

Mr Will Miles
Associate Director - Environment
AECOM
PO Box Q410, QVB PO
Sydney NSW 1230

Dear Mr Miles

**State Significant Development – Secretary's Environmental Assessment Requirements
Viva Energy Clyde Western Area Remediation (SSD 9302)**

Please find attached the Secretary's Environmental Assessment Requirements (SEARs) for the proposed remediation of contaminated land at the former Clyde Refinery at Devon Street, Rosehill, in the Parramatta local government area.

The SEARs have been prepared for Viva Energy Australia Pty Ltd (Viva) in consultation with the City of Parramatta Council and other relevant Government agencies (see **Attachment 2**). The SEARs are based on the Preliminary Environmental Assessment dated 1 May 2018 and information presented at the Planning Focus Meeting on 21 May 2018.

Please note that the Secretary may alter the SEARs at any time. You must consult further with the Secretary if you do not lodge a development application and EIS within two years of the date of issue of these SEARs.

I wish to emphasise the importance of effective and genuine community consultation and the need for proposals to proactively respond to the community's concerns. A comprehensive, detailed and genuine community consultation and engagement process must be undertaken during preparation of the EIS. This process must ensure the community is both informed of the proposal and is actively engaged in issues of concern to them. Sufficient information must be provided to the community so that it has a good understanding of what is being proposed and of the potential impacts.

The development may require separate approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). If an EPBC Act approval is required, please advise the Department, as the Commonwealth assessment process may be integrated into the NSW assessment process, and supplementary SEARs may need to be issued.

Please contact the Department of Planning and Environment at least two weeks before you to submit the development application and EIS. This will enable the Department to:

- confirm the applicable fee (see Division 1AA, Part 15 of the *Environmental Planning and Assessment Regulation 2000*); and
- determine the number of required copies of the EIS.

If you have any enquiries about the SEARs, please contact Deana Burn on the details above.

Yours sincerely



Chris Ritchie
Director
Industry Assessments

as delegate of the Secretary

7/6/18.

Secretary's Environmental Assessment Requirements

Section 4.12(8) of the *Environmental Planning and Assessment Act 1979*
Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*

Application Number	SSD 9302
Development	Remediating the western area of the former Clyde Refinery to enable future commercial or industrial use
Location	Western area of the Viva Clyde Terminal, Devon Street, Rosehill in the Parramatta local government area
Applicant	Viva Energy Australia Pty Ltd
Date of Issue	June 2018
General Requirements	The Environmental Impact Statement (EIS) for the development must meet the form and content requirements in clauses 6 and 7 of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>. In addition, the EIS must include: • detailed description of the development, including: – existing activities on the site, including groundwater monitoring – need and justification for the remediation works – likely staging of the remediation works – details of all equipment proposed for use on the site with locations shown on site plans – likely interactions between the development and existing, approved and proposed operations near the site – details of long-term management plans for any remaining contamination on the site, including on-going management of groundwater • demonstrate the site is suitable for the proposed final land use in accordance with <i>State Environmental Planning Policy No 55 – Remediation of Land</i> • detail how the proposal is consistent with strategic planning objectives of the Greater Sydney Commission's Central City District Plan and the objectives for the Greater Parramatta and Olympic Peninsula • consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments • consideration of key issues identified by Government agencies (see Attachment 2) • a risk assessment of the potential environmental impacts of the remediation works, identifying the key issues for further assessment • detailed assessment of the key issues specified below, and any other significant issues identified in the risk assessment, which includes: – a description of the existing environment, using sufficient baseline data – an assessment of the potential impacts of all stages of the remediation works, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes – a description of the measures that would be implemented to avoid, minimise and if necessary, offset the potential impacts of the remediation works, including proposals for adaptive management and/or contingency plans to manage any significant risks to the environment • a consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS. The EIS must also be accompanied by a report from a qualified quantity surveyor providing: • a detailed calculation of the capital investment value of the remediation works (as defined in clause 3 of the <i>Environmental Planning and Assessment Regulation 2000</i>), including details of all assumptions and components from

