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MEMORANDUM

29 March 2007

To	Chris Ritchie		
Copy to	Neil Trillo		
From	Julian Ardas	Tel	02 9239 7387
Subject	Vopak / NFAL Biodiesel EA - Submission Responses	Job no.	21/14828

Dear Chris,

Thank you for sending copies of the submissions received by the Department of Planning for the proposed Sydney Biodiesel Terminal at Port Botany. GHD and Vopak/NFAL would like to take this opportunity to respond to some of the issues raised in the submissions. It is understood that the following organisations sent a submission to the Department of Planning – NSW Fire Brigades; Randwick City Council; Sydney Water and the Department of Environment and Conservation. Accordingly, GHD and Vopak/NFAL responses are summarised under each organisation.

1 NSW Fire Brigades

1.1 Utilisation of the Worst Case Scenario Data

The NSWFB is concerned with the effect that radiant heat from a bund fire would have on the adjacent storage tanks and exposed plant and equipment. The assessment needs to consider the worst case wind speed and direction during a bund fire scenario.

Response

The NSWFB have requested that these issues be included in the Fire Safety Study (FSS). These issues would be addressed both prior to and during the FSS.

1.2 Compliant Separation of Above Ground Tanks

The separation distances between all above ground tanks and their exposures should be compliant with Australian Standard 1940 - 2004.

Response

The NSWFB have requested that these issues be included in the Fire Safety Study (FSS). These issues would be addressed both prior to and during the FSS.

1.3 Adequacy of the Current Fire Protection System

The PHA, section 5.10 - On-site Propagation of Incidents identifies seven scenarios in which the NSWFB could have difficulty in containing an incident to the point of origin. Our specific concern is in relation to a bund fire burning for an extended period of time and the NSWFB being prevented from initiating appropriate fire protection strategies for tanks, buildings and plant impacted by radiant heat from the bund fire due to the radiant heat levels exceeding 4.7 kW/mz.

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Response

The NSWFB have requested that these issues be included in the Fire Safety Study (FSS). These issues would be addressed both prior to and during the FSS.

1.4 Application of Aspirated Foam

Can aspirated foam be rapidly and effectively applied from a safe location, (i.e. from locations which are not exposed to more than 4.7 kW/m2 radiant heat levels)?

What is the effective throw of the sites poltable foam monitors' foam streams?

Will foam streams applied from monitors be the most effective method to apply a rapid foam blanket in a bund fire scenario? Particularly for a bund fire which may have been burning for an extended period of time?

How long will it take to apply an effective foam blanket?

If aspirated foam cannot be safely and effectively applied then as a minimum the NSWFB expects a permanently installed medium expansion bund pourer system to be installed to assist in the management of a bund fire

Response

The NSWFB have requested that these issues be included in the Fire Safety Study (FSS). These issues would be addressed both prior to and during the FSS.

1.5 Adequate Supply of On-site Foam Concentrate

Whether sufficient quantities of suitable foam concentrate will be available on site to enable an effective foam blanket to be applied to the bund fire scenario and for the foam blanket to be adequately maintained to enable post fire security.

Response

The NSWFB have requested that these issues be included in the Fire Safety Study (FSS). These issues would be addressed both prior to and during the FSS.

1.6 Adequate Firewater Water supply

The Fire Safety Study should address the firewater requirements and provide a hydraulic analysis verification of the sites fire systems to demonstrate that firewater demand can be met by the sites' fire water supply. The sites worst-case fire scenario should be addressed in the calculations to verify whether firewater supply can meet the anticipated firewater demand for a bund fire.

Response

The NSWFB have requested that these issues be included in the Fire Safety Study (FSS). These issues would be addressed both prior to and during the FSS.

2 Randwick City Council

2.1 Hazardous event control measures and SoC

Table 7.1 (Environmental Assessment) shows the major preventative and mitigation control measures to deal with the causes and consequences of hazardous events. Council would query why these preventative and protective measures cannot be nominated directly and individually in the proponent's draft Statement of Commitments to ensure clear and unambiguous action.

