

Lakeland Irrigation Scheme - Update October 2022



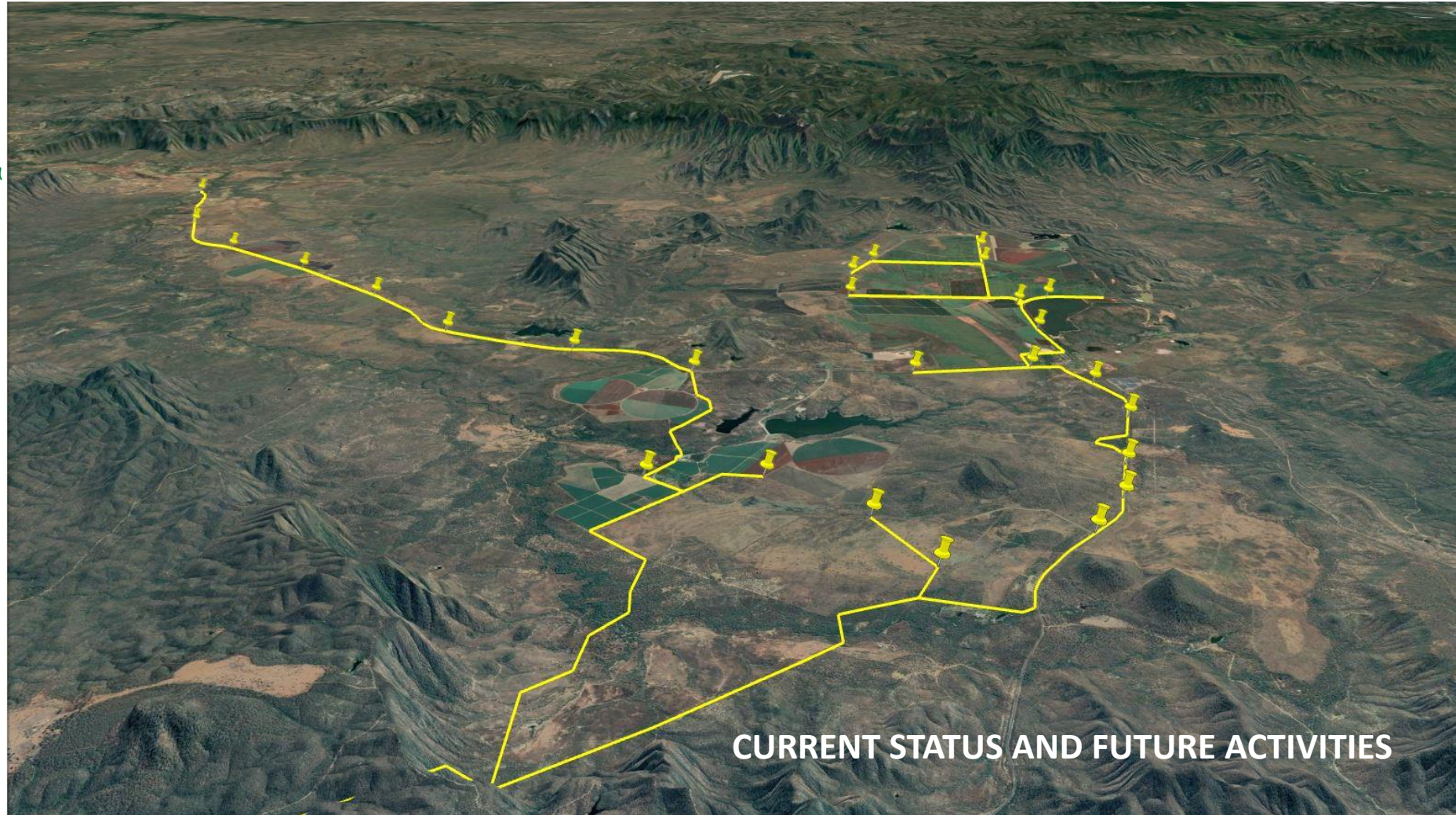
TROPICAL NORTH



An Australian Government Initiative



Member of the Surbana Jurong Group



CURRENT STATUS AND FUTURE ACTIVITIES

Lakeland Irrigation Scheme – Progress on Palmer Option

- The Draft Detailed Business Case (DDBC) for the Lakeland Irrigation Area Scheme (LIAS) was presented to the State government for comment on 29th August 2022.
- Comments are expected from State agencies by mid October.
- These comments will be addressed and answers included with the Final DBC or amendments incorporated if appropriate.
- The final DBC will be submitted as soon as any outstanding work is completed and RDATN is satisfied that the document presents the best case for acceptance.
- Currently, stakeholder engagement and feedback is a high priority and RDATN/SMEC will continue to engage with all elements of the community and those impacted in any way by the proposed project.
