

ASSESSMENT OF HERITAGE VALUE

Lime Kiln ruins
Bower

DESCRIPTION OF PLACE

A group of three brick-lined kilns built in the 1920s by the Wilksch family at Bower to produce lime by burning limestone. The stone was quarried on the property to the east of the kilns. Lime was sent by rail from Bower as far as Broken Hill during the 1920s and 1930s. The historic remains are in need of stabilisation as bricks have been removed from the site over the years and the walls have deteriorated and collapsed.

STATEMENT OF HERITAGE VALUE

The kiln site for burning limestone to make lime was established in the 1920s at Bower and has heritage value in being one of the few remaining lime kiln sites in South Australia. The kilns provided lime to a wide area during the 1920s and 1930s. The remains of the three kilns are brick-lined and are in a ruined state.

RELEVANT CRITERIA

Section 16, *Heritage Act 1993*

- (a) *it demonstrates important aspects of the evolution or pattern of the State's history namely the production of lime which was an essential ingredient for mortar used in stone and brick construction, the predominant building method in South Australia from the mid-nineteenth century*

Lime was one of the earliest chemicals used by man and the processing of lime one of the oldest industries. There is evidence of lime-burning and the use of lime mortar in Mesopotamia by 2500 BC.

During the nineteenth century, small lime kilns were established in South Australia in a number of areas where limestone, dolomite or a large supply of sea shells were available. Builders often manufactured their own lime from locally available sources using cleared timber as a fuel.

The kilns were mostly used to reduce local limestone (a sedimentary rock of calcite or calcium carbonate, CaCO_3) into powdered common lime (calcium oxide, CaO) which is used in the building industry for mortar, lime plaster, whitewash and cement. It is also used in agriculture and as a metallurgical flux in the smelting and refining of aluminium, copper and zinc. One ton of stones produced approximately 21 bushels (84 pecks) or seven bags of lime.

THE PROCESS OF CALCINATION

Lime was produced from the limestone in a slow burning kiln. The process releases water and carbon dioxide from the limestone leaving a lump of powdery, greyish-white quicklime

(sometimes referred to as lump lime). The operation involved placing logs of wood in the base of the kiln and layering limestone and wood alternatively until the kiln was full. The contents were then set alight at the base and would burn for one to two days until the kiln was ready to be emptied of the remaining lime by raking it through the draw-off hearth.

At Bower, a constant production of lime could be maintained with three kilns and five men working. The fresh lime was then bagged and taken to the railway for transport. Lime produced in the 1920s and 1930s at the Bower kilns was transported as far afield as Broken Hill.

In 1863 there were 70 lime kilns in country districts of South Australia. By 1876 sixteen remained employing 120 men and in 1885 there were fifteen limeworks employing 77 men. (Donovan, 23, 41,63) By 1912 David Miller was moving into cement production in South Australia and in 1913 established the Adelaide Cement Company but lime manufacturing continued as a local industry on a small scale until the 1950s. The Bower limeworks was a local plant during the transition period for the industry towards the establishment of large scale production.

(b) it has rare, uncommon or endangered qualities that are of cultural significance due to the deteriorated condition of the site

The lime kilns at Bower are a rare and uncommon example of small scale local lime production before the 1939-1945 War. The site is endangered through destabilisation of the brick construction and needs conservation work to preserve the remains for the future.

There are three lime kilns currently entered in the *State Heritage Register*; the 'Lime Kiln and Jetty', Wool Bay (File 10112, Registered 28 November 1985); the 'former Lime Kiln and Quarry', Days Road Murdoch Hill (File 12900, Registered 20 November 1986) and the Lime Kilns included in 'The Peake Ruins' (File 13624, Registered 28 May 1987).

REFERENCES

- | | |
|----------------|--|
| Donovan, Peter | <i>An Industrial History of South Australia</i>
Working Paper 2, Department of Architecture
University of Adelaide, 1979 |
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SITE RECORD

Lime Kiln ruins
Bower

Description	A group of three brick-lined kilns built in the 1920s by the Wilksch family at Bower to burn limestone. The stone was quarried on the property to the east of the kilns. Lime was sent by rail from Bower as far as Broken Hill during the 1920s and 1930s. The historic remains are in need of stabilisation.
AMG Reference	N 6222250 E 348500 Map Sheet MOUNT MARY 6729-1 (1:50000)
Boundary	Land on which the three kilns are located
Land Description	Section 29 Hundred of Beatty Certificate of Title Volume 1808 Folio 139
Local Government	The District Council of Morgan
Owner	<div style="background-color: black; width: 200px; height: 1.2em; margin-bottom: 2px;"></div> <div style="background-color: black; width: 100px; height: 1.2em; margin-bottom: 2px;"></div> <div style="background-color: black; width: 150px; height: 1.2em;"></div>
Other Assessments	1983 survey, <i>Heritage of the Lower North</i>
Photographs	1983 survey, <i>Heritage of the Lower North</i> Film , 24 January 1996
Report By	Y L Reynolds

