# FOR ENTRY IN THE REGISTER OF HERITAGE PLACES

1.	DATA BASE No.	P13670						
2.	NAME	Lime Kilns, Howatha	nra					
3.	LOCATION	adjacent Oakajee Ri	ver, Howatharra					
4.	DESCRIPTION OF PLACE INCLUDED IN THIS ENTRY (leave for Land Information Officer to fill in )							
5.	LOCAL GOVERNME	ENT AREA	Shire of Chapman Valley					
6.	OWNER (leave	for Land Information	Officer to fill in )					
7.	Register of Herita     National Trust Cla     Town Planning Sa     Municipal Invento     Register of the National Trust	age Places: assification: cheme: ory:						
8.	CONSERVATION ORDER							
9.	HERITAGE AGREE	MENT						
40								

## 10. STATEMENT OF SIGNIFICANCE

Lime Kilns, Howatharra, the remains of four purpose built vernacular lime kiln elements, has cultural heritage significance for the following reasons:

it is a representative example of the ruins of vernacular lime kilns common to more remote rural districts in the first half of the twentieth century; and,

it has associations with the provision of lime for local building work in the Chapman Valley area and with Nanson labourer and builder Fred Murphy in the years 1938-1940.

#### 11. ASSESSMENT OF CULTURAL HERITAGE SIGNIFICANCE

The criteria adopted by the Heritage Council in November 1996 have been used to determine the cultural heritage significance of the place.

# PRINCIPAL AUSTRALIAN HISTORIC THEME(S)

3.14.2

Using Australian materials in construction

# HERITAGE COUNCIL OF WESTERN AUSTRALIA THEME(S)

303

Mining (inc. mineral processing)

308

Commercial services and industries

# 11.1 AESTHETIC VALUE\*

## 11.2 HISTORIC VALUE

Lime Kilns, Howatharra, was established to provide lime for local building work in the Chapman Valley area. (Criterion 2.1 & 2.2)

Lime Kilns, Howatharra, is associated with Nanson labourer and builder Fred Murphy in the years 1938-1940. (Criterion 2.3)

# 11.3 SCIENTIFIC VALUE

Lime Kilns, Howatharra, has the potential to yield archaeological evidence that could provide information on the use of the place and on the lime burning process. (Criterion 3.2)

# 11.4 SOCIAL VALUE

Lime Kilns, Howatharra, has social value for the local community who, although unsure of who constructed and worked the kilns, are aware of their existence as part of the occupation and history of the district. (Criterion 4.1)

#### 12. DEGREE OF SIGNIFICANCE

#### 12.1 RARITY

# 12.2 REPRESENTATIVENESS

For consistency, all references to architectural style are taken from Apperly, R., Irving, R., Reynolds, P. A Pictorial Guide to Identifying Australian Architecture. Styles and Terms from 1788 to the Present, Angus and Robertson, North Ryde, 1989.

For consistency, all references to garden and landscape types and styles are taken from Ramsay, J. Parks, Gardens and Special Trees: A Classification and Assessment Method for the Register of the National Estate, Australian Government Publishing Service, Canberra, 1991, with additional reference to Richards, O. Theoretical Framework for Designed Landscapes in WA, unpublished report, 1997.

Lime Kilns, Howatharra is a representative example of the ruins of vernacular lime kiln elements common to more remote rural districts in the first half of the twentieth century. (Criterion 6.1)

# 12.3 CONDITION

Lime Kilns, Howatharra is in poor condition. It has been neglected over a considerable period of time and fallen into this ruinous state due to lack of continued use and consequent neglect.

## 12.4 INTEGRITY

Lime Kilns, Howatharra has not been functional for many decades, and has declined to become a ruin. The remains show minimal evidence of the nature of the place, and they are not intact or redeemable. The place has a low degree of integrity.

# 12.5 AUTHENTICITY

Lime Kilns, Howatharra provides evidence of some original fabric in its context, but overall presents a low degree of authenticity.

# 13. SUPPORTING EVIDENCE

The documentation for this place is based on the heritage assessment completed by Irene Sauman, Historian and Laura Gray, Heritage and Conservation Consultant, in May 2010 with amendments and/or additions by HCWA staff and the Register Committee.

If there is any special curtilage that has been decided by the Register Committee or the Heritage Council a brief description of it should go here.

