



Murrumbidgee  
Irrigation

**EXPRESSION OF INTEREST**  
**Murrumbidgee Irrigation Limited's**  
**MI Automation Finalisation Project - Civil**  
**CONTRACT MI-PRO-CON-XXXXX: CONSTRUCTION**



**November 2021**

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## 1. Project Outline

Murrumbidgee Irrigation (**MI**) operates irrigation and drainage arrangements for the Murrumbidgee Irrigation Area (**MIA**) in New South Wales, providing water to numerous landholders in that area. The MIA region is currently undergoing an expansion into a wider range of agricultural farming methods, technologies & products that requires efficient water distribution.

Previous automation projects conducted under the Private Irrigation Infrastructure Operators Program (**PIIOP**) have already led to improved quantity and quality of crop yield per unit of input and improved flexibility of farm systems, enabling greater frequency and reliability of crop yield.

Irrigation practices in the MIA are technically advanced and allow water to be applied more precisely, at higher flow rates and for shorter lengths of time to limit evaporation and seepage losses below the crop root zone and provide optimum growing conditions that increase crop yield. This in turn places higher demand on MI's supply network for greater flow rate and more precise water delivery. The proposed investment complements previous PIIOP funding rounds which has resulted in approximately 80% of MI's delivery network now modernised while also aligning with MI's objective to make every drop of water count.

This project will complete the modernisation of the MIA. The finalisation of these works will achieve improved water delivery efficiencies and increased delivery performance that meets industry demands, enables regional agribusinesses to maximise their potential for sustainable production, invests in regional communities through local opportunities and delivers water for the environment. This will lead to a resilient community that is well-adapted and able to reside, and thrive, in a water-constrained future.

## 2. Indicative Project Timeframe

April 2022 to October 2024

## 3. EOI Lodgement

Expressions of Interest (**EOI**) must be lodged **electronically** to: [tenders@mirrigation.com.au](mailto:tenders@mirrigation.com.au), stating in the subject field:

**"CONFIDENTIAL - EXPRESSION OF INTEREST – Contract MI-PRO-CON-10052: MI Automation Finalisation Project - Civil"**

The timing for lodgement of EOIs is as follows:

- Closing Date for Lodgement: **28 January 2022**
- Closing Time for Lodgement: **5:00 PM AEST**

Any enquiries with respect to the lodgement of EOIs should be directed to:

<b>Contact Person:</b>	<b>David Hunt</b>
Mob:	0437 743 635
Fax:	(02) 6962 0200
E-mail:	<a href="mailto:tenders@mirrigation.com.au">tenders@mirrigation.com.au</a>

## 4. Site Inspection

A site inspection can be arranged upon request.

## 5. Information and Response Requirements

- Schedule 1:** Declaration of Compliance with the Code for the Tendering and Performance of Building Work 2016
- Schedule 2:** Information Regarding Compliance with the Code for the Tendering and Performance of Building Work 2016
- Schedule 3:** General Information
- Schedule 4:** Company Experience
- Schedule 5:** Quality Management System (QMS), Work Health & Safety (WHS) & Environmental Management System (EMS)
- Schedule 6:** Key Personnel Resumes
- Schedule 7:** Financial Capacity
- Schedule 8:** Checklist

## 6. Information Provided

- Attachment A:** Project Outline
- Attachment B:** Standard Designs

## **SCHEDULE 1: Declaration of Compliance with the Code for the Tendering and Performance of Building Work 2016**

### **1.1 In these clauses:**

<b>ABCC</b>	means the body referred to in subsection 29(2) of the Act.
<b>ABC Commissioner</b>	means the Australian Building and Construction Commissioner referred to in subsection 15(1) of the Act.
<b>Act</b>	means the <i>Building and Construction Industry (Improving Productivity) Act 2016</i> .
<b>Building Code</b>	means the <i>Code for the Tendering and Performance of Building Work 2016</i> , which is available at <a href="https://www.legislation.gov.au/Details/F2017C00125">https://www.legislation.gov.au/Details/F2017C00125</a>
<b>Building Contractor</b>	has the same meaning as in the Act.
<b>Building Industry Participant</b>	has the same meaning as in the Act.
<b>Building Work</b>	has the same meaning as in subsection 3(4) of the Building Code.
<b>Commonwealth Funded Building Work</b>	means Building Work in items 1-8 of Schedule 1 of the Building Code.
<b>Enterprise Agreement</b>	has the same meaning as in the <i>Fair Work Act 2009</i> (Cth).
<b>Exclusion Sanction</b>	has the same meaning as in subsection 3(3) of the Building Code.
<b>Related Entity</b>	has the same meaning as in subsection 3(2) of the Building Code.
<b>Works</b>	means Commonwealth Funded Building Work that is the subject of this Request for Expression of Interest.

