

BURRA MINES HISTORIC SITE
BURRA

HERITAGE SIGNIFICANCE

Historically, the Mines Historic Site is important because the copper produced by it restored the colony's flagging economy during a crucial time in the mid 1840's. It is responsible for the establishment of "copper towns" surrounding the area, the mass influx of settlers who came from Cornwall and Wales to mine and smelt the ore, and the provision of a transportation infrastructure that developed and established further settlement between the mine and port.

Physically, the Historic Site is important for containing the dramatic and spectacular remains of the State's most influential copper mining endeavour. The remains are as varied as they are beautiful and range from chimneys to huge areas of open cut.

Environmentally, the Historic Site is an exciting element in Burra's character and although its sheer size tends to blend it into the natural landscape, individual features are notable.

The Integrity of the Historic Site has been compromised and most of it is left as ruins. But although not intact, the site does provide the evidence for its own appreciation.

NOMINATION SOURCE/THREAT/OWNER

This report has been prepared as a result of the programme to evaluate items nominated in Burra. It was observed that only specific items in the mines area had been included on the State Register. Their significance relates to a wider physical area and other physical features. It was decided to amalgamate the items into an area in order to properly recognise its significance and plan its conservation. The area is basically owned by the District Council with two minor portions owned by private individuals. The site is under no known threat.

HERITAGE CONSERVATION BRANCH RECOMMENDATION:

..... *B. C. Rawns*
Manager

It is recommended that this item be included on the Register of State Heritage Items, and that it be categorized H1, A2, A3, H2, H3.

SOUTH AUSTRALIAN HERITAGE COMMITTEE RECOMMENDATION:


.....
Chairman

South Australian Heritage Act 1978-82	Register of State Heritage Items ITEM EVALUATION SHEET Historic Site	Ref. No. 6639-10970
	Item BURRA MINES HISTORIC SITE BURRA	Status Buildings only N.Tr.(CL)
Age 1840's- 1880's	Subject PRIMARY INDUSTRY - Extractive	Site Type Mining

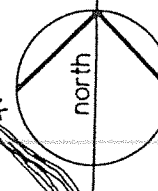
History	Context The Mines site is associated with Australia's first major mining era, and yielded rich copper ore which restored South Australia's ailing economy during the 1840's and 1850's. Its effect upon settlement, immigration, transportation and the establishment of the townships surrounding the mine was profound.	E	VG	AG	FP	NA
	Person/Group The South Australian Mining Association ("The Snobs") whose Secretary was Sir Henry Ayers, G.C.M.G., Trustee & Chairman of Savings Bank of S.A., founder of Bank of Adelaide, M.L.C. (1857-1893) Premier of South Australia in seven ministries.	X				
	Event 1845 Discovery of copper lode 24/9/1845 Opening of Mine 1851-1854 Mine brought to virtual standstill by goldrush 1877 Mine closed.	X				
Physical	Natural Elements Dramatic setting rising nearly 100m from Burra Creek, barren hillsides joined now by mine spoils, size is very much man-altered, spectacular vistas, little or no vegetation, harmonious with the surrounding countryside.		X			
	Man-Made Elements Evocative site with romantic ruins set against a barren landscape, spectacular open cut mine dominates the site, mine spoils are so large they form artificial hills, all but two buildings are ruins, ruins are reminders of the past even in their present state, numerous ground level ruins, informal and unsophisticated atmosphere.		X			
	Representation On a similar level with the Moonta Mine site but a more dramatic setting, earlier than Moonta and more physically significant than Kapunda.					
Environment	Continuity Landscape qualities are consistent with the Burra surrounds, open cut portion is in a hollow and not visually disruptive.			X		
	Local Character An exciting element in Burra's character, contrast to the built up areas, spectacular lookout from which to see Burra's original townships.		X			
	Landmark As part of a larger landscape it is not individually dominant but the ruins on the hillsides are visual features, familiar attraction for visitors to the town.		X			
Integrity	Alterations Structures are basically ruins or shells, all machinery has been removed, processes can be followed in principle, tourist activity only, intact buildings little changed.				X	
	Condition Condition of the ruins vary but maintenance is necessary for most, ground level remains are most in jeopardy, earthworks stable.			X		
	Compatibility Tourist activity only, no formal facilities or direction, no current mining activity			X		

bon accorde
historic site

- site boundary follows property lines or extensions of same, within the toned areas
- burra creek is the boundary between the two sites

 ALLOTMENT 2
(MR. G. R. O'CONNOR)

