Environmental Management Plan

2016-2017

PILBARA PORTS AUTHORITY

CONTENTS

1. INTRODUCTION

Pilbara Ports Authority (PPA) is a Government Trading Enterprise under the Western Australian *Port Authorities Act 1999* (the Act), which defines a clear role for all port authorities and establishes lines of accountability and reporting requirements to the State Government.

Under the Act, PPA has a duty to act on commercial principles, and is afforded the power to perform defined functions, including:

- the facilitation of trade and planning for future growth and development of the ports for the economic benefit of the State;
- the control of operations and business of the ports and the power to hold and dispose of assets and enter into commercial arrangements;
- the safe and efficient operation of the ports;
- the maintenance and preservation of property vested in the ports; and
- the protection of the ports' environment and minimisation of the impact of port activities on that environment.

As part of its Environment and Cultural Heritage Policy commitment to deliver its services and activities in an environmentally sustainable and responsible manner, PPA maintains this Environmental Management Plan (EMP). The Act also requires PPA to develop an EMP for its ports[1]. The EMP is maintained under PPA's Integrated Management System and complies with ISO 9001:2015 (Quality), and ISO 14001:2015 (Environment)

The EMP is designed to address the scope of PPA's environmental management of port services and activities across its operations in the Pilbara and its corporate office in Perth. It also provides a framework to include additional ports which maybe transitioned to PPA's management control in the future.

The purpose of this EMP is to:

- Define the scope of PPA's environmental management role and responsibility across its ports and corporate office;
- Outline how PPA identifies and manages the risks and opportunities associated with delivering its services and activities to minimise impacts to the surrounding environment and cultural heritage assets of its ports;
- Provide an overview of the significant environmental risks for the current financial year and outline the key treatment plans that will address these risks;
- Outline PPA's environmental objectives for the current financial year. In subsequent years, it will report progress against these objectives;
- Outline how PPA identifies, fulfils and reports on its legal and other requirements[2];
- Provide a framework for ensuring PPA's environmental performance is continuously and systematically improved;
- Provide a high-level overview of how environmental management at PPA meets the requirements of ISO14001:2015 and integrates with PPA's IMS; and
- Highlights key reference documents, systems and processes central to environmental management at PPA.

1 Part 5, Division 1, s.51(1)(b) of the *Port Authorities Act 1999*

2 Within this EMP, the term 'legal and other requirements' has the same meaning as the term 'compliance obligations' in ISO 14001:2015.

1.1. OUR SERVICES

PPA is responsible for the planning, developing, authorising, co-ordinating and controlling a range of port services across its three operational ports in the Pilbara. These services include pilotage, navigation aids, Vessel Traffic Services (VTS), port communications, ship scheduling and berthing allocations. PPA also operates several common user berths and provides for storage and handling of cargo at these berths. PPA is the licensee (*under the Environment Protection Act 1986*) for the Utah Point Multi-User Bulk Export Facility (Utah Facility) and Eastside berths 1 and 2 at the Port of Port Hedland. These facilities operate as multi-user facilities, designed to handle bulk cargoes from small to medium sized operations.

PPA issues Licenses and manages Service Agreements for a range of services including pilotage, towage, mooring, lines boats, bunkering, pilot transfers and stevedoring at common user berths.

PPA is also responsible for security within port areas, and cooperates with Commonwealth Government agencies responsible for customs, quarantine, maritime safety and security.

PPA also manages several strategic land parcels across its three operational ports. A large proportion of these lands are leased to bulk exporters of iron ore and liquefied natural gas. In addition, PPA also leases land to a range of tenants who undertake light industrial and marine service activities associated with the development and operation of each port.

1.2. OUR LOCATIONS

PPA's ports are located along the Pilbara coastline from the Port of Ashburton near Onslow in the south, to the Port of Port Hedland in the north. A brief description of PPA's ports and corporate office is presented below. The port locations are shown in Figure 1-1. A more detailed description of the environmental values unique to each operational port can be found on PPA's website www.pilbaraports.com.au.

1.2.1. Port of Ashburton

The Port of Ashburton is located on the west Pilbara coastline approximately 1,150 km north of Perth and 12 km south-west of Onslow (Appendix 1A).

In October 2008, the Western Australian State Government endorsed the establishment of a port and strategic industrial area at Ashburton North. The Port of Ashburton, currently under construction by Chevron Australia Pty Ltd (Chevron), will be a multi-user port with an ultimate export capacity of 50 Mt LNG per annum, export capacity for other hydrocarbon based products (including value-added processing), capacity for general cargo and fuel, and capacity for supply base activities to service offshore operations in the Carnarvon Basin. Multi-user facilities within the port will include the shipping channel and turning basin, the materials offloading facility (MOF) access channel and turning basin, and the MOF and MOF berths. Access to the multi-user product loading facility (PLF) will be facilitated in accordance with existing commercial agreements.

The port waters and seabed cover an area of approximately 250 km^2 and include a range of intertidal and sub-tidal hard and soft-substrate marine habitats. These include wide intertidal sand / mud flats, sandbars and shoals at the mouth of four small mangrove creeks, macroalgae beds, scattered seagrass patches and some subtidal coral and sponge communities. These habitats support a diverse array of fauna, including shorebirds, turtles and marine mammals.

The physical marine environment of the Port of Ashburton is characterised by shallow water depths (5 m to 15 m) and moderate tidal ranges resulting in turbid water and low wave energy, except during storm / cyclonic conditions. The Ashburton River delta, a major seasonal river in the region, lies at the south-west corner of the port.

The key landside area vested to PPA covers a total area of 365 hectares. Although the Port Precinct is currently under a construction lease with Chevron, only 32 hectares of this land will be leased (exclusively) to Chevron once the Wheatstone Project is operational. The remaining areas will include a land-backed wharf, developed laydown area and several undeveloped areas that are set aside for future development (e.g. industry areas and services corridor). Access to the Port Precinct is via the eastern infrastructure corridor, a dedicated road link which separates the Wheatstone Project from Onslow Salt.

