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South Pine River Shoreline Erosion Management Plan

Stage 2 Final Report

August 2015

South Pine River Shoreline Erosion Management Plan: Stage 2 Report

Prepared for: Moreton Bay Regional Council

Prepared by: BMT WBM Pty Ltd (Member of the BMT group of companies)










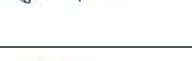
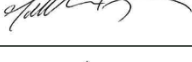
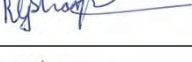
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<p>Synopsis: This report outlines recommendations for river bank erosion management on the tidal reach of the South Pine River.</p>		

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DISTRIBUTION

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BMT WBM File	PDF	PDF	PDF	PDF	PDF	PDF			
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Executive Summary

Executive Summary

An investigation into the morphological processes in the lower reach of the South Pine River has been undertaken in order to develop a plan to manage bank erosion along the river. The investigation into the morphological processes and general management processes is documented in the Stage 1 South Pine River Shoreline Erosion Management Plan (BMT WBM, 2014). This subsequent Stage 2 report builds on Stage 1 by providing more specific recommendations for managing bank erosion within the study area.

The study area extends from the confluence with the Pine River up to approximately 200m beyond the North Coast Railway crossing. The study area generally divides the local government areas of Moreton Bay Regional Council (Council) on the western bank and Brisbane City Council on the eastern bank.

An overarching management strategy has been devised to set a general erosion management philosophy for the study area. This strategy is formed on the following components:

- A Migration Zone has been defined in which it is considered reasonable to allow the river to migrate naturally. This is based on current development, and intended to evolve in light of future development;
- A Soft Erosion Protection Zone has been defined in which erosion protection solutions using soft engineering devices are suitable; and
- A Hard Erosion Protection Zone has been defined in which erosion protection solutions using hard engineering devices are suitable.

This report provides site specific discussion and recommendations along Pine Rivers Park, Pitonga and Normanby Way, and Learmonth Street.

The South Pine River Shoreline Erosion Management Plan (SPRSEMP) promotes the following management strategies:

- Soft erosion protection system along Pine Rivers Park to protect park infrastructure and values from further bank erosion;
- Maintenance of an existing rock filled gabion retaining wall structure located on Normanby way;
- Rehabilitation of mangroves along a short pocket of bare bank at Bob Bells Park;
- Hard erosion protection system to prevent further bank erosion from undermining two transmission towers: in the Pine Rivers Park area and downstream of Learmonth Street;
- Maintain existing private erosion protection in front of private dwellings along Learmonth Street; and
- In other areas bank erosion is to be monitored with response in line with the overarching management strategy.

In conclusion, this SPRSEMP has attempted to devise a management plan that upholds the principle of allowing natural processes to take their course, but within the constraint that the study area is not in a natural condition and intervention is required to prevent damage to development along the river banks.

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Introduction

1 Introduction

1.1 Objective and Document Layout

Shoreline Erosion Management Plans are promoted by the Queensland Department of Environment and Heritage as a means for local Councils to address shoreline erosion issues within their Local Government Areas. BMT WBM was commissioned by Moreton Bay Regional Council (Council) to undertake the South Pine River Shoreline Erosion Management Plan (SPRSEMP). The project was divided into two stages:

Stage 1 (BMT WBM, 2014) – Available information was reviewed to identify the level of threat/risk along the river reach. Modelling was undertaken to supplement the assessment of existing erosion risks and identify the processes and causes of erosion. This work provided an indication of bank migration patterns and potential future trajectories of the river bank. The Stage 1 report included a review of the planning and legislative framework to provide a context for the project. Generic options for managing bank erosion were also presented.

Stage 2 (this report) – Site specific assessments were undertaken using Stage 1 as a basis. Recommendations of management options for the South Pine River were drawn from these assessments, including recommendations and prioritisation.

This document presents the outcomes of the second stage of the SPRSEMP. The aim of the document is to formulate a high level plan for future management of erosion risk on the tidal reach of the lower South Pine River. The project area has been split into separate reaches, with the assessments and recommendations for each reach being documented within separate chapters. The purpose of this approach is to enable the corresponding chapter for each reach to be read independently, thus allowing a reader to focus on their particular area of interest.

An overarching implementation plan is presented in the final chapter of the report.

1.2 Project Area

The South Pine River divides the Moreton Bay Regional Council Local Government Area and the Brisbane City Council Local Government Area. As this project has been commissioned by Moreton Bay Regional Council, the project focusses on the Moreton Bay Regional Council assets. Nevertheless, erosion concerns affecting other parties have also been identified and management recommendations presented.

