



Government of **Western Australia**
Department of **Water and Environmental Regulation**



Shire of West Arthur

Non-potable strategic community
water supplies plan

Department of Water and Environmental Regulation
Prime House, 8 Davidson Terrace
Joondalup Western Australia 6027
Locked Bag 10 Joondalup DC WA 6919

Phone: 08 6364 7000

Fax: 08 6364 7001

National Relay Service 13 36 77

wa.gov.au/dwer

© Government of Western Australia

March 2024

This work is copyright. You may download, display, print and reproduce this material in unaltered form only (retaining this notice) for your personal, non-commercial use or use within your organisation. Apart from any use as permitted under the *Copyright Act 1968*, all other rights are reserved. Requests and inquiries concerning reproduction and rights should be addressed to the Department of Water and Environmental Regulation.

Acknowledgements

Throughout the development of this Strategic Community Water Supply plan a number of people from the Rural Water Planning section in the Department of Water and Environment Regulation (the department) were involved:

Sherrie Anderson, Rosie Bell, Tracy Calvert, Mell Culhane, Elizabeth Tanner, Sandy Turton-Parkinson and Renae Thorpe.

The department would also like to thank the Shire of West Arthur and the Water Corporation for their advice, support and assistance during the preparation of this plan.

For more information about this plan, contact
Rural Water Planning, 1800 780 300.

Cover photograph: Kylie Dam by Kerry Chia

Disclaimer

This document has been published by the Department of Water and Environmental Regulation. Any representation, statement, opinion or advice expressed or implied in this publication is made in good faith and on the basis that the Department of Water and Environmental Regulation and its employees are not liable for any damage or loss whatsoever which may occur as a result of action taken or not taken, as the case may be in respect of any representation, statement, opinion or advice referred to herein. Professional advice should be obtained before applying the information contained in this document to particular circumstances.

This publication is available at our website wa.gov.au/dwer or for those with special needs it can be made available in alternative formats such as audio, large print, or Braille.

Contents

Summary	1
Introduction.....	2
Strategic community water supplies and agricultural area dams	3
Shire of West Arthur map	4
Strategic community water supply access.....	5
Overview of different fill points	5
Swipe card systems.....	5
Farm bots.....	5
Shire of West Arthur SCWS sites	6
Description of community water supplies	1
Gorn Road bore.....	1
Gorn Road bore site description.....	2
Duranillin standpipe	3
Duranillin standpipe site description.....	4
Rees Road bore	5
Rees Road bore site description	6
Kylie Siding dam and tank.....	7
Kylie Siding dam and tank site description	9
Quindanning Road standpipe.....	10
Quindanning Road standpipe description	11
Moodiarrup Hall standpipe	12
Moodiarrup Hall standpipe description.....	13
Glossary	14

Summary

Water supply planning is essential in rural areas and requires collaboration, involvement and participation from all stakeholders, including farmland communities, local government authorities (LGAs) and State Government agencies as part of an integrated approach to sustainable water supply for the future.

This plan provides information for the shire and farmers on the location of strategic community water supplies (SCWS) and how to access non-potable water for emergency stock watering and firefighting purposes, including what facilities are available at each site.

Introduction

Over the past 40 years recurrent water supply problems have affected the dryland agricultural region. Emerging climate changes are likely to increase the occurrences of low rainfall years, resulting in water shortages and restrictions in rural communities.

Facing long-term water security challenges, farmers are encouraged to proactively develop and maintain on-farm water infrastructure to better prepare for dry periods.

Rural water planning recognises the importance to prepare for these events and increase the opportunities to deliver an assured water supply to farmland communities in the dryland agriculture areas of Western Australia (WA).

SCWS planning is one of the key roles of the Department of Water and Environmental Regulation's (the department's) rural water program. The aim is to ensure dryland agricultural areas are safeguarded wherever possible against serious water deficiencies.

While landholder self-sufficiency must remain the primary objective, the rural water planning program recognises the importance of emergency off-farm water supplies to farming communities. It also builds on the SCWS network across the dryland agricultural area through the community water supplies partnership (CWSP) program and the agricultural areas (AA) dam works program.

Both programs establish and improve non-potable water supplies with an aim to ensure water is available for emergency livestock watering and firefighting. The CWSP program also aims to reduce reliance on potable scheme water supplies for non-potable needs and to increase water availability for public amenities such as sportsgrounds.