1.2.2. Port of Dampier

The Port of Dampier is located on the western side of the Burrup Peninsula on the west Pilbara coastline, approximately 20 km west of Karratha, 200 km north-east of Onslow and 1,550 km north of Perth (Appendix 1B).

The port consists of ten port terminals with separate navigational channels, which facilitate the export of iron ore, salt, gas products and the transfer of general cargo. PPA is responsible for managing port waters and vessel traffic and operates one of these terminals, which includes multi-user facilities to support the safe and efficient movement of cargo. PPA also manages 120 hectares of leased land within the King Bay Industrial Estate (KBIE) precinct, which provides landside support infrastructure and services for industry, and leaseholders within the Port of Dampier.

The Port of Dampier includes inshore, relatively calm and turbid environments that are sheltered by the 42 islands of the Dampier Archipelago and Burrup Peninsula. Offshore areas of the port are influenced by clearer oceanic waters and rougher seas. With its variety of conditions, the port supports a wide range of marine habitat types including mangroves, rocky shores, sand and mud shores, macroalgal communities and coral reefs. Within these habitats there is a high diversity of marine fauna including species of special significance including migratory humpback whales, migratory shorebirds and marine turtles.

1.2.3. Port of Port Hedland

The Port of Port Hedland is a single channel port located approximately 200 km to the north-east of Karratha and 1,650 km north of Perth. PPA own and operate four public berths within the port's inner harbour, with an additional 15 private berths, which facilitate the export of iron ore.

PPA manages vessel traffic movements at all berths within the Port of Port Hedland. The public berths facilitate the trade of bulk minerals (iron ore, manganese, salt and copper concentrate), petroleum products, ammonium nitrate, bulk liquids, general cargo, containerised cargo and livestock.

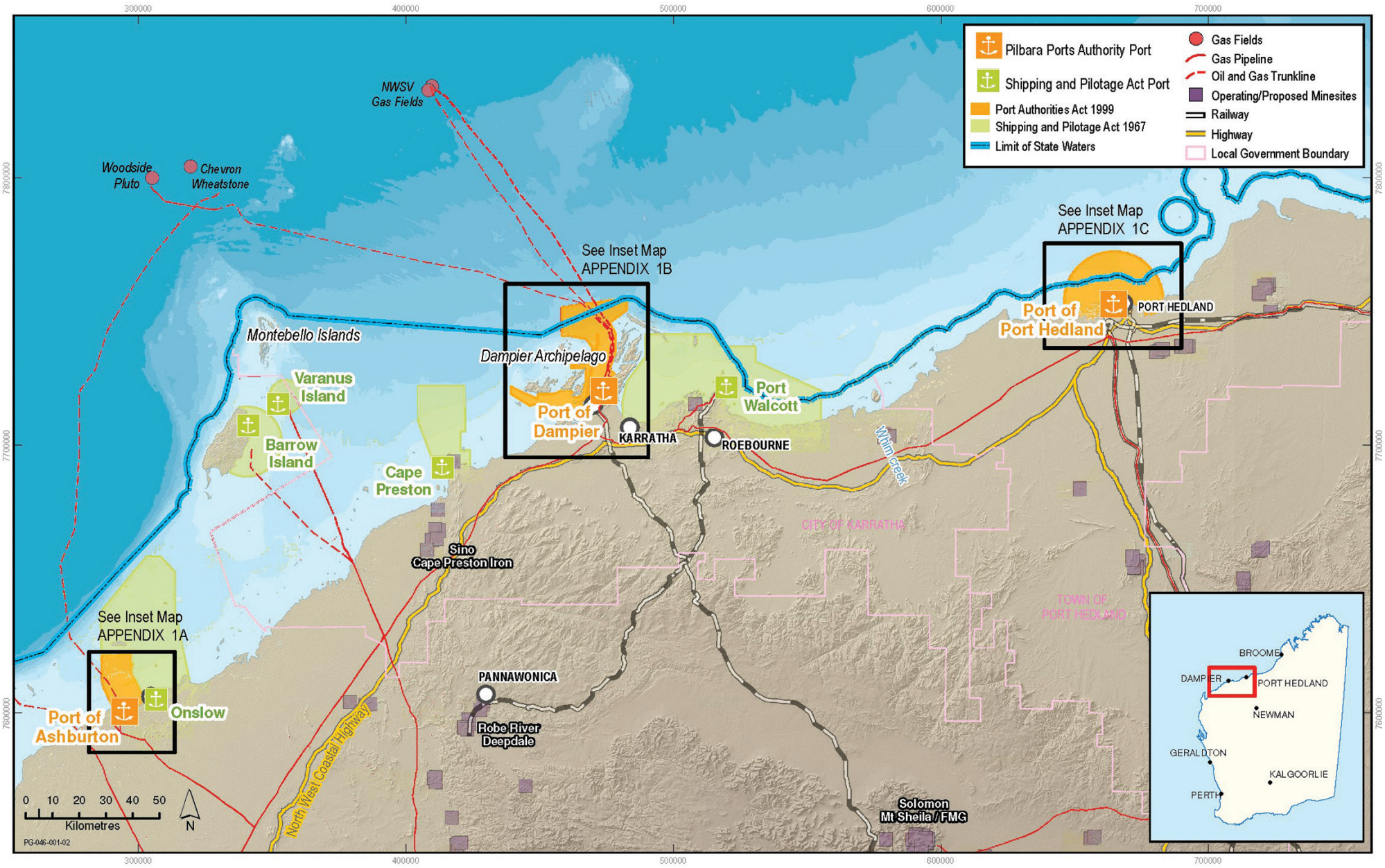
In addition to port operations, PPA manages port-vested lands in the west end of the Port Hedland township and in the Wedgefield Estate. PPA also leases port lands to major proponents BHP, FMG and Roy Hill. These lands are leased and managed under commercial agreements.

