensity (per unit of production). Emissions intensity should be compared with best practice if possible.
3. The emissions should be estimated using an appropriate methodology, in accordance with NSW, Australian and international guidelines (see below).
4. The proponent should also evaluate and report on the feasibility of measures to reduce greenhouse gas emissions associated with the project. This could include a consideration of energy efficiency opportunities or undertaking an energy use audit for the site.

Guidance Material

- The Greenhouse Gas Protocol: Corporate Standard, World Council for Sustainable Business Development & World Resources Institute
<http://www.ghgprotocol.org/standards/corporate-standard>
- National Greenhouse Accounts (NGA) Factors, Australian Department of Climate Change (Latest release),
<http://www.climatechange.gov.au/publications/greenhouse-acctg/national-greenhouse-factors.aspx>
- National Greenhouse and Energy Reporting System, Technical Guidelines (latest release) <http://www.climatechange.gov.au/en/government/initiatives/national-greenhouse-energy-reporting/tools-resources.aspx>
- National Carbon Accounting Toolbox
<http://www.climatechange.gov.au/government/initiatives/ncat.aspx>
- Australian Greenhouse Emissions Information System (AGEIS)
<http://ageis.climatechange.gov.au/>

4 Noise and vibration

1. In relation to noise, the following matters should be addressed (where relevant) as part of the EIS.

General

2. Construction noise associated with the proposed development should be assessed using the *Interim Construction Noise Guideline* (OEH, 2009).
<http://www.environment.nsw.gov.au/noise/constructnoise.htm>
3. Vibration from all activities (including demolition, construction and operation) to be undertaken on the premises should be assessed using the guidelines contained in the *Assessing Vibration: a technical guideline* (OEH, 2006).
<http://www.environment.nsw.gov.au/noise/vibrationguide.htm>
4. If blasting is required for any reasons during the construction or operational stage of the proposed development, blast impacts should be demonstrated to be capable of complying with the guidelines contained in *Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration* (ANZEC, 1990).
<http://www.environment.nsw.gov.au/noise/blasting.htm>

Industry

5. Operational noise from all industrial activities (including private haul roads and private railway lines) to be undertaken on the premises should be assessed using the guidelines contained in the *NSW Industrial Noise Policy* (EPA, 2000) and *Industrial Noise Policy Application Notes*.
<http://www.environment.nsw.gov.au/noise/industrial.htm>

Road

6. Noise on public roads from increased road traffic generated by land use developments should be assessed using the guidelines contained in the *Environmental Criteria for Road Traffic Noise* (EPA, 1999).
<http://www.environment.nsw.gov.au/noise/traffic.htm>
7. Noise from new or upgraded public roads should be assessed using the *Environmental Criteria for Road Traffic Noise* (EPA, 1999).
<http://www.environment.nsw.gov.au/noise/traffic.htm>

5 Waste, chemicals and hazardous materials/radiation

5.1 General waste – any proposal

The EIS should:

1. Include a detailed plan for in-situ classification of waste material, including the sampling locations and sampling regime that will be employed to classify the waste, particularly with regards to the identification of contamination hotspots.
2. Identify, characterise and classify all waste that will be generated onsite through excavation, demolition or construction activities, including proposed quantities of the waste.
Note: All waste must be classified in accordance with *OEH's Waste Classification Guidelines*.
3. Identify, characterise and classify all waste that is proposed to be disposed of to an offsite location, including proposed quantities of the waste and the disposal locations for the waste. This includes waste that is intended for re-use or recycling.
Note: All waste must be classified in accordance with *OEH's Classification Guidelines*.
4. Include a commitment to retaining all sampling and classification results for the life of the project to demonstrate compliance with *OEH's Waste Classification Guidelines*.
5. Provide details of how waste will be handled and managed onsite to minimise pollution, including:
 - a) Stockpile location and management
 - Labelling of stockpiles for identification, ensuring that all waste is clearly identified and stockpiled separately from other types of material (especially the separation of any contaminated and non-contaminated waste).
 - Proposed height limits for all waste to reduce the potential for dust and odour.
 - Procedures for minimising the movement of waste around the site and double handling.
 - Measures to minimise leaching from stockpiles into the surrounding environment, such as sediment fencing, geofabric liners etc.
 - b) Erosion, sediment and leachate control including measures to be implemented to minimise erosion, leachate and sediment mobilisation at the site during works. The EIS should show the location of each measure to be implemented. The Proponent should consider measures such as:
 - Sediment traps
 - Diversion banks
 - Sediment fences
 - Bunds (earth, hay, mulch)

