

Victorian Desalination Project

WATERSURE

Environmental Management Plan

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Definitions and Acronyms

AquaSure	The proponent for the Victorian Desalination Project
CFA	Country Fire Authority
CIP*	AquaSure Community Involvement Plan
Client	Victorian Desalination Project Division of Department of Environment, Land, Water and Planning, AquaSure's client
Close-out*	When the balance of D&C activities, remaining after Commercial Acceptance, have been completed in accordance with the Project Deed
Close-out works*	While construction will be largely complete, some construction items will require to be completed after the plant has started delivering desalinated water. These items are the close-out works
CMMS	Computerised Maintenance Management System
Commercial Acceptance*	The stage when most of the D&C activities are complete and the Desalinated Water Supply System is able to be safely operated. This will be achieved between Preliminary Commercial Acceptance and Reliability Test Finalisation.
Commissioning	Commissioning is the program of activities to test and run-in the plant so that it can become fully operational
Connected Water Authority*	A Water Authority whose water supply system is directly connected to the Desalinated Water Supply System
Contractor	The AquaSure appointed D&C Contractor (Thiess Degrémont Joint Venture) and the O&M Contractor (Degrémont Thiess Services Joint Venture)
D&C	Design and Construction
D&C activities*	Design and construction of the marine intake and outlet structures, desalination plant and facilities, and utilities (transfer pipeline and power supply), including commissioning.
D&C Contractor	Thiess Degrémont Joint Venture
Defects liability period*	This is the period after the completion of the works during which the D&C Contractor is responsible for any defects. The period is specified in clause 24.6 of the Deed and is generally 24 months.
DEECA	Department of Energy, Environment and Climate Action (Formerly DELWP Victorian Department of Environment, Land, Water and Planning)
DMPF	Dual Media Pressure Filter
DPCD	Victorian Department of Planning and Community Development
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DWSS*	Desalinated Water Supply System, including the Desalination Plant, Transfer Pipeline and Power Supply (until the Electricity Handover Date when the Electricity Transmission and Connection Assets are handed over to the State or its nominee such as the Electricity Operator)
EA	Environmental Auditor is a joint appointment of the State and AquaSure (under the Letter Agreement regarding IREA transition arrangements, dated 6 October 2020) to verify and audit that project activities are in accordance with the Project Deed.
EES	Environment Effects Statement
EIRP	Environmental Incident Response Plan
Electricity Handover Date*	The O&M Transition Date, when the Electricity Transmission and Connection Assets are handed over to the State or its nominee such as the Electricity Operator
Electricity Interim Operator*	The third party appointed by the State to provide interim operation services to the Electricity Handover Date. The Electricity Interim Operator and the Electricity Operator may be the same entity.
Electricity Operator*	The third party operator selected by the State to operate and maintain the Electricity Transition and Connection Assets from the O&M Transition Date (Electricity Handover Date).

EMP*	Environmental Management Plan
EMR*	AquaSure Environmental Management Representative
EMS*	Environmental Management System
Environmental Requirement*	As per Appendix S3 to Annexure 3 of the Project Deed
EPA	Environment Protection Authority
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)
ETCA*	Electricity Transmission and Connection Assets
Expiry date*	The date after the Date for RT Finalisation that is: a) 27 years and 3 months; plus b) the aggregate period of any extensions of time to the late RTF.
Gigalitres (GL)	Billion litres
HVAC	High Voltage Alternating Current
IMS	Watersure Integrated Management System
IREA	Independent Reviewer & Environmental Auditor (IR&EA) is a joint appointment of the State and AquaSure (under Clause 8 of the Project Deed) to verify and audit that project activities are in accordance with the Project Deed.
ISO 14001	AS/NZS ISO 14001:2015 Environmental Management systems – Requirements with guidance for use
O&M	Operation and Maintenance
O&M Contractor	SUEZ Water Pty Ltd and Ventia Utility Services Pty Ltd together trading as Watersure (Watersure) as the O&M Contractor for the Desalination Plant and Transfer Pipeline
O&M phase*	The Project Deed states that the O&M phase commences following Preliminary Commercial Acceptance.
OMMP	Operational Marine Monitoring Program
O&M activities*	All things and tasks which are, or may be, required to operate, maintain or repair the Desalinated Water Supply System. The O&M Activities involve the start-up, shut-down, operation at different flow rates, inspection, planned maintenance, and incident and emergency management associated with each stage of the DWSS.
Potabilisation	Treatment of desalinated water to meet water quality standards
Power Supply*	The Electricity Transmission and Connection Assets include: <ul style="list-style-type: none"> • 220kV AC underground system and associated reactive compensation stations • underground cables including joints • connecting lines, infrastructure, communications, equipment and all other associated, systems and works between the CBTS, Booster Pump Station and the Desalination Plant • metering
PR*	Performance Requirements set out in Annexure 3 to the Project Deed
Preliminary Commercial Acceptance (PCA) *	When the Desalinated Water Supply System is able to be safely and legally operated to deliver at least 50 GL of desalinated water per year
Project	Victorian Desalination Project
Project Deed (the Deed) *	Contractual arrangement between the State and AquaSure Pty Ltd for the delivery of desalinated water from the Project to Victoria's water supply system
PS&PR*	Project Scope and Performance Requirements set out in Annexure 3 to the Project Deed
PSU	Practical Salinity Unit

Reference document*	Reference Documents includes the documents referred to in Appendix S2 (Reference Documents) to the PS&PR (Annexure 3 to the Project Deed)
Reliability Test Finalisation*	RTF or RT Finalisation is broadly when all reliability testing of the Desalinated Water Supply System is completed in accordance with the Project Deed
Reverse Osmosis (RO)	Two stages of reverse osmosis, where seawater is pushed through ultra-fine membranes under high pressure. Fresh water will pass through, leaving sea water concentrate behind.
SCADA	The Supervisory Control and Data Acquisition (SCADA) system which continuously monitors and controls the Desalinated Water Supply System.
Screen and Pump Station	An initial screening that removes fine particles including sand and sediment
State*	The Minister for Water of the State of Victoria for and on behalf of the Crown in the Right of the State of Victoria
TDJV	The AquaSure appointed D&C Contractor, Thiess Degrémont Joint Venture.
UCA	Underground Cable Asset
VDP	Victorian Desalination Project
Water Delivery Protocols*	The protocols, developed by AquaSure in consultation with the State and the Connected Water Authorities.
Watersure	The AquaSure appointed O&M Contractor for the Desalination Plant and Transfer Pipeline, SUEZ Water & Treatment Services Pty Ltd and Ventia Utility Services Pty Ltd, trading as Watersure (Watersure)

* Refer to the Project Deed for complete definitions

1 Introduction

The Operation and Maintenance (O&M) Environmental Management Plan (EMP) details the environmental management requirements to be followed during the O&M phase of the Victorian Desalination Project (VDP). The EMP recognises that, during the Design and Construction (D&C) phase of the VDP, all impacts and risks to the environment have sought to be 'designed out' with the residual environmental risk profile being low, for the following reasons:

- The VDP went through an extensive public environmental assessment process, with establishment of strict environmental standards by Ministers at both State and Commonwealth levels.
- The reverse osmosis desalination technology chosen is state of the art. It has been extensively employed and its performance demonstrated worldwide.
- The design of the marine structures is world best practice and minimises the potential footprint of the VDP in Bass Strait. The impacts of both the intake and outlet are only expected to be detectable in the immediate vicinity of the structures themselves.
- The detailed design has been reviewed by the Independent Reviewer & Environmental Auditor (IR&EA) and approved by the Environment Protection Authority (EPA).
- The construction and commissioning of the VDP was subject to continual surveillance by the IR&EA to ensure that it has been constructed and commissioned in accordance with the design.
- The electricity use of the VDP will be fully offset by Renewable Energy Certificates.
- Implementation of a comprehensive automated operating system with full, real-time knowledge of how each component of the plant is performing, including 'fail safe' (automated shutdown) for all area of the process plant that directly interact with the environment. This is supported by a detailed and systematic planned preventative maintenance program for the VDP.

There are limited opportunities for unplanned interactions between the VDP and the environment. Predominantly these are out-of-specification discharges to the marine environment and potential incidents and emergencies, such as spills at the plant site. The VDP has been designed, constructed and is to operate so that it is 'fail safe', as illustrated by the following examples:

- There are extensive monitoring and control points throughout the plant and pipeline, with adjustments made or components automatically shut down if they are not operating within set parameters. These control points are located well before any risk of out-of-specification discharge to Bass Strait. The quality of brine discharge is also monitored continuously with the ability to stop the plant immediately, either automatically or manually, if the discharge would be out-of-specification.
- In order to clean the intake structure, occasional chlorine dosing is required. This can only occur if all the procedural steps and checks are followed. If these are not correctly initiated, the dosing is unable to be initiated.
- There are valves located periodically along the length of the pipeline which allow the water in a section of pipeline to be removed and discharged to adjacent waterways. This would rarely be required, if at all. The valves would need to be manually and individually opened. In this circumstance, the protocol agreed with the EPA and Melbourne Water would be followed before any water could be discharged.
- Preventing impacts from potential incidents and emergencies has been addressed through design, as well as the environmental incident response plan. The plant has fully self-contained and banded areas for chemical storage so that, in the unlikely event of a spill, the material will be isolated and fully-contained within that area, preventing its escape to the environment.

In this context, the EMP describes the system for controlling and managing the limited and minor environmental risks associated with O&M activities. Environment external and internal issues are identified, monitored and reviewed through the EMP obligations register periodically.

Watersure activity manages the needs and expectations of interested parties - Refer to BPP-000-PL-001 Business Practices Plan Section 2.4

1.1 Scope

This EMP describes the system for minimising and managing environmental risks associated with O&M activities. This EMP has been prepared in accordance with AquaSure's Environmental Management System (EMS) Manual, with reference to the Design and Construction (D&C) EMP and ISO 14001:2015. The key purposes of this EMP are to:

- ensure that O&M activities include measures to effectively manage potential and actual impacts to the environment and community
- ensure compliance with the contractual Project Deed including the Project Scope and Project Requirements (PS&PR) for the O&M phase
- implement Watersure's Environmental Policy (i.e. the O&M Environmental Policy)
- provide certainty of delivery of the prescribed environmental outcomes for relevant O&M activities
- implement a system for legislative and contractual compliance
- establish mitigation and management measures to achieve the environmental requirements of the Project for O&M activities, having regard to the risks posed to the environment
- develop, implement and monitor management measures
- establish the environmental management requirements for subsidiary environmental management documentation including the Environmental Obligations Register, Environmental Risk Register and Environmental Monitoring Schedule.
- enable continual improvement

1.2 Application

This EMP applies to Watersure, including all personnel (i.e. all employees and contractors) employed on Watersure's behalf to undertake activities related to the O&M phase of the Victorian Desalination Project.

All personnel must comply with the requirements of this EMP.

1.3 Project Description

The Victorian Desalination Project (VDP) is located near the town of Wonthaggi, on the Bass Coast within the Bass Coast Shire, and is approximately 90 km to the south-east of Melbourne.

The O&M phase of the VDP involves three components:

- Desalination Plant
- Transfer Pipeline
- Power Supply.

A description of each component is provided in Table 1.

