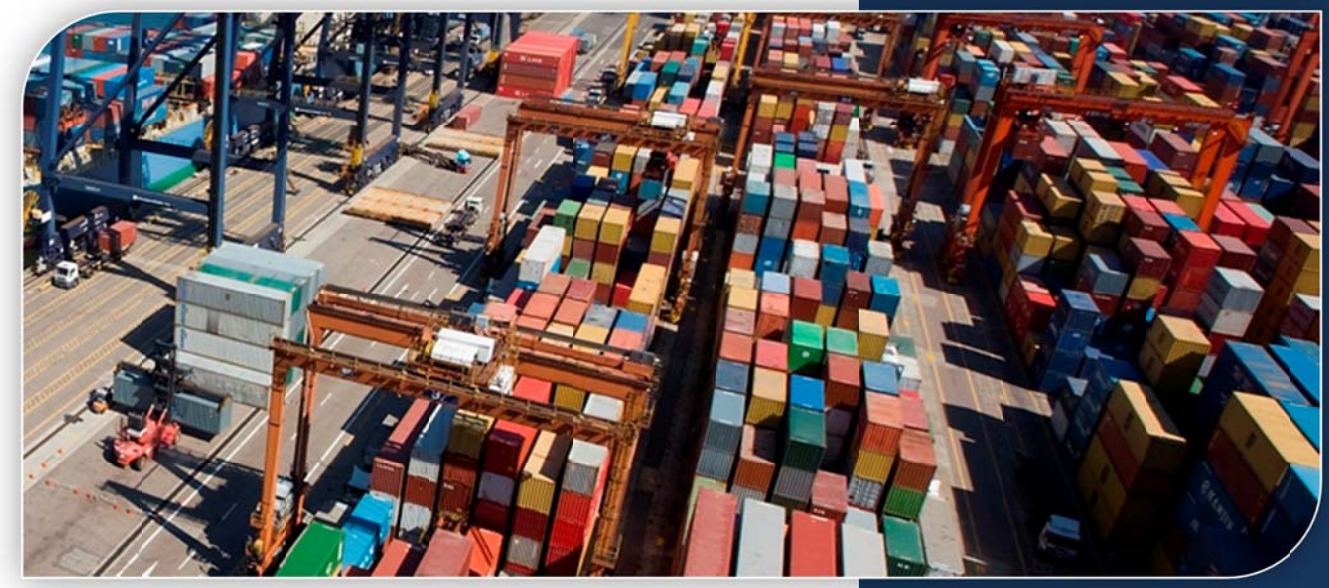
Hutchison Ports Australia

2013

HSEQ Management System

Stormwater Management Sub-Plan - SICTL

Version 2



Telephone 02 8268 8000

Fax 02 9269 0717

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Register of Amendments					
Ver No	**Page no**	**Date**	**Description of amendments**	**Prepared by**	**Approved by**
Draft 0	All	12 July 2013	Consultation Draft	John Ieroklis	Trevor Ballantyne
Draft 1	All	15 July 2013	Consultation Draft	John Ieroklis	Trevor Ballantyne
1	All	31 July 2013	Pollutant Concentration Limits Sub-Plan External stakeholder consultation comments incorporated	John Ieroklis	Trevor Ballantyne
2	All	30 August 2013	DP&I comments incorporated Renamed to Stormwater Management Sub-Plan	John Ieroklis	Trevor Ballantyne

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Stormwater Management Sub-Plan

1 Purpose

This Stormwater Management Sub-Plan (SMSP) has been created as a means by which Sydney International Container Terminals (SICTL) can comply with the relevant conditions outlined in the Instrument of Development Consent DA-494-11-2003-i listed in Schedule C – Terminal Operations (the Development Consent). The SMSP is a component of the HSEQ5.1.7 Operational Environmental Management Plan (OEMP) – SICTL and as such is a Tier 3 document within the Hutchison Ports Australia (HPA) Health, Safety, Environment and Quality (HSEQ) Management System. This sub-plan is an example of the commitment of HPA to comply with the Development Consent and work with external stakeholders co-operatively to achieve good operational outcomes. The indicative process of how OEMP sub plans control the operations of the SICTL Terminal is shown below.

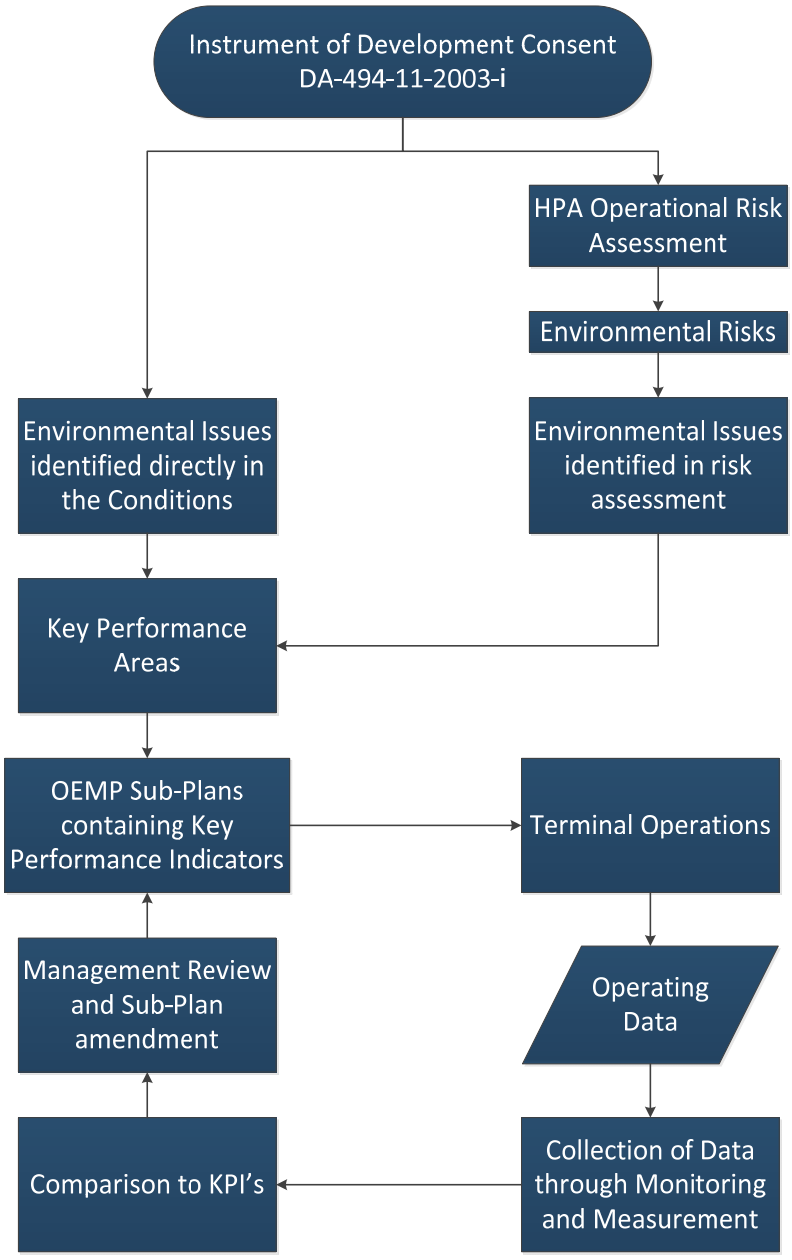

Figure 1 Illustration of how the KPAs and sub-plan control Operations

2 Objective

The objective of this sub plan is to guide the direction of SICTL's operations so that site stormwater can be managed to regulatory standards and minimise off site environmental impacts, in particular Penrhyn Estuary and Botany Bay.Through this awareness, SICTL can best manage foreseeable impacts successfully. Ultimately, awareness and management of impacts will lead to compliance with the Development Consent. SICTL will utilise this sub-plan in the following ways:

- as an management instrument so that good performance by SICTL and its contractors in the Water Quality Management Key Performance Area (KPA) can be assured;
- as a measure of compliance with the Development Consent in the form of a Key Performance Indicator (KPI) target and a KPI goal;
- as a description of what the KPI actually is and its context for measurement;
- as a basis for consultation with relevant stakeholders in regards to eliminating pollution impacts, and
- as a tool for promoting an ongoing relationship between the relevant stakeholders and SICTL so that any operational problems can quickly be solved.