- Geofabric liners
- Other control measures as appropriate

The Proponent should also provide details of:

- how leachate from stockpiled waste material will be kept separate from stormwater runoff;
 - treatment of leachate through a wastewater treatment plant (if applicable); and
 - any proposed transport and disposal of leachate off-site.
6. Provide details of how the waste will be handled and managed during transport to a lawful facility. If the waste possesses hazardous characteristics, the Proponent must provide details of how the waste will be treated or immobilised to render it suitable for transport and disposal.
 7. Include details of all procedures and protocols to be implemented to ensure that any waste leaving the site is transported and disposed of lawfully and does not pose a risk to human health or the environment.
 8. Include a statement demonstrating that the Proponent is aware of OEH's requirements with respect to notification and tracking of waste.
 9. Include a statement demonstrating that the Proponent is aware of the relevant legislative requirements for disposal of the waste, including any relevant Resource Recovery Exemptions, as gazetted by OEH from time to time.
 10. Outline contingency plans for any event that affects operations at the site that may result in environmental harm, including: excessive stockpiling of waste, volume of leachate generated exceeds the storage capacity available on-site etc.

5.2 Chemicals subject to Chemical Control Orders

1. The EIS must demonstrate how the Proponent will manage all materials and wastes containing scheduled chemical waste, dioxin and/or polychlorinated biphenyls (PCBs) in accordance with the applicable Chemical Control Order, National Management Plan or in accordance with a licence under the EHC Act.
2. Where a project involves any processing or treatment of scheduled chemicals, the proponent must provide OEH with sufficient and appropriate documentation for a technology assessment to be undertaken by the OEH, in accordance with the following:
 - 'National Protocol - Approval/Licensing of Trials of Technologies for the Treatment/Disposal of Schedule X Wastes - July 1994'; and
 - 'National Protocol for Approval/Licensing of Commercial Scale Facilities for the Treatment/Disposal of Schedule X Wastes - July 1994'.

6 Water and soils

6.1 Acid sulfate soils

1. The potential impacts of the development on acid sulfate soils must be assessed in accordance with the relevant guidelines in the *Acid Sulfate Soils Manual* (Stone *et al.* 1998) and the *Acid Sulfate Soils Laboratory Methods Guidelines* (Ahern *et al.* 2004).
2. Describe mitigation and management options that will be used to prevent, control, abate or minimise potential impacts from the disturbance of acid sulfate soils associated with the project and to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

6.2 Water

Describe Proposal

1. Describe the proposal including position of any intakes and discharges, volumes, water quality and frequency of all water discharges.
2. Demonstrate that all practical options to avoid discharge have been implemented and environmental impact minimised where discharge is necessary.
3. Where relevant include a water balance for the development including water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options.
4. Details/specifications of all bunded areas to store, blend and process liquids or chemicals to contain spillages.
5. Details/specifications of all tanker loading/unloading areas. It should be not that these areas must be designed such that they are not impacted upon by rainwater.

Background Conditions

6. Describe existing surface and groundwater quality. An assessment needs to be undertaken for any water resource likely to be affected by the proposal.

7. Biodiversity

There are a number of recent records of the Green and Golden Bell Frog (GGBF) from within the Clyde Refinery site. The GGBF is listed as an endangered species under the *Threatened Species Conservation Act (1995)* (TSC Act) and this population has been identified by the EPA as a Key Population.