1.2 The Building Code applies to the Works.

1.3 All tender processes and calls for expressions of interest (howsoever described) in respect of the Works will be conducted in a manner that is consistent with the Building Code.

1.4 The Respondent is only permitted to participate in the tender processes (howsoever described) in respect of the Works where the Respondent is not subject to an exclusion sanction.

1.5 As part of their response, Respondents must submit:

- (a) a signed "Declaration of Compliance" which is attached to this Request for Expression of Interest; and
- (b) the further information outlined in Attachment A to the "Declaration of Compliance".

1.6 Where the Funding Recipient issues a Request for Tender in relation to the Works, Tenderers will be required to submit a Workplace Relations Management Plan with their tenders for approval by the ABCC in accordance with Part 6 of the Building Code.

## 2. Declaration of Compliance With The Code For The Tendering And Performance Of Building Work 2016

**Name of project to which the Works relate:** MI Automation Finalisation Project - Civil

**Name of Respondent, ABN and ACN:** \_\_\_\_\_

- 2.1 The Respondent confirms that it and any Related Entity will comply with the Building Code when undertaking the Works should it be the successful Respondent in relation to the Works.
- 2.2 The Respondent confirms that it, and any Related Entities, will comply with the Building Code from the time of lodging an expression of interest or tender response (if not already obliged to do so), and that it has complied with the Building Code in preparing its response.
- 2.3 The Respondent confirms that it is not subject to an exclusion sanction at the time of lodging this response.
- 2.4 The Respondent acknowledges the powers and functions of the ABC Commissioner and the ABCC under the Act and the Building Code and undertakes to ensure that it and its subcontractors will comply with any requests made by the ABCC and the ABC Commissioner within those powers and functions, including but not limited to requests for entry under section 72 of the Act, requests to interview any person under section 74 of the Act, requests to produce records or documents under sections 74 and 77 of the Act and responding to requests for information concerning matters relating to the Building Code under subsection 7(c) of the Building Code.
- 2.5 Should the Respondent be the successful tenderer in relation to the Works and proposes to subcontract any of the Works, the Respondent must ensure that any request for expressions of interest or requests for tender (howsoever described) for the Works requires a person responding to the tender:
- (a) to comply with the Building Code; and
  - (b) to confirm that it and its related entities meet the requirements of section 11 of the Building Code; and
  - (c) to confirm that it is not subject to an exclusion sanction.
- 2.6 The Respondent declares that where it proposes to subcontract any of the Works, should it be the successful Tenderer, it must:
- (a) not enter into a subcontract with a subcontractor, which could be required to comply with the Building Code, and that:
    - (i) is covered by, or has Related Entities covered by, an Enterprise Agreement that does not meet the requirements of section 11 of the Building Code; or
    - (ii) is subject to an Exclusion Sanction or is excluded from performing Building Work funded by a state or territory government unless approval to do so is provided by the ABC Commissioner.
  - (b) only enter into a subcontract where:
    - (i) the subcontractor has submitted a declaration of compliance, including the further information outlined in Attachment A to the declaration of compliance, in substantively the same form as the model declaration of compliance applicable to contractors and subcontractors in relation to the Building Code (located in Part 4 in the document titled Model Clauses Type B-Indirectly Funded available on the ABCC website ([www.abcc.gov.au](http://www.abcc.gov.au))); and
    - (ii) the subcontract with the subcontractor contains clauses in substantively the same form as the model contract clauses applicable to contractors and subcontractors in relation to the Building Code (located in Part 5 in the document titled Model Clauses Type B-Indirectly Funded available on the ABCC website ([www.abcc.gov.au](http://www.abcc.gov.au))).
- 2.7 The Respondent must ensure that an agreement entered into in relation to the Works with a subcontractor requires the subcontractor to act consistently with the Building Code in respect of the Works.

