Port of Skardon River

ENVIRONMENTAL MANAGEMENT PLAN

2014

Ports North
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FILE REFERENCE 03-02-03
1 INTRODUCTION

Far North Queensland Ports Corporation Limited (FNQPC) trading as Ports North, manages five trading ports and four community ports throughout northern Queensland. This Environmental Management Plan (EMP) is prepared to identify potential impacts and outline environmental management measures developed for operations at the port to ensure environmental safeguards are in place to minimise the risk of impacts to the natural environment. All personnel involved in activities on port land and certain activities aboard vessel within the port area are required to demonstrate a general environmental duty of care throughout any such operations, and are required to comply with the measures below, unless a variation is approved in writing by Ports North.

Ports North, as the port authority for the Port of Skardon River, has very tight environmental controls in place at the port to ensure that no environmental harm occurs during port operations, maintenance or developments. Best practice measures are used to ensure high environmental standards in the operations.

This EMP is to be read in conjunction with the applicable “Port Rules and Notices” that also apply at the Port for such operation. Refer to www.portsnorth.com.au for most up to date information. Operators are to ensure that these measures are fully implemented.

Ports North staff and port users involved in operations, including loading and unloading product across the wharves are required to protect the environment under the applicable legislation, including the Transport Infrastructure Act 1994, and the Environmental Protection Act 1994.

2 LOCATION

The Port of Skardon River is one of the trading ports managed by Ports North. The port is located on the coastline of the Gulf of Carpentaria in north-west Queensland (see Figure 2-1). The port is located approximately 125 kilometres north of Weipa at approximately Latitude 11°45′36″S, Longitude 142°04′12″E on the west coast of Cape York Peninsula (Figure 1).

The port limits (shown in Figure 2-2) are defined in the regulations of the Transport Infrastructure (Ports) Regulation 2005. The port includes the lower Skardon River and stretches along the coastline.

The port activities are concentrated along the southern bank in the lower reach of the Skardon River, with no intensive port activity occurring outside this area. This EMP applies to the port area, including port limits at Skardon River.
Figure 2-2 Location of Port and Port Limits
3 DESCRIPTION OF ACTIVITIES

Mining developments in the Skardon River area have led to the requirement for a port in the area. There are existing basic port facilities comprising a barge landing ramp and walkway. The facility has changed hands and operated as a kaolin mine and export facility. Ports North and its predecessor (Ports Corporation of Queensland (PCQ)) are responsible for management of the Port of Skardon River, although PN does not own any land at Skardon River. Mining Lease terms govern the activities and tenure at the port.

The port services operations for the export of kaolin, and potentially bauxite. Fuel and produce is imported through the port for the operation of the kaolin processing facilities on site. AMSA has also established a facility adjacent to the barge ramp for the periodic use as a foreign fishing vessel destruction site. New export opportunities continue to be explored by Ports North and proponents to support regional development.

3.1 Location of Infrastructure and Buildings

No Ports North infrastructure is established at Skardon River, with the minor number of building’s part of the mine development. This includes a series of small buildings, a floating wharf, and a barge/landing ramp.

3.2 Channels

There is no declared entrance channel, with any vessel access constrained by tide and to within the existing natural channels. To date no channel development or maintenance activity has occurred.

3.3 Anchorage

There is no designated shipping anchorage within port limits, apart from some storm moorings.
4 OVERVIEW OF PORT ENVIRONMENTAL MANAGEMENT

It is our policy is to manage our ports in a pro-active manner to minimise any impacts from port operations or new developments. We have a structured environmental program that involves environmental assessment, monitoring, protection and rehabilitation. It strives for continual improvement in the control of port and port user activities to maintain a healthy port environment. The detailed environmental policy, procedures and practices are documented in its Environmental Management System, which is consistent with the AS/ NZS ISO14001 standard. Ports North has an Environmental Management Framework and associated Policy, which provides a mechanism for continually improving operations and practices (refer Appendix A). All activities carried out at the port under Ports North’s direct or indirect control need to comply with this Policy. Ports North also subscribes to the policy aspirations identified in the Environment Policy for Queensland Ports.

This Environmental Management Plan for the port is complementary to, and consistent with, the Environment Policy that is documented in its EMS and on its web site. Under the Environmental Management System, new projects undertaken on strategic port land will require a project-specific Environment Management Plan to be developed by the proponent and then approved prior to commencement of the project. This plan must address the potential environmental issues from the project during construction, as well as for ongoing operations and the actions needed to minimise impacts. Our environment staff can supply a standard checklist of potential issues and will work with a project proponent to determine the environmental issues that need to be addressed.

To assess the overall state of the port environment or to detect any changes occurring, Ports North maintains regular scientific monitoring of key environmental values such as seagrass condition and trend, and results from such monitoring are made accessible via the organisation’s website.

5 DOCUMENT USE AND REVIEW

This Environmental Management Plan (the Plan) for the Port has been developed to document in detail the environmental areas of significance within the Port and the current environmental management practices and controls used to protect and enhance the port environment.

This Plan will be used in determining environmental standards for the on-going development and operation of the port. This Plan is designed to complement any future Land Use Plan to ensure that any development at the port is carried out in an environmentally sustainable manner and in a manner consistent with the planned strategic development of the area.

This Plan is also intended to provide a reference document for current and potential users of the port, government agencies and local communities. This Plan is not a statutory document and is not required by legislation.

