

MAREEBA SHIRE COUNCIL

MAREEBA SEWAGE TREATMENT PLANT UPGRADE

Transitional Environmental Program

Milestone Report December 2015

1. Introduction

The Mareeba Sewage Treatment Plant (STP) services the township of Mareeba. Mareeba is located approximately 60 km north west of Cairns in Far North Queensland. The local authority for Mareeba is the Mareeba Shire Council (MSC) which owns and operates the existing STP.

MSC operates its Mareeba STP under an Environmental Authority. The existing STP at Mareeba is an aging facility and is hydraulically overloaded and does not meet license conditions for several parameters including ammonia-N and BOD.

MSC seeks to provide improvement to the treatment process particularly focusing on hydraulic capacity and discharge effluent quality. The works are intended to provide Mareeba with a sustainable future for the plant to cater for future growth in the Mareeba region.

2. Background

On 17 November 2014, DEHP approved MSC's voluntary draft Transitional Environmental Program (TEP). The approved TEP details the way forward for MSC to achieve compliance with its Environmental Authority. The TEP contains objectives and milestones that must be met. This report describes MSC's progress towards achieving those objectives and completing the milestones.

3. Objectives and Progress

Objective 1: Compliance with EA Condition 5F.WT1 (Surface Waters Release Limits)

On 24 August 2015, DEHP approved an amendment to the TEP to accommodate new surface water limits imposed under amended Environmental Authority EPPR01792213.

The new license limits were included as part of the tender specification for the Mareeba WWTP Upgrade. The tender is now closed and has been awarded to Downer Utilities Australia Pty Ltd.

MSC had identified a compliance risk with the new surface waters limits and compromise was made where DEHP agreed that if through the tender process it was identified that the Mareeba Shire community could not afford the tender submissions that met the new water quality limits, then MSC

may apply to amend the licence again. Through this report, MSC can now inform DEHP that a the successful tender is proposing to meet the new licence limits and as such an amendment of the Environmental Authority will not be necessary.

Objective 2: 5F.WT2 (Monitoring of Volume of Release)

A flow meter to measure the quantity of effluent has been included in the preliminary process design. Preferred brand and type of flow meter and instruments has been selected.

Objective 3: 5F.G7(Receiving Environment Monitoring Program).

Environmental monitoring has been undertaken in accordance with the Receiving Environment Monitoring Program. The second round of biological sampling for macroinvertebrates has just been completed.

Objective 4: 5F.G1 (Inflows that must be bypassed)

Wastewater Operators continue to diligently monitor inflows requiring bypassing of the inlet works to prevent gross solids carry over or ragging in downstream structures. No inflows have required bypassing in recent months.

4. Hold Points and Performance Indicators

Council has been driving the desired outcomes and can report on the achievements relating to the September 2015 milestones.

Performance Indicators	Date	Responsibility	DEHP Report Date
Completion of process design brief and geotechnical plans.	27 April 2015	Director Infrastructure Services	April 2015
<i>Status: Completed.</i>			
Completion of financial modelling for remainder of works.	27 April 2015	Director Infrastructure Services	April 2015
<i>Status: Completed.</i>			
Completion of REMP design.	27 March 2015	Director Infrastructure Services	April 2015
<i>Status: Completed.</i>			
Completion of packaged Inlet works documentation.	30 June 2015	Director Infrastructure Services	September 2015
<i>Status: Completed.</i> Outcome of tender pending Council adoption.			
Implementation of REMP	01 July 2015	Director Infrastructure Services	September 2015
<i>Status: Completed</i>			
Completion of Concept Process Design	30 June 2015	Director Infrastructure Services	September 2015
<i>Status: Completed.</i> Concept detail in tender specification.			
Tender document preparation.	30 June - 30 August 2015	Director Infrastructure Services	September 2015
<i>Status: Completed.</i> Tenders are now closed.			
Tender Period	30 August 2015 - 30 October 2015	Director Infrastructure Services	November 2015
<i>Status: Completed.</i> Tenders are now closed.			
Tender Awarded	30 November 2015	Director Infrastructure Services	December 2015
<i>Status: Completed</i> Council has awarded the Design and Construct of the Inlet Works Upgrade to Bilfinger Water			

Technologies Pty Ltd.
Council has awarded Downer Utilities Australia P/L with the Design and Construct of the Mareeba Wastewater Treatment Plant.

Downer has successfully offered a two basin Sequencing Batch Reactor (SBR) process that will provide capacity for high wet weather flows, high effluent quality, operational flexibility and reliability. It is designed to suit reconfiguration into a MBR when there is future demand.

The bioreactor is sized to provide 12500EP capacity of ADWF = 3.8ML/day as an SBR and the ultimate > 16000EP (5ML/day) capacity if converted to an MBR.

Construction Commences	December 2015 - December 2016	Director Infrastructure Services	March, Sept, Dec 2016
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Status: Current

Design has commenced for the Inlet Works and is awaiting collaboration with the successful tenderer for the remainder treatment works. Site works for the inlet plant are expected early in the new year to meet with the new rising main upgrade program. The design and construct program for the remainder of the treatment works commences in January 2016 with site establishment occurring March 2016.

Completion Construction	December 2016	Director Infrastructure Services	December 2016
Operation and start verification testing	Jan 2017	Director Infrastructure Services	March 2017
Defects liability and verification testing period		Director infrastructure Services	August 2017
End of defects liability & verification testing	November 2017	Director Infrastructure Services	November 2017