

## Attachment B – Construction Conditions (Excavation and Disposal)

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## 1. General

The Proponent must ensure all activities are undertaken in compliance with the *Protection of the Environment Operations (POEO) Act 1997* and any associated Regulations.

The Proponent must apply for and hold an in-force (that is, Issued) Environment Protection Licence (EPL) issued by the Environment Protection Authority prior to the proponent carrying out any scheduled activities under the *POEO Act 1997*.

A copy of the EPL must be kept at the premises to which the licence applies. The licence must be produced to any authorised officer of the EPA who asks to see it. The licence must be available for inspection by any employee or agent of the Proponent working at the premises.

The Proponent must prepare a Pollution Incident Response Management Plan (PIRMP) in accordance with the requirements set out in Part 5.7(a) of the *POEO Act*.

Pollution monitoring data that is required to be collected by an EPL condition must be published by the Proponent in accordance with Section 66(6) of the *POEO Act* and with the written requirements issued by the EPA.

## 2. Discharges to air and water and applications to land

### Location of monitoring/discharge points and areas

Water quality and air quality emission monitoring locations will be informed by more detailed information from the proponent and supported by the relevant Management Plans.

## 3. Limit conditions

### Pollution of waters

Except as may be expressly provided in an Environment Protection Licence, the Proponent must comply with Section 120 of the *POEO Act 1997*.

### Concentration limits

Monitoring/discharge points, concentration limits and monitoring requirements will be added during the development and review of the management plans listed under the Special Conditions. Analytes which may have limits and monitoring requirements include: metals and metalloids (Antimony, cadmium, chromium (VI), copper, cobalt, lead, mercury (inorganic), nickel, pH, silver, selenium, vanadium, zinc, arsenic, tributyltin, aluminium), and Polycyclic aromatic hydrocarbons (Anthracene, benzo(a)pyrene, fluoranthene, naphthalene, phenanthrene, total polycyclic aromatic hydrocarbons).

The EPA proposes the following limits:

- for dredging sites a Total Suspended Solids (TSS) limit of 50 mg/L above background. This limit is based on existing project approvals for the Outer Harbour redevelopment.
- for any stockpile runoff or disturbed area sediment basins a TSS limit of 50mg/L applies.

## Waste

All land based waste (including surface waters from disturbed contaminated soils), excavation and fill materials, whether imported or generated on site, shall be assessed, classified, managed and disposed of in accordance with the *Waste Classification Guidelines* (EPA, 2014) or any future guideline that may supersede that document.

All waste materials removed from the site shall only be directed to a waste management facility lawfully permitted to accept the materials.

## Contamination

The proponent must consider the requirements of and their responsibilities for contamination under the *Contaminated Land Management Act 1997* (the CLM Act) during the proposed works associated with excavations of Berth 101 is proposed, dredging and disposal, and also the Gas Pipeline footprint.

The proponent must ensure the proposed development does not:

- result in a change of risk in relation to any pre-existing contamination on the site so as to result in significant contamination.
- result in release of pollution on the site.

The proponent must ensure that any contamination identified as meeting the trigger in the EPA 'Guidelines for the Duty to Report Contamination') is notified (or re-notified) in accordance with requirements of section 60 of the *Contaminated Land Management Act 1997*.

Due to the significant volumes of contaminated material to be managed, the proponent must engage a *NSW EPA Accredited Site Auditor* to:

- a. review and endorse management plans associated with contaminated materials
- b. to issue a Section A Site Audit Statement at the completion of any remediation and works, stating suitability of the site (the Gas Terminal Site, Pipeline and the Outer Harbour emplacement area) for the intended use.

## Noise – Construction Hours Justification

Construction work must be limited to standard construction hours as per the *EPA Interim Construction Noise Guidelines* unless the Proponent can provide justification as specified in the Guidelines.

## Construction Hours

Construction activities associated with Port Kembla Gas Terminal must be undertaken during the following standard construction hours:

- (a) 7:00 am to 6:00 pm Mondays to Fridays, inclusive; and
- (b) 8:00 am to 1:00 pm Saturdays;
- (c) at no time on Sundays or public holidays.