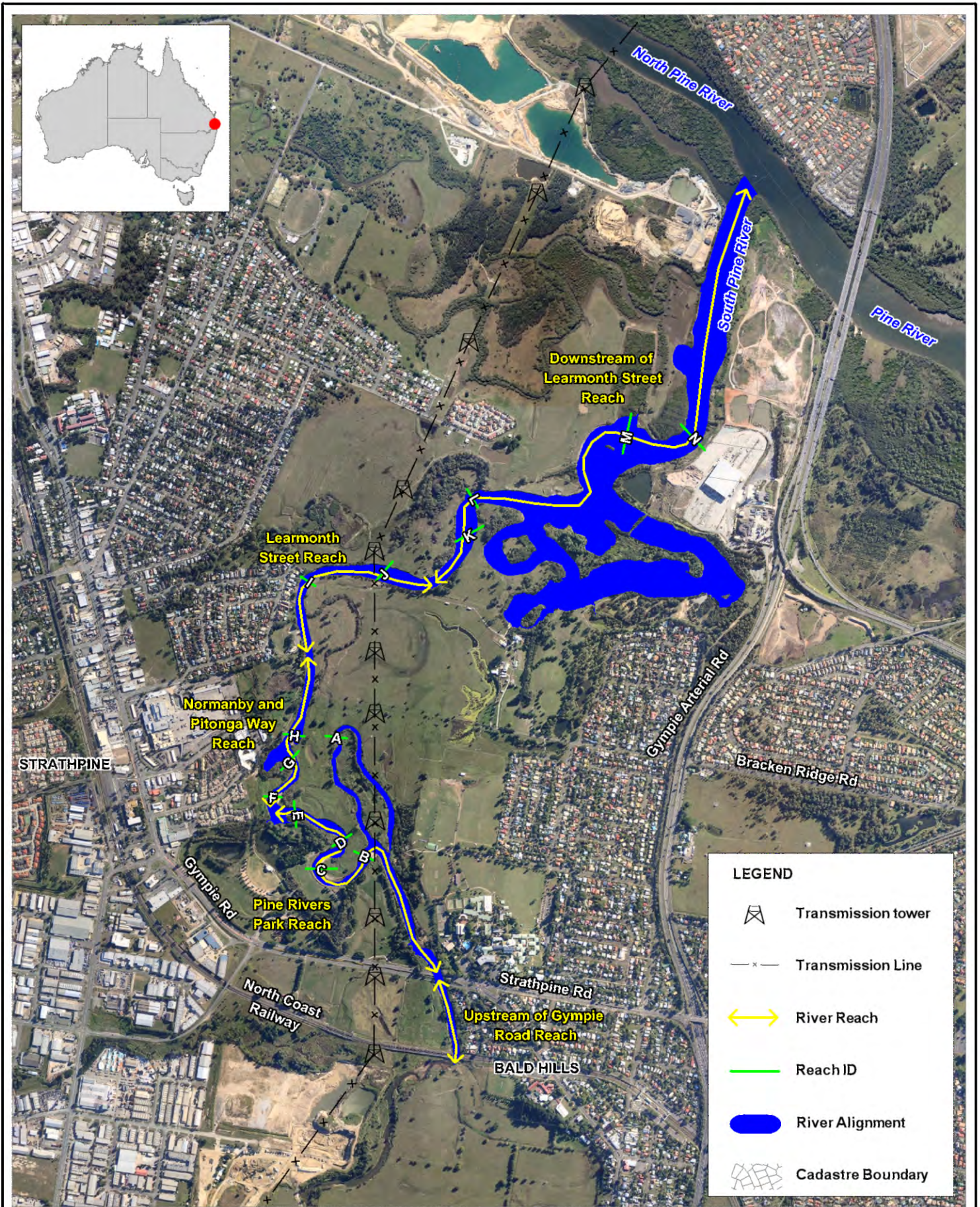
The project area extends from approximately 200m upstream of the North Coast Railway Crossing to the confluence with the Pine River. A detailed assessment of three reaches along the study area has been undertaken, namely:

- Pine Rivers Park;
- Pitonga and Normanby way; and
- Learmonth Street.

The location of the study area and reaches listed above are shown on Figure 1-1. General information on Queensland Coastal Plan matters and State interests within the study area are

Introduction

discussed in the Stage 1 report (BMT WBM, 2014; Section 2). The current condition of the river banks within the study area is discussed in the Stage 1 report (Section 5.2).



Title:
Study Area Locality

Figure:
1-1

Rev:
A

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



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Approx. Scale

