

SA Heritage Register

Nomination form



Government of South Australia

Department for Environment
and Water

NOMINATION FORM

To help your nomination be successful, please fill out this form with as much information as possible.

Feel free to expand the answer fields as much as you require or append information to the form.

It is important that you attach images and a map of what you are nominating by email or by fax.

Please note that places which have been nominated during past three years will not be reconsidered by the South Australian Heritage Council unless you can provide significant new information not provided through the previous nomination and assessment.

For assistance with this form you may contact:

Your local historical society or heritage adviser may be of assistance OR you may telephone an assessment officer in Heritage South Australia on (08) 8124 4960.

A. Nominated Place

1. Name	
Name of Place:	Underground Water Tank and Water Conservation Reserve
Any other or former name(s):	old water tank, government water tank
Is the place already on another heritage list?	No

2. Location					
Street Address:	Old Water Tank Road				
	Suburb / Town: Coober Pedy			Post Code: 5723	
Local Council Name:	District Council of Coober Pedy				
Land Description: (if known)	Title:	Volume:	Folio:	Parcel Type:	Parcel No:
	;				
	Plan Type:	Plan No:	Section:	Hundred:	
GPS Location/s: (If known)	Longitude / Easting / X			Latitude / Northing / Y (Datum =)	

3. Ownership	
Name of Owner(s):	
Contact person: (if different from owner explain relationship)	
Postal Address:	
Phone Number:	
Ownership History:	

4. Nominator (your details)	
Your Name/s:	
Organisation/Position:	
Daytime Phone:	
Fax:	
Postal Address:	
Email Address:	

B. Description

5. Description of nominated place	
Description of the nominated place and its current condition:	The nominated place is a 500,000 - gallon concrete water tank in good condition, currently used for water storage.
Are you aware of any modifications or additions to the place? Can you provide dates for these changes?	No
Do you believe there may be historical items under the ground? Should an archaeological investigation be considered?	No
Date you inspected the place:	I have not inspected the place. It is surrounded by a fence and locked gate. I took a photo of it on 25-8-19.
Have you had any contact with the Owner?	Yes, [REDACTED] the Coober Pedy Historical Society discussed the heritage value of the tank and the water reserve with [REDACTED] the District Council of Coober Pedy on 23-8-19. We agreed to nominate the tank and the water reserve for the State Heritage Register. A draft copy of the completed nomination form was sent to him.
Current use of the place:	Backup water storage
Original or former use(s):	Water collection and storage
Are there any current or long term threats to the nominated place?	No
Name of Builder:	40 volunteer opal miners, 20 each fortnight, built the tank
Any other information:	Construction of this tank began in June 1921 and was finished in June 1922. In 1926 enough rain fell to fill the 500,000 - gallon tank

C. History

6. Origins and history	
Years of Construction:	Start: 1921 Finish: 1922
Name of Designer / Architect:	None
History of the nominated place:	<p>'Stuarts Range Opal Field Water and a Warning,' article in the Register 3/5/1919 carries a warning from Director of Mines, LK Ward, to prospectors of the need to bring their own supplies and water.</p> <p>A petition for a water reserve was presented to the Minister of Mines on 20/7/20</p> <p>The 120-acre Reserve for Water Conservation Purposes was gazetted on 18/4/1922 to protect the catchment.</p> <p>In 1960 volunteers from the community cleaned the tank. (See photo 1960 0094)</p>

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	<p>See the attached articles (PDF Page 6 June 5 2014 and PW 0003) for more complete histories of the tank and the water conservation reserve.</p>
<p>Historical sources used to support your nomination: Please attach copies of pages from publications or newspaper articles as appropriate.</p>	<p>PW 0003 Watertank Reserve, Kath Crilly, Coober Pedy Times 21/3/90</p> <p>HS 00071 Old Water Tank Road, S Britt, Coober Pedy Regional Times 6/6/14</p> <p>MA 00010 1959 Map, Bailey, showing Water Conservation Reserve</p> <p>HS 00034 O'Neill Court, S Britt, Coober Pedy Regional Times 25/10/12</p> <p>LK Ward Biography. Bernard O'Neil, Australian Dictionary of Biography, Vol 16 (MUP) 2002</p> <p>HS 00031 Ward St, S Britt, Coober Pedy Regional Times 30/8/12</p> <p>PDF Register 3/5/1919</p> <p>OB 00003 Core drilled from original cement floor of old water tank showing evidence of damage done in transit by camel train from William Creek. It appears moisture got into some bags and they had to break it up and use it as aggregate.</p> <p>Photos: 1950 0132 Man using hand pump to pump water into a tank in the back of a utility 1960 0094 Community volunteers cleaning the tank 1960 0398 Queue for water ration 1956 0112 Tank in 1956 2007 0011 EWS Water Conservation Reserve sign 2019 Current picture of Water Tank & reserve</p>

D. Heritage Significance

7. Statement of State Significance - Why is the place important to South Australia?

The Old Water Tank and Water Conservation Reserve are of State heritage significance because of the crucial role water played in the existence of Coober Pedy and the development of opal mining. It demonstrates the importance the State Government at the time placed on opening the north. The construction of the tank was also an early illustration of multiculturalism, a testament to the cooperation of men from different countries with diverse skills to overcome isolation to build a utility that is still serving the community after 97 years.