- 2.8 The Respondent must ensure that subcontractors comply with the Building Code in respect of the Works.
- 2.9 The Respondent must ensure as far as is reasonably practicable that subcontractors that are engaged by the [Respondent/Tenderer] in respect of the Works take remedial action to rectify non-compliant behaviour.
- 2.10 The Respondent must ensure that:
  - (a) it will only use products in relation to the Works that comply with the relevant Australian standards published by, or on behalf of, Standards Australia; and
  - (b) an agreement entered into in relation to the Works with a subcontractor requires the subcontractor to only use products in relation to the Works that comply with the relevant Australian standards published by, or on behalf of, Standards Australia [NOTE: Clauses 1.1.20(a) and (b) are not required on indirectly Commonwealth funded building work but may be included as a matter of best practice].
- 2.11 The Respondent declares that it has provided all of the further information required by Schedule 2 and relevant to this Declaration of Compliance.

**To be signed by the respondent**

**Date:** .....

**Name of Authorised Person:** .....

**Job Title:** .....

**Signature:** .....

## SCHEDULE 2: Information Regarding Compliance with the Code for the Tendering and Performance of Building Work 2016

Respondents must provide the following information as part of their Declaration of Compliance

Item	Requirement	Compliance
1	Does the Respondent positively commit to the provision of appropriate training and skills development for their workforce, and, if so, what evidence can the Respondent supply in relation to this (for example, evidence of its compliance with any state or territory government building training policies and evidence of its support in the delivery of nationally endorsed building and construction competencies)?	Yes/No  Details:
2	How many current apprentice and trainee employees are engaged or intended to be engaged by the Respondent to undertake the Works?	Details:
3	How many and what classes of persons that hold visas under the <i>Migration Act 1958</i> are engaged or intended to be engaged by the Respondent to undertake the Works?	Details:
4	Has the Respondent within the preceding 3 years had an adverse decision, direction or order of a court or tribunal made against it for a breach of a designated building law, work health and safety law or the <i>Migration Act 1958</i> ?	Yes / No  Details:
5	Has the Respondent or its Related Entities within the preceding 3 years been required to pay any amount under an adjudication certificate (provided in accordance with a law relating to the security of payments that are due to persons in respect of Building Work) to a Building Contractor or Building Industry Participant?	Yes / No  Details:
6	Has the Respondent or its Related Entities within the preceding 3 years owed any unsatisfied judgement debts to a Building Contractor or Building Industry Participant?	Yes / No  Details:



### SCHEDULE 3: General Information

Applicants must provide the following general information:

***(If the Applicant is a joint venture or consortium each member of the joint venture or consortium must complete and submit a separate EOI.)***

Item	Requirement	Details
A.	Name of the company or entity under which this EOI is being made and under which, if invited, tenders will be submitted ('Applicant')	
B.	Trading name (if different)	
C.	State the type of entity (e.g. public or private company, joint venture)#	
	<p>If the Applicant is a member of a joint venture or consortium it must indicate if it will be the <b>principal contractor</b> under the <i>Work Health and Safety Act 2011 (NSW)</i>.</p> <p>If the Applicant will not be the principal contractor it must provide the full name of its JV or group member who will be the principal contractor</p>	<p><input type="checkbox"/> Yes, we agree to be engaged as principal contractor</p> <p><input type="checkbox"/> No, we will not be engaged as principal contractor. The principal contractor will be:</p> <p>..... (insert name of entity)</p>
D.	ABN and ACN / ARBN	
E.	Address of registered office	
F.	Postal address (if different to above)	
G.	Telephone number	
H.	Email address	
I.	Contact for EOI enquiries (full name, position, email address, mobile phone)	

# There are a variety of legal entities that can submit Applications for prequalification. The Applicant must fully describe the form of legal entity under which it operates.