Response

GHD recommend that the Statement of Commitment (SoC) include the following additional commitment under Risks and Hazards:

'The proponent shall include the preventative and mitigation control measures identified in *Table 3 – Hazard Identification Word Diagram* of the Preliminary Hazard Assessment during detailed design phase of the proposal.'

GHD is satisfied that this measure would be sufficient to address this issue. It is noted that further hazard and risk studies including: Fire Safety Study (FSS); Hazard and Operability Study (HAZOP); Final Hazard Analysis (HAZAN); Construction Safety Study; and Transport of Hazardous Materials Study, would also be undertaken for the proposal.

These studies, in conjunction with the additional SoC commitment, would ensure preventative and mitigation control measures that are identified are implemented throughout the detailed design process.

2.2 Traffic and transport

Council remains concerned that Section 7.2 Traffic and Transport fails to address concerns that construction traffic, as well as the projected additional operational traffic, would result in adverse impacts on surrounding residents in Randwick City Council and the road network surrounding the development site. The proponent advises generally that "Vopak is aware of local traffic issues, including the need to avoid the use of local roads … for non-bulk liquid deliveries" (page 87). This statement is considered simplistic and an inappropriate substitute for a proper analysis of which roads, construction and operational traffic will be using and the attendant controls, measures and management practices to prevent this traffic from using surrounding local residential streets in Randwick City Council. In particular, the proposed statement of commitment (during operation) under Traffic and Transport (page 156) is inadequate in mitigating the effects of traffic in local residential streets in the Randwick City Council area for the following reasons:

- *It seeks only to mitigate the potentially adverse impacts of hazardous goods in transit (important as this may be) through specific streets (ie., Stephen Road and Botany Road) whereas Council's concern relates also to the impact of increased traffic volumes and congestion generated by all construction and operational traffic associated with the proposed development in surrounding local residential streets in the Randwick Local Government area.*
- *It has no effect in excluding construction and operational traffic associated with the proposed development from surrounding local residential streets in the Randwick Local Government area (or that of Botany Bay) as it refers only to impacts on Stephen Road and Botany Road only.*

- *It is not supported by analysis that models the traffic impact of the proposed development (in terms of increased traffic volumes and congestion generated by all construction and operational traffic associated with the proposal and the cumulative effect of the Port Botany expansion) on intersections and road network in the surrounding area and, in particular, local residential streets in the Randwick Local Government area.*

Response

The traffic report (refer to Appendix E) provides further detail than the traffic section presented in the EA. Refer to section 6 of the traffic report for a summary of the impacts and mitigation measures and Section 4.1.7 for traffic assignment.

It is not expected that local residential streets within the Randwick Local Government area would be adversely impacted as a result of vehicle movements during the construction or operation of the Vopak site. During the construction period, it has been determined that a worse case scenario of 16 vehicles per hour (vph) of additional traffic would be generated. As discussed in the traffic report, it is anticipated that the majority of this traffic would be distributed through the major road network and not within local residential streets.

Construction and operational traffic has been analysed as shown in Sections 4 and 5 of the traffic report. A practical absorption capacity assessment was used as the worse case scenario of 16 vph during the construction period and 2 vph during operation. Referencing to Austroads – Part 5 Intersections at Grade Fig 4.2 Practical Absorption Capacity this increase can easily be accommodated. The relatively small increase in vehicle transport during construction and operation does not warrant specific traffic modeling within the entire Randwick Local Government Area road network.

The future expansion of Port Botany is discussed in Section 5.4 of the traffic report. Detailed analysis and modelling of the cumulative effects of general Port Botany expansion is beyond the responsibility of the proponent. The proponent is responsible for the potential traffic impacts of the proposal, not general expansion of the Port Botany area.