This SCWS plan has been compiled for the Shire of West Arthur to provide a clear description of each of the SCWS in the shire available for firefighting purposes, and to farmers and farming communities in times of emergency.

Strategic community water supplies and agricultural area dams

A network of SCWS has been developed across WA's dryland agricultural areas to provide an important source of non-potable water for farming and firefighting needs.

These supplies are for emergency use in times when low rainfall causes on-farm supplies to become depleted and farmers need to travel to access water for livestock.

Vesting of the strategic dams, tanks and bores and other assets in each LGA varies, with some sites owned by government agencies (including the department), Water Corporation, the LGA itself, or by private entities where an agreement has been made to allow access.

It is important that these water supplies are carefully managed to ensure water is available during times of emergency.

The department keeps in regular contact with rural communities to monitor the condition of SCWS and identify and address any maintenance issues.

Each year, the department's rural water program undertakes works to maintain and upgrade sites vested with it and sites in priority areas vulnerable to dry conditions.

AA dams have been developed since the early 1990s to provide water and support the growth of farming in the dryland agricultural area. There are about 480 of the original 681 AA dams that range from high value to no value in terms of their condition and serviceability.

SCWS are a subset of the AA dams that are reliable, in good to excellent repair and retain a high value. The department uses LGA maps to determine which sites are worth upgrading and to identify priority areas to develop new SCWS.

The following map (Figure 1) shows the location of the strategic community supplies and AA dams in the Shire of West Arthur, with symbols indicating the capacity, vesting and values of each site.

