



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



Shire of West Arthur

Non-potable strategic community
water supplies report

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March 2024

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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 and Sandy Turton-Parker.

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
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Cover photograph: Kylie Dam by Kerry Chia

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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 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, firefighting and for other farm needs. 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 and essential farming purposes.

Vesting of the strategic dams and bores 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

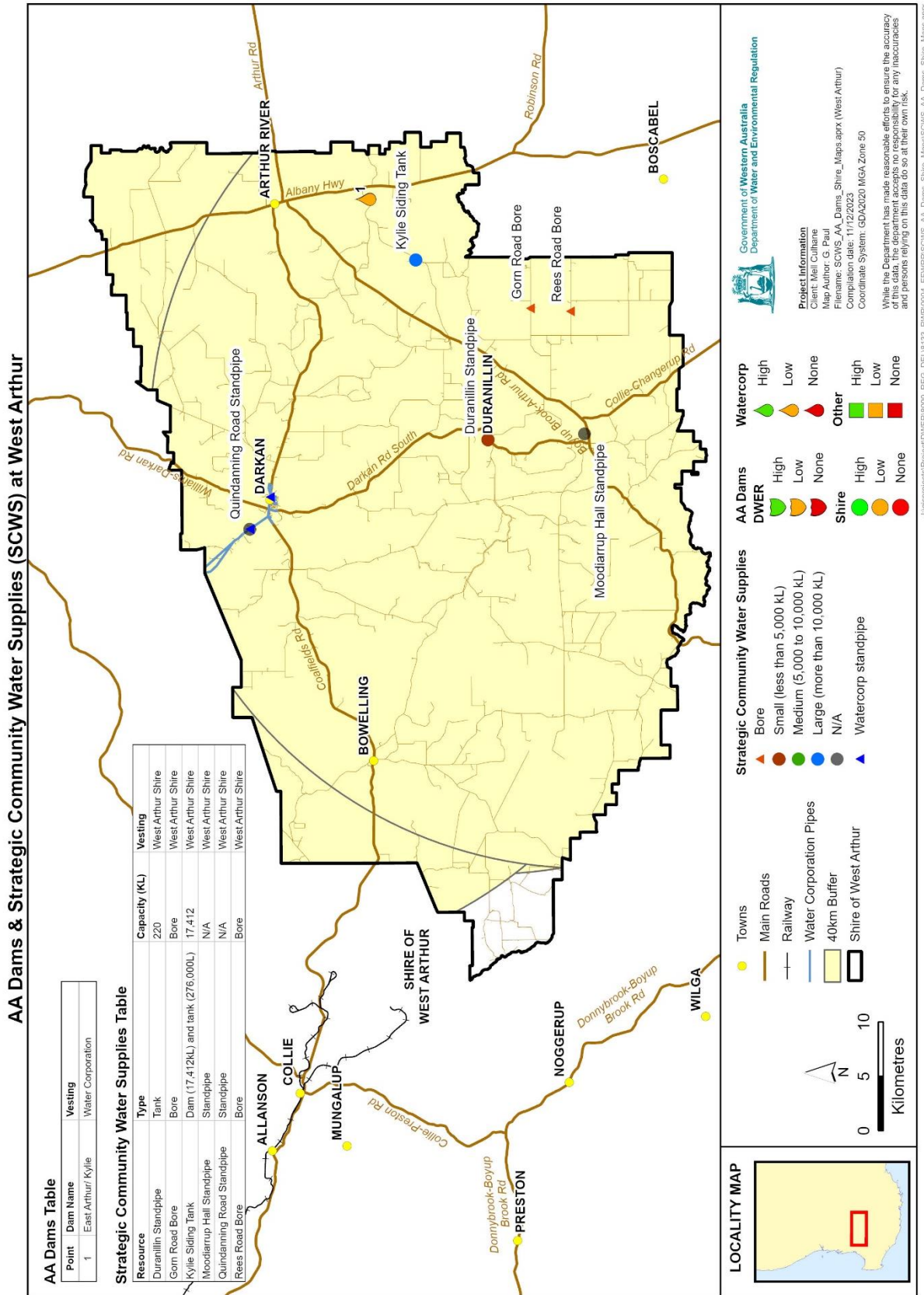


Figure 1 – Location of Strategic Community Water Supplies (at 11 December 2023)

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 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