The following sections provide general principles, controls and management strategies which must be adhered to at all times by staff and the Operator (including its sub-contractors) involved to reduce potential impacts.
The following information is presented in this document:

- Section 2 presents the key legislation and policies that need to be considered in port operations and developments.
- Section 3 provides a general description of the environmental values at the Port and surrounding areas, including areas designated as an environmental buffer.
- Section 4 describes potential industry or operational impacts in the port and presents the environmental control measures to be employed to manage those risks.
- Appendices document specific management plan components applicable to certain operations if required.

This Plan will be reviewed and updated as needed to ensure that it reflects any significant changes that may occur within the port. It will be completely reviewed at least every six years and a new document issued.

Ports North will seek community, industry and relevant government agency feedback on any major changes to this Plan and will incorporate external feedback where appropriate. Minor changes to the Plan will be carried out throughout the life of the Plan and these minor revisions will not necessarily be subject to external consultation. Examples of minor changes not requiring consultation are changes in the description of goods handled in the port, legislation changes, property lot subdivisions or number changes or other minor changes in the Land Use Plan, changes to port limits or the incorporation of new environmental information. Major changes to this document that would be externally consulted include any changes to the declared land use zones.

6 IMPLEMENTATION

Port users will be responsible for ensuring requirements of this EMP are implemented for the duration of their particular activity, and will be responsible for monitoring the environmental management of day-to-day activities. A separate site specific EMP may also be required for each operators own activities, which should ensure consistency with this overall Port EMP. Each port user is required to ensure that all personnel working onsite are aware of their environmental responsibilities and the importance of the EMP, and will be responsible for the regular inspection of the adequacy of all environmental controls as is the case with health and safety requirements.

7 RESPONSIBILITIES AND CONTACTS

The following roles within these operations and specific responsibilities are noted as follows;

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8 GENERAL ENVIRONMENTAL, SAFETY OR COMMUNITY IMPACTS

To minimise impacts on social and environmental aspects of operations, the following management measures shall be adopted:

- All site personnel will be advised of their responsibilities for reporting any potential or actual environmental harm in accordance with the *Environmental Protection Act 1994*;
- PN is to be notified of any safety or environmental incidents and complaints that occur immediately;
• An Incident Form will be completed and remedial actions will be monitored;
• Port users are required to record all details of any complaints received and to notify PN including details of the action taken to rectify the situation; and,
• Port North’s will consult with relevant stakeholders prior to commencement of operations.

9 INDUCTION

All personnel working onsite must attend an induction or ‘tool box’ by the Port representative prior to commencing works or activities. The induction will cover relevant provisions from this EMP, including:

- Performing work duties with minimal impact on the existing environment;
- General environmental duty of care;
- Incident recognition and reporting;

Ports North will maintain a diary record of the completed inductions (i.e. date, time, who attended).

10 LEGISLATIVE REQUIREMENTS

State Legislation

Ports North has responsibilities conferred on it by State legislation (*Transport Infrastructure Act 1994* and *Transport Operations (Marine Pollution) Act 1994*) for the safe and efficient management of the port and its infrastructure, and for managing pollution from shipping activities. The jurisdiction of Ports North at the Port of Skardon River includes all land under the *Land Use Plan*, and all waters within designated port limits, as defined under the *Transport Infrastructure (Ports) Regulation 2005* (see Figure 2-2). The geographical extent of this Plan applies only to the area under that jurisdiction.

*Transport Infrastructure Act 1994*

Ports North is the port operator for the Port as declared under the *Transport Infrastructure Act 1994*. Requirements of the Act are affected by the “Port Rules” and “Port Notices”.

*Environmental Protection Act 1994*

Under the *Environmental Protection Act 1994* (EP Act), consideration of the environmental duty of care, and duty to notify is required at all stages of operations by all staff (Section 316 of the EP Act). The basic principles of the EP Act should be understood by all staff.

Under the *Environmental Protection Regulation 2008*, some actions may be classed as an Environmentally Relevant Activity (ERA) and hence the activity may require specific Department of Environment and Heritage Protection (DEHP) approval. Port activities carried out by either port users or operator must comply with all relevant government legislation. The key State legislation for protection of the environment is the Queensland *Environment Protection Act 1994*. The Queensland Department of Environment and Heritage Protection (DEHP) is responsible for ensuring compliance with this Act. Ports North has an approval to operate the port as the port authority under the *Transport Infrastructure Act*. However, this does not provide any umbrella approvals for the individual activities of port users. Port users are required to hold all the relevant environmental authorities or licences issued by state administering agencies for their day-to-day activities, which might include environmentally relevant activities such as
stockpiling, loading or unloading in bulk, fuel or chemical storage, sewage treatment, aquaculture or boat repair and maintenance.

Significant new developments in the port are likely to require approval under the **Sustainable Planning Act 2009**. For projects proposed on Strategic Port Land (Strategic Port Land is land owned by Ports North that has been designated as land required for port purposes and approved as such by the Minister for Transport. Strategic Port Land is listed in the Land Use Strategy and Plan.), Ports North is the Assessment Manager under the Act. Further information is provided in the Land Use Strategy.

Another piece of key State legislation that could affect port development or operation is the **Fisheries Act 1994**. It should be noted that under this Act, marine plants, which include seagrass, mangroves, saltmarsh and other tidal plants, may not be removed, damaged or even trimmed without a permit from Queensland Department of Agriculture Forestry and Fisheries (DAFF). The Act also prohibits work in a declared fish habitat area without a permit, although no such areas were proclaimed in the port at the time of writing.