Shire of West Arthur map

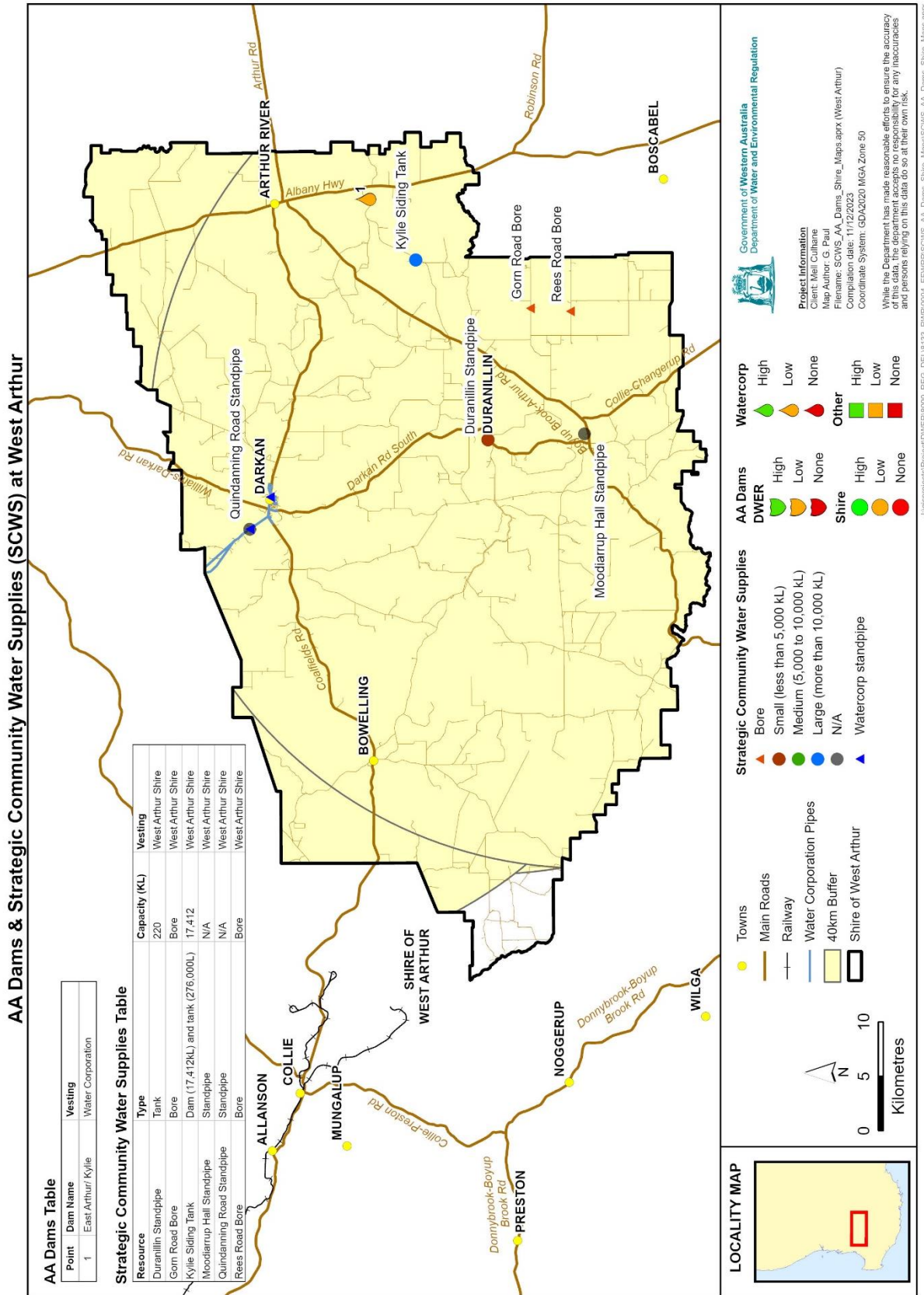


Figure 1 – Location of Strategic Community Water Supplies (at 11 December 2023)

Strategic community water supply access

Overview of different fill points

Each SCWS will have a fill point to allow access to water supply for agricultural purposes. Each fill point will have a camlock fitting. Standard sizes of camlocks include 50 mm (2 inch) and an 80 mm (3 inch) fitting and in some cases a 100 mm (4 inch) connection is fitted for firefighting purposes. These camlock fittings will be available where there is a tank, standpipe, swipe card system or bore fill point. When accessing water directly from dams without a tank storage, you will need to bring your own pump to extract water.

Swipe card systems

Swipe card systems are metered fill points that require a swipe card or fob from your shire to access the water supply. Contact your local shire office to obtain a swipe card to access these water supplies.

During emergencies such as bushfires, the shire can switch the swipe card system to allow access without a swipe card. All local fire appliances have swipe card access. The emergency access contact is the Works Manager on 0427 362 214.

Farm bots

Some tanks across the state are fitted with farm bots, which regularly record the water level and feed this information into a website. You can access this website at app.farmbot.com.au (Login ID: **public.access** Password: **access1**) to check tank locations and view water tank levels for tanks fitted with farm bots.

Below are examples of different fill points you may come across in your shire.



Tank standard camlock fitting



Farm bot positioned on top of tank



Swipe card standpipe system



Tank, electric swipe card and pump for bore

Shire of West Arthur SCWS sites

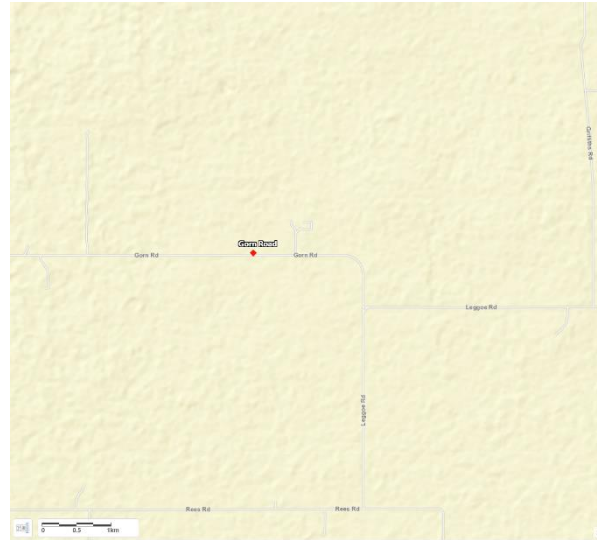
Site name	Location
Gorn Road bore	Gorn Road <i>~5.6 km east of the Gorn Road-Bokal South Road intersection (northern side of the road)</i>
Duranillin standpipe	Duranillin Townsite <i>Ewing Street, Duranillin</i>
Rees Road bore	Rees Road <i>~1.8 km east of the Ballock Road-Rees Road intersection (northern side of road)</i>
Kylie Siding tank	Bokal East Arthur Road <i>~0.9 km north of Morrell Road located on the Kylie siding access track.</i>
Quindanning Road standpipe	Quindanning-Darkan Road <i>~2.0 km north of Coalfields Highway/Quindanning-Darkan Road intersection.</i>
Moodiarrup Hall standpipe <i>(saline water from river, firefighting purposes only)</i>	Boyup Brook-Arthur Road <i>~0.82 km east of Darkan Road South. Via access track to the north towards Arthur River.</i>

