Expression of interest reference: A.7.2122007 Visionary land use planning to facilitate development precincts

Making Water Work in the Rockhampton region

Project reference: A.7.2122007 Visionary land use planning to facilitate development precincts

Background

With major economic and social challenges and opportunities shaping the future of Queensland's regional communities, the Rockhampton Regional Council (RRC), the Queensland Government, through its Department of Agriculture and Fisheries (DAF) and the Department of Environment and Science (DES) and the Cooperative Research Centre for Developing Northern Australia (CRCNA) have been working together to maximise the future sustainable development opportunities emerging from available water resources in the Lower Fitzroy Basin.

Early stages of this work culminated in the development of a broad **Making Water Work Business Case** (see Appendix 1). This business case represents the Rockhampton region's wider integrated approach to maximising the economic, social, environmental and cultural value from the new Rookwood Weir development and other available sources of water.

Key stakeholders with an interest in this **Business Case** (Appendix 1) have formalised collaborative governance arrangements through the *Making Water Work Governance Group* that oversees this work, chaired by Advance Rockhampton in partnership with the CRCNA Chief Scientist and DAF. Justification for shared investment between the CRCNA, DAF and RRC in progressing this business case includes:

- The need to deliver high value water security in the region
- The opportunity to unlock significant unmet agriculture export and domestic demands
- The potential to explore many new jobs from new agricultural development, food manufacturing and export of agricultural products and materials
- The existence of important agricultural and pastoral development opportunities in the Rockhampton Regional Council area and the Lower Fitzroy
- A growing policy and consumer pressure for a more circular and value rich agricultural economy, particularly in the Great Barrier Reef lagoon.

Five (5) key scoping Sub Projects have been identified and resourced to help progress this broader **Making Water Work Business Case** within the Rockhampton Regional Council area within the context of the Lower Fitzroy basin**.** These include:

1. Defining a supply chain and development precincts vision
2. **Visionary land use planning to facilitate development precincts**
3. Mobilising strong water governance arrangements

4. Integrating nutrient, waste and energy streams in agricultural development
5. Achieving reef water quality requirements in new agricultural development.

This EOI applies to the **second** of these Sub Projects. It is intended that Sub Projects 1, 2 and 3 will be released first and around the same time, and that successful proponents will communicate with each other during their completion. Sub Projects 1, 2 and 3 will also provide foundational knowledge and data to inform later release of Sub Projects 4 and 5.

The Job

The proponent is required to undertake the following activities:

Visionary Land Use Planning to Facilitate Development Precincts		
1	Opportunities & constraints development for potential and staged agricultural development.	To support the Supply Chain and Development Precincts Vision (Sub Project 1), and building on existing Rockhampton Regional Council data layers, develop the key opportunities and constraints layers to help identify potential staged agricultural (horticulture, cropping and livestock) and aquacultural development, together with associated infrastructure development.
2	Planning instrument analysis.	**Explore the most appropriate planning instruments, planning provisions and planning sequencing options** required to help facilitate development and investment in emerging development precincts (e.g. State Development Areas, Ag Development Precincts, Strategic Assessments under the EPBC Act etc.).
3	Planning foundations report for South Yaamba.	Based on the South Yaamba District (see Appendix 2), provide a Planning Foundations Report for an agricultural precinct, starting with an outline of existing agricultural production and additional areas where commercial cropping and horticulture could be undertaken in line with soil suitability and landholder aspirations. The Planning Foundations Document would include advice on: (i) a proposed water distribution system; (ii) necessary road and transport treatments; (iii) required power/ energy, digital communications, innovation infrastructure and other necessary infrastructure; (iv) waste streams generated; and (v) areas based management of water, sediment and nutrients

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Eligibility

To be considered eligible, any responses to this EOI must:

- Demonstrate that the lead proponent has strong partnerships in place to deliver on the required activities
- Demonstrate how they will deliver this proposed project within a maximum 12-month timeframe
- Be able to secure cash and in-kind commitments from the lead organisation and research partners to match the requested CRCNA funding - at least 25% cash and 25% in kind of the total project cost
- Have a proven track record across the skills required to achieve the objectives of the EOI.

Selection criteria

- Provide evidence of project management capability, including technical competency in delivery the project and administrative capacity (including appropriate systems) to meet project reporting and financial management obligations to deliver this project on time (12 months) and within budget.
- Provide a clear demonstration of the partnership capacities required to partner with key relevant stakeholders in the Rockhampton and Lower Fitzroy region.

The process

- This is an open EOI process with submissions due **5pm AEST Friday 29 April 2022**
- Responses should be provided by filling in the required EOI form
- EOIs will be evaluated by the *Making Water Work Governance Group*
- Successful proposals will be presented to the CRCNA Board for final approval
- Once approved, successful proponents work with the CRCNA staff and the *Making Water Work Governance Group* to develop a detailed project plan and budget
- This plan forms the basis of the CRCNA participant agreements and contracts which need to be fully executed before projects commence.