	which the CIV calculation is derived • a close estimate of the jobs that will be generated during remediation works • certification that the information provided is accurate at the date of preparation.
Key Issues	The EIS must address the following specific issues: • Community & Stakeholder Engagement - a detailed community and stakeholder engagement strategy identifying who and how stakeholders will be engaged in the process - a report detailing the issues raised and how they have been addressed, including any changes to the proposal - details of proposed engagement activities throughout remediation works. • Contamination & Remedial Action Plan (RAP) - a Remedial Action Plan (RAP) that: - o follows the requirements in the Guidelines for Consultants Reporting on Contaminated Sites (EPA 2011) - o is approved by a Site Auditor accredited under the <i>Contaminated Land Management Act 1997</i>, prior to implementation or at a timeframe agreed to by the Environment Protection Authority - o includes a diagrammatic conceptual site model that can be updated following the progress of the remediation works - o characterises the nature and extent of contaminated soils and groundwater, detailing all contaminants of concern (CoC) - o details all remediation methods and technologies, including layouts, design and technical specifications - o justifies the proposed methodologies and treatment and remediation criteria to achieve the preferred final land use - o includes triggers for contingency actions to ensure clean-up is occurring to the extent practicable - o details measures to remove and treat light non-aqueous phase liquids (LNAPL) in the sub-surface to remove potential on-going sources of contamination - o details of proposed measures to manage excavated material and wastewater during remediation - o details all procedures and plans to be implemented to reduce risks to an acceptable level for the proposed final land use - o includes a site validation plan - o details the final landform following remediation and the suitability of any fill material - details of any restrictions on future development of the land and liabilities for on-going management of any residual contamination - details of the long-term strategy for funding the maintenance of any residual contamination, including financial assurances. • Water & Soils - a detailed description of baseline surface and groundwater conditions - an assessment of the potential surface and groundwater impacts of the remediation works - justification (including data, assumptions and methodology) for proposed pollution control works - details of treatment systems to ensure all discharges comply with the <i>Protection of the Environment Operations Act 1997</i>, avoid contaminated water entering Duck River and neighbouring premises and demonstrate the works will avoid harm to marine vegetation adjacent to the site - details of licensing requirements including the proposed location of discharge points presented on a plan - details of any required dewatering and management of contaminated groundwater - volumes of surface and groundwater to be taken from each water source as defined by the relevant water sharing plan - a detailed description of the mitigation and management controls that would be put in place to manage erosion and sediment, stormwater, groundwater and acid sulphate soils during and after remediation works - details of proposed surface and groundwater monitoring, including on-going and long-term management

- a flood impact assessment and consideration of the effects of coastal hazards.
- **Human Health Risk**
 - an assessment of the potential human health risks (on site and off site) associated with each remediation method, including consideration of background levels and cumulative impacts
 - details of mitigation and management measures to be implemented during the remediation works to minimise human health risks and ensure the safety of workers and nearby residents.
- **Air Quality and Odour**
 - identification of all emissions and pollutants of concern and details of all discharge points and their characteristics
 - quantitative assessment of the potential air quality, dust and odour impacts of the remediation works including consideration of background levels and cumulative impacts
 - details of all air quality and odour control equipment and monitoring for all discharge points and fugitive emissions
 - an air quality management plan detailing measures (including contingencies) to manage emissions from remediation activities, combustion from equipment and vehicles, fugitive dusts and odours from contaminated materials.
- **Waste**
 - accurate estimates of the quantity and classification of the potential liquid and non-liquid waste streams of the remediation works
 - a description of storage, treatment (including immobilisation of contaminants), transport, disposal and re-use for all waste generated, including any hazardous waste
 - details of any waste materials brought on site for treatment and reuse, including type, quantity and classification and proposed remedial method
 - a waste management plan detailing how each waste stream will be managed
 - details of the transport, handling, storage and use of dangerous goods, chemical and products on site, including measures to minimise leakage and migration of pollutants.
- **Hazards and Risk**
 - a preliminary risk screening in accordance with State Environmental Planning Policy No 33 - Hazardous and Offensive Development and Applying SEPP 33 (Department of Planning, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development, including but not limited to hazardous materials that can be created during the process of remediation.
 - should the preliminary risk screening indicate that the proposed development is "potentially hazardous", a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis' (Department of Planning, 2011) and Multi-Level Risk Assessment (Department of Planning, 2011).
- **Noise and Vibration**
 - a quantitative assessment of potential noise and vibration impacts from the remediation works on sensitive receivers, including a cumulative noise impact assessment considering existing operations
 - a noise management plan detailing measures to mitigate noise from remediation works to the nearest residential areas and neighbouring premises including details of times of operation for all stages of remediation works.
- **Traffic and Access**
 - accurate predictions of the traffic generated by the remediation works and the impact on the safety and capacity of the surrounding road network and key intersections
 - measures to manage vehicle and pedestrian movements during remediation works
- **Biodiversity**
 - assessment of biodiversity impacts in accordance with the *Biodiversity*