2.1 Environmental Issues Overview

The environmental issues that influence the operation of the SICTL terminal are either identified directly in the Development Consent or are the outcomes of an operational risk assessment carried out by Hutchison Ports Australia (HPA). In either case, the environmental issues are what SICTL will manage. The 10 issues identified in section 1.5.1 of the OEMP are:

- environmental management interface with work health and safety;
- training personnel in environmental management;
- **quality of stormwater runoff/ separator tank discharges;**
- odour and dust management;
- noise and traffic management;
- waste management;
- the handling and transit of chemicals and dangerous goods containers;
- storage of fuels on site;
- impacts on Sydney Airport;
- the management of native and feral animals;
- energy usage. and
- community & complaints handling.

Independent issues or related issues may be grouped together and managed under Key Performance Areas.

2.2 Key Performance Areas Overview

KPAs are an important concept within environmental management because they describe unique and relevant fields of compliance, i.e. 'areas'. The KPAs identified in section 1.6.3 of the OEMP are:

- air quality;
- aviation operational impacts;
- noise and complaints;
- operational traffic;
- ***water quality;***
- Dangerous Goods and Hazardous Substances cargo management;
- waste generation;
- native and feral animal management, and
- energy.

Independent issues or related issues may be grouped together and managed under Key Performance Areas.

2.3 OEMP Sub-Plans Overview

The sub plans to the OEMP are the management instrument which will guide SICTL to achieve compliance in the KPAs. The OEMP sub plans identified in sections 1.6.3 and 4.2.1 of the OEMP are:

- the Air Quality Management Sub-Plan;
- the Aviation Operational Impacts Sub- Plan;
- the Bird Hazard Management Sub- Plan;
- the Noise Management Sub- Plan;
- the Operational Traffic Management Sub- Plan;
- the ***Stormwater Management Sub- Plan;***
- the Handling of Dangerous Goods and Hazardous Substances Sub- Plan;
- the Waste Management On-Site Sub- Plan;
- the Water and Wastewater Management Sub- Plan;
- the Shorebird Management Sub-Plan;
- the Feral Animal management Sub-Plan, and
- the Energy Management Action Sub-Plan.

2.4 Key Performance Indicators Overview

A KPI is an objective and concise measure of one facet of operational performance managed by each sub-plan. By comparing operational data to KPI targets and goals, SICTL can assess its own performance and identify opportunities for improvement. Each OEMP sub-plan has at least one KPI. The context for all KPI's is per Twenty-foot Equivalent Unit (TEU) of throughput. In some instances where the KPI is expected to be low, it is measured for every thousand TEU throughput for convenience. The KPIs managed under this sub-plan are detailed in section 6.

3 Legislative Framework

3.1 Applicable Legislation

The legislation that applies to the implementation of this sub-plan is listed below:

- Protection of the Environment (Operations) Act 1997 (NSW) and regulation, and
- Environmental Planning and Assessment Act, 1979 (NSW) and regulation

3.2 Conditions of Development Consent

The Conditions of Development Consent are listed below and are taken from the Instrument of Development Consent DA-494-11-2003-i - Schedule C Terminal Operations (NSW Department of Planning).

Table 1: Conditions of Development Consent

Condition	Condition of Development Consent
C2.14	**Water and Wastewater Management** Except as may be expressly permitted by a licence under the Protection of the Environment Operations Act 1997 in relation to the development, section 120 of that Act (prohibition of pollution of waters) shall be complied with in connection to the development.
C2.15	**Pollutant Concentration Limits** For each monitoring/ discharge point or utilisation area, the concentration of any pollutant discharged at that point, or applied to that area must not exceed concentration limits specified in the relevant environment protection licence.

4 Strategic Approach

4.1 Risk Identification

The risks identified by SICTL to be managed by this sub-plan are:

- Pollutants entering the stormwater system and being discharged into Penhryn Estuary and Botany Bay;
- The accumulation of trapped pollutants in the Separator Units;
- The Correct and continued operation of the drainage shut-off system

A detailed risk assessment and evaluation of control measures will be undertaken by SICTL prior to commencement to ensure the risks are controlled to be as low as reasonably practicable. The mitigation measures specified in this sub plan will be updated to correspond with ongoing changes to the Environmental Risk Assessment.

4.1.1 Exclusions to the Scope of this Sub-Plan

Unless noted otherwise, this sub-plan does not cover issues:

- not listed in the Development Consent;
- stormwater discharge from on board vessels;
- any actions by vessels (movements, noise, emissions etc)
- in Botany Bay beyond the quay line of the SICTL Terminal;
- outside the lease area of the SICTL Terminal;
- the monitoring, inspection, cleanout, maintenance, sampling and water quality of SQID/ Separator units that are connected to the Patricks terminal and discharge into Penhryn Estuary. These units are coloured brown and are contained in the red box in Figure 3;
- of future construction phases (covered in separate CEMP's), and
- beyond the reasonable control or responsibility of HPA.

4.2 Potential Environmental impacts

Discharging stormwater into a natural waterbody introduces a change in the local water quality because stormwater carries with it many pollutants that may accumulate within urban catchments. Unmitigated, the impacts on the local waters have the potential to:

- alter the pH;
- increase turbidity;
- Introduce an excess of nutrients, and/ or
- Alter the concentration of dissolved oxygen in the water.

These changes can affect all levels of marine life present in the local waters and may become complex problems affecting bird species and other compounded ecological effects. The waters surrounding the SICTL terminal are also heavily used by recreational boaters who will notice the effects of any pollution first hand.

4.3 Potential Operational Impacts

SICTL anticipates the operation of the SICTL Terminal will impact local water quality in the following ways:

4.3.1 Site Runoff Containing Pollutants Entering Botany Bay

The SICTL terminal's stormwater drainage system will serve impervious catchments which have a variety of heavy industrial uses:

- Roadways and marshalling areas for trucks;
- Parking areas for employees' cars;
- Roof drainage from terminal buildings;
- Quayfront areas where cargo is landed from ships;
- Container stacking areas including Dangerous Goods stacking areas;
- Spill containment area;
- Rail siding area

These areas have the potential to introduce pollutants such as silt and heavy metals into the stormwater that will be discharged into Botany Bay.