8. Significance Criteria

The South Australian *Heritage Places Act 1993* lists seven criteria by which places are assessed as 'State significant.' Please tick the criteria you feel the place demonstrates and explain your reasons.

- | | | |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | It demonstrates important aspects of the evolution or pattern of the State's history. | The opening of the far north was an early priority of the South Australian government as was the development of mineral resources. This place illustrates the crucial role water played in the evolution of the State's history. |
| <input type="checkbox"/> | It has rare, uncommon or endangered qualities that are of cultural significance. | |
| <input type="checkbox"/> | It may yield information that will contribute to an understanding of the State's history, including its natural history. | The importance of water, particularly in the north of the state, is illustrated by the challenges overcome to build this huge concrete tank. |
| <input type="checkbox"/> | It is an outstanding representative of a particular class of places of cultural significance. | |
| <input type="checkbox"/> | It demonstrates a high degree of creative, aesthetic or technical accomplishment or is an outstanding representative of particular construction techniques or design characteristics. | Given the isolation of Coober Pedy and its lack of water, the building of this tank demonstrated a high degree of technical adaptation to the conditions. |
| <input type="checkbox"/> | It has strong cultural or spiritual associations for the community or a group within it. | |

- It has a special association with the life or work of a person or organisation or an event of historical importance.**

Director of Mines, LK Ward, was instrumental in the survival of the Coober Pedy opal fields. The construction of the tank was an example of the many ways he supported the mining community.

E. Additional Information

9. Images/Maps/Diagrams/Site Plans

A full range of images including maps, site plans, and photographs will help your nomination.

Please provide:

- a clear outline of the place being nominated within any maps or plans provided
- high quality images of the place (please list the total number of images being provided)
- the subject of each image
- the date each image was created
- the author of each image, and
- the copyright holder of each image (if known)

Paste images here:

A zip folder is appended:

PW 0003 Watertank Reserve, Kath Crilly, Coober Pedy Times 21/3/90

HS 00071 Old Water Tank Road, S Britt, Coober Pedy Regional Times 6/6/14

MA 00010 1959

HS 00034 O'Neill Court, S Britt, Coober Pedy Regional Times 25/10/12

LK Ward Biography. Bernard O'Neil, Australian Dictionary of Biography, Vol 16 (MUP) 2002

HS 00031 Ward St, S Britt, Coober Pedy Regional Times 30/8/12

PDF Register 3/5/1919

OB 00003 Core drilled from original cement floor of old water tank showing evidence of damage done in transit by camel train from William Creek. It appears moisture got into some bags and they had to break it up and use it as aggregate.

Photos:

1950 0132 Man using hand pump to pump water into a tank in the back of a utility

1960 0094 Community volunteers cleaning the tank

1960 0398 Queue for water ration

1956 0112 Tank in 1956

2007 0011 EWS Water Conservation Reserve sign

2019 Current picture of Water Tank & reserve

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The South Australian Heritage Council is committed to transparency in relation to the listing process and wishes to enhance public confidence in the nomination, listing and decision-making process. The Council's policy is to make nominations for State heritage listing and submissions on provisional entries publicly available via webpage or to interested parties. The Council will adhere to the Privacy Principles and your name and personal details will not be released.

I/we [redacted]
to be heritage listed.

nominate the Underground Water Tank +
Water Conservation Reserve

The information I/we have provided is correct to my/our knowledge.

Your Signature/s: [redacted]

Date: 9/9/19

A heritage officer may contact you to discuss aspects of the nomination.

Nomination Form Checklist

Please check that your nomination includes:

- A clear indication of the location of the place (including map/s). Where a number of features are nominated, show the location of each and/or a boundary surrounding the significant elements of the site.
- A history of the place explaining important aspects relevant to the nomination.
This should generally help support arguments of cultural significance.
- A clear description of the nominated place.
- A statement of significance and indication on how the place satisfies one or more of the significance criteria.
- A heritage officer may contact you to discuss aspects of the nomination.

Email: DEWHeritage@sa.gov.au

Post: Executive Officer, South Australian Heritage Council
Department for Environment and Water
GPO Box 1047, Adelaide 5001

From an historical point of view Watertank Reserve

In the last edition of the Coober Pedy Times, it is stated that a poll is to be conducted on Saturday 7th April, 1990 to decide how and when certain areas of land should be developed - in particular - the Old Water Tank Reserve.

I would like to state my case for this area to be left as a reserve because of its historical significance to Coober Pedy. I was hoping to have this information available for everyone to see at the Opal Festival Historical Display, but this rushed referendum has not given anyone time to consider the issues involved. On an issue as important as this - why the rush? Also, why does the referendum question infer that these areas of land 'be developed'?

This area of land was gazetted as a Reserve for Water Conservation Purposes on the 19th April, 1922 under the provision of the Water Conservation Act 1888, and the Crown Lands Act 1915. The tank was built as the consequence of a petition presented to the Minister of Mines (Hon. T. Pascoe) by the opal miners of Stuart Range on the 20th July, 1920.

Previous to this land being used as a tank catchment (120 acres or 48 hectares), it had been used by a group of miners who had prepared small drains leading to pits from which the rain water was bailed into galvanized iron tanks arranged in groups round the site.

It took 3 years for the miners at Stuart Range to convince the Government that the opal field was going to be a permanent asset to the State, and another 9 months of blood, sweat and tears for 50 men, 60 camels, 8 horses and 1 motor lorry to construct this tank and to keep the opal field going. It would take an entire edition of the Coober Pedy Times to tell half the story of the construction of this tank, but I can assure you that it was an achievement of epic proportions.