burra smelter
historic site

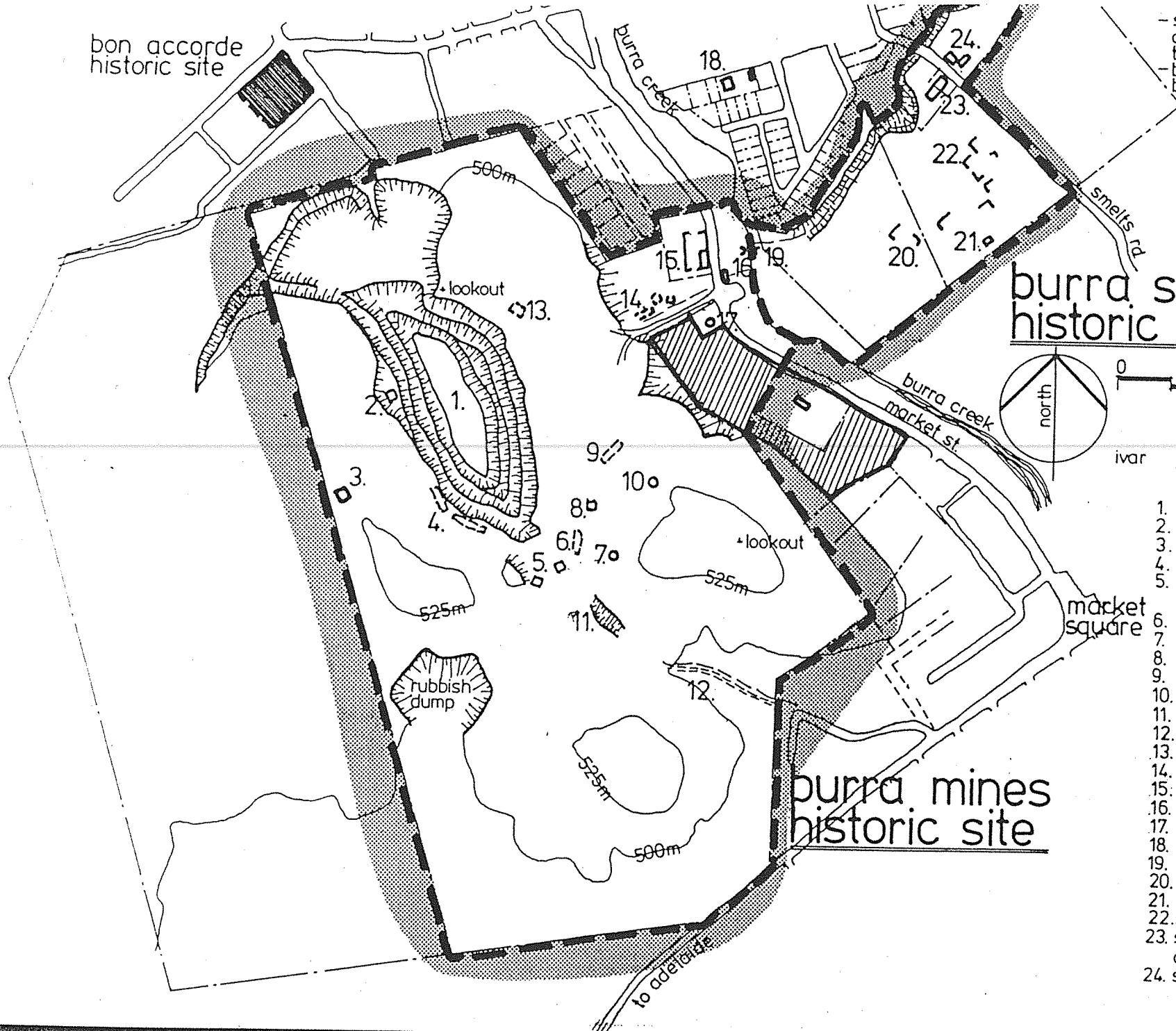


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1. open cut
2. graves pump house
3. powder magazine
4. administration offices
5. morphetts pump house, dam and winding house
6. fitting shop ruins
7. welsh chimney
8. dressing tower
9. ore sorting floor
10. cornish chimney
11. elevated haulage cutting
12. mine walk
13. smithy ruins
14. waterwheel pit and buddle pits
15. storeroom, residence and yards
16. bridge parapet
17. peacocks chimney
18. smelts manager (mines) residence
19. smelts bridge abutments
20. smelter ruins
21. smelter furnace ruins
22. smelter ruins
23. smelts manager (smelter) residence and office.
24. storeroom, stable and yards

burra mines
historic site



South Australian Heritage Act 1978-82	Register of State Heritage Items ITEM EVALUATION SHEET Historic Site	Ref. No. 6630-10970
	Item BURRA MINES HISTORIC SITE BURRA	Prepared By: Ivar Nelsen Iris Iwanicki

Supplementary Information

Adaptation: The existing landscape and visual qualities of the site should be maintained. Any new structures or facilities should not intrude upon the ruins or visually disrupt the hillsides. New vegetation should be minimal. Vehicular traffic through the site should be rationalised.

Interpretation: The site is an ideal venue for an active interpretation exercise. The interpretation should centre upon, and utilise, the site itself and its physical features. Reconstruction or restoration should be minimal if used at all. The associations with the adjacent smelts site and the Bon Accord Mine site should be reinforced.

History and Sources

The Burra-Burra Mine (later shortened to Burra) Mine produced large, rich amounts of copper between 1845-1877. The remaining site includes the open cut area, underground workings, the rubbish dumps, the mullock heaps, remains of Cornish and Welsh chimneys, mines offices, Morphet's and Graves pump houses, and 'miner's walk'. At the time of the discovery of copper in the Burra area by the shepherds Streaty and Pickitt, the colony had "reached the very lowest point in its depression", and was on the turning point of rapid recovery as a result of this mine and the one at Kapunda (1844). British Investment was successfully urged towards South Australia, "a province which forms a portion of the British Empire, is inhabited by their countrymen, under the rule of British protection and British laws, and which moreover affords them prospects such as few of the vaunted foreign mines can compete with" (Dutton, 1846, 258).

In 1866, the following description of the mine was made:-

It was discovered by a shepherd named Pickitt, in 1845, and in order to secure the fee simple of mineral land it became necessary to purchase a special survey of 20,000 acres, paying the Government for the same in specie. The survey was taken on August 16th, by Messrs. C.H. Bagot and G.F. Aston on behalf of themselves and others, afterwards called the Princess Royal mining company, and by Messrs. William Allen and Samuel Stocks, jun., for themselves and others, who afterwards became incorporated with the South Australian mining association, which name is still borne by the Burra company. These two parties were called respectively the "nobs" and the "snobs", the former representing the "aristocracy" of the colony, and the latter the merchants and tradespeople. The nobs were unwilling to combine with the snobs in a joint stock company for carrying on the mine, and therefore, although they united to purchase the ground - as neither party could, unaided, raise the hard cash - so soon as the survey was completed the land was divided by drawing a line through the centre from east to west. Lots were then drawn for the land, and the "snobs" became the fortunate proprietors of the northern portion of the survey, and on which the Burra mine existed. The Princess Royal property was ultimately sold for pastoral purposes at 18s. an acre.

