

EXPRESSION OF INTEREST

Murrumbidgee Irrigation Limited's Roaches Surge Reservoir Project CONTRACT MI-PRO-CON-10052: DESIGN AND CONSTRUCTION









Contents

1.	Introduction	2
2.	Indicative Timeframe	2
3.	EOI Lodgement	2
4.	Site Inspection	3
5.	Information and Response Requirements	3
6.	Information Provided	3
SCH	EDULE 1: Declaration of Compliance with the Code for the Tendering and Performance of Building Work 2016	
SCH	EDULE 2: Information Regarding Compliance with the Code for the Tendering and Performance of Building Work 2016	_
SCH	EDULE 3: General Information	8
SCH	EDULE 4: Company Experience	10
SCH	EDULE 5: Quality Management System (QMS), Work Health and Safety (WHS) & Environmental Management System (EMS)	12
SCH	EDULE 6: Key Personnel	13
SCH	EDULE 7: Financial Capacity	14
SCH	EDULE 8: Checklist of information provided by the applicant	16
ATT	ACHMENT A: Project Outline	17
ATT	ACHMENT B: Design Report	20
ATT	ACHMENT C: 80% Drawings	21

1. Introduction

Murrumbidgee Irrigation (MI) is requesting Expressions of Interest for Design and Construction of a 5,000 ML surge reservoir. 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.

Currently, forecasting water orders is difficult, taking up to 7 days to get water from the dams to the MIA, which limits MI's ability to respond to demand fluctuations due to changes in climatic conditions. This often results in a mismatch between the volume of water released and that taken at MI's offtake

The new reservoir will be known as Roaches Surge Reservoir. Its construction upstream of Roaches Regulator on the Main Canal at Farm 1A, Yanco, will allow MI to support surges in demand through our integrated channel network and provide additional surge capacity across the network, enabling higher flowrates to irrigators in peak events, as well as better matching to river ordering. Roaches Surge Reservoir will enable MI to get the water take versus water order as close as possible, and ensure less water is lost to the resource set within the Murrumbidgee Valley.

Roaches Surge Reservoir will provide additional benefits. These include providing irrigators and towns in the MIA with much greater water security during winter works periods, when MI is unable to divert water from the river system. It will provide system 'buffer' capacity in high demand periods, such as targeted high flow environmental events along the Murrumbidgee, as well as storage capacity when water ordered by customers is not required during unexpected rain events. The ability to temporarily store water ordered but not extracted by customers will reduce the loss of productive water into the drainage network via the channel escape system (spill management).

Finally, the Roaches Surge Reservoir Project will leverage the investment by irrigators in technology to provide a further substantial increase to farm productivity and crop yields, by reducing ordering and shutdown timeframes without impacting other levels of service or delivery efficiency.

For further details refer to Attachments A -C.

2. Indicative Timeframe

30 January 2022 - 15 September 2022

3. EOI Lodgement

- (a) Expressions of Interest (**EOI**) must be lodged as follows:
 - (i) **electronically** to:

tenders@mirrigation.com.au

(ii) stating in the subject field:

"CONFIDENTIAL - EXPRESSION OF INTEREST – Contract MI-PRO-CON-10052: Design and Construction of Roaches Surge Reservoir"

(b) The timing for lodgement of EOIs is as follows:

(i) Closing Date for Lodgement: 24 December 2021

(ii) Closing Time for Lodgement: 5:00 PM AEST

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

Contact Person: Tony Onley

Mob: 0428 978 077

Fax: (02) 6962 0200

E-mail: tenders@mirrigation.com.au

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: Design Report
Attachment C: 80% Design

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

1.1 In these clauses:

ABCC means the body referred to in subsection 29(2) of the

Act.

ABC Commissioner means the Australian Building and Construction

Commissioner referred to in subsection 15(1) of the Act.

Act means the Building and Construction Industry (Improving

Productivity) Act 2016.

Building Code means the *Code for the Tendering and Performance of*

Building Work 2016, which is available at

https://www.legislation.gov.au/Details/F2017C00125

Building Contractor has the same meaning as in the Act.

Building Industry has the same meaning as in the Act.

Participant

Building Work has the same meaning as in subsection 3(4) of the

Building Code.

Commonwealth Funded

Building Work

means Building Work in items 1-8 of Schedule 1 of the

Building Code.

Enterprise Agreement has the same meaning as in the Fair Work Act 2009.

Exclusion Sanction has the same meaning as in subsection 3(3) of the

Building Code.

Related Entity has the same meaning as in subsection 3(2) of the

Building Code.

Works 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:	Roaches Surge Reservoir

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:
 - 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)); 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)).
- 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:

To be signed by the respondent

- (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.