I would be only too willing to show residents the history of this Water Reserve at the Opal Festival, but in the meantime I would urge you to vote 'no development' to this question at the referendum.

Sport & Recreation

Concerning residents need for a recreation reserve, for a recreation reserve, and E. Edson's letter (Coober Pedy Times 7th February), my suggestion would be to use the old drive-in area of land, this area of land was the town meeting place in 1920

Continued Page 38



A view of the drive-in and current water supply area

Page 8 COOBER PEDY TIMES 21st March 1990

Watertank Reserve cont...

From Page 8 and called 'The Junction'. The meeting to decide on a new name for the town in June 1920 was held here, as was the first sports day in July 1921. The Mayor has already suggested that a cricket field could be constructed here and I think that this is an excellent suggestion - it could be called Junction Oval. This area of land is bordered by a feeder creek of the Golgeline watershed and it is also next door to the new water plant. It would be much more practicable to pump water from the new water plant next door and to construct sports fields on flat ground, allowing for a run-off basin which is a natural creek bed

running along side.

The area between O'Neill Road and McDougall Street fronting Umoona Road could possibly be set aside as a bowling green (artificial grass), and a swimming pool complex or tennis courts. The natural water run-off for this area is the creek bed running around the base of Hospital Hill and at the back of the water plant. This area is protected from wind by the hills on the eastern side of Hutchison Street, is fronted on two sides by bitumen road, is next door to the water supply and power poles are in place. How about a referendum question on this?

K. Crilly
Coober Pedy Historian

21st March 1990 COOBER PEDY TIMES Page 39



Coober Pedy Street and Road Names

Where did the name of your street come from?



Part 54 in a series
by Sue Britt

WATER TANK ROAD: Opal and the chance of getting rich quick brought people to the Stuart Range in 1915 but it was water that determined their numbers and the length of their stay. The South Australian government, always keen to support mining ventures that might bring in revenue, paid the O'Neill brothers to sink a bore.



Pumping water from the tank c 1960's

Unfortunately this well, the Camel Well, at a depth of 100 feet yielded only salt water. (CPRT 25/10/12) Three other drill sites proved unsuccessful as well.

A dam or tank* in a natural catchment area was their next solution. A petition for a water reserve was presented to the Minister of Mines on 20/7/20. As Director of Mines, L.K. Ward, wrote, "If no water is obtained by boring and by sinking, it will be necessary to excavate dams, but work of that nature cannot be carried out until there is sufficient water on the field to maintain those who are to do the work."

The providing of a water supply in such a district is a very difficult problem, and even if a tank had been excavated to receive rainfall, it would not have been filled at any time during the last twelve months as there has been no rainfall." Opal miners were already carving out small dams in the slopes above White Hill. These channels led to pits from which the runwater was bailed into galvanized iron tanks arranged in groups around the site.

Eventually the ambitious plan of building a concrete tank was considered. It was a huge undertaking in such a remote place. Everything had to be carted in by camel, including the water to make the concrete.

Construction of this tank began in June 1921. 40 local miners, 20 each fortnight, did the work. The cement was brought in by camel. There were 5 teams of 14 camels, as well as 8 horses and a motor lorry, used in its construction. "Seider" Willard, camel driver, recalled his experience: "At one time we took the parts of a huge reinforced concrete tank from the rail at William Creek across to Coober Pedy where the opal miners were living in caverns they had dug under the ground to escape the heat. We used 5 teams with 14 camels to a wagon for this trip and each wagon had four or five tons. This was over heavy sand - on a good track we could have put on six to seven tons. At one stretch on this 110-mile trek we had to 'double-bank' the teams to get through and at times I saw the lead camel actually crawling over the top of the sand hills."

A temporary shed was constructed at William Creek to store the huge cement. After the 1,500 barrels of cement were transported, the shed materials were carried to Coober Pedy to make the roof of the tank. The 120 acre Reserve for Water Conservation Purposes was gazetted on 18/4/1922 to protect the catchment. The tank was finished in June 1922. A bit of rain fell that year and enough was collected in the tank to supply inhabitants with water for 6 months. But it wasn't until 1926 that enough rain fell to fill the 500,000 gallon tank.

This is how the first rain event, at the end of 1925, was reported in the Adelaide Mail 12/12/1925: "When the water vanishes from the government tank most of the miners vanish also. In October the Government tank at Coober Pedy went dry. As it had not rained for 3 years, it looked as if the field would be abandoned."

A digger described the providential thunderstorm which gave Coober Pedy a new lease of life. On a day when the thermometer reached 110°F before noon, a thick, low-lying cloud was noticed moving slowly along the edge of the ranges. Pessimistic diggers looked at it, shook their

heads and went on digging. Suddenly the wind changed and in a fierce Coober Pedy was the centre of a raging dust storm. Lightning flashed and almost before the thunder could peal, hailstones two inches in diameter were thudding on the earth-protected dugouts.



Cars queue for water rations c 1960, Hans Lang photo



Cleaning out the Water Tank 1960, Ron Gough photo

A miner caught in the storm was knocked down three times; another had difficulty in getting out of a shaft because of the earth dislodged by the pelting ice missiles. Rabbits were killed outright, dugouts flooded, and, most important of all, the Government tank replenished. In 10 minutes half an inch of rain fell and 80,000 gallons of water flowed into the tank."