	<i>Assessment Method</i> and documented in a Biodiversity Development Assessment Report - assessment of impacts on Green and Golden Bell Frog habitat likely to be present on site in artificial and modified habitats. • Heritage - identify and assess potential impacts on Aboriginal cultural heritage values along the Duck River frontage and describe measures to avoid, mitigate and manage any impacts - assessment of impacts on State and local heritage.
Plans and Documents	The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the <i>Environmental Planning and Assessment Regulation 2000</i> . These documents should be included as part of the EIS rather than as separate documents.
Consultation	During the preparation of the EIS, you must consult with relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular, you must consult with: • City of Parramatta Council • Environment Protection Authority • Office of Environment and Heritage • Department of Primary Industries • Department of Health • Fire and Rescue NSW • SafeWork • Roads and Maritime Services • Port Authority of NSW • Greater Sydney Commission • the surrounding land owners and occupiers that may be affected by the proposal. The EIS must describe the consultation process and the issues raised, and identify where the design of the remediation works has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.
Further consultation after 2 years	If you do not lodge an EIS for the development within 2 years of the issue date of these SEAR's, you must consult with the Secretary in relation to the requirements for lodgement.
References	The assessment of the key issues listed above must consider 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.

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 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>

Policies, Guidelines & Plans

Plans and Documents

The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*. Provide these as part of the EIS rather than as separate documents.

In addition, the EIS must include the following:

1. An existing site survey plan drawn at an appropriate scale illustrating:
 - the location of the land, boundary measurements, area (sq. m) and north point;
 - the existing levels of the land in relation to buildings and roads;
 - location and height of existing structures on the site;
 - location and height of adjacent buildings and private open space; and
 - all levels to be to Australian Height Datum (AHD).
2. A locality/context plan drawn at an appropriate scale should be submitted indicating:
 - watercourses including nearby rivers and creeks, and dams;
 - significant local features such as heritage items;
 - the location and uses of nearby buildings, shopping and employment areas, hospitals and schools; and
 - traffic and road patterns, pedestrian routes and public transport nodes.
3. An indication of the location of the site with respect to the relevant Land Zoning Map within the *Parramatta Local Environment Plan 2011*.
4. Drawings at an appropriate scale illustrating:
 - detailed plans, sections and elevations of the existing building, which clearly show all proposed internal and external alterations and additions.

Documents to be submitted

Documents to submit include:

- 1 electronic copy of all the documents and plans for review prior to exhibition; and
- other copies as determined by the Department once the development application is lodged.