The first directors of the South Australian mining association, and who were appointed to manage the affairs of the Burra mine, were Messrs. Charles Beck, James Bunce, John Benjamin Graham, John Bentham Neales, William Paxton, William Peacock, Christopher Septimus Penny, Emanuel Solomon, and Samuel Stocks, jun. Mr. Henry

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History and Sources

Ayers was appointed secretary. Operations were commenced immediately, the number of miners employed being 10, under the superintendence of a captain, and with a smith to sharpen and repair the tools. The first shot was fired on the 29th September, 1845, blasting a large mass of rich ore, and in a short time several drays were loaded for the port. The workings were carried on with vigour, and the produce of the mine surpassed the most sanguine expectations entertained on its discovery. The original working capital of the company was only £1500; but with a mine so rich and so easily worked that amount proved sufficient, until the sale of ore increased the funds available for working expenses. During the first 6 years of the history of the Burra, nearly 80,000 tons of exceedingly rich ore were raised and shipped to England, yielding a profit to the company of £438,552; a pretty good result from an original outlay of £10,000 for the land. At the close of the first 6 years since the opening of the mine, the number of hands employed was upwards of 1000; but at this time the newly discovered gold-fields in Victoria attracted a large proportion of our population, and especially the miners, who left in such numbers that only 100 were left at the Burra - the Kapunda mine suffering in like manner; indeed, I believe at one time only 5 or 6 men remained at Kapunda, including the captain and purser. This state of things produced a serious check on the working of the mines; at the Burra, where pumping engines had been erected, the machinery was of necessity stopped, and the water let in; the comparatively few men who remained being employed in working above the water level. For the greater part of three years the mine continued thus; the Government then took the matter into their serious consideration, and rightly deeming the prosperity of the colony to be dependent, to a great extent, on that of its mining interest, they adopted measures for the introduction of a number of Cornish miners. When these immigrants arrived, the water was pumped from the mine, and full operations were resumed, and have been carried on with comparatively trifling interruptions until the present time. The greatest number of hands employed was in 1859, when it amounted to 1170 persons. The discoveries at Wallaroo caused some of the miners to remove to that locality, and several were attracted by the reports of the great richness of some of the mines in the far north. A still larger departure of miners took place in consequence of inducements held out to them by a certain coal mining company in New South Wales. Prior to this time, however, the working of the mines at Wallaroo and in the far north had tended to raise the rate of wages, and it was deemed advisable by the directors of the Burra to confine their operations to those workings above the 55-fathom level; the water was, therefore, let into the lower part of the mine - from the 70-fathom level to the 55 - and it is found that at the present rate of wages larger proportionate profits can be realised, without incurring the expense of pumping and working the lower levels. The yield of ore has ranged for many years from 10,000 to 13,000 tons a year, the produce of the ore giving an average of from 22 to 23 per cent of copper; or about 2500 tons of pure copper when smelted, and yielding to the colony an average annual amount of at least £225,000. The total amount expended in the colony by the Burra company, up to the present time, is about £1,700,000, of which upwards of £1,000,000 has been paid in wages. The gross profits amount to £850,000, of which £714,560 have been divided among the shareholders, and £135,520 added to the capital stock, while £10,560 remained undivided. (Bailliere's Gazetteer, 1866, 46 & 47).

Unsuccessful attempts at smelting by the Association resulted in an agreement between it and the English & Australian Copper Co. for the latter to undertake smelting the ore at a site on the opposite side of Burra Creek in 1849. It was a favourable agreement to the Mine's proprietors in many ways, not least being the transfer of ore transportation responsibility to the smelters. Improvements at the Mine site included the installation of Roach's engine and boiler house in 1849, a crushing plant, Morphet's engine house, chimney stack, winding house. Peacock's engine house

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History and Sources

and stack, Grave's engine house, offices and captains' cottages, changing rooms, ore sheds, circular whims, overhead launders carrying water to the water wheels, and the powder magazine (1847). (Although the last is claimed to be Australia's oldest mine building remaining, the cottages at Kapunda Mine square predate it by a couple of years).

Of particular interest are the remains of the engine houses. These housed both beam and winding (Morphett's) engines. Five known different designs of Cornish pumping engine houses were used throughout the State. There were 30 to 40 known beam engines in South Australia, eventually superseded by the horizontal engine. The site offers an excellent opportunity for interpretative information on the Cornish contribution in this area of mining history because of the accessibility and quality of what remains.

It is difficult to document the specific history of individual buildings on the mine site for lack of detailed records and also the effects of open cut mining. However, early drawings of the area show a complex of buildings and machinery, much of which was located where the open cut later occurred in 1870. The attempt to rework the mine by opencut methods failed to restore the mine's flagging profitability, for the canny Cornish miners had left little in their underground workings in the area. The mine closed in 1877.

There were two further periods of mining activity. In 1901, the Burra Burra Copper Company was formed to rework the tailings, waste heaps and old workings at the mine. It wound up in May, 1914, after cancelling an agreement with the South Australian Mining Association. In 1969, Samin Limited, a subsidiary of Poseidon N.L. was formed to work the Burra Mine. Mining was carried out until February, 1981, and the rock extracted stockpiled on the surface. This was then reprocessed, extracting an average of 1.8% copper from 2.0 million tons of ore. (Copper oxide extracted was sold for further chemical conversion). All material from the Burra mine was used by February, 1983, and processing now utilises ore from N.T. Peko Mines. Samin was taken over by Adelaide and Wallaroo Fertilizers in 1978. Work undertaken on the Burra open-cut avoided destroying Grave's engine house and the remains of the offices, and chimney stack was relocated at the entrance to the Mines area.

At a national, state and regional level, the mine site is historically significant because of its prime importance as one of Australia's earliest major mines.