Figure 1. Regional location of the VDP

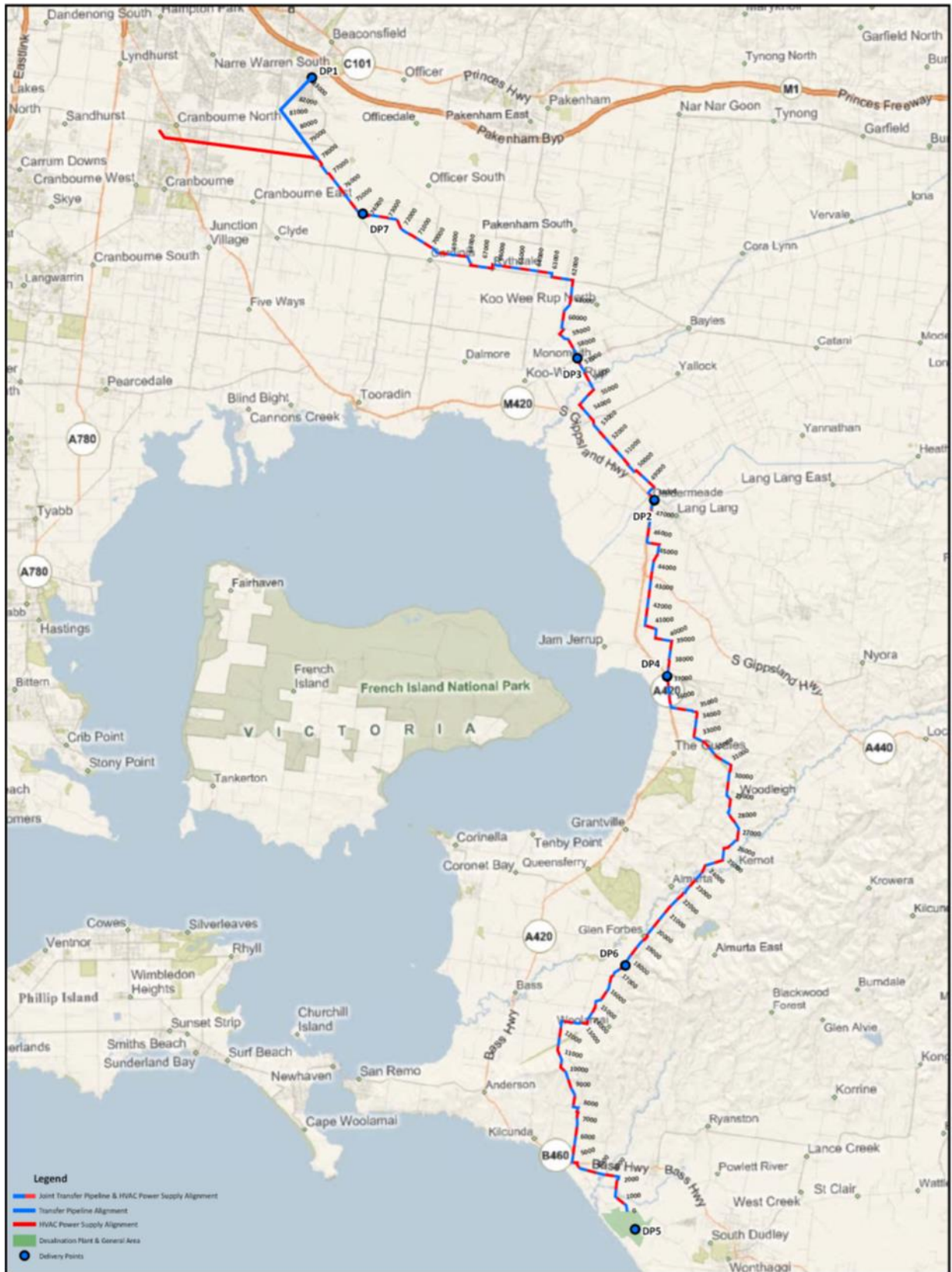


Table 1. Description of O&M components

O&M Component	Description
Desalination Plant	<ul style="list-style-type: none"> marine structures, intake tunnel and outlet tunnel Process Plant, including seawater intake pumps and screens, pre-treatment plant, reverse osmosis plant, and treated water storage buildings, roads and the coastal park (that form part of the Victorian Desalination Project)
Transfer Pipeline	<ul style="list-style-type: none"> 84 km pipeline to link to Melbourne Water's Cardinia-Pearcedale main in Berwick with associated infrastructure such as air and scour valves booster pump station approximately 75km north of the desalination plant one-way surge tanks on Kilcunda Ridge and Gurdies St Hellier Road.
Power Supply	<p>Electricity Transmission and Connection Assets (ETCA), including:</p> <ul style="list-style-type: none"> 220kV AC underground system and associated reactive compensation stations underground cables including joints connecting lines, infrastructure, communications, equipment and all other associated, systems and works between the CBTS, Booster Pump Station and the Desalination Plant metering.

1.3.1 Project Delivery Arrangements

The State has contracted AquaSure through the Project Deed to finance, design, construct, operate and maintain the Desalinated Water Supply System (DWSS) associated with the VDP. AquaSure has appointed:

- Thiess Degrémont Joint Venture (TDJV) as the D&C Contractor
- SUEZ Water Pty Ltd and Ventia Utility Services Pty Ltd, together trading as Watersure (Watersure) as the O&M Contractor for the Desalination Plant and Transfer Pipeline.

1.3.2 Transition from D&C to O&M

The Project Deed states that the O&M phase commences following Preliminary Commercial Acceptance (PCA) and that the EMP governs all O&M activities and applies to any D&C activities to the extent that they are carried out during the O&M phase. In accordance with the Project Deed, this EMP applies from PCA.

Desalination Plant and Transfer Pipeline

AquaSure retains the responsibility of ensuring that the environmental framework for the development and implementation of project specific EMPs is in accordance with Project Deed Requirements and AquaSure's EMS requirements.

The management of the Desalination Plant and Transfer Pipeline is transferred from the D&C Contractor (TDJV) to the O&M Contractor (Watersure) on the O&M Transition Date (Reliability Test Finalisation (RTF) (see Figure 2).

For the Desalination Plant and Transfer Pipeline environmental management is as follows:

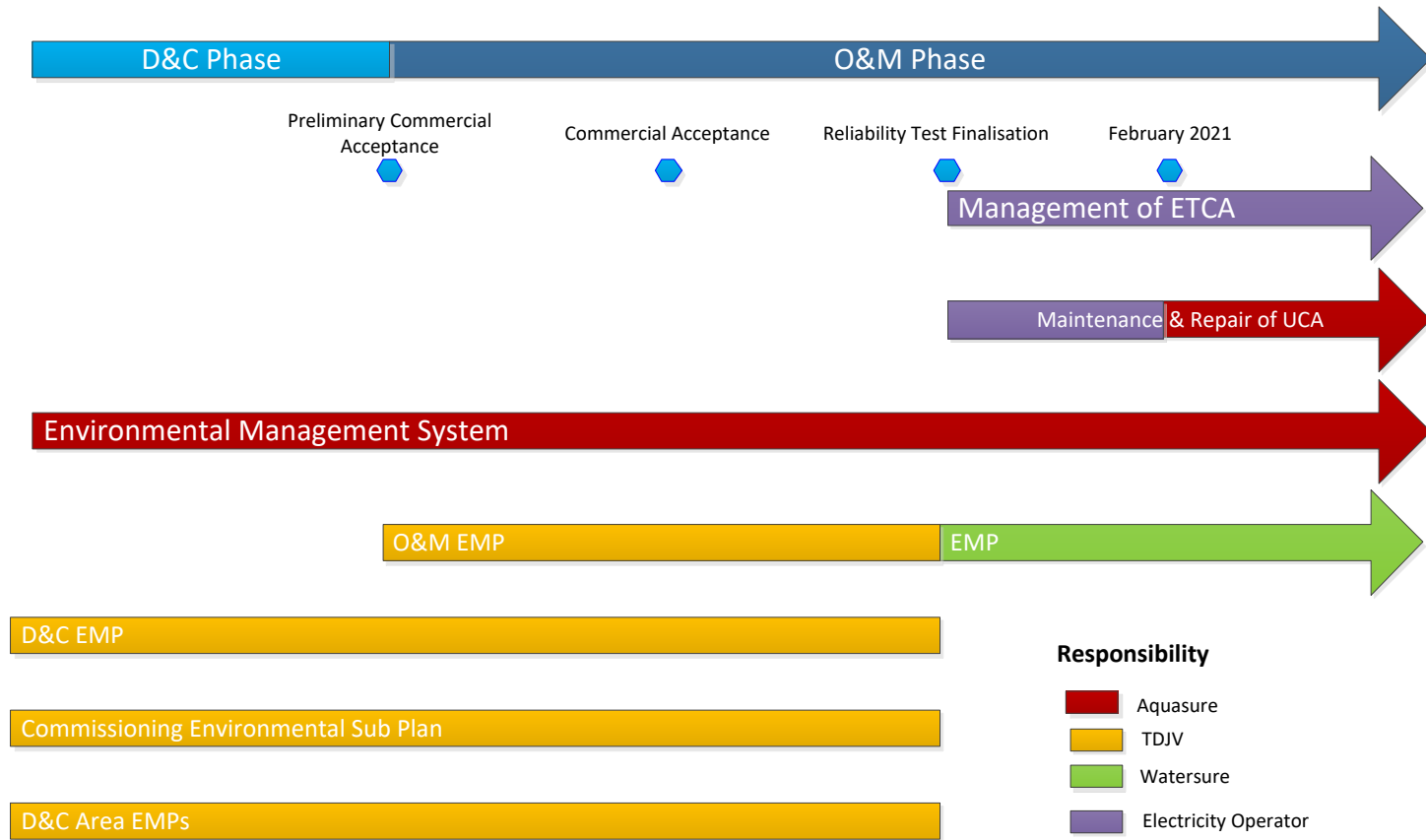
- for the period of the O&M phase following RTF until the Expiry Date, this EMP will be managed by Watersure. The approved D&C EMP and associated documents will cease. The Project and O&M activities, including any associated with close out works and the defects liability period, will be managed in accordance with this EMP (see Figure 2).

Power Supply

The Power Supply is not part of the O&M Contractor's (Watersure) scope of works.

Following the Electricity Handover Date until the Expiry Date, the electricity operator is responsible for the operation of the ETCA and the maintenance and repair of the Maintained ETCA. Since February 2021, AquaSure is responsible for the maintenance and repair of the Underground Cable Assets. Therefore there are two separate EMPs.(see Figure 2).

Figure 2. Environmental management in transition from D&C to O&M



2 Operation and Maintenance

2.1 O&M Activities

The O&M activities are the tasks required to operate, maintain and repair the DWSS, where:

- Operation of the DWSS is to, at all times, monitor, control and operate the system to ensure Desalinated Water complies with the Project Deed, including the Desalinated Water Quality Specifications, and any risk management strategies required by a Connected Water Authority and detailed in the Water Delivery Protocols.
- Maintenance of the DWSS is the routine inspection and monitoring of the condition of assets, planned routine maintenance and refurbishment work, and unplanned intervention and repair of the system.

The O&M activities involve managing the mechanical, electrical, chemical and control systems of the DWSS, as well as operating and maintaining the ancillary infrastructure such as the Green Roof, buildings and roads, and coastal park (that form part of the Victorian Desalination Project).

For the purposes of this EMP, the O&M activities will be managed in accordance with the responsibilities identified in Table 2.

Table 2. O&M components and management responsibility

O&M Component	Contractor responsibility	
	PCA to RTF	From RTF
Desalination Plant	D&C Contractor (TDJV)	O&M Contractor (Watersure)
Transfer Pipeline	D&C Contractor (TDJV)	O&M Contractor (Watersure)
Power Supply	D&C Contractor (TDJV)	From the Electricity Handover Date, the Power Supply is not covered by this EMP (Refer to Section 1.3.2)

The DWSS is summarised in Figure 3. The O&M activities involve the start-up, shut-down, operation at different flow rates, inspection, planned maintenance, and incident and emergency management associated with each stage in the DWSS, including:

- **Seawater Intake** – raw seawater is screened through static coarse screens to remove naturally occurring debris and entrained marine biota, prior to the pre-treatment process
- **Screen and Feed Pump** – the seawater lift pump station will lift the seawater from sea level, up to a level at which the seawater will move through the pre-treatment plant by gravity. The resulting screenings waste can either be sent to the sludge treatment process or segregated, dewatered and transported to an appropriate offsite waste facility
- **Dual Media Pressure Filter** – the seawater will then be conditioned to coagulate and flocculate naturally occurring, suspended solids and organic material for removal in the pre-treatment filters. The filter system will consist of Dual Media Pressure Filters and cartridge filters. Following periodic cleaning of the filters, the resulting liquid pre-treatment waste (filter backwash) will be recycled to the head of the Plant and the solid sludge transported to an appropriate offsite waste facility
- **Reverse Osmosis** – the desalination process will separate dissolved minerals (i.e. salts) out of the filtered seawater. Reverse Osmosis technology will be employed which involves a two pass system of ‘pumping’ water through a selective membrane under high pressure. Around half the intake water is extracted as freshwater, the other half (known as the return water) is concentrated as brine (about twice the concentration of seawater) and is approximately 65 PSU (practical salinity unit) which is discharged to the ocean via the two outlet structures. Chemicals added in the treatment process will be neutralised before being discharged to the ocean.
- **Post Treatment** – following desalination the water will be treated with carbon dioxide and lime, chlorination and fluoridation to make it suitable for drinking. The resulting post-treatment waste (lime sludge) is sent to the sludge treatment process

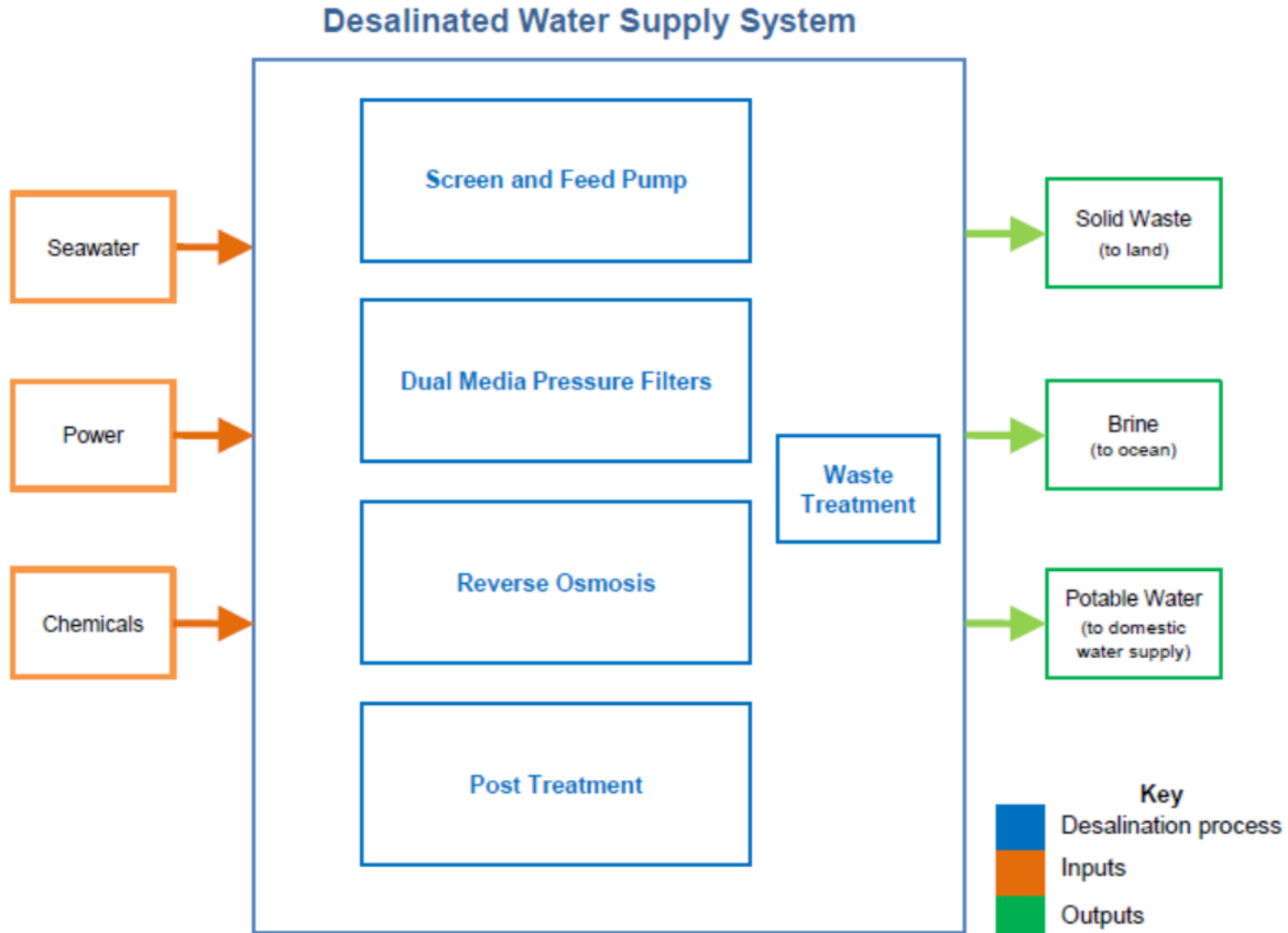
- **Treated Water Storage** – the treated water is sent to large on-site water storage tanks
- **Transfer Pipeline** – the treated water is pumped via pipeline to Melbourne Water's Cardinia Reservoir.