Description of community water supplies

Gorn Road bore



Aerial location of tank



Location on Gorn Road



Bore location along Gorn Road



Close up of bore



Tank at Gorn Road

Gorn Road bore site description

Vesting	Tank located on private property, bore and pump on road reserve
Purpose	Strategic community water supply for agricultural purposes, including emergency stock and firefighting water
Associated Reserve	NA
Catchment Type	Palaeochannel
Catchment Area (ha)	NA

Location and coordinates

Location: Gorn Road ~5.6 km east of the Gorn Road-Bokal South Road intersection (northern side of the road)

Latitude	-33.551781
Longitude	116.965109
Eastings	496761.07
Northings	6287539.30

Water supply and access

Structure Type	Bore and Tank
Capacity	400 kL per day
Tank Storage	90,000 L
Standpipe Y/N	No
Swipe card Y/N	No
Pump Y/N	Pump usually installed in November of each year or supplied on request from the Shire.
Heavy Vehicle Access	Yes
Turnaround Area	No (circular route on roads available)
Emergency access contact	Shire Works manager (0427 362 214) Shire CEO (0473 072 017)

Duranillin standpipe



Aerial location



Standpipe location



Standpipe



Lock to access standpipe



Pump panel



Signage



Tanks and pump house

Duranillin standpipe site description

Vesting	Shire of West Arthur
Purpose	Strategic community water supply for agricultural purposes, including emergency stock and firefighting water
Associated Reserve	Road reserve
Catchment Type	Water delivered to the tanks by the Shire
Catchment Area (ha)	N/A

Location and coordinates

Location: Duranillin Townsite, Ewing Street, Duranillin

Latitude	-33.516388
Longitude	116.801309
Eastings	481547.98
Northings	6291446.19

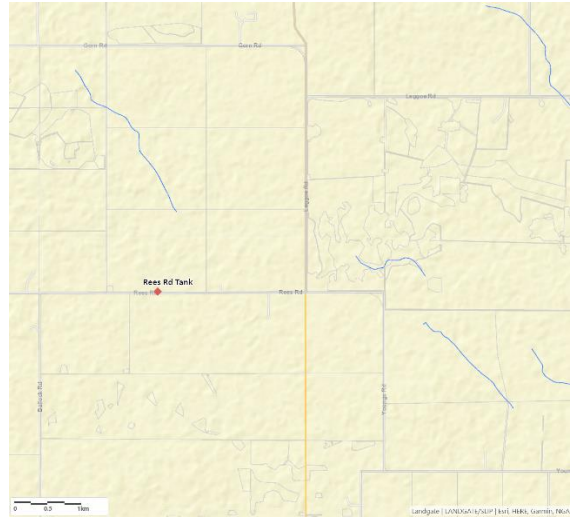
Water supply and access

Structure Type	Standpipe, tank and pump house
Capacity	N/A
Tank Storage	2 tanks – one 100,000 L tank and one 120,000 L tank
Standpipe Y/N	Yes
Swipe card Y/N	No (Key required to access standpipe. Key located in fire truck).
Pump Y/N	Yes
Heavy Vehicle Access	Yes
Turnaround Area	No (can easily go around the block)
Emergency access contact	Shire Works manager (0427 362 214) Shire CEO (0473 072 017)

Rees Road bore



Aerial location



Tank location



Standpipe detail



Tank and standpipe



Rees Road bore



Rees Road bore pump setup

Rees Road bore site description

Vesting	Tank and bore located on Private property. Standpipe located in Road Reserve (Shire).
Purpose	Strategic community water supply for agricultural purposes, including emergency stock and firefighting water
Associated Reserve	
Catchment Type	Paleochannel
Catchment Area (ha)	

Location and coordinates

Location: Rees Road ~1.8 km east of the Ballock Road-Rees Road intersection (northern side of road)