How to apply

Proposals are to be submitted on the EOI form available **here.**

Format for Deliverables

MS Word and PDF documents will be accepted for the draft and overall report.

Key contacts for information relating to this EOI

Strategic EOI Advice	**Administrative Advice**
Allan Dale (CRCNA Chief Scientist)	Carla Keith (CRCNA General Manager)
0418 736 422	0499 330 051
allan.dale@jcu.edu.au	generalmanager@crcna.com.au

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Appendix 1 – Business case

Appendix 2 – Planning Foundations Report for South Yaamba

Description and Preamble

As part of the Making Water Work Program a Planning Foundations Report for South Yaamba is required to assist forward planning for further agricultural development. South Yaamba has some existing horticultural, cropping and livestock operations with the area being identified as having opportunities for further growth, with potential for existing operations to expand and new higher value operations to potentially come on line.

It has been identified that:

- There are potential opportunities for a 10,000ML water distribution scheme in the South Yaamba area to assist local agricultural development. Please see the map below.
- Access to the river is currently constraining growth with the identification of options for water easements required.
- Necessary road treatments may need to be improved to handle additional agricultural inputs and outputs plus more farm-based workers and service providers accessing the area
- With the growth of agriculture improved power/energy solutions may be required
- Improved telecommunications will be required to assist with smart farming solutions however scoping of what is specifically required is needed; and
- Approximately 15 plus landholders are looking at either expanding operations or seeking new higher value agricultural operations.

The Making Water Program is wanting to secure a professional consultant to develop a planning foundations report at the preliminary design level incorporating the elements outlined above. Noting that engaging with local landholders will be required to help develop the plan.

In terms of specifics, the following agenda need to be understood:

<u>Water Distribution Scheme</u>

- Understanding the irrigation area extent and demand patterns required (based on knowledge being developed by Rockhampton Regional Council
- Undertaking river bathymetry for three potential extraction points will be required
- The identification of power supply connection points will be required
- The provision of three irrigation concept options should take into consideration access to infrastructure the preferred option to be selected using a multi-criterion analysis
- The detail of the capital, operational, depreciation costs and cost per ML from the potential schemes are required to be incorporated into the multi-criteria analysis.
- The design of irrigation trunk infrastructure (preliminary design) including necessary pumps stations and delivery pipelines and potential balancing storage/s based on a preferred option will be required
- Provision of an overall report including a cost estimate for an irrigation system including a cost per ML of water for transportation from the river to the property will be required.

The design of the irrigation trunk infrastructure will need to meet the following criteria:

- Sized to meet peak evaporative crop requirements for the irrigated farmed area with acceptable limitations in extreme weather events
- Recognition of the inherent possibility of the whole area requiring peak water simultaneously
- The consultant to outline additional criteria that they would use.

Road infrastructure

- Based on projected landholder agricultural development plans, the consultant will identify the necessary road treatments required with an order of road developments based on landholder timeframes and requirements.
- The order of the road treatments and the standards to be applied need to meet Council's requirements.

Power / Energy

- Based on project landholder agricultural development plans, the consultant will identify power / energy solutions to assist agricultural development.

Waste streams generated

- Based on projected landholder agricultural development plans, the consultant will need to understand potential waste streams (tonnages) and where possible nutrient cycles could be employed or circular economy opportunities.

Management of water and nutrient

- Based on projected landholder agricultural development plans, the consultant should identify higher level physical mitigation techniques that would / could be employed to assist management of water and nutrient run off.

Telecommunications / Digital communications

- Based on project landholder agricultural development plans identify power / energy solutions to assist agricultural development.

Background Information

The Lower Fitzroy region has on average approximately 5,900GL of water that flows down the Fitzroy River with supplemented water being held in the Fitzroy Barrage Water Supply Scheme, Eden Bann Water Supply Scheme and soon to be completed Rookwood Weir Water Supply Scheme. There is also a 46,000ML volumetric limit for unsupplemented water through the Lower Fitzroy Water Management Area.