Newspaper stories over many years recorded the drama of the tank water levels. A Coober Pedy resident wrote to The Adelaide Mail 22/8/1936: "Well when it rains we have crab holes or catchments to catch it from the ranges. Our last catch was 12 months ago. We now buy water at 5' for 100 gallons from the Government tank and pray for rain!"

The Advertiser on 27/5/52 reported: "The recent fall of 99 points of rain, which ran two feet into the half million gallon tank, ended a severe water famine which threatened to close the field."

In 1960, most of the people in town turned out as volunteers to help clean the water tank of the foot deep layer of silt that had built up on the bottom. Interestingly, not one mozzie wriggler was found in the shallow layer of water above the silt.

Today, the water tank on Water Tank Road is still in use as backup storage for water from the desalination plant but its full capacity of half a million gallons would barely provide 3 days of water at current daily consumption rates. *Tank, in this case, meaning a hole excavated in the ground to hold water.

Information from
Newspaper articles cited above
Notes on Construction of the Water Tank 1921 - 1922 by Kath Crilly, recorded by Anne Johnson 1993
Waterbank Reserve CPT 21/3/90 by Kath Crilly
Outback Heroes by Patsy Adam Smith,
Lansdowne Press 1981

The Power of Laughter Can Reduce Your Stress

Astonishingly, 98% of Australians have indicated that humour and laughter reduces stress.

That was the key finding in Lifestyle's 2014 Stress Poll, which also revealed that stress levels in Australia remain high with 91% of respondents indicating they are experiencing stress.

Too many of us see stress heads, it hurts the brain and damages the heart... stress sucks!

Lifestyle's 2014 Stress Down Day is on July 25 and is a national fundraising campaign that promotes happiness, encourages help seeking and raises awareness of suicide prevention through Lifestyle's crisis support services.

"Get involved and have fun this Stress Down Day by helping Lifestyle raise funds through the power of laughter."

Everything you need to know about Stress Down Day can be found at www.stressdown.org.au

Lifestyle Saving Lives
Crisis Support. Suicide Prevention.

Historical Society

Outing

to
OLYMPIC FIELD

Sunday 18th June
2 PM meet at Council Car Park

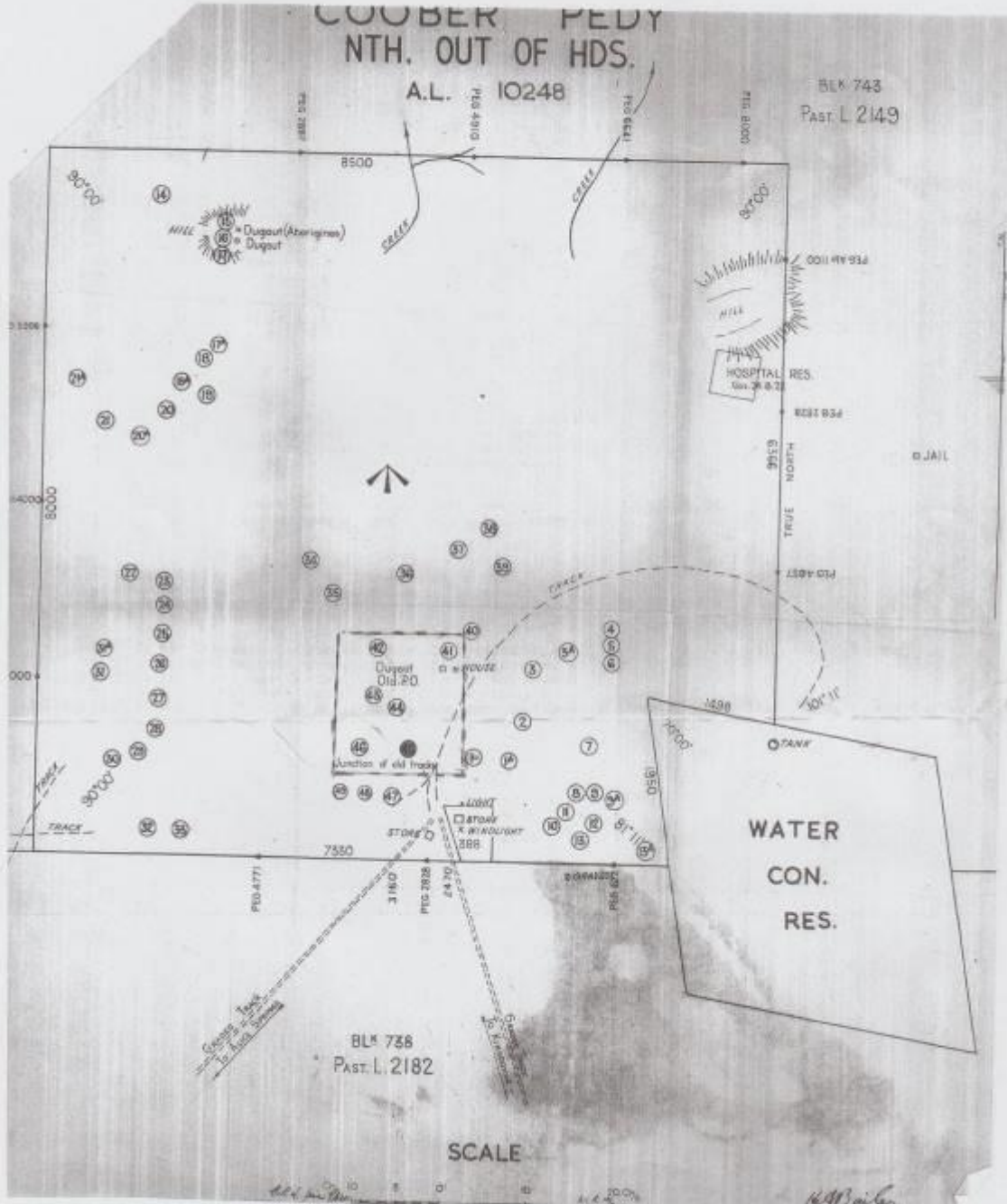
Come and see the Olympic
One of the biggest and best Opal Fields
in Coober Pedy