The study area should include areas of remnant vegetation adjoining the site, if the proposal may cause indirect impacts on this area. Remnant vegetation in the study area includes two endangered ecological communities listed under the TSC Act (Coastal Saltmarsh and Swamp Oak Floodplain Forest), and threatened plant species (*Wilsonia backhousei* and *Acacia pubescens*). Therefore, the EIS should include a biodiversity assessment, including assessment of impacts on threatened biodiversity, native vegetation and habitat. This assessment should address the matters included in the following sections.

1. A field survey should be conducted of the site and of any adjoining areas of native vegetation that may be indirectly impacted. The survey should be undertaken and documented in accordance with relevant guidelines, including:
 - the *Green and Golden Bell Frog Environmental Impact Assessment Guidelines* (DEC 2003);
 - the *Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna -Amphibians* (DECCW, 2009)
 - *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft* (DEC, 2004), and
 - Threatened species survey and assessment guideline information on www.environment.nsw.gov.au/threatenedspecies/surveyassessmentgdlns.htm.

2. The EIS should contain the following information as a minimum:
 - a. Description and mapping of study area, all survey locations, vegetation communities (including classification and methodology used to classify), key habitat features and reported locations of threatened species, populations and ecological communities present in the subject site and study area.
 - b. Description of survey methodologies used, including timing, location and weather conditions.
 - c. Details, including qualifications and experience of all staff undertaking the surveys, mapping and assessment of impacts as part of the EIS.
 - d. Identification of national and state listed threatened biota known or likely to occur in the study area and their conservation status.
 - e. Description of the likely impacts of the proposal on biodiversity and wildlife corridors, including direct and indirect and construction and operation impacts.
 - f. Identification of the avoidance, mitigation and management measures that will be put in place as part of the proposal to avoid or minimise impacts, including details about alternative options considered and how long term management arrangements will be guaranteed. These measures should be developed in accordance with the "*Management Plan for the Green and Golden Bell Frog Parramatta Key Population*" (DECC 2008).
 - g. Description of the residual impacts of the proposal. If the proposal cannot adequately avoid or mitigate impacts on biodiversity, then a biodiversity offset package is expected (see the requirements for this at point 4 below).

3. An assessment of the significance of direct and indirect impacts of the proposal must be undertaken for threatened biodiversity known or considered likely to occur in the study area based on the presence of suitable habitat. This assessment must take into account:
 - a. the factors identified in s.5A of the EP&A Act, and
 - b. the guidance provided by *The Threatened Species Assessment Guideline – The Assessment of Significance* (DECCW, 2007) which is available at:

<http://www.environment.nsw.gov.au/resources/threatenedspecies/tsaguide07393.pdf>

4. Where an offsets package is proposed by a proponent for impacts to biodiversity this package should:
 - a) Meet DECCW's *Principles for the use of biodiversity offsets in NSW*, which are available at: www.environment.nsw.gov.au/biocertification/offsets.htm.
 - b) Identify the conservation mechanisms to be used to ensure the long term protection and management of the offset sites.
 - c) Include an appropriate Management Plan (such as vegetation or habitat) that has been developed as a key amelioration measure to ensure any proposed compensatory offsets, retained habitat enhancement features within the development footprint and/or impact mitigation measures (including proposed rehabilitation and/or monitoring programs) are appropriately managed and funded.
5. With regard to the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, the assessment should identify any relevant Matters of National Environmental Significance and whether the proposal has been referred to the Commonwealth or already determined to be a controlled action.

8. Contaminated sites.

The proponent will have to comply with all guidelines relevant to the decommissioning and/or removing underground petroleum storage systems (eg UPSS regulations).

9. Aboriginal Cultural Heritage

An assessment of the likelihood of Aboriginal objects being located within the project should be undertaken. If it is likely that Aboriginal objects are present within the project area, consideration of potential impacts to these objects must be made in accordance with the *Draft Guideline for Aboriginal Cultural Heritage Impacts Assessment and Community Consultation (DECC July 2005)*.