**Single company** - No additional requirements.

**Company within a consolidated group** - The EOI must clearly identify which company within the group is interested in tendering or, alternatively, if it is the group itself which is seeking to tender. The company will be assessed in its own right, based on its individual financial statements and any additional information that may be requested. A subsidiary company may submit audited financial

*statements for the parent company (or guaranteeing entity) for assessment if it is prepared to provide a guarantee from the parent entity in the form of a Parent Company Guarantee (PCG). The Applicant must confirm in the EOI that it is prepared to provide a PCG. Where the parent company (or guaranteeing entity) is not prepared to provide the required guarantee, the subsidiary must be assessed in its own right.*

*In considering Applications from subsidiary companies or entities, MI reserves the right to examine the resources of the parent company or entity if considered warranted.*

**Joint ventures** - *MI will consider EOIs from joint ventures. Joint ventures may be either incorporated or unincorporated. An incorporated joint venture will be assessed as a legal entity in its own right. Unincorporated joint ventures will be assessed on a case-by-case basis, which will include a separate assessment of each joint venture party.*

## SCHEDULE 4: Company Experience

### 4.1 General

State the number of years of relevant experience the Applicant has had as head contractor for projects similar to the Project.

	in NSW	in other States (please specify)
Number of years		

### 4.2 Relevant Projects

Provide details of current or completed projects undertaken within the past 5 years involving works similar to the Project (*maximum of 5*).

The following details are to be provided for each project:

Item	Requirement	Details
A.	Project Name	
B.	Client contact details	
C.	Contract administrator / superintendent / principal's representative contact details	
D.	Location of the project	
E.	Description of the project <i>(maximum of 150 words)</i>	
F.	Form of contract <i>(AS 2124, AS 4300 etc.)</i>	
G.	Type of contract <i>(lump sum, schedule of rates etc.)</i>	
H.	Contract value at award	
I.	Start date	
J.	Date for practical completion	
K.	Original contract period <i>(weeks)</i>	

Item	Requirement	Details
L.	Names of Applicant's key operational personnel employed on contract	
M.	Value of subcontracted work	

*(Duplicate and insert table, as required)*

#### 4.3 Contract Completion

Has the Applicant, including any partner, principal, director or senior staff member ever been associated with a contract which has failed to complete or been renegotiated into a different contract type (*e.g. AS 2124 contract renegotiated into an alliance*)? If yes, state the name of the individual or organisation and the reason for the failure or renegotiation.

**[#INSERT]**

## SCHEDULE 5: Quality Management System (QMS), Work Health and Safety (WHS) & Environmental Management System (EMS)

5.1 Please provide evidence of a quality system that the Applicant has in place, including a sample or example Quality Plan and a sample or example Inspection and Test Plan.

- (i) Corporate quality policy attached (*please tick to confirm*)
- (ii) Sample / example Quality Plan attached (*please tick to confirm*)
- (iii) Sample / example Inspection and Test Plan attached (*please tick to confirm*)

5.2 Please provide evidence of utilisation of the QMS on relevant projects:

**[#INSERT]**

*(Evidence of utilisation of the QMS on relevant projects must refer to at least one of the projects referred to in section 3.2 and could include audit reports and sample/example corrective action requests actioned)*

5.3 Utilisation of Work Health and Safety (WHS) & Environmental Management Systems

- Has the Applicant received any notice with respect to non-conformance or prosecutions or directions for legislative breaches in relation to WHS or its WHS Management System over the last three years? If so, provide details and measures taken for corrective action and the outcome of these actions.

**[#INSERT]**

5.4 Environmental Management System (EMS)

- (i) Has the Applicant received any notice with respect to non-conformance or prosecutions or directions for legislative breaches in relation to any environmental matter or its EMS over the last three years? If so, provide details and measures taken for corrective action and the outcome of these actions.

**[#INSERT]**

## SCHEDULE 6: Key Personnel

6.1 Please provide the details in the table below for key operational personnel permanently employed in NSW or employed elsewhere who are available for and would be allocated to the Project by the Applicant if the Applicant was invited to submit a tender.

*(Maximum of 5 key personnel)*

A.	Name	
B.	Roles and responsibilities	
C.	Experience in the current or completed projects in section 3.2 above	
<input type="checkbox"/> Resume attached <i>(please tick to confirm)</i>		

*(Duplicate and insert table, as required)*

6.2 A current, detailed resume for each person nominated must be included. Resumes must include the following information:

- (i) current position and title;
- (ii) current role / responsibilities;
- (iii) time with the Applicant's organisation;
- (iv) time in current role / position; and
- (v) experience over the past 5 years including with respect to the Applicant's projects as set out in section 3.2.

