



Shire of Kulin

Non-potable strategic community water supplies plan

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

Cover photograph: Dudinin Dam Tank, Kulin Shire.

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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 planning 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 Kulin 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, 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 Kulin, with symbols indicating the capacity, vesting and values of each site.

Shire of Kulin map

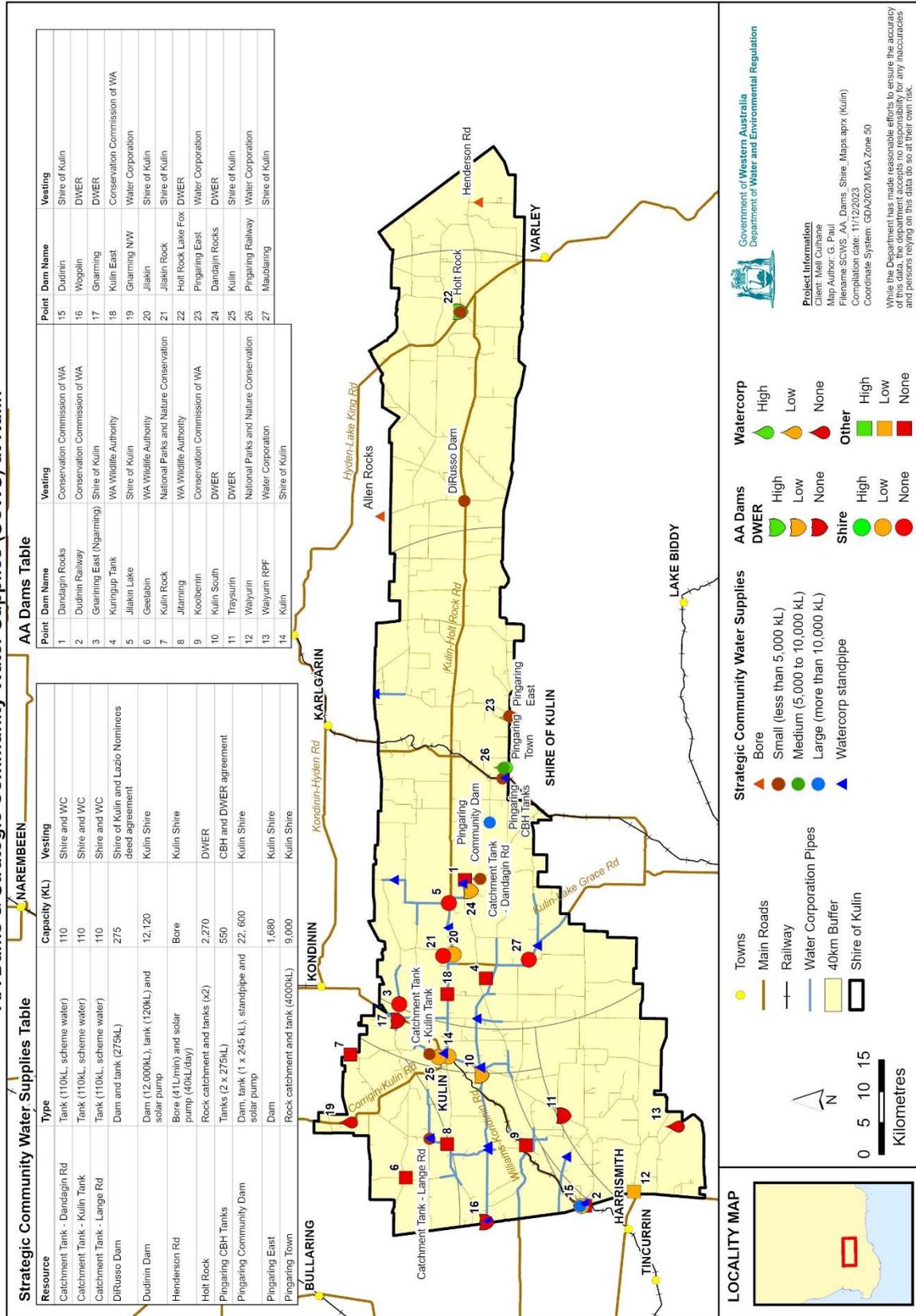


Figure 1 – Location of Strategic Community Water Supplies (at 11 December 2023)

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. The emergency access contacts are:

| | |
|---------------------------------------|--------------|
| Alan Leeson (CEO) | 0497 801 204 |
| Judd Jobson (Executive Manager Works) | 0427 801 241 |
| David Tholstrup (Works Supervisor) | 0482 801 104 |

Farm bots

Some tanks 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 view water tank levels for tanks fitted with farm bots.