2.3 Infrastructure reinstatement

No details of where and how supply pipelines will be installed nor details of infrastructure reinstatement have been provided with the subject application. The proponent states that the issue of infrastructure reinstatement can be addressed through a condition of consent as requested by Council. The Department should ensure that the issue of infrastructure reinstatement is addressed through the application of the following conditions of approval:

- *Full details of all works in Randwick City Council's road reserves shall be submitted to Council's Director – City Services for approval prior to commencement of works.*
- *The proponent must meet the full cost for Council or a Council approved contractor to:*
  - *Modify the existing vehicular crossing to suit the new vehicular access into the site.*
  - *Repair/replace any damaged sections of Council's footpath, kerb & gutter, nature strip etc which are due to building works being carried out at the above site.*
- *The proponent shall ensure that all infrastructure on Council road-reserve/land is reinstated to the satisfaction of Randwick City Council's Director – City Services upon completion of the works for the proposed development. Should reinstatement of any infrastructure in Council's road-reserve/land fail*

to meet Council's standard within 12 months from the issue of an occupation period for the proposed development, the proponent shall meet all cost for carrying out rectification works.

Response

GHD have no issues with the third condition and accept it in its current form.

GHD recommend the Council's condition one and two be amended to:

- 'Full details of all works in Randwick City Council's road reserves shall be submitted to Council's Director – City Services prior to commencement of works'; and
- 'The proponent must meet the full cost to:
  - Modify the existing vehicular crossing to suit the new vehicular access into the site; and
  - Repair/replace any damaged sections of Council's footpath, kerb & gutter, nature strip etc which are due to building works being carried out at the above site'.

GHD do not believe that condition one requires an 'approval' from Council as the proposal is a project to which Part 3A of the EP&A Act applies. The Department of Planning should remain the consent authority as delegated by the EP&A Act.

GHD also do not believe that condition 2 warrants the prescribed works to be only carried out by Council or a Council approved contractor. In the interest of competition, fairness and availability of contractors, the prescribed works should be open to Council or any suitably qualified contractor to complete the works.

2.4 Construction Traffic and Management Plan

Draft statement of commitment under "Traffic and transport" (page 156 of the EA) should be reworded to read as follows:

"A construction Traffic and Management Plan (CTMP) would be developed and submitted to SPC for review and approval prior to construction. A copy of the CTMP will also be sent to the RTA and to Randwick City Council for the approval of Council's Director – City Services."

Response

GHD recommend the commitment as requested by council be amended to:

'A construction Traffic and Management Plan (CTMP) would be developed and submitted to the Department of Planning and SPC for review and approval prior to construction. A copy of the CTMP will also be sent to the RTA and to Randwick City Council for review and comment prior to approval.'

The CTMP would be sent to SPC for approval as part of land owners consent. However for the purposes of general development consent and implementing land use approvals, GHD do not believe that the condition requires an 'approval' from Council as the proposal is a project to which Part 3A of the EP&A Act applies. The Department of Planning should remain the consent authority as delegated by the EP&A Act.

2.5 Site contamination

The Environmental Assessment still does not appear to address the issue of site contamination adequately. As such, the following draft statement of commitments should be amended to:

"Site Contamination investigations would continue and would be conducted to ensure the site meets the appropriate NEPM/NEHF criteria and has decontamination measures that would be developed to manage/remove areas of contamination. The works would be conducted in accordance with the requirements of the Department of Environment and Conservation."

"The Site Auditor is to assess the suitability of the site for its intended development and use. A Site Audit Statement (SAS) and Summary Site Audit Report (SSAR) is to be prepared and submitted to the DEC and Council, prior to any building or excavation works commencing. The SAS and SSAR shall confirm that the land has been remediated and the site and groundwater is suitable for the intended development and use and satisfies the relevant criteria in the National Environment Protection (Assessment of Site Contamination) Measure 1999."

Response

GHD accept the reworded amendments as proposed by Council to condition one. However, GHD believe that the second condition is unnecessary and the original commitment is appropriate.