### State Planning Policies

The **State Coastal Management Plan** was published by the EPA in August 2001, with subsequent amendments including those in 2012. This Plan seeks to protect and manage Queensland’s coastal resources. In considering assessable developments on Strategic Port Land, Ports North will have regard to this plan in its decision-making as Assessment Manager under the **Sustainable Planning Act 2009**.

### Commonwealth Legislation

Projects that may have an impact on issues of national environmental significance could require assessment and approval under the Commonwealth **Environment Protection and Biodiversity Conservation Act 1999**. Examples of triggers of the Act include impacts on World Heritage areas; Ramsar wetlands of international significance; nationally threatened species and communities listed by the Commonwealth; migratory species protected under international agreements; nuclear actions; or Commonwealth marine environment. Such projects will need to be referred to Environment Australia by the project proponent to determine if Commonwealth approval is required. The disposal of dredged material at sea (outside internal State waters) is covered by the **Environment Protection (Sea Dumping) Act 1981**.
11 THE PORT ENVIRONMENT

All port facilities are located on the banks of the Skardon River on the western coastline of Cape York. The port is situated in a typical monsoonal tropical environment with hot, wet summers and hot, dry winters. Environments that have high ecological status surround it. These include large stands of mangroves, salt flats and terrestrial vegetation. The area is important as a nursery ground for fisheries and contains important habitat for migratory birds. Water quality is naturally variable, with large variations in salinity, temperature and turbidity depending upon weather conditions and river flows. A description of the prevailing conditions and the environmental resources and values are provided below to place the port operations or development in context of the local environment.

11.1 Climate and Coastal Conditions

Little accurate information is currently available on tides and currents at Skardon River.

Skardon River has a tropical maritime climate with mean summer maximum temperatures of up to 32°C and a winter minimum of 20°C. Dominating the climate of the area are alternative periods of wet and dry weather.

The dry season (April – November) is characterised by offshore SE winds, blowing persistently at speeds of 12 to 25 knots for approximately two-thirds of the year. A short period of relative calm and increasing humidity follows with winds slowly veering and backing to the N/NW quadrant between November and February/March during which rainfall is very heavy at times. During this wet season the average wind speed is normally below 5 knots, however, wind speeds up to 16 knots have been recorded during this season in the region.

Cyclones are infrequent, occurring once every three years on average and generally in January to March. Like other Gulf rivers, the Skardon River moves large amounts of suspended material into the Gulf, and the intertidal and sub-tidal zones remain turbid throughout the year. The catchment covers a large area of relatively intact gulf savannah lands. Catchment land use is dominated by extensive beef cattle grazing, remote un-developed land reserves, with no urban or industrial use.

11.2 Areas of Environmental Significance

Although there are no marine parks in the Skardon River region, the area encompasses a diverse range of ecologically important marine habitats. Many of these areas such as mangroves, salt pans, rock bars and marine swamps are likely to be of high importance to local fisheries.

The Skardon River lies within an area identified as one of Queensland’s major wetland aggregations and has been included in a Directory of Important Wetlands in Australia by Environment Australia (Perry 1995 in Roelfs et al 2002).

Extensive fringing mangroves were identified along the Skardon River. Scattered areas of salt pans were at the landward margins of mangroves. Beyond the salt pans and tidal flats were extensive areas of sedgeland or marine swamp.

Coastal areas surrounding Skardon River include salt flats, mangrove communities, extensive intertidal flats and shallow sub-tidal seagrass beds. These habitats are extremely productive and
support a high diversity of animals and plants including some species which are valuable to commercial fisheries and some which have high conservation value.

**Figure 11-1 Environmental Resources**

11.3 **Cultural Heritage**

No cultural heritage surveys have been undertaken for the Skardon River area. It is understood that the area contains many sites and values of importance to the traditional owners of the region.

11.4 **Seagrass**

Surveys for the presence of marine flora have been undertaken in 1986, 2002 and 2010, and indicate only one small isolated *Halodule uninervis* (narrow form) seagrass meadow was identified in the Skardon River. The meadow was located approximately 2.4 km north of the port facilities on a sand/mud bank in a side creek of the Skardon River. A seagrass meadow identified near the mouth of the Skardon River by the DPI in 1986 was not present in the 2002 survey. This suggests that seagrass distribution in this system is variable between years and perhaps seasons.

*Halodule uninervis* is capable of producing long-lived seeds that can lay dormant in the sediments. This “seed bank” may allow recovery of these meadows during favourable conditions for seagrass growth. It is likely that the loss of the seagrass meadow identified in 1986 is only temporary and that part of the river may still contain a viable seed bank.

No seagrass was found within the fine-scale survey of the port, which focused on marine communities and intertidal habitat within 500 metres of the port facility. However, ephemeral
species such as *Halophilla ovalis* and *Halodule uninervis* (narrow) may sometimes be present. It is unlikely that seagrass would grow in the subtidal areas of this section of the river.

**Map 1. Location of coastal seagrass habitat characterisation sites and seagrass meadows in the Skardon River survey area, May 2010**

11.5 **Marine Fauna**

Sand areas within Skardon River contain many schools of baitfish and larger predatory fish including barramundi (*Lates calcarifer*).