Below are examples of different fill points you may come across in the 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 Kulin SCWS sites

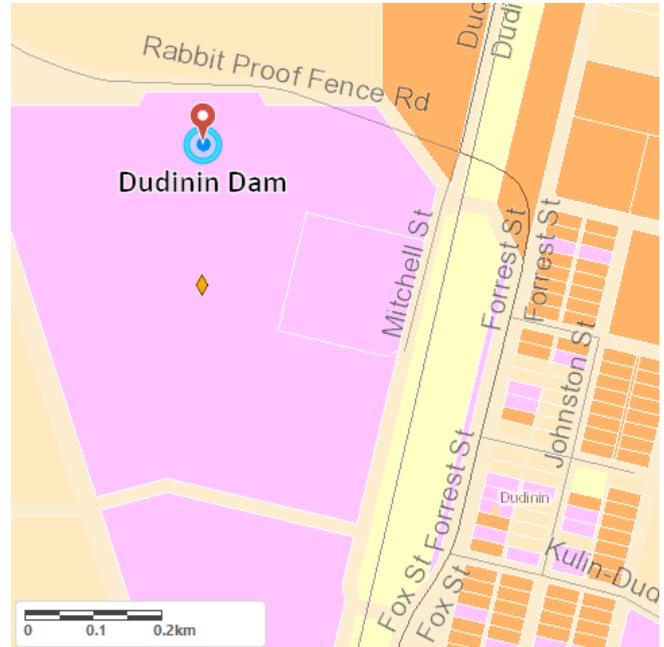
| Site name | Location |
|-------------------------|---|
| Dudinin dam | Rabbit Proof Fence Road <i>~ 500 m from Dudinin – Jitarning Road</i> |
| Henderson Road | Henderson Rd <i>~ 1.4 km from Holt Rock Road East</i> |
| Holt Rock | Holt Rock Road <i>(Intersecting Hyden Lake King Road)</i> |
| Pingaring East dam | Pingaring Varley Road North <i>(near Karlgarin Road South turn off)</i> |
| Pingaring community dam | Jones Road <i>On the bend ~ 6.15 km from Kulin-Holt Rock Road</i> |
| Pingaring CBH tanks | Pingaring CBH – tanks located at northern end of CBH access from Luke Price St and North Lake Grace - Karlgarin Road |
| DiRusso dam | Allen Rocks Road <i>Dam ~ 240 m north of Kulin-Holt Rock Road, western side</i> <i>Tank located at the northeast corner intersection of Kulin-Holt Rock Road and Allen Rocks Road</i> |

Description of community water supplies

Dudinin dam



Aerial view of Dudinin dam



Location map



Dudinin dam tank

Dudinin dam site description

| | |
|---------------------|--|
| Vesting | Kulin Shire |
| Purpose | Strategic community water supply for agricultural purposes, including emergency stock and firefighting water |
| Associated reserve | 46697 |
| AA dam # | 263 |
| Catchment type | Earth |
| Catchment area (ha) | ~1.7ha |

Location and coordinates

Location: Rabbit Proof Fence Road ~ 500 m from Dudinin – Jitarning Road

| | |
|-----------|--------------|
| Latitude | -32.867 |
| Longitude | 117.8993 |
| Eastings | 584136.1062 |
| Northings | 6363098.9407 |