# 13.1 DOCUMENTARY EVIDENCE

Lime Kilns, Howatharra comprises the ruins of four lime kiln elements on Victoria Location 5663 adjacent to the Oakajee River at Howatharra.<sup>1</sup>

The Champion Bay and Greenough Flats districts were explored in 1839 by Lieut George Grey, and again in 1848 by Assistant Surveyor A. C. Gregory. Both considered the area suitable for pastoral and agricultural activities, but it was the discovery of lead deposits 50 kilometres further north in the Murchison region that resulted in the area first being settled. The Geraldine Lead Mine opened in 1849, and the settlement of Geraldton was authorised on Champion Bay.<sup>2</sup>

The Aboriginal name for the Champion Bay district was "Wootakarra' (Utacarra) and the region is the country of the Yamatji people. This large grouping is made up of a number of former smaller language groups whose boundaries moved according to the seasons. The term Yamatji was a general term used by the people of the region to refer to themselves as distinct from Europeans. Mount Gould (Japarang) was considered to be the central place for the region. The areas around creeks and rivers would have been well frequented for hunting, fishing and camping.<sup>3</sup>

Pastoralists moved into the district in the 1850s, among them brothers William and Lockier Burges and John and James Drummond. John Nicol Drummond, who was a police inspector at Champion Bay, established Redcliffe, later known as White Peak. His brother James established Oakabella to the north, which was later taken up by Lockier Burges. These two properties were the original grants in the Oakajee area.<sup>4</sup>

Information provided on site to Laura Gray by Kelvin Royce indicates that what may have been thought to be a well at the lower level of the site is actually a lime kiln.

The First Hundred Years: Geraldton Centenary 1850-1950', Municipality of Geraldton, [1950], pp. 5-7.

Berndt, R. M. & Catherine (Eds) Aborigines of the West: Their past and present, UWA Press, 1980; Bates, D. M. The Native Tribes of Western Australia, Canberra, National Library of Australia, 1985; Hallam, Sylvia, J. 'The First Western Australians', In Stannage, C. T. (ed) A New History of Western Australia, UWA Press, Perth, 1981, pp. 35-71; Tindale, Norman B. Aboriginal Tribes of Australia: Their terrain, environmental controls, distribution, limits, and proper names, ANU Press, Canberra, 1974.

McDonald, Hales and Associates, 'Oakajee Industrial Estate - heritage management plans', Section 5: The non-indigenous heritage values of the study area, pp. 44-45; Bain, Mary Albertus, Ancient Landmarks: a social and economic history of the Victoria district of Western Australia 1839-1894, UWA Press, 1975, pp. 86-89, 100-101; Erickson, Rica, Bicentennial Dictionary of Western Australians, Perth, UWA Press, 1988, p. 900.

Agitation for a railway from Geraldton to service the mines had begun as early as 1859. In 1864, the township of Northampton was established in the southern part of the Murchison fields, about 34 miles north of Geraldton. This was considered the ideal destination for a rail line from the port.<sup>5</sup> Lead and copper mines had been established between Geraldton and Northampton, including the Celira, Oakajee, Maguire and White Peak mines. The latter was a copper mine established in 1867 on James Drummond's White Peak property and financed by George Shenton.<sup>6</sup>

A railway line of 33 miles 66 chains known as the Northern Railway was officially opened between Geraldton and Northampton on 26 July 1879. The train stopped at twelve sidings associated with pastoral properties. Lead mining had slumped by the time the line was opened due to a 50% drop in price, and many mines closed, some never to reopen.

In the twentieth century, however, mining and agriculture advanced and the Northampton line was extended between 1909 and 1913, with a spur line from Wokarina to Yuna and a 33-mile extension of the main line from Northampton to Ajana. These lines were wholly dependent on mining and agriculture. With government acquisition of some pastoral properties for subdivision for agriculture, in particular wheat cultivation, the district became more densely settled. In 1908, a railway siding named Howatharra was established and a town site gazetted the following year. Howatharra is the nearest town to the Oakajee River, being a little to the east.

Lime Kilns, Howatharra is located on Victoria Location 5663. This parcel of land was originally held under pastoral lease and the first freehold title was issued in 1918 to Edward Norman Hester and Henry Edward Carey of White Peak Station. They held the title until 1941, when it was transferred to Carey alone. He retained ownership until 1954. 12 It was during their ownerships that Lime Kilns, Howatharra is known to have been in operation. A 1903 map of

The First Hundred Years: Geraldton Centenary 1850-1950', op cit; Bain, Mary Albertus, A life of its own: a social and economic history of the City of Geraldton and the Shire of Greenough, 1846-1988, City of Geraldton, 1996, pp. 17-105; Hay, John, 'Literature and Society', p. 607, In Stannage, C. T. (ed) A New History of Western Australia, UWA Press, Perth, 1981, pp. 599-635.