The Skardon River has high wilderness values and is an important breeding area for estuarine crocodiles and green turtles. Marine stingers have also been identified in the river. The low lying habitats in the port limits are likely to be an important fisheries resource, providing nursery and forage areas for prawn and fish species such as barramundi. Based on quality and types of habitat within this portion of the Gulf, the presence of good populations of cetaceans and turtles is highly likely. There is little information relating to the number of each group, as survey data to date is general limited. It is highly likely that many EPBC(Comm) and Nature Conservation Act (QLD) listed species are present.

11.6 **Intertidal Sand and Mud Flats**

The intertidal region of Skardon River is comprised of extensive sand bars that border the main channel of the river. Intertidal benthic communities are sparse throughout the port limits, with some aggregations of oyster beds, *Sacrostrea* sp., and patches of isolated algae beds (filamentous green algae (Chlorophyta)) along some intertidal mud banks. Oyster beds exist on the southern
bank from near the mouth of Skardon River to just upstream of the port facility. A small oyster bed also exists at the mouth of a small creek on the opposite bank to the barge ramp.

A few rock bars are visible at low tide in some of the side branches of the Skardon River and one has been identified in the main channel. There are no rock bars within a 1 kilometre radius of the port facility.

The substrate within 500 metres of the port facility is mostly bare mud/sand/shell/gravel with very sparse benthic invertebrate cover. A small bed of mixed red and brown (Rhodophyta and Phaeophyta) algae is located on a rocky substrate on the opposite side of the river to the port facility. Other algae present in this area includes filamentous green (Chlorophyta) and red turf algae. Sponges and bryozoans were the only subtidal benthic invertebrates identified near the port facility, however these were present at only a few sites and covered only 10% of each site.

Oyster beds have been identified on rocks within the intertidal zone adjacent to foreshore area, which has been cleared for the port facility, and in a small bed on the opposite shore to the barge landing. The bank sediment within this cleared area comprises of mud, sand, shell and gravel (in order of dominance).

11.7 Fisheries and Aquaculture

Commercial, traditional owner subsistence and recreational fishing are conducted in the waters of the Gulf of Carpentaria and western Cape York rivers. Commercial fisheries include prawn trawling, coastal net and line fishing and crab pot fisheries. Intertidal benthic communities, which include sand and mud banks, algae beds, seagrass areas, oyster beds and rock bars, were identified in the Skardon River and are important to the local ecology and fisheries. The low lying habitats within the port limits are likely to be an important fisheries resource, providing nursery and forage areas for prawn and fish species such as barramundi. Large schools of baitfish and barramundi have been observed in the sand areas of the river.

11.8 Soil and Terrain

The port area is flat and is bordered by extensive areas of low gradient sand and mud flats, resulting in the port location being periodically flooded during major storm events and isolated. The soils are predominantly sand ridges along the immediate coastline, with bauxite rich bedrock layers further inland. The low lying areas are highly saline, often silty clays. Acid sulphate soils are highly likely to occur in the marine clays underlying the sandy topsoil layers throughout the port area.

11.9 Coastal Vegetation

The mouth of the Skardon River is bordered by sand dunes vegetated mostly with *Casuarina* sp. woodland, tussock grasslands and heath.

Extensive fringing mangrove and scattered saltpan habitats exist along the Skardon River from coastal areas to upper freshwater sections. Typical fringing mangrove areas along Skardon River include *Rhizophora stylosa* and *R. apiculata*, *Ceriops tagal*, *Bruguiera gymnorrhiza* and *B. parviflora*, *Sonerratia* sp, *Avicennia marina*, *Xylocarpus granatum* and *X. mekongensis* and *Excoecaria agallocha*.

The region has small scattered areas of saltpans at the landward margins of the mangroves. These areas are characterised by mostly bare hyper saline sandy soils with patches of salt adapted plants.
(Samphires/Pigfaces – *Halosarcia* sp; Marine grasses – *Sporobolus* sp., *Fimbristylis* sp. *Tecticornia* sp) and are bordered by a suite of mangrove species including *Excoecaria* sp. and *Avicennia* sp. Some salt pans are also fringed with *Acacia* sp.

Beyond the salt pans and tidal flats are extensive areas of sedgeland or marine swamp. Species recorded in these swamp areas include the sedge *Eleocharis* sp., *Marine Couch* – *Xerochloa* sp. and *Fimbristylus* sp. and emergent trees and shrubs including *Melaleuca* sp. and *Grevillea* sp. Elsewhere, the vegetation comprised mostly open woodland forest.

Approximately 300 m of mangroves had previously been cleared along the foreshore area for the port facility. Marine couch, terrestrial plants and grasses occupy the cleared area and there has been some recolonisation of the cleared intertidal areas by mangroves (mostly *Rhizophora stylosa*).

The Skardon River region has been noted as containing some of the best representative areas of *Melaleuca quinquinervia* open forest on Cape York Peninsula.

### 11.10 Terrestrial Fauna and Birdlife

The wetland areas near Skardon River and adjacent vegetation and coastline support a diverse array of fauna, with limited survey data published for the area.

### 11.11 Natural Amenity

The Port of Skardon River and the surrounding district has high significant value for its natural wilderness, including water associations, wetland aggregations, vegetation communities, fringing mangroves, scattered salt pan and marine swamp habitats, intertidal areas and sand dunes. The mangrove areas in particular are intrinsic for the continued existence of fish, prawns, turtles and other marine and terrestrial species. Skardon River’s natural features remain relatively undisturbed resulting in an area of significant natural beauty.