Water supply and access

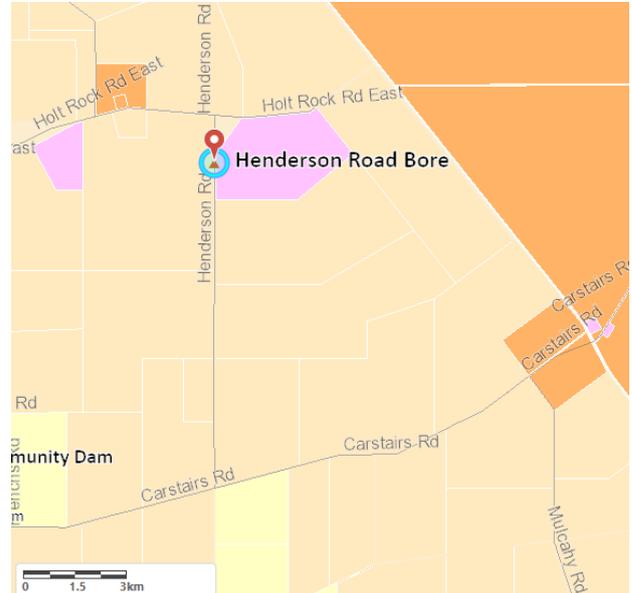
| | |
|--------------------------|---------------------------------------|
| Structure type | Dam, tank and solar pump |
| Dam capacity | Dam 34,932 kL |
| Tank storage | 120kL |
| Standpipe Y/N | Yes |
| Swipe card Y/N | Yes (Please contact Shire for access) |
| Pump available Y/N | No |
| Heavy vehicle access | Yes |
| Turnaround area | Yes |
| Emergency access contact | Alan Leeson (CEO) 0497 801 204 |

Description of community water supplies

Henderson Road



Aerial view of Henderson Road



Location map



Henderson Road tank 310 kL

Henderson Road description

| | |
|--------------------|--|
| Vesting | Kulin Shire |
| Purpose | Strategic community water supply for agricultural purposes, including emergency stock and firefighting water |
| Associated reserve | 29498 (Nearby Reserve) |
| Catchment type | Bore |

Location and coordinates

Location: Henderson Road ~ 1.4 km from Holt Rock Road East

| | |
|-----------|------------|
| Latitude | -33.63 |
| Longitude | 118.72 |
| Eastings | 659650.24 |
| Northings | 6277903.77 |

Water supply and access

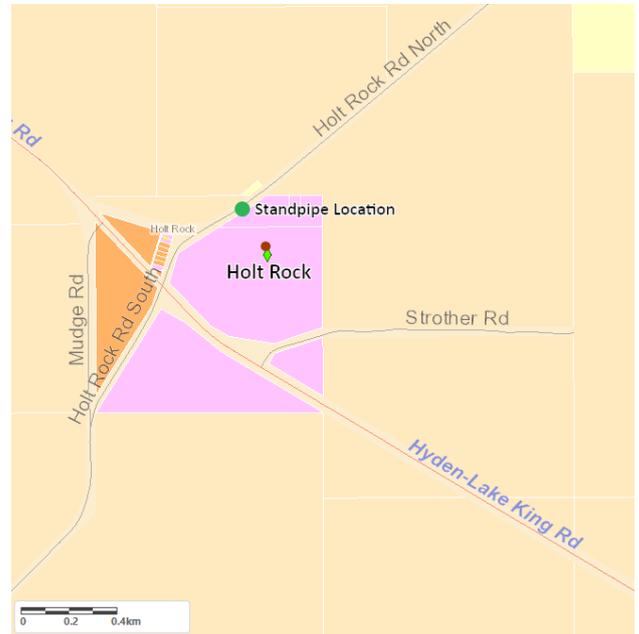
| | |
|--------------------------|---------------------------------------|
| Structure type | Bore & tank |
| Bore capacity | 41 L/min and solar pump 40kL/day |
| Tank storage | 310 kL |
| Standpipe Y/N | Yes (Please contact Shire for access) |
| Swipe card Y/N | Yes |
| Pump available Y/N | No |
| Heavy vehicle access | Yes |
| Turnaround area | No (a through road) |
| Emergency access contact | Alan Leeson (CEO) 0497 801 204 |

Description of community water supplies

Holt Rock



Aerial view of Holt Rock



Location map



Holt Rock tanks (August 2012)



