MURRUMBIDGEE IRRIGATION

Contractors' Brief

Barren Box Storage and Wetland Rehabilitation 2009-2014
Revegetation Program

1. INTRODUCTION/BACKGROUND

1.1 Company Overview

The Murrumbidgee Irrigation Area (MIA) is located in southern central NSW covering approximately 3,624km² and contains over 2,700 farms. The natural drainage of the area is via Mirrool Creek, which discharges into Barren Box Storage and Wetland (BBSW). The majority of water delivered to the MIA is from two major storage dams in the Murrumbidgee Catchment, Burrinjuck and Blowering.

Murrumbidgee Irrigation Ltd (MI) is one of the largest private irrigation companies in Australia serving 3,200 shareholders over an area of 600,000 hectares. The Company is responsible for the effective and efficient provision of water to customers within the MIA. This role includes water pricing, development and maintenance of infrastructure and environmental stewardship.

Our purpose

- To provide leading edge water services
- To improve our environment for future generations
- To develop a competitive, profitable business

Our vision

- Growing opportunity. Water and beyond.

Our commitment

- We will safeguard our environment and create opportunities for a better future by working together and acting with integrity and respect for differing views.

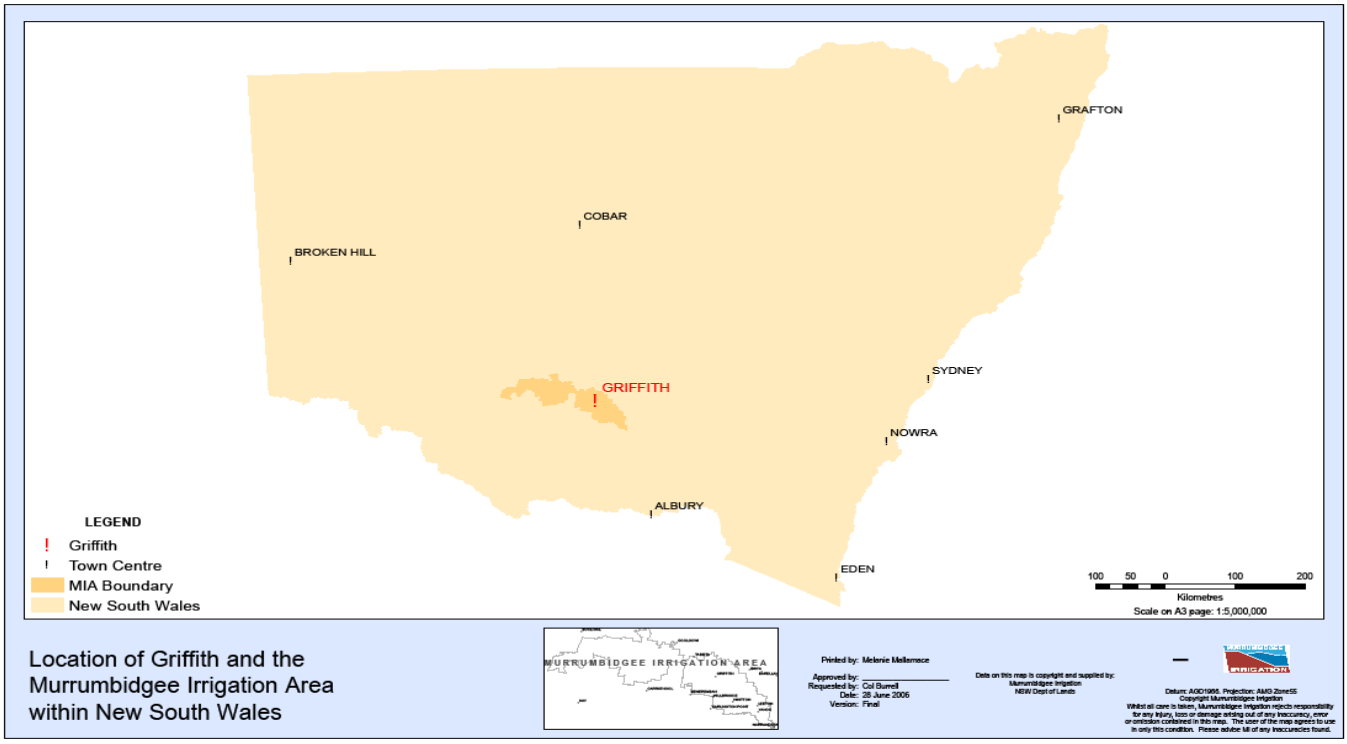

Figure 1: Griffith Location Map

1.2 Overview of Barren Box Storage & Wetland Project

Located 30km north-west of Griffith, NSW, Barren Box Storage and Wetland is a large shallow depression on Mirrool Creek. In its natural state, Barren Box was an intermittent wetland, with Black Box woodland and lignum shrubland, covering 3,200 ha.

The wetland has been and still is a significant Aboriginal cultural heritage site for the Wiradjuri people. It was used as a special ceremonial and trading place. The use and occupancy of Barren Box is evident through artefacts that have been carbon-dated to 450 years ago.

Following European settlement and the development of irrigation, Barren Box became a permanent wetland and was used as water storage and for drainage for the Murrumbidgee Irrigation Area (MIA). The 3,200 ha site proved to be inefficient as a storage due to high loss of water through evaporation.

To generate water savings, improve operating efficiency and facilitate the return of half the site to a more natural wetland, the site was divided into three basins or cells, two cells for water storage and the third for wetland rehabilitation, as follows:

- Active cell – 1230ha, approximate capacity 24,500 ML,
- Intermediate cell – 320 ha, approximate capacity 4,500 ML,
- Wetland cell - 1650 ha, approximate capacity 44,000 ML.

These works were completed in 2006.