Hear stories of fortunes won and
tragic losses

COOPER PEDY
NTH. OUT OF HDS.

A.L. 10248

BLK 743
PAST L 2149



5/10/59



Cooper Pedy Street and Road Names

Cooper Pedy
REGIONAL TIMES

Where did the name of your street come from?

Part 17 in a series - by Sue Britt

O'NEILL COURT is named for **Jim and Dick O'Neill**, two experienced opal gougers from White Cliffs, who were in the Tarcoola Goldfield when word reached them about the Hutchison discovery in February 1915.



Fred Blakeley (holding kitten) with Dick and Jim O'Neill outside their dugout

It was the O'Neill brothers who opened the Stuart Range opal fields. Jim O'Neill took their first "extremely large" parcel to Tully Wollaston who was excited because he had never seen such chunky opal before. He paid £10,000 for the parcel which took several days to grade. The O'Neill brothers made £17,000 in 1915, this at a time when £805 would buy a very fine 7-room house in East Adelaide with established garden and all modern conveniences.

The O'Neill brothers were known for their daring and bush skills. They, along with Fred Blakeley, (CPRT 27/9/12) set off on a remarkable journey in 1908 from White Cliffs to Darwin by bicycle. They took Jethro "a dog with dingo antecedents" on this 3,718km trip and their adventures were described by Fred Blakeley in his book *Hard Liberty*.

Also described in *Hard Liberty* was the O'Neill's equally remarkable journey to the Stuart Range opal fields.

"The distance from Tarcoola was only a hundred and fifty miles going across country, but there was no track of any kind and no water beyond the last well of Peak Downs Station, seventy-five miles from the range. At the range itself there was no water and no feed for animals.

The O'Neills set out on the journey with two horses and a spring dray. Jim had taken the position of the reported opal find from a mining map, and they now struck their course by compass through mulga scrub and over sandhills for a distance of sixty miles. In the track they cut there was scarcely a bend.

This journey could only be accomplished by relaying water from the station well, and when within thirty miles of the range they took a chance and pushed through. They struck the very spot marked on the map.

Time had to be measured by water. They had a hundred gallons for two men and two horses. They did not like the look of the prospecting field, so pushed farther north, and were rewarded by finding the real opal, of which the other had been only an indication. They pegged several forty-acre blocks, and returned to Tarcoola to apply for leases."

It was at this point that the free-for-all character of opal mining, that still exists today, was established. According to Barrie O'Leary, "the South Australian Government did not ratify the extensive leases applied for by these firstcomers, and special claims for opal miners were introduced. So, in 1918, the potential opal field was made available for all newcomers to take as much ground as they could conveniently work."



Dick O'Neill, Jethro, Jim O'Neill and Fred Blakeley at Blood Creek July 7th 1908 on their cross continent bike journey

To further encourage the development of opal mining, the SA government undertook extensive, but mostly unsuccessful work, to secure water. The O'Neills were hired to dig a well (CPRT 30/8/12). Unfortunately, 100 feet down, they only struck salty water.

Jim and Dick O'Neill lived at the Stuart Range opal fields through drought years, using ingenious and desperate measures to survive. They probably dug the first dugout and they used a save-all to recycle water.

Dick O'Neill and Fred Blakeley dug a dugout in December 1915 near the Big Flat. It provided a refuge against flies and relief from the daily temperatures of 110°F. It contained "three rooms and a sort of kitchen with an inside fireplace, and a chimney bored through the roof, as well as a neat oven carved out of rock for baking bread. An air tunnel was added for ventilation"

This is how the save-all worked: "It was a twenty gallon drum into which we emptied all our used water, no matter how dirty or what its use had been. Everything went into the save-all, even wet tea leaves. When we had collected five gallons, we allowed the sun to ferment the mixture, and it would work like yeast for two or three days, and then settle down, leaving crystal clear water above the sediment. This clear water we took off very carefully and boiled, then put it through a charcoal strainer; after a second boiling we considered it good enough to take a bath in and then to wash underwear and so back into the save-all again."

Skill, endurance and daring played a large part in the O'Neill's success but so did luck. More than once, in spite of the dugout and the save-all, they came close to perishing for lack of water. On one occasion a small cloud came sailing up from the south. It was a very noisy thunderstorm that dumped its load right on top of them. In an area one mile long by half a mile wide it filled every crabbhole. Luckily the O'Neills had the foresight to bring a tank. They ran around madly filling jam tins and dumping the precious water into the tank.

