Sydney Port Botany Terminal 3 Project
Water Resource Management Plan

Terms and Definitions

The following terms, abbreviations and definitions are used in this plan:

Terms	Explanation
SPBT3	Sydney Port Botany Terminal 3
CEMP	Construction Environmental Management Plan
EM	Environmental Manager
EPA	Environmental Protection Agency
ERAP	Environmental Risk Action Plan
OEH	Department of Climate Change and Water
WRMP	Water Resource Management Plan
EIS	Environmental Impact Statement
MCoA	Ministers Conditions of Approval

Distribution

The master 'controlled' WRMP document forms part of the project's CEMP as an Appendix. The controlled copy will be retained in TeamBinder, the Laing O'Rourke document management system, where it can be accessed by personnel as necessary.

All paper copies of this WRMP will be considered as 'uncontrolled' unless they have been allocated a 'copy number' in a colour other than black.

The client representative will be provided with a copy in conjunction with the submission of the CEMP.

Issue, Revision and Re-issue

The initial issue of this WRMP has been reviewed by Laing O'Rourke's Regional Environmental Manager to ensure it meets the requirements of the current EMS and policy, contract, specifications and standards. The plan is approved for use on the project by the Project Director. Evidence of initial review and approval is by signatures on the cover sheet.

In conjunction with the submission of the WRMP, Laing O'Rourke will coordinate and facilitate an initial WRMP Workshop with representatives from the client and Laing O'Rourke to discuss the contents and application of the WRMP to facilitate the approval of the WRMP and agree the proposed management measures and controls.

Revisions of this WRMP may be required throughout the duration of the project to reflect changing circumstances or identified opportunities for improvement.

Revisions may result from:

- Management Review
- Changes to the Company's standard system
- Audit (either internal or by external parties)
- Client complaints or non-conformance reports.

Revisions shall be reviewed and approved by the Project Manager prior to issue. Updates to this WRMP are numbered consecutively and transmitted to holders of controlled copies.

Contents

1. Introduction

This Water Resource Management Plan (WRMP) has been developed to address the construction activities associated with the Sydney Port Botany Terminal 3 (SPBT3) Project. In particular, the plan has been developed to address the requirement for a Water Resource Management Plan as outlined in the Framework Construction Environmental Management Plan for the project.

Development of Sydney Port Botany Terminal 3 will involve the construction of onshore civil infrastructure including container stacking areas. The proposed Terminals have four berths with a total length of 1,180 m. The approximate Terminal area, excluding the Wharf area is 46 ha.

The key components of the Sydney Port Botany Terminal 3 include:

- Ground treatment and consolidation measures
- Drainage, utilities, services
- Container yard
- HV & LV electrical
- Buildings
- Rail yard.

1.1 Objective

This WRMP seeks to ensure that water resourcing is maintained and managed effectively during the project. Appropriately trained personnel and experience gained from previous projects will be used to achieve high environmental performance on the SPBT3 Project.

It is recognised that during construction some specific areas will require alterations to the planned control measures due to changing circumstances. In these situations, the planned control measures will be reviewed, risk assessed and, where appropriate and practical, amended as necessary prior to commencing new or modified activities.

This WRMP aims to satisfy the following objectives:

- Address the requirements of the planning approval for the SPBT3 Project
- Address the requirements of the Environmental Impact Statement (EIS) for the Port Botany expansion
- Address the requirements outlined in the Aurecon Framework Construction Environmental Management Plan
- Address the requirements of the relevant environmental legislation as it applies to this project
- Address the requirements of the Environment Protection Licence issued for the works undertaken for the SPBT3 Project

Responsibilities for the implementation and management of this WRMP are in accordance with the Project's Construction Environmental Management Plan.

1.2 Targets

The following targets have been identified in terms of soil and water management for the project:

- Implementation of best practice water usage techniques
- Ensure construction activities are managed to meet water quality objectives.
- Monitor the effects of activities and the effectiveness of mitigation measures

- Ensure all personnel are appropriately trained in environmental awareness and the significance of the ongoing health of the surrounding Bay.
- Reduce potable water used on site.
- Provide capacity to store and reuse stormwater generated on site.

1.3 Statutory provisions and guidelines

The following statutory provisions and guidelines are applicable to the Project, with regards to water quality:

- POEO Act 1997
- Water Management Act 2000

1.4 Ministers Conditions of Approval

MCoA's relevant to soil and water quality management are outlined below.

MCoA Reference	MCoA Detail
B2.13	Prior to commencement of construction, the Applicant is required to consult with Sydney Water regarding the likely requirements from Sydney Water for a section 73 Compliance Certificate.

It is noted that the responsibility of gaining the Section 73 Compliance Certificate sits with Aurecon as stated in the Framework Construction Environmental Management Plan Section 2.

2. References

- Port Botany Expansion Environmental Impact Statement
- Aurecon Framework Construction Environmental Management Plan Sydney Terminal 3 Sydney International Container Terminals Pty Limited, Revision 3
- Reference is also made to the NSW Protection of the Environment Operations Act which integrates into one Act all of the controls necessary to regulate pollution and reduce degradation of the environment. The Act also provides for licensing of scheduled development work, scheduled activities and for offences and prosecution under this Act

3. Strategic Approach

3.1 Water Usage During Construction

During construction water would be used for:

- General domestic purposes such as washing, drinking and amenities;
- Washing down and cleaning equipment at localised work sites;
- Concrete batching and curing;
- Dust reduction measures; and
- Fire water for use during emergencies.