- For more information contact 'lakeland@rdatropicalnorth.org.au'.

Lakeland Irrigation Scheme – Progress on Palmer Option

IMPORTANT NOTICE

Part of the objective of the Detailed Business Case (DBC) is to investigate the most likely infrastructure requirement and present this as a ‘Reference Design’.

The location of infrastructure (dam, transfer and distribution) is not final and if the DBC progressed to a further stage, all of the assumptions would be revisited and supported by further extensive investigation and design.

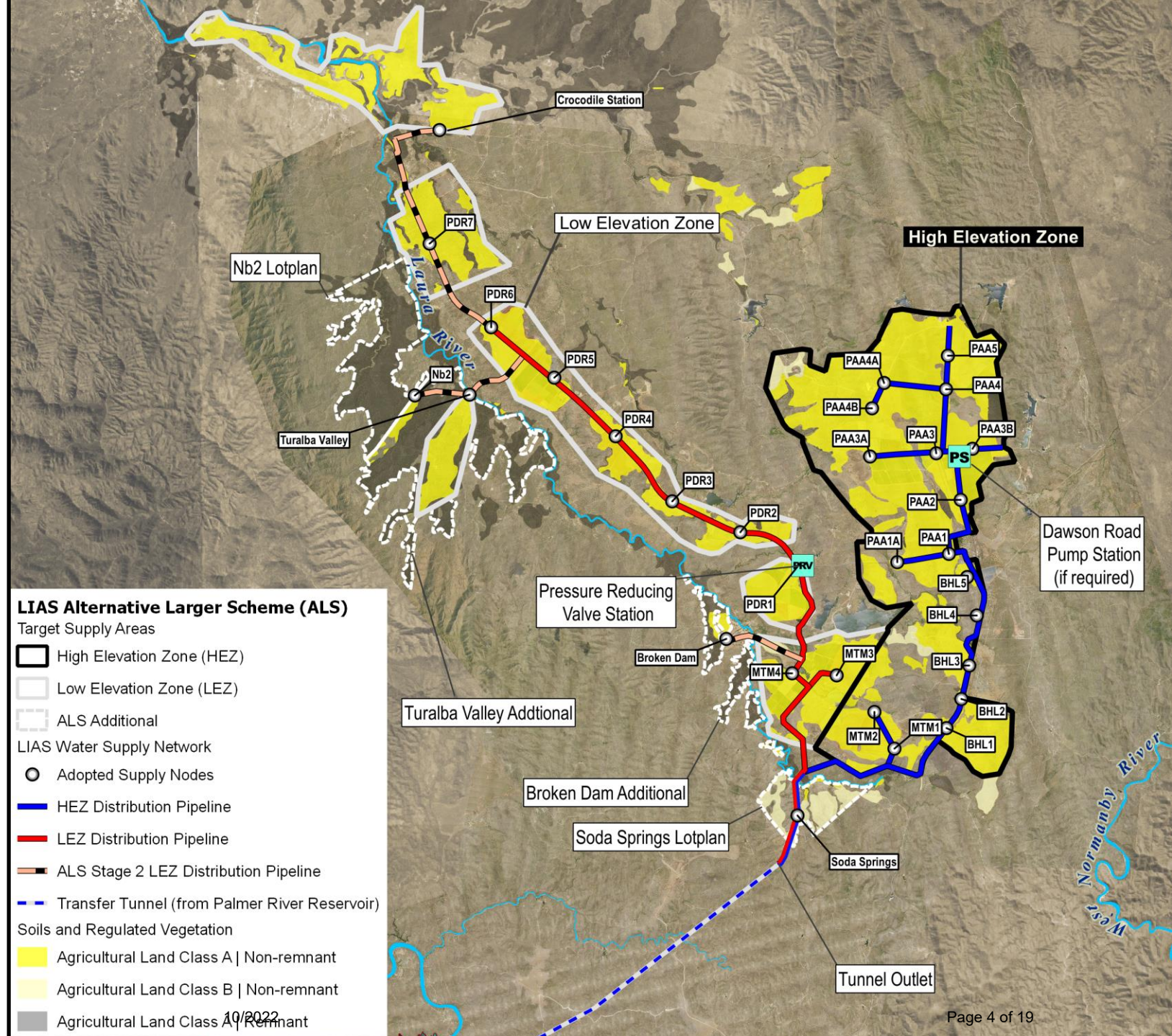
The location, type and size of infrastructure shown in the presentation cannot be relied upon to represent what may or may not occur in a final scheme, and this would be the responsibility of the eventual scheme proponent. RDATN is only the proponent for the DBC.