A major outcome of the project is that 20,000 megalitres in water savings has been returned for use as environmental flows in the Snowy River. Barren Box Storage and Wetland is an iconic project for Murrumbidgee Irrigation (MI) and is one of the largest water infrastructure projects in regional Australia specifically instigated to return water to the environment.

With the completion of engineering works, the project now moves into the next phase of managing the new storage and the development and implementation of a wetland rehabilitation program.

The purpose of this document is to describe the activities required to undertake a revegetation program in accordance with the Barren Box Wetland Rehabilitation Plan 2009-20114. Rehabilitation will occur over a four year period from 2009 – 2013.

2.0 PROJECT DETAILS

2.1 Project Description

Murrumbidgee Irrigation through the efforts of MIA EnviroWise has a long term objective to improve the biodiversity and condition of the landscape and vegetation in the areas of operation of Murrumbidgee Irrigation.

After two years of consultation with a Technical Advisory Panel the Barren Box Wetland Rehabilitation Plan was developed to guide the rehabilitation, management and maintenance of the Barren Box Wetland cell. The vision of the plan is "to create an ecologically diverse and functioning Black Box Wetland and surrounding grassy woodland/chenopod shrubland that also respects, preserves and enhances the cultural significance of the area, by example to promote stewardship of regional natural resources.

Objectives:

1. In the wetland zone:
    a. To support the diversity of native plant species appropriate for a Black Box wetland during wet and dry phases.
    b. To support a high diversity and abundance of native animal species appropriate for a Black Box wetland during wet and dry phases.
    c. To stimulate establishment and on-going recruitment of native flora and fauna species appropriate to a Black Box wetland
    d. To support ecological processes in the Wetland Cell that sustain a functioning Black Box wetland in the long-term through wet and dry phases with minimal external intervention.
    e. To manage available environmental water by active water delivery and drainage of the wetland to support objectives 1, 2, and 3.
2. In the terrestrial zone:
    a. To support the diversity of native plant species appropriate for a grassy woodland / chenopod shrubland.
    b. To support a high diversity and abundance of native animal species appropriate for a grassy woodland / chenopod shrubland.
    c. To stimulate establishment and on-going recruitment of native flora and fauna species appropriate to a grassy woodland / chenopod shrubland.
3. To achieve the objectives of the Barren Box Storage and Wetland Cultural and Heritage management plan.
4. To support community capacity building through natural resource education and awareness programs.
5. To maintain a good neighbour policy.