Notwithstanding the above condition, construction works associated with Port Kembla Gas Terminal may be undertaken outside the hours specified under those conditions in the following circumstances:

- (a) construction works that cause LAeq (15 minute) noise levels that are
  - (i) no more than 5 dB(A) above rating background level at any residence in accordance with the Interim Construction Noise Guideline (DECC, 2009), and
  - (ii) no more than the noise management levels specified in Table 3 of the Interim Construction Noise Guideline (DECC, 2009) at other sensitive land uses, and
  - (iii) continuous or impulsive vibration values, measured at the most affected residence are no more than those for human exposure to vibration, specified in Table 2.2 of Assessing vibration: a technical guideline (DEC, 2006), and
  - (iv) intermittent vibration values measured at the most affected residence are no more than those for human exposure to vibration, specified in Table 2.4 of Assessing vibration: a technical guideline (DEC, 2006); or
- (b) where a negotiated agreement has been reached with affected receivers;
- (c) for the delivery of materials required by the police or other authorities for safety reasons; or
- (d) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm; or
- (e) construction works approved through an Out-Of-Hours Work Protocol prepared as part of the Construction Noise and Vibration Management Plan required by condition D57(b), provided the DPE, local residents and other affected stakeholders and sensitive receivers are informed of the timing and duration prior to the commencement of the works;

(f) construction works approved through an EPL.

Where a noise limit has not been prescribed, all operations and activities occurring on the premises must be conducted in a manner that will not cause offensive noise.

## Odour

The licensee must not cause or permit the emission of offensive odour beyond the boundary of the premises.

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

No condition of these requirements identifies a potentially offensive odour for the purposes of Section 129 of the POEO Act.

## 4. Operating conditions

### Dust

The premises must be maintained in a condition that minimises and/or prevents the emission of dust from the premises at all times.

All activities occurring in or on the premises must be carried out in manner that will minimise the generation or emission from the premises of wind blown or traffic generated dust.

## 5. Monitoring and recording conditions

Water quality and air quality emission monitoring locations will be informed by more detailed information from the proponent and supported by the relevant Management Plans.

During dredging and disposal works, the monitoring of the following water pollutants may be required under this licence condition: metals and metalloids (Antimony, cadmium, chromium (VI), copper, cobalt, lead, mercury (inorganic), nickel, pH, silver, selenium, vanadium, zinc, arsenic, tributyltin, aluminium), and Polycyclic aromatic hydrocarbons (Anthracene, benzo(a)pyrene, fluoranthene, naphthalene, phenanthrene, total polycyclic aromatic hydrocarbons).

## 6. Special Conditions (Based on existing Outer Harbour Project Approval Conditions)

### Containment Structures

B23. Prior to the commencement of dredging, reclamation and emplacement activities, the Proponent shall submit, a **Containment Structures and Emplacement Report**.

The Report shall be prepared by an appropriately qualified person(s) and detail the design of and construction methodology for the proposed emplacement cells, the disturbance and relocation of existing emplaced sediment, sediment emplacement and emplacement cell capping, to ensure that the works prevent the dispersal of, or contain contaminated sediment during construction and operation of the project, and to ensure that environmental and health risks will be appropriately mitigated and managed.

In addition to armouring of bund walls exposed to tidal and wave forces, the contaminated material emplaced in the bunds should have a low permeability clean capping to minimise the potential for contaminant mobilisation from rainfall and tidal movement, including both emerged and submerged surfaces.

## Acid Sulfate Soils (Condition from Outer Harbour Project Approval)

C21. The Proponent shall ensure that any construction activities in identified areas of acid sulfate soil risk are undertaken in accordance with *Acid Sulfate Soil Manual* (Acid Sulfate Soil Management Advisory Committee, 1998).

Acid sulfate soil mitigation measures must address any handling of potential acid sulfate material on shorelines ready for emplacement; and must ensure emplaced material will not generate acid after completion of the emplacement and capping works.

## Emplacement Cells

C31. The Proponent shall engage an appropriately qualified person to audit the construction of the emplacement cells and the emplacement of dredged sediments at the practical completion of each of the following stages:

- a) construction of bunds within the reclamation footprint;
- b) the dredging of the existing spoil emplacement area;
- c) new bund walls to encapsulate spoil within the existing spoil emplacement area;
- d) deposition of dredged spoil; and
- e) the emplacement cell capping.

In addition to armouring of bund walls exposed to tidal and wave forces, the contaminated emplaced material shall have a low permeability clean capping to minimise the potential for contaminant mobilisation from rainfall and tidal movement, including both emerged and submerged surfaces.

The audit shall consider the commitments contained in the documents referred to in condition A1 and the conditions of approval, in particular condition B23. The auditor shall provide the Director General with a report within one month of each audit confirming that the cell construction and sediment emplacement are in accordance with the approval and the Containment Structures and Emplacement Report required under condition B23. The Audit Reports shall be incorporated into the Compliance Tracking Program required in condition B42.

## Turbidity Control

C22. Turbidity control measures shall be designed, installed and maintained outside and surrounding all dredging, excavation and emplacement works to be undertaken as part of the project for the duration of the works and until turbidity in the water column within the measures has fallen to below the turbidity limits specified under condition C24. Turbidity control measures are to be designed, installed and maintained to prevent the release of a visible plume of sediment and contaminants beyond the measures.