### 11.12 Water and Sediment Quality

The waters offshore from Skardon River are generally very turbid due to the relatively shallow water depths and fine silts which are continually mobilised and remain in suspension. Turbidity is increased from freshwater run-off during the wet season, and high volumes of freshwater enter from the catchment.

There is very little recent data available on the quality of water or sediment either in the Port or in neighbouring waters. The waters are expected to be of an excellent natural quality due to pristine catchment area and limited disturbance.

### 11.13 Port Environmental Buffer Areas

To date a formal designation of a Land Use Plan that identifies port land uses has not been developed or port land gazetted, and hence allocation of environmental or general buffer areas has not occurred. Due to the limited activities and operations at the Port, and absence of adjacent sensitive uses, the need for such zones is relatively small compared to other locations. Ports North intends to protect and enhance the ecological values of high value ecosystem areas by restricting infrastructure development on them and ensuring suitable management measures are in place for their on-going protection.
12 POTENTIAL IMPACTS TO SENSITIVE AREAS

The dominant sensitive environmental areas adjacent to the Port are fringing mangroves, the seagrass meadows, and intertidal mudflats. Extensive noise or air quality sensitive residential development are minimal and absent from the immediate adjacent area, with commercial port related land use development the dominant use of the port operation area.

Foreshore intertidal mudflats and surrounding coastal wetlands are host to numerous species of resident and migratory wading birds, many with international conservation significance. Extensive areas of savannah grasslands and remanent marine and terrestrial vegetation surround the port and township.

13 ENVIRONMENTAL MANAGEMENT MEASURES

As detailed in our Environment Policy, we strive for ecologically sustainable operations and development of its ports, which is consistent with Queensland Transport’s “Environmental Policy for Queensland Ports”. This may result in the setting of higher environmental standards on operations or new developments than required by environmental legislation or licences. This is achieved through a detailed environmental assessment of all proposed projects on port land or in waters within port limits and auditing of both our operations and those of port use activities.

We will require a detailed Environmental Management Plan (initial construction phase, and then for ongoing operations phase) to be prepared by new port users, or project proponents as part of the approval process for any new development. This Plan should be developed in consultation with the Corporation. Larger projects will require preparation of a formal Environmental Impact Statement (EIS).

To assess the overall state of the port environment or to detect any changes occurring, we also undertake regular scientific monitoring of key environmental values. Results from these monitoring programs are made publicly available.

13.1 Management and Enforcement

Ports North operations staff are authorised officer under the Transport Infrastructure (Ports) Regulation 1994 and may issue directives to vehicles and vessels to ensure the safety or efficient operation of the port or to enforce port regulations or the requirements of Transport Operations (Marine Pollution) Act with regard to discharges from vessels.

The port representative will respond to oil spills in the port and may board vessels for sampling purposes during an investigation of a spill.

Penalties for contravention of a port notice or legal direction of Ports North can be applied.

In addition to the controls Ports North is able to enact under the Port Rules and Notices, the Department of Environment and Heritage Protection (DEHP) oversees environmental regulation of port users and their activities. This regulation includes licensing activities in the port and any monitoring of compliance with licence conditions.

13.2 Emergency Response

As port operator we have a statutory responsibilities and powers under the Transport Infrastructure Act 1994 to maintain the safety and security of the port. This Act gives the port authority the power to control movement of vessels in the port, to inspect ships or to move ships moored or goods left against the authority’s direction.

We have developed an Emergency Response Plan that covers situations such as cyclones, marine incidents, bomb threats, fire, explosion or fatalities. Copies of the Response Plan are held at the Port
office, by the Regional Harbour Master and by a number of port users and other key agency contacts.
Where a non-marine incident is caused through the activities of a port user on port land, the initial response is the responsibility of the port user, with notification required to Ports North and the appropriate agency (Cook Shire Council, DEHP etc). If the incident has the potential to escalate beyond the boundaries of the port user’s responsibility, we maintain the right to initiate external resources and response agencies to assist in reducing the impact of the incident on other port users.

13.3 Cyclone Procedures

Detailed cyclone procedures are provided in the Port Emergency Response Plan and are consistent with Queensland Transport’s Maritime Cyclone Contingency Plan for Port of Skardon River.

13.4 Management of Oil Spills

Oil spills in port waters could result from a variety of sources including groundings, collisions and sinking of vessels; illegal discharges from vessels; accidents when transferring waste oil to storage facilities on shore and accidents when refuelling vessels.
To reduce the risk of oil spills occurring, Maritime Safety Queensland (Queensland Transport) ensures the safety of navigation, including the provision of navigation aids. Pilotage services for the arrival and departure of ships greater than 50m in length from the port are provided so as to reduce the risk of human error.
The Port of Skardon River is equipped for smaller spills of oil and the onsite operator is responsible for provision of the “first strike” response to an oil spill within the Port through close co-ordination with local Maritime Safety Queensland staff. MSQ can provide additional resources out of Cairns, or other centres, for larger spills.
The response plan for an oil spill is documented in the First Strike Oil Spill Response Plan- Port of Skardon River (http://www.msg.qld.gov.au/~media/msginternet/msgfiles/home/environment/contingency%20plans/qcccap_app26.pdf), which is regularly updated. This plan is complementary to the Queensland Coastal Contingency Action Plan, and the National Plan to Combat the Pollution of the Sea by Oil and other Noxious and Hazardous Substances (National Plan) for larger spills.