Catchment wall, sump and pipe



Standpipe and swipe card (2022)

Holt Rock description

| | |
|---------------------|--|
| Vesting | Department of Water and Environmental Regulation |
| Purpose | Strategic community water supply for agricultural purposes, including emergency stock and firefighting water |
| Associated reserve | 45610 |
| AA dam # | 462 |
| Catchment type | Rock catchment with rock walls |
| Catchment area (ha) | ~15 ha |

Location and coordinates

Location: Holt Rock Road (Intersecting Hyden Lake King Road)

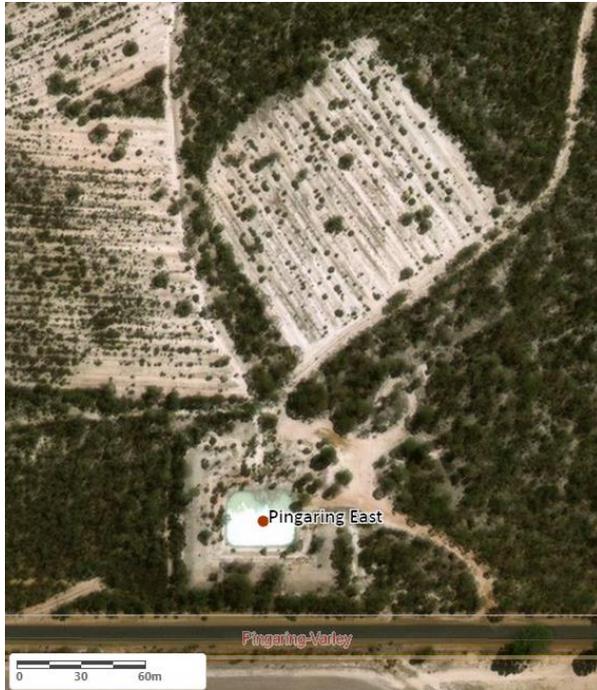
| | |
|-----------|----------------|
| Latitude | -32.676122 |
| Longitude | 119.416321 |
| Eastings | 726571.953645 |
| Northings | 6382036.970710 |

Water supply and access

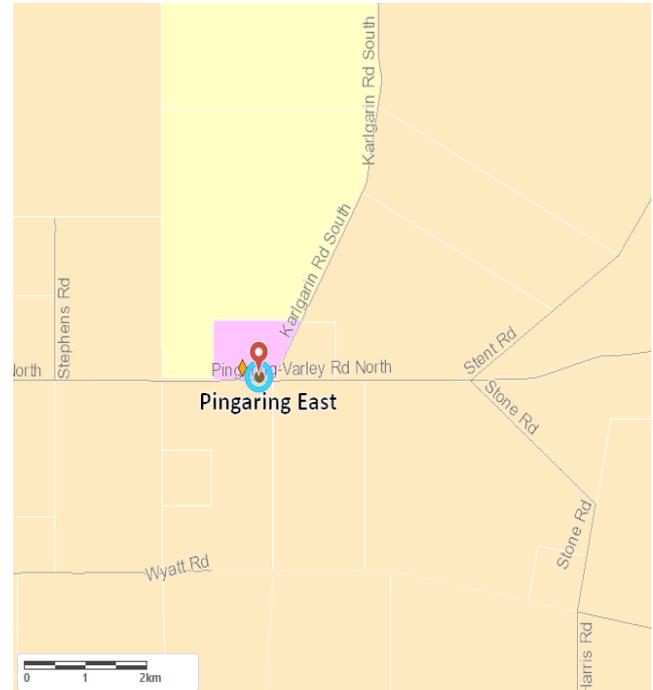
| | |
|--------------------------|---------------------------------------|
| Structure type | Rock Catchment and 2 x tanks |
| Capacity | 2,272 kL |
| Tank storage | 2 x 1,136 kL tanks (total 2,272 kL) |
| Standpipe Y/N | Yes (Please contact Shire for access) |
| Swipe card Y/N | Yes |
| Pump Y/N | No |
| Heavy vehicle access | Yes |
| Turnaround area | Yes |
| Emergency access contact | Alan Leeson (CEO) 0497 801 204 |