Latitude	-33.585295
Longitude	116.958360
Eastings	496136.05
Northings	6283823.36

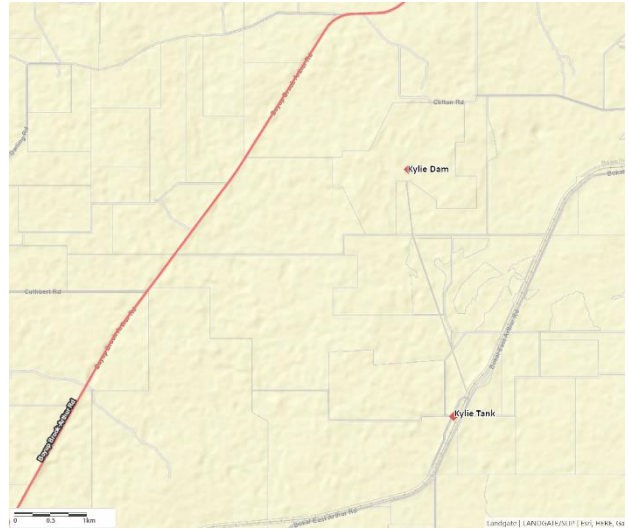
Water supply and access

Structure Type	Standpipe, bore and tank
Capacity	Unknown (estimate 200kL per day)
Tank Storage	90,000 L
Standpipe Y/N	Yes
Swipe card Y/N	No
Pump Y/N	No pump on tank
Heavy Vehicle Access	Yes
Turnaround Area	Yes (tight – but easy circular route on roads in the area)
Emergency access contact	Shire Works manager (0427 362 214) Shire CEO (0473 072 017)

Kylie Siding dam and tank



Kylie tank aerial location



Kylie dam and tank location



Kylie tank facing north within railway



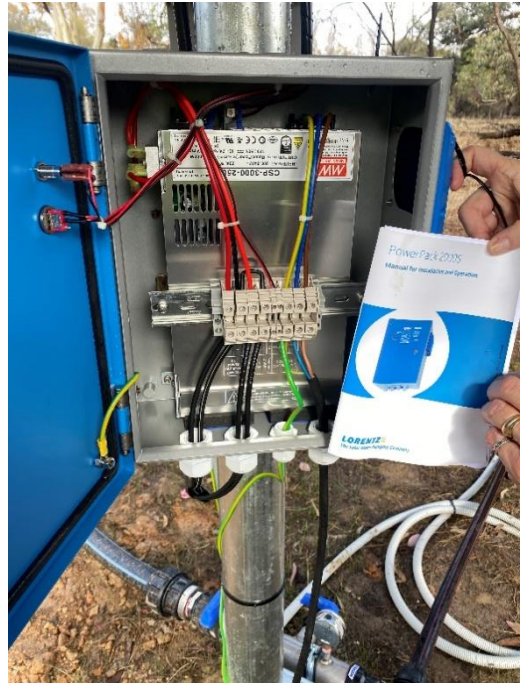
Water tank at Kylie Siding



Kylie dam in Kylie reserve



Solar panel and pump



Pump panel and instruction manual. Generator can be added for flow boost.

Kylie Siding dam and tank site description

Vesting	Shire of West Arthur
Purpose	Strategic community water supply for agricultural purposes, including emergency stock and firefighting water
Associated Reserve	NA
Catchment Type	Earth
Catchment Area (ha)	212 ha

Location and coordinates

Location: Bokal East Arthur Road ~0.9 km north of Morrell Road located on the Kylie siding access track

Latitude	-33.456638
Longitude	116.979633
Eastings	498107.26
Northings	6298088.08

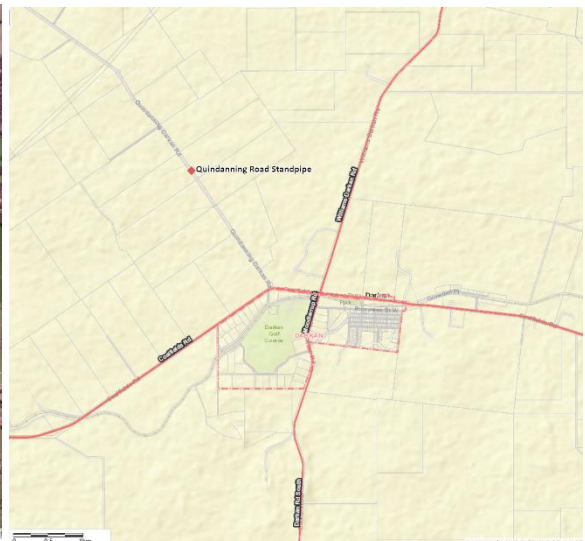
Water supply and access

Structure Type	Tank (accessible to the public) and Dam (not accessible to the public)
Dam capacity	17,412 kL
Tank storage	276,000 L
Standpipe Y/N	Yes
Swipe card Y/N	No
Pump Y/N	Solar pump located at the dam to assist with tank refill. No pump located at the tank
Heavy Vehicle Access	Yes
Turnaround Area	Drive through access
Emergency access contact	Shire Works manager (0427 362 214) Shire CEO (0473 072 017)