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')	
В.	Trading name (if different)	
C.	State the type of entity (e.g. public or private company, joint venture)#	
	If the Applicant is a member of a joint venture or consortium it must indicate if it will be the principal contractor under the Work Health and Safety Act 2011 (NSW). 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	 ☐ Yes, we agree to be engaged as principal contractor ☐ No, we will not be engaged as principal contractor. The principal contractor will be:
D.	ABN and ACN / ARBN	
E.	Address of registered office	
F.	Postal address (if different to above))	
G.	Telephone number	
H.	Email address	
l.	Contact for EOI enquiries (full name, position, email address, mobile phone)	

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

[#] 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.

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	
В.	Client contact details	
C.	Contract administrator / superintendent / principal's representative contact details	
D.	Location of the project	
E.	Description of the project (maximum of 150 words)	
F.	Form of contract (AS 2124, AS 4300 etc.)	
G.	Type of contract (lump sum, schedule of rates etc.)	
Н.	Contract value at award	
l.	Start date	
J.	Date for practical completion	
K.	Original contract period (weeks)	

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 tha	it the A	Applicant	has in place	, including	asample or
	example Quality	y Plan and a	sample or	example II	nspecti	on and Te	est 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 OMS on relevant projects:

[#INSERT]	
•	n of the QMS on relevant projects must refer to at least one of the projects 3.2 and could include audit reports and sample/example corrective action
5.3 Utilisation of Work	Health and Safety (WHS) & Environmental Management Systems
(i)	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

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

(Maximum of 5 key personnel)

A.	Name	
В.	Roles and responsibilities	
C.	Experience in the current or completed projects in section 3.2 above	
□ Resu	ume attached (please tick to confirm)	

(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 Practicing 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)
☐ Professional Indemnity Insurance (please tick to confirm)	\$10,000,000		
☐ Public Liability Insurance (please tick to confirm)	\$20,000,000		
☐ 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: - Audited annual report - management accounts - Insurances (Professional Indemnity, Public Liability and Workers Compensation	7	Y/N

ATTACHMENT A: Project Outline

Background information

MI will construct an enroute surge reservoir with a capacity of 5,000ML near the Roaches Regulator on the Main Canal in Yanco NSW. The structure will be known as Roaches Surge Reservoir and serve as a gravity and pumped reservoir for the purposes of irrigation water storage and supply. The reservoir and associated infrastructure will cover an area of approximately 140 ha. The internal reservoir area is approximately 90 ha.

In November 2019, MI commenced work on an Environmental Impact Statement and 80% design for the Surge Reservoir. Development approval for the project was received on 15 October 2021, subject to several conditions being met. A key approval condition is that a construction environmental management plan is to be prepared that incorporates all the recommendations of the EIS, Appendices and other approved documents.

The surge reservoir comprises a single cell reservoir system with higher banks to maintain reservoir capacity while allowing a smaller footprint and lower level of biodiversity and cultural heritage impacts. An outlet channel linking the reservoir to the Main Canal downstream of Roaches Regulator will leverage the head difference at the regulator to maximise performance of the structure in gravity mode.

The surge reservoir site is located 4.5km south east of Yanco village. The main infrastructure for the reservoir, including reservoir, inlet channel and pumping infrastructure, will be located on MI owned land at Farm 1A, 432 Regulator Road, Yanco. The outlet channel of the reservoir will traverse Crown land currently occupied by the Yanco Agricultural Institute to link to the Main Canal downstream of Roaches Regulator. MI is in an advanced stage of negotiations with Crown Lands for a licence to allow MI to construct the outlet channel infrastructure on approximately 11 ha of Crown land.

The site for the reservoir is generally flat with a gentle downward slope from north west of the site towards the south east at approximately 1V:80H and covered with minimal vegetation in its current state.

Design:

Design for the surge reservoir is 80% complete and based on development objectives, available information, previous site investigations and current guidelines and standards. Some elements of the design may be further defined during 100% detailed design stage. Any final designs must comply with the terms of the development approval, ANCOLD and ICOLD guidelines, Australian standards and internationally recognised guidelines of other national dam authorities (e.g. USACE, USBR and FERC).