Advice from Vopak is that an accredited site auditor undertakes regular site assessments – as part of Vopak's own environmental due diligence policy. The assessments found that the identified 'hot spots' were judged not be significant enough to warrant remediation (refer to page 141 of EA).

The purpose of a Site Audit Statement and Summary Site Audit Report is to confirm that the land is remediated and fit for the intended or proposed land use. However the existing site is not contaminated to the point where remediation is required. Hence there is no reason for a Site Audit Statement and Summary Site Audit Report to confirm the land is appropriately remediated.

3 Sydney Water

3.1 Specific comments on the Environmental Assessment

Sydney Water's Malabar Sewage Treatment Plant does not provide tertiary treatment of effluent. Malabar provides treatment to a high-rate primary level. The discrepancy between the different wastewater treatment methods will need to be assessed and addressed by the proponent.

The EA has not documented the additional potable water required for Stage 1 and for Stage 2 of the proposed development. The EA also does not detail how the additional trade wastewater from Stage 2 will be managed.

The Environmental Assessment has stated on Page 55 that there is only 1 cooling tower required for Stage 2, but Page 56 states that there are 3 cooling towers required for Stage 2 of the proposed development. The proponent will need to clarify which is the correct figure.

Response

GHD acknowledge that Malabar Sewage Treatment Plant treats wastewater to a high-rate primary level rather than tertiary treatment. Regardless of treatment level at Malabar, trade wastewater from the proposal would undergo a form of high-rate primary level treatment prior to discharge. Therefore trade

wastewater would be treated to a standard prescribed by Sydney Water as being acceptable for discharge.

The additional potable water required for the proposal is documented on Page 153 of the EA, the process diagram illustrated in Figure 6.2 (page 47) and Appendix C. That is approximately 880 KL/day for two trains (Stage 1 and 2).

The proposal would require six cooling towers in total. The cooling towers' reference on page 55 should be referred to as 'additional cooling towers' rather than 'the second cooling tower'. The description on Page 56 - 'Cooling towers (three for each stage and approximately 5.3 metres in height)' – is correct.

3.2 Stormwater

Sydney Water encourages the proponent to utilise this excellent opportunity to integrate the passage and treatment of stormwater at lot, road and precinct scales, using Water Sensitive Urban Design (WSUD).

Response

GHD believe that the existing stormwater controls are adequate for this particular site. The stormwater controls are described in Section 7.5.1 and 7.5.2 of the EA. The site's use as a bulk liquids storage area discount most WSUD features (e.g. grass swales, scour points, rainwater harvesting, detention basins, gross water pollutant traps etc) that may be more appropriate for other land uses (e.g. residential homes or sites with large green areas for rainwater harvested irrigation).

The existing stormwater approach is likely to result in more controlled and effective management of stormwater quality than the above mentioned WSUD features. Existing controls for stormwater include diversion to sump pits for testing followed by a range of management options including release to the environment, treatment and disposal as trade wastewater or diversion to slop tanks for off-site disposal.

3.3 Section 73 Compliance Certificate

The developer may be required to amplify or adjust existing infrastructure to service the proposed development. The developer will be required to obtain a Section 73 Compliance Certificate from Sydney Water. Issuing of the Certificate will confirm that the developer has met Sydney Water's detailed requirements

Response

GHD acknowledge that the proposal would require a Section 73 compliance certificate. This certificate is usually granted after the development approval stage (similar to an occupation certificate). The requirements for Section 73 certificate can be met with the following additional commitment:

'The proponent shall ensure that the requirements of a Section 73 Compliance Certificate of the *Sydney Water Act 1994* is undertaken in consultation with the Sydney Water Corporation.'

4 Department of Environment Conservation

4.1 General Management Plans

DEC recommends that the draft Statement of Commitments (SoC) includes a requirement for the preparation of an Operational Stormwater Quality Management Plan

Response

GHD agree to an additional commitment for site stormwater operations and recommends the following commitment:

'Operational environmental management plan incorporating:

- Operational Stormwater Quality Management Plan taking into account the applicable Water Quality Objectives in the ambient waters and using technical criteria derived from the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000)*. A copy of the Stormwater Quality Management Plan would be provided to DEC with the proponent's licence application.'