Nicholas Hall - Shell Clyde Refinery Conversion - Key Issues & Assessment Requirements

From: Katherine Lafferty <klafferty@parracity.nsw.gov.au>
To: Nicholas Hall <Nicholas.Hall@planning.nsw.gov.au>
Date: 3/2/2012 3:02 PM
Subject: Shell Clyde Refinery Conversion - Key Issues & Assessment Requirements
CC: Louise Kerr <lkerr@parracity.nsw.gov.au>, Mark Leotta <MLEotta@parracity.nsw.gov.au>, Brad Delapierre <bdelapierre@parracity.nsw.gov.au>, Matthew Cruickshank <MCruickshank@parracity.nsw.gov.au>

Dear Nicholas,

I refer to the Department's request for key issues and assessment requirements for the Shell Clyde Refinery Conversion (SSD-5147).

Please be advised that we concur with the Department's draft list of Director General's Requirements for the proposed development and wish to add the following specific considerations:

Heritage

The site contains a heritage item under Schedule 5 of Parramatta Local Environmental Plan 2001. The site is of significance because it is located on the bank of Parramatta River, and includes a portion of the river bank listed as significant wetlands. The heritage item comprises an area of remnant wetland vegetation located along the foreshore of the Parramatta and Duck rivers and their tributaries.

Aboriginal Significance

The site is identified as having Aboriginal Association. These are areas identified as having some significance to present day Aboriginal people through current social or historical connections.

Not only should this issue be addressed within the EA, consideration should be given to consultation with the local Aboriginal community groups.

The relevant Aboriginal community groups are the Dharug Tribal Aboriginal Corporation and the Deerubbin Local Aboriginal Land Council.

Endangered Ecological Community

The Sydney Metropolitan Catchment Authority identifies part of the site as containing an Endangered Ecological Community being Swamp Oak Floodplain Forest. Impacts upon any ecologically endangered communities need to be addressed within the EA.

Loss of Cultural Significance

The refinery may be considered to have cultural significance. It is an historic visual icon within the area. The loss of the refinery in terms of its cultural significance should be addressed. Consideration should be given to the photographic documentation of the site and the provision of an Arts Plan to reflect the history of the site.

Flooding

Part of the site is affected by the 1:100 year flood event. Consideration must be given to the proposed development in regard to Council's Local Floodplain Risk Management Policy.

Council controls to be considered in the EA

The EA should contain an assessment of the proposed development in accordance with the following Council controls:

- Parramatta Local Environmental Plan 2011
- Parramatta Development Control Plan 2011
- Council's Local Floodplain Risk Management Policy.

Council appreciates the opportunity to comment on the above and looks forward to further consultation on this matter.

Please call me on 9806 5393 if you wish to discuss any of the above matters.

Kind Regards,

**Kate Lafferty | Senior Development Assessment Officer | Development Services
Parramatta City Council**

PO Box 32, Parramatta NSW 2124

P (02) 9806 5393 F (02) 9806 5901 E klafferty@parracity.nsw.gov.au

Visit <http://www.parracity.nsw.gov.au>

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Think before you print - help save our environment!

Our Reference: SYD12/00194
Your Reference: SSD-5147
Contact: Angela Malloch
Telephone: 8849 2041



Transport
Roads & Maritime
Services



The Director
Mining & Industry Projects
Department of Planning
GPO Box 39
Sydney NSW 2001

Attention: Chris Ritchie

State Significant Development Proposal – Shell Clyde Refinery Conversion

Dear Sir / Madam,

Reference is made to your letter requesting the Roads and Maritime Services (RMS) to provide details of key issues and assessment requirements regarding the abovementioned development for inclusion in the Director General's Environmental Assessment (EA) requirements.

RMS would like the following issues to be included in the transport and traffic impact assessment of the proposed development:

1. Daily and peak traffic movements likely to be generated by the proposed development including the impact on nearby intersections and the need / associated funding for upgrading or road improvement works (if required).
2. Details of the proposed accesses and the parking provisions associated with the development including compliance with the requirements of the relevant Australian Standards (ie: turn paths, sight distance requirements, aisle widths, etc).
3. Proposed number of car parking spaces and compliance with the appropriate parking codes.
4. Details of service vehicle movements (including vehicle type and likely arrival and departure times).