Information from:
Hard Liberty by Fred Blakeley
Beautiful Opals - Australia's National Gem by Len Cram 1999
A Field Guide to Australian Opals by Barrie O'Leary
The Register, Adelaide, 23/5/1915

HEALTH MATTERS - Think UV not heat!

The sun's ultraviolet (UV) radiation is the major cause of skin cancer and the best natural source of vitamin D.

UV can't be seen or felt and can be damaging even on cool or cloudy days.

The sun protection times indicate when the UV is forecast to reach 3 and above - the level that can damage skin and eyes and increase your risk of skin cancer.

Protect yourself in 6 ways



Everyone is exposed to ultraviolet (UV) radiation from the sun. The sun sends out different types of radiation - visible light that we see as sunlight, infrared radiation felt as heat and UV radiation that we can't see or feel.

People often confuse infrared and UV radiation. When the temperature is cool it means less infrared radiation but not necessarily less UV radiation.

Sun protection at any age is important

SUNSMART
UV Alert
Cooper Pedy 18 October
Sun protection required:
9.40 am to 4.50pm
Max UV: 10
Partly cloudy
Your location
Add this to your website

Exposure to UV radiation from the sun and other sources, such as solariums, is the major cause of skin cancer. UV radiation from the sun is also one of the best natural sources of vitamin D so a balance is important. Vitamin D helps to develop and maintain healthy bones, muscles and general health.

Get the App - stay informed

Check the SunSmart UVAlert daily for local sun protection times anywhere in Australia. Find the SunSmart UVAlert online, in newspapers or on the free SunSmart iPhone and Android apps.

Reference: www.sunsmart.com.au or download the widget to your personal computer http://www.sunsmart.com.au/ultraviolet_radiation/sunsmart_uv_alert/uvwidget.html

by Monique Harding
Health Promotion Officer
Cooper Pedy Hospital & Health Service
Telephone: 088678 9226

Ward, Leonard Keith (1879–1964)

by [Bernard O'Neill](#)

This article was published in *Australian Dictionary of Biography*, Volume 16, (MUP), 2002

Leonard Keith Ward (1879-1964), geologist and public servant, was born on 17 February 1879 at Petersham, Sydney, fourth of eight children of [Frederick William Ward](#), a journalist from New Zealand, and his Australian-born wife Amy Ada, née Cooke. One of his brothers was [Hugh Kingsley Ward](#). After attending Sydney and Brisbane Grammar schools and winning a Queensland university exhibition, Keith studied arts and then mining and metallurgy at the University of Sydney (B.A., 1900; B.E., 1903). Taught geology by [\(Sir\) Edgeworth David](#), he gained experience with Broken Hill Proprietary Co. Ltd before joining the staff of the Western Australian School of Mines, Kalgoorlie, in 1903.

On 7 December 1907 at St Patrick's Cathedral, Melbourne, Ward married with Catholic rites Estella Jane Hockin (d.1957). In 1907-11 he was assistant government geologist and inspector of mines in Tasmania. On 1 January 1912 he succeeded [H. Y. L. Brown](#) as government geologist in South Australia. From 1916 he had additional duties as director of mines and supervisor of boring. When the Geological Survey and the Department of Mines were combined into the one organization in 1917, he was appointed head of department; in 1919 he also became secretary to the minister of mines.

From the beginning Ward worked to integrate the mining industry with the South Australian economy. He regarded the State's mineral resources as public property to be used and regulated in the best interests of the community: increased production of minerals would foster the expansion of local industries, and thereby boost employment. In 1914 (and 1928) he was responsible for revisions of Brown's geological map of South Australia. Under his direction a department of chemistry was established in 1915 to conduct systematic chemical industrial research on South Australia's natural resources. He was appointed a member of the Leigh Creek coal committee (1916) and of the advisory committee (1943). In 1918 he became chairman of the mineral industry committee set up by the Commonwealth Advisory Council of Science and Industry in South Australia. His concern for industrial safety and employees' health resulted in greater protection for workers; in the 1920s he oversaw the implementation of new regulations to prevent lead and gas poisoning, and to cover the use of electricity in mines, works and quarries. In 1926 the University of Adelaide conferred a doctorate of science on Ward for a thesis on the geological history of Central Australia.

Ward stressed the value of having a national geological survey in addition to the State enterprises. As a consultant to the Commonwealth government he investigated water supplies in the Northern Territory and Central Australia (1923-31), and chaired the fifth interstate conference on artesian water (1928). He advised on mining in the Northern Territory (1927-30) and on the establishment of an ore-treatment plant at the Tennant Creek goldfield (1937). A member (1929-30) of the Federal and New South Wales governments' royal commission on the coal industry, he was appointed (1934) to the Commonwealth committee which investigated the construction of a plant to produce oil by the hydrogenation of coal. In 1935 he joined the geological advisory committee formed to assist Anglo-Persian Oil Co. geologists who were investigating sites in Australia for Commonwealth Oil Refineries Ltd. He served on the State advisory committee of the Council for Scientific and Industrial Research (1926-44), the executive committee of the Imperial Geophysical Experimental Survey (1928-31) and the Commonwealth Oil Advisory Committee (1936-40).