4.2 Waste

DEC recommends that the commitment to manage waste in accordance with the Environmental Guidelines: Assessment, classification and management of liquid and non-liquid wastes (2004) be strengthened to make reference to managing waste in accordance with the requirements of the Protection of the Environment Operations Act 1997 and the Environmental Guidelines: Assessment, classification and management of liquid and non-liquid wastes (2004).

The proponent is also reminded that any waste that is classified as Hazardous, Industrial or Group A waste in accordance the Environmental Guidelines and under Schedule 1 of the POEO Act 1997 will require the relevant activities to be undertaken under an Environment Protection Licence.

Response

GHD agree that the commitments to waste measures be strengthened to include the Protection of the Environment Operations Act 1997.

The requirement for an Environmental Protection Licence for waste classified under Schedule 1 of the Protection of the Environment Operations Act 1997 is noted.

4.3 Noise

DEC recommends that the SoC includes a clear commitment to design, construct and operate the facility to satisfy a contribution noise level of $L_{A\ eq,\ 15mins}$, 35dB(A).

Response

The noise report indicated that, based on Tables 2.1 and 2.2 of the Department of Environment and Conservation Industrial Noise Policy, Project Specific Noise Levels for Day 7am to 6 pm is $L_{A\ eq,\ 15mins}$, 50dB(A) (refer page 8 of Noise Report). The noise modelling found that construction noise emitted from the site is unlikely to be greater than $L_{A\ eq,\ 15mins}$, 48dB(A) (refer to page 10 of the Noise Report). Therefore GHD does not agree that a commitment includes the construction of the facility to satisfy a contribution noise level of $L_{A\ eq,\ 15mins}$, 35dB(A).

The noise modelling indicated that residential receivers located north east of the site (within Matraville) might have the potential to receive noise during operation of the site up to $L_{A\ eq,\ 15mins}$, 38dB(A). The noise report stated that an increase of 2-3 decibels is unlikely to be perceptible to the human ear (refer to page 12 of the noise report). The noise modelling found that vehicular movements to and from the site and idling transport vehicles are most likely to influence noise output from the operation of the site. Therefore the mitigation measure identified in the noise report was that where practical, vehicles should be

operated at low speed or power and should be switched off when not being used rather than left idling for prolonged periods.

To address DEC's noise level concerns, GHD recommends the following commitment be added under noise:

'Monitoring of operational noise within 12 months after completion of stage 1 and 2 construction works would be undertaken to indicate whether operational noise exceed $L_{A\ eq,\ 15mins,}$ 35dB(A) during day, evening and night periods at the nearest sensitive receivers. Should operational noise monitoring indicate that noise levels greater than $L_{A\ eq,\ 15mins,}$ 38dB(A) at the nearest sensitive receivers, additional noise mitigation and design measures would be implemented in consultation with the Department of Environment and Conservation.'

4.4 Air

The proponent needs to be reminded that consideration of the fatty matter operational waste stream as a potential fuel source may be inappropriate. Burning fatty acid in an industrial processes would be considered a non-standard fuel. Only where DEC assesses the use of non-standard fuels as appropriate should non-standard fuels be used. Any licensed premises wishing to use a non-standard fuel will need to contact DEC to have the proposed fuel and its use assessed.

Response

Noted.

GHD is of the understanding that the site operations would not involve the burning of fatty acid.

5 Revised Statement of Commitment

The following table includes the revised statement of commitment. Changes and additional commitment are highlighted in **bold** type.