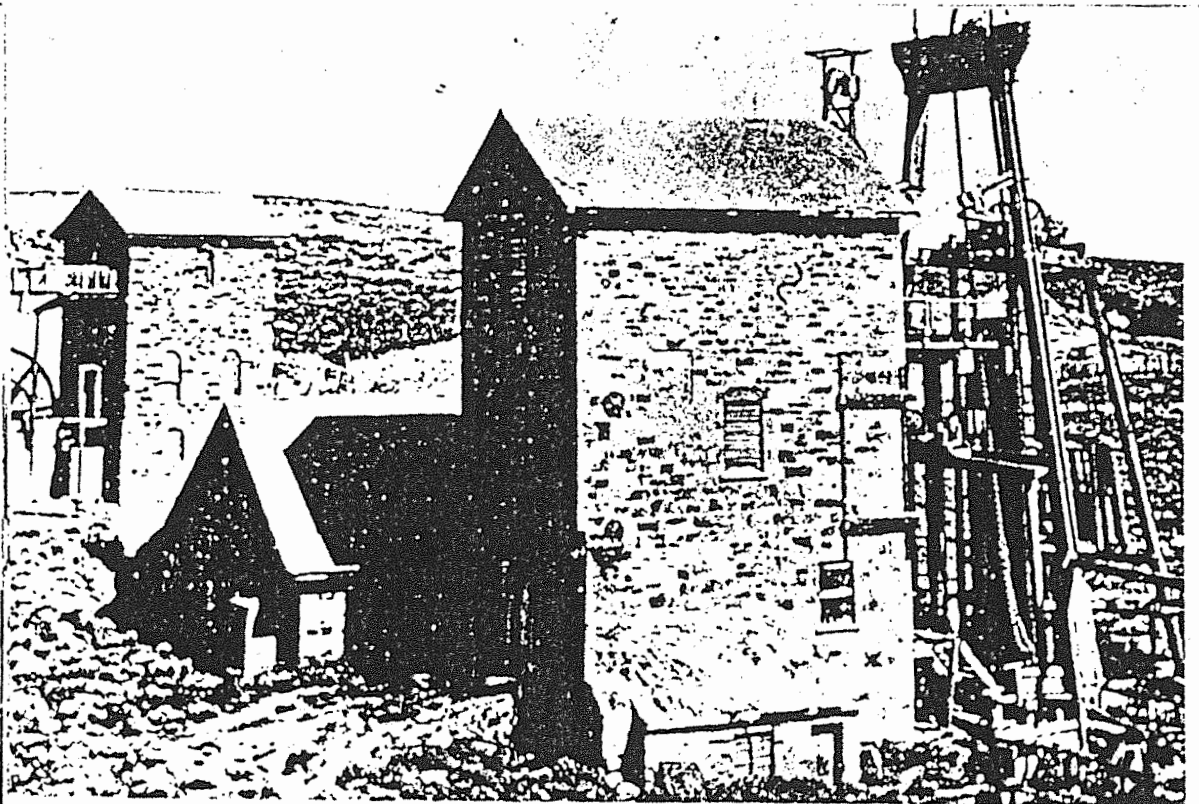
Burra's production boosted the South Australian colony's development during the latter part of the 1840's and 1850's.

Sources:

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D.A. Cumming: Notes on the Burra Mine and Smelter.
Greg Drew, Mines Department. I.E. Aust., Nov. 1982
F. Dutton: South Australia and its mines, Lond. 1846
F. Treloar: The Burra Mine - Reminiscences (S.A. Collection SAA)
Whitworth: Bailliers's Guide to South Australia 1866
SAA: South Australian Mining Assoc. Records.



From 'The Picturesque Atlas of Australasia' Vol. II, 1888



13 Above: Close-up view showing detail of Morphet's pumphouse, boiler-room and winding-house.



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PLN N°.

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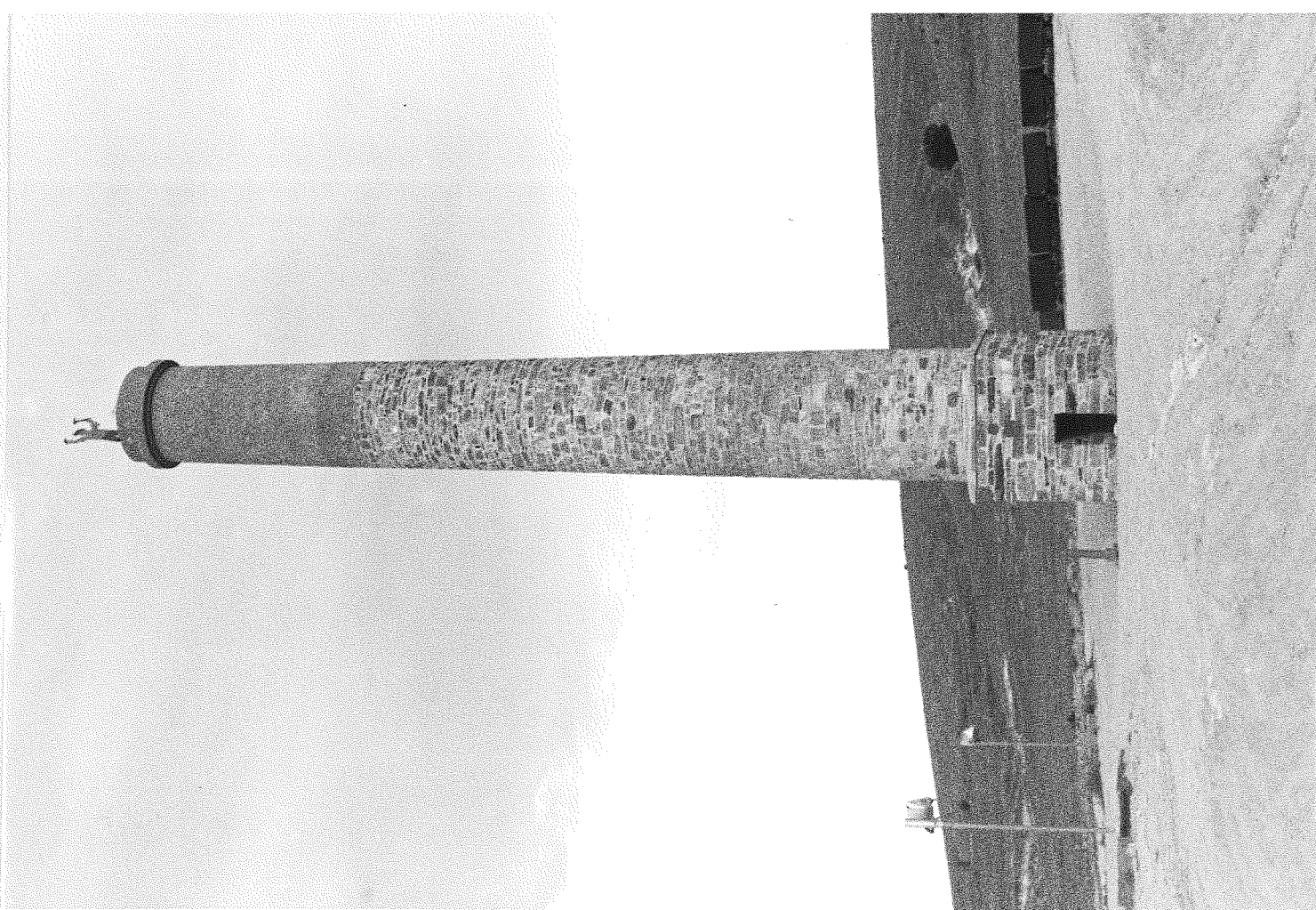
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BURRA MINES HISTORIC SITE