Description of community water supplies

Pingaring East dam



Aerial view of Pingaring East



Location map



Pingaring East dam (August 2012)

Pingaring East dam

| | |
|---------------------|---|
| Vesting | Water Corporation |
| Purpose | Shire purposes first, Strategic community water supply including agricultural purposes, emergency stock & fire water ONLY in extreme dry periods. |
| Associated Reserve | 22267 |
| AA dam # | 553 |
| Catchment type | Earth |
| Catchment area (ha) | ~ 6ha |

Location and coordinates

Location: Pingaring Varley Road North near Karlgarin Road South turn off

| | |
|-----------|----------------|
| Latitude | -32.757373 |
| Longitude | 118.731379 |
| Eastings | 662189.742706 |
| Northings | 6374283.997870 |

Water supply and access

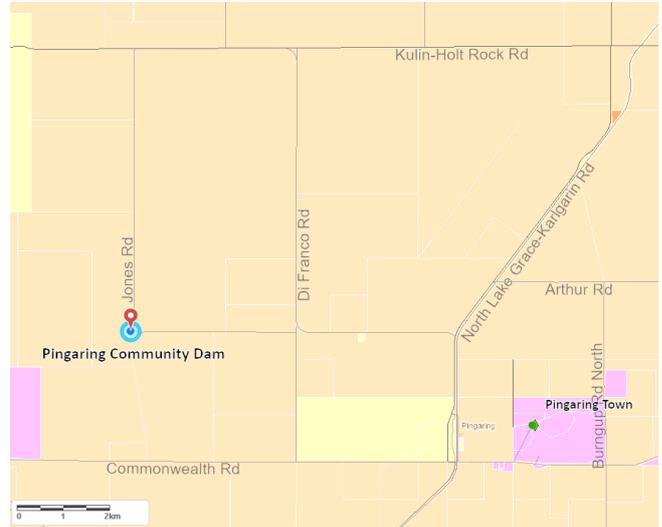
| | |
|--------------------------|---|
| Structure type | Dam |
| Dam capacity | 1,680 kL (currently cleaning out and reconstructing May 2022) |
| Standpipe Y/N | No |
| Pump available Y/N | No |
| Heavy vehicle access | No |
| Turnaround area | Yes |
| Emergency access contact | Alan Leeson (CEO) 0497 801 204 |

Description of community water supplies

Pingaring community dam



Aerial view Pingaring community dam



Location map



Upgraded catchment (August 2020)



New dam (August 2020)



Tanks and access (August 2020)

Pingaring community dam description

| | |
|---------------------|--|
| Vesting | Kulin Shire |
| Purpose | Strategic community water supply for agricultural purposes, including emergency stock and firefighting water |
| Associated reserve | 14838 |
| Catchment type | Earth |
| Catchment area (ha) | 8ha |

Location and coordinates

Location: On bend of Jones Road ~ 6.15 km from Kulin-Holt Rock Road

| | |
|-----------|----------------|
| Latitude | -32.731630 |
| Longitude | 118.550000 |
| Eastings | 645238.721545 |
| Northings | 6377401.544660 |

Water supply and access

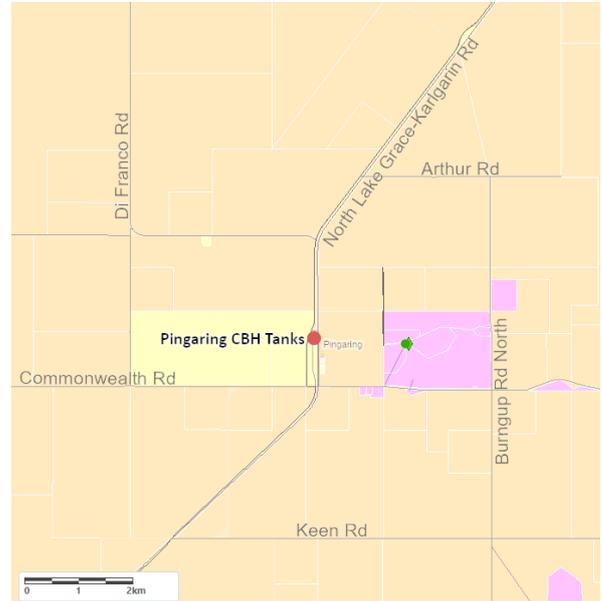
| | |
|--------------------------|---|
| Structure type | Dam, tank (1 x 245kL), standpipe and solar pump |
| Dam capacity | 22,600 kL |
| Tank storage | 245 kL |
| Standpipe Y/N | Yes (please contact shire for access) |
| Pump available Y/N | Yes, solar pump |
| Heavy vehicle access | Yes |
| Turnaround area | Yes |
| Emergency access contact | Alan Leeson (CEO) 0497 801 204 |