Table 5.1 Draft statement of commitments

Mitigation / management measures	Timing
General management plans	
Construction Environmental Management Plan, incorporating: ◗ Construction Soil and Water Management Plan; ◗ Construction Traffic Management Plan; ◗ Acid Sulphate Soil procedure; and ◗ A waste management plan in accordance with the ***Protection of the Environment Operations Act 1997*** and *EPA Environmental Guideline: Assessment, Classification and Management of Liquid and Non-Liquid Waste (2004 edition)*. ◗ Mitigation and management measures identified in this EA and any subsequent approval conditions as issued by the Minister.	During construction
Operational environment management plan incorporating: ◗ **Operational Stormwater Quality Management Plan taking into account the applicable Water Quality Objectives in the ambient waters and using technical criteria derived from the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000)*. A copy of the Stormwater Quality Management Plan would be provided to DEC with the proponent's licence application.** ◗ A waste management plan in accordance with the ***Protection of the Environment Operations Act 1997*** and *EPA Environmental Guideline: Assessment, Classification and Management of Liquid and Non-Liquid Waste (2004 edition)*. ◗ Mitigation and management measures identified in this EA and any subsequent approval conditions as issued by the Minister.	During operation
Risks and hazards	
Include in the updated safety management systems (including training programs) appropriate information concerning the new hazards associated with sodium methylate. Whilst this material does not contribute significantly to off-site risk, management of spills will require special attention to protect site based personnel handling the material	Updated before operation
The existing stormwater system under the biodiesel plants area has no isolation valve in the final pipe leaving site. Suitable means is to be provided to ensure spills do not leave the site via this stormwater piping system	Detailed design phase
For automated tank transfers, two independent tank level switches should be installed (or equivalent) to reduce the likelihood of tank overfilling to an acceptable level (as per current practice at Site B)	Detailed design phase

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Mitigation / management measures	Timing
The proposal tanks would be designed in accordance with the latest version of Australian Standards 1940 (AS1940), AS1670 for fire alarms and AS2941 for pump sets.	Detailed design phase
The proponent shall include the preventative and mitigation control measures identified in *Table 3 – Hazard Identification Word Diagram* of the Preliminary Hazard Assessment during detailed design phase of the proposal.	**Detailed design phase**
Traffic and transport	
A construction Traffic and Management Plan (CTMP) would be developed and submitted to the Department of Planning and SPC for review and approval prior to construction. A copy of the CTMP will also be sent to the RTA and to Randwick City Council for review and comment prior to approval.	**Before construction**
During the life of the project, the proponent shall ensure that vehicles associated with the project do not transport hazardous goods along Stephen Road and Botany Road west of their intersection with Foreshore Road, unless for local deliveries only. This would be incorporated into conditions of contract for the trucking companies.	During operation
Air quality	
Trenching and pipe laying would be undertaken progressively along the route to minimise the area that is disturbed at any single point in time.	During construction
Disturbed surfaces would be stabilised as soon as practicable.	During construction
Equipment to be well maintained and limit instances of fuel combustion processes.	During construction
Where material stockpiles are necessary, the stockpile would be covered or watered down to prevent movement and disturbances from wind.	During construction
Noise	
An Environmental Management Plan (EMP) for the project works would be developed for both construction and operational phases.	Before construction and operation
During construction and operation, combustion engine plants, such as generators, compressors and welders should be checked to ensure they produce minimal noise with particular attention to residential grade exhaust silencers.	During construction and operation
Construction vehicles to be kept properly serviced and fitted with appropriate mufflers. The use of exhaust brakes should be eliminated, where practicable.	During construction
Where practicable, all construction vehicle access to and from the construction site should be made only during normal working hours.	During construction
Where practicable, construction and operational machines to be operated at low speed or power and should be switched off when not being used rather than left idling for prolonged periods.	During construction and operation
Construction and operational machines found to produce excessive noise compared to industry best practice should be removed from the site or stood down until repairs or modifications can be made.	If required
Where practicable, impact wrenches should be used sparingly with hand tools or quiet hydraulic torque units preferred during construction.	During construction