Lakeland Irrigation Scheme

Extent and Configuration (Oct 2022 including ALS)

3 Components:

1. Dam
2. Transfer from dam to Lakeland
3. Distribution to farms



Lakeland Irrigation Scheme – Progress on Palmer Option

- Review of the Strategic Business Case for suitability
 - Field work has been completed:
 - Geotechnical drilling on preferred dam location including cultural heritage clearance for access
 - Dry and Wet season environmental data collection
 - Dam options completed for dam type and sizing
 - Decision taken to transfer water from the dam to the Lakeland distribution system by tunnel to avoid having to pump to the top of the Dividing Range
 - Consideration of hydro electricity from the escarpment to the valley
 - Options for a distribution network of pipes to service land.
- Except for
- final Cultural Heritage survey of the inundation area
-
- Preliminary Social Impact study
 - Stakeholder engagement commenced including community, indigenous and irrigators
 - Extensive topographical survey (aerial and drone) for dam and Lakeland
 - Agriculture/agronomy confirmation
 - Water resource modelling and assessment
 - Economic assessment and reporting
 - Assessment of fishway provision

Lakeland Irrigation Scheme – Scheme Costs

At this stage of the project, all cost estimates are preliminary and based on a limited amount of onsite investigation. As such the cost estimates are heavily skewed to reflect unknown impacts.

- These would include but are not limited to:
 - Need for further extensive geotechnical investigation.
 - Final selection of distribution pipe materials to ensure State requirements for safe operation are achieved.
 - Final form of agreed fish passage infrastructure.
 - Potential costs of meeting: environmental offsets; cultural heritage and Native Title arrangements and/or compensation; land acquisition.
 - Market conditions at time of tendering.
 - Costs to provide a 'shovel ready' project including detailed design, process for obtaining water entitlement, establishing the source of construction materials
 - Contingencies arising during construction including weather, labour issues, camp and accommodation etc.
 - Services including power supply and backup, telecommunications, remote control.

Lakeland Irrigation Scheme – Capital & Operating costs to farmers

The final cost to farmers is represented by two different levies.

1. An initial purchase price to give a right to water as a commodity. This is determined through an auction process. The minimum price is usually about \$1,500/ML but can be as high as \$4,000/ML where competition and productivity is high.
2. An annual levy to cover fixed costs of owning infrastructure as well as the operating costs to deliver the water.

In practice, the ‘fixed’ charges outweigh the ‘usage’ charges.