6.3 The Applicant warrants that the nominated personnel are available for contracts to be undertaken as and when required for MI. It is accepted that one person may occupy a variety of roles.

## **SCHEDULE 7: Financial Capacity**

*(The information submitted pursuant to this section shall remain confidential. The Applicant's financial information must be audited by a suitably qualified accountant. Note: A suitably qualified accountant is an accountant who is qualified as a Certified Practising Accountant, Chartered Accountant or Professional National Accountant within the Australian accounting profession.*

### **7.1 Information to be submitted**

The following information is to be attached to this Application:

- (i) *Audited annual report / financial statements for the last three years (\*)*
- (ii) *Management accounts that are no more than six months old (\*)*

**Note:** If the Applicant is an entity of a type that is not required to be audited, statutory financial statements, including a Director's Report and Director's Declaration, as well as a Compilation Report from the qualified accountant who prepared the financial statements, must be provided.

If the Applicant is a subsidiary and its EOI is shortlisted, it may be required to provide a parent company guarantee on terms approved by MI as part of the request for tender process.

*(\*) The financial statements / management accounts should include the following:*

- (i) balance sheet;*
- (ii) profit and loss statement;*
- (iii) cash flow statement;*
- (iv) notes to and forming part of the financial statements;*
- (v) signed Director's Report (where Applicant is a company);*
- (vi) signed Auditor's Report;*
- (vii) signed Director's Declaration.*

## 7.2 Insurances

Please provide certificates of currency in for the following types of insurance:

Type of Insurance	Minimum Amount	Amount of insurance that the Applicant will provide	Amount of the deductible or excess (if any)
<input type="checkbox"/> Professional Indemnity Insurance (please tick to confirm)	\$10,000,000		
<input type="checkbox"/> Public Liability Insurance (please tick to confirm)	\$20,000,000		
<input type="checkbox"/> Worker's Compensation	As required by statute	As required by statute	Not applicable

# all amounts in the table above are in Australian dollars.

## 7.3 Additional information

Additional information may be requested to support the assessment, and the financial assessor may also source relevant information from publicly available sources (e.g. Dun and Bradstreet and/or IBIS World reports and ratings, ASIC and the Australian Business Register). By lodging the EOI, the Applicant agrees to such requests being made.



## SCHEDULE 8: Checklist of information provided by the applicant

No.	Requirement	Relevant Schedule	Information provided
1	Declaration of Compliance with the Code for the Tendering and Performance of Building Work 2016	1	Y/N
2	Information regarding Compliance with the Code for the Tendering and Performance of Building Work 2016	2	Y/N
3	General company information	3	Y/N
4	Company project experience information	4	Y/N
5	Evidence of a Quality Management System	5	Y/N
6	Response regarding any non-conformance or prosecutions or directions for legislative breaches in relation to WHS or the company's WHS Management System over the last three years	5	Y/N
7	Response regarding any notice with respect to non-conformance or prosecutions or directions for legislative breaches in relation to any environmental matter or its EMS over the last three years	5	Y/N
8	Information on key operational personnel permanently employed in NSW or employed elsewhere who would be allocated to the Project by the Applicant if the Applicant was invited to submit a tender, including a detailed resume for each person.	6	Y/N
9	Information on financial capacity: <ul style="list-style-type: none"> <li>- Audited annual report</li> <li>- management accounts</li> <li>- Insurances (Professional Indemnity, Public Liability and Workers Compensation)</li> </ul>	7	Y/N

## ATTACHMENT A: Project Outline

Completing the automation of the water delivery network is currently one of Murrumbidgee Irrigation's key business objectives. The rationalisation & automation of existing assets is key to realising this objective whilst also providing a positive business approach that provides the key benefits listed below:

- Automation – to bring the existing manually operated system in line with MI's business objectives to rationalise and automate existing assets
- Reduce forward capital, maintenance and operational costs by replacing aged infrastructure.
- Reduce water losses & improve on business revenue by replacing unmetered structures & automating existing assets.
- Improve on operational control of the current water delivery network by enabling automated operation of regulator & outlet assets.
- Improve on current customer service by providing an efficient & reliable water ordering & delivery service.
- Eliminate the safety risks associated with the manual operation of existing assets.