5 Implementation of This Sub-Plan

The implementation of this sub-plan will follow a closed-loop approach developed to suit the nature of the Development Consent (listed in section 3.2) that are related to Pollutant Concentration Limits. This method is an extension of the process shown in figure 1 and has the primary objective of achieving the conditions outlined in the Development Consent. The closed-loop is explained diagrammatically below:

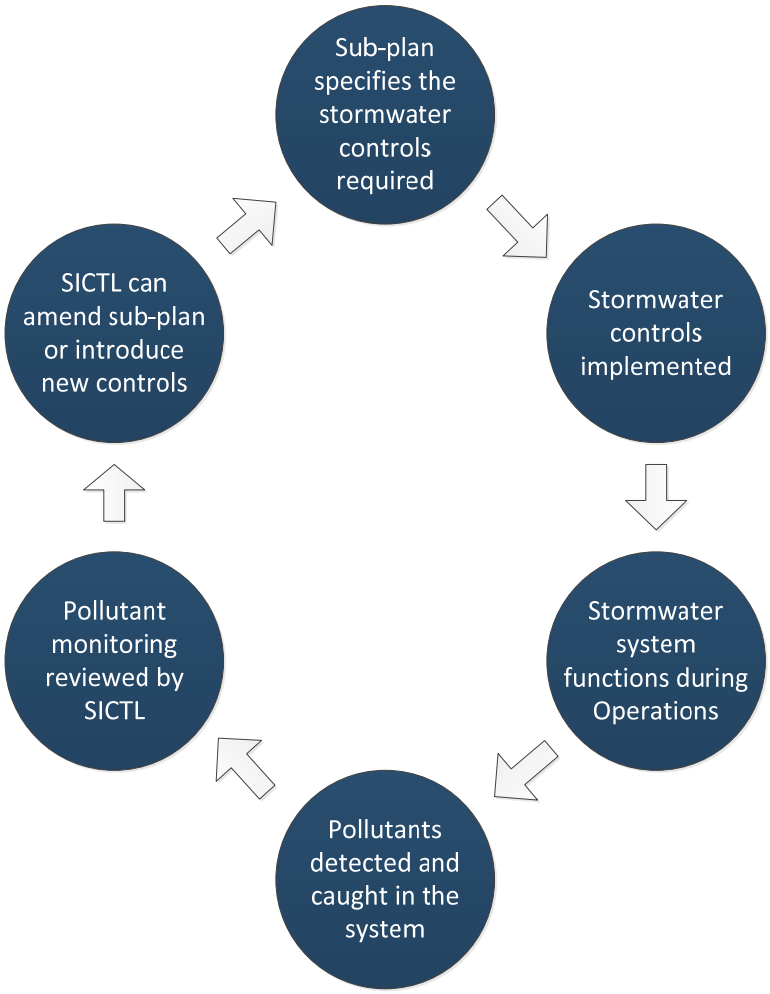

Figure 2 Closed-loop operations of this sub-plan.

The range of pollution controls specified in section 5.1 of this sub-plan will be applied to the operations of the terminal by SICTL. Periodic quality monitoring will be undertaken as a means of confirming the effectiveness of the water quality measures and to detect any exceedances. These results will be collected and reviewed by the HSEQ department where the operational activities will also be assessed against the data. Changes to the methods of operations can be made or additional controls implemented by SICTL with the aim of complying with the conditions in the Development Consent.

5.1 Operational Controls

Details of the overall management methods and procedures that will be implemented to control discharges from the SICTL Terminal are explained in this section. The controls correspond with the potential operational impacts raised in section 4.3.

5.1.1 Hardstand Areas

The construction of the SICTL terminal is almost entirely comprised of concrete hardstand areas. Other areas that are not concrete are likely to be gravel or ballast (ASC yard/ rail siding), asphalt (vehicle areas) or sprayed seal. These areas do not erode.

Where future phases are being constructed, disturbed areas will be managed under the Construction Environmental Management Plans relevant to those areas.

5.1.2 Housekeeping

General housekeeping to prevent pollutants from entering the terminal's stormwater system will be managed under section 5.1.4 of the HSEQ5.1.7a Air Quality Management Sub-Plan and section 5.3 of the HSEQ5.1.7h Waste Management On Site Sub-Plan.

Regular cleaning of areas by sweeper truck will reduce the surface pollutants entering the stormwater system and reduce the load on the Separator units.

5.1.3 Stormwater Quality Improvement Devices

The need for distributed treatment of stormwater rather than one end-of-line control (known as Water Sensitive Urban Design) has been satisfied by SICTL in the design of the terminal. Forty-nine heavy metals separator units have been incorporated in the design of the terminal, each unit serves a small internal catchment and traps pollutants within the stormwater flow prior to discharge. The locations of the separator units within the SICTL terminal are shown below:

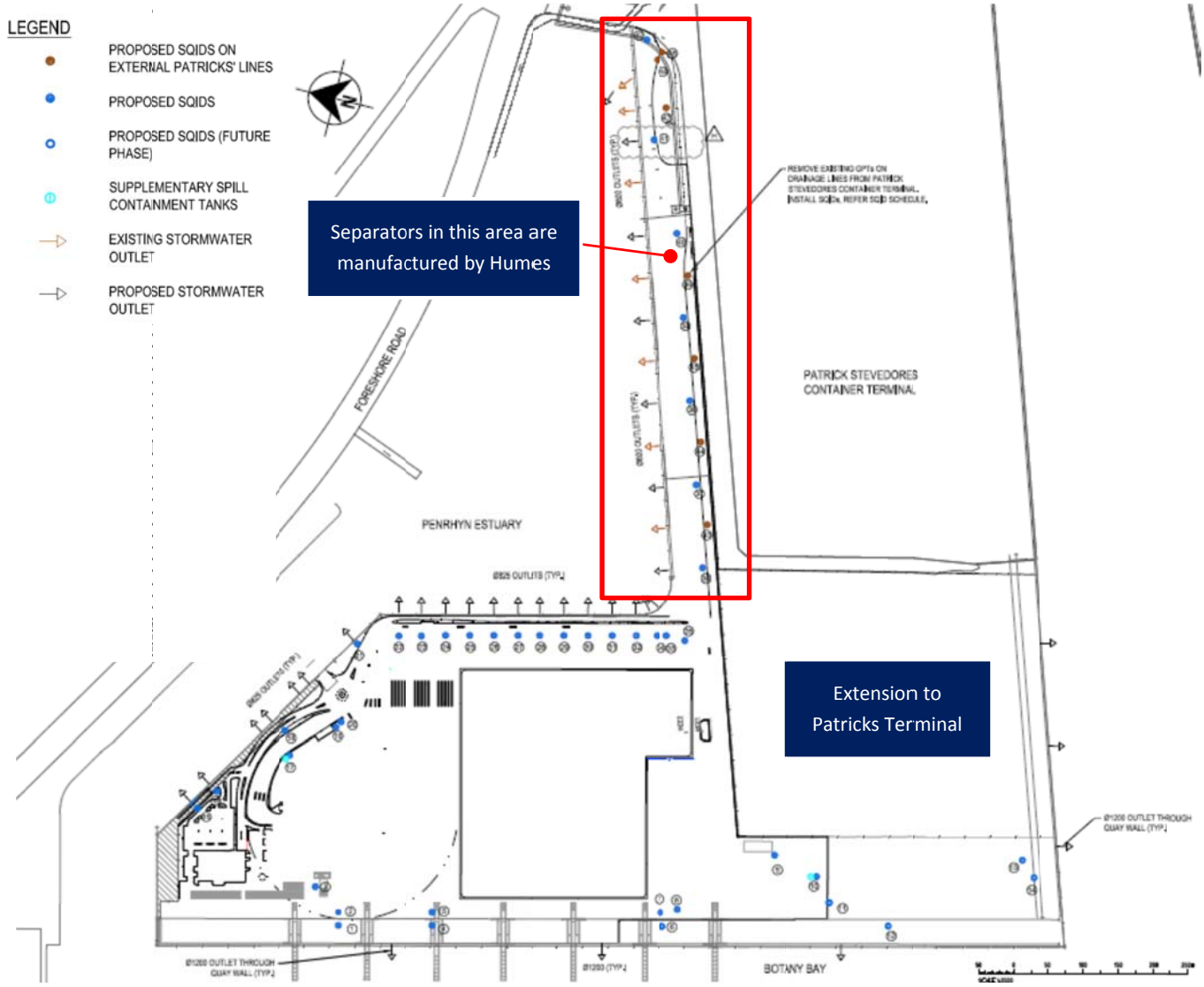

Figure 3 Illustration showing the locations of separator units.

N.B: As part of the construction of the SICTL terminal, the existing Gross Pollutant Traps servicing the Patricks terminal (coloured brown, within the red box in figure 3) were replaced by Humes Separator units. SICTL and HPA take no responsibility for the quality of water discharged by these devices. Similarly, HPA or SICTL do not control or manage the monitoring, inspection, cleanout, maintenance or sampling for these devices. These devices will be serviced by contractors to Patricks stevedores.

The design of SICTL's drainage system incorporates separator units made by two manufacturers, SPEL and Humes. Diagrams of these units are shown below:

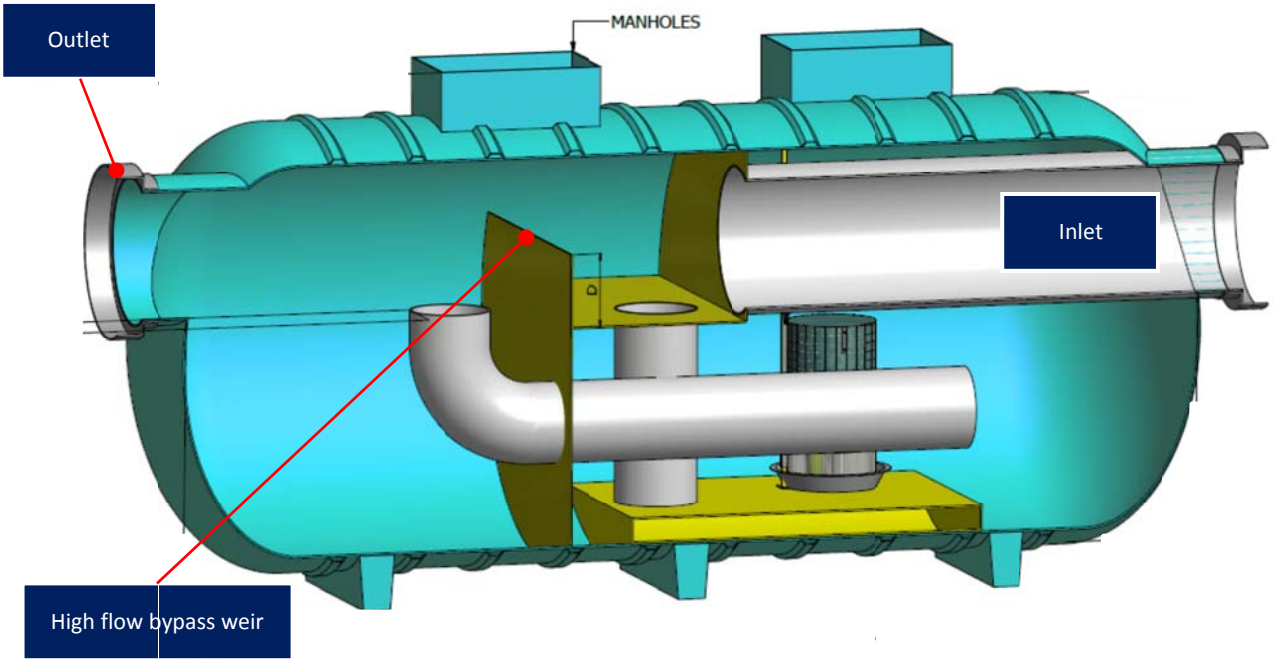

Figure 4 Cut away diagram of the SPEL Environmental 'Stormceptor' separator unit.

Figure 5 A SPEL Environmental 'Stormceptor' separator unit being installed during construction of the SICTL Terminal in 2013.

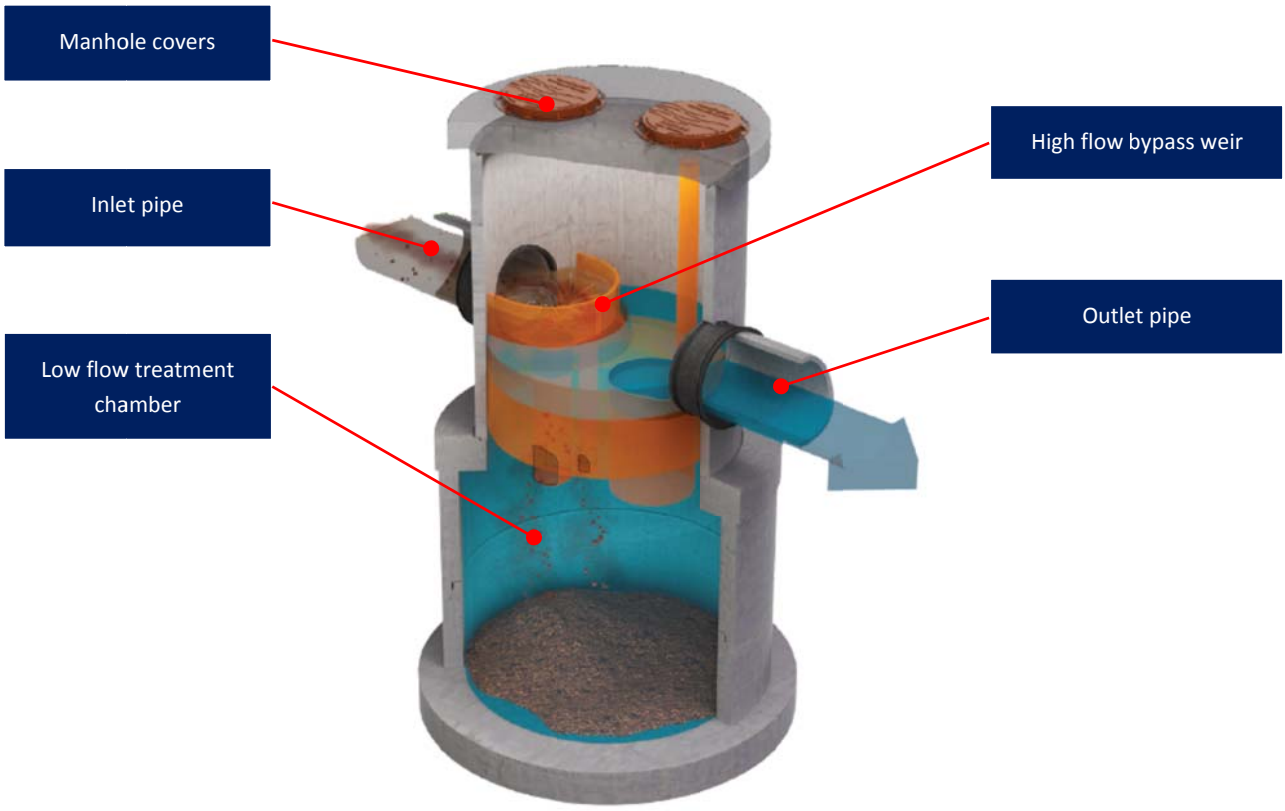

Figure 6 Cut away diagram of the Humes 'Aquaceptor' separator unit.