FILE INFORMATION REPORT

Lime Kiln
Bower

REGISTER HISTORY AND OWNER CONSULTATION

1983	<i>Heritage of the Lower North survey</i>
30 May 1984	South Australian Heritage Committee recommended place for inclusion in the <i>State Heritage Register</i>
14 December 1995	Spoke with owner on the telephone to discuss possible heritage listing
9 January 1996	Informal Letter of Intent sent to owners
24 January 1996	Site visit to inspect remains of kilns

CRITERIASection 16, *Heritage Act 1993*

- (a) it demonstrates important aspects of the evolution or pattern of the State's history
- (b) it has rare, uncommon or endangered qualities that are of cultural significance

South
Australian
Heritage
Act
1978-80

HERITAGE SURVEY ITEM IDENTIFICATION SHEET

PROJECT
HERITAGE SURVEY REGION 8

Item Ref. No. 4

ITEM NAME: Lime kiln ruins
Former or other

Office Use
ITEM No.
DOCKET No.

HERITAGE SIGNIFICANCE

This group of lime kilns was established by the Wilksch family in approximately 1920 when the Wilksch blacksmithing business was diminishing due to the introduction of tractors and motor vehicles. During the 1920s and 30s the business flourished and employed up to 5 people including Len Wilksch, the son of the founder.

Sometimes lime was stored in the old stone blacksmith shed nearby, but normally it was sent away fresh by rail from Bower to as far as Broken Hill. The kiln was the only major kiln in the area, another large kiln being at Sedan. Lime-stone was quarried off the property to the east of the kilns and this quarry, along with the partly ruined remains of three brick lined kilns are of great archaeological interest. The relics are the only surviving in the Region and one of the few surviving in the State.

LOCATION
Address

Town Bower
Postcode
Section 29
Hundred Beatty
County
L.G.A. Morgan
S.H.P. Region 8
A.M.G. Ref. 6729-I
54 34840 622250

SUBJECT

4.4

PERIOD
State

Study Area
1905-28

REFERENCES

Verbal Len Wilksch, 1982
Archival photographs

TYPE OF ITEM
LAND Natural feature ☐
Historical site ☐
Historical Gdn. ☐
BUILDING ☐
STRUCTURE ☒
PHYSICAL CONDITION
Ruined but of
archaeological interest

PHOTOGRAPH Film No. 574 Negative No. 2
Direction of view to W



STATUS
Reg. of State Her. Items
Reg. ☐ Interim L. ☐
Nominated ☐
National Estate
Reg. ☐ Proposed L. ☐
National Trust
CL ☐ RL ☐ File ☐
Other