13.5 Stormwater Quality and Protection

Potential Impacts

The primary environmental impacts associated with existing port operations are potential releases of water contaminants into the adjacent stormwater systems or the adjacent waterway. Release of particulate matter, nutrients and bacterial coliforms into the water column may affect adjacent areas (e.g. flora) by promoting excess algal growth, or human health impacts from faecal coliforms, sedimentation or reduction of light penetration through the water. Natural water quality conditions within the Skardon River are close to pristine, and are seasonally variable due to the high natural turbidity and major inputs to the catchment.

Management

Ports North has no land holdings in the port, and management of stormwater management is a minor matter under the control of the local council. Drains are typically unlined. As a matter of policy, best practice stormwater management devices will be installed in any future major developments on future port land.
13.6 Management of Discharges from Shore-based Industries

The Department of Environment and Heritage Protection provides the environmental authority for discharges from shore-based industry and determines the appropriate environmental standards for these discharges to protect environmental values. Apart from the mine facilities, there is little industry currently at the port.

13.7 Contaminated Land

Certain land uses throughout the history of the port may have included activities known as Notifiable Activities (as described in the QLD Environmental Protection Regulation, 2009), which include certain Environmentally Relevant Activities (ERA’s), may have had the potential to cause contamination of the land and groundwater below. Such uses may also have included much older activities that occurred prior to the commenced of stronger environmental regulation in the mid-1990’s. Sites with actual or potential contamination may be listed on the QLD Environmental Management Register (EMR), and such a listing does not automatically mean there is environmentally harmful or health impacting conditions on the site, more so that prospective development and disturbance, and existing day to day operations need to mindful of the possibility of disturbing contaminants. Uses that typically give rise to contamination include areas used for fuel storage, abrasive blasting and painting, slipway activity, bulk storage of chemicals or minerals and waste handling/treatment facilities. Ports North may require an “Entry Report” to be compiled at the start of a new land use or lease on a site so as to ensure an adequate baseline of contamination status is documented. At the end of such use or lease, an “Exit” contamination report may be required for comparison to the “Entry” baseline condition so as to verify the potential impact of the vacating use, and determine any such clean up or remediation actions. Development of sites listed on the EMR needs to be informed on the contamination status so as to ensure that any actual contamination can be appropriately managed, and that any movement of soil from a site listed on the EMR is managed via a “Disposal Permit” issued by DEHP, and any other requirements under the QLD Environmental Protection Act, 1994.

13.8 Waste Management

Potential Impacts

Un-controlled release of waste from operations may impact the nearby environment and also present a visual impact.

Management Measures for Waste

Prior to commencement of loading operation, actions are to be reviewed, so as to ensure appropriate planning for waste to be captured, and cleaned up.

Ships involved in the export of kaolin and other associated products and the import of general cargo and/or petroleum products, utilise areas within the Port Limits at Skardon River. Discharges from these vessels include small amounts of raw sewage and oily bilge water. Small quantities of antifouling leachate may also enter the system from such vessels. A possible impact from ships manoeuvring at the port is the suspension of bottom sediments from prop-wash, which may contribute to suspended sediment loads in the water column.

General Refuse

Potential wastes generated from on-board the vessels are likely to be minimal and consist of minor volumes of waste generated by the crew.

Ensure there is no contamination of surrounding environments.

Waste removal should go to waste bins and the to an approved landfill facility unless other conditions apply.
Quarantine or Regulated waste is to be removed and disposed via suitably approved waste contractor through contact with AQIS or Bio-Security Queensland.

Marine Waste and Contaminants
There is little demand for waste to be offloaded from bulk ships in the port and the waste facilities currently provided in the port to bulk ships are limited.

13.9 Air Quality and Noise
The remote location of Skardon River and the activities associated with kaolin mining has not necessitated any surveys of noise or air quality. Future surveys will be considered as the need arises.

13.10 Management of Ballast Water Discharges
With over 200 species of exotic marine organisms known to have been introduced into Australian waters, the introduction of foreign marine organisms through ships' ballast and hull fouling is a major concern for Australia. Ballast water is discharged from ships as they come into port and at the ship’s berth as it loads product. Due to the tidal constraints on vessel access through the shallow entrance to Skardon River, management of hull depth via altering volume of ballast water becomes more prevalent, and hence discharges are potentially the most environmentally significant input from ships into the Port of Skardon River. In risk studies carried out and documented in the PCQ Ecoports Monograph No. 14 (“Ballast Water Risk Assessment – 12 Queensland Ports. Stage 5 Report – Executive Summary and Synthesis of Stages 1-4”), all other PCQ ports returned values low enough to be placed in lower risk categories, indicating relatively little threat of pest introduction (Hilliard et al., 1997). It is, therefore, assumed that the Port of Skardon River has a low risk of introducing marine species from ships ballast water. There is currently no completely effective way of removing foreign organisms from ballast water that is commercially available. AQIS recommends mid-ocean exchange of ballast water (flushing tanks with three times their volume) as being the most effective mechanism currently available. Guidance is available from www.marinepests.com.au.