The capital cost of constructing the scheme is very large with a current expectation that significant government grant funding would be required. Possible farm gate charges have been determined for a range of government funded scenarios where some would not be recouped through charges.

The simple version for the Reference Design scheme is:

Government Contribution to Capital Costs	Farm Gate Annual Cost
NIL	\$938.22
50%	\$476.02
90%	\$106.26

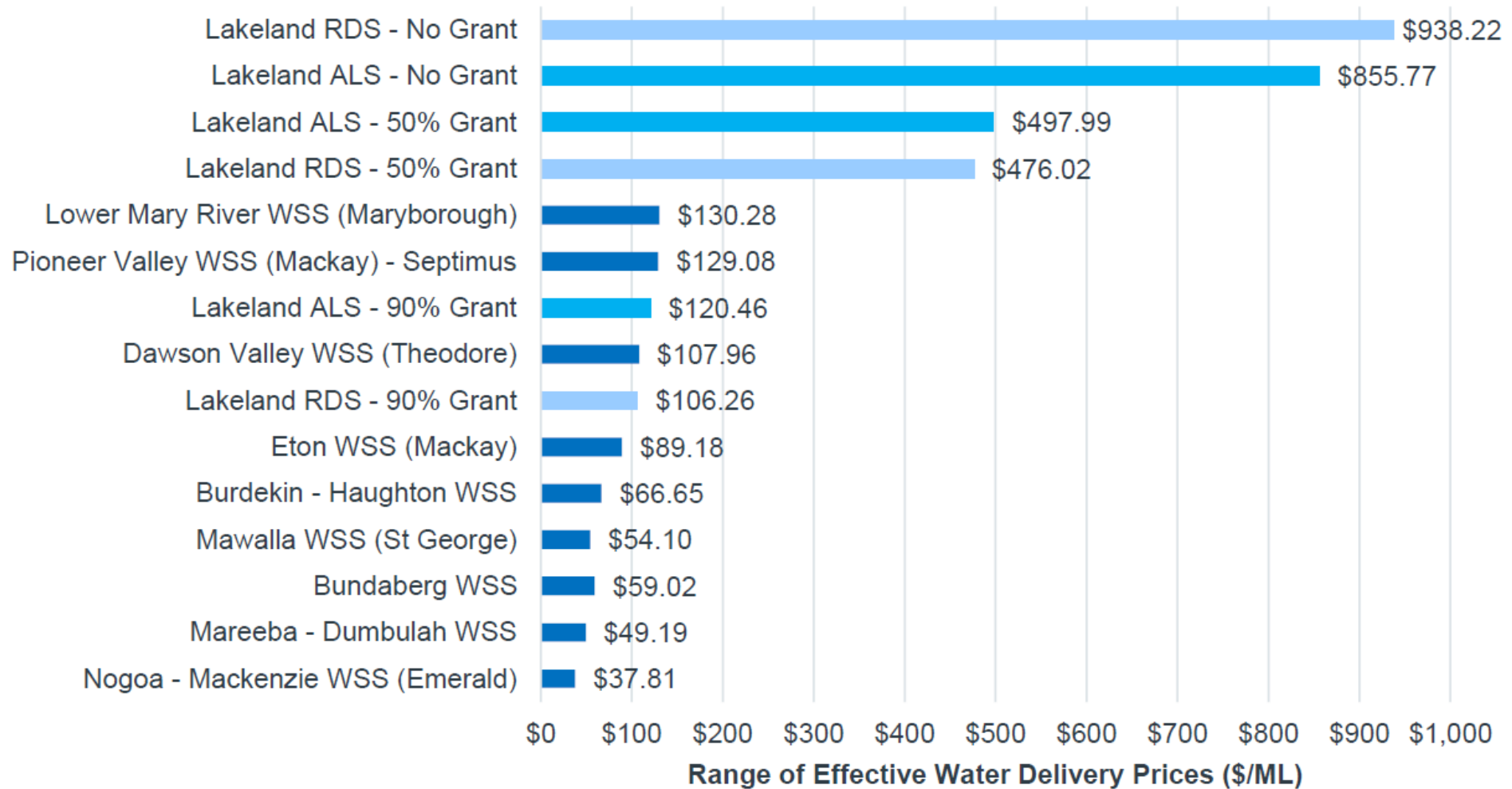
Lakeland Irrigation Scheme – Indicative Scheme Costs