Description of community water supplies

Pingaring CBH tanks



Aerial view of Pingaring CBH tanks



Location map



New CBH tanks 2 x 275 kL

Pingaring CBH tanks site description

| | |
|---------------------|--|
| Vesting | CBH and Department of Water and Environmental Regulation (agreement in place) |
| Purpose | Strategic community water supply for agricultural purposes, including emergency stock and firefighting water |
| Associated reserve | CBH land |
| Catchment type | CBH roof catchment |
| Catchment area (ha) | ~ 0.90ha |

Location and coordinates

Location: Pingaring CBH – tanks located at northern end of CBH access from Luke Price Street and North Lake Grace - Karlgarin Road

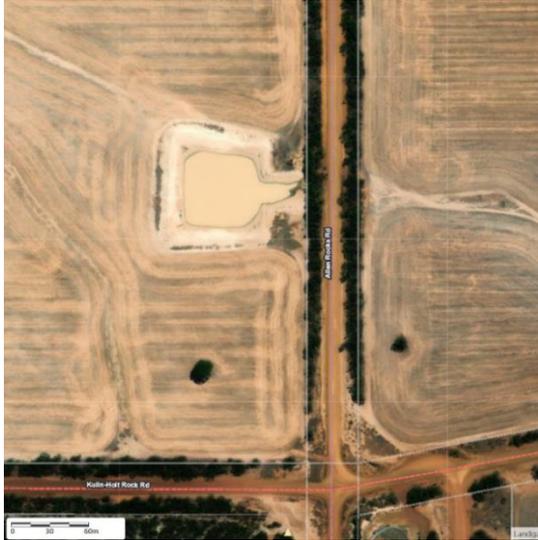
| | |
|-----------|---------------|
| Latitude | -32.74898 |
| Longitude | 118.62506 |
| Eastings | 652243.70526 |
| Northings | 6375372.47791 |

Water supply and access

| | |
|--------------------------|--|
| Structure type | Tanks |
| Tank storage | 2 x 275 kL |
| Standpipe Y/N | No |
| Pump available Y/N | No |
| Heavy vehicle access | Yes |
| Turnaround area | Yes |
| Supply note | Must have approval from CBH area manager prior to access. Ensure site traffic flow is followed at all times. |
| Emergency access contact | Alan Leeson (CEO) 0497 801 204 |

Description of community water supplies

DiRusso dam



DiRusso aerial



Location map



Desilted dam February 2023



DiRusso dam



Tank and swipecard controller



Tank outlets

DiRusso dam site description

| | |
|---------------------|--|
| Vesting | Shire of Kulin and Lazio Nominees have a License Agreement and Deed of Covenant |
| Purpose | Strategic community water supply for agricultural purposes, including emergency stock and firefighting water |
| Associated reserve | Private Property |
| Catchment type | Earth |
| Catchment area (ha) | ~6ha |

Location and coordinates

Location: Allen Rocks Road, *Dam* ~ 240 m north of Kulin-Holt Rock Road, western side. Tank located at the northeast corner intersection of Kulin-Holt Rock Road and Allen Rocks Road

| | |
|-----------|-------------|
| Latitude | -32.68757 |
| Longitude | 119.09541 |
| Eastings | 696449.840 |
| Northings | 6381407.652 |