C23. An inspection and monitoring program shall be prepared and implemented to ensure that all turbidity control measures, are maintained with respect to structural integrity and effectiveness. The program shall include procedures to record dates, times and observations made with each inspection. The program and resultant records shall be made available to the EPA upon request.

C24. Unless otherwise specified in any EPL for the project, all dredging, excavation and emplacement works associated with the project shall be undertaken in a manner that does not cause turbidity outside the turbidity control measures installed as part of the project to exceed the background turbidity by

more than an equivalent suspended sediment concentration of 50mg/L when measured in accordance with the **Water Quality Monitoring Program** required under conditions C29 and C30.

## Water Quality Monitoring

C25. For the purposes of monitoring turbidity during dredging, excavation and emplacement works, at least four representative reference monitoring points surrounding the works shall be identified and established, unless otherwise agreed by the EPA.

C26. During dredging and dredge spoil emplacement works continuous data loggers shall be deployed at the monitoring points described in condition C25 and used to monitor for turbidity, dissolved oxygen, temperature and pH and shall allow for an immediate measure of turbidity to inform reactive management responses, for example, nephelometric turbidity units (NTUs).

C27 Visual monitoring of sheens and plumes must also be undertaken.

C28. The EPA shall be notified of the location of the water quality monitoring points prior to the commencement of any dredging, excavation and emplacement works, and if required by the EPA, modify the location of the monitoring points to reflect a representative reference location(s).

C29. Prior to the commencement of any dredging and dredge spoil emplacement works, a **Dredging Water Quality Monitoring Program** to monitor turbidity and pollutant concentrations surrounding the works, and changes to those concentrations as a result of the project shall be developed. The Program shall be developed in consultation with EPA and include, but not necessarily be limited to:

- a) establishment of water quality criteria, consistent with any requirements of this approval and the EPL for the project, against which the water quality performance of the project will be assessed;
- b) procedures for monitoring of turbidity at the monitoring points established under condition C25 of this approval and monthly flyovers to assess for turbidity;
- c) procedures for monitoring contaminant concentrations as a result of the dredging works and emplacement works. During dredging and emplacement works, the monitoring of the following water pollutants shall be undertaken in consultation with EPA: metals and metalloids (Antimony, cadmium, chromium (VI), copper, cobalt, lead, mercury (inorganic), nickel, silver, selenium, vanadium, zinc, arsenic, tributyltin, aluminium), and Polycyclic aromatic hydrocarbons (Anthracene, benzo(a)pyrene, fluoranthene, naphthalene, phenanthrene, total polycyclic aromatic hydrocarbons).;
- d) procedures for toxicant monitoring using diffusive gradients in thin-films, including frequency of analysis;
- e) a broader sampling program to monitor harbour-wide trends in Outer Harbour water quality;
- f) an ongoing ecological monitoring program, developed in consultation with the EPA to assess the ecological health of the Port Kembla Outer Harbour;
- g) assessment, management processes, and trigger values to establish whether water quality criteria are being exceeded, or are likely to be exceeded as a result of the dredging excavation or emplacement works; and
- h) contingency measures and actions to be taken in the event that elevated turbidity, pollutant or toxicity levels are detected, including investigations, variation of work methods, installation of additional pollutant controls, stop work, and notification to EPA.

The Program shall be integrated into the Dredging and Excavation Environmental Management Plan required under condition C35 and implemented for the duration of dredging, excavation and emplacement works (or each phase of the works).

## Dredging and Excavation Environmental Management Plan

C35. Prior to the commencement of dredging, excavation and emplacement works, or each phase of works, a **Dredging and Excavation Environmental Management Plan** shall be prepared in consultation with EPA. The Plan shall outline environmental management practices and procedures to be followed during dredging, excavation and emplacement works to minimise human health and ecological risks. The Plan must include, but not necessarily be limited to:

- a) a description of all activities to be undertaken during dredging, excavation and emplacement works, including proposed dredging methods, maps of dredge areas, disposal areas, containment structures and depths for each stage;
- b) statutory and other obligations that must be fulfilled during dredging, excavation and emplacement works and associated activities, including all approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies;
- c) a description of the roles and responsibilities for all relevant employees involved in the dredging, excavation and emplacement works;
- d) environmental performance criteria for dredging, excavation and emplacement works, including turbidity and contaminant levels, that would trigger; and
- e) details of how the environmental performance of the dredging, excavation and emplacement works will be managed and monitored and what actions will be taken to address identified adverse environmental impacts. In particular, the following environmental performance issues shall be addressed in the Plan:

- i) details of measures that will be employed to manage water quality, dredged materials and sediment impacts during dredging, excavation and emplacement works, including details of turbidity controls, barge movement management, and emplacement areas;
- ii) a **Water Quality Monitoring Program(s)** as required by conditions C29;
- iii) details of environmental controls to be retained after the completion of works which are likely to cause pollution of waters until the turbidity of the water within the systems return to background levels;
- v) measures to monitor and manage odours and dust emissions, including timeframes that barges would store dredged sediment and rock material before placing in excavation areas;
- vi) measures to monitor and minimise soil erosion and the discharge of sediment and other pollutants to lands and/ or waters;
- vii) adoption of best noise practice in the selection, operation and maintenance of dredging equipment and methods to evaluate and monitor ongoing noise performance during dredging, excavation and emplacement works;
- viii) measures to monitor and control odour and air emissions during handling of sediments;
- ix) monitoring, inspections, and contingency actions for risk factors (eg failure of the silt curtains) including a silt curtain monitoring program.
- x) staging and detail of the disposal structure (bunded and armoured areas that will encapsulate contaminated sediment)
- xi) final shape/form of the emplaced material, including capping
- xii) capture and treatment of runoff from any stockpiled materials
- xiii) armouring against mobilisation of bund walls and emplaced materials
- xiv) suitability of the excavation and dredge material to be used for outer bunding material, including:
  - the acceptability of contaminant levels and potential for a hotspot of pollutants to be present in source material
  - the potential for acute and chronic toxicity of material that would be part of an outer bund that may be colonised by marine life between proposed armouring
  - ensuring material with elevated levels of contaminants, including dioxins and polycyclic aromatic hydrocarbons, are adequately quantified and characterised and not used for bunding material where there could be impacts to the water quality and/or aquatic ecosystems
  - an “unexpected finds protocol” for berth 101 and the pipeline route. The Berth 101 protocol must consider potential contamination in soil, fill, and excavation waters encountered in the proposal footprint. Material excavated must be tested for contaminants of concern including but not limited to Asbestos, Polychlorinated Biphenyls (*PCBs*), and Polycyclic Aromatic Hydrocarbons including Benzo(a)pyrene. Any waste materials generated must managed with respect to the NSW EPA Waste Classification Guidelines and the National Assessment Guidelines for Dredging.

The Plan shall be submitted for comment to the EPA no later than one month prior to the commencement of dredging, excavation and emplacement works, or within such period otherwise agreed by the EPA.

## Air Quality Management Plan

2.21 The Proponent shall install, operate and maintain a meteorological monitoring station to monitor weather conditions representative of those on the Site, in accordance with:

- a) AM-1 Guide to Siting of Sampling Units (AS 2922-1987);
- b) AM-2 Guide for Horizontal Measurement of Wind for Air Quality Applications (AS 2923- 1987); and
- c) AM-4 On-Site Meteorological Monitoring Program Guidance for Regulatory Modelling Applications.

The meteorological monitoring station shall be installed at or near the site and the Proponent shall use the meteorological monitoring station to undertake the monitoring required under this approval. This requirement does not preclude the Proponent from reaching agreement with any other relevant party for the installation, operation and maintenance of a shared monitoring station, or shared use of an existing monitoring station representative of the Site, provided the outcomes of this requirement are achieved.

2.22 From the commencement of construction of any project associated with this concept plan approval, the Proponent shall continuously monitor, utilising the meteorological monitoring station required under this approval, for each of the parameters listed in Table 2.

**Table 2 – Meteorological Monitoring**

Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method
Rainfall	mm	Continuous	1 hour	AM-4
Temperature at two metres	°C	Continuous	15 minute	AM-4
Temperature at ten metres	°C	Continuous	15 minute	AM-2 and AM-4
Wind direction at ten metres		Continuous	15 minute	AM-2 and AM-4
Sigma theta at ten metres		Continuous	15 minute	AM-2 and AM-4
Solar radiation	W/m <sup>2</sup>	Continuous	15 minute	AM-4

2.23 Prior to the commencement of dredging for any project associated with this concept plan approval, unless otherwise agreed by the EPA, the Proponent shall develop and submit for the approval of the EPA, an **Ambient Dust Monitoring Program**, to outline how the particulate matter impacts of the projects associated with this Concept plan approval will be monitored and proactively managed. The Program shall be prepared by an appropriately qualified person(s). The Program shall include, but not necessarily be limited to:

- a) identification of an air quality monitoring network and meteorological monitoring,
- b) locations, frequencies and methods for monitoring total suspended particles, PM<sub>10</sub> and deposited particulate matter;
- c) the use of appropriate sampling or monitoring methods to measure the parameters described above and a meteorological station capable of monitoring wind direction and speed;
- d) the utilisation of real-time monitoring data to inform environmental management decisions associated with the project;
- e) a framework for identifying actual and potential particulate matter impacts, and for applying proactive and reactive mitigation and management measures to address those impacts;
- f) provisions for reporting monitoring results to EPA and for independent review and auditing of the Program (to be incorporated into the Compliance Tracking Program); and
- g) mechanisms for updating the Program as may be required from time to time.