

The purpose of this document is to provide proponents with a guide for the preparation of a Storm Water Management Plan. Please note that Storm Water Management Plans (if required) are to be submitted as part of the construction application package (refer to the Port Development Guidelines). The complete construction application package (including all documents and attachments) is to be submitted in accordance via Aconex. Storm Water Management Plans prepared by a contractor or sub-contractor on the proponent’s behalf, are to be reviewed and approved by the proponent before submission to Pilbara Ports.

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## **SECTION 2: Details to be included in a Storm Water Management Plan**

### **Introduction**

This document provides proponents with a guide for the preparation of a Storm Water Management Plan (SWMP), and provides general information on the format and content of a SWMP that is acceptable to Pilbara Ports.

The SWMP must include a local area catchment and drainage study, an on-site catchment and drainage strategy, and demonstrate how storm water management will:

- Minimise environmental impacts.
- Protect buildings and key infrastructure (including other drainage systems) from flooding and waterlogging.
- Maximise opportunities for fit-for-purpose reuse of storm water.
- Integrate with hard and soft landscaping.
- Be maintained into perpetuity.

### **1. DOCUMENT CONTROL AND AUTHORISATION**

The front cover of the SWMP should include document control details in accordance with the organisation's internal control procedures, to ensure that approved documentation can be clearly identified. As a minimum, information relating to the person who prepared the SWMP and their accreditation details is to be included, along with sign-off details are to be included.

### **2. EXECUTIVE SUMMARY**

Provide summary information about the development and state each key element of the stormwater management strategy and provide a brief explanation of how the action/design response achieves the design objective.

### **3. BACKGROUND INFORMATION**

#### **3.1 Introduction**

Provide an overview of the site and the proposed development.

#### **3.2 Storm Water Design Objectives**

Clearly state the relevant design objectives, and provide a reference for the origin of each design objective and any assumptions.

#### **3.3 Site Characteristics**

Discuss site characteristics such as land use, soil type, environmentally sensitive areas, acid sulphate soils, contaminated areas, surface water flow paths, groundwater and the proposed development.

### **3.4 On-site Storage**

Provide information for the required on-site storage and/or detention including: invert levels, top water and peak flow levels.

### **3.5 Flood Protection**

Provide information in regards to peak flow rates and discuss how buildings and infrastructure are protected from flooding. Outline how the onsite storage system will be integrated with upstream and downstream systems in a greater than 1 in 10 year storm event.

### **3.6 Storm Water Management System**

Provide a detailed description of the stormwater management system. Include a description of the size, location and design of the system. Discuss locations and arrangements for agreed structural and non-structural best management practices and treatment trains. Figures/drawings should be included for the whole development and where appropriate, for critical locations/elements including:

- Pipe/swale network, including locations of best management practices (swales, bioretention systems, soak wells etc.).
- Typical cross-sections of swales, storage areas and multiple-use corridors, including indicative landform/landscaping.
- Long section(s) of the system showing the final surface levels, invert levels, groundwater levels.

### **3.7 Landscape Concept**

Discuss the integration of the best management practices with on-site landscaping and car parking areas.

### **3.8 Storm Water Quality**

Describe how the stormwater management system addresses water quality. Discuss the expected water quality improvement provided by structural and non-structural best management practices. Provide qualitative and quantitative assessment of water quality improvements and discuss compliance with the design objectives.

### **3.9 Acid Sulphate Soils**

Where acid sulphate soils are present, please cross-reference the relevant Acid Sulphate Soils Management Plan. Refer to the Port Development Guidelines – Appendix E – Environment & Heritage Technical Standards.

### **3.10 Ground Water**

Where the development alters the level of the ground or impacts upon groundwater, show post-development groundwater levels and fill requirements (including existing and final surface levels), outlet controls and any subsoils (showing drawdown/impacts near sensitive environments).

### **3.11 Disease Vectors and Nuisance Insects**

Provide information on the management of disease vectors and nuisance insects.

## **4. WATER SUSTAINABILITY INITIATIVES**

### **4.1 Storm Water Re-use**

Provide information on stormwater reuse measures including the designs, controls, management and operation of the proposed system. The designs should demonstrate compliance with all relevant National and State regulations and guidelines.

### **4.2 Water Conservation**

Explain and quantify reductions in the use of scheme water as a result of stormwater reuse (where applicable).

## **5. MONITORING AND MAINTENANCE**

### **5.1 Monitoring**

Outline any monitoring program proposed, including methods, frequency and parameters. A contingency plan should also be identified together with appropriate trigger values and responsibilities.

### **5.2 Maintenance**

Address how best management practices will be maintained and managed. Discuss the expected maintenance frequency.

## **6. IMPLEMENTATION**

### **6.1 Roles and Responsibilities**

Outline the roles, responsibilities and maintenance arrangements for implementing the SWMP.

## **7. DOCUMENT OWNER**

The Developments Manager has overall responsibility for this Guide.