

Pulgul STP Major Upgrade Works

PROJECT:

This project is for a major upgrade to the existing Pulgul Sewage Treatment Plant (STP) off Cicada Lane Urangan to cater for population growth in the Hervey Bay area. A Site selection and Community Engagement report was presented to Council at its Ordinary Meeting on 18 December 2019, where it resolved to proceed to the concept design of the upgrade of the Pulgul STP.

The proposed plant upgrade is to increase the overall treatment capacity to 10ML/day average dry weather flow (ADWF) which is equivalent to 50,000 persons with the effluent quality meeting Class A recycled water standards.

Public Tenders were called for suitably qualified and experienced Engineering Consultants for the provision of concept and detailed design services for the upgrade. These Tenders closed on 28 October 2021.

Kellogg Brown and Root Pty Ltd (KBR) were awarded the Contract in March 2022 and have provided a Concept Design (Figure 1) for the upgrade consisting of the following major elements:

- A new process train consisting of a three Stage Oxidation Ditch (OD) of 8.4 ML/day ADWF capacity with two Clarifiers.
- Provision for future filters to polish effluent from all STP trains.
- New Sludge dewatering system and building
- Chemical dosing including Chlorination system upgrade.
- New Aerobic Digester.
- Decommissioning of existing IDEAL treatment system.
- Modifications to the inlet works structure to provide flow splitting for the two process trains.

The existing OD will be retained to increase the overall capacity to the required 10 ML/day ADWF.

It is proposed that the existing outfall into Pulgul Creek will be upgraded with the discharge location relocated to north of the Marina in the deep-water channel.

PROJECT ESTIMATE:

\$63.5m

PROJECT STATUS:

• Concept Design

The Concept Design was completed in August 2023 and KBR are now proceeding with the detailed design stage of the Contract.

• Staging of Construction

The initial construction works will consist of the new OD and Clarifiers, Aerobic Digester, Chlorination system upgrade and modification to the Inlet works. Remaining elements of the overall design (such as the new dewatering building, chemical dosing and the filters) that are not expected to be needed within the short term may be deferred. This may reduce the initial project cost by approximately \$13m.

• Outfall

The design of the outfall is being undertaken by KBR under a separate Contract and final sizing etc is dependent upon the Environmental Authority conditions imposed by the Department of Environment and Science (DES) as part of the approvals for the STP upgrade.

INDICATIVE PROJECT MILESTONES

March 2024	Final Design
March 2024	EA Approval
April/July 2024	Tender Period
September 2024	Construction Commences
March 2026	Project Completion



Figure 1 Proposed Layout