A revegetation program has been developed to meet the vision, objectives and targets. This includes a detailed planting program using a combination of aerial sowing, direct seeding and tubestock planting to reintroduce indigenous species to the site.

Due to the permanent water regime within Barren Box from the 1970's through to 2003 the composition and structure of native vegetation within the wetland cell is highly degraded with only stands of dead timber of the original overstorey species Black box *Eucalyptus largiflorens* remaining.

For the purpose of implementing the revegetation program the wetland cell has been divided into two zones, the wetland zone and the terrestrial zone, based on the modelled hydrology of the site a transition zone divides the two zones (Figure 2).

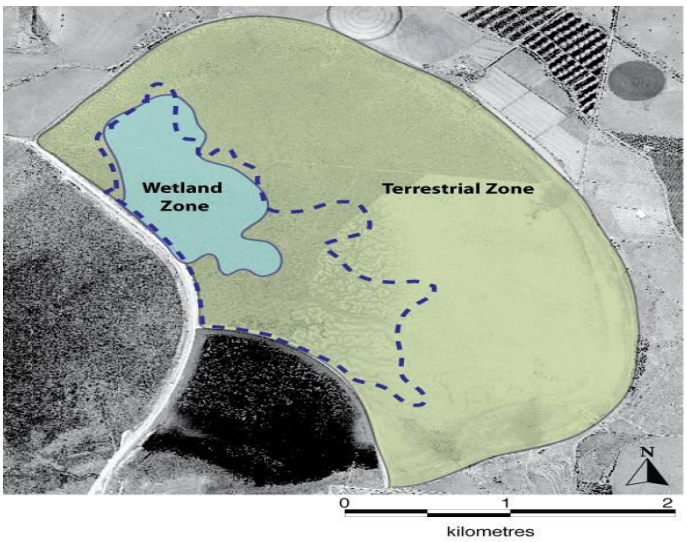

Figure 2: Approximate location and extent of wetland and terrestrial zones for rehabilitation. Note that wetland zone is shown as filled from Active Cell (blue shading) and Intermediate Cell (dotted line).

Wetland zone:
The ecological target for the wetland zone is a Black Box woodland. The conditions within the wetland at BBSW (length of dry phase and 2006 fire) have resulted in conditions where it is extremely unlikely that this vegetation will return through the existing seedbank or via propagules arriving via wind or water.

In order to preserve the indigenous artefacts in the wetland and maintain the gilgai formation, aerial sowing of seed has been selected to propagate Black Box in the wetland zone.

Terrestrial zone:
The terrestrial zone will comprise a combination of tubestock planting and direct seeding depending on the sensitivity of the location (artefacts, gilgai and erosion). Revegetation within this zone will be completed in stages following favourable conditions.

The wetland cell has been divided into subzones 1 to 7 (Figure 3). These sub zones enable smaller manageable revegetation programs to be planned and implemented over a period of five years.

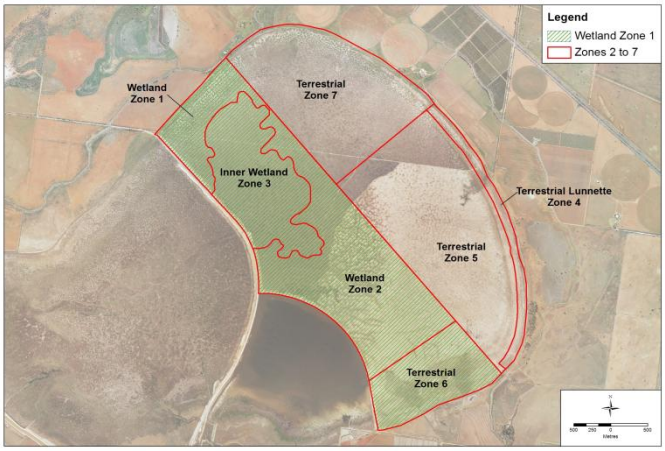

Figure 3: Wetland and terrestrial revegetation zones 1 to 7 within the Wetland cell, Barren Box Storage and Wetland.