A member of the Australasian Institute of Mining and Metallurgy from 1918, the Australian National Research Council, and the council (1917-43) of the South Australian School of Mines and Industries, Ward was also a fellow of the Geological Society of America. He presided over the geology and mineralogy section of the sixteenth

meeting (1923) of the Australasian Association for the Advancement of Science, held in Wellington, New Zealand, the Royal Society of South Australia (1928-30) and the State branch of the Royal Geographical Society of Australasia (1930-31).

Honest, unassuming, modest and kind, Ward 'took quiet delight in cutting the self-important down to size, and in bringing to light the true facts of any situation'. He was an easy-going, congenial and humorous person who was renowned for his 'cheery laugh' and fondness for telling amusing stories. Appointed I.S.O. in 1943, he was awarded the [\(W. B.\) Clarke](#) and [\(Sir Joseph\) Verco](#) medals by the Royal societies of New South Wales (1930) and South Australia (1955) respectively. After retiring in 1944 as director of mines and government geologist, he was a consultant to the department for five years until forced to resign because of continuing ill health. Survived by two of his three sons and his three daughters, he died on 30 September 1964 at Toorak Gardens, Adelaide, and was cremated with Anglican rites.

Select Bibliography

- B. O'Neil, *In Search of Mineral Wealth* (Adel, 1982)
- B. O'Neil, *Above and Below* (Adel, 1995)
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Related Entries in NCB Sites

[view family tree](#)

- [Dickinson, Jessica Helen](#) (daughter) 
- [Dickinson, Samuel Benson](#) (son-in-law) 
- [Ward, Frederick William](#) (father) 
- [Ward, Hugh Kingsley](#) (brother) 

Citation details

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Leonard Keith Ward (1879-1964), by unknown photographer
[State Library of South Australia, SLSA: B 6081](#)

Life Summary [\[details\]](#)

Birth

[17 February 1879](#)

[Petersham, Sydney, New South Wales, Australia](#)

Death

[30 September 1964](#)

[Toorak Gardens, Adelaide, South Australia, Australia](#)

Cultural Heritage

- [New Zealander](#)

Religious Influence

- [Anglican](#)

Occupation

- [geologist](#)
- [public servant](#)
- [public service head](#)



Coober Pedy Street and Road Names

Coober Pedy
REGIONAL TIMES

Part 13 in a series - by Sue Britt

Where did the name of your street come from?

WARD STREET is named for Government Geologist Mr L.Keith Ward. When 14-year old Willie Hutchison discovered opal in February 1915, he also found enough water for the men and camels to stay on in the area for a week.

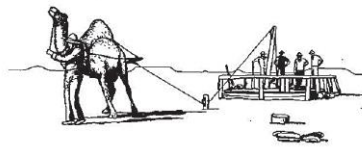


Mr L. Keith Ward, SA Government Geologist 1916

The members of the New Colorado Prospecting Syndicate spent the time gouging the hills nearby searching for the source of the floaters found by the boy. The opal they found was taken to opal buyer Tully Wollaston and also to L K Ward, who in March, 1915, declared the find a "highly encouraging one." He said the specimens were "quite the best obtained in South Australia." He further recommended that the Minister of Mines (Sir Richard Butler) support the "careful and systematic prospecting of the find".

In October 1916, Mr Ward came to the Stuart Range Opal Fields to inspect living and mining conditions. He found the O'Neill brothers who had pegged several 40 acre blocks in Big Flat Field soon after they arrived in May 1915. They were always struggling with the water supply, or the lack of it.

In the 3 years after the discovery of opal the average rainfall was less than 1 inch. The O'Neills were "using water only for drinking and didn't even dampen a cloth to wipe their faces." (Hard Liberty) Their partner, Fred Blakeley, recorded how they saved and reused every drop of water. If it had not been for a lucky thunderstorm enabling the men to bail water out of the crabholes into their tanks, they may well have perished.



The O'Neill brothers using camel power to sink Jungle Well.

Realising that it was crucial to secure a water supply, Ward drew up an agreement with the O'Neill brothers to sink four wells at a price of 30 guineas per foot. They used camel power to raise the buckets of dirt.

By March 1917, the first of these wells, Jungle Well, in the centre of a 10-acre reserve north of the diggings, had been sunk to a depth of 78 ft. A further 100 ft of hand boring resulted in finding water that was too salty to drink. (The Discovery of Coober Pedy) Distillation of the salty water was not possible due to the scarcity of fuel to heat it.

The year 1919 brought rain. News of rain brought an opal rush. Men released from railway construction, returned soldiers and strikers from the mines in Broken Hill came with their camels and horses. L K Ward was Director of Mines by then and he supported the newly-formed Progress Committee in the establishment of sanitation practices. As the well sinking project had failed to find potable water, the construction of a concrete tank in a catchment area was mooted.

In his official report, L K Ward recorded that the value of opal won from the fields increased from £750 in 1916 to £52,425 by the end of 1920.

The population rapidly increased to about 400, an amazing number of people considering the lack of water. It was Mr L Keith Ward's support at a state government level that was instrumental in converting the opal fields to a township.

Information from *The Discovery of Coober Pedy* by Kath Crilly

Hard Liberty by Fred Blakeley

The Register Adelaide 15/3/15 and 14/5/21 with quotes from reports by LK Ward

RICE at the Races

The 2012 Coober Pedy Races provided a great opportunity for parents living in Outback SA to come together for RICE (Remote Isolated Children's Exercise) activities.

While RICE has been supporting families and young children in remote and Outback South Australia since 1976, it was the first time in its recent history that the organisation hosted its management committee meeting outside of Port Augusta.