Aspect	Policy /Methodology
Contamination, Soil and Water	
<i>Contamination & Soils</i>	Guidelines for Consultants Reporting on Contaminated Sites (EPA 2011)
	Guidelines for the NSW Site Auditor Scheme – 2 nd Edition (DEC 2006)
	Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC & NHMRC)
	National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPC)
	Guidelines for the Assessment & Management of Groundwater Contamination (DECC 2007)
	State Environmental Planning Policy No. 55 – Remediation of Land
	Managing Land Contamination – Planning Guidelines SEPP 55 – Remediation of Land (DOP)
	Acid Sulfate Soils Manual (Stone et al. 1998)
<i>Surface Water</i>	National Water Quality Management Strategy: Water quality management - an outline of the policies (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Policies and principles - a reference document (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Implementation guidelines (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ)
	Using the ANZECC Guideline and Water Quality Objectives in NSW (DEC)
	NSW State Rivers and Estuaries Policy (1993)
	State Water Management Outcomes Plan
	NSW Government Water Quality and River Flow Environmental Objectives (DECC)
	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC)
	Managing Urban Stormwater: Soils & Construction (Landcom)
	Managing Urban Stormwater: Treatment Techniques (DECC)
	Managing Urban Stormwater: Source Control (DECC)
	Technical Guidelines: Bunding & Spill Management (DECC)
	NSW Floodplain Development Manual 2005
	NSW Guidelines for Controlled Activities on Waterfront Land (NOW 2012)
	Policy and Guidelines for Fish Habitat Conservation and Management (2013)
<i>Groundwater</i>	National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)
	NSW State Groundwater Policy Framework Document 1997 (DLWC)
	NSW State Groundwater Quality Protection Policy 1998 (DLWC)
	NSW State Groundwater Dependent Ecosystems Policy (2002)
	NSW State Groundwater Quantity Management Policy 2002 (DLWC)
	NSW Aquifer Interference Policy (NOW 2012)
	MDBC Guidelines on Groundwater Flow Modelling 2000
	Australian Groundwater Modelling Guidelines (NWC, 2012)
<i>Wastewater</i>	Environmental Guidelines: Use of Effluent by Irrigation (DECC)
	National Water Quality Management Strategy - Guidelines For Water Recycling: Managing Health And Environmental Risks (Phase1) 2006 (EPHC, NRMMC & AHMC)
	National Water Quality Management Strategy – Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 2): Augmentation of Drinking Water Supplies 2008 (EPHC, NRMMC & AHMC)
	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)
	Recycled Water Guidance Document: Recycled Water Management Systems (DPI, 2015)

Human Health Risk	
	Environmental Health Risk Assessment (enHealth)
Air Quality and Odour	
<i>Air Quality</i>	Protection of the Environment Operations (Clean Air) Regulation 2010
	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA 2016)
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC)
<i>Odour</i>	Technical Framework: Assessment and Management of Odour from Stationary Sources in NSW (DEC, 2006)
	Technical Notes: Assessment and Management of Odour from Stationary Sources in NSW (DEC)
Waste	
	Waste Avoidance and Resource Recovery Strategy 2014-2021 (EPA)
	The National Waste Policy: Less Waste More Resources 2009
	Waste Classification Guidelines (DECC)
Hazards and Risk	
	State Environmental Planning Policy No. 33 – Hazardous and Offensive Development
	Applying SEPP 33 – Hazardous and Offensive Development Application Guidelines (DUAP)
	Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis
Noise and Vibration	
<i>Noise</i>	Noise Policy for Industry (EPA 2017)
	NSW Road Noise Policy (EPA 2011)
	Interim Construction Noise Guideline (DECC 2009)
<i>Vibration</i>	Assessing Vibration: A Technical Guideline (DEC 2006)
Traffic and Transport	
	Guide to Traffic Generating Development (RTA)
	Guide to Traffic Management Part 12: Traffic Impacts of Developments (Austroads 2016)
	NSW Long Term Transport Master Plan (TfNSW 2012)
	Road Design Guide (RTA)
Biodiversity	
	The Biodiversity Assessment Method (OEH 2017)
Heritage	
	The Burra Charter (the Australia ICOMOS Charter for places of cultural significance)
	Statements of Heritage Impact 2002 (HO & DUAP)
	NSW Heritage Manual (DUAP 1996)
	Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (DECCW, 2011)
	Aboriginal cultural heritage consultation requirements for proponents (DECCW, 2010)
	Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (OEH 2010)

ATTACHMENT 2

Government Agency – Key Issues

DOC18/286346-01
SSD 9302

Ms Deana Burn
Planner
NSW Department of Planning and Environment
320 Pitt St GPO Box 39
Sydney NSW 2001

Dear Ms Burn

Viva Energy Clyde Western Area Remediation Project - SSD 9302 Request for Response to Secretary's Environmental Assessment Requirements

The Environment Protection Authority ("EPA") refers to the request to provide Secretary's Environmental Assessment Requirements in respect to the above proposal.

The EPA has reviewed the report titled **Viva Energy Clyde - Western Area Remediation Project – Preliminary Environmental Assessment** (prepared by AECOM and dated 1/05/2018). The site is located at Durham Street, Rosehill on the Camellia Peninsula. The report has been prepared to provide key environmental aspects within the Western Area.

The site is the former Clyde Refinery that is owned by Viva Energy Australia Pty Ltd (Viva Energy). Viva Energy operates the Clyde Terminal on part of the site, however a large part of the former refinery in the south-western part of the site (the Western Area) is no longer in operation. Viva Energy is proposing to remediate the Western Area for future re-development.