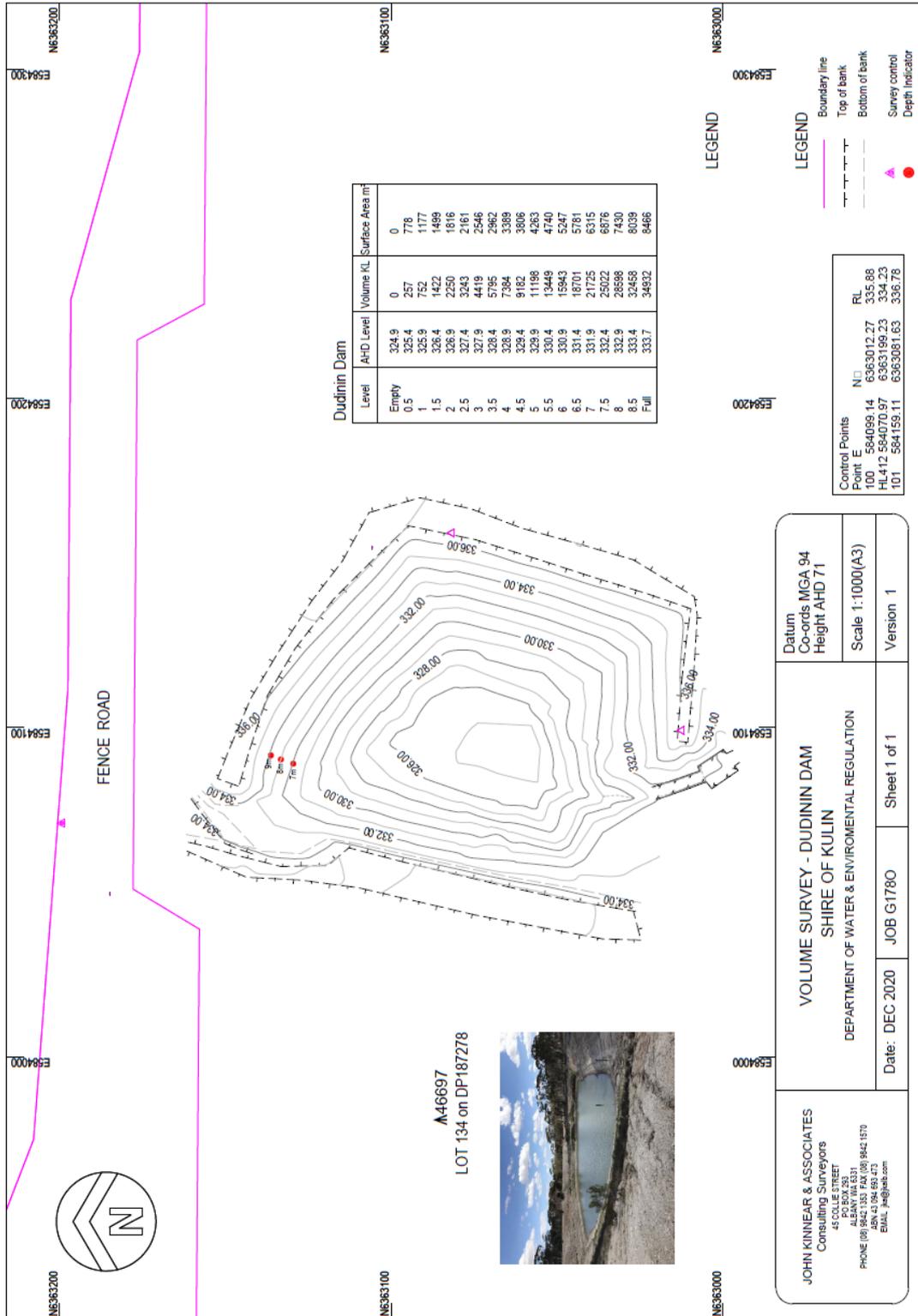
Water supply and access

| | |
|--------------------------|--|
| Structure type | Dam and Tank |
| Tank storage | 275 kL |
| Standpipe Y/N | Yes |
| Pump available Y/N | No |
| Heavy vehicle access | Yes |
| Turnaround area | Yes |
| Supply note | Tank is accessible at all times. Dam is not accessible unless permission is granted from Shire of Kulin. |
| Emergency access contact | Alan Leeson (CEO) 0497 801 204 |