RECOMMENDATION

(A) State ☒ (B) Local ☐

PREPARED BY

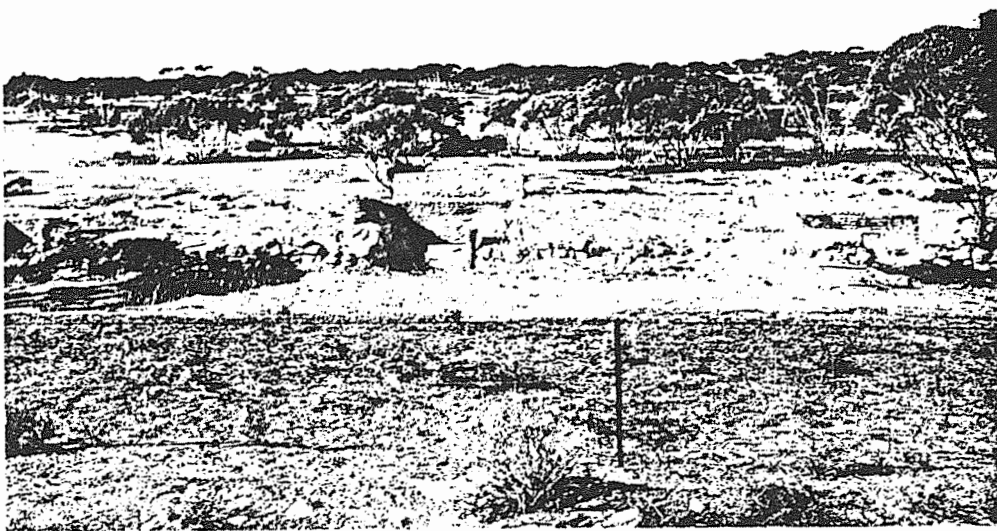
HERITAGE INVESTIGATIONS

Date: 1982

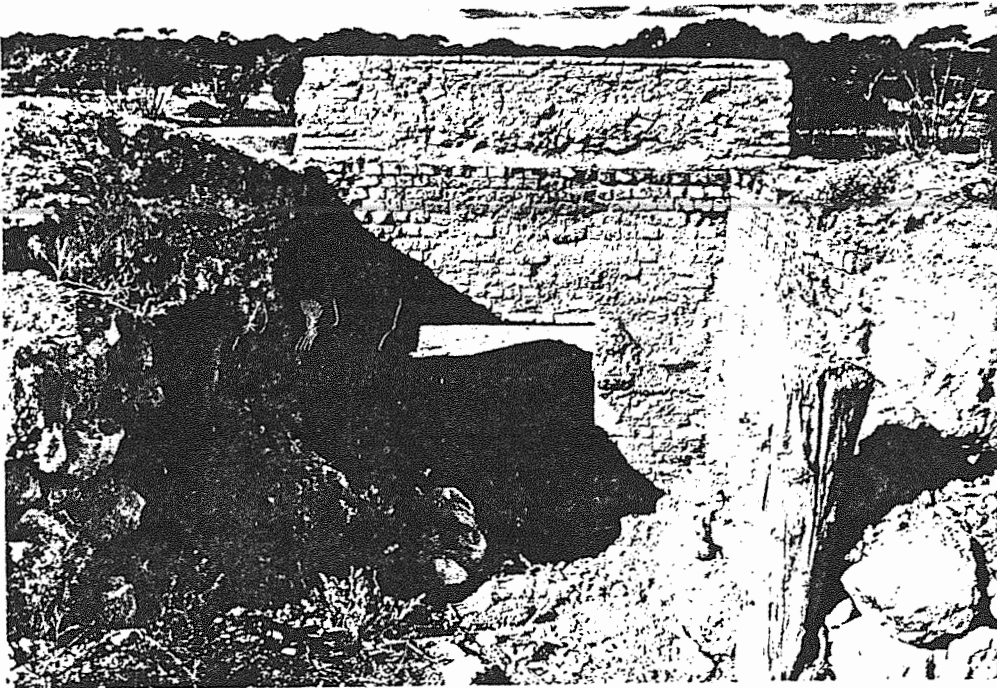
PROJECT
HERITAGE SURVEY REGION 8

Item Ref. No. 4(a)

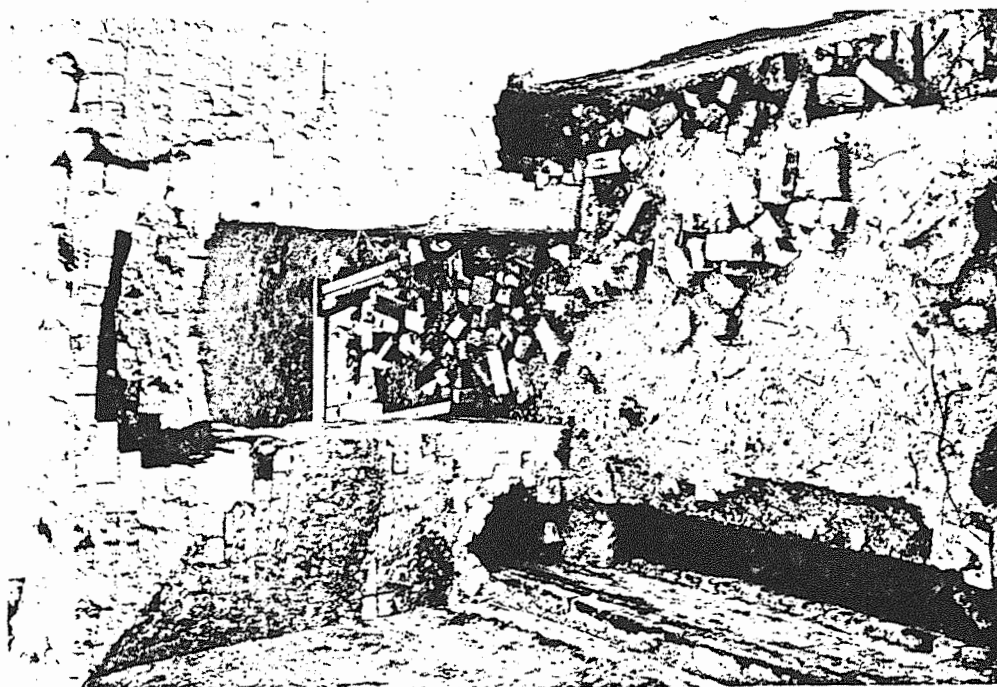
L.G.A. Morgan



Film No. 574
Negative No. 1
Direction of view to E



Film No. 574
Negative No. 6
Direction of view to E



Film No. 574
Negative No. 5
Direction of view to E



ITEM LOCATION MAP

- Item location

----- District Council Boundary



FILM 1931

LIME KILN RVINS
BOWER

11024
24/1/96