

MAREEBA SHIRE COUNCIL

MAREEBA SEWAGE TREATMENT PLANT UPGRADE

Transitional Environmental Program

Milestone Report March 2016

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 TEP has since been amended twice to reflect amendments to the internal milestones and to accommodate a new Environmental Authority. The approved TEP, dated 24 August 2015, 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 to design and construct a new 2 staged new Sequence Batch Reactor (SBR) with future capacity to convert to a membrane activated sludge treatment process (MBR). The bioreactor will be initially

sized to provide a 12,500 equivalent persons capacity with an average dry weather flow of 3.8ML/day and then in Stage 2, the ultimate 16,000EP capacity (5ML/day) when converted to an MBR.

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 been completed. Attached for your information is the REMP Round 2 Pre Wet Season 2015 Report.

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 March 2016 milestone.

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>			
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>			
Tender document preparation.	30 June - 30 August 2015	Director Infrastructure Services	September 2015
<i>Status: Completed.</i>			
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> Tenders have been awarded. Contracts are in place.			
Construction Commences	December 2015 - December 2016	Director Infrastructure Services	March, Sept, Dec 2016

Status: Current

Fabrication has commenced for the Inlet Works. Design has commenced for the remainder of the treatment works. Collaboration between the two design parties is well underway. The installation of the new rising main upgrade has commenced and is expected to reach practical completion by 08 April (Photo 1). Site establishment for the treatment plant construction is expected to occur in May 2016.



Photo 1 - Installation of the new rising main to the Mareeba Wastewater Treatment Plant is nearing practical completion.

Completion Construction	December 2016	Director Infrastructure Services	December 2016
Operation and start verification testing	January 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