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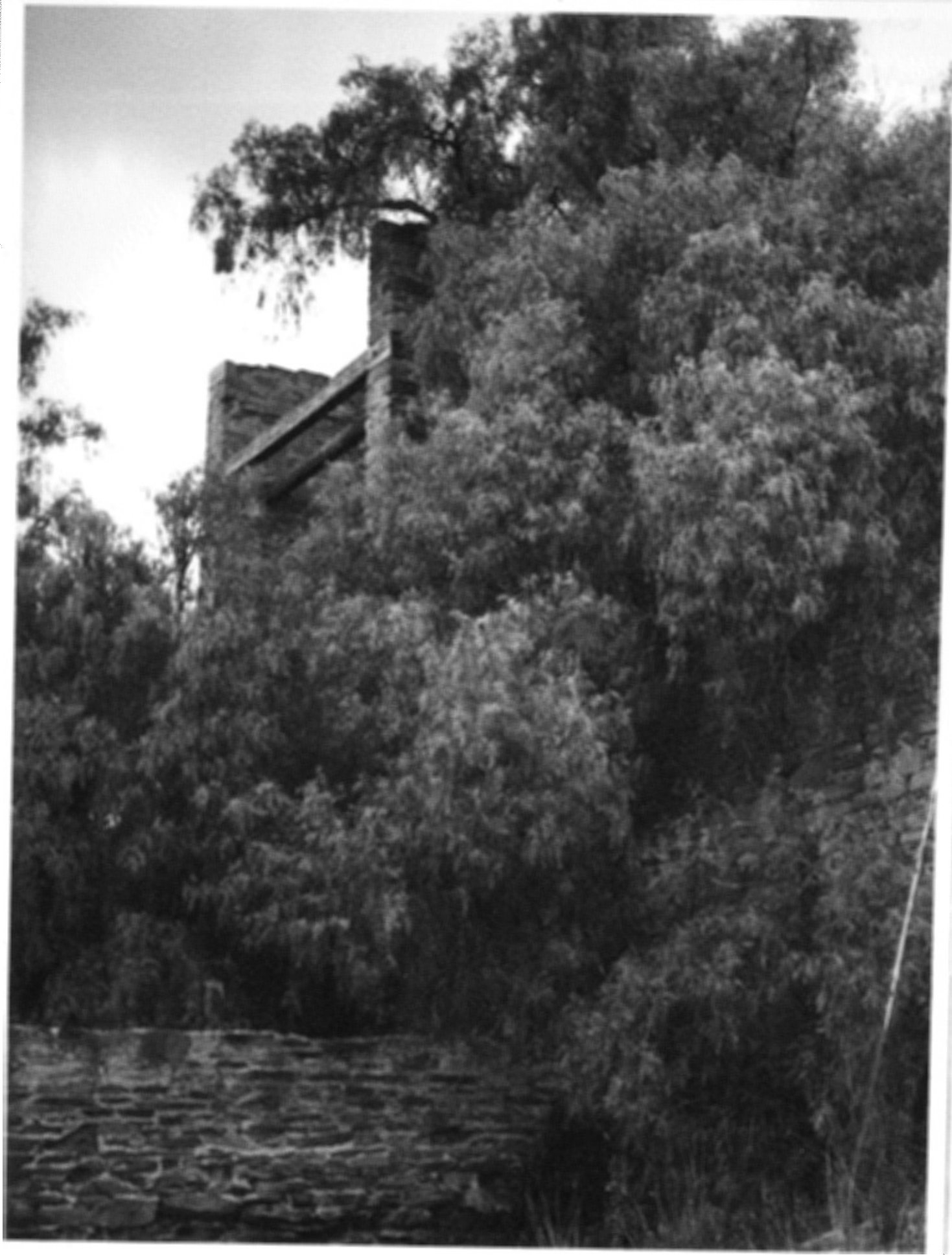
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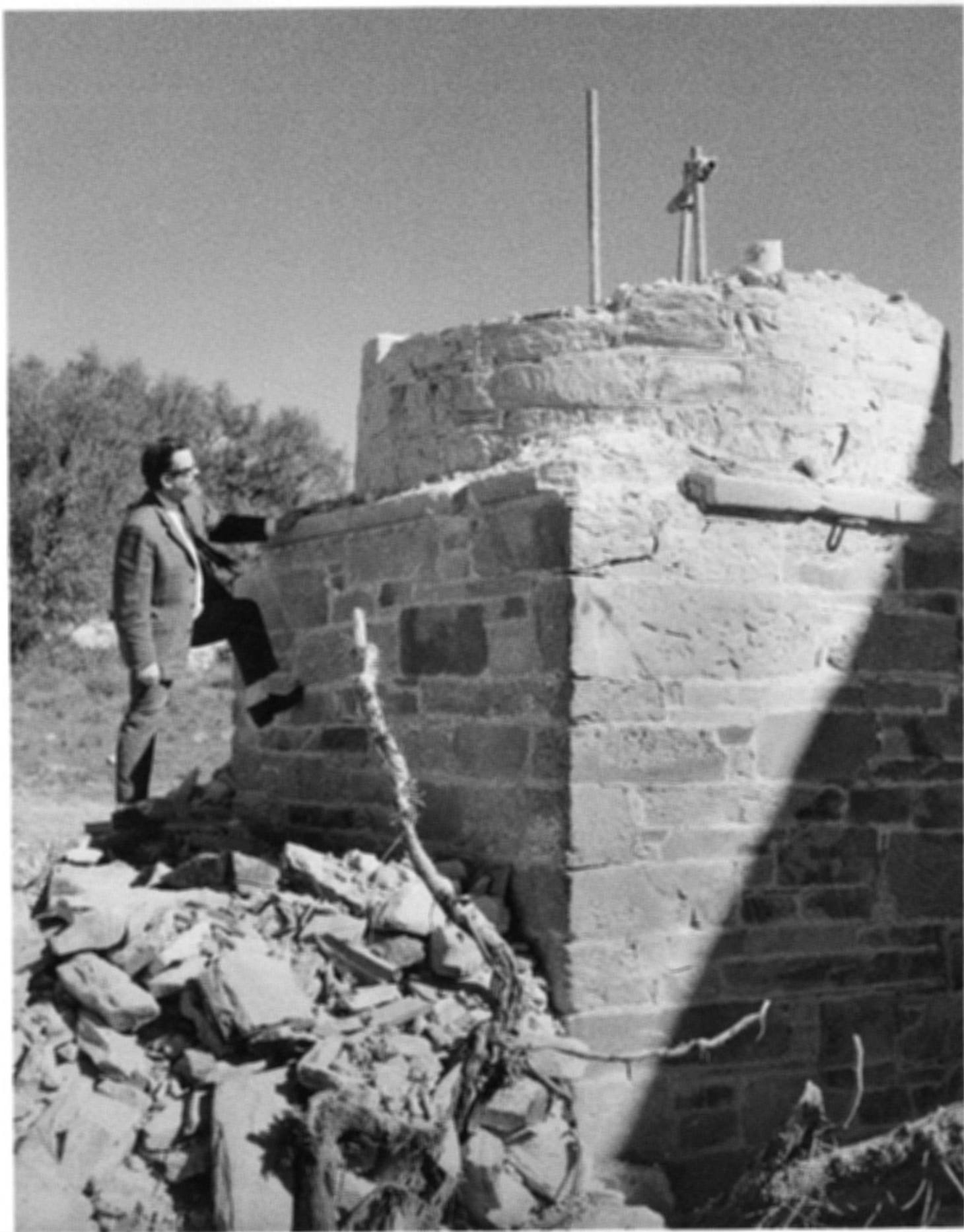