These units continually separate sediments and heavy metals from stormwater flows and trap these pollutants so they are not discharged. The manufacturer's documentation describing the operation and capabilities of these units is in Appendix 1 of this sub-plan.

The separator units require ongoing maintenance to perform effectively. SICTL will undertake to inspect and cleanout these units as per the below schedule:

Table 2: Inspection and cleanout schedule for separator units

Type of Service	Frequency
Inspection	Every 3 months and after every spill event (or more frequently as determined by SICTL)
Cleanout	Every 6 months and after every spill event (or more frequently as determined by SICTL)

5.1.4 Stormwater Drainage from Dangerous Goods Storage Areas (The WaterUp System)

Upon commencement, the SICTL terminal will feature three Automated Stacking Crane (ASC) stacks, ultimately increasing to thirteen, used as follows:

- Odd-numbered ASC stacks will handle solid, liquid and gaseous DG cargo, and
- Even numbered ASC stacks will handle solid and gaseous DG Cargo only, not liquid DGs

Each ASC stack contains five lanes of containers across its width. Lane one and lane five in each ASC stack have been reserved for DG cargo as shown below:

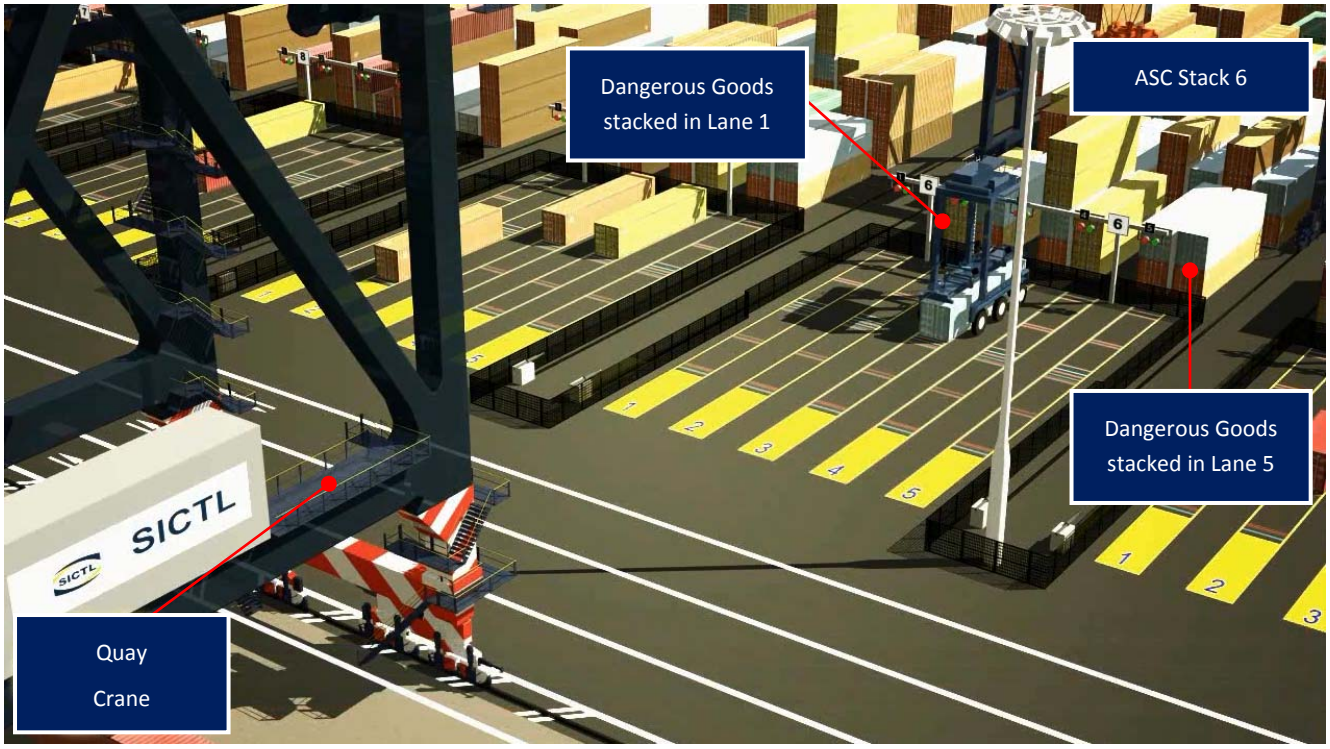

Figure 7 Details of an ASC stack as viewed from the water side exchange

The stormwater drainage system servicing the odd-numbered ASC stacks (Dangerous Goods liquids) will be fitted with an automatic drainage shutoff system called WaterUp. This system can be operated in two modes as determined by SICTL:

Table 3: WaterUp system modes of operation

Mode of Operation	Description
Open valve	Stormwater is allowed to flow through drainage system and into separator units. Valves close immediately if the sensors detect pollutants entering the stormwater system. Trapped polluted stormwater can be pumped out and treated.
Closed valve	Valves are usually closed to trap any pollutants entering the stormwater system when during no rain (i.e chemical spill). Trapped pollutants can be pumped out and disposed. Alternatively, the valves open once sensors detect clean stormwater and a rain event (by rain sensor). If sensors detect pollutants entering the stormwater system the valves close immediately. Trapped polluted stormwater can be pumped out and treated.

The WaterUp system continually monitors the stormwater flows in order to detect sediments and heavy metals. If detected, the stormwater tainted with these pollutants will be trapped and not discharged. A notification will be sent from the WaterUp controller to SICTL's Network Control System indicating that the valves are closed and that pollutants have been caught in the system. SICTL can then arrange for the drainage lines to be pumped out and pollutants disposed by an approved contractor. The drainage lines will also be cleaned of any remaining pollutants by an approved contractor. The procedure for cleaning and draining any contaminated drainage line after a spill or leak will be determined by assessing the nature and classification of the Dangerous Goods or pollutant. The servicing of the system will be discussed with WaterUp and the sensors will be recalibrated after each event of necessary. The manufacturer's documentation describing the operation and capabilities of the WaterUp system is in Appendix 2 of this sub-plan. A list of compounds which trigger the system and are prevented from being discharged is also provided.