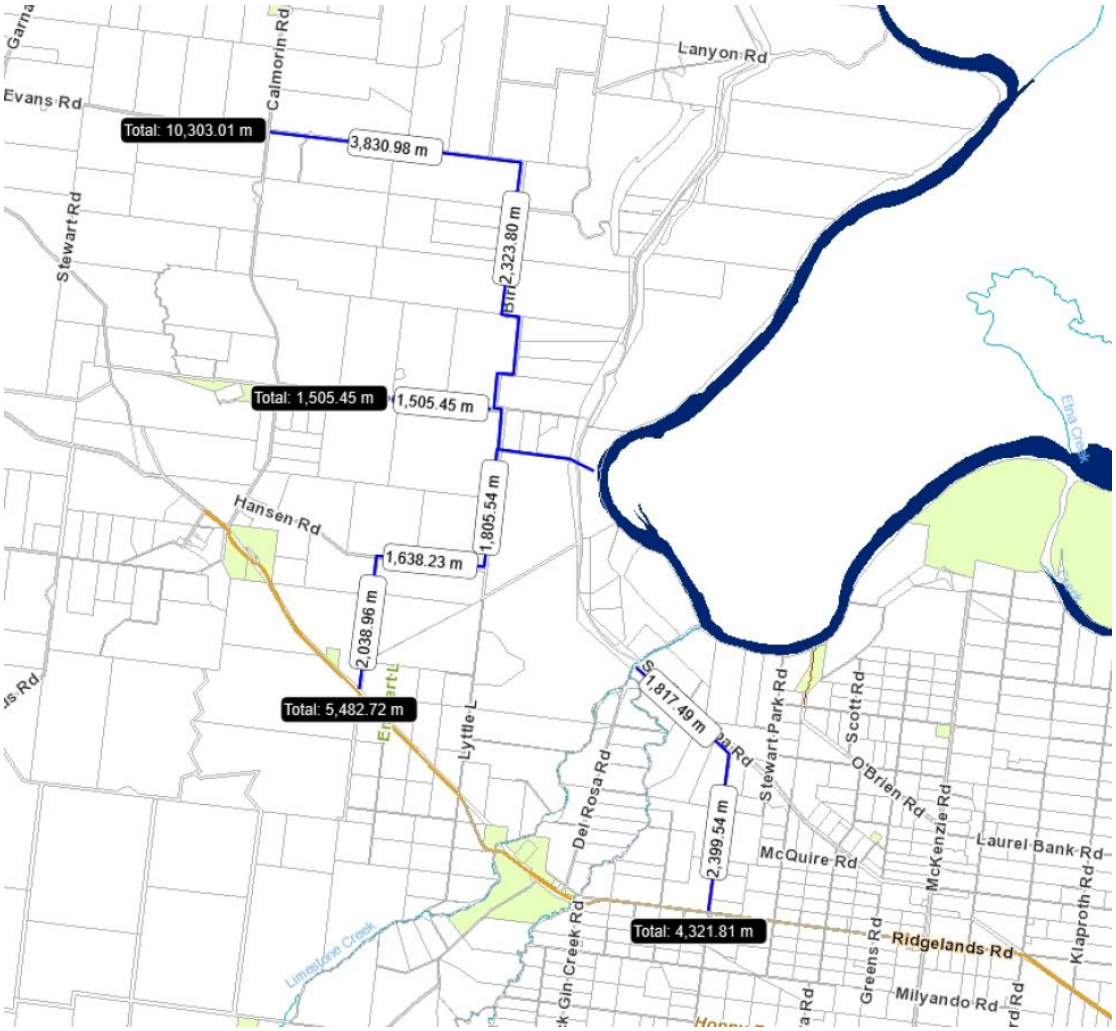
As the Fitzroy River is the largest river catchment on the eastern seaboard of Australia with good agricultural soils (generally 5KM either side of the river), the Rockhampton Region has a significant opportunity to diversify its agricultural product through increased horticulture, cropping and more intense livestock production.

South Yaamba as a district has progressed its agricultural development to have macadamia, lychee, partial irrigation and dry land cropping however the main limiting factor is obtaining water from the Fitzroy River for non-riparian areas.

Landholders have expressed a desire to explore a potential irrigation scheme to transport water from the Fitzroy River to their properties to aid their agricultural production and this scope seeks to obtain this information.

Key deliverables for the South Yaamba Foundations Report

- Irrigation Analysis report based on known local landholder demand with consideration of additional land that has suitable soils for cropping and horticulture using the Crop Suitability Mapping Investor Tool
- An options development report which includes the preferred irrigation option
- Preliminary concept design drawings, pumps required, schematics plans for pipelines and design report
- Preliminary costings of preliminary concept and order of cost estimates
- Financial analysis including cost $/ML, Cashflow (over the life of the asset) BCR, NPV, Payback Period and ROI
- Presentation of findings to the Making Water Work Governance Group
- Completion of the overall report.



South Yaamba : Water Distribution area to be investigated

Other Available Resources

- Grow Rockhampton: https://www.advancerockhampton.com.au/files/assets/advancerocky/advance-documents/grow-rockhampton.pdf

- Rock e Plan: http://rockeplan.rockhamptonregion.qld.gov.au/Pages/XC.Home/Default.aspx

- Rookwood Weir Project: https://www.sunwater.com.au/projects/rookwood-weir-project/

- Rookwood Weir Irrigated Crop Suitability Tool and report: https://www.daf.qld.gov.au/business-priorities/agriculture/sustainable/rookwood-weir/mapping-tool-report