Mitigation / management measures	Timing
Noise modelling suggests that vehicular movements to and from the site and idling transport vehicles are most likely to influence the noise output from the operational site. Where practical, vehicles should be operated at low speed or power and should be switched off when not being used rather than left idling for prolonged periods.	During construction and operation
Monitoring of operational noise within 12 months after completion of stage 1 and 2 construction works would be undertaken to indicate whether operational noise exceed $L_{A\ eq,\ 15mins}$, 35dB(A) during day, evening and night periods at the nearest sensitive receivers. Should operational noise monitoring indicate that noise levels greater than $L_{A\ eq,\ 15mins}$, 38dB(A) at the nearest sensitive receivers, additional noise mitigation and design measures would be implemented in consultation with the Department of Environment and Conservation.	**Within 12 months after completion of stage 1 and 2 construction works**
Water quality	
Construction phase impacts can be managed by implementation of a Construction Soil and Water Management Plan detailing construction phase stormwater management strategies in accordance with Landcom Soil and Construction, Managing Urban Stormwater (Landcom, 2004). These would include amongst others: ◗ General site practices and responsibilities; ◗ Material management practices; ◗ Stockpile practises; ◗ Topsoil practices; and ◗ Erosion control practices (earth sediment basins, straw bales, sediment fences, turbidity barriers, stabilised site accesses, diversions and catch drains).	During construction
Monitoring should be undertaken to ensure that stormwater management measures and for trade wastewater are working effectively. Monitoring would rely primarily on visual inspections and sampling. Visual inspections should be undertaken of bunded areas, pits, diversion and catch drains and all other stormwater conveyance structures. Grab samples should be taken for untreated and treated bunded stormwater and trade wastewater.	During construction and operation
Waste Management	
A sufficient number of suitable receptacles for general waste and recyclable materials would be provided for waste disposal on site, including sufficient bins to allow separation of wastes for recycling and conform with DEC guidelines for construction waste.	During construction
Surplus soil material (spoil) created as a result of the proposal would be reused in landscaping and rehabilitation works as a first priority. Any waste material unable to be re-instated would be transported to land that can lawfully receive that waste.	During construction
All waste would be securely stored to ensure that any pollutants are prevented from escaping.	During construction and operation
Construction vehicles would be securely covered to prevent spilling and loss of waste during transportation.	During construction
The work site would be left clean and free of any debris and other rubbish at the end of the works.	After construction and before operation
Where feasible, suitable construction and operational waste would be recycled in accordance with the *NSW Waste Avoidance and Resource Recovery Strategy 2003*.	During construction and operation

Mitigation / management measures	Timing
All waste to managed in accordance with ***Protection of the Environment Operations Act 1997*** and *EPA Environmental Guideline: Assessment, Classification and Management of Liquid and Non-Liquid Waste (2004 edition)*.	During construction and operation
Trade Waste Water to be managed in accordance with Sydney Water's Trade Waste protocols.	During operation
Visual	
All worksites to be left clean and tidy and the contractor shall maintain the site in an orderly manner.	During and after construction
Construction works would be completed within the shortest possible timeframe.	During construction
All work equipment and materials would be contained within the designated boundaries of the work site.	During construction
On completion of the works all equipment, materials and refuse relating to construction of the works would be removed from the work areas.	During and after construction
All waste generated during the course of the works would be removed from the work area as soon as practicable and disposed in accordance with ***Protection of the Environment Operations Act 1997*** and DEC waste management guidelines (*Assessment, Classification and Management of Liquid and Non-Liquid Waste 2004*).	During construction
All new buildings would be built according to the appropriate standard and code will be designed to harmoniously fit in with existing buildings at Site A and consider street frontage views from Friendship Road.	Detailed design phase
New landscaping would be designed in accordance with the SPC landscape policy (Sections 5.1 and 5.2 of the Exempt and Complying Development Guidelines for Port Botany) and agreed upon prior to construction.	Detailed design phase
Lighting requirements for proposal would be designed *to Australian Standard 1680.1 - 2002 minimum requirements*.	Detailed design phase
All lighting during construction and operational would be compliant with *MOS 139 9:21 Lighting in the vicinity of aerodromes*.	During construction and operation
Built form	
All new tanks are to have a maximum height of 18 metres.	During operation
All other structures, other than distillation columns, are to have a height limit of less than 24 metres.	During operation
Dispensation from Sydney Ports from condition 23, which is to apply only to the distillation columns.	Before construction
Topography, geology and soils	
Disturbed areas would be stabilised as soon as possible following completion of works.	During and after construction
Stockpiles would be covered or stabilised to prevent transport of sediment from the work site.	During construction
Sediment control devices such as silt fences would be installed on all drainage lines downstream in the vicinity of the work area.	During construction