5.1.5 Non-Automated Stormwater Shutoff Valves (The PolluPlug System)

Additional to the WaterUp system described above, all other drainage outlets at the SICTL terminal are also fitted with a manually controlled stop valve in the form of an inflatable bladder within each drainage pipe called 'PolluPlug'. These valves are situated downstream of each separator unit and provide a further safeguard against pollutants from spills entering Botany Bay and Penrhyn Estuary as they can be manually closed (inflated) by SICTL staff in the event of a chemical spill in an area of the terminal that is not serviced by the WaterUp system. Closing these valves would ensure that all pollutants are trapped within the drainage lines, SICTL can arrange a contractor to pump out the trapped pollutants and dispose accordingly.

5.2 Training of personnel

The training of personnel on the requirements of this sub-plan occurs during the general terminal induction where an outline of water quality management is delivered to all new workers. This training will be completed online prior to the new worker arriving at the terminal.

5.3 Monitoring and Response

Upon commencement, SICTL will undertake commissioning water quality monitoring (sampling and testing) of the terminal's discharges to ensure the stormwater separators are working correctly and to specification. This commissioning monitoring will be at a frequency and period agreed with the EPA.

During operations, SICTL will undertake periodic water quality monitoring and ensure that SICTL's pollutant concentration limits are being complied with. The water quality monitoring program will:

- Sample all the terminal's discharge points or, where this is not practicable, the outlet side of the Separator units, if all discharge points cannot be sampled, representative discharge points or separators will be sampled;
- Take place at a frequency of every six months (in addition to other times determined by SICTL);
- Take place at the commencement of a new phase of operations or at appropriate operational milestones;
- Take place at any other additional time as determined by SICTL;
- Tie in with the inspection (3 monthly) and cleanout (6 monthly) program described in table 2;
- Be undertaken by suitable consultants and laboratories accredited by the National Association of Testing Authorities, Australia (NATA) using methods approved in the document *Approved Methods for the Sampling and Analysis of Water Pollutants in New South Wales* (EPA 1998), and

- Test for:
    - Total Suspended Solids;
    - Turbidity:
    - pH;
    - Oil & grease;
    - Other pollutants deemed necessary by the EPA.

The SICTL water quality monitoring program will be further developed in consultation with Patrick Stevedores who also discharge into Penrhyn Estuary. SICTL will publish the monitoring data as per the flowchart below:

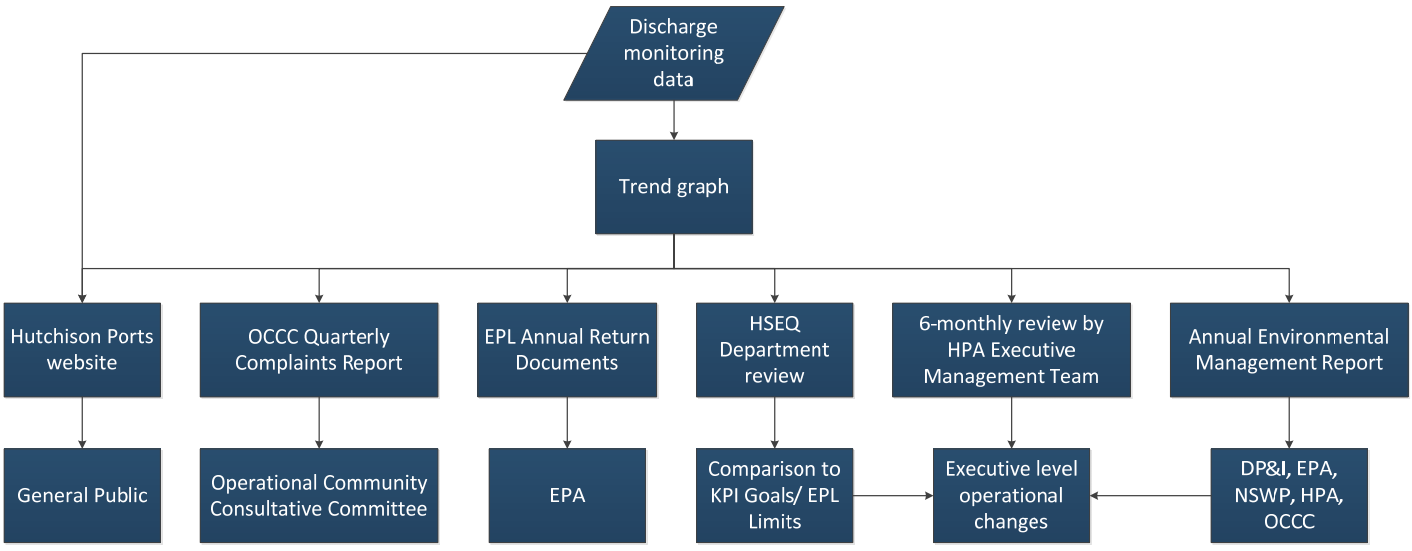

Figure 8 Illustration showing the how the monitoring results are used.

The results will be uploaded to the Hutchison Ports Australia's website in compliance with any licence conditions. The trend graph will also be uploaded to provide context. SICTL will undertake an annual review of the ongoing monitoring and discuss justification in each Annual Environmental Management Report (AEMR). Section 6.2.1 provides more information on reporting obligations.

Response to trends in monitoring will be determined by the HSEQ Department with the aim of meeting the Development Consent and any EPL conditions. New controls can be implemented or new management methods can be developed and introduced to the workforce.

6 Performance Expectations

6.1 Pollutant Removal Efficiency

Depending upon the stormwater application, pollution control devices such as separators, Gross Pollutant Traps or sediment basins operate in one of two modes:

- An open-loop 'removal efficiency' basis, suitable for continuous discharge, or
- A closed-loop 'detention and treatment' basis, suitable for first-flush.

First-flush systems such as tanks or construction sediment basins have the capacity to capture the volume from the initial flush of a storm and store it for treatment. The quality of this detained water can be controlled to comply with a specific water quality parameter by treating the water to remove pollutants and not discharging it until the parameter is met. Repeated treatments can be applied in order to improve heavily polluted water.

Continuous discharge systems do not have the storage capacity of first-flush systems and so do not detain any stormwater for treatment, the stormwater is treated as it passes through the device. For this reason, the separator units are designed and specified on a 'removal efficiency' basis dependent upon the concentration of pollutants in the stormwater entering the unit.

The separator units employed by SICTL to trap pollutants have the following characteristics

Table 4: Pollutant removal performance

Unit number	Manufacturer of unit	Pollutant removal performance (advertised)
1 - 35	SPEL Environmental - Stormceptor	85% removal of Total Suspended Solids Removal of oils and heavy metals to below visible quantities.
36 - 49	Humes - Aquaceptor	80% removal of Total Suspended Solids Removal of oils and heavy metals to below visible quantities.

6.2 Assessment of Pollutant Concentration Limits and Pollution KPI

Prior to operational start, an assessment and prediction of the likely concentration of runoff pollutants that will be captured by the separators is provided in this section. To achieve this, a recognised document used in the stormwater consulting industry 'Australian Runoff Quality, 2006' (ARQ) published by Engineers Australia is used as the basis for quantifying urban stormwater pollution characteristics. This method of assessment and prediction is in lieu of conducting a field trial. This data will be replaced by the discharge limits prescribed by the NSW EPA upon the issue of an Environmental Protection Licence for the SICTL terminal.

Roadways and marshalling areas for trucks, parking areas for employees' cars and quayfront and rail siding areas where SICTL plant transit cargo make up the bulk of trafficable areas within the terminal where pollutants are expected to be generated.