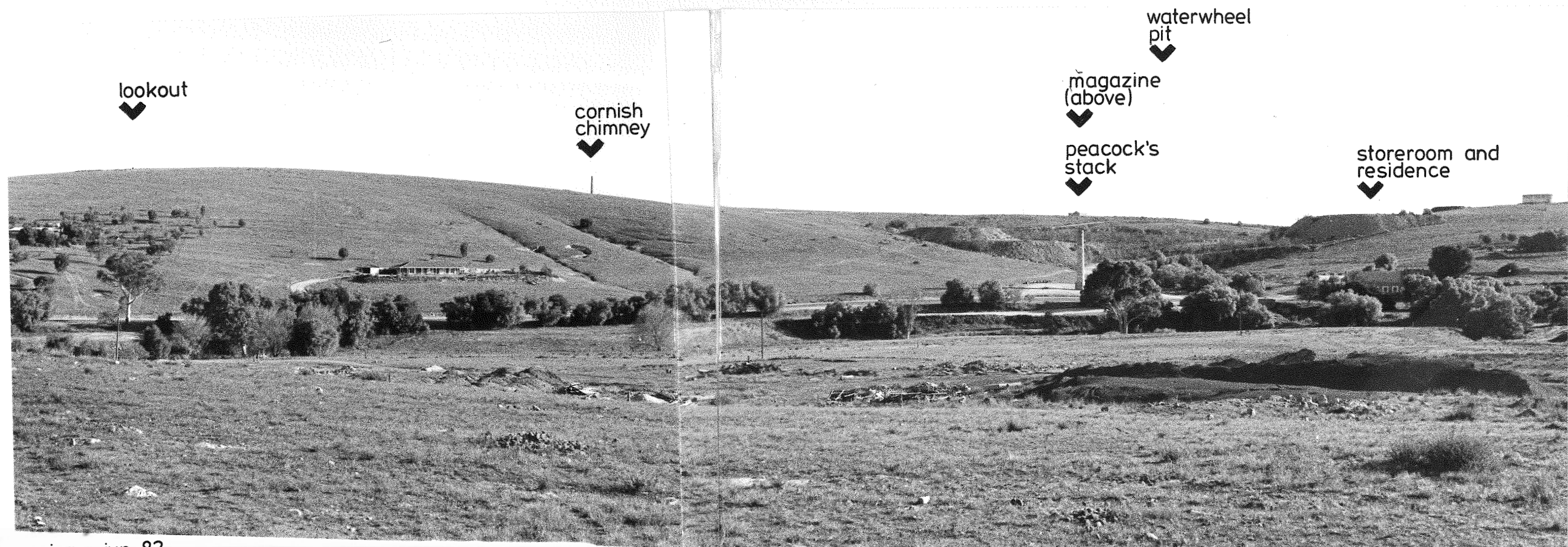












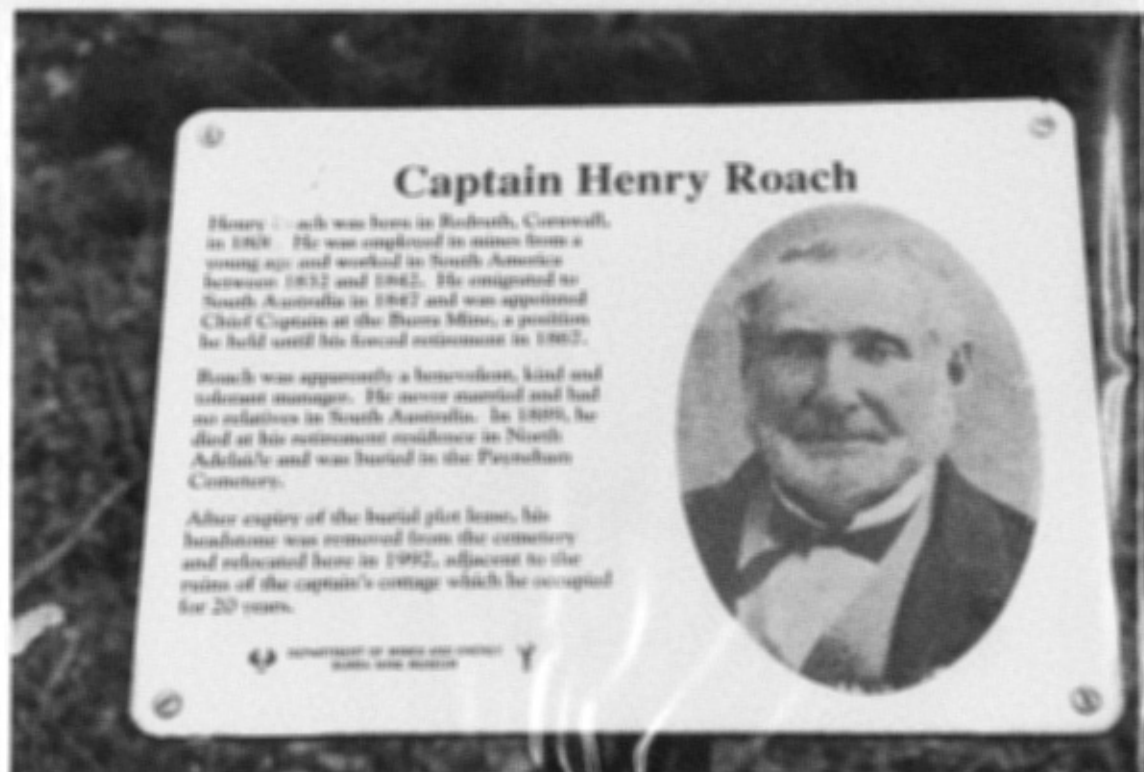
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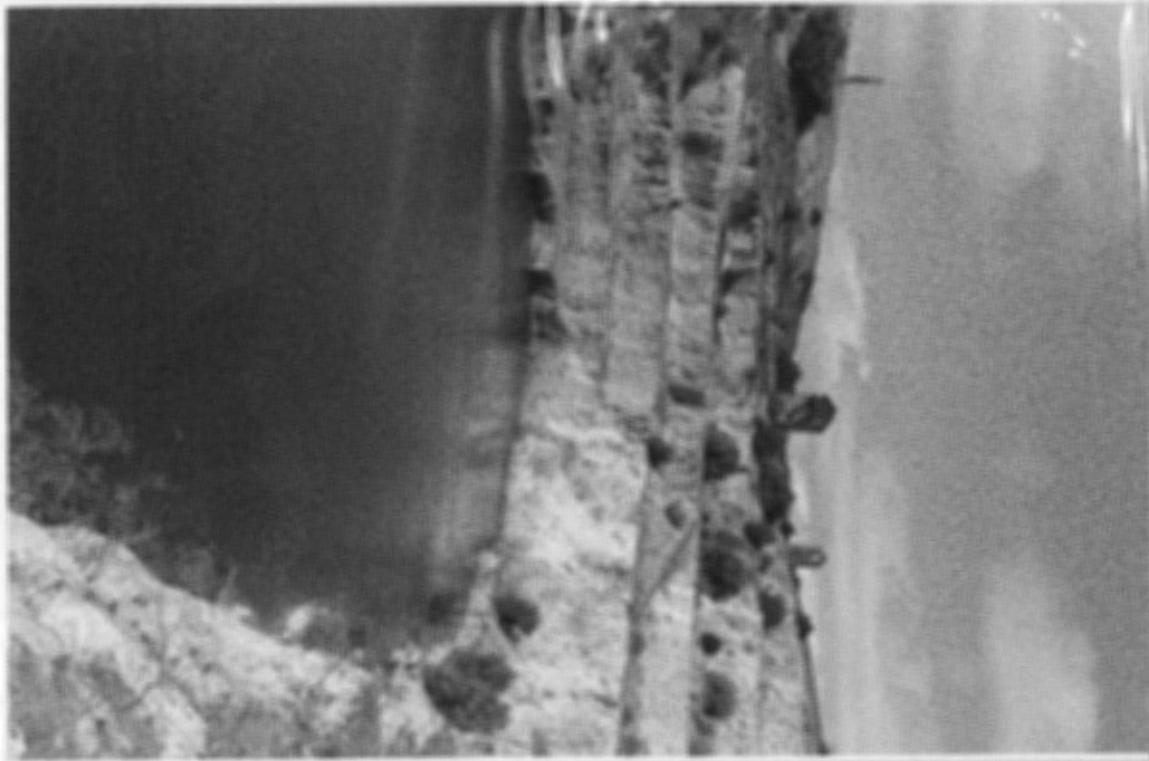


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SUMMARY OF STATE HERITAGE OBJECT

REGISTER ENTRY

Object associated with a State Heritage Place in accordance with Section 16(2)(c) of the *Heritage Places Act 1993*

NAME: Burra Jinker **OBJECT NO.:** 10970-01
[Object associated with Burra Mines Historic Site] **PLACE NO.:** 10970

ADDRESS OF PLACE: Market Street, Burra
(CT5250/610 F1763 A2, CT5882/153 F186980 A468,
CT5562/624 D24484 Q102, CT6152/669 D95074 A603)

ADDRESS OF OBJECT: Market Street, Burra
(CT 5562/624 DP24484 A102)

STATEMENT OF HERITAGE SIGNIFICANCE (OBJECT)

The Burra Jinker (also known as the Woollacott Jinker) has significant associations with the early development and operations of the Burra Copper Mines. The Burra Mines were constructed on a huge scale at a time when copper formed a substantial part of South Australia's economy, and Burra remains one of Australia's most significant heritage places associated with copper mining.

The rare surviving 'Jinker' at Burra reflects both the scale of operations at Burra and it has close associations with the work that went on at the Burra mine. First used in the 1850s, the Jinker is known to have transported the large boilers needed for the Schneider and subsequently, the Morphett Engine House from Port Adelaide to Burra. The Schneider Engine was delivered by Bell Freeman and the Morphett engine by William Woollacott who reportedly led a team of 6 drovers and 40 oxen (including 32 spare oxen).