The flow rates through the DWSS (extracted seawater, desalinated drinking water and saline discharge) will vary from one time interval to another due to operation and maintenance requirements, electricity grid load, requirements imposed by the connected Water Authority, and the flexibility for water supply, where the State can order up to 150 GL per annum.

The DWSS is designed as a modular system that can operate efficiently and effectively across this range of flow rates. In addition, the system-wide redundancy allows equipment to be maintained without impacting on the efficient and effective operation of the DWSS across this range of flow rates. The O&M activities, and so this EMP, allow for this variation in flow rates.

During normal operations the plant discharge water quality is expected to be relatively consistent with flow rate being the primary variable. During certain low frequency operational conditions and off-specification flows there will be different discharge qualities which will primarily relate to lower salinities, changes to flow rates and other parameters such as pH.

Figure 3. Desalinated Water Supply System



2.2 Environmental Context and Significant Environmental Aspects

2.2.1 Environmental Impact Assessment

The Victorian Desalination Project was subject to an Environment Effects Statement (EES), which assessed the potential social, economic and environmental impacts of a reference project, variations and options. This EES assessment process provided the basis for Commonwealth and Victorian environmental approvals and led to the development of Performance Requirements (PRs) and the role of the Independent Reviewer and Environmental Auditor (IR&EA), which are included in the Project Deed between the State and AquaSure (see Figure 4).

The EES involved 80 specialist studies including for flora, fauna, cultural heritage, hydrology, landscaping, design and visual impact analysis, geotechnical and marine based investigations, and social impact research.

The EES indicated that there are many social and economic benefits for local areas and that potential environmental impacts are generally short-term and limited to the period of construction.

The EES and EPA Works Approval Application (necessary as desalination plants are defined as scheduled premises, refer to section 3.1.1) were publicly exhibited for 30 days and community members were invited to review the EES and provide comments. About 400 public comments were received.

An Inquiry was held, involving a 15-day public hearing where the panel heard submissions from 20 community groups, five councils and 74 individuals.

As part of this process, the Department of Planning and Community Development appointed an Independent Expert Group to provide advice on the design and soundness of key studies. The Independent Expert Group found that the EES scope and approach made it unlikely that significant and unexpected marine impacts would occur.

The Inquiry concluded that it was confident that the VDP would result in significant benefits to the State, subject to implementation of the Environment Management Framework and Performance Requirements, which should ensure effective management of the environmental effects of the Project.

The Minister for Planning, in his assessment, accepted the EES, stating that environmental impacts could be minimised or offset to acceptable levels through the application of strict requirements.

The Project was subject to Commonwealth and Victorian environmental approvals, in particular:

- A Works Approval issued by the EPA, as it was satisfied that the proposed works met the requirements of the *Environment Protection Act 1970 (Vic)* and were consistent with the relevant state environment protection policies.
- Approval from the Commonwealth under the *Environment Protection and Biodiversity Conservation Act 1999*.

Following from this process, Performance Requirements (PRs) were finalised. The PRs define the minimum environmental performance required for the Project to ensure that it will deliver on the environmental expectations of the community and key stakeholders. The PRs have been transferred into the Project Deed (Appendix S3 to Annexure 3) between the State and AquaSure and are a requirement of the Watersure contract with AquaSure.

In addition, the State and AquaSure have jointly appointed an IR&EA to oversee the design, construction and environmental management of the Project, including to provide assurance for the environmental performance of O&M activities of the Desalinated Water Supply System. Since the end of the IR&EA period on 30 June 2020, the EA is responsible for providing assurance the environmental performance of the O&M activities are in compliance with the Project Deed.

AquaSure's Environmental Management System and the Contractors' Environmental Management Plans ensure that the Performance Requirements and O&M activities are planned and performed so that environmental effects are either avoided or minimised.

Figure 4. VDP environmental impact assessment



2.2.2 O&M Environmental Context

The EES included an environmental risk assessment process (described in detail in Volume 1, Chapter 5 of the EES and in the Risk Assessment Report (Maunsell 2008, Technical Appendix 6 of the EES)).

With regard to the O&M activities for the DWSS, the EES environmental risk assessment found:

- **Marine Structures** – operation could have some longer-term effects on the marine environment, although the impacts of both the intake and outlet were only expected to be detectable in the vicinity of the Marine Structures. The removal of some eggs and larvae by the intake is one likely impact on the marine environment, but only a small proportion of larvae were predicted to be removed by the intake.

The PRs were developed to provide an environmental framework for managing potential impacts of the Marine Structures during operation. A suite of PRs were developed, applicable to the marine environment to limit entrainment of marine biota, limit impacts on the ecology of continuous high relief reef, minimise restrictions on commercial fishing and marine tourism activities and minimise, to the extent practicable, impacts on marine flora and fauna from Project activities. The PRs also require activities such as modelling, management and monitoring to validate the final design against PRs and requirements of the EPA.

- **Desalination Plant** – operation will be in accordance with strict environmental standards, with regular maintenance activities to prevent disruption to operation. The reverse osmosis technology that will be implemented is well known and state of the art and is expected to have a minimal impact to the surrounding environment and community. The plant control system is full automated and designed to be 'fail safe' for all aspects that have the ability to interact with the surrounding environment.

- **Transfer Pipeline** – following rehabilitation and establishment of the easement, the Transfer Pipeline was expected to cause little to no impact on the surrounding environment and community. There may be disturbance from noise to residents near the booster pump station. However, noise and vibration will adhere to EPA guidelines and the pump station housing will be acoustically designed to further minimise noise and vibration outside the station. No issues have been identified to suggest that the Transfer Pipeline will have any lasting detrimental effect on the environments through which it runs or on the social or economic life of its surrounding communities.

The EES environmental risk assessment was appropriately undertaken on the reference project, variations and options developed in the EES. In the period since, TDJV finalised the design and constructed the Project incorporating the requirements of the Project Deed, including environmental management being in accordance with the PRs. This was also verified by the IR&EA as part of project completions for the D&C phase.

In addition, following from the conditions in the Works Approval the EPA:

- Approved the construction of the Marine Structures. As part of this Works Approval assessment the EPA was provided with the final plans and specifications, results of a biological survey, hydrodynamic modelling and a toxicity assessment supporting the final location of the Marine Structures.
- Advised that the design met the EPA performance requirements relating to noise emissions. As part of this assessment the EPA was provided with noise propagation modelling, site plans and equipment specifications.

From an environmental management perspective, the key operational difference between the reference project and finalised design is the substitution of sodium hypochlorite for the reference project's liquefied chlorine gas. This greatly reduces the risk of chemical release and means the Desalination Plant is not classified as a Major Hazard Facility.

Aside from this improvement, the existing conditions and potentially significant environmental risks are consistent with those identified in the EES and are summarised in the AquaSure EMS Manual. The significant environmental aspects associated with the O&M activities have been determined using the reference documents, additional investigations and description of O&M activities (provided in Section 2.1).

A detailed environmental risk assessment of the O&M activities has been applied (refer to section 3.2.2). This environmental risk assessment involved rating:

- **Post-D&C Phase Raw Risk** – a raw risk rating that recognises the design, installation and verification of existing D&C phase controls, such as engineered preventative and control measures.
- **Residual Risk** – a residual risk rating that recognises the additional O&M controls, particularly the specifications from the relevant O&M Manuals.

The purpose of the environmental risk assessment is to capture the risks related to O&M activities. The inclusion of the existing controls associated with D&C phase design, construction and verification, when considering the raw risk, recognises that the Project has sought to 'design-out' unacceptable impacts and risks to the environment, in accordance with the Performance Requirements. Therefore, due to the project design, the overall environmental risk associated with O&M activities is low.

The O&M controls ensure the residual environmental risk associated with the operation and maintenance of the DWSS is appropriately managed. The DWSS operations are continuously monitored and controlled by the Supervisory Control and Data Acquisition (SCADA) system which provides the operator interface, including data trending and alarming. When a parameter diverges from its set point, the control system automatically corrects the process to remain within the operating range. If the parameter still exceeds the operating range or if its trend is likely to do so, an alarm is automatically sent to the operator requesting a corrective action. If the corrective action is not effective or if no corrective action is taken by the operator, the control system will automatically shut down the system (or part of it) to prevent any negative effects on the process, asset or environment.

The DWSS process control and monitoring is complemented by the following:

- Routine manual sampling and analysis program.
- Routine maintenance, checks and calibration of all instruments and equipment as specified by the Computerised Maintenance Management System (CMMS).
- Routine operation inspections and monitoring.
- All systems and procedures are documented and specified in the O&M Manuals.

All the DWSS operational personnel receive continuous training to ensure their competency for all related activities is verified.

The O&M controls, coupled with the D&C phase design, construction and verification, ensure the O&M activities are delivered in accordance with the Performance Requirements, minimising the environmental impact of the DWSS.

This is demonstrated in the environmental risk assessment (Attachment 3), where all O&M activities have a low residual risk (refer to section 3.2.2).

2.3 Environmental Policy

Watersure is committed to achieving sustainable outcomes from the O&M activities of the Victorian Desalination Project, by managing these in an environmentally sensitive manner and preventing pollution for the benefit of our employees, client and the community. Continual improvement in environmental performance will be achieved by setting objectives, measuring progress and communicating results.

The O&M activities will comply with the AquaSure, SUEZ and Ventia environmental policies. These policies are available on the respective organisations' websites. Watersure's Environmental Policy (Attachment 1) has been developed to give effect to these policies. Watersure's Environmental Policy will be available on the AquaSure website, prominently displayed at all O&M work sites and communicated to staff and other interested parties via inductions and ongoing awareness and training programs.

This EMP provides the tools to fulfil these policies.

2.4 Environmental Objectives

The overarching environmental objective for the O&M activities is to work with our employees, client and the community to achieve sustainable outcomes through continual improvement in our environmental performance, in particular to:

- Comply with all environmental legislation, approvals and standards established for the O&M activities.
- Be a good neighbour, to actively engage with the community about O&M activities to understand and resolve any concerns, particularly in relation to noise and air quality.
- Minimise energy consumption, including achieving a specific energy consumption for the desalination process that is less than 4.6KWh/kL on an annual average basis.
- Minimise water use, including achieving a minimum water conservation target of 2A for offices and associated facilities, and reusing or recycling water where practical, such as harvesting rainwater to supplement supply for non-potable uses such as toilet flushing, cooling tower and irrigation.
- Develop annual measurable targets for energy, water and chemical use, and waste reduction and detail how these will be achieved in an action plan. The Management Review will consider the extent to which these targets have been met. This will be included in the Annual Report.

2.5 Performance Requirements

The performance requirements (PRs) specified in the PS&PRs have been set as more detailed Project obligations, particularly Appendix S3 Environmental Requirements to Annexure 3 Project Scope and Project Requirements.

The overarching environmental obligations for the Project are stated in the Project Deed as to:

- I. Minimise the environmental impact of the Project through design and appropriate risk management and mitigation measures and in particular, to minimise adverse impacts on the coastal and marine environment from construction activity, visual intrusion, noise and waste discharge and disposal.
- II. Protect the beneficial uses of the coastal and marine environment, including the landscape and recreational values of the adjacent coastal reserve.
- III. Optimise energy efficiency and ensure that 100% of the electricity used in operating the Desalinated Water Supply System will be offset by the purchase of renewable energy credits.

3 Planning

3.1 Environmental Obligations

The Environmental Obligations Register (Attachment 2) identifies all Commonwealth and State environmental requirements (legislation, approvals, licences, permits and policies), and the Project Deed requirements relevant to the O&M activities and is used to track compliance with environmental obligations and requirements.