The port covers approximately 41,822 hectares of open waters, complex estuarine and creek habitats, sandy islands, mudflats and beaches, all of which are sensitive ecosystems and have considerable environmental value. Mangroves and coral communities are the dominant marine habitats within port waters, supporting a high diversity of seabirds, turtles and marine mammals (Appendix 1C).

1.2.4. Corporate Office

PPA has a corporate office in Perth, situated approximately 1,500km south of the Pilbara region. The office was established in 2009 and provides a range of services in support of the ports and ensures a strategic connection to port proponents, regulators and the State Government.

Figure 1-1: Ports vested in the Pilbara Ports Authority, including Port of Ashburton, Port of Dampier and Port of Port Hedland.



1.3. OUR ROLE – ENVIRONMENTAL MANAGEMENT

PPA's environmental management role has been identified at a high level within its Strategic Development Plan (SDP) Objective for *Sustainability*, to: "*Manage the ports' growth and operations, while respecting the Pilbara's environment and heritage*". The certification of PPA's Integrated Management System to the ISO 140001:2015 Environmental Management System standard is also seen as critical to PPA achieving its strategic *Business Excellence* objective: "*To optimise performance through industry leading practices and innovation*".

In delivering this EMP, PPA aims to achieve best practice standards in environmental management across all its port services and activities. It provides a framework that effectively manages risks to minimise impacts to the environment and cultural heritage assets of PPA's ports.

Overarching environmental management of PPA's ports is addressed under the *Environmental Protection Act 1986*, which is administered by the Western Australian Environmental Protection Authority (EPA). PPA and its lessees, licensees, service providers, contractors and other port users are all required to comply with the *Environmental Protection Act 1986*. This is recognised in the Act, which states that: "*Nothing in this Act limits or otherwise affects the operation of the* Environmental Protection Act 1986 *in relation to a port, a port authority or port activities." (Part 4, Division 1, s.31).*

This EMP is updated annually to ensure information remains current.

Woodside Pluto Liquefied Natural Gas (LNG) Jetty, Port of Dampier

2. CONTEXT OF THE ORGANISATION

2.1. UNDERSTANDING THE CONTEXT – STRATEGIC PLANNING

PPA conducts annual strategic planning workshops to set strategic business direction in the short, medium and long-term context.

As part of PPA's annual strategic planning process, PPA assesses the internal and external environmental issues that may have a direct influence on the effectiveness of PPA achieving the intended outcomes of its environmental management system, and the potential for PPA to impact on local, regional and national environmental and sustainability issues. For example:

- **Internal issues**, which may include organisation culture, services, resourcing, activities and processes; and
- **External issues**, which may include commodity market and economic conditions, meeting government objectives and new legislative obligations, maintaining cost competitive operations, stakeholder expectations and environmental conditions[3].

The key output of the annual strategic planning process is PPA's Statement of Corporate Intent (SCI). The SCI outlines the key business direction and priority projects over the coming year under three broad objective pillars: *Trade Facilitation*, *Sustainability* and *Business Excellence*.

Key Performance Indicators are developed and aligned to the strategic objectives and initiatives.

PPA and Woodside Port facilities on the Burrup Peninsula, Port of Dampier

3 Environmental conditions are those elements of the environment, which can be affected by the organisation (e.g. air quality, water quality, land use, etc.), or those which can affect the organisation (e.g. climate change, existing land contamination, depletion of natural resources).

2.2. UNDERSTANDING THE NEEDS AND EXPECTATIONS OF STAKEHOLDERS

PPA interacts across a large geographic area with stakeholders who have differing needs and areas of interest. These stakeholders can include elected government representatives, government agencies, customers, port users, community, business / industrial, media and PPA staff. PPA's *Stakeholder Engagement and Communications Strategy* identifies PPA's stakeholders and outlines an engagement approach. Outcomes from the implementation of this strategy are considered in the development of PPA's strategic objectives.

2.3. SCOPE OF THE ENVIRONMENTAL MANAGEMENT PLAN

The EMP scope includes all port services and activities for which PPA has a level of environmental responsibility, or .operational control. In the context of this EMP, there are three levels of operational control that define the scope of PPA's responsibilities:

- **Direct Operational Control** – where PPA has full operational control of a facility or project, the direct environmental responsibility lies with PPA. For example, where PPA (as the principal or operator) is constructing a facility using directly engaged contractors, PPA will be responsible for compliance with regulation as a minimum (e.g. obtaining and complying with environmental approvals, licenses, permits etc.).
- **Commercial Control** – where PPA enters into a commercial agreement (e.g. lease/permit/licences etc.) allowing another party to carry out activities on PPA vested lands, sea bed or water areas. Under a commercial agreement, PPA will condition port users to ensure compliance with the necessary environment and heritage regulations as a minimum. An example of this arrangement would be an organisation which has a lease over PPA's lands, and undertakes a business activity on that lease. The lessee would hold an operations specific Environmental Management Plan and all the appropriate statutory approvals to undertake the activity; and
- **Neighbouring Relationships** – where an operation is undertaken within or immediately adjacent to PPA's vested land, waters or sea bed but where no legal agreements associated with the operation of that business exists between PPA and that operation. For example, the operations of entities on adjacent State Agreement lands that may contribute to cumulative environmental impacts within port areas. In this instance, PPA seeks to influence the behaviour of that party to strive for sound environmental and heritage outcomes. PPA does not hold any environmental approvals for such an organisation, and is not involved with ensuring compliance. PPA has no ability to direct or control the environmental performance of this party outside the processes available under the *Environmental Protection Act 1986*.