5. RMS will require in due course the provision of a traffic management plan for all demolition / construction activities, detailing vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures.

Should you require any further clarification in relation to this matter, please call the contact officer named at the top of this letter.

Yours faithfully,

A handwritten signature in blue ink, appearing to read "O. Hodgson", with a horizontal line underneath.

Owen Hodgson
Senior Land Use Planner
Transport Planning, Sydney Region

5 March 2012



Contact: Nick Hall
Phone: 02 9228 6438
Fax: 02 9228 6466
Email: nicholas.hall@planning.nsw.gov.au

Mr I Bell
Shell Australia
8 Redfern Street
Hawthorn VIC 3123

Dear Mr Bell

**State Significant Development – Director General’s Requirements
Shell Clyde Refinery Conversion (SSD-5147)**

I have attached the Director General’s environmental assessment requirements (DGRs) for the proposed Shell Clyde Refinery Conversion.

These requirements have been prepared in consultation with the relevant government agencies and Parramatta City Council (see attachment 2), and are based on the information you have provided to date. Please note that the Department may alter these requirements at any time, and that you must consult further with the Department if you do not lodge a development application and EIS for the development within two years of the date of issue of these DGRs.

I would like to draw your attention to the requirement to assess the potential hazards and risks associated with the existing site and the proposed development as well as the cumulative impacts from the overall site and the surrounding potentially hazardous developments in the area.

The Department will review the EIS for the development carefully before putting it on public exhibition, and will require you to submit an amended EIS if it does not adequately address the DGRs.

If the proposal is likely to have a significant impact on matters of National Environmental Significance, it will require an approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This approval would be in addition to any approvals required under NSW legislation and it is your responsibility to contact the Department of Sustainability, Environment, Water, Population and Communities to determine if an approval under the EPBC Act is required for your development (<http://www.environment.gov.au> or 6274 1111).

I would appreciate it if you would contact the Department at least two weeks before you intend to submit the DA and EIS for the development. This will enable the Department to determine the:

- applicable fee (see Division 1AA, Part 15 of the *Environmental Planning and Assessment Regulation 2000*);
- consultation and public exhibition arrangements; and
- number of copies (hard-copy or CD-ROM) of the DA and EIS that will be required for exhibition purposes.

If you have any enquiries about these requirements, please contact Nick Hall on the above details.

Yours sincerely

16. 3. 12

Chris Wilson
Executive Director
Major Projects Assessment
As delegate for the Director-General

Director General's Environmental Assessment Requirements

Section 78A(8A) of the *Environmental Planning and Assessment Act*

State Significant Development

Application Number	SSD-5147
Development	<p>Conversion of Shell's Clyde Refinery site into a finished fuel import and distribution terminal by:</p> <ul style="list-style-type: none">• converting crude oil tanks and feedstock product tanks into intermediate and finished product tanks in the eastern parts of the site;• decommissioning, demolishing and removing existing crude oil processing and blending facilities and other tankage and other redundant infrastructure in the western part of the site;• receiving finished product by pipeline from Shell's Gore Bay Terminal site; and• distributing finished product by pipeline to Sydney Airport, to other company's terminals in Newcastle and Silverwater and to Shell's Parramatta Terminal for distribution via road.
Location	9 Devon Street Rosehill NSW 2142
Applicant	Shell Australia
Date of Issue	
General Requirements	<p>The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>.</p> <p>In addition, the EIS must include a:</p> <ul style="list-style-type: none">• detailed description of the development, including:<ul style="list-style-type: none">– need for the proposed development;– justification for the proposed development;– likely staging of the development;– likely interactions between the development and existing, approved and proposed operations in the vicinity of the site;– the nature and destination of fuels to be received and distributed; and– plans of all proposed building works.• consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments.• risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment.• detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes:<ul style="list-style-type: none">– a description of the existing environment, using sufficient baseline data;– an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes; and– a description of the measures that would be implemented to avoid, minimise and if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage any significant risks to the environment; and– consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS.