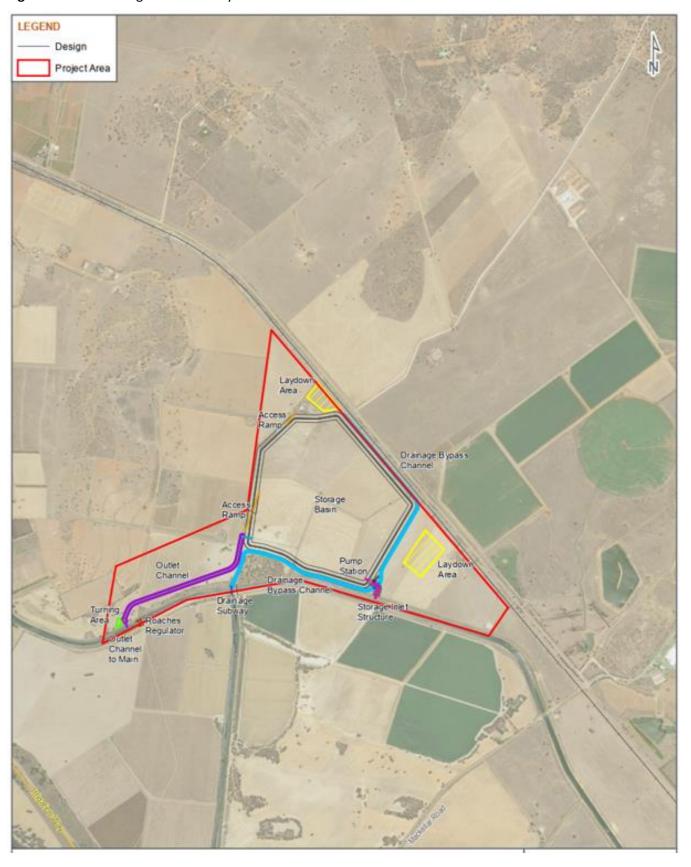
Roaches Surge Reservoir will consist of the following (See Figure 1):

- (a) Reservoir Embankment: The embankment is to be constructed using fill sourced on site. The embankment has an internal area of 90ha and a capacity of 5000ML. It has a crest width of 5m with an internal and external batter of 1V:3H, and a height of approximately 7.3m above existing ground level. The internal batter is to be lined with rock riprap to protect from wind/wave action. The external batter is to be lined with topsoil and stabilised with grass.
- (b) Reservoir Inlet structure: The inlet structure requires the construction of a dual gravity and pumped facility that is able to capture water from the Main Canal and the adjacent drainage system. Design for the inlet structure consists of a gravity intake, pipes, intermediate pit with pumps, and control valves with accessible meter to allow switching between gravity and pump operation. It is intended that the inlet structure would only be used as an outlet structure during emergencies, such as flood events, and to allow drainage of the dead water pool with a 200 ML/d pump.

The inlet structure consists of 6x1500mm pipes though the Main Canal embankment entering an open channel leading to an intermediate pit with pumps. The pit is connected to the storage itself via 5 x 1500mm pipes through the reservoir embankment. The pit includes an emergency spillway as an overtopping safety measure. Water from the drainage system can also be directed via an additional 5 x 1500 mm pipes into the intermediate pit for transfer into either the reservoir or the Main Canal. The flow of water through all pipes is controlled by penstock gates with control valves and meters. Pumping capacity is 1,000 ML/d provided by 5 x 200ML/d pumps located in the pit. Gravity inflow is a maximum of 1,000 ML/d to a maximum gravity fed capacity of 1,280ML. Maximum gravity outflow to the Main Canal is 1,500 ML/d at full reservoir level.

- (c) **Reservoir Outlet Structure**: This serves as the main reservoir outlet and transfers water by gravity from the reservoir to the Outlet Channel with no attached pump infrastructure. It includes the construction of a 5 x1500mm row piped culvert through the embankment with upstream and downstream headwalls. The flow of water is controlled by penstock gates with control valves with accessible meter. It has a maximum outflow flow rate of 1,500ML/d (at pumped capacity) and total gravity outflow capacity of 630 ML/d at full gravity fed reservoir capacity.
- (d) **Reservoir Outlet Channel**: This channel consists of approximately 1.2km of channel with a bed width of 9m, crest width of 4m with internal and external batters of 3H:1V. It connects the reservoir to the Main Canal entry below Roaches Reservoir.
- (e) **The Main Canal Entry Structure**: This is the connection for the outlet channel to the Main Canal. It consists of a 5 x1500mm row piped culvert through the embankment with upstream and downstream headwalls and incorporates bulkheads at the upstream headwall. There are no penstock gates or meters associated with the Main Canal entry structure.
- (f) **Drainage Bypass:** The reservoir design includes a 2,500m long 300ML/day drainage bypass that has been informed by flood/hydraulic modelling. The drainage bypass passes under the inlet channel and under the Main Canal through subways to connect with a drainage channel that flows into the Murrumbidgee River via a connecting creek. It will improve drainage to land north of the reservoir and the railway easement.
- (g) **Main Canal Drainage Subway**: The existing 900mm drainage subway under the Main Canal will be upgraded to a 2 x 1200mm diameter reinforced concrete pipe subway. The invert of the subway has been set such that the top of the pipe has a minimum clearance of 600mm below the existing channel bed. The subway is approximately 70 meters in length.

Figure 1: Roaches Surge Reservoir Layout:



ATTACHMENT B: Design Report

ATTACHMENT C: 80% Drawings