The scope of this EMP includes all areas where PPA has direct operational control and all activities under PPA commercial and/or neighbouring relationships that may pose a risk to the environment of the ports. This includes cumulative environmental impacts, which are not managed through PPA's Development Application (DA) process and/or through direct State or Commonwealth requirements as part of an environmental approvals or licenses.

Cultural heritage features and values are an important and prominent aspect of the ports' operating environments. Cultural heritage is considered by definition an integral part of environmental management in the EMP and the Integrated Management System. To enable PPA to operate in areas containing heritage values, PPA has developed a *Cultural Heritage Management Plan* (CHMP) that identifies processes and strategies to avoid and protect those values, or mitigate impacts where they are unable to be avoided. The CHMP provides for engagement with the Aboriginal community and statutory regulators to ensure PPA undertakes development and operational activities in compliance with heritage legislation. The CHMP also considers non-Aboriginal culture heritage values that may be encountered on port land or with port waters (e.g. early European structures, shipwrecks).

3. LEADERSHIP AND COMMITMENT

3.1. ENVIRONMENT AND CULTURAL HERITAGE POLICY

PPA's *Environment and Cultural Heritage Policy* outlines PPA's commitment to deliver its services and activities in an environmentally sustainable and responsible manner. The policy is reviewed every 24 months by PPA's Executive Committee and approved by the Board. The policy is communicated via PPA's site induction process, is displayed in all PPA workplaces and can be accessed via PPA's website.

3.2. ORGANISATIONAL ROLES, RESPONSIBILITIES AND AUTHORITIES

All PPA staff, contractors and other positions under the direct control of PPA have a general duty under the Western Australian *Environmental Protection Act 1996* to:

- Not cause or allow serious environmental harm or material environmental harm; or
- Intentionally or otherwise, cause pollution or an unreasonable emission from any premises.

The minimum responsibilities and accountabilities for PPA staff are documented in position descriptions, each of which will have some level of role, responsibility and authority for managing environmental aspects. This may include implementing operational controls, risk treatment plans, programs or other administrative controls. An outline of the roles, responsibilities and authorities at key levels within PPA are displayed in Table 3.1.

Bulk carrier approaches entrance to Port of Port Hedland harbour

Table 3.1: Outline of key roles and their environmental responsibilities within PPA

ROLE	RESPONSIBILITY
BOARD OF DIRECTORS	Under Section 8(2) of the Act, the Board is to "*perform the functions, determine the policies and control the affairs of the Port Authority*". As such, the Board is responsible for determining and endorsing PPA's *Environment and Cultural Heritage Policy*.
EXECUTIVE COMMITTEE ***– Chief Executive Officer*** ***– GM Risk & Governance*** ***– GM Operations*** ***– GM Development & Trade*** ***– GM Finance & ICT*** ***– GM Engineering & Infrastructure*** ***– Director Human Resources***	Members of the Executive Committee are responsible for ensuring environmental stewardship and accountability within their specific function. Specifically, the CEO is responsible for leading the culture of the organisation regarding environmental stewardship. The CEO delegates responsibility for various risk mitigation initiatives and approves resources in consultation with the General Managers. The Executive Committee are responsible for annual workforce planning to ensure adequate resources and budget are available for the implementation of PPA's Environmental Management System.
GM RISK AND GOVERNANCE	The General Manager Risk and Governance has overall accountability for environmental compliance and performance from a governance perspective.
HARBOUR MASTER (HM)	Harbour Masters are chiefly responsible for ensuring the safe and efficient movement of vessels through PPA's ports and ensuring those vessels and their associated activities are undertaken with minimal impact to the ports' marine environment. Harbour Masters also undertake a key role as Incident Controller in the event of a port marine oil pollution emergency.
DIRECTOR ENVIRONMENT AND HERITAGE (DEH)	The DEH has overall responsibility for the coordination of the environmental management in accordance with the requirements of AS/NZS ISO 14001:2015. This includes the development of the EMP, reporting on environmental management system performance and providing recommendations for continual improvement to the Executive Committee for review. The DEH must ensure significant risks and their controls are identified and being managed by appropriate roles or functional area within the organisation.
ENVIRONMENT AND HERITAGE TEAM (EHT)	The EHT have the responsibility to implement the EMP and monitor and report on performance of the environmental management system, including risk treatment plans and objectives.
PPA STAFF	PPA staff are required to adhere to this EMP, and contribute to developing and implementing risk treatment plans for significant environment aspects that are applicable to their work area.
PPA CONTRACTORS / SERVICES PROVIDERS	Contractors and service providers are expected to adhere to the EMP when operating on behalf of or directly for PPA.
LESSEES / LICENSEES	Lessees and licensees must adhere to the conditions in their commercial agreements with PPA to ensure the environmental impacts from their activities are managed. They must also abide by environment and heritage legislation.

4. PLANNING

The EMP considers:

- The internal and external environmental issues that may have a direct influence on the effectiveness of PPA achieving the intended outcomes of its environmental management system (Section 2.1);
- The needs and expectations of internal and external stakeholders (Section 2.2); and
- The current scope of PPA's services and activities within the context of the EMS (Section 2.3).

During the planning process, PPA also determines the risks and opportunities related to its legal and other requirements, environmental aspects and other issues and requirements that need to be addressed in order to:

- Give assurance the EMP will achieve its intended outcomes;
- Prevent or reduce undesired effects / environmental harm; and
- Achieve continual improvement.

4.1. LEGAL AND OTHER REQUIREMENTS

PPA's compliance program is designed to assist PPA in meeting its legal and other regulatory requirements and reduce the risk of any legislative breach, as well as providing a framework for compliance with relevant laws, industry codes and organisational policy. The program is delivered through the implementation of PPA's *Compliance Policy*, and *Compliance Program Manual*. In an operational port context, PPA's legal and other requirements can include:

- **Regulatory obligations**: for example, requirements under State and Commonwealth environment and cultural heritage legislation and the statutory approvals issued to PPA under this legislation; and
- **Voluntary commitments**: for example, a commitment to meeting industry standards, codes of practice, or the requirements of community agreements.