Watersure will maintain access to an appropriate online update service in order to maintain applicable legal and other relevant requirements and the Environmental and Systems Specialist is responsible for determining how these requirements apply to its environmental aspects.

The Environmental and Systems Specialist is responsible for managing the approvals process for O&M activities related to the Desalination Plant and Transfer Pipeline.

Watersure will submit new or revised licences, permits or approvals to the AquaSure Environmental Management Representative (EMR), who in turn will forward these to the State. Issues relating to problems with compliance with statutory approvals will be notified promptly to AquaSure, in addition to the reporting requirements in Section 3.2.6.

The Environmental and Systems Specialist is responsible for regularly updating and maintaining the Environmental Obligations Register. The Environmental and Systems Specialist will use the Obligations Register to track ongoing performance against obligations, including being able to:

- Describe the obligation's relevance to the O&M activities.
- Identify the relevant approval holders.
- Refer to the document where the obligation was obtained.
- Reference the regulatory body which will govern regulatory compliance for the particular obligation.
- Describe how the obligations have and will be complied with by defining the document which details the compliance measure or the specific action that closes out the obligation.
- Define how compliance will be monitored.

A working copy of the Obligations Register, which includes means to comply with each obligation, permit or approval, will be completed by the Environmental and Systems Specialist on a monthly basis to track progress against the requirements. The current working version is available on the Project's document management system.

3.1.1 EPA Requirements for Scheduled Premises

In accordance with the Environment Protection (Scheduled Premises and Exemptions Regulations) 2007, water desalination plants with a design capacity to process more than 1 Million litres per day of feed water are defined as a scheduled premises and are subject to the works approval and licensing provisions of the *Environment Protection Act 1970* (Vic). As a result, the VDP required a Works Approval and Section 30A Commissioning Approvals from the EPA, prior to the EPA issuing a waste discharge Licence for the ongoing operation of the desalination plant.

Watersure complies with the requirements of the relevant Works Approval, 30A Commissioning Approvals and EPA Discharge Licence through implementation of this EMP. As these are revised and issued, this EMP will be reviewed and updated accordingly. The Environmental and Systems Specialist will track ongoing performance against these requirements (including the Operational Marine Monitoring Program (OMMP) as discussed in Attachment 4) and detailed in the monthly report.

3.2 Environmental Management Framework

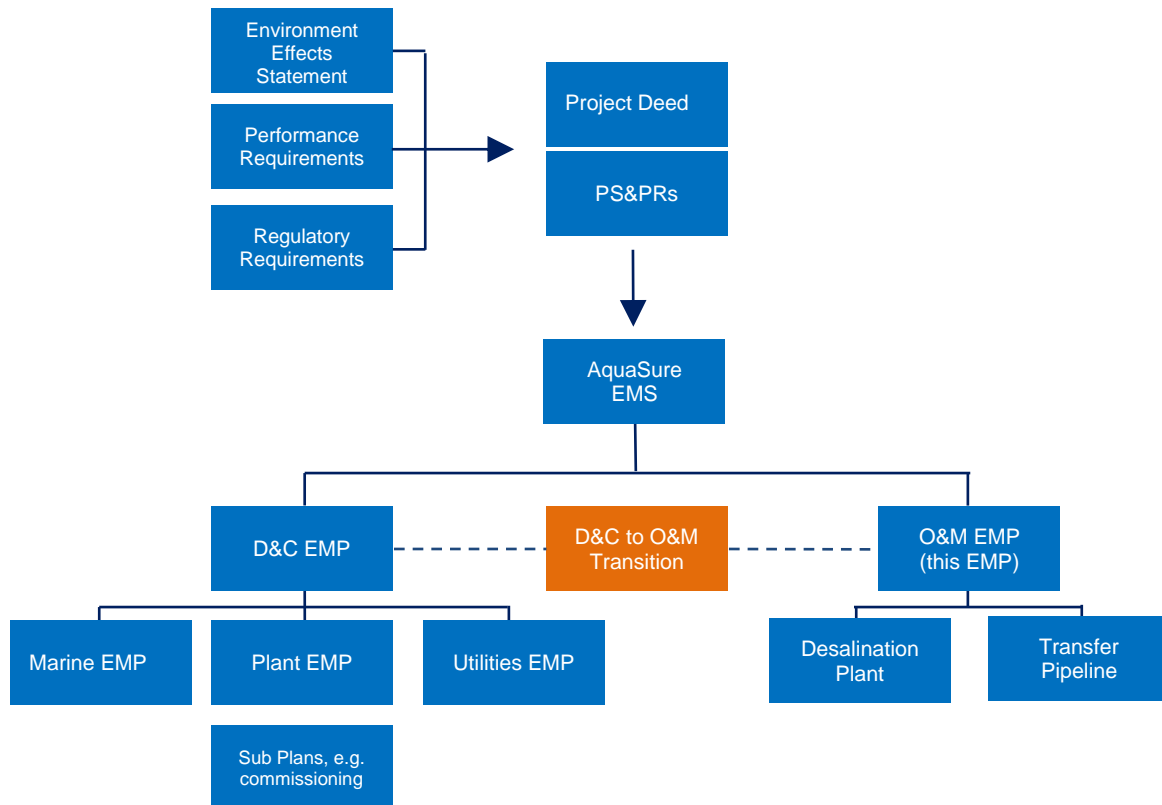
This EMP has been prepared in accordance with AquaSure's EMS Manual. AquaSure's EMS Manual describes the Project development and approval process. The Project was subject to an EES in Victoria and to approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The fundamental output from the EES process was the establishment of the Performance Requirements (PRs) for the Project. The PRs define the minimum environmental performance required for the Project to ensure that it will deliver on the environmental expectations of the community and key stakeholders.

The PRs, as amended by the Inquiry and the Minister for Planning’s assessment and the EPBC Act approval, have been transferred into the Project Deed (as Annexure 3) between the State and AquaSure and are a requirement of the contract with AquaSure.

AquaSure has developed the Environmental Management Framework to deliver the environmental PRs, as shown in Figure 5.

Figure 5. Environmental Management Framework



3.2.1 Environmental Management Plan

This EMP links to the Watersure Integrated Management System (i.e. the whole of Project O&M Management System), as illustrated in Figure 6.

Figure 6. Watersure Integrated Management System

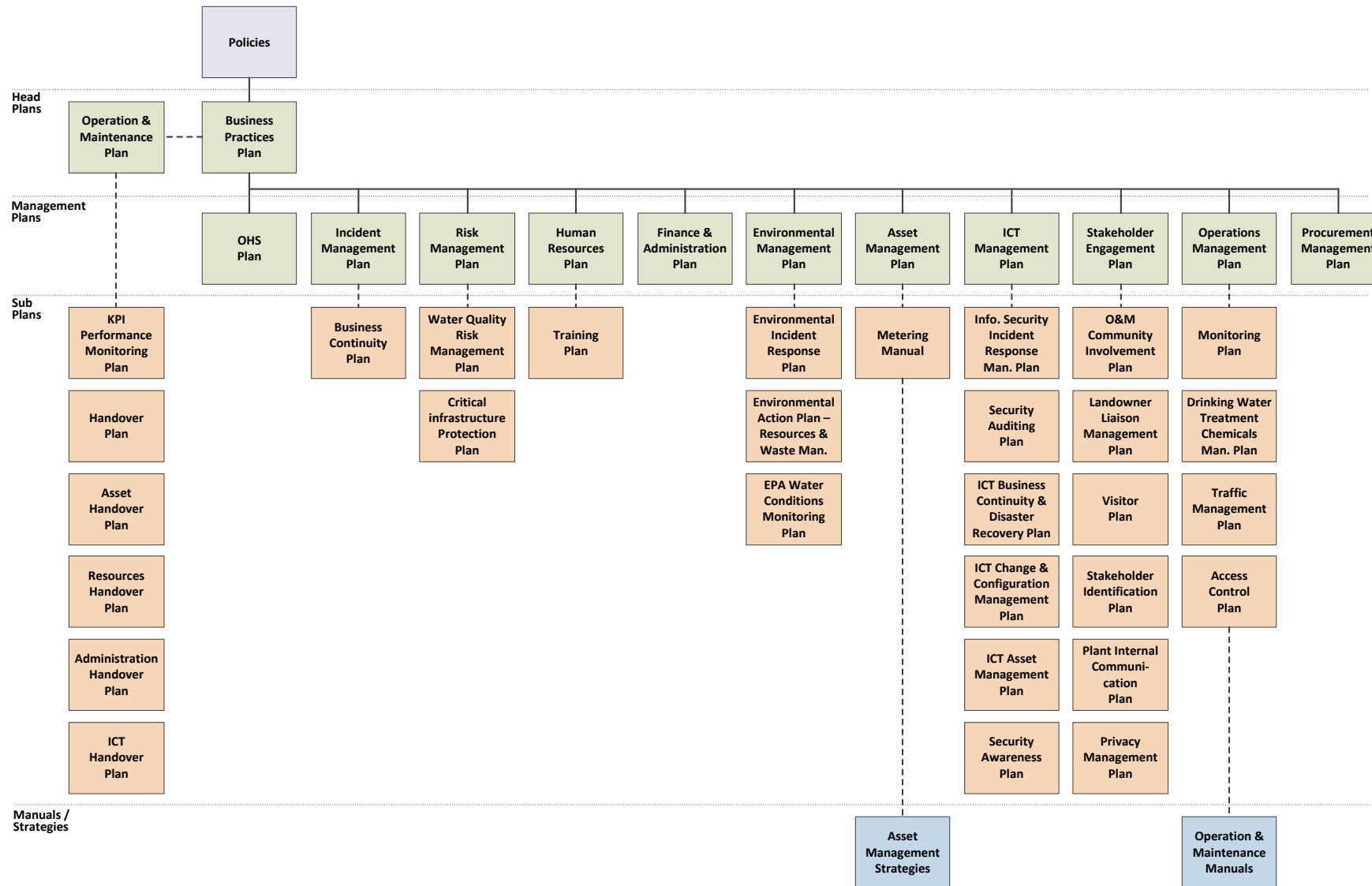


Figure 7. O&M Environmental Management Document Structure

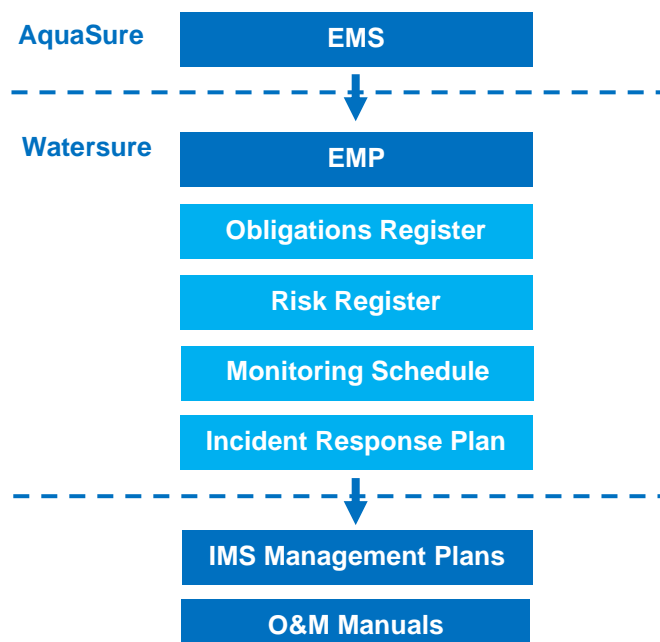


Figure 7 shows the structure of the EMP documentation, including how the Environmental Risk Register, Environmental Monitoring Schedule and Environmental Incident Response Plan integrate into the relevant O&M Manuals (where the operating procedures are located), and relevant O&M management plans such as the Stakeholder Engagement Plan and Traffic Management Plan (as identified in Figure 6).

3.2.2 Actions to address Risks and Opportunities

The EES environmental risk assessment process is described in detail in Volume 1, Chapter 5 of the EES and in the Risk Assessment Report (Maunsell 2008, Technical Appendix 6 of the EES) and summarised in the AquaSure EMS Manual.

The EES environmental risk assessment was appropriately undertaken on the reference project, variations and options developed in the EES. In the period since, TDJV has finalised the design and constructed the Project in accordance with the requirements of the Project Deed, including environmental management being in accordance with the PRs. This has been verified by the IR&EA. In addition, the conditions of the EPA Works Approval have been met.

The environmental aspects and impacts of O&M activities are identified through the Project risk management process, which complies with ISO 31000:2018 “Risk management – Principles and guidelines” and the relevant corporate requirements of SUEZ and Ventia. The process is documented in the Watersure Risk Management Plan and includes continual review of risk throughout the life of the Project. The methodology applied is consistent with that described in the Risk Management Plan with the following variation, the environmental risk consequence level definitions in the environmental risk analysis contain more detail to enable appropriate classification of environmental risks.

The environmental risk assessment was developed with input from relevant Watersure and TDJV personnel. This considered the environmental risks for each O&M activity and across the DWSS, the potential environmental hazard resulting from those activities and the potential environmental impacts.

The likelihood and severity of the post-D&C phase raw risk is then determined (using the rating system in Attachment 3), recognising the design, installation and verification of existing D&C phase controls, such as engineered preventative and control measures (e.g. deliberate modularisation of the Desalinated Water Supply System that allows for efficient transitioning between production rates).

The risk register then identifies appropriate controls for O&M activities to manage this post-D&C phase raw risk, including reference to the relevant O&M Manuals and management plans (refer to section 3.2.3). The likelihood and severity of the residual risk is then determined (using the rating system in Attachment 3) (see Figure 8).