Table 3.1 of the ARQ lists the expected pollutant loads from a range of surface types, the suspended solids data from which is reproduced below:

Table 5: ARQ table 3.1 excerpt

	Roofs	Paving	Roads	Lawns	Open Space
Suspended solids **SS EMC for this surface type (mg/L)**	20	80	180	360	600

The vehicle types moving within the SICTL terminal will be a combination of commercial vehicles, large trucks and heavy plant. SICTL expects the pollutant concentrations generated in stormwater running off these areas to be more than 180 mg/ L for roads as defined in table 3.1 of ARQ but not as high as 360mg/ L for lawns. SICTL has assumed a pollutant load of **270 mg/ L**, midway between the two.

Applying the lowest removal efficiency (Humes Aquaceptor – 80%) achievable from the variety of separator units, SICTL expects the pollutant concentration limits at discharge to be approximately **54mg/ L.**

The singular measure of how well this sub-plan is implemented and the effectiveness of the control measures described in section 5.1 is the number of time the pollutant concentration limit is exceeded. This 'cover-all' approach is deemed the most suitable for quantifying this Key Performance Indicator (KPI). The KPI is described in the table below.

Table 6: Management of Key Performance Areas

Key Performance Areas	Key Performance Indicators	Goal
Water Quality	Number of times the Pollutant Concentration Limit is exceeded, expressed as **pollution events per 100,000 TEU**	Zero per 100,000 TEU

SICTL aims to meet this KPI goal through proactive management of its operations. The goal adopted by SICTL under this sub-plan is for no pollution events attributed to the operation of the SICTL Terminal.

6.3 Opportunities for Improvement

Under this sub-plan opportunities for improvement of operational practices and stormwater controls (which affect the pollutant concentration limits) will be identified by the HSEQ Officer and Environmental and Safety Compliance Engineer during general inspections of the terminal, inspections of the control measures, analysis of monitoring data and consultation with the workforce. Additionally the Stakeholders or the Operational Community Consultative Committee (OCCC) can raise issues directly with SICTL that affect the local water quality. These will be treated as opportunities for improvement by the HSEQ Officer or the Environmental and Safety Compliance Engineer and be rectified within agreed timeframes. All such opportunities for improvement will be reported in accordance with the HSEQ2.2.1 Hazard and Improvement Opportunity Reporting Procedure using the HSEQ2.2.1.1 Hazard and Improvement Report Form and registered on the HSEQ Information Management System.

6.3.1 Management of Complaints or Common Issues involving Neighbouring Stevedores

The SICTL HSEQ Officer or the Environmental and Safety Compliance Engineer will investigate the complaint or the water quality issue in accordance with the process outlined in section 4.6.4 of the OEMP. However, in cases where the findings of the investigation (Step 3) prove that the complaint was caused by a combined

effect of the actions by SICTL and another Port Botany lessee (for example, activities carried out near the boundary between SICTL and Patricks Stevedores on the Southern end of the Terminal known as 'The Knuckle') then SICTL will formally notify the complainant with these findings and interface with the other lessee via the Terminal Manager using the below process:

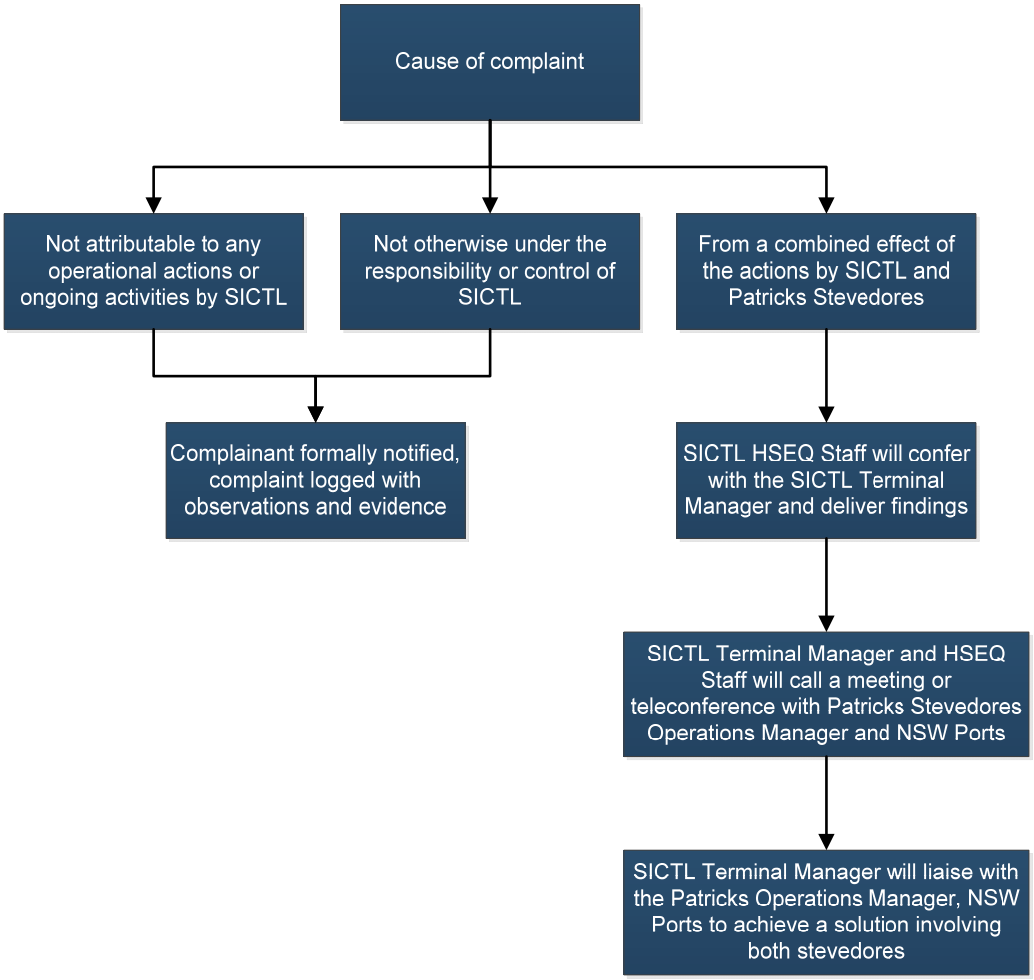

Figure 9 The process of managing complaints involving organisations other than or in addition to SICTL.

SICTL will formally notify the complainant if the findings of the investigation show that SICTL was not responsible. In the event that a shared responsibility exists, SICTL will call a meeting or a teleconference between NSW Ports and Patricks Stevedores where a collaborative solution can be achieved that satisfies the complainant and the operational needs of both stevedores. The SICTL Terminal Manager will be the primary interface with the Operations Manager for Patricks Stevedores in this situation.

6.4 Documentation and Record Keeping

SICTL will retain all records of water monitoring for traceability. Additionally, the Tier 4 documents that come under this sub-plan are:

- HSEQ2.2.1.1 Hazard and Improvement Report Form

These documents will be retained for traceability and will be included in the Annual Environmental Management Report (AEMR). They will be administered by the HSEQ Officer/ Environmental & Safety Compliance Engineer and will be uploaded into SICTL's internal document management system, Sharepoint. In line with HPA's reporting requirements, incidents and monitoring data will be collated and entered into a

database graphing trends over time. Sections of these graphs depicting different time periods will be included in the reports as relevant.