2.2 Project Objectives

The objective of the Barren Box Wetland revegetation program is to re-establish local provenance wetland and terrestrial species appropriate to each revegetation zone and in accordance with the Barren Box Wetland Rehabilitation Plan vision and objectives.

3.0 SCOPE OF WORKS

The following scope of works is proposed to meet the objectives of the project:

- Attend a project commencement meeting with MI to refine the project detail and provide advice on site specific management.
- Provide MI with a site specific plan and quote outlining all costs involved to meet the project outline.
- In consultation with Barren Box Wetland Project Officer and working in stages direct seed an area of 590ha over a three year period. Provide technical advice and/or ground preparation prior to sowing. Seed will be supplied by Murrumbidgee Irrigation.
- Provide MI with a detailed seeding report outlining date of sowing, weather conditions on date of sowing, site description, soil condition, soil moisture, planting methodology and site photos after each sowing application.

4.0 TIMETABLE

ITEM	DATE
Tender received	10 Feb 2010
Attend project commencement meeting	22 Feb 2010
Barren Box Wetland Rehabilitation Officer to introduce contractor to the site	22 Feb 2010
Direct Seed each zone as decided in consultation with Barren Box Wetland Rehabilitation Officer	Beginning autumn 2010
Complete revegetation program	30 November 2013

5.0 BUDGET

Your proposal is to include a detailed budget costing and is to include time allocation on each component to complete the scope of works.

6.0 PROJECT DURATION

The project is to commence no later than 15 May 2010 and be completed by 30 November 2013.

7.0 TENDERS

Expressions of interest should be brief and include the following information:

i. Relevant experience including referees which can be contacted.

ii. An outline of how the required tasks would be approached.

iii. A Work Plan showing the sequence of the tasks to be undertaken and their respective timeframes and linkages;

iv. A detailed costing for the project showing:

- The cost for each task,
- Daily rate and hours of input for each team member for each task. These rates will be used to assess the value of any variations to the project and contract,
- Travel and related costs for each task, and

v. A list of measurable milestones and an associated payment schedule;

vi. A clear indication of who the contracting organisation will be and the name(s) of any sub-contracting organisation to be used on the project;

8.0 Tender Assessment

The following criteria will be used to assess and rank tenders:

i. Ability of the proposed methodology to meet the project objectives, scope of works and outcomes.
ii. Demonstrated skill and experience of the team;
iii. Capacity to deliver the project objectives and products within the timeframe; and
iv. Value for money.

Murrumbidgee Irrigation may choose not to accept the lowest priced or any tender.

9.0 Finalising the Contract

Once the preferred tenderer has been selected, any issues requiring clarification will be discussed with that tenderer. If agreement is reached, this tenderer would then become the recommended tenderer. If agreement cannot be reached with that tenderer, the Company may negotiate with the next best tenderer.

The recommended tenderer will then attend a Project commencement meeting with the Company to outline the proposed project methodology, timeframes and team responsibilities.

Contracts will then be exchanged with the successful tenderer.

10.0 Timing of Submissions

Tenders should be forwarded to:

Attn: Tender Box
Barren Box Revegetation Project
Murrumbidgee Irrigation Limited
PO Box 492
Griffith NSW 2680

Submissions should be received no later than 4pm 10 Feb 2010.

All queries should be directed through Karen McCann, Biodiversity/Wetlands Officer, Murrumbidgee Irrigation on 6962 0200 or 0428 660 866. Email: mccannk@mirrigation.com.au

No submissions delivered later than the date/time set out above will be considered to be a conforming tender.