Appendices

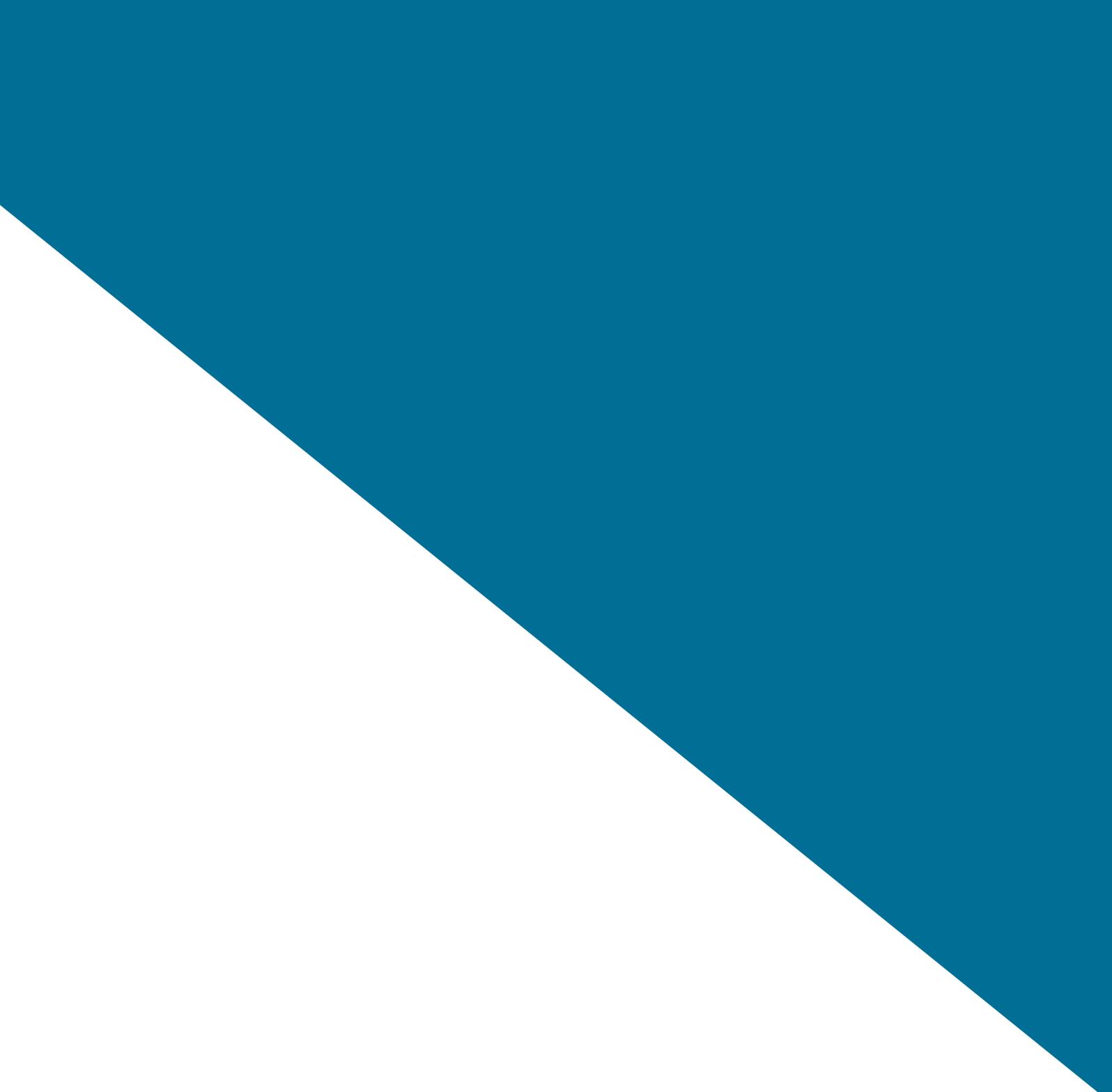
Appendix A – Dam surveys

Dudinin dam



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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