RICE Executive Officer Rob Kay said the management committee, which includes parents who use RICE services, hosts eight meetings a year, and said they now plan able to hold at least one of those a year outside of Port Augusta.

The meeting and social get together were held on Friday, August 10 and saw the launch of RICE's strategic plan for 2012-2015 as well as its new promotional dvd. Staff also hosted activity days for the Coober Pedy Races on the Saturday and Sunday (August 11 and 12), setting up a play area and activities for younger children.

RICE has almost 100 families that use its services but Mr Kay said the organisation is working hard to further increase its profile, with the aim of having all families in remote and Outback areas of the state aware of the unique service.

"We are continuing to operate the service as we have always done, by offering Outback Childcare, kindergarten, toy and book libraries, play days, crèches, and health and wellbeing support, but we want to know that everyone is aware of our services," Mr Kay said.

RICE staff are easily recognisable in their red shirts and RICE branded 4WD vehicles and deliver their range of services to families living across 650,000 square kilometres of South Australia, from their base in Port Augusta.



RICE at the Races Sarah and Jessica Haydon enjoying the RICE activities at the Coober Pedy Races with Elmo.



RICE Management Committee members at the recent Coober Pedy meeting were Petie Moore, Jodie Keogh, Rob Kay, Gillian Fennell, Lucy McTaggart and Linda Haydon.

BOLD NEW PLAN FOR OUTBACK TOURISM GROWTH

A dynamic new plan for growth is set to boost tourism across South Australia's Outback.

The DAP contains 16 actions designed to increase visitation to the Outback and ensure it has unique appeal. These include promoting the Explorer's Way, filling strategic gaps in RV-friendly facilities and liaising with operators on ways to build better air tourism opportunities for the region.

Developing new commercial opportunities, building new accommodation and investigating experience development are among other priorities.

OTWP chair Rob Coro said the DAP was an important step forward.

"This plan is a very thorough and focused approach to Outback tourism in the coming years," Mr Coro said. "We are confident the agreed actions will make a real difference as they are implemented and look forward to helping make them a reality."

SATC chief executive Jane Jeffreys said the Outback DAP would shape efforts to market and develop the region during the next three years.

"DAPs are practical, realistic lists of tasks that the SATC and regional stakeholders believe are achievable by the end of 2015."

The plans have been produced for South Australia's 11 non-metropolitan regions.

DAP stakeholder groups will meet every six months to track progress on the action list, and will add new items as goals are achieved.

Copies of the Outback DAP are available via the Regional Development Australia Far North Website <http://www.rdafn.com.au/>

SINES "BLOW UP"

Story by Professor David.

As a rule we reap what we sow, and a happy illustration of this is Mrs. Mary McTaggart, of Gidma, Walkerville terrace.

A JOYOUS NINETY.

Mrs. Mary McTaggart at Home.

[By a Special Reporter.]

As a rule we reap what we sow, and a happy illustration of this is Mrs. Mary McTaggart, of Gidma, Walkerville terrace.

[Life Still Pleasant.]

Mrs. McTaggart has one regret, and that is that she can no longer get about as she did. Rheumatism attacked her three years ago, and since then she has been unable to walk.

STUART'S RANGE OPAL FIELDS.

Water and a Warning.

A correspondent who for years has resided in the north, wrote as follows under date, Bon Bon, April 23:—"Many men are preparing to go to the Stuart's Range opal fields, 150 miles north of Tarcoola, and 90 miles west of William Creek."

BARRIER STRIKES.

Miners and the O.B.U.

BROKEN HILL, May 2.

The trouble on the mines continues, but up to this afternoon it had not extended. The position had rather improved.

The Certified Engineers this morning adopted a resolution:—"That this association joins up with the A.M.A. as certified engine drivers' section of the A.M.A."

The Engine Drivers and Firemen's Association last night resolved to carry on the campaign until every man following the engineering calling was in the association.

Severe Earthquake.

A severe earthquake was felt through the ground. Some of the houses were damaged, and the ground cracked in several places.

Strenuous Old Times.

Mrs. McTaggart could write a book upon her experiences in the early days of pastoral life in the north—but, like most people who have fought great odds and won, she is diffident concerning those heroic, isolated days.

True Sportsmanship.

Mrs. McTaggart refused condolences regarding that trip, and declared that "it might easily have been worse."

Officials Advise Caution.

Enquiries in official circles showed that the warning is fully warranted. The Director of Mines (Mr. L. Keith Ward) who reported on the Stuart's Range opal field, directed the following:—"The prospector who decides to go to Stuart's Range at present must bear in mind that there is other work than that of prospecting for opals that he must be prepared to do."

Search for Artesian Supply.

Several efforts were made by the Government by sinking shallow wells, and in one instance by boring from the bottom of a well to locate water without success.

WHARFS DEADLOCK.

STATE GOVERNMENT ACTION.

PERTH, May 2.

The Premier (Mr. Colebatch) announced today to a deputation of consignees of goods delayed at Fremantle, that the Government had resolved upon decisive action.

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SUGAR GROWING.

TATA AND AUSTRALIAN JAM.

An ultimatum received to have been forwarded by the Fremantle Lumpers to the Government is repudiated by the secretary of the Labour Federation (Mr. McCallum), who states that the industrial disputes committee will make its recommendations today.