The rehabilitation activities will pose environmental risks that needs to be addressed in the EIS. The EPA identifies the following information to be included in the EIS:

- A Water Management Plan with detailed information of the rehabilitation site's stormwater management, including the drainage systems for separation of dirty and clean areas, and a Soil and Erosion Management Plan to address mitigating the entry of contaminated water to the Duck River and to the neighbouring premises;
- A Groundwater Management Plan showing how contaminated groundwater will be monitored and remediated;
- An analysis of the type of compounds, concentrations and extent of soil and groundwater contamination in the area before rehabilitation works commence;
- Detailed information of all the strategies and technologies proposed for contaminated soil remediation;

- A Waste Management Plan that identifies the type of wastes generated at all project stages and how these wastes can be managed;
- An Acid Sulfate Soil Management Plan that details how the disturbance on various types of acid sulfate soils can be managed;
- An Air Quality Management Plan that details how emissions from remediation activities, combustion emissions from equipment and vehicles, fugitive dusts and odours from contaminated materials can be managed;
- A Noise Management Plan that details how the generation of noise associated with rehabilitation activities can be mitigated to the nearest residential areas of Silverwater, Rosehill and Rydalmere and neighbouring premises; and
- All the above proposed management plans must be reviewed by the EPA.

Contamination Assessment

The report is based on previous soil and groundwater, including surface water, investigations undertaken across the site since 1991 until 2017 (GMEs conducted since 1999). It is proposed to remediate the impacted soil (including drainage systems) at the site using a combination of in-situ and ex-situ remediation technologies.

The report states that “a separate remediation approach is unlikely to be required to address residual petroleum hydrocarbon impacts in groundwater”, based on recent GMEs that indicate that the LNAPL (and dissolved phase hydrocarbon) impacted groundwater is localised and will be reduced by natural attenuation. LNAPL and dissolved phase hydrocarbons however, occurring in shallow groundwater accumulating during soil excavations will be removed and treated on-site along with impacted soil.

Assessment of Contaminated Land Issues

- The report follows the requirements for the Preliminary Site Investigation outlined in the Guidelines for Consultants Reporting on Contaminated Sites (EPA, September 2000).
- The report lists the Contaminants of Concern (including PFAS) based on past and present potentially contaminating activities.
- The development of a Conceptual RAP (3D model) is proposed to determine the extent of soil remediation required (not including groundwater).
- The LNAPL and dissolved phase hydrocarbon remediation will be driven by risk to human and ecological receptors (and liability management for the proposed redevelopment of the site).

Recommendations

It is recommended that the proposed Conceptual RAP includes:

- A diagrammatic Conceptual Site Model (CSM) that can be updated following the progress of the remediation works undertaken.
- Triggers for contingency remediation actions to ensure that the clean-up of the site is occurring to the extent practicable (CUTEP).
- Measures to address LNAPL in the subsurface (if any) that could potentially provide an ongoing source of contamination, which must be removed or treated to the extent practicable.

The EPA notes that the PEA includes that an auditor accredited under the CLM Act would confirm the suitability of the site following the completion of the remedial works. The EPA also recommends that the auditor also be required to confirm the adequacy/appropriateness of the RAP prior to implementation.

If you have any questions relating to this matter, please contact me on (02) 9995 5732.

Yours sincerely

cmitchell 1/6/18

Christine Mitchell
A/Unit Head – Sydney Industry
Environment Protection Authority



Office of
Environment
& Heritage

DOC18/304713
SSD 9302

Deana Burn
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Dear Ms Burn

Request for SEARs for Viva Clyde Western Area Remediation (SSD 9302)

I refer to your e-mail dated 9 May 2018 requesting input from the Office of Environment and Heritage (OEH) on the Secretary's Environment Assessment Requirements for the above State Significant development.

Please find attached OEH's environmental assessment requirements in Attachment 1. Please also note that Green and Golden Bell Frog habitat is likely to be present on the site in both artificial and modified habitats and also remnant wetland habitat and they are listed as vulnerable under the Commonwealth Environment Protection Biodiversity Conservation Act, 1999.

A separate response may be provided on heritage matters by the Heritage Division of OEH as delegate of the Heritage Council of NSW. If you have any queries about this advice, please contact Svetlana Kotevska on 8837 6040 or by email at Svetlana.kotevska@environment.nsw.gov.au.