The MI Automation Finalisation project is currently valued at \$84,737,322 (Including Material Supply, automation components supplied by the Principal). This project is expected to be delivered over a three-year period starting 2022 & being finalised 2024. Project Planning, Design & Procurement activities will generally commence from November each year & will continue for a 5-month period ending in March the following year.

Project delivery (Construction) activities will commence from April each year & would be expected to be completed by November of that same year. Works will be released as contract packages predominately utilising Construct Only AS4000-1997 standard contracts with several pipeline projects being release as Design and Construct contracts utilising AS4902.

Works expected to be delivered each year including estimated values has been detailed in the below table:

*Table 1: Program of Works*

YEAR	SCOPE	ESTIMATED BUDGET
<b>YEAR 1 2022</b> <b>(Construction Apr- Nov 22)</b>	<ol style="list-style-type: none"> <li><b>YENDA-</b> Meters, Regulators &amp; Pipelines.</li> <li><b>MURRAMI-</b> Meters &amp; Regulators</li> <li><b>SPECIAL PROJECTS -</b> Meters, Regulators, Pipelines &amp; channel seepage repair/ refurbishment in Murrami/ Leeton areas.</li> </ol>	<b>\$34,036,134.5</b>
<b>YEAR 2 2023</b> <b>(Construction Apr- Nov 23)</b>	<ol style="list-style-type: none"> <li><b>GRIFFITH/ HANWOOD &amp; LVBC (Lake View Branch Canal)-</b> Meters &amp; regulators</li> <li><b>SYSTEM WIDE-</b> Low Flow Outlets &amp; Pipelines.</li> <li><b>SPECIAL PROJECTS-</b> Meters, Regulators, Pipelines &amp; channel seepage repair/ refurbishment</li> </ol>	<b>\$35,392,663.5</b>
<b>YEAR 3 2024</b> <b>(Construction Apr- Nov 24)</b>	<ol style="list-style-type: none"> <li><b>WIDGELLI / BILBUL &amp; HANWOOD-</b> Meters &amp; regulators</li> <li><b>SYSTEM WIDE-</b> Pipelines &amp; Channels.</li> <li><b>SPECIAL PROJECTS &amp; CAPEX-</b> Meters, Regulators, channels, System Control.</li> </ol>	<b>\$15,308,524.5</b>

The sub-projects are located in various parts of MIA and completion of the sub-projects will result in a fully integrated water delivery network. This project is comprised of 4 project categories that include a number of sub-projects. These project categories are:

1. Automation of control structures (regulator/offtakes/escapes)
2. Metered outlet replacement
3. Metered outlet conversion from unmetered outlets
4. Open channel refurbishment, piping and reconfiguration

Whilst emphasis will be placed on whole-of-life-cycle costing and the accrued benefits, through a Triple Bottom Line options analysis process, MI maintains an open and consultative approach to identify, analyse, refine and select optimal value for money solutions to modernise water delivery infrastructure and secure improved water delivery efficiency.

## 1. Automation of Control Structures

The remaining districts to be automated include the Leeton and Stoney Point areas, and the Griffith township. Additionally, areas that have lower levels of automation such as Yenda, the Northern Branch Canal (NBC), Hanwood, the Mirrool Creek Branch Canal (MCBC) system and Lake Wyangan require further works to achieve full automation (Table 2).

*Table 1: Scope and schedule for regulators/offtakes/escapes*

Precincts	Areas covered	Asset Quantities		
		Regulators/Escapes	Offtakes	Total
1	Leeton & Stoney Point	166	38	204
2	LVBC & Griffith	64	13	77
3	Hanwood & MCBC	32	0	32
4	Yenda & NBC	25	15	40
5	Other	7	0	7
	Total	294	66	360

## 2. Automated Metered Outlets

These sub-projects will upgrade existing metered outlets with the new standard of Pattern Approved meters that meet the requirements of the Australian Standards 4747 for each of the 5 precincts identified below. This will include the automation of metered outlets with the capability to monitor flow remotely, self-adjust and to optimise channel flows and operations (Table 3).