Quindanning Road standpipe



Quindanning standpipe aerial



Quindanning standpipe location



Quindanning standpipe



Quindanning standpipe couplings



Quindanning standpipe signage



Turn around/drive through area

Quindanning Road standpipe description

Vesting	Shire of West Arthur
Purpose	Strategic community for firefighting water only
Associated Reserve	N/A
Catchment Type	N/A
Catchment Area (ha)	N/A

Location and coordinates

Location: Quindanning-Darkan Road ~2.0 km north of Coalfields Highway/Quindanning-Darkan Road intersection

Latitude	-33.31855
Longitude	116.71316
Eastings	473301.261
Northings	6313360.959

Water supply and access

Structure Type	Standpipe only
Dam capacity	NA
Tank storage	NA
Standpipe Y/N	Yes
Swipe card Y/N	No
Pump Y/N	No
Heavy Vehicle Access	Yes
Turnaround Area	Yes
Emergency access contact	Shire Works manager (0427 362 214) Shire CEO (0473 072 017) Sara Ritchie (0428 361 307)

Moodiarrup Hall standpipe



Moodiarrup Hill aerial



Moodiarrup Hill location



Pump



Power switch



Standpipe



Truck drive through area



Tap on standpipe

Moodiarrup Hall standpipe description

Vesting	Shire of West Arthur
Purpose	Strategic community water supply for agricultural purposes, including emergency stock and firefighting water
Associated Reserve	R15800
Catchment Type	River
Catchment Area (ha)	N/A

Location and coordinates

**Location: Boyup Brook-Arthur Road ~ 0.82 km east of Darkan Road South.
Via access track to the north towards Arthur River**


Latitude	-33.596639
Longitude	116.807067
Eastings	482099.27
Northings	6282549.75

Water supply and access

Structure Type	Standpipe and pump
Dam capacity	N/A
Tank storage	N/A
Standpipe Y/N	Yes
Swipe card Y/N	No
Pump Y/N	Electrical pump at the standpipe
Heavy Vehicle Access	Yes
Turnaround Area	Drive through access
Emergency access contact	Shire Works manager (0427 362 214) Shire CEO (0473 072 017)

Glossary

Camlock	A male hose coupling fixed for connection of a water hose. Camlocks can be attached to fill points such as tanks, or standpipes to allow access to water supply. Camlock sizes vary from site to site and generally include 50 mm (2 inch), 80 mm (3 inch) as a standard. At some sites a 100 mm (4 inch) camlock has been included for firefighting purposes.
Catchment types	<p>Earth – land cleared, cambered, and compacted to provide a catchment area for surface water.</p> <p>Bitumen – catchment lined with bitumen to allow capture of surface water.</p> <p>Rock catchment – rock that slopes, has containment walls to capture surface water to a storage source (e.g. a tank or a concrete dam).</p> <p>Bore – a drilled casing that accesses ground water to provide a water supply.</p> <p>CBH – water is captured from CBH grain silo storage facility and stored in a dam or tank.</p>
Fill point	Location where a water supply can be accessed from using camlock fittings either via standpipe, swipe card system, tank or bore.
Farm bot	A device fitted to some tanks to regularly record the water level and feed this information into a website. You can access this website at app.farmbot.com.au (Login ID: public.access Password: access1) to see water tank levels for tanks fitted with farm bots.
Non-potable	Water not suitable for human consumption.
Solar pump	A pump powered through solar that pumps water from one location to another (e.g. from dam to dam or from dam to tank).
Staff gauges	A marker measuring tool positioned at surveyed depths in a dam to indicate water levels.
Standpipe	A pipe overhead, on a plinth or raised off the ground to provide a fill point for water supply.
Swipe card	A metered fill point requiring a card to be swiped to start pumping system. Contact the LGA for further information.
Vesting	Person or governing agency with responsibility for managing land.



Department of Water and Environmental Regulation
Prime House
8 Davidson Terrace Joondalup
Western Australia 6027

Locked Bag 10, Joondalup DC WA 6919

Phone: 08 6364 7000
Fax: 08 6364 7001
National Relay Service 13 36 77
wa.gov.au/dwer