PPA's mangrove nursery, Port of Port Hedland

4.2. ENVIRONMENTAL ASPECTS

4.2.1. Identifying Aspects and Impacts

Identifying the environmental aspects[4] and impacts[5] of PPA's services and activities is the foundation of PPA's EMP on which continual improvement and management reviews are based. A current assessment of aspects and impacts relating to PPA's services and activities is summarised in PPA's *2016-17 Environmental Risk Register.*

4.2.2. Risk and Opportunity Assessment

PPA applies a consistent and robust approach to risk management across the delivery of its services and activities. The *Enterprise Risk Management Manual* and *Risk Assessment Procedure* together provide the framework for determining how risks are consistently identified, assessed, treated, monitored and reported on within PPA. For each environmental aspect identified in the *Environmental Risk Register*:

- The **risk** (a function of likelihood, consequence and control effectiveness) of impacts occurring is assessed using a qualitative five by five risk assessment matrix to determine the residual risk (note: PPA assesses risk after controls have been implemented); and
- **Opportunities** or potential beneficial effects are identified and noted (where applicable).

Significant environmental risks are defined as any environmental aspect with a residual risk rating of high or greater, and all risks (regardless of risk rating) that do not meet PPA's tolerability criteria, as outlined in the *Enterprise Risk Manual*. The development of risk treatment plans is mandatory for all identified significant environmental aspects, each of which is required to be completed or reviewed within specified timeframes according to the level of risk tolerability. PPA's risk treatment plans are developed and implemented by risk owners in consultation with the Environment and Heritage team.

An overview of PPA's significant environmental risks for 2016 – 2017 is presented in Table 4.2.

4.3. ENVIRONMENTAL OBJECTIVES

Consistent with the requirements of PPA's Environment and Cultural Heritage Policy, PPA has established several high level environmental management objectives to help the organisation meet the intended outcomes of its EMS. An environmental management objective has been set for each environmental 'theme' identified in Table 4.1, which groups PPA's environmental aspects into recurring elements.

PPA's environmental management objectives have been developed with consideration of:

- PPA's *Environment and Cultural Heritage Policy;*
- PPA's legal and other requirements;
- PPA's significant environmental risks (Table 4.2);
- PPA's strategic objectives;
- Environmental issues identified through the review of accidents, incidents, hazards, inspections and monitoring; and
- The views of interested parties, both internal and external.

4 An *aspect* is defined as an element of PPA's services and activities that can interact with the environment. It may be thought of as an input or source of risk.

5 An impact is defined as any change to the environment, whether adverse (threat) or beneficial (opportunity), wholly or partially resulting from PPA's services or activities. An impact may also be referred to as the consequence or effect and is a result of a corresponding environmental aspect.

A list of PPA's key driving strategies, programs and plans that have been implemented to assist PPA in achieving its environmental management objectives are presented in Table 4.3.

Table 4.1: Description of PPA's environmental themes

Theme	Description
Ambient Air Quality	Odour issues, dust and ship's combustion emissions (SOx, NOx, particulates).
Flora & Fauna	Native flora and fauna, pests and weeds.
Greenhouse Gas & Energy	Energy consumption and greenhouse gas emissions, carbon management and offsets.
Cultural Heritage	Aboriginal and European cultural heritage.
Land & Seabed	Management of contaminated land, remediation and land development.
Noise	Noise emissions.
Waste	Generation, reduction and recycling, hazardous, mineral and general wastes.
Water	Contamination of marine waters, groundwater and stormwater, usage of potable water, and generation of wastewaters.

Aerial view of the Port of Port Hedland

Table 4.2: Overview of PPA significant environmental risks and associated risk treatment plans

RISK DESCRIPTION	RISK RATING[1]	RISK TREATMENT PLAN(S)	RISK OWNER	ENVIRONMENTAL THEME[2]	ACTION DUE DATES
Existing contaminated sites (Port Hedland): Unknown extent of contamination, rate of spread and/or environmental impacts on PPA lands listed as "Contaminated – Remediation Required"	*High*	A. Revise the Golder "Way Forward Memo" for Lot 6098, including sub-lot risk ratings. B. Implement Sampling and Analysis Plan (SAP) across all leases within Lot 6098 as sites become available. C. Implement Soils and Material Management Plan for impacted sites.	Environment and Heritage	Land and Seabed	Jun-18 Jun-18 Dec-16
Management of PPA Lease / Licensed Areas within the larger Lot 370 title (Port Hedland) – includes the UPBHF operations and Wedgefield Estate	*High*	A. Through the lodgement of an Interest Only Deposited Plan (IODP) excise the UPBHF site to avoid the listing of this site as *Possibly Contaminated – Investigation Required* (based on known data presented in PSI and DSI). B. Develop Soils and Material Management Plan for Lot 370 (the broader lot), based on the high possibility that the lot will be listed by DER as *Possibly Contaminated – Investigation Required*, due to previously reported incidents. C. Develop a schedule of known and possible contaminated areas within Lot 370 and prepare a risk map which defines these areas. D. Develop and implement a site investigation program based on the risks identified in C (above).	Environment and Heritage	Land and Seabed	Jun-17 Dec-17 Jun-18 Jun-18
Invasive Species (Weeds): *Unmanaged establishment of Priority Weed Species on PPA lands.*	*Moderate*	A. Implement PPA Weed Management Plan B. Implement collaborative research project to improve understanding of phenology and techniques for management of Stinking Passionflower vine *Passiflora foetida* on the Burrup Peninsula.	Environment and Heritage	Flora and Fauna	Mar-17 Mar-17

[1] Risk Rating = Residual Risk in PPA ERMF. This is the rating of the risk with all current controls in place.

[2] Refer to Table 4.1 for environmental theme definitions.