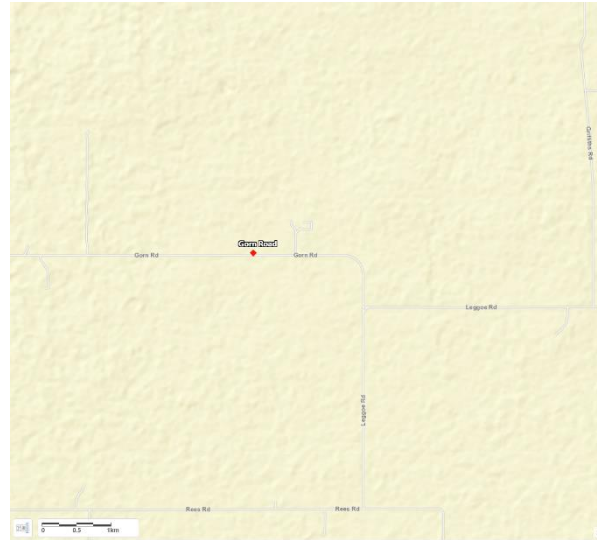
| Site name | Location |
|---|---|
| Gorn Road bore | Gorn Road <i>~5.6 km east of the Gorn Road-Bokal South Road intersection (northern side of the road)</i> |
| Duranillin standpipe | Duranillin Townsite <i>Ewing Street, Duranillin</i> |
| Rees Road bore | Rees Road <i>~1.8 km east of the Ballock Road-Rees 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 |

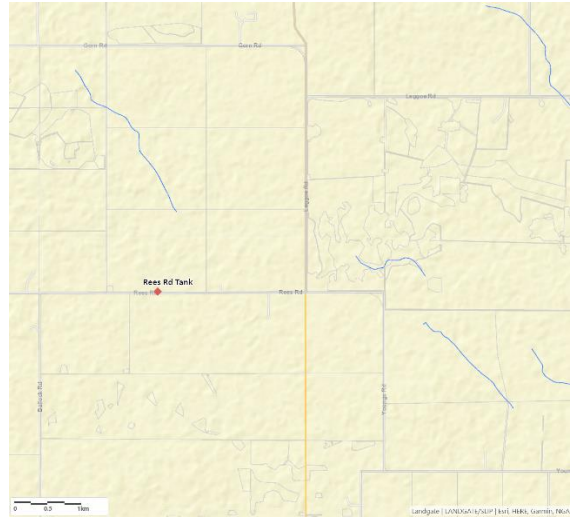
Water supply and access

| | |
|--------------------------|---|
| 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 |

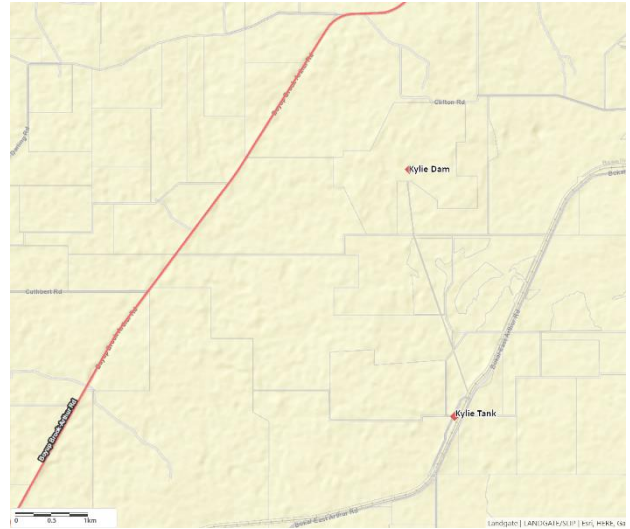
Water supply and access

| | |
|--------------------------|--|
| 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 |

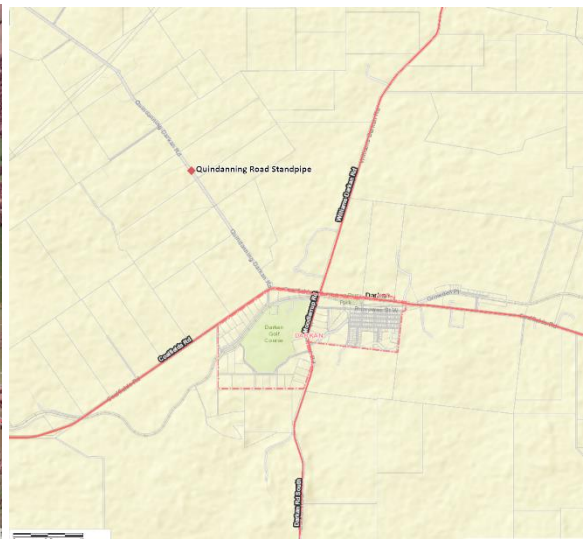
Water supply and access

| | |
|--------------------------|---|
| 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. |

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