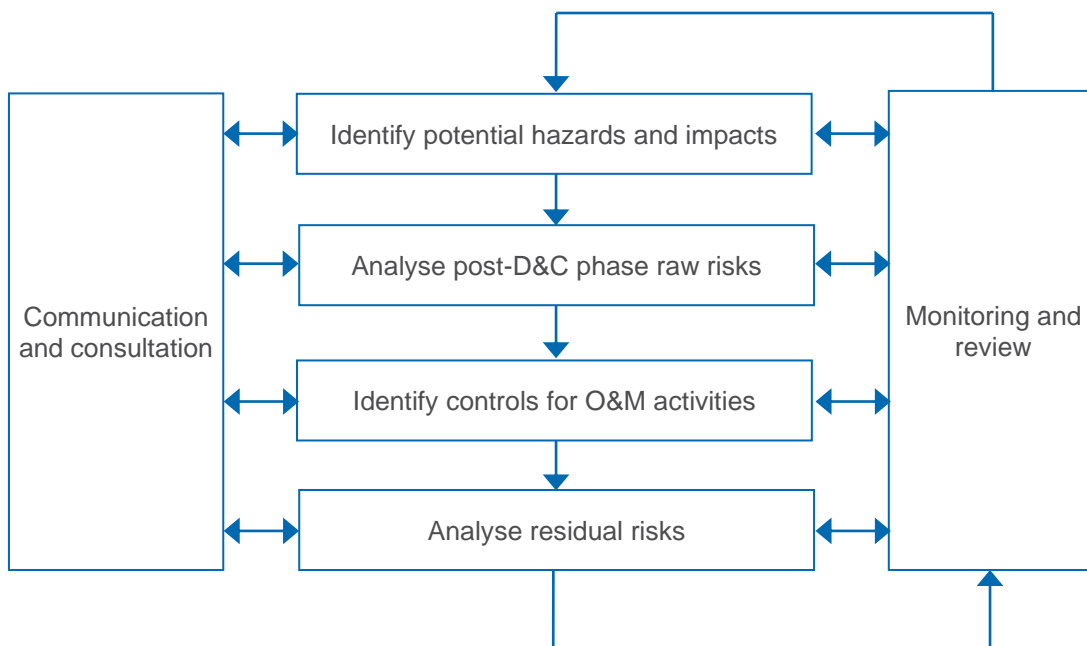
The purpose of the environmental risk assessment is to capture the risks related to O&M activities. The inclusion of the existing controls associated with D&C phase design, construction and verification when

considering the raw risk recognises that the Project has sought to 'design-out' unacceptable impacts and risks to the environment, in accordance with the Performance Requirements.

In accordance with clause 4 (b) of Appendix S3 PS&PR the environmental risk assessment identifies the preventative measures required to minimise the risk of incidents and emergencies. Potential emergency situations are also identified.

The risk register will be reviewed at least annually during the O&M phase or at other times such as when new aspects or impacts are identified or new activities proposed (refer to section 3.7). This will take account of any new work or procedures, incorporate monitoring and investigation results, and any issues raised by stakeholders. Changes to the risk register will be approved by the Plant Director as per Table 5.

Figure 8. O&M risk analysis methodology



3.2.3 O&M Manuals and Management Plans

The O&M Manuals provide a process management framework for Watersure to effectively manage the DWSS processes, including for key environmental risks, effects and legal requirements.

The information and documentation related to all physical elements of the DWSS, including relevant operating procedures, are contained in the O&M Manuals, each of them dedicated to specific O&M systems based on operational and process requirements. Table 3 lists the O&M systems and associated O&M Manuals. Each manual is intended to be a stand-alone operational document which forms part of the overall O&M Manual for the plant. Each manual will consist of nine volumes (see Table 4).

This EMP has direct links to other plans in the Watersure O&M Management System (see Figure 6), such as:

- Incident Management Plan and subsidiary Crisis Management Plan
- Risk Management Plan
- Stakeholder Engagement Plan and subsidiary Community Involvement Plan
- Operation Management Plan and subsidiary Traffic Management Plan and O&M Manuals.

The Environmental and Systems Specialist will review and endorse relevant sections of the O&M Manuals and management plans to ensure that environmental controls and proposed mitigation measures in this EMP are fully embedded in the relevant documents. This contributes towards achieving the environmental objectives of the O&M activities, having regard to the risks posed to the environment (as identified in the Environmental Risk Register at Attachment 3).

During the O&M phase the EA will audit project activities to form an opinion as to whether or not the Environmental Management Plan and environmental requirements are being complied with (see Section 4.2.2).

Table 3. O&M Manual List

Manual No.	Manual Name
00	System Overview – Plant and Stream
01	Intake Structure and Tunnel
02	Pre-treatment – Sodium Hypochlorite
03	Outfall Structure and Tunnel
04	Sodium Bisulphite for RO, Outfall and Off Specification
05	Intake Process – Sea Water Lifting Pump Station (SWLPS) and Shock Chlorination
06	Intake – Sea Water Drum Screens and Macerators
07	Pre-treatment – Ferric Sulphate (Coagulant)
08	Pre-treatment – Sulphuric Acid (pH Adjustment)
09	Pre-treatment – Coagulant Aid
10	Pre-treatment Process – Dual Media Pressure Filtration (DMPF)
11	Pre-treatment – DMPF Backwash
12	Pre-treatment – Cartridge Filters
13	RO – Antiscalant
14	RO Process – 1st Pass, HP Cooling and Associated RO Process Control
15	RO – Caustic Soda
16	RO – 2 nd Pass
17	RO – CIP / Long Term Preservation / Neutralisation Tank and Membrane Test Skid
18	Potabilisation – Carbon Dioxide
19	Potabilisation – Hydrated Lime
20	Potabilisation – Fluorosilicic Acid (Fluoridation)
21	Potabilisation – Sodium Hypochlorite (Chlorination)
22	Potabilisation Process – Balancing Towers and Treated Water Storage Tanks
23	Transfer Pumps and Booster Pumps
24	Pipeline, Delivery Points and Surge Protection
25	Polymer System (Lime and Sludge)
26	Sludge – Ferric Sulphate (Coagulant)
27	Sludge Process – Densadeg (Thickening)
28	Sludge – Centrifuge and Load Out
29	Stabilisation Ponds and Chemical Sumps
30	Electrical System (HV and LV) & Emergency Power Supply (UPS and Stand-by Generation)
31	Cathodic Protection Systems
32	Plant Control System
33	Plant Management System, IT and Communications
34	Water Quality Analytical System and Instrumentation
35	Laboratory
36	Buildings and Roads
37	Green Roof and Watering System
38	Ecological Reserve
39	Compressed Air System (Service and Instrument)
40	Service Water and Potable Water
41	Drainage and Sewer System
42	Fire Protection
43	HVAC and Chilled Water Plant
44	Cooling System (VSD and Motor - RO, TPS, BPS)
45	Lighting, Security / CCTV
46	Static and Mobile Lifting Equipment

Table 4. Content of O&M Manuals

Volume No.	Volume Title	Contents
Volume 1	Process	Safety & environmental information, component lists, system description, process theory, design criteria and control philosophy
Volume 2	Operation	Safety & environmental information, component lists, operation procedure sequence, start-up procedures, normal operating procedures, shutdown procedures, isolation procedures and abnormal operation procedures
Volume 3	Maintenance	Safety & environmental information, system component list, inspection procedures, calibration procedures, maintenance/servicing (lubrication) procedures and condition monitoring procedures
Volume 4	PFD, P&ID and Calculation notes	Process Flow Diagrams, Piping & Instrumentation Diagrams and calculation notes
Volume 5	Drawings and 3D Model	Design drawings, shop drawings, vendor drawings, sketches and 3D model
Volume 6	Functional Description and Functional Analysis	Functional Description and Functional Analysis
Volume 7	Vendor Documentation	Vendor documentation
Volume 8	D&C Deliverables	Design & Construction deliverables (e.g. Design Package, Procurement Package, Inspection Test Procedure, Construction Package)
Volume 9	Training	Recommended training

3.2.4 Procurement

Procurement will be conducted in accordance with Watersure's procurement requirements, which requires the subcontract documentation and process to take account a number of considerations, including environment.

The subcontract and supplier documentation includes the relevant requirements of the O&M Contract for environment.

Evaluation of tenders, subcontractors and suppliers includes evaluation of their environmental performance, environmental factors of supplies and history.

The Environmental and Systems Specialist or delegate will assist in the environmental evaluation required during procurement processes.

3.2.5 EMP Approval and Revisions

This EMP and the attached Environmental Obligations Register, Environmental Risk Register, Environmental Monitoring Schedule and Environmental Incident Response Plan are controlled documents (refer to section 3.4). These documents will be approved and revised in accordance with the requirements outlined in Table 5. Watersure will consult relevant stakeholders on proposed revisions to this EMP. Where approval is required, this will be sought prior to implementing the change. Where approval is not required by a relevant party, they will be notified of the change and issued with a revised EMP within 14 days, in accordance with requirements outlined in Table 5.

Table 5. EMP Approval and Revision Requirements

Version	Watersure	AquaSure EMR	EA	Victorian Government
Initial version for Preliminary Commercial Acceptance	Approved by Plant Director	Approved	Review and assent	Consent of State Consent of Minister for Environment and Climate Change
Administrative revision (all changes such as to referencing or formatting)	Approved by Plant Director	Approved	Notification of change	Consent of State
Minor revision (all changes that do not alter the risk profile, reduce obligations or alter environmental performance requirements)	Approved by Plant Director	Approved	Notification of change	Consent of State
Major revision (all changes that alter the environmental risk profile, methodology and/or scope of O&M activities)	Approved by Plant Director	Approved	Review and assent	Consent of State Consent of Minister for Environment and Climate Change

3.2.6 External Notification and Reporting Requirements

Performance against this EMP and performance requirements will be reported to project stakeholders as described in Table 6.

Table 6. Environmental notification and reporting requirements

Subject	Reporting or notification	
	Project stakeholder	Timeframe
Environmental limit exceeded	State, EA, EPA and delegate of the Minister for Environment and Climate Action	Notification within 24 hours of verifying that environmental limit has been exceeded Incident report required
A pollution incident that causes or threatens to cause material harm to human health or the environment; or a prescribed notifiable incident (S.30 Environment Protection Act 2017)	State, EA, EPA and delegate of the Minister for Environment and Climate Action	Immediate notification Incident report required
Monthly Report As per the Project Deed PS&PR, Appendix S3 Environmental Requirements.	State and EA	Monthly
Annual Report As per the Project Deed PS&PR, Appendix S3 Environmental Requirements.	State and EA	Annual
Other Reports As per Project Deed PS&PR (Annexure 3) provide a copy of any report submitted	State and EA	5 days

Subject	Reporting or notification	
	Project stakeholder	Timeframe
in connection with an approval relating to the environment.		
Certificate of Compliance from AquaSure confirming that O&M activities have been undertaken in accordance with the Environmental Management Plan and Environmental Requirements	State and EA	Due to State & EA on the first business day of each calendar quarter

3.3 Organisational Structure and Responsibility

3.3.1 Leadership and Individual Responsibility

Management at all levels and supervisory personnel will lead by example and set the highest standards for environmental management.

Environmental responsibility, promotion of environmental awareness, understanding and identification of environmental hazards and the encouragement of ownership are key approaches for environmental management of O&M activities. These approaches will bolster the prevention and, where required, the prompt correction of any nonconforming conditions or behaviours leading to continual improvement.

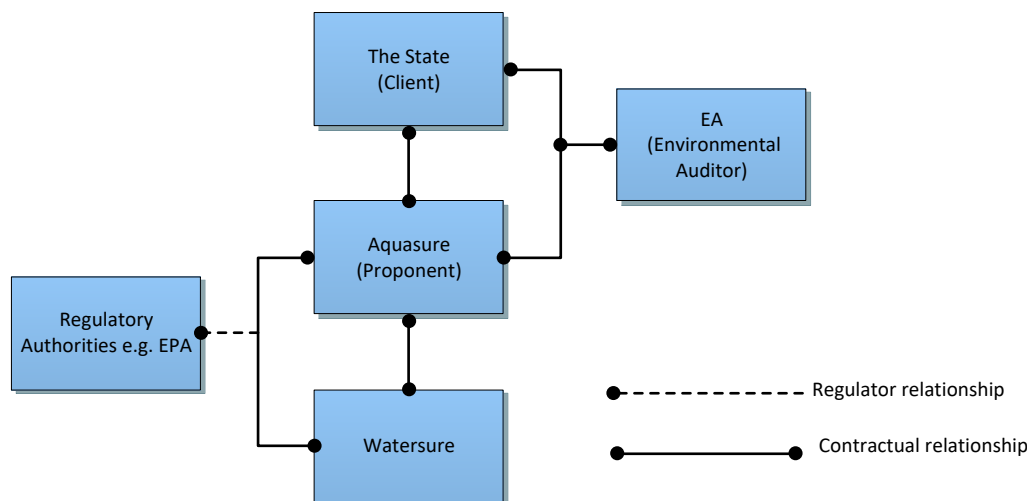
The provision of competent and qualified environmental personnel for O&M activities is critical to ensure that the PRs are achieved. The roles and responsibilities of key personnel are identified in Section 3.3.4.

Watersure is accountable to AquaSure for environmental performance.

3.3.2 O&M Organisational Structure

Watersure’s contractual and regulatory relationship with AquaSure, the State and the key stakeholders of the Project are shown in Figure 9.