Yours sincerely

S. Harrison 24/05/18

SUSAN HARRISON
Senior Team Leader Planning
Greater Sydney
Regional Operations

Attachment 1: OEH Recommended Environmental Assessment Requirements - Viva Clyde Western Area Remediation (SSD 9302)

Biodiversity
1. Biodiversity impacts related to the proposed development are to be assessed in accordance with Section 7.9 of the Biodiversity Conservation Act 2017 the <u>Biodiversity Assessment Method</u> and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must include information in the form detailed in the <i>Biodiversity Conservation Act 2016</i> (s6.12), <i>Biodiversity Conservation Regulation 2017</i> (s6.8) and <u>Biodiversity Assessment Method</u>, unless OEH and DPE determine that the proposed development is not likely to have any significant impacts on biodiversity values.
2. The BDAR must document the application of the avoid, minimise and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the <u>Biodiversity Assessment Method</u>.
3. The BDAR must include details of the measures proposed to address the offset obligation as follows; • The total number and classes of biodiversity credits required to be retired for the development/project; • The number and classes of like-for-like biodiversity credits proposed to be retired; • The number and classes of biodiversity credits proposed to be retired in accordance with the variation rules; • Any proposal to fund a biodiversity conservation action; • Any proposal to conduct ecological rehabilitation (if a mining project); • Any proposal to make a payment to the Biodiversity Conservation Fund.
4. If seeking approval to use the variation rules, the BDAR must contain details of the <u>reasonable steps</u> that have been taken to obtain requisite like-for-like biodiversity credits.
5. The BDAR must be submitted with all spatial data associated with the survey and assessment as per Appendix 11 of the BAM.
6. The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the <i>Biodiversity Conservation Act 2016</i>.
Aboriginal cultural heritage
7. The EIS must identify and describe the Aboriginal cultural heritage values that exist in the undisturbed vegetated area along the sites Duck River frontage if it will be affected by the development and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The identification of cultural heritage values must be conducted in accordance with the Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (OEH 2010), and guided by the <u>Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW</u> (DECCW, 2011) and consultation with OEH regional branch officers.

8. Consultation with Aboriginal people must be undertaken and documented in accordance with the <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR.
9. Impacts on Aboriginal cultural heritage values are to be assessed and documented in the ACHAR. The ACHAR must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.
Water and soils
10. The EIS must map the following features relevant to water and soils including: a. Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map). b. Rivers, streams, wetlands, estuaries (as described in s4.2 of the Biodiversity Assessment Method). c. Wetlands as described in s4.2 of the Biodiversity Assessment Method. d. Groundwater. e. Groundwater dependent ecosystems. f. Proposed intake and discharge locations.
11. The EIS must describe background conditions for any water resource likely to be affected by the development, including: a. Existing surface and groundwater. b. Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations. c. Water Quality Objectives (as endorsed by the NSW Government http://www.environment.nsw.gov.au/ieo/index.htm) including groundwater as appropriate that represent the community's uses and values for the receiving waters. d. Indicators and trigger values/criteria for the environmental values identified at (c) in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or local objectives, criteria or targets endorsed by the NSW Government. e. Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions http://www.environment.nsw.gov.au/research-and-publications/publications-search/risk-based-framework-for-considering-waterway-health-outcomes-in-strategic-land-use-planning
12. The description of existing water quality/hydrology in the EIS must be based on suitable data (meaning data collection may be required) and must include: a. Water chemistry. b. A description of receiving water processes, circulation and mixing characteristics and hydrodynamic regimes. c. estuary flushing characteristics.

- d. Sensitive ecosystems or species conservation values.
- e. Specific human uses and values (e.g. fishing, proximity to recreation areas).
- f. A description of any impacts from existing industry or activities on water quality.
- g. A description of the condition of the local catchment e.g. erosion, soils, vegetation cover.
- h. An outline of baseline groundwater information, including, for example, depth to watertable, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment.
- i. Historic river flow data.

