



## MAJOR CAPITAL ITEM REPORT

### Part 1 - Summary Details

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*Please use your TAB key to complete Parts 1 & 2.*

**CRDC Project Number:** IREC1701

**Project Title:** Automation of recycle system- IREC Field Station

**Project Commencement Date:** 27 March 2017 **Project Completion Date:** 31 August 2018

**CRDC Research Program:** 1 Farmers

### Part 2 – Contact Details

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**Signature of Research Provider Representative:**

**Date Submitted:** 2 November 2018

## **Part 3– Capital Item Final Report**

### **1. Background**

The IREC Field Station is a purpose built facility that demonstrates state-of-the-art irrigation technology and current research for regional irrigators and visitors, both international and from other irrigation areas.

Currently 30ha of land is laid out to state-of-the-art automated surface irrigation system (beds in bankless channel with roll-over banks) co-funded by CRDC. This summer an automated Pipe-Through-the-Bank layout will be installed on an additional 15ha (funded by GRDC).

In order to better demonstrate the advantages of automation technology we needed to upgrade and automate the pump and recycle system. The funding will go towards pump upgrade and the automation of the irrigation recycle system at the Irrigation Research & Extension Committee Field Station (IREC FS) at Whitton.

### **2. How does the Capital Item meet expectations and specifications?**

This has been a long and difficult project, due mainly to the inexperience with the works required and components involved, as well as fitting the upgrade into the irrigation program/season.

We believe the automated recycle system will exceed our initial expectations, not only in its capacity to assist with providing irrigation data/information vital in research, but also in the demonstration and ease of management value it adds to the IREC FS.

### **3. How is the Capital Item being utilised to support your research or intended application?**

The fully automated irrigation recycle system and pump site, will not only complete the automation of surface irrigation systems at the IREC Field Station, it will also provide greater opportunities for researchers to continue and expand projects, especially around technology demonstrations and irrigation focussed research.

It will also further improve water use efficiency and increase farm profitability, while showcasing state-of-the-art automation technology to irrigators and other visitors.

### **4. Describe the benefits of this Capital Item in supporting your research?**

The IREC FS is now a site which provides more comprehensive research capabilities. The automated irrigation recycle system and pump site will enable irrigation focussed research such as different irrigation intervals and deficits to be undertaken at the IREC Field Station. Drainage water will be metered (Mace meters supplied by Murrumbidgee Irrigation), so different irrigation schedules, system efficiency and drainage volume comparisons will also be possible.

### **5. Are there any Extension/Communications opportunities?**

Yes. The new automated drainage recycle system will be showcased at the IREC annual field day in January 2019. The project has also been mentioned in Field Station updates in Chairman's report and articles in the IREC Farmers' Newsletter. It will also feature on IREC website and in social media posts. We aim to produce a plain lessons learned publication for irrigators in the south to use as a reference.

## **Part 4 – Capital Item Final Report Executive Summary**

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*(This will be included on CRDC's website of final reports.)*

The CRDC funded “Automation of recycle system- IREC Field Station” project saw the supply & installation of variable speed drive pump, sensor and recycle pump automation technology to complement the state-of-the-art automated irrigation system in use.

This project enables IREC to demonstrate to irrigators and visitors the benefits associated with a fully integrated automated irrigation and recycle system.

It has been funded significantly by CRDC with contributions from MI, Bidgee Automation, Padman Stops and other commercial businesses.

The IREC Field Station will now be able to exhibit a wide range of technologies and, management practices as well as share knowledge gained from the various research projects taking place at the site.

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