Key issues

The EIS must address the following specific matters:

- **Hazards and Risks**– including:
 - a summary of the results of a Preliminary Hazardous Analysis (PHA) undertaken for the proposed development. The PHA should be prepared in accordance with *Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis*, and in particular:
 - identify the hazards associated with the existing site and the proposed development, as well as any external hazards (i.e. natural hazards) to determine the potential for off-site impacts;
 - include failure rates approximate to the plant and equipment to be used;
 - address all relevant recommendations arising from the Buncefield incident; and
 - demonstrate that the proposed development complies with the criteria set out in *Hazardous Industry Planning Advisory Paper No 4 - Risk Criteria for Land Use Safety Planning*; and
 - estimate the cumulative impacts from the overall site and the surrounding potentially hazardous developments in the area (existing and proposed) and demonstrate that the proposed development does not increase the cumulative risk of the area to unacceptable levels.
- **Contamination** – including how ecological and human health risks posed by contaminants on the site would be mitigated and managed particularly as redundant tankage and other infrastructure is decommissioned, demolished and removed.
- **Soil and Water** – including:
 - an assessment of the potential soil, groundwater and surface water impacts of the development including potential impacts on the Parramatta River and Duck Rivers and their tributaries;
 - identification of any water licensing requirements or other approvals under the *Water Act 1912* and/or the *Water Management Act 2000*;
 - demonstration that water for the development can be obtained from an appropriately authorised and reliable water supply in accordance with the operating rules of the Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources;
 - a detailed description of the mitigation and management controls that would be put in place to manage erosion and sediment, stormwater and acid sulphate soil (if present);
 - ways to reduce water supply and increase water reuse; and
 - potential impacts of flooding, with consideration of climate change and projected sea level rises.
- **Heritage** – including:
 - an Aboriginal cultural heritage assessment (including both cultural and archaeological significance), which must demonstrate effective consultation with relevant Aboriginal community groups; and
 - a non-Aboriginal cultural heritage assessment (including both cultural and archaeological significance) which must:
 - include a statement of heritage impact (including significance assessment) for any State significant or locally significant historic heritage items including the Shell Oil Refinery Wharf and the surrounding wetland areas on the banks of the Parramatta and Duck Rivers and their tributaries; and
 - outline any proposed management and mitigation measures.
- **Noise and Vibration** – including all demolition, construction and operational noise and on-site and off-site road noise.
- **Air Quality and Odour** – including a quantitative assessment of the air quality and odour impacts of the development on surrounding receivers.
- **Transport and Access** – including:
 - accurate predictions of the traffic generated by the development;
 - a detailed assessment of the potential impacts of the development on the capacity, efficiency and safety of the road network including the

	<p>cumulative traffic generated by all existing and proposed developments on the Rosehill/Camelia industrial precinct;</p> <ul style="list-style-type: none"> - details of any upgrades to road infrastructure that would be required due to the development; and - site accesses, internal roads and vehicular parking required as a result of the development. <ul style="list-style-type: none"> • Greenhouse Gas – including: <ul style="list-style-type: none"> - a quantitative analysis of the Scope 1, 2 and 3 greenhouse gas emissions of the development; - a qualitative analysis of the impacts of these emissions; and - details of the measures that would be employed to improve energy efficiency. • Visual – impacts on surrounding receivers and from public areas, including at night • Biodiversity – including impacts to terrestrial and aquatic ecology and ways to maintain and improve intact stands of riparian vegetation to the north east and east of the refinery site. • Waste – including accurate estimates of the quantity and classification of the potential liquid and non-liquid waste streams of the development and a description of the measures that would be implemented to ensure that any waste produced is appropriately handled, processed and disposed of. • Social and Economic.
Consultation	<p>During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners.</p> <p>In particular, you must consult with the:</p> <ul style="list-style-type: none"> • Environment Protection Authority; • Fire and Rescue NSW; • NSW Office of Water; • NSW Transport (Roads and Maritime Services); • Parramatta City Council; • Sydney Metropolitan Catchment Management Authority; • Sydney Ports; and • WorkCover NSW. <p>The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.</p>
Further consultation after 2 years	<p>If you do not lodge an EIS for the development within 2 years of the issue date of these DGRs, you must consult with the Director General in relation to the requirements for lodgement.</p>
References	<p>The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, the following attachment contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this development.</p>