The Jinker is considered an important artefact from Burra's past and was displayed at Wayville showgrounds as part of the centenary celebrations in 1936 until it was moved to the main street of Burra in 1965. In 2014, a new shelter was constructed to help protect the Jinker from the elements.

The Jinker not only has important associations with the copper mines at Burra, but also demonstrates the evolution of early transport in South Australia, and in particular remarkable carting achievements. The Jinker was adapted for use and often repaired during some of these long and difficult journeys across harsh terrain, reflecting the early technical innovation of the new colonists. The determination and willpower of the men who drove this vehicle exemplifies the experiences of early South Australian settlers in overcoming the obstacles required to build the Burra Mines and the colony.

STATEMENT OF HERITAGE SIGNIFICANCE (PLACE)

The following Statement of Heritage Significance dates from the time of entry of the Burra Historic Mine Site in the Register of State Heritage Items (now known as South Australian Heritage Register) in November 1984:

Historically, the Mines Historic site is important because the copper produced by it restored the colony's flagging economy during a crucial time in the mid 1840's. It is responsible for the establishment of the 'copper towns' surrounding the area, the mass influx of settlers who came from Cornwall and Wales to mine and smelt ore, and the provision of a transportation infrastructure that developed and established further settlement.

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Environmentally, the historic site is an exciting element in Burra's character and although its sheer size tends it to blend into the natural landscape, individual features are notable.

The Integrity, of the Historic Site has been compromised and most of it is left as ruins. But although not intact, the site does provide the evidence for its own appreciation.

SITE PLAN

Burra Jinker

Market Street, Burra

(Object associated with Burra Mines Historic Site, SHP 10970)



Location of the Burra Jinker, in relation to the Burra Mines Historic Site (SHP 10970)

[Generally indicating the important elements and features of the place (outlined in orange)]

N ↑

SITE PLAN

Burra Jinker

Market Street, Burra

(Object associated with Burra Mines Historic Site, SHP 10970)



Location of the Burra Jinker adjacent to Market Street, Burra, SA

[Generally indicating the location of important elements and features of the place (outlined in orange)]

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COMMENTARY ON THE LISTING

Description and notes with respect to a place entered in the South Australian Heritage Register in accordance with the *Heritage Places Act 1993*

Physical Description of Object

40ft long Jinker constructed of Bluegum, Ironbark and metal, with three wheels to each 'pelly' and 16" tyres.

History of the Object

In c1850 Burra became one of the first 'copper towns' growing around the South Australian Mining Association's mining operations. The conveyancing of ore from the Burra Mines initially required the use of bullock teams who could negotiate the terrain between Burra and Port Wakefield. Of the early 'bullockies' (men who drove the large teams of bullocks) was Mr Bell (aka Joe) Freeman, who provided the conveyancing for parts of the first large engine (the Schneider Engine) from Port Adelaide to the Burra Mines in 1852. The Burra Mines required large engines to allow water to be pumped out of the mine shafts, thus allowing the workers to access the mine without the issue of flooding.

The conveyancing of such large boilers required a Jinker, which was purpose built in 1851 by Mr Couls in Hindley Street of Bluegum and Ironbark. Reportedly the largest engine at Burra operated on the Morphet Shaft c1858 and required a boiler that was designed and constructed in England. When the large boiler arrived at Port Adelaide the great task of conveying this piece of machinery to the Burra Mines had to be faced by the South Australian Mining Association's directors, the Jinker was again utilised and Mr William Woollacott was contracted for the fee of £500 to drive a team of 40 bullocks to pull the boiler on the Jinker to the Burra Mines.

To carry out the contract, two poles were fixed to the Jinker that carried the boiler. This allowed the bullocks to pull two-abreast. While 32 bullocks were initially used, it was found that 40 bullocks made the pulling far easier. A large herd of bullocks had to accompany the bullocks actually pulling the Jinker to share the work load. It took up to six drivers to drive the Jinker and herd, causing considerable comment as they passed by.

The many journeys required to deliver the boiler parts were always difficult, involving the crossing of harsh terrain and several rivers. The journey was often delayed for repairs to the Jinker, shoring up of bridges prior to crossing or covering roadways with sand to reduce vibrational damage. The trip would take up to three weeks each time. Reportedly upon completion of the job the whole town turned out to

celebrate and welcome the 'plucky' teamster, who received a bonus for his endeavours.

References

This Summary was prepared by Simon Carter and Anna Pope of the State Heritage Unit, DEWNR using the following references:

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- *Burra Record*, 12 May 1936, p 1
- *Burra Record*, 19 June 1929, p 4
- Heritage Conservation Branch, 1983, *Register Nomination Report: Burra Mines Historic Site- Burra 10970*
- Regional Council of Goyder, 12 January 2015, History of the Burra Jinker, Goyder Staff Newsletter Article, pp 4-5, available at:
www.goyder.sa.gov.au/webdata/resources/files/staff%20newsletter%20-%2012%20January%202015.pdf
- *South Australian Register*, 22 September 1852, p 3
- State Heritage Branch, *Burra State Heritage Area*, DENR Factsheet (undated)
- State Library of South Australia, *Woollacott Jinker*, Article from the *Chronicle* dated 1933, B8637/1
- *Sydney Morning Herald*, 17 May 1851, p 2
- *The Adelaide Chronicle*, 9 February 1933, p 47
- *The Adelaide Chronicle*, 9 February 1933, p 47
- *The Mail*, 31 October 1925, p 14
- Treloar, F 1929, *The Burra mine : reminiscences of its rise and fall, 1845-1877*, Printed at the Burra Record Office, Burra, S. Aust, pp 26-27

PHOTOS

Burra Jinker

Market Street, Burra

(Object associated with Burra Mines Historic Site, SHP 10970)



Burra Jinker in shelter

Image Source: ABC News, 17 Sep 2015, *Historic Burra Jinker*, ABC News website, viewed 8 March 2016, <<http://www.abc.net.au/news/2015-09-17/historic-burra-jinker/6782590>>



Burra Jinker in shelter

Image Source: Lovejoy, N & J, *Can Go Around Australia*, Blog, viewed 8 March 2016, <<http://cangoaustralia.blogspot.com.au/2014/04/burra-sa.html>>