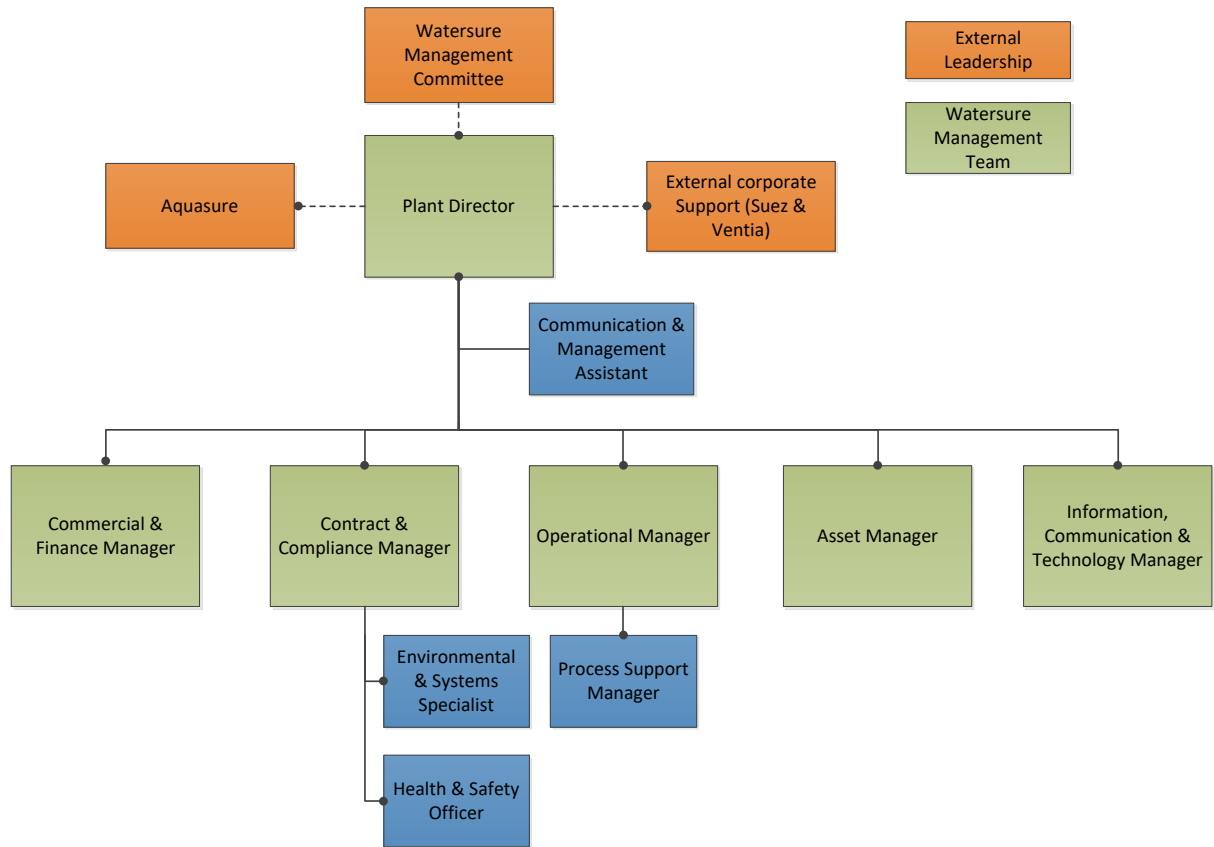
Figure 9. Environmental reporting relationships



3.3.3 O&M Leadership Structure

The O&M leadership structure is shown in Figure 10, with additional personnel relevant to environment.

Figure 10. O&M Leadership Structure



3.3.4 Watersure O&M Environmental Roles and Responsibilities

The O&M environmental roles and responsibilities are detailed in Table 7.

Table 7. O&M Environmental Roles and Responsibilities

Title	O&M Environmental Roles and Responsibilities
Plant Director	<ul style="list-style-type: none"> • Overall responsibility for operations, including for ensuring that all operations are carried out in an environmentally sound manner. • Provide leadership, support and adequate resources for the achievement of environmental objectives and targets, including that the requirements of the PRs and environmental laws and regulations are met. • Responsible for discussions with shareholders, reporting to the Management Committee, links to external corporate support and the operational interface with AquaSure.
Watersure Management Team	<ul style="list-style-type: none"> • Responsible for the plant's continuous operation and maintenance activities relevant to their functional areas including: <ul style="list-style-type: none"> – Ensuring the water quality and plant availability are controlled and operated to agreed performance targets. – The day to day management and supervision of their assigned employees. • Manage and comply with all state and federal legislation and regulations related to environment. • Provide management and direction to Watersure personnel and contractors in relation to protecting the environment. • Manage and actively participate in all site environmental initiatives. • Ensure compliance to the plant's environmental requirements by: <ul style="list-style-type: none"> – Conducting regular audits and reviews of systems. – Developing procedures and managing training requirements for all operational staff. • Ensure that environmental risks related to operation and maintenance activities whether carried out by employees or contractors are properly managed. • Facilitate an effective involvement of all personnel in the maintenance and development of the EMP.
Contract & Compliance Manager	<ul style="list-style-type: none"> • Responsible for ensuring that Watersure satisfies all its contractual, legal and reporting requirements in accordance with the O&M Contract. • Assist the management team to achieve compliance. • Ensure third party certification for specific standards. • Provide interface with the Parents Companies Management Systems and Corporate System Managers. • Coordinating community related activities. • Supervising the Environmental and Systems Specialist.

Title	O&M Environmental Roles and Responsibilities
Process Support Manager	<ul style="list-style-type: none"> • Responsible for the operability of the VDP laboratory and its processes including definition of the plant operation instructions and production procedures. • Monitoring and reporting on VDP process and performance, including monitoring of the process performance against environmental compliance and reporting requirements. • Provide advice and assistance in relation to any environmental issues that may occur onsite.
Environmental and Systems Specialist	<p>Identify, administer and support environmental management for O&M activities in accordance with contractual and legal obligations and assist the Plant Director to:</p> <ul style="list-style-type: none"> • Proactively and positively work with the regulators and authorities to ensure compliance with environmental standards and impact targets • Provide support to other function managers in planning, obtaining approval for, and implementing O&M activities in accordance with environmental objectives and targets, including working with the Contract & Compliance Manager on environmental compliance and the Process Support Manager on environmental monitoring. • Manage the implementation of this EMP, including in relation to: <ul style="list-style-type: none"> – Competency, training and awareness. – Measurement and evaluation, including monitoring, auditing, inspecting, reviewing, reporting on environmental performance and the operation of this EMP. – Management review and continual improvement. • Report on environmental performance to Watersure senior management. • Liaise with the AquaSure EMR to provide advice, monitoring and reporting to AquaSure and to support AquaSure on environmental matters to the client, regulators and the public. • Manage and support the certification and ongoing audits of the plant to ISO 14001 standards.
Health & Safety Officer	<p>Assist in the implementation of this EMP. When required:</p> <ul style="list-style-type: none"> • Assist the Environmental and Systems Specialist and Contract & Compliance Manager in managing the relationship between the Project, the regulators and authorities, particularly in relation to compliance with environmental standards and impact targets. • Lead the provision of advice to the Environmental and Systems Specialist in areas of environmental risk management and delivery. • Assist in managing incidents, near-hits and complaints.
Communication & Management Assistant	<p>Assist in the implementation of this EMP. When required:</p> <ul style="list-style-type: none"> • Assist the Environmental and Systems Specialist and Contract & Compliance Manager to implement this EMP and the Project Deed, particularly in relation to compliance with environmental obligations relating to communications and external stakeholder relationships. • Lead the provision of advice to the Environmental and Systems Specialist in areas of environmental communications and delivery. • Assist in managing internal and external communications, including and complaints.

Title	O&M Environmental Roles and Responsibilities
All personnel (i.e. all Watersure employees and contractors)	<ul style="list-style-type: none"> • Comply with environmental procedures and risk mitigation measures. • Conduct regular environmental inspections in accordance with job responsibilities. • If there is likelihood of damage occurring to the environment as a result of activities, notify their supervisor, and take appropriate corrective action including ceasing work activities, procedures or similar corrective actions. • Ensure communication external to the Project regarding incidents occurs through the designated channels. • Share lessons and contribute to the Project's environmental knowledge.

3.3.5 AquaSure Roles and Responsibilities

The AquaSure EMS Manual describes the roles and responsibilities of AquaSure staff including the AquaSure EMR.

3.3.6 Independent Reviewer and Environmental Auditor

The Project Deed requires the engagement of an EA. The EA is a joint appointment of the State and AquaSure under Clause 8 of the Project Deed. The key functions of the EA with respect to environmental matters relevant to O&M are:

- Verifying that the documentation complies with the requirements of the State Project Document.
- Carrying out audits on the Project Activities to determine whether they have been undertaken in accordance with the EMS Manual, EMP, PRs and environmental requirements. The EA will issue Environmental Audit Reports to the State and AquaSure.

Watersure will generally liaise with the EA via the AquaSure EMR. In situations such as audits Watersure will liaise directly with the EA as part of the process.

3.4 Document and Record Control

3.4.1 Reference Documents

This EMP has been developed to comply with the Reference Documents.

These are set out in Appendix S2 to the PS&PR. The environmental management document must comply with the current version at the time.

The requirements of the reference document must be met unless the PRs specify a different standard or level of service, in which case the PRs will prevail.

The hierarchy of reference documents is:

- i. Australian Drinking Water Guidelines
- ii. Australian Codes of Practice including Best Practice Guidelines and EPA Publications
- iii. VicRoads publications (as applicable to roads, bridges and shared use paths)
- iv. Australian Standards
- v. AUSTROADS publications
- vi. International standards or codes
- vii. AquaSure's Reference Documents (submitted at the time of tender in Appendix B2 to the PS&PR)
- viii. Other Reference Documents.

3.4.2 Control of Environmental Documents

Watersure will ensure that environmental documents and records nominated in the EMS Manual and specific to implementation of their relevant components of the EMP are maintained, archived and controlled.

EMP documentation will be controlled in accordance with the Watersure Management System, including ensuring that all controlled documents are:

- developed, reviewed and approved prior to issue
- issued for use
- controlled
- stored
- removed from use when superseded or obsolete.

The minimum retention period for all documents is as nominated in the AquaSure EMS Manual.

3.4.3 Master Documents

In accordance with the Watersure Management System, the master of the EMP and associated attachments are stored as an electronic PDF file attached to the record located within the Project's document management system along with all related documentation.

Where required, hard copies are to be derived from the signed electronic master and are deemed 'uncontrolled'.

'Masters' that have been superseded are identified and located within the Controlled Documents File.

Documents are controlled in accordance with the requirements of the Watersure Management System.

3.4.4 Distribution

The Plant Director will ensure that the current version of this EMP is available to all personnel and issues controlled or uncontrolled copies to applicable external organisations where necessary.

Issue details are recorded in the Watersure Management System. When issued, it is the responsibility of the user to replace superseded material with the current issue. Superseded material should be DESTROYED or marked 'superseded' as appropriate by the user.

Watersure will provide full and current access to the AquaSure EMR of:

- this EMP and associated documentation
- documents and records relevant to environmental management.

3.4.5 Control of Records

Records will be managed in accordance with the Watersure Management System. The following environmental records will be retained for the period specified in the AquaSure EMS Manual:

- legislative updates
- licences and permits
- approvals
- environmental training and induction activities
- monitoring results
- details of non-conformances and corrective/preventive actions/improvements
- incident or complaints reports
- results of environmental audits
- results of management reviews
- inspection, calibration and maintenance activities
- records of hazardous material waste sent for off-site disposal
- correspondence.

All records are to be:

- legible and clearly identifiable
- traceable via referencing to a specific requirement, procedure or this EMP.

The Environmental and Systems Specialist is responsible for maintaining environmental records for the Project, except as nominated in the relevant O&M Manual or management plan.

3.5 Competency, Training and Awareness

3.5.1 Induction and Awareness

Induction to environmental obligations relevant to the Project shall be provided to all full and part time Watersure personnel, contractors (including subcontractors and consultants) and visitors (including group visitors) to any part of the Victorian Desalination Project main plant, easement or other assets before entering site and starting work.

All environmental inductions will be conducted as part of the induction procedures described in OHS-000-PR-066 Site Induction Procedure, which include induction to environmental obligations as part of the relevant induction process.

3.5.1.1 Visitor Inductions

All visitors going onto any part of the VDP plant or easement must undergo a visitor's induction, including:

- Consultants inspecting equipment / areas on the VDP where they are not undertaking physical works, or where there is minimal potential for safety or environmental harm.
- Visitors.

All visitors must be accompanied at all times. Under no circumstances may a visitor undertake any physical work onsite. Watersure personnel and contractors are responsible for the actions and conduct of their visitors and must ensure that their visitors obey the site safety and environmental requirements.

Visitor Inductions are done through training management system (online) and the content is controlled in form OHS-000-FM-007

All group visits will complete visitor induction as a group. One form OHS-000-FM-063 is to be signed off with an attached sign on sheet of all individuals' names that attend the visit.

3.5.1.2 Site Induction

Required for all personnel and contractors operating at a Project-wide level. Also referred to as 'Full Site Induction'.

Site Inductions follow the form presented in OHS-000-PS-008 Watersure Induction Video, which covers the topics required to be addressed by OHS-000-PL-001 Occupational Health & Safety Plan and ENV-000-PL-001 Environmental Management Plan. Induction competency is assessed and recorded through the training management system or through OHS-000-FM-005 for all inductees. All records can be accessed on the training management system.