ATTACHMENT 1

Technical and Policy Guidelines

The following guidelines may assist in the preparation of the Environmental Impact Statement. This list is not exhaustive and not all of these guidelines may be relevant to your proposal.

Many of these documents can be found on the following websites:

<http://www.planning.nsw.gov.au>

<http://www.bookshop.nsw.gov.au>

<http://www.publications.gov.au>

Aspect	Policy /Methodology
Risk Assessment	<p>AS/NZS 4360:2004 Risk Management (Standards Australia)</p> <p>HB 203:2006 Environmental Risk Management – Principles & Process (Standards Australia)</p>
Hazards and Risk	<p>State Environmental Planning Policy No. 33 – Hazardous and Offensive Development</p> <p>Applying SEPP 33: Hazardous And Offensive Development Application Guidelines (DUAP)</p> <p>Hazardous Industry Planning Advisory Paper No. 4 (DUAP, 1992): Criteria for Land Use Planning, (DUAP)</p> <p>Hazardous Industry Planning Advisory Paper No. 6 (HIPAP No 6): Guidelines for Hazardous Analysis, (DUAP)</p> <p>Multi-Level Risk Assessment (DUAP)</p>
Contamination	<p>State Environmental Planning Policy No 55 - Remediation of Land</p> <p>Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC & NHMRC)</p> <p>National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPC)</p> <p>Managing Land Contamination - Planning Guidelines SEPP 55 – Remediation of Land (DUAP and EPA)</p> <p>Contaminated Sites: Sampling Design Guidelines (NSW EPA)</p> <p>Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites (NSW EPA)</p> <p>Guidelines for the Assessment and Management of Groundwater Contamination (DECC) Draft</p>
Soil and Water	
<i>Coastal</i>	<p>NSW Coastal Policy (NSW Government 1997)</p> <p>State Environmental Planning Policy No 71 - Coastal Protection</p> <p>Floodplain Risk Management Guideline - Practical Consideration of Climate Change (DECC)</p>
<i>Surface Water</i>	<p>National Water Quality Management Strategy: Water quality management - an outline of the policies (ANZECC/ARMCANZ)</p> <p>National Water Quality Management Strategy: Policies and principles - a reference document (ANZECC/ARMCANZ)</p> <p>National Water Quality Management Strategy: Implementation guidelines (ANZECC/ARMCANZ)</p> <p>National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)</p> <p>National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ)</p> <p>Bunding and Spill Management (EPA)</p> <p>Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC)</p> <p>Using the ANZECC Guideline and Water Quality Objectives in NSW (DEC)</p>