From the project EIS it is estimated that during construction of the new terminal, approximately 15 ML of potable water could be required per year.

SPC's Green Ports Guidelines requires reduction of water use, and water reuse, during construction. Water is required for a number of aspects of construction, such as:

- supply for the concrete batch plant;

- Supply for dust suppression of roads and the dried reclamation surface;
- Supply for watering landscaped areas;
- Domestic supply for site offices, compounds, vessels and amenities; and
- Miscellaneous use for wash down or road base compaction.

3.2 Wastewater

All wastewater from offices and compounds will be discharged to sewer. Connections to sewer will be made during site establishment, prior to use of the site.

3.3 Water Recycling

Rainwater captured from roofs will be maximised in above-ground tanks for reuse either in the concrete batch plant or dust suppression on the reclamation area.

A concrete recycling unit that recovers aggregates, sand and water from waste wet concrete will be used. Recovered water is proposed for reuse either in the concrete batch plant, or for dust suppression on internal roads and the dried reclamation surface.

3.4 Water Efficiency

Water efficient fixtures and fittings such as low flush volume toilet pans, tap aerators and self timed taps will be used to reduce potable water demand.

3.5 Water Sources

Groundwater extraction is restricted in the Port Botany area due to historic industrial contamination. The entire construction area is within the Botany Basin Groundwater Extraction Exclusion Area designated by the NSW Office of Water under the Water Act 1912. Therefore use of groundwater will not be a preferred option.

Seawater may be used for dust suppression on internal roads and the dried reclamation surface, where this does not affect the ability of the reclaimed area to be revegetated.

A connection to Sydney Water reticulated water will be used for supplying the concrete batch plant, offices and compound.

Recovered water may also be sourced from sediment basins.

4. Mitigation Measures

Mitigation measures for soil and water quality management for the construction phase of the project are outlined below.

Mitigation Measures	Responsibility	Source of Requirement	Timing
Water use and wastewater discharge at the site would be subject to a Water Resources Management Plan (WRMP),	Environment Manger	EIS Ch33.5	Throughout construction
Incorporate water efficient appliances into the site establishment design of site compounds	Project Engineer	SPC Green Ports Guideline	Site Establishment and throughout construction
Incorporate water storage tanks into the site establishment design	Project Engineer	SPC Green Ports Guideline	Site Establishment and throughout construction

Mitigation Measures	Responsibility	Source of Requirement	Timing
Recycle collected stormwater and waste concrete water on-site	Project Manager	Best Practice	Throughout construction
Purchase / use water efficient appliances (e.g. dual flushing toilets, taps, showers)	Environment Manger	SPC Green Ports Guideline	Throughout construction
Use 'Desert Cubes' or similar in urinals to allow waterless urinals where practical	Project Manager	SPC Green Ports Guideline	Throughout construction
Use water crystals for any landscape plantings to reduce water demand	Superintendent	SPC Green Ports Guideline	Throughout construction
Ensure that sewage from portable toilets is removed by a licensed waste contractor, with a suitable trade waste agreement.	Project Engineer	EIS Ch33.5	Throughout construction

5. Training

All site personnel shall undergo site specific induction training which will include environmental awareness. Toolbox meetings will also be undertaken as and when required. They will cover specific environmental issues and shall include water resource management.

Personnel directly involved in utilising water resources on site will be given specific training in the construction, operation and maintenance of the various measures to be implemented. Training of site personnel will be ongoing through the project to ensure environmental awareness and competency is incorporated into all work during the project.

Personnel conducting measuring, monitoring and reporting activities are to be suitably trained or experienced in the activity. Records of all training are to be filed in accordance with the project filing system.

6. Monitoring

Water usage on site will be tracked on a monthly basis. If excessive consumption or fluctuations of greater than 20% occur, investigations will be undertaken and appropriate actions taken to address the problem.

Items that require repair or action will be documented on the weekly checklist or on form F 1228 as seen in the CEMP. Items that require specific and detailed action will be recorded on the Project's Corrective Action Register.

A detailed inspection will also be conducted three to four days prior to long weekends, RDO weekends or other periods when the site will be shut down for a lengthy time period. This will enable items requiring attention to be identified, raised on an Environmental Improvement Request (EIR) (Form F 1228) and implemented. An example of an EIR is seen in the CEMP.

The Superintendent will be responsible for providing appropriate resources in terms of labour, plant and equipment to enable the items to be rectified in the nominated timeframes.

Inspections to be recorded on Form 1227 Weekly Environmental Inspection Checklist. If deemed necessary, additional sedimentation control measures will be implemented to ensure that water quality is maintained throughout the works.

Improvement requests received from the Client's Environmental Representative or other appropriate agencies shall be assessed and responded to within 24 hours if the issue is not environmentally threatening.

The following forms and check sheets shall be utilised to inspect, monitor and record erosion and sediment controls and water quality on this project and filed in accordance with the project filing system.

- Form F 1227 Weekly Environmental Checklist
- Form F 1228 Environmental Improvement Request