As part of the process, customers will continually be consulted and provided the opportunity to reset their farming practices with the availability of higher flow outlets that cater for flow ranges from 2ML/d to 100ML/d. This allows customers to reduce the number of access points (metered outlets) and hence reduce ongoing fixed charges associated with each metered outlet. This also provides an ongoing benefit to all customers as the reduction in the number of outlets reduces the ongoing capital and maintenance costs for the network.

Table 2: Scope and schedule for automated metered outlets

Precincts	Areas covered	Asset Quantities
		Metered Outlets
1	Leeton & Stoney Point	225
2	LVBC & Griffith	113
3	Hanwood & MCBC	142
4	Yenda & NBC	243
5	Meter Only	60
5	Other	1
	Total	713

### 3. Conversion of Unmetered Outlets to Metered Outlets

MI currently has approximately 1,000 unmetered outlets. These connections generally provide low flow water supply for stock, domestic and garden purposes. MI recently approved a policy to convert all unmetered outlets to be either low flow metered outlets with average flows of 2 ML/day, or garden licences that are unmetered connections restricted to a maximum connection pipe size of 50mm and limited to 2-acre land sizes. This project category requires the upgrade and metering of all low flow outlets with a cost-effective metering solution (Table 4).

The impetus for moving this asset class to either the Garden Licence or a low flow metered and monitored outlet is as follows:

- A number of unmetered outlets have large offtake capacities (up to 3 - 5 ML/d). Water savings can be achieved by removing these, and it also allows connection charges and usage fees to be accurately calculated for billing purposes.
- Compliance levels and the performance of an automated channel system will be greatly improved with the removal of larger capacity and undocumented unmetered outlets from MI's area of operations.

Table 3: Scope and schedule for unmetered outlets

Areas covered	Unmetered Outlets	
All MIA	700	2021-2023

### 4. Open Channel Refurbishment, Piping and Reconfiguration

Open channel Refurbishment, Piping and Reconfiguration was identified as an opportunity for MI to achieve water savings as well as asset rehabilitation. General erosion, repeated desilting and removal of weeds over the past 80 years has widened the waterway, thereby creating additional water loss, water control, access and maintenance challenges. Table 5 details the proposed works.

Channels that have been identified for refurbishment and piping have typically widened by up to 50% and this leads to:

- Increase seepage due to a reduction in the bank width;
- Access difficulties due to loss of a traffic-way along the crest of the adjacent bank;
- Increased weed growth due to low flow velocities;
- Overbank losses due to a diminishing quantities of bank material; and
- Additional losses of water due to increased evaporation.

Reconstruction of the channels will allow for better water control, a reduction in seepage, evaporation, escape water and maintenance due to refurbishment of open channel and a reduction in WHS hazards. Channel refurbishment includes relining using both HDPE and clay lining methods.

Several channels have been identified for piping. Piping eliminates seepage and evaporation whilst also reducing maintenance and WHS issues associated with an open channel system which has contributed to a steady decrease in safety incidents and resulted in MI being Lost Time Injury (LTI) free for over 12 months. Several of the pipelines will replace existing failing pipelines. These laterals are old concrete pipelines that are reaching the end of their useful life and are continuing to develop leaks after major repairs. The water lost through these leaks, combined with the water losses associated with dewatering to undertake repairs, can be saved via pipeline replacement.

Channel reconfiguration is made achievable through the increase in outlet sizes that allows customers to reduce the number of assets required to service their landholdings and the reconfiguration of parts of the network. This can be achieved with zero reduction in serviceable land. Additionally, as smaller land parcels are amalgamated into larger farming enterprises, more tail end channel systems are servicing and dissecting these larger properties. These landholders are taking the opportunity to have larger outlets installed at the boundary of these properties which allows MI to hand over the existing infrastructure to the landholder. The landholders are then reconfiguring and utilising the existing channel system to divert water through their farms at higher flow rates with less fixed infrastructure.

*Table 4: Scope and schedule for open channel refurbishment, piping and reconfiguration*

Precincts	Activity	Asset Quantities
		(km's)
1	Channel Lining/Refurbishment	13
2	Pipeline	9
3	Reconfiguration	13
4	Seepage Interception	10
	Total	45