The Site Induction will be reviewed annually or in the event of a substantial change to an environmental procedure, to ensure it reflects current working practice.

Site Induction materials will be submitted to the AquaSure EMR for approval.

3.5.1.3 Watersure Onboarding Procedure

All new Watersure personnel (i.e. contract, full or part time personnel included on the Watersure Organisational Chart) are oriented to work on the Project via the process described in New Employee On Boarding Checklist. Delivered 1-on-1 with the Environmental and Systems Specialist, the environmental element of this onboarding process includes orientation to:

- Requirements of the EMP and project environmental obligations.
- Environmental management and compliance.
- Overview of the EMP and Watersure's ISO certified IMS (including ISO 14001).
- Event/CAR system management.
- Management of the Ecological Reserve, Green Roof and associated contractors.
- Environmental elements of work risk assessments (e.g. JSEAs).
- Environmental and Systems Specialist role and responsibilities.

3.5.1.4 Induction Records

Records will be maintained of all inductions conducted, including:

- Names and signatures of personnel attending.
- Date of attendance.
- Name of trainer/facilitator.

Induction records will be generated, controlled and maintained within the training management system. Paper based inductions records are kept in the document management system. .

3.5.1.5 Environmental Management Plan Induction

Where VDP personnel have a specific role in developing or implementing the EMP, the Plant Director or delegate will induct personnel into the relevant requirements of this EMP. These personnel will not commence work on O&M activities that could have an impact on the environment until this has been completed.

3.5.2 Competency

The key aspects addressed are competency of:

- Watersure Employees
- Subcontractors and consultants.

Watersure Employees

Watersure will ensure that all personnel are suitably qualified or experienced to undertake their work in an environmentally responsible manner, using the requirements of the Human Resources Plan and Training Plan. Personnel are selected on the basis of skills, experience and cultural fit.

Where a training need is identified, arrangements will be made for the appropriate training and development in line with the position and individual's needs.

Where necessary, assistance will be provided until the required competency level has been attained.

Subcontractors and Consultants

The competency of subcontractors and consultants to perform their environmental responsibilities will be specified and assessed as part of the procurement and preselection process.

Following appointment, where a subcontractor or consultant proves not competent to perform their environmental responsibilities, the Contract & Compliance Manager is responsible for taking remedial action which includes:

- Communication and an agreed action plan with the subcontractor or consultant.
- Training by Watersure of the relevant personnel.
- Additional support to the subcontractor or consultant.
- Taking remedies under the contract.

3.5.3 Training

This section outlines environmental training requirements including:

- Environmental Management Training
- Identifying training needs and skill gaps.
- Developing and sourcing appropriate training programmes.
- Scheduling and delivering training.
- Maintaining qualifications/skills and records.

The People & Culture Manager (or delegate), will coordinate training for relevant O&M personnel, maintain relevant training records, and assess the effectiveness of the training.

3.5.3.1 Environmental Management Training

Environmental Management Training shall be provided to all Watersure personnel upon commencement and refreshed at three-yearly intervals thereafter.

The Environmental and Systems Specialist or delegate is responsible for conducting Environmental Management Training.

The purpose of Environmental Management Training is to communicate relevant Project-wide environmental requirements so that all personnel are aware of and understand the rules they are required to conform with and the impacts they are to avoid.

The topics addressed in the Environmental Management Training shall include:

- Duties under environmental legislation and contractual requirements.
- Specific environmental objectives and mitigation measures established in this EMP.
- Responsibilities under this EMP in relation to implementing mitigation measures, monitoring, reporting and implementing corrective actions.
- Definition, management and responsibilities in the event of an environmental incident.
- The consequences of not implementing mitigation measures or departure from specified operating conditions.
- Internal and external communication processes and protocols.
- Community awareness and sensitivities, and cultural perspectives and expectations.

At completion of the training, participants shall complete a competency assessment in accordance with ENV-000-FM-009 environmental Management Training Competency Assessment. The Environmental and Systems Specialist (or delegate) is responsible for assessing results of training. Records of these assessments will be retained within the WTS training management system.

3.5.3.2 Identifying Environmental Training Needs and Skill Gaps

A training needs analysis has been developed for each WTS position. This identifies the training required for each position to complete work that meets WTS requirements.

For environment aspects the Environmental and Systems Specialist, together with the relevant People and Culture Manager (or delegate), will, at least annually and for each new starter, identify training needs and skill gaps relevant to the delivery of the environmental PRs and the effective implementation of the EMP.

The training will include:

- Familiarization with the environmental performance criteria, minimum procedural requirements and other environmental management measures to be met.
- Emergency and incident response training.
- Non-compliance and preventative action training.
- Monitoring, reporting and auditing obligations.
- Consortium member specific training (e.g. training on the Management System, non-compliances, monitoring, reporting and auditing).
- Employee awareness programs providing case studies of relevant innovations and case studies demonstrated in the industry.

3.5.3.3 Developing and Sourcing Appropriate Environmental Training Programmes

The People and Culture Manager (or delegate) will be responsible for ensuring the development of existing training programmes that are related to environmental requirements and will source materials from consortium members, external providers or develop in-house material and programmes.

All training materials related to the EMP or have environmental content will be endorsed by the Environmental Manager and submitted to the AquaSure EMR for approval prior to use and after each revision.

All training materials related to the EMP or have environmental content shall be reviewed by the Environmental Manager and People and Culture Manager (or delegate) at least annually to ensure currency, suitability and effectiveness of the training.

3.5.3.4 Scheduling and Delivering Environmental Training

The People and Culture Manager (or delegate) is responsible for scheduling and ensuring that environmental training and awareness programs have been provided to the relevant O&M team.

The Environmental Manager (or delegate) will be responsible for presenting environmental training to the relevant O&M team.

3.5.3.5 Maintaining Environmental Qualifications/Skills and Records

Records and means to maintain competencies, skills and qualifications will be in accordance with the Human Resources Plan, Training Plan and the Induction process.

The following details must be included in environmental training records:

- Name of O&M personnel attending the training.
- Type of training attended.
- Date of attendance.
- Name of trainer.
- Name of the organisation providing the training.
- Refresher training requirements.
- Copies of environmental training records will be maintained on the document management system.

These details are recorded in the Training Management System.

3.6 Communication

3.6.1 AquaSure Communications

Watersure will participate, as requested, in the following meetings facilitated by AquaSure:

- Meeting with the AquaSure EMR, with the frequency as nominated by the AquaSure EMR.
- Environmental Working Group meetings with the key stakeholders including the State and AquaSure, with the frequency to be agreed by the AquaSure EMR and the State.

In addition, Watersure will attend:

- Regular meetings of environmental agencies, convened by the State.
- Regular meetings with key stakeholders including DEECA and EPA.

3.6.2 Internal Communications

A program of internal communication networks, interfaces and regular meetings has been established by Watersure.

The Environmental and Systems Specialist, or relevant delegate, will participate in communications and interfaces where there are significant environmental issues. The AquaSure EMR, in accordance with the AquaSure EMS, will also participate where necessary.

Within the team, issues that may impact environmental considerations will be conducted, as a minimum, by the following methods:

- Regular O&M team meetings: Production meetings, Shut meetings and other adhoc meeting as required
- Regular Project Steering Group meetings.
- Regular environmental communications

3.6.3 External Communications

The O&M Stakeholder Engagement Plan outlines the strategies that will be put in place to facilitate engagement with stakeholders and the community. It includes processes for identifying and addressing concerns and for managing enquiries and complaints.

All external communications will be conducted in accordance with the AquaSure Community Involvement Plan (CIP), which identifies:

- The respective roles and responsibilities of AquaSure and Watersure.
- The systems and procedures that will be followed to provide overall management of stakeholder and community involvement, including the dispute resolution processes.
- Communication strategies to inform the community about Project activities.
- Tools and mechanisms to be used to implement these strategies, such as regular information bulletins, fact sheets, letterbox drops, door knocks, website (www.aquasure.com.au/), community information sessions, community speaking program and photographic and video records.

The Environmental and Systems Specialist will be involved in preparing and/or reviewing external communications involving environmental themes consistent with the CIP obligations.

3.6.4 Enquiries and Complaints Management

Strict requirements will apply to the handling of complaints to ensure the cause of the complaint is rectified as soon as possible.

The means by which any enquiries or complaints received from regulatory authorities, interest groups or the general public will be managed in accordance with the O&M Stakeholder Engagement Plan.

Key communication mechanisms for enquiries and complaints are detailed in the O&M Stakeholder Engagement Plan. For environmental complaints these include:

- Establishment of a 24-hour contact number.
- Recording details of complaint received in respect to environmental Project activities.
- Recordings details of actions taken and response given.
- Notification and reporting requirements, intended strategies to reduce complaints or incidents of a similar nature.

Details of all complaints including summary of main areas and issues of complaint or the cause of the incident, action taken, response given and intended strategies to reduce complaints or incidents of a similar nature will be reported to AquaSure on a monthly basis in the monthly report.

Watersure must immediately notify AquaSure if a complaint is received in respect to environmental Project activities (for example pollution or non-compliance). AquaSure will immediately notify the State and the EA. The complaints process including responses to complaints is detailed in the O&M Stakeholder Engagement Plan.

3.7 Construction Works Necessary for O&M Activities and Construction Defect Rectification

The Project Deed outlines all change mechanisms for the Project. Construction works are not ordinarily required as part of O&M activities. In the event that construction works are necessary for O&M Activities or construction defect rectification these works will be managed through the Permit to Work System implemented by Watersure.

All works conducted on the DWSS requires a permit to work approved and issued by Watersure. In order for a permit to be issued the work must be assessed and authorised by an appointed Watersure Representative, appropriately risk assessed (including environmental aspects), planned and controlled. All personnel conducting the work must be inducted, appropriately trained for the task and understand the permit conditions approved by Watersure.

- Environmental controls relevant to the works will be identified during the permit, risk assessment and planning processes and implemented using any of the following tools appropriate to the work: Job Safety and Environmental Analysis (JSEA) – a low to medium level, activity-specific risk assessment and planning tool which will identify the specific environmental management measures – developed and implemented for the specific construction activity being undertaken.
- Pre-construction surveys will be completed as required.
- Work method statement – a high level, activity-specific risk assessment and step by step planning tool, which details all steps involved in a particular construction activity along with their respective risk control measures. This will identify key environmental risks for construction activities and include a written methodology and current Site Environmental Plan to diagrammatically show appropriate controls and mitigation measures to ensure that Project objectives, targets and obligations are achieved.

- Procedures – detailed task specific work instruction that are used to control specific activities. Environmental controls will be incorporated into specific procedures as part of the Work Pack development.
- Site environmental plan – where there are significant environmental issues to be managed, a site environmental plan may be developed for the site. This plan will detail practical environmental management measures to be implemented at specific worksites to minimise potential impacts of construction activity on the environment and community. The preparation of a site environmental plan involves a detailed assessment of environmental and community risks for the proposed construction activities. Most of the information contained will be presented in A3 and A1 formats to make them easy to use by all Watersure site personnel and subcontractors. Site environmental plans are intended to be used at the site level and be displayed within the crib huts / lunch rooms.
- If required by Watersure, a Work Pack may be developed and will include an assessment of environmental obligations, including identifying all Commonwealth and State environmental requirements (legislation, approvals, licences, permits and policies) and the relevant Project Deed Performance Requirements. Relevant O&M Manuals (in particular Volumes 4 to 8: Reference Documents) will be consulted for information on existing conditions.

The Environmental and Systems Specialist is required to consult with the permit office and review permit applications with identified high environmental risks prior to the permit being issued and works commencing.

The Environmental and Systems Specialist or delegate will monitor and inspect any works in accordance with the any relevant environmental requirements, including permit conditions, relevant Project Deed Performance Requirements (refer to Attachment 4: O&M Environmental Monitoring Schedule – Construction works necessary for O&M activities).

All permits and associated documents will be maintained in accordance with the Watersure Management System.

3.8 Incident and Emergency Preparedness, Response and Recovery

Incident and emergency scenarios are identified in the Environmental Risk Register (Attachment 3).

Environmental incidents and emergency preparedness and response will be managed in accordance with the O&M Environmental Incident Response Plan (EIRP) (see Attachment 5).

The EIRP integrates with the O&M Incident Management Plan and as such covers environmental incidents only.

The EIRP provides a standard approach for the notification, recording, classification, investigation and reporting of all work-related incidents, including those involving sub-contractors, other persons working on site, ensuring safe and effective handling of incident situations. The EIRP also provides contact details and specific timeframes for relevant authorities that may need to be notified in the event of an environmental emergency. The EIRP will be reviewed and, where applicable, updated after any major incident.

For environmental incidents and emergencies, the EIRP:

- Defines a procedure to manage incident situations.
- Ensures that the impact of an incident on the environment is minimised.
- Ensures that the continuity of operations is maintained through implementation of effective environmental incident management procedures and response plans.
- Ensures that appropriate internal reporting procedures are in place that include prompt notification to AquaSure, DEECA, EPA, corporate management and other required agencies.
- Ensures that communications protocols result in a coordinated public response, including any public reporting obligations.
- Ensures that results of all incidents are assessed, reported and corrective actions implemented.

As well as Watersure responsibilities, the EIRP set out the responsibilities of the AquaSure EMR to participate in managing, responding to and investigating incidents.

The Environmental and Systems Specialist has a key role to play in managing environmental incidents and reviewing the EMP, procedures and tools following incidents, near-hits and complaints.