Table 4.3: Overview of PPA key environmental objectives and associated programs, strategies and plans.

THEME	OBJECTIVE	CURRENT PROGRAM / STRATEGY / PLAN
Ambient Air Quality	Minimise impacts on the community from site sourced air emissions.	A. Air Quality Forecasting, Monitoring and Reporting Program
Flora and Fauna	Minimise impacts to flora and fauna and seek opportunities to enhance native species.	A. Benthic Primary Producer Management Strategy B. Vertebrate Pest Control Program C. Wildlife Management Program D. Weed Management Plan E. Marine Pests Sentinel Monitoring Program F. Environment and Heritage Monitoring Plan G. Development Application Process and Guidelines
Greenhouse Gas and Energy	Minimise greenhouse gas emissions and continually improve energy efficiency.	A. Resource Management Action Plan
Cultural Heritage	Minimise uncontrolled impacts and seek opportunities to enhance Aboriginal cultural heritage values.	A. Cultural Heritage Management Plan
Land and Seabed	Effectively manage Port services and activities to prevent pollution of Port land and seabed and ensure environmental impacts of contamination are minimised.	A. Contaminated Sites Management Programs B. Lease Inspection Program C. Dredged Material Management Plan(s) D. Development Approval Process and Guidelines E. Technical Advisory and Consultative Committees F. Environment and Heritage Monitoring Plan
Noise	Minimise impacts to the community from site sourced noise emissions.	A. Noise Management Plan
Waste	Reduce the volume of wastes generated by PPA services and activities that require disposal to landfill or specialised treatment.	A. Resource Management Action Plan B. Industry Community Litter Initiatives (e.g. ICARE Partnership, Adopt-A-Spot Program)
Water • ***Stormwater*** • ***Potable water*** • ***Marine water*** • ***Groundwater***	Effectively manage port services and activities to ensure water resources are used efficiently and contamination of stormwater, groundwater, surface water and marine waters is minimised • *Minimise impacts of stormwater flows from port operations on the environmental values of waterways, groundwater systems and receiving marine environment.* • *Maintain long-term security and sustainability of water use for PPA activities and our customers* • *Minimise impacts of contamination to marine water quality from port services and activities* • *Minimise impacts of contamination to groundwater from port services and activities*	A. Environmental Quality Management Framework (Port Hedland Draft) B. Lease Inspection Program C. Resource Management Action Plan D. Dredged Material Management Plan(s) E. Environment and Heritage Monitoring Plan F. Development Approval Process and Guidelines G. Marine Oil Pollution Contingency Plans

5. OPERATION

5.1. OPERATIONAL PLANNING AND CONTROL

PPA maintains a range of processes to effectively manage risks and minimise the impacts of port services and activities to environment and cultural heritage assets of its ports, in a manner that is consistent with its *Environment and Cultural Heritage Policy*.

Port services and activities associated with PPA's significant environmental risks are addressed by implementing existing (mandatory) controls and risk treatment plans. Those services and activities that are not associated with significant environmental risks are managed in accordance with a range of administrative controls including operational plans, which set operating criteria and controls to ensure environmental management requirements are met.

Where a process undergoes planned change, management system documentation is updated (including the *Environmental Risk Register*) and changes are communicated in accordance with the requirements of PPA's *Document Control Procedure*. Uncontrolled changes (or incidents) are managed in accordance with PPA's *Incident Management Procedure*.

5.2. EMERGENCY PREPAREDNESS AND RESPONSE

PPA's *Environmental Risk Register* identifies possible environmental emergency scenarios that require a targeted plan(s). The key environmental emergency scenario identified across all PPA ports is a marine oil pollution event.

PPA's marine oil pollution contingency plans and other emergency response plans are publically available on PPA's website.

Environmental monitoring at Dampier Cargo Wharf

6. SUPPORT

6.1. RESOURCES

PPA's Executive Committee determines organisational resources on an annual basis through the workforce planning process. This process includes consideration of staffing resources to ensure sufficient expertise is available for the successful implementation of PPA's EMP.

Other resources required for the implementation of this EMP (e.g. monitoring equipment, use of specialist environmental consultants etc.) are assessed and planned for during the annual budgeting process.

6.2. COMPETENCE AND AWARENESS

An analysis of competency and training needs for PPA staff is completed in accordance with the *Training, Awareness and Competency Procedure*.

A mandatory minimum training requirement for all people working within operational areas at PPA's ports in Dampier and Port Hedland is the completion of an online site induction. This induction communicates environmental obligations and expectations to ensure PPA's services and activities are delivered in a manner that respects the environment cultural heritage assets of its ports. An additional environmental awareness training package is also delivered to new PPA employees following completion of the site induction. This package communicates PPA's roles in environment and cultural heritage management across its ports, including levels of operational control, legal and other requirements, significant environmental aspects and environmental objectives, and expectations around hazard and incident reporting.

6.3. COMMUNICATION

PPA's engagement and communications with stakeholders on environmental management is guided by the *Stakeholder Engagement and Communications Strategy*. In implementing this Strategy, PPA hosts and attends a wide range of external forums to allow information exchange with industry, key stakeholders and the local community on a wide range of operational issues including environment and cultural heritage management.

PPA's main forum for information exchange is through its Community Consultation Committees (CCC) established at each of its operational ports in Ashburton, Dampier and Port Hedland. These forums share information and provide mechanisms for feedback with the local and regional communities in which PPA operates.

PPA also communicates key information on its environmental performance to port stakeholders via its *Annual Report* and this EMP, which are made available on PPA's website.

PPA also welcomes direct general feedback on the environment and cultural heritage management of its regional ports. This is possible by directly contacting PPA's regional port offices in Dampier and Port Hedland, and corporate office in Perth. It is also possible to provide feedback through PPA's website.

