

# Lakeland Irrigation Area Scheme

## Community Update May 2021

### Overview

The Lakeland Irrigation Area Scheme would provide a reliable supply of water to unlock the rich basalt soils of the area for high value agriculture. There is a unique opportunity to capture a proportion of high-water flows in the upper Palmer River to substantially expand the existing commercially established horticultural industry and generate employment and prosperity throughout the region.

SMEC has been engaged by Regional Development Australia – Tropical North to investigate the viability of building a dam approximately 23 km south west of Lakeland. The Business Case seeks to provide a scientific and evidence-based assessment around the possible engineering, environmental, financial, social and cultural impacts and opportunities associated with the water supply scheme.

### Major Scheme Components

#### Water source

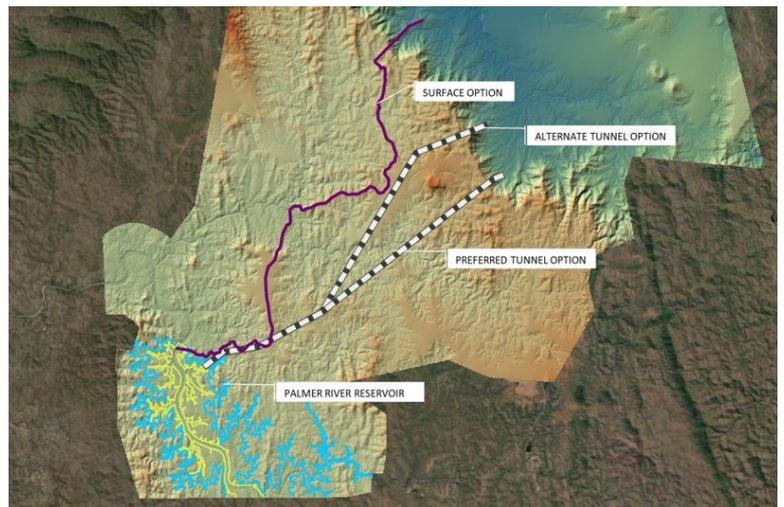
Dam on the Palmer River

#### Transfer system

Tunnel or pipeline to move water from the Palmer River Dam to Lakeland

#### Distribution system

Piped network supplying water to farm gates north and south of Lakeland and west along the PDR.



### Project Milestones



## Preliminary Scheme Statistics

- Support increase in irrigated land around Lakeland from 1,650 Ha to ~ 8,000 Ha on full take-up of available water.
- Dam construction type – Concrete and embankment dam types under consideration. A mass concrete dam of Roller Compacted Concrete (RCC) construction is more likely at this stage with further work required to confirm the preferred dam type. An RCC dam would comprise a vertical upstream face, central overflow section (spillway) within the river channel, and foundation grouting to reduce leakage beneath the dam.
- Directly affected properties: Bonny Glen, Maitland Downs and properties in Byerstown.
- Over 55 km of distribution supply pipeline to farms, operated under pressure.

## Main Dam

|              |              |                   |
|--------------|--------------|-------------------|
| <b>720 m</b> | <b>150 m</b> | <b>RL 411.5 m</b> |
| Wall length  | Spillway     | Crest level       |
| <b>48 m</b>  |              |                   |
| Height       |              |                   |

## Saddle Dams

|                 |                           |                         |
|-----------------|---------------------------|-------------------------|
| <b>2</b>        | <b>~435 m and 135 m</b>   | <b>14.5 m and 3.5 m</b> |
| No. of dams     | Wall length               | Heights                 |
| <b>2,330 Ha</b> | <b>892 km<sup>2</sup></b> | <b>200,000 ML</b>       |
| Inundation area | Catchment area            | Reservoir capacity      |

## Major Business Case Components

- Investigations – Surveys and field work to obtain important topographical, geological and hydrological data, and assess long term water availability.
- Cultural heritage and ecological assessments – Cultural monitoring for geological investigations and dry and wet season surveys for flora, fauna and habitat to identify potential impacts and further studies.
- Agronomics and grower consultation – Review of soil and crop data from DNRM land suitability assessment and discussions with growers to understand cropping and water use practices.
- Community engagement – Ongoing conversation with the community to share updates, build support and identify potential concerns to be addressed as the project evolves.
- Infrastructure planning and design – Consideration of various scheme configurations and options analysis for major infrastructure components to obtain a consensus on the preferred scheme for reference design.
- Cost estimation and economic analysis – Estimation of implementation impacts and construction quantities, timelines, and costs to assess potential local and regional economic benefits.
- Commercials and commitments – Identification of potential funding and ownership models to establish potential water pricing and obtain commitments from irrigators to take water if scheme proceeds.
- Reporting – Presentation of the business case in accordance with QLD and national frameworks to capture the benefits and risks of the scheme proceeding or not proceeding.

## Next Steps



We value your thoughts and ideas regarding the Lakeland Irrigation Area Project. Please register your interest in the Project via the contact details below.

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