13. The EIS must assess the impacts of the development on water quality and hydrology, including:

- a. The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the development protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction.
- b. Water circulation, current patterns, water chemistry and other appropriate characteristics such as clarity, temperature, nutrient and toxicants, and potential for erosion.
- c. Changes to hydrology (including drainage patterns, surface runoff yield, flow regimes, and groundwater).
- d. Disturbance of acid sulphate soils and potential acid sulfate soils.
- e. Stream bank stability and impacts on macro invertebrates.
- f. Water quality and hydrology modelling.
- g. Identification of proposed monitoring of water quality.
- h. Consistency with any relevant certified Coastal Management Program (or Coastal Zone Management Plan)

14. The EIS must assess the impact of the development on hydrology, including:

- a. Water balance including quantity, quality and source.
- b. Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas.
- c. Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems.
- d. Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches).

e. Changes to environmental water availability, both regulated/licensed and unregulated/rules-based sources of such water. f. Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options. g. Identification of proposed monitoring of hydrological attributes.
15. 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).
16. The EIS must describe mitigation and management options that will be used to prevent, control, abate or minimise potential impacts from the disturbance of acid sulfate soils 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.
17. The proposed monitoring of water quality must be undertaken in accordance with the <u>Approved Methods for the Sampling and Analysis of Water Pollutant in NSW 2004</u> The EIS must include a water quality and aquatic ecosystem monitoring program that includes: a. Adequate data for evaluating maintenance, or progress towards achieving, the relevant Water Quality Objectives. b. measurement of pollutants identified or expected to be present.
Flooding
18. The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including: a. Flood prone land. b. Flood planning area, the area below the flood planning level. c. Hydraulic categorisation (floodways and flood storage areas). d. Flood hazard
19. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 5% Annual Exceedance Probability (AEP), 1% AEP, flood levels and the probable maximum flood, or an equivalent extreme event.
20. The EIS must model the effect of the proposed development (including fill) on the flood behaviour under the following scenarios: a. Current flood behaviour for a range of design events as identified in 14 above. This includes the 0.5% and 0.2% AEP year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.
21. Modelling in the EIS must consider and document:

- a. Existing council flood studies in the area and examine consistency to the flood behaviour documented in these studies.
- b. The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood, or an equivalent extreme flood.
- c. Impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazard categories and hydraulic categories.
- d. Relevant provisions of the NSW Floodplain Development Manual 2005.

22. The EIS must assess the impacts on the proposed development on flood behaviour, including:

- a. Whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure.
- b. Consistency with Council floodplain risk management plans.
- c. Consistency with any Rural Floodplain Management Plans.
- d. Compatibility with the flood hazard of the land.
- e. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land.
- f. Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site.
- g. Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.
- h. Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the NSW SES and Council.
- i. Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the NSW SES and Council.
- j. Emergency management, evacuation and access, and contingency measures for the development considering the full range of flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the NSW SES.
- k. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.

Coastal hazards

23. The EIS must describe the potential effects of coastal processes and hazards (within the meaning of the *Coastal Management Act 2016*), including sea level rise and climate change:

- a. On the proposed development
- b. Arising from the proposed development.

24. The EIS must consider the effects of coastal hazards on impacting the site under the following scenarios:

- a. Current sea level.
- b. Projected future climate change (including sea level rise) which have been peer-reviewed and widely accepted by scientific opinion.

25. The EIS must have regard to and document:

- a. Consistency with any certified Coastal Management Program (or Coastal Zone Management Plan).
- b. Consistency with the objectives of the *Coastal Management Act 2016* and the aims of SEPP Coastal Management 2018.

OUT18/7345

Ms Deana Burn
NSW Department of Planning and Environment

By email: deana.burn@planning.nsw.gov.au

Dear Ms Burn

**Viva Clyde Western Area Remediation (SSD 9302)
Input to Secretary's Environmental Assessment Requirements**

I refer to the email of 9 May 2018 to the Department of Industry in respect to the above matter. Comment has been sought from relevant branches of Lands & Water and Department of Primary Industries. Any further referrals to Department of Industry can be sent by email to landuse.enquiries@dpi.nsw.gov.au.