6.4. DOCUMENTS AND RECORDS

PPA has adopted an enterprise-wide approach to document and records management. The *Document Control Procedure* sets out the expected standard for controlled documents. PPA's EMP and associated records are kept in accordance with the *Recordkeeping Policy* and *Recordkeeping Plan*.

7. PERFORMANCE EVALUATION

7.1. MONITORING, MEASUREMENT, ANALYSIS AND EVALUATION

PPA has implemented a range of environmental monitoring programs across its regional ports, some of which have been identified in Table 4.3 (Section 4.3). Monitoring programs at PPA's ports have been implemented either due to:

- **Legal requirements**: where PPA are bound to undertaking monitoring under statutory approvals issued to the organisation under environment and/or cultural heritage legislation; and/or
- **Best practice**: where the aspects and impacts of delivering PPA's services and activities have been analysed through the *Environmental Risk Register* and a monitoring program has been established to characterise and monitor the quality of the environment in response to these.

PPA communicates the key outcomes of its environmental monitoring programs through various processes and stakeholder forums established under PPA's *Stakeholder Engagement and Communications Strategy* (e.g. Community Consultative Committees). Several environmental monitoring programs that are implemented as a result of legal requirements also require the outcomes to be communicated publically on PPA's website.

By routinely evaluating the results of its environmental monitoring programs against its environmental objectives, PPA is able to effectively monitor, report and continually improve the overall performance and effectiveness of its EMS.

7.2. EVALUATION OF COMPLIANCE

PPA maintains a process for periodically evaluating compliance to its legal and other requirements (refer to Section 4.1). This process is described within PPA's *Compliance Program Manual*, with compliance records managed through an online task management workflow system.

7.3. INTERNAL AUDIT

PPA has implemented an IMS Internal Audit Program. Documents that will be audited are detailed in the *Integrated Management System Manual*.

The Internal Audit Program is approved by PPA's General Manager Risk and Governance is managed by the IMS Committee. Internal audits are conducted in accordance with the *Internal Audit Procedure.*

7.4. HAZARD AND INCIDENT MANAGEMENT

PPA's processes for managing environmental hazards and incidents are documented in the *Incident Management Procedure* and *Hazard Management Procedure*. All environmental hazards and incidents are reported and communicated via PPA's online reporting tool.

7.5. MANAGEMENT REVIEW

PPA's *Environment and Cultural Heritage Policy* is reviewed and approved by its Board every two years to ensure its continuing suitability and effectiveness.

PPA's Executive Committee review and endorse the EMP annually to ensure PPA's environmental objectives remain current and promote continuous improvement in environmental management.

8. IMPROVEMENT

8.1. NON-CONFORMITY AND CORRECTIVE ACTIONS

PPA's *Non-Conformity Procedure* identifies the process by which PPA documents non-conformity and preventative and corrective actions. By following this process, PPA can achieve continual improvement and prevent recurrence of non-conformity.

PPA maintains a register of all non-conformity records. All preventative and corrective actions details are recorded in the IMS Register for IMS Committee's consideration. Actions are closed out of the IMS Register once the process owner has implemented the action plan.

8.2. CONTINUAL IMPROVEMENT

PPA strives to continually improve the suitability, adequacy and effectiveness of its EMS to enhance environmental performance through the implementation of this EMP, and associated documentation. The annual review of this EMP and ongoing auditing pursuant to the Internal Audit Program, ensures PPA can meet its commitment to continual improvement, in line with the *Environment and Cultural Heritage Policy.*