35% HIGH PRIORITY WATER DEMAND SCENARIO

Rates Current At March 2022

Ref	Location	Total Cost
A1	Palmer River Dam	\$350,700,245.0
A2	Tunnel Using TBM (Option 1)	\$177,690,861.0
A3	Irrigation Water Distribution Network	\$160,897,032.0
A4	Site Access Roads	\$20,997,967.0
A5	Other Provisions	\$52,368,649.0
ESTIMATED NET COST		\$762,654,754.0
MARGINS & ADJUSTMENTS		
	In-Direct Job Cost	24.0% \$183,037,164.0
	Offsite Overhead and Margin	10.0% \$94,569,192.0
Construction Contractor Cost (CC)		\$1,040,261,110.0
	Client Cost including investigation, design, construction support and client admin cost etc as advised	4.8% \$50,000,000.0
	Environmental Off set charges including fish way offsets Excl.	
	Land Acquisition Cost Excl.	
Contingency for risk		35.0% \$381,598,890.0
	Escalation (from 2022 to 2030)	26.1% \$384,190,000.0
	Goods and Services Tax Excl.	
	Authority Fees and Charges Excl.	
	Covid19 Impact Excl.	
ESTIMATED TOTAL COST Tunnel Option		\$1,856,050,000.0
ESTIMATED TOTAL COST Surface Option (Plus additional enviro and CH)		\$2,013,634,148.0
ALTERNATIVE LARGER SCHEME (296GL)		\$2,172,004,829.0

Lakeland Irrigation Scheme – Indicative Annual Water Pricing



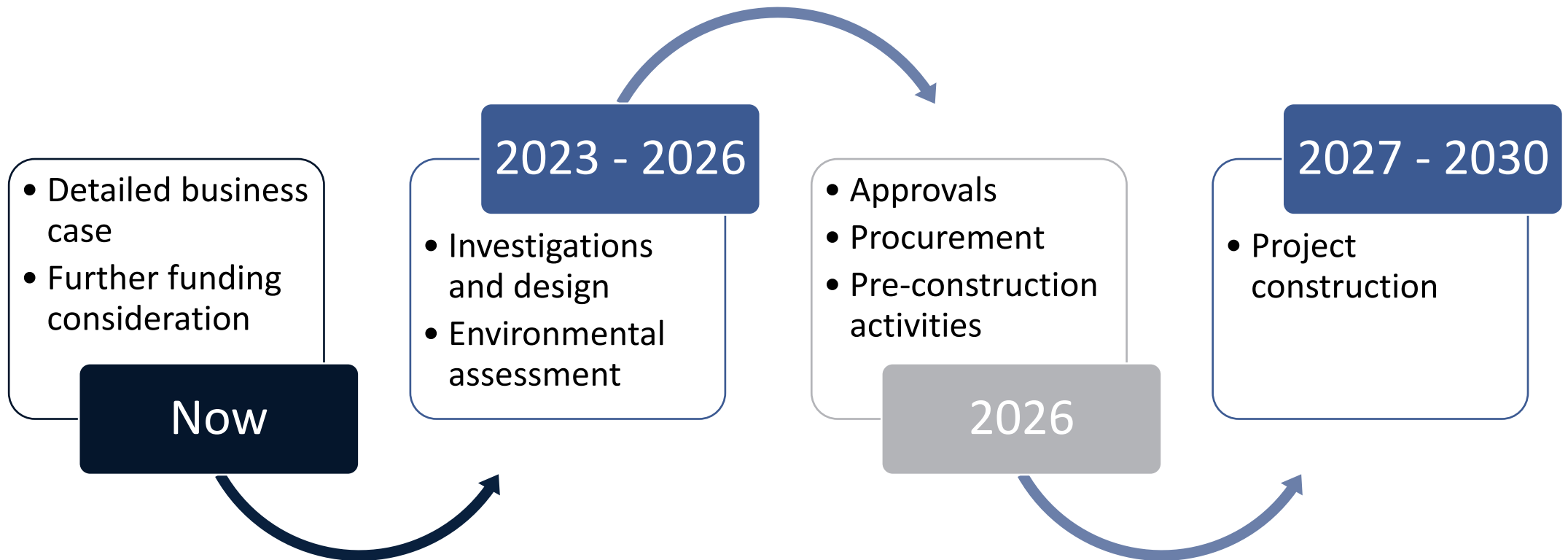
Lakeland Irrigation Scheme – Actions to Final DBC