The department provides the following recommendations to be addressed in the EIS for the proposal:

Recommendations

- Water – an assessment of impacts on surface and groundwater resources (both quality and quantity) and measures proposed to reduce and mitigate these impacts, including:
 - o proposed surface and groundwater monitoring activities and methodologies;
 - o annual volumes of surface water and groundwater proposed to be taken by the activity from each surface and groundwater source as defined by the relevant water sharing plan;
 - o proposed management and disposal of produced or incidental water; and
 - o consideration of relevant policies and guidelines, including the [NSW Aquifer Interference Policy](#) (2012) and the [Guidelines for Controlled Activities on Waterfront Land](#) (2012).
- Aquatic ecosystems – demonstration that the proposal will be designed to avoid or minimise the harm of marine vegetation and key fish habitat adjacent to the site, including:
 - o consideration of water sensitive urban design measures in the treatment of stormwater; and
 - o demonstration of effective erosion and sediment control measures both during and following construction.

Comments

- Please note that harm of marine vegetation falls under the jurisdiction of the *Fisheries Management Act 1994*. Assessment of any harm of marine vegetation and determination of associated offsets for any loss of marine vegetation is to be assessed according to Section 3.3 of the [Policy and Guidelines for Fish Habitat Conservation and Management](#) (2013). Note that the Biodiversity Assessment Method (BAM) for offsetting does not apply to the offsetting of marine vegetation.



Department
of Industry

- It is recommended that the final land form be temporarily vegetated with grass where relevant as an interim measure prior to the redevelopment of the site. This will greatly assist in sediment control at the site, and reduce the risk of sedimentation to the adjoining waterways from a large expanse of unvegetated soil over an indefinite period of time.

Yours sincerely

A handwritten signature in blue ink, appearing to read "alisoncollaros".

Alison Collaros

A/Manager, Assessment Advice

28 May 2018

8 June 2018

Our Reference: SYD18/00753/01

Department Ref: SSD9302

Deana Burn
Planning Officer
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Dear Ms Burn,

**REQUEST FOR INPUT TO SEARS
VIVA CLYDE WESTERN AREA REMEDIATION PROJECT SSD9302
FORMER CLYDE REFINERY ON DURHAM STREET, ROSEHILL**

Reference is made to your email dated 9 May 2018 requesting Roads and Maritime Services (Roads and Maritime) to provide details of key issues and assessment requirements regarding the abovementioned development modification for inclusion in the Secretary's Environmental Assessment Requirements (SEARs).

Roads and Maritime has reviewed the Applicant's request for SEARs and advises that the following should be addressed within the Environmental Impact Statement (EIS):

- The proposed changes to road layout and design having regard to approved and proposed land uses and development yields,
- Current daily and peak hour vehicle, public transport, pedestrian and bicycle movements, together with the existing traffic and transport infrastructure provided in the area,
- Existing and future performance of key intersections providing access to the site, any road and/or intersection upgrades required to accommodate the development. The assessment needs to be supported by appropriate modelling and analysis to the satisfaction of Roads and Maritime,
- The operation of transport networks, including rail and bus, having regard to service levels, usage and the ability to accommodate the forecast number of trips,
- Measures to encourage users of the development to make sustainable travel choices, including proposals to improve walking, cycling, public transport and car sharing,
- On-site car parking provision and arrangements for access, loading and deliveries, including details of service vehicle movements,
- Appropriate provision, design and location of on-site bicycle parking, and how bicycle provision will be integrated with the existing bicycle network,
- Detailed plans of the proposed layout of the internal road network and parking provision on-site in accordance with the relevant Australian Standards,

- Preparation of a Construction Traffic Management Plan which includes:
 - o details of vehicle routes, number of trucks, hours of operation, access management and traffic control measures for all stages of construction,
 - o assessment of cumulative impacts associated with other construction activities,
 - o an assessment of road safety at key intersections in the vicinity of the site,
 - o details of anticipated peak hour and daily truck movements to and from the site,
 - o details of access arrangements for workers to/from the site, emergency vehicles and service vehicle movements,
 - o details of temporary cycling and pedestrian access during constructions,
 - o an assessment of traffic and transport impacts during construction and how these impacts will be mitigated for any associated traffic, pedestrians, cyclists and public transport operations,
 - o An assessment of surrounding road network in regards to the load limit and the ability for heavy vehicles and construction traffic to use the surrounding road network.

Should you have any further inquiries in relation to this matter, please do not hesitate to contact Nav Prasad by email at development.sydney@rms.nsw.gov.au.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'AT' followed by a wavy line.

Aleks Tancevski
Senior Land Use Planner
Network Sydney South Precinct