13.11 Vessel Cleaning and Slipway Operation
There are no slipways or vessel cleaning facilities currently operating in the port. Slipways represent a major potential source of contamination if not properly managed. Because of the high environmental importance of the port area vessel cleaning or slipways would not be considered appropriate unless certain pollution control infrastructure was included. Recommended actions in the ANZECC “Anti-fouling and In-Water Hull Cleaning and Maintenance Guidelines, will be required for any proposed in water works. Due to the potential for discharge of marine pests, and paint residues, including TBT and other antifouling paints, hull cleaning is not permitted. Any hull maintenance works for small to medium size works conducted via use of tides to position vessel on the shoreline for careening will be required to utilise tarpaulins to contain and capture all material removed from the hull of vessel, and for all material to be removed from within the tidal zone, prior to the next incoming tide. In water hull or propeller works will need an approval from DEHP and Ports North operations staff.

13.12 Acid Sulphate Soils
Because the port land is of low elevation, there is a risk of acid sulphate soils being present in the area. Acid sulphate soils contain pyrites or iron sulphide. While they remain undisturbed, they do not have any detrimental impacts. However, if the soils are exposed to the air, the iron sulphide will be oxidised to form sulphuric acid. Any water run-off from the exposed acid sulphate soils will reduce the pH of the receiving waters and release iron and aluminium from the soil into the water body.
Acid sulphate soils have not been identified to-date in the port area. However, if any significant soil disturbance is occurring for a project on port land, Ports North will require testing for the presence of acid sulphate soils. Disturbance of acid sulphate soils should be avoided where possible. If disturbance cannot be avoided, the appropriate treatment of the soil must be determined. If acid sulphate soils are present, a management plan for the acid sulphate soils must be developed prior to commencement of works. As part of any development application, testing for the presence of acid sulphate soils in the area of any planned significant soil disturbance is required.

13.13 Hazardous or Flammable Goods

Potential Impacts
The principal legislation dealing with the handling of dangerous cargoes in port areas is the Transport Operations (Marine Safety) Act 1994 and the Transport Operations (Marine Safety) Regulation 1995. All handling of dangerous goods within port limits are expected to comply with the Australian Standard ASTM 3846 “Storage, Handling and Transport of Dangerous Goods in Port Areas”, which provides recommendations for the minimum acceptable handling requirements.

Minor refuelling of vessels is carried out in the Port and should be conducted so as to minimise any safety or environmental risks. Before any new imports of dangerous goods through the Port could be considered, a risk assessment would need to be carried out. The requirements for such cargoes are detailed in the Transport Operations (Marine Safety) Act and the Transport Operations (Marine Safety) Regulation. The Australian Standard AS3846, The Handling and Transport of Dangerous Cargoes in Port Areas, documents the requirements and recommendations for safe handling and transport of dangerous goods in port areas. The standard provides the minimum acceptable safety requirements for port facilities and their operating practices.

13.14 Flora, Fauna and Natural Amenity

Potential Impacts
The presence of the port facilities to load kaolin or minerals onto vessels and offload supplies from barges impacts on the natural amenity of the area. The potential impacts of development in areas adjacent to the environmental zones are considered in project impact studies, to minimise any significant adverse impacts, such as a possible deterioration in the quality of stormwater run-off. Developments will have due regard to the flora and fauna values documented in this Plan. Loading operations are to occur on an establish hardstand and wharf area, and as such are unlikely to impact resident flora or fauna. In the event that wildlife does occur in the area, practical and reasonable measure should be used to move on such wildlife, or alter timing of loading operations so as to avoid.

Mitigation Measures
The infrastructure associated with the operation of the port, however, has been kept to a minimum and would appear to have little additional impact to that resulting from mining operations. Any expansion of the port will take into consideration environmental and aesthetic values as part of any development proposal. Avoid and prevent injury to all wildlife during loading. In the event of a sick or injured animal, the Operator shall notify Ports North who will follow up with Environment Manager on 07 4052 3820 and the Queensland Parks and Wildlife Service (1300 360 989).

13.15 Dredging
To date, no dredging has occurred in the Port of Skardon River.

13.16 Cultural Heritage

Potential Impacts

The already developed area has been previously disturbed whereby the likelihood of uncovering a cultural heritage item is minimal. Loading operations on sealed operational hardstand area and wharf, hence potential for observation of cultural items is unlikely.

Mitigation Measures

- Any new development works will be required to conduct a due diligence evaluation consistent with prior to any disturbance of undeveloped lands;
- All onsite personnel are responsible for reporting any potential cultural heritage items or objects, particularly during earthworks
- If a cultural heritage item is found (excluding human skeleton remains, which are to be reported to the police), works in the immediate area of the find shall cease and Ports North will be advised. The Traditional Owners and State Environment Department shall be contacted by Ports North Environment staff.

14 MONITORING

The above evaluation of potential aspects and impacts of activities at the port and subsequent management options give rise to the following monitoring elements may be implemented at this port:

<table>
<thead>
<tr>
<th>Impact</th>
<th>Specifics</th>
<th>Required</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Quality</td>
<td>Odour</td>
<td>Yes</td>
<td>Record and monitor trends in complaints Liaise with DEHP to verify and ensure compliance by port operators</td>
</tr>
<tr>
<td></td>
<td>Dust</td>
<td>Yes</td>
<td>Record and monitor trends in complaints Liaise with DEHP to verify and ensure compliance by port operators</td>
</tr>
<tr>
<td>Noise</td>
<td>From plant, equipment or trucks</td>
<td>Yes</td>
<td>Record and monitor trends in complaints Liaise with DEHP to verify and ensure compliance by port operators</td>
</tr>
<tr>
<td>Water Quality</td>
<td>Monitor site for presence of discharge to waterways/stormwater</td>
<td>Yes</td>
<td>Nil discharge direct to stormwater, or waterway. Correct work practices to halt discharges Monitor dredging and bed levelling consistent with triggers in the Long Term Management and Monitoring Plan.</td>
</tr>
<tr>
<td>Waste</td>
<td>Deposition on wharf, road,</td>
<td>Yes</td>
<td>Regular checking and clean-up, regular</td>
</tr>
</tbody>
</table>
**15 AUDITING**

Ports North staff may conduct an environmental audit in accordance with this EMP at any time during operations. Port Users must keep a copy of any relevant environmental licence, permit or approvals and records required under this EMP, onsite at all times. PN may also inspect the works at any time to ensure all commitments are been implemented.