- Receive Draft DBC review comments
- Stage 2 'Preliminary Commitment' completion
- Update water distribution scheme reference design and Bill of Quantities for final demands
- Finalise tunnel geotech and design
- Quantitative risk assessment and probabilistic cost estimates for the Reference Project
- CH survey of inundation area and consultation with Traditional Owner groups
- Stakeholder engagement with impacted landholders and mining leaseholders
- Supply chain and financial stakeholder engagement
- Updated financial and economic analysis
- Update social impact evaluation
- Implementation plan and delivery model analysis
- Finalise Environmental Impact Assessment and DBC

Lakeland Irrigation Scheme – Benefits Realisation

- Firm up the social benefits of increasing agriculture at Lakeland including:
 - Population increase
 - Additional community, social and health services
 - Opportunities for service centre for Lower Cape York Peninsula
 - Indigenous engagement and opportunities e.g. near the dam, and Crocodile
- Include benefits and aspirations for the Lakeland Area through engagement with Cook Shire Council
- Include the issues or barriers to current growers increasing their farming potential and how solutions can be incorporated in the scheme e.g. potential expansion of the Priority Agricultural Area, or adoption of an Agricultural Precinct with a clear framework for further development.

Lakeland Irrigation Scheme – Indicative Development Timeline



Lakeland Irrigation Scheme – Indicative Development Timeline

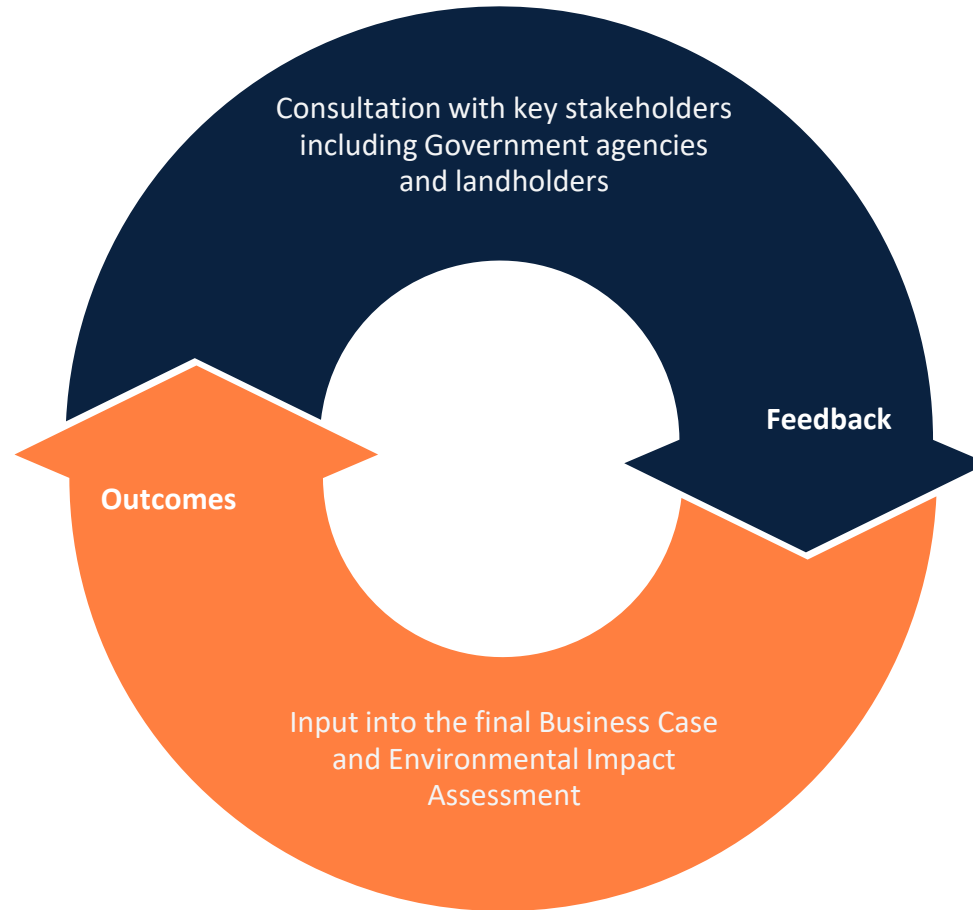
Activity	2022				2023				2024				2025				2026				2027				2028				2029				2030	
	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2
Detailed Business Case																																		
DBC studies																																		
DBC concluded																																		
Further investment decision																																		
Design and Construction Schedule																																		
Further site investigations (geotech)																																		
Concept development and detailed design																																		
Procurement																																		
Construction																																		
Other Critical Path Items																																		
Project stakeholder engagement																																		
Water plan amendment	Prerequisite for implementation																																	
Cultural heritage management plans																																		
Indigenous land use agreements																																		