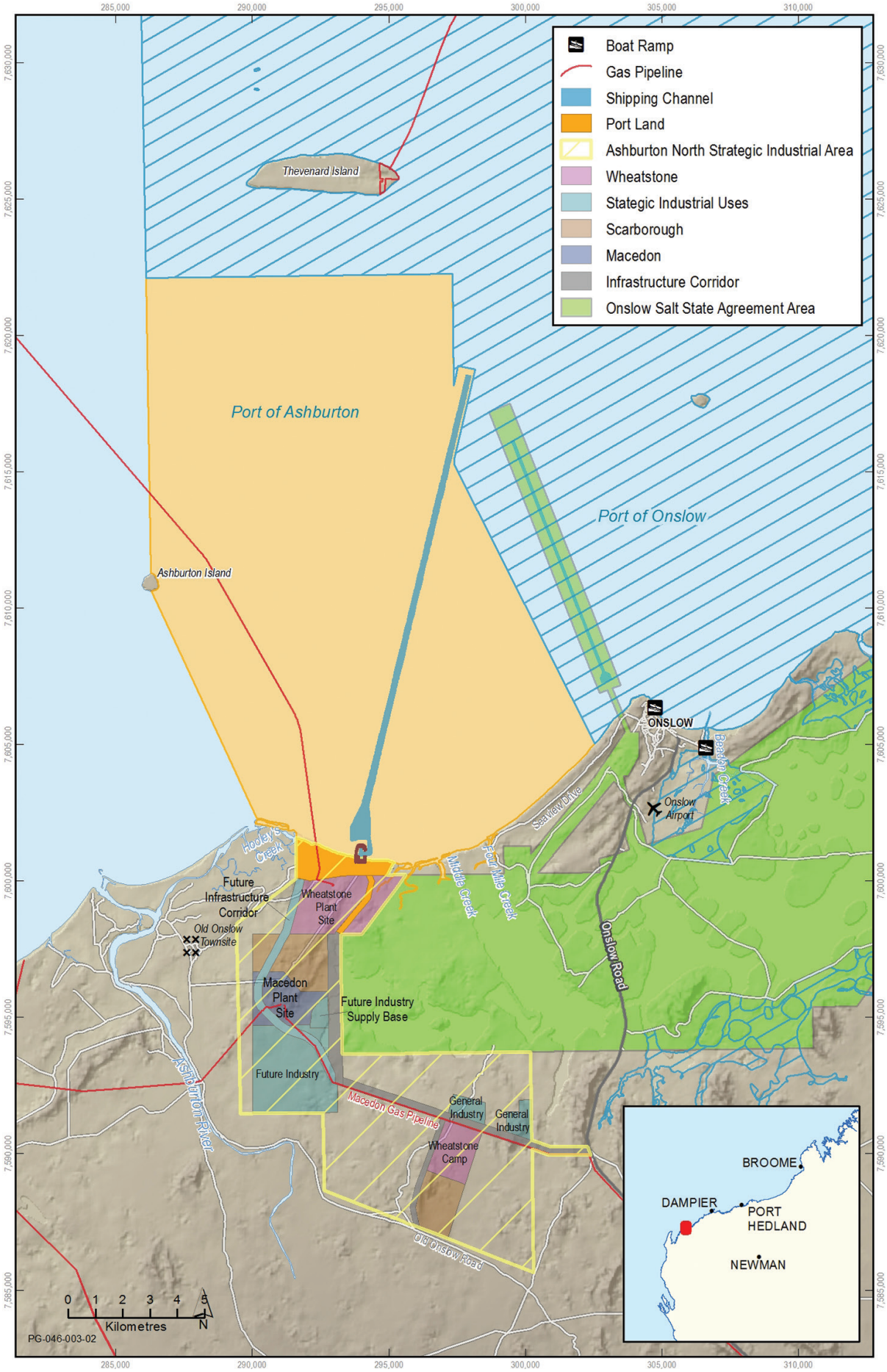
9. PROCESS OWNER

The Director Environment and Heritage has overall responsibility for this document.

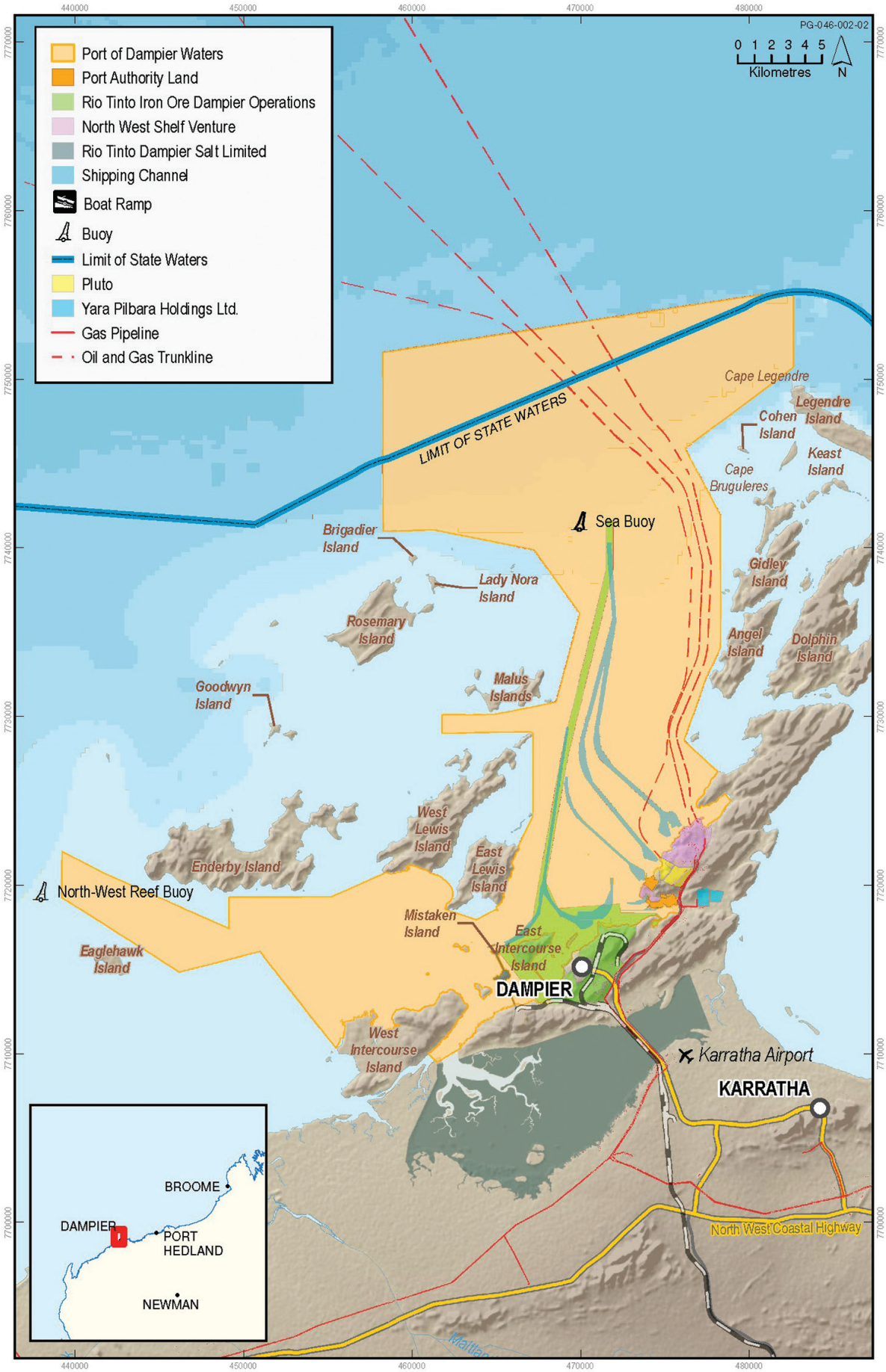
Date approved: 12 September 2016	Review date: 12 September 2017
Version: 2	Approved by: Director Environment and Heritage

Port of Dampier at Dusk

APPENDIX 1A – PORT OF ASHBURTON (LOCALITY MAP)



APPENDIX 1B – PORT OF DAMPIER (LOCALITY MAP)



APPENDIX 1C – PORT OF PORT HEDLAND (LOCALITY MAP)