<table>
<thead>
<tr>
<th>Flora and Fauns</th>
<th>Layby area</th>
<th>clearing of stockpiles or bins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pest weeds and animals</td>
<td>Yes</td>
<td>Manage existing pests, be vigilant for new species/incursions</td>
</tr>
</tbody>
</table>
16 GLOSSARY

the Corporation  Far North Queensland Ports Corporation Limited (FNQPC)

dB(A)  decibels (A – weighted), which is a measure of noise intensity

DEHP  Department of Environment and Heritage Protection

EPBC Act  Commonwealth’s Environment Protection and Biodiversity Conservation Act 1999

QT  Queensland Department of Transport

17 REFERENCES

Department of Natural Australian and New Zealand Environment and Conservation Council, 2012, Department of Agriculture, Fisheries and Forestry and Department Sustainability, Environment, Water, Population and Communities and New Zealand Ministry for Primary Industries (2012), Anti-fouling and in-water cleaning guidelines, Department of Agriculture, Fisheries and Forestry, Canberra ISBN 978-1-76003-009-4 (online)


Environment Policy

Ports North is responsible for nine Port locations including trading Ports of Cairns, Mourilyan, Cape Flattery, Karumba and Skardon River, community Ports (Thursday Island and Quintell Beach) and non-trading Ports (Cooktown and Burketown).

Ports North strives to operate a viable business that considers financial, environmental and social impacts by identifying and implementing initiatives that promote excellence in environmental management at these Ports.

To demonstrate environmental leadership, Ports North will:

- Implement and maintain an environmental management system to meet the standard set by AS/NZS ISO14001:2004, as a tool for continual improvement in environmental performance;
- Comply with relevant environmental laws, regulations, policies, procedures, and standards;
- Identify, assess and minimise risk and potential impacts of Port activities;
- Integrate environmental considerations and principles of sustainable development into management processes and decision making;
- Maintain emergency, fire protection, security systems and infrastructure to protect the environment;
- Strive to use resources efficiently, minimise waste and prevent pollution;
- Apply sufficient and appropriate people and resources to achieve this Environmental Policy;
- Define, measure and report regularly against objectives and targets to review the effectiveness of performance; and
- Communicate this Policy to staff and stakeholders to build collaborative relationships to promote superior environmental outcomes.

The Chief Executive Officer and Senior Management are responsible for providing the leadership to support effective implementation of this Policy and for ensuring all Ports North’s staff, contractors and those engaged by the organisation are required to comply with this Policy.

This Policy will be regularly reviewed following legislative or organisational changes, or at a minimum of every two years, to ensure it reflects the nature and potential impacts of Port activities and services.

Chris Boland
Chief Executive Officer
July 2014
## Appendix B  Incident Report Form

**FNQPC ENVIRONMENTAL INCIDENT REPORT FORM**

This form is to be completed for any environmental accident or incident. Please Note: THIS FORM IS TO BE FILLED IN AFTER THE EVENT. AT THE TIME OF THE INCIDENT PLEASE CALL EITHER:

- Port Supervisor
- Operations Office Cairns – (07) 4051 2558 or 0419 657 350
- Environment Manager – (07) 4052 3820 or 0439 723 008

Once completed, please forward to

Environment Manager, FNQPC Ltd, PO Box 594, Cairns Q, 4870. Ph: 4052 3820, Fax: 4052 1493

### Event Details

<table>
<thead>
<tr>
<th>Incident (release or harm to environment occurred)</th>
<th>Please Circle</th>
<th>Near Miss (no release to environment or harm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>When:</td>
<td>Date <strong>/</strong>/__</td>
<td>Time _ _ am/pm</td>
</tr>
<tr>
<td>Reported BY:</td>
<td>Date <strong>/</strong>/__</td>
<td>Time _ _ am/pm</td>
</tr>
<tr>
<td>Reported TO:</td>
<td>Date <strong>/</strong>/__</td>
<td>Time _ _ am/pm</td>
</tr>
</tbody>
</table>

### Description

Describe clearly the circumstances leading to the accident/incident, and the accident/incident itself. As far as possible verify the facts recorded, and identify witnesses.

### Type If Spill – Approx Quantity

### Cause/Circumstance

### Name Position

### Organisation Telephone

### Signature Date
### Prevention:
*To be completed by Manager/Supervisor*

Method of Cleanup:

Equipment Used

Method and Location of Waste Disposal

Existing Measures in Place to prevent or Minimise this type of event;

### Follow Up:

Measures to be implemented to prevent this occurring again?

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position</td>
<td>Date</td>
</tr>
</tbody>
</table>

### Close Out:
*To be completed by Environment Section*

Recorded in Register:

Follow Up Letter Sent to Company

Feedback provided to Reporter:

FNQPC Environmental Incident Report Form.doc