6.4.1 Reporting Obligations

Further to section 5.1.8 the monitoring, mitigation, complaints and response information arising from this sub-plan will be reported by SICTL in the following:

- The internal reporting documents provided to the six-monthly operational review by the HPA Executive Management Team
- The Annual Environmental Management Report
- Environmental Protection Licence Annual Return Documents
- Hutchison Ports Website

The pollution events KPI will be reviewed monthly by the HSEQ department so that trends and statistics can be included in the 6-monthly internal reports and the AEMR. The source of this information is the monitoring data collected by SICTL. Monitoring data must be uploaded to the HPA website within 14 days of receipt as per SICTL's environmental protection licence conditions.

7 Responsibility, Accountability and Authority

7.1 SICTL as Tenant

SICTL retains ultimate responsibility for implementing this sub-plan. SICTL has adopted a shared responsibility approach where all members of the SICTL Terminal workforce are expected to meet the requirements of this sub-plan and be aware of the potential effects of their work on local water quality. All staff are made aware of this responsibility during the SICTL induction and in the regular toolbox meetings and prestart talks. The HSEQ team provides the necessary expertise, guidance and support.

7.1.1 HSEQ Officer

The HSEQ Officer is part of the HSEQ Management team and is the primary point of contact at the Terminal who advises the management team and the operations staff about compliance with this sub-plan. Other responsibilities include:

- general surveillance of operations to detect the potential for impacts on surrounding water quality;
- advise on control measures required to mitigate impacts on surrounding water quality, and
- interface with the OCCC to manage any impacts originating from the Terminal which affect discharges and surrounding water quality as they arise.

The SICTL Environmental Representative can also undertake these functions.

7.1.2 Environmental and Safety Compliance Engineer

The Environmental and Safety Compliance Engineer is also a part of the HSEQ Management Team who supports the HSEQ Officer by advising on the legislative and Development Consent requirements applicable to operations. Other responsibilities include:

- measuring operational data, assessing trends and facilitating review;
- setting KPI's and generating reports outlined in section 2.2 of the OEMP
- authoring and amending the OEMP and sub-plans, and
- liaising with SICTL management and external stakeholders to determine compliance requirements.

7.1.3 National HSEQ Manager (Environmental Representative)

The National HSEQ Manager is responsible for giving overall guidance to the operational staff, HSEQ Management team and SICTL management on the HSEQ Management System which includes the OEMP and its sub-plans. The National HSEQ Manager is also responsible for ensuring adequate HSEQ resources are available to SICTL. Currently, the National HSEQ Manager is the approved Environmental Representative.

7.1.4 Terminal Manager

The Terminal Manager is the central point of co-ordination between the HSEQ Officer and the general operational staff such as Shift Managers, Plant Operators and also the shipping lines. The Terminal Manager controls all operations of the SICTL Terminal and ensures that the HSEQ resources are being used effectively.

7.1.5 Work Crews and Plant Operators

The SICTL workforce is responsible for understanding the purpose of this sub-plan and the controls specified in it. Working together with the HSEQ Officer, the workforce will implement this sub-plan in their daily work activities.

8 Identification of Stakeholders

8.1.1 Internal Stakeholders

Internal stakeholders are involved with the operation of the Terminal in some way and have an interest in the successful implementation of the controls listed in section 5.1. Most internal stakeholders are under the direction of Hutchison Ports Australia, a list is given below:

- HPA Corporate (the Executive Management Team);
- HSEQ Department;
- SICTL Management at the Terminal;
- SICTL Maintenance Department;
- Operations Personnel ;
- Contractors, and
- Customers (Shipping Lines).

8.1.2 External Stakeholders

External stakeholders are groups or organisations who are affected by or involved with the operation of the Terminal through consultation, communication or approval. Most external stakeholders are government organisations, a list is given below:

- The local community;
- The Operational Community Consultative Committee;
- Randwick City Council;
- Botany Bay City Council;
- NSW Ports;
- NSW Roads and Maritime Services;
- NSW Department of Planning and Infrastructure, and
- NSW Office of Environment and Heritage/ EPA.

8.2 Consultation with Stakeholders

8.2.1 Ongoing consultation

SICTL will consult with the various stakeholders in different situations where their involvement is appropriate and will cultivate a pro-active and reactive relationship for dealing with complaints. Complaints from stakeholders will be handled in accordance with section 4.6.4 and 4.6.5 of HSEQ5.1.7 Operational Environmental Management Plan. Under this sub-plan, the primary external stakeholder is the Operational Community Consultative Committee which includes representatives from the local community and Botany Bay City Council.

8.2.2 Key Personnel Contact Details - SICTL

Name	Position	Contact number
Toll Free Hotline	SICTL Community Information Line	1800 472 888
George Stinson	HSEQ Officer, SICTL	0448 343 963
John Ieroklis	Environmental and Safety Compliance Engineer	0458 009 650
Trevor Ballantyne	National HSEQ Manager, HPA and Environmental Representative	0420 961 877
Keith Glass	Terminal Manager, SICTL	0477 004 262

9 Referenced Documents

- Instrument of Development Consent DA-494-11-2003-i - Schedule C Terminal Operations (NSW Department of Planning)
- Port Botany Expansion Environmental Impact Statement, URS Australia, 2003
- Australian Runoff Quality, Engineers Australia, 2006
- *Approved Methods for the Sampling and Analysis of Water Pollutants in New South Wales* (EPA 1998).
- HSEQ1.1 HSEQ Policy Statement
- HSEQ2.2.1 Hazard and Improvement Opportunity Reporting Procedure
- HSEQ5.1.7 Operational Environmental Management Plan (OEMP) – SICTL
- HSEQ11.4 Compliance Auditing Policy
- HSEQ11.4.1 Compliance Auditing Procedure

10 Review and Auditing of this Sub-Plan

The review and amendment of this sub-plan will be in accordance with sections 5.2 and 5.4 of the OEMP which emphasises the Environmental Risk Assessment as the 'driver' of the review process. Drawing upon the Environmental Risk Assessment for guidance on the depth of the review will help SICTL achieve the following:

- fulfilment of SICTL's commitment to continuous improvement as noted in the HSEQ1.1 HSEQ Policy Statement;
- Rectification of operational or system deficiencies identified during workplace inspections through a holistic and thorough approach;
- Transparent and straightforward auditing of HPA's systems and processes;
- changes to operations directed by management upon review of activities, incidents, monitoring data, AEMRs and KPIs can be reflected in this sub-plan, and
- Supporting SICTL and HPA's competitive market position by implementing beneficial industry trends in environmental best practice.

Detailed provisions for auditing SICTL's environmental management system such as audit scope, depth, frequency and distribution of findings are explained in section 5.2 of the OEMP. Auditing of this Sub-Plan shall be in accordance with:

- condition C 4.5 of the Development Consent;
- section 5.2 of the OEMP;
- HSEQ11.4 Compliance Auditing Policy, and
- HSEQ11.4.1 Compliance Auditing Procedure

This sub-plan will be included in the scope of OEMP Tier 3 audits and all Annual Independent Environmental Audits.

Appendix 1 – Heavy Metals Separator Units Manufacturer's Data

Appendix 2 – WaterUp System Manufacturer's Data