The Plant Director will be responsible for ensuring that environmental emergency procedures are practiced on a regular basis and to provide the means to ensure that relevant personnel are trained and equipped to deal with a range of situations, to include but not be limited to:

- Fuel spills.
- Chemical spills.
- Ground contamination.

The induction will detail the relevant emergency response requirements.

A master contacts list of incident / emergency response personnel will be kept in the EIRP (not distributed widely) and updated as regularly as required.

4 Measurement and Evaluation

4.1 Monitoring of Environmental Performance

Environmental monitoring will be conducted in accordance with the Monitoring Schedule (Attachment 4).

The Monitoring Schedule is a controlled document, managed as set out in Section 3.4. The Environmental and Systems Specialist is responsible for maintaining and overseeing the implementation of the Monitoring Schedule.

Implementing the Monitoring Schedule is the responsibility of the persons nominated in the Schedule.

The Monitoring Schedule has been developed in discussion with relevant government agencies.

Where required, specialist consultants will be engaged to help establish internal monitoring systems and to train relevant personnel in the collection of samples, use of scientific instrumentation and recording and analysis of data.

Monitoring will be conducted in accordance with relevant standards and guidelines for environmental management identified in the EES, approvals and Reference Documents, such as Victorian Government requirements, Australian Standards or, in the absence of an Australian Standard, industry acceptable procedures. All analytical testing shall use National Association of Testing Authorities (NATA) approved procedures where applicable.

Inspection, testing and calibration of monitoring equipment will be managed in accordance with the Quality Plan. Specialist monitoring consultants will be responsible for maintaining their monitoring equipment in accordance with relevant standards.

The minimum frequency and standard for monitoring is that listed in applicable approvals, licences, and regulations.

The results of the activities required by the Monitoring Schedule will be reviewed monthly, before the preparation of the monthly report. This is responsibility of the Environmental and Systems Specialist and will assist to:

- Evaluate performance relative to predicted impacts.
- Evaluate performance and compliance with legal and other commitments.
- Assess progress against targets for this EMP.

Monitoring results that exceed the relevant standards or performance criteria, as a result of the O&M activities, will be managed in accordance with the corrective and preventative action process (refer to section 4.3). Corrective action will be implemented as soon as practicable after results are received. This may include modifying procedures in O&M Manuals.

AquaSure, the EA and the State will be advised of any non-compliances from monitoring in accordance with Table 6.

4.1.1 Environmental Inspections

Regular inspections will be conducted. Inspection requirements are set out in the Monitoring Schedule (Attachment 4). Any actions required, or measures determined not to be effective, will be identified on the inspection checklist and where possible closed out on the inspection checklist.

Actions requiring further follow up will be recorded in the Watersure Actions Register, and if necessary raised within the Event/CAR database for further investigation and corrective management.

It is anticipated that the AquaSure EMR, the EA, the State and regulatory agencies associated with environmental matters may wish to formally inspect O&M activities. The Plant Director or delegate will liaise with relevant organisations and facilitate these inspections.

4.2 Audits

4.2.1 Internal Audits

Internal auditing of environmental elements of the Watersure IMS will:

- Be conducted in accordance with SYS-000-PR-010 Auditing Procedure, which has been developed to meet requirements of ISO 14001 and Section 9.5.2.2 of the AquaSure EMS Manual.

- Be conducted by the AquaSure EMR, Environmental Manager or other internal auditor as approved within the Watersure IMS and/or by the AquaSure EMR.
- Occur at planned intervals as approved by the AquaSure EMR and documented in SYS-000-SH-001 Audit & Activity Schedule.

If the AquaSure EMR conducts an audit on an EMS component, that is also scheduled to be audited by Watersure, the EMR's audit may suffice as the Watersure audit, with the consent of the EMR.

4.2.2 External Audits

4.2.2.1 AquaSure Environmental Audits

Watersure will facilitate audits by the AquaSure EMR. The Environmental and Systems Specialist will respond to relevant audit reports of this EMP received from the AquaSure EMR within the time specified by the EMS. Watersure will formulate a plan of action to follow-up the findings and recommendations of the audit, including:

- Describing the planned corrective and/or preventative action/s for each finding.
- Nominating a timeframe to complete the corrective and/or preventative action/s.
- Nominating the responsible persons to carry out the corrective and/or preventative action/s.
- Implementing corrective and/or preventative action/s within the agreed timeframes.
- Notifying the EMR of close-out.
- Providing evidence of completion where agreed.

The AquaSure EMR will review the close out of the audit findings.

4.2.2.2 EA Environmental Audits

The EA or the State may audit any part of the Project or EMS Manual or other environmental documentation with reasonable notice for the purposes of confirming compliance with environmental requirements.

Watersure will facilitate audits by other parties, including the EA and the State. If required by the EA or the State, Watersure will make available appropriate personnel to explain or provide information on such matters in relation to the conduct of the Project Activities as the EA or the State reasonably requests, and in such form and substance as the EA or the State reasonably requests.

The EA is required to undertake quarterly audits on the Project to form an opinion as to whether or not the EMP and the environmental requirements are being complied with. AquaSure or the State can request that the EA carry out additional audits as required.

On receiving a Certificate of Compliance from AquaSure (see section 4.4.1), or a request from AquaSure or the State to conduct an additional audit, the EA will audit the Project to assess performance in relation to:

- The operation of the Environmental Management System.
- The implementation of each component of the Environmental Management Plan.
- Each other Environmental Requirement.

Where the EA provides a draft environmental audit report to AquaSure, the AquaSure EMR and, if relevant, Watersure will review the report and provide comments to the EA within 5 business days.

If an environmental audit report from the EA includes an opinion that the EMP or environmental requirements have not been complied with, Watersure must provide AquaSure with a plan and program for the rectification or remediation of any non-compliance and to ensure future compliance (Plan for Environmental Remediation). This must be provided with sufficient time for AquaSure (within 5 business days after receipt of the EA's report) to provide the Plan for Environmental Remediation to the State and the EA.

If the Plan for Environmental Remediation is not to the satisfaction of the EA, Watersure will continue to consult with AquaSure and the EA and amend the Plan.

Once the EA is satisfied with the Plan, Watersure will implement the Plan for Environmental Remediation and provide a certificate to the EA once rectification is complete and the Plan closed out.

4.3 Corrective and Preventative Actions

As part of a commitment to continual improvement, corrective and/or preventative actions may result from management reviews, results of monitoring, inspections and audits, the evaluation of incidents or emergencies, or parent companies and other external organisations and professional forums.

All employees have the authority to raise corrective or preventative action as required.

The tools and methods to be utilised for documenting, tracking, reporting and communicating corrective and/or preventative are described in Table 8.

Table 8. Corrective and Preventative Actions Management Tool

Type of Activities Raising Corrective and Preventative Actions	Record to be Produced	Appropriate Management Tool
Inspections	Inspection checklists	Watersure Actions Register Event/CAR Report (if further investigation and corrective management required)
Incidents, procedural breaches, and high potential near hits	Incident report	Event/CAR Report
Monitoring results	Monitoring report	Event/CAR Report (if corrective actions required)
External and internal audits	Audit report	Event/CAR Report (if corrective actions required)
IMS Management Reviews	IMS Management Review meeting minutes	Various, as relevant if corrective actions required
EMS Reviews	EMS Management Review meeting minutes	Various, as relevant if corrective actions required
Complaints (not found to be incidents)	Complaints Register	Event/CAR Report (if corrective actions required)

Corrective and preventative actions will be managed in the Event / Corrective Actions Request (CAR) module of the Paradigm database. This system manages corrective and preventative actions, collects environment, health and safety statistical and incident data for reporting and analysis purposes. The database allows personnel to track actions through to close out. All corrective and/or preventative actions will be documented, assigned to a responsible person(s), and tracked until completion in an appropriate timeframe. The implementation and effectiveness of corrective and/or preventative actions will be verified. Implementation of corrective actions or controls shall adhere to the following timeframes:

- Critical Priority Actions completed immediately
- High Priority Actions completed within 7 days
- Moderate Priority Actions completed within 7 – 14 days
- Low Priority Actions completed as soon as practicable.

Priorities for response to environmental related corrective and preventative actions shall be determined based on the risk to the environment. As guidance, a critical priority action should be allocated to prevent immediate risk to the environment. Low priority actions should be allocated to prevent long-term recurrence of the inappropriate situation.

The response to incidents will be managed in accordance with the Environmental Incident Response Plan.

The Environmental and Systems Specialist is accountable for tracking corrective and/or preventative actions relevant to the environment. Outstanding actions shall be reviewed and reported monthly.

Where appropriate, work may be stopped by Watersure. This stoppage will remain in force until corrective actions are implemented or authority is given to continue.

4.4 Evaluation of Compliance

4.4.1 Certificate of Compliance

Watersure will provide a Certificate of Compliance to AquaSure and the EA confirming that relevant O&M activities have been undertaken in accordance with the EMP and Environmental Requirements. The Certificate is due on the first Business Day of each calendar quarter.

A Certificate of Compliance may be issued where Watersure has met the requirements to develop and implement Plans of Environmental Remediation in response to EA audits, as follows:

- If an EA Environmental Audit Report includes an opinion that the EMP or Environmental Requirements have not been complied with, within 5 Business Days after receipt of that report, Watersure has provided to AquaSure and the EA a plan and program for the rectification or remediation of any non-compliance and to ensure future compliance (Plan for Environmental Remediation).
- To the extent that the Plan for Environmental Remediation does not satisfactorily address the EA's concern and subject to the bullet point below, Watersure must continue to consult with EA and amend its Plan for Environmental Remediation until the EA is satisfied with the Plan for Environmental Remediation.
- When the EA notifies Watersure that the Plan for Environmental Remediation is satisfactory, Watersure must comply with the Plan for Environmental Remediation and, when Watersure believes it has rectified the non-compliance, provide a certificate, confirming that the non-compliance has been rectified in accordance with Plan for Environmental Remediation.

4.4.2 Evaluation of Compliance

In evaluating whether a Certificate of Compliance can be issued for the O&M activities, Watersure will consider the following:

- Reports.
- Environmental Obligations Register.
- Monitoring and inspection results.
- Results of environmental audits, including internal, EA, AquaSure and independent audits.
- Details of non-compliances and corrective / preventative actions / improvements.
- Status of Plans of Environmental Remediation.
- Incident reports.
- Results of management system reviews.
- Correspondence.
- Outcomes of meetings and site visits.

A record of the key documents and evidence reviewed in evaluating compliance will be maintained.

The results of the activities required by the Monitoring Schedule will be reviewed monthly, before the preparation of the monthly report, providing an evaluation of compliance. This is the responsibility of the Environmental and Systems Specialist.

5 Management System Review and Continual Improvement

5.1 Management System Review Meetings

A management review of this EMP and/or the associated controlled documents is required if at any time it:

- Does not adequately address the matters it is intended to address.
- Is causing non-compliance or is otherwise necessary to comply with the Project Deed.
- Has to be changed because of an audit.
- No longer represents current or appropriate practice.
- Is otherwise required by the Project Deed to be updated.

A management system review is to be held following Reliability Test Finalisation and at a minimum of six monthly intervals thereafter.

Management system reviews of the Watersure IMS, which includes review against requirements of ISO 14001:2015 will be conducted in accordance with SYS-000-PR-009 Management System Review Procedure.

Management system reviews focussed specifically on this EMP will be conducted by a nominated management team including, as a minimum:

- AquaSure CEO and/or EMR.
- Plant Director.
- Environmental and systems specialist.

The review will consider, as a minimum:

- Achievement of the AquaSure Environmental Policy commitments.
- Status and effectiveness of EMS Manual implementation.
- Achievement of the O&M Environmental Policy commitments.
- Status and effectiveness of this EMP.
- Adequacy of resources/organisational changes.
- Environmental performance, aspects, impacts and risk register.
- Environmental objectives and targets and the extent to which these have been met.
- Results of monitoring, inspection and reporting.
- Any necessary response to changing circumstances.
- The program of environmental competency, training and awareness.
- Audit results and evaluation of compliance.
- Any non-compliances or corrective actions.
- Communications from external interested parties, including complaints.
- Follow-up actions from previous management reviews.
- Lessons learned and opportunities for improvement.

The management review will be documented and any action arising will be assigned to a responsible person(s) and tracked until completion in an appropriate timeframe.

Management system reviews will ensure the continued effectiveness, suitability and adequacy of environmental policy, objectives, targets and management arrangements and identify opportunities for continual improvement.

Any changes to this EMP or associated controlled documents will be reviewed and approved in accordance with Section 3.2.5.

6 References

The following documents have informed the development of this EMP:

- Project Deed between AquaSure and the State.
- AquaSure EMS Manual.
- TDJV D&C EMP.
- TDJV Commissioning Environmental Sub Plan.
- Environmental management requirements of SUEZ Water and Ventia.
- Department of Sustainability and Environment 2008. *Victorian Desalination Project – Environment Effects Statement* (including EPA Works Approval Application)
- Mitchell K et al. 4 December 2008. *Report of the Inquiry to the Minister for Planning - Victorian*
- Minister for Planning. January 2009. *Victorian Desalination Project – Assessment under Environment Effects Act 1978*
- ISO 14001:2015. *Environmental Management Systems – Requirements with guidance for use.*

Attachment 1: Watersure Environmental Policy

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Attachment 2: Environmental Obligations Register

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Attachment 3: Environmental Risk Register

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Attachment 4: Environmental Monitoring Schedule

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Attachment 5: Environmental Incident Response Plan

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