<sup>6</sup> Lands & Survey, 'Plan of country between Champion Bay and the Mines showing practicable routes for a Light Railway through the district', 1872, SROWA, WAS 237 CONS 3846 Item 165; Bain, Mary Albertus, op cit, pp. 162-164.

Geraldton & Northampton Railway Specifications of Work: General conditions of contract, etc.' Gov Printer, Perth [1874]; 'The First Hundred Years', op cit, p. 10; Joyce, John (ed), Western Australia's first government railway 1879-1957, Australian Railway Historical Society (WA) Inc, Ashfield, July 1979, pp. 5, 8.

Spillman, K., A Rich Endowment: Government & Mining in Western Australia 1829-1994, published to commemorate the centenary of the Department of Minerals & Energy, UWA Press, Nedlands, 1993

West Australian Government Railways (WAGR), Annual Reports, 1950-1958; Joyce, John (ed), op cit, p. 12.

Glynn, Sean, Government Policy and Agricultural Development: A study of the role of government in the development of the Western Australian wheat belt, 1900-1930, UWA Press, 1975.

<sup>11</sup> Landgate website, history of country towns.

<sup>12</sup> Certificate of Title, Vol. 709 Fol. 147, 29 May 1918.

the area does not show the kilns but a lime kiln is marked on a 1926 Lands & Survey plan. 13

The kilns are not of large commercial size and that and other factors indicate that they were of a more domestic use. There is no quarry associated with Lime Kilns, Howatharra, the limestone apparently being sourced from the surrounding surface, and the structures are accessed from the North West Coastal Highway by what is now a barely discernible bush track. According to Alice Nannup, Lime Kilns, Howatharra was in use in the mid 1930s, when her husband was cutting posts and firewood in the area. In the later 1930s to early 1940s, Fred Murphy of Nanson is believed to have sourced lime from the place for the construction of stone houses. Frederick Murphy is listed as a labourer at Nanson from 1938 to 1940. Other information indicates Lime Kilns, Howatharra was operating after the Second World War until 1952.

White Peaks Station was not acquired for subdivision for agricultural settlement, but parts of it have been sold off over the years. In 1958, Murrum Pastoral Company acquired Location 5663 and the land was leased by Trevor Royce from 1977. Lime Kilns, Howatharra was not in use at that time and as far as is known, had not been in use for some time previous. 18

A search of the Post Office Directory listings for Geraldton, Howatharra and Nanson in 1936 and 1940 failed to locate anyone with the occupation of lime burner. The Tindale & Millers Lime Co Ltd is listed in Geraldton from 1933 to 1942, but there is no information as to whether or not they received any of the product of *Lime Kilns*, *Howatharra*. Available information appears to indicate that the kilns were of local and domestic use, with people 'burning for themselves'. 19

Burning lime did not require any particular skill and it was not uncommon for the material to be produced for individual projects at the site, either in a small kiln constructed for the purpose or in a shallow pit. When Thomas Buckingham was building his house at Kelmscott in 1868, he records burning lime in a field nearby.<sup>20</sup>

A kiln could be operated as a mixed-feed (pot kiln) or separate-feed (patent kiln). In a mixed feed operation the limestone and fuel, generally timber, were placed into the kiln in layers and fired. The burnt lime, mixed with the ash, was removed through a doorway at the side. In a separate-feed operation, the kiln was loaded only with stone, and the timber was burnt in a firebox on

<sup>13</sup> Lands & Survey plans 157A40, 1903 & 1926, Battye Library cadastral maps CN77.

Information provided by Alice Nannup in Suba, Tanya & Callow, Bruce, European site survey -Chapman Valley, for Landcorp, 1993; Information provided by Trevor Royce to Irene Sauman, 5 May 2010.

<sup>15</sup> Information provided by 92-year-old John Burges to Irene Sauman, 5 May 2010.

<sup>16</sup> Wise's Post Office Directory, 1935-1945.

<sup>17</sup> Suba, Tanya & Callow, Bruce, op cit.

<sup>18</sup> Information provided by Trevor Royce to Irene Sauman, 5 May 2010.

<sup>19</sup> Information provided by 92-year-old John Burges to Irene Sauman, 5 May 2010.