Multi-seasonal environmental surveys (groundwater, ecology, water quality)																																		
Fish passage input to design																																		
Environmental impact statement technical studies and consultation																																		
EPBC Act approval and conditions																																		
Obtain required secondary approvals (permits and licenses)																																		

Lakeland Irrigation Scheme – On-going Challenges

- Accommodating potentially adverse impacts on:
 - Environment (avoid, reduce or offset), land ownership, social impact, Cultural Heritage, Native Title.
- Methodology for approvals, either:
 - Option 1 – Single Project Referral and Assessment
 - Option 2 – Split Referral (Recommended)
- Triggers for on-going development
 - Acceptance by Government
 - Scheme funding and sponsorship (Fed, State, local)
 - Review of Mitchell and Cape York Water Plans to facilitate water allocation cross catchment from Mitchell to Normanby and any impacts on downstream users in the Palmer or Mitchell areas
 - Nomination of a Proponent
 - Coordinated Project under the Coordinator General
 - Resolution of Indigenous issues around CH and NT, and engagement for economic advantage
- On-going role for RDATN
- Current and Future role for Cook Shire Council

Lakeland Irrigation Scheme

Consultation



Overview of EIA

The Environmental Impact Assessment aims to identify key risks of the project on the environment. It also outlines options to avoid, mitigate or offset potential impacts.

The LIAS will require both Commonwealth and State Government approval before it can proceed.

Consultation with the community and stakeholders

Community and stakeholder engagement is an ongoing project priority.

We will continue to engage with landholders, stakeholders and the community regarding the project and potential impacts.

During this phase, we welcome community and stakeholder feedback at any time.

Potential Impacts

If the proposal receives Government support, the nominated proponent would consult and negotiate with affected stakeholders to identify all potential impacts.

Mitigation examples

- Maintain access to places and sites of cultural importance, and relocate artefacts to a proposed cultural centre
- Targeted employment and training programs eg. Environmental Management and Ranger roles, reduced barriers for Aboriginal and Torres Strait Islander suppliers
- Negotiate with landholders to ensure issues are identified and mitigation is fair and transparent.