	The NSW State Rivers and Estuaries Policy (NSW Water Resources Council)
	Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources (NOW) 2011
<i>Groundwater</i>	National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)
	NSW State Groundwater Policy Framework Document (DLWC)
	NSW State Groundwater Quality Protection Policy (DLWC)
	The NSW State Groundwater Dependent Ecosystem Policy (DLWC)
	Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources (NOW) 2011
<i>Acid Sulfate Soils</i>	Acid Sulfate Soil Manual (ASSMAC)
	Managing Urban Stormwater: Soils & Construction (Landcom)
<i>Erosion and Sediment</i>	Design Manual for Soil Conservation Works - Technical Handbook No. 5 (Soil Conservation Service of NSW)
	Soil and Landscape Issues in Environmental Impact Assessment (DLWC)
	Wind Erosion – 2nd Edition
<i>Stormwater</i>	Managing Urban Stormwater: Strategic Framework. Draft (EPA)
	Managing Urban Stormwater: Council Handbook. Draft (EPA)
	Managing Urban Stormwater: Treatment Techniques (EPA)
	Managing Urban Stormwater: Source Control. Draft (EPA)
	Managing Urban Stormwater: Harvesting and Reuse (DEC)
<i>Wastewater</i>	National Water Quality Management Strategy: Guidelines for Sewerage Systems - Effluent Management (ARMCANZ/ANZECC)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems - Use of Reclaimed Water (ARMCANZ/ANZECC)
	National Water Quality Management Strategy - Guidelines For Water Recycling: Managing Health And Environmental Risks (Phase1) (EPHC, NRMMC & AHMC)
	National Water Quality Management Strategy - Guidelines For Water Recycling: Managing Health And Environmental Risks (Phase1) (EPHC, NRMMC & AHMC)
Heritage	
<i>Aboriginal</i>	Draft Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation (DEC 2005)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
<i>Non- Aboriginal</i>	NSW Heritage Manual (NSW Heritage Office & DUAP)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
Noise	
	NSW Industrial Noise Policy (DECC)
	NSW Road Noise Policy (OEH, 2011)
	Interim Construction Noise Guideline (DECC)
Vibration	
	Environmental Noise Management – Assessing Vibration: a technical guide (DEC)
	DIN 4150 Part 3 – Structural Vibration: effects of vibration on structures (ISO, 1999)
	Assessing Vibration – A Technical Guide 2006 (DEC)
Air Quality	
	Protection of the Environment Operations (Clean Air) Regulation 2002
	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DEC)
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC)
Odour	
	Technical Framework: Assessment and Management of Odour from Stationary Sources in NSW (DEC)

Technical Notes: Assessment and Management of Odour from Stationary Sources in NSW (DEC)

Transport and Access

State Environmental Planning Policy (Infrastructure)

Guide to Traffic Generating Development (RTA)

Road Design Guide (RTA)

Greenhouse Gas

National Greenhouse Accounts (NGA) Factors

Guidelines for Energy Savings Action Plans (DEUS)

Waste

Waste Avoidance and Resource Recovery Strategy 2007 - Overview (DECC)

Waste Avoidance and Resource Recovery Performance Report 2006 (DECC)

Social and Economic

Draft Economic Evaluation in Environmental Impact Assessment (DOP)

ATTACHMENT 2

Government Authority and Council Responses to Request for Key Issues

Date: 24 February 2012
Our Ref: 10214/2009/004583



PCU031120

Mr Chris Ritchie
Manager – Industry
Mining & Industry Projects
Department of Planning
GPO Box 39
Sydney 2001

ATT: Nick Hall

Dear Mr Ritchie



Shell Clyde Refinery Conversion (SSD 5147)

Thank you for your letter received on 14 February 2012, requesting WorkCover's recommended key issues and assessment requirements for the above project.

The Major Hazard Facilities Team reviewed the scoping report and our comments are set out below.

1. As proposed in Section 5 of the scoping report, the proponent must consult with WorkCover prior to and during the preparation of the EIS.
2. Clause 4.3.6 of the report states that the Safety Report will be submitted to WorkCover in February 2012 for a new MHF Licence. In this regard, the proponent should note that with the commencement of the Work Health and Safety (WHS) legislation on 1 January 2012, the OHS legislation was repealed. Under the provisions of the WHS Regulation, the proponent must review and revise the safety related studies/reports, including those listed in clause 4.3.6 of the scoping report, when a modification to the MHF is proposed. The proponent must outline in the EIS, the procedure and the timing for compliance with the WHS Regulation.

Should you have any queries, please contact Sohan Fernando on telephone (02) 8281 6485 or email Sohan.Fernando@workcover.nsw.gov.au.

Yours sincerely



Jan Douglas
Manager
Major Hazards Facilities Team
WorkCover NSW

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