Mitigation / management measures	Timing
At the completion of construction and stabilisation of the land surface, all stormwater control devices would be removed.	After construction
Outdoor construction works would not take place during or immediately after high intensity or prolonged rainfall.	During construction
All roads and footpaths affected by construction would be kept free of all waste, loose sand, soil, aggregates and clay deposits.	During construction
An Acid Sulphate Soil procedure would be developed in response to potential unearthing of Acid Sulphate Soils. This would be consistent with the measures in the Acid Sulphate Soil Management Advisory Committee Guidelines	If required
In the event that contaminated groundwater is discovered, a groundwater management plan would be developed and implemented.	If required
Site Contamination investigations would continue and would be conducted to ensure the site meets the appropriate NEPM/NEHF criteria and has decontamination measures that would be developed to manage/remove areas of contamination. The works would be conducted in accordance with the requirements of the Department of Environment and Conservation.	**During operation**
Any 'hot spots' that are found to have contamination levels exceeding environmental guidelines would be subsequently remediated in accordance with SEPP 55 legislation procedures	If required
Appropriate disposal of any contaminated soil or water in accordance with DEC waste management guidelines.	If required
Socio-economic	
The general community will have the opportunity to register interest, view the EA and write a submission through the Department of Planning 30-day submission period.	Before EA determination
Nearby industries and the SPC would be provided with targeted information in relation to the construction timetable and identification of potential impacts.	During construction
Utilities and services	
Liaison with the SPC and relevant utility and service providers regarding timing of connections to the services, location of services and utilities on the site.	During construction
Liaison with relevant petroleum distributors that could potentially be impacted in regards to timing of connections with the integrated bulk liquids pipe distribution network.	During construction
Liaison with utility and service providers to confirm the location of services and utilities prior to construction commencing.	Before construction
The proponent shall ensure that the requirements of a Section 73 Compliance Certificate of the *Sydney Water Act 1994* is undertaken in consultation with the Sydney Water Corporation.	**Post DA approval**
Miscellaneous	
Feed oils would be limited to vegetable oils as described within the Environmental Assessment. Feed oils would not involve the use of waste fats/oils from recovery operations of food outlets, sewage treatment plants etc.	During operation

Mitigation / management measures	Timing
The proponent shall carry out the project generally in accordance with the Environmental Assessment dated January 2007	During construction and operation
Full details of all works in Randwick City Council's road reserves shall be submitted to Council's Director – City Services prior to commencement of works	**Prior to construction of works**
The proponent must meet the full cost to: ◗ **Modify the existing vehicular crossing to suit the new vehicular access into the site; and** ◗ **Repair/replace any damaged sections of Council's footpath, kerb & gutter, nature strip etc which are due to building works being carried out at the above site.**	**As required**
The proponent shall ensure that all infrastructure on Council road-reserve/land is reinstated to the satisfaction of Randwick City Council's Director – City Services upon completion of the works for the proposed development. Should reinstatement of any infrastructure in Council's road-reserve/land fail to meet Council's standard within 12 months from the issue of an occupation period for the proposed development, the proponent shall meet all cost for carrying out rectification works.	**As required**

Regards

Julian Ardas

Manager Environmental Planning