Buckingham, Thomas Jr, 'Memoirs of Thomas Buckingham, born 10-4-1839', Perth, typescript, [1910], p. 23.

the side. Patent kilns produced lime with less ash.<sup>21</sup> The kilns operated in Western Australia in the late nineteenth and early to mid twentieth centuries were pot kilns, as were the kilns of *Lime Kilns, Howatharra* at the Oakajee River

The process of loading, firing and emptying a kiln could take up to two weeks, depending on the kiln capacity, with the firing process occupying two to three days. During firing, the kiln was manned continuously and fuel added as required. The limestone used had to be of a high quality and all of the same type, as stone with higher shell content burnt more quickly and could cause uneven firing in the kiln.<sup>22</sup>

In the nineteenth and early twentieth century, lime was used in the building industry for mortar, lime wash and render.<sup>23</sup> In the mining industry it was used as a fluxing agent for gold extraction, while 'slacklime', a low-grade lime from kiln debris, was used in limited quantities in agriculture.<sup>24</sup>

In 2010, Lime Kilns, Howatharra is a ruin.

# 13.2 PHYSICAL EVIDENCE

Lime Kilns, Howatharra, comprises the ruins of four lime kiln elements, situated approximately 20 kilometres north of Geraldton, in a paddock, two kilometres west of the North West Coastal Highway. The site can only be accessed by a rough track skirting the topography of hills and valleys and cutting across former paddocks.

Lime Kilns, Howatharra is only visible on close proximity inspection. Two kiln elements are located on the side of a limestone outcrop hill, on the east slope, and the other two are east of the hillside, in the valley approximately 200 metres away. The valley kiln elements are located within a former paddock area that is contoured and planted out with plantation trees.

Lime Kilns, Howatharra is utilitarian structures, with the basic form determined by the requirements of the lime burning process. The hillside kiln elements comprise a circular brick kiln on the east side of the limestone outcrop with evidence of an associated element (Kiln 2) 10 metres or so down the hillside.

Kiln 1 (hillside) is circular with a diameter of approximately 2 metres, situated predominantly below ground. The external lining of the circular form is curved steel plate, and the interior is lined with bricks and stone. The bricks, mostly part bricks are laid in headers around most of the perimeter above ground level, with random laterite stone, and limestone insitu rock beneath. There is random laterite stone above ground level on part of the north and east sides

Wingate Michael, Small-scale Lime Burning: A practical introduction, Intermediate Technology Publications, 1985, pp. 9-10.

<sup>22 &</sup>quot;Cooper's Lime Kilns', Trust News, March 1999, pp. 12-14.

Cowper, A. D. Lime and Lime Mortars, Donhead Publishing, London, 1998 reprint of 1927 publication by HM Stationery Office, London for the Building Research Station, pp. 1-8.

Pearson, Michael, 'Archaeological interpretation and ethnographic analogy: the lime industry in Western Australia', Archaeology in Oceania, Vol. 21 No. 1, April 1986, pp. 94-102; Letter from Robert Ferres to Isaac Wood, 15 June 1861, regarding Lime-Kiln Grant, Fremantie, Battye Private Archives, ACC 1A.

of the perimeter. The kiln is in a ruinous state filled with debris and the top of the wall, above ground level is damaged and deteriorated. The steel plate is severely rusted, particularly where it has been below ground, and the brick and stone have fallen away on the north and east sides predominantly. A slab of remnant concrete is located adjacent to the kiln on the north side. It is likely that Kiln 1 is the element that has been referred to as an 'Historic well'. However, the evidence indicates kiln associations rather than a well.

Kiln 2, located a few metres east down the hill from Kiln 1, is a pile of random limestone stones. It is likely the remains of a vent associated with Kiln 1.

Kilns 3 and 4 are located in close proximity to each other, central within a former paddock that is now a contoured tree plantation, between the hillside (west) where kilns 1 and 2 are located, and the Oakajee River to the east.

Kiln 3 (south) evidences the remains of a square or rectangular form laterite stone structure predominantly below ground level, with two and three random stone courses above ground level and a corner detail on the southwest corner, and the east side no longer evident. There is a pile of remnant stone on the southeast corner. The pit surrounded by the stone walls, is infilled with debris.

Kiln 4 is a random laterite stone structure a metre or so high, several metres long with stepped ends, and approximately 0.500 metres of a double and three deep stone wall. The stone wall extends below ground level with an open pit to the front (west), facing up hill, with a pile of remnant stones only a few metres in front. The front wall (west) demonstrates a 'face' finish of the random stone, likely associated with the kiln function and heat element of that function. On the back (east), along the ground level line of the 'wall' there are several openings between the random stones that are likely vents or similar associated with the function of the kiln. The open pit has been filled with debris so the depth is indeterminate.

Due to the ruinous state of the all 4 kiln elements it is difficult to get a clear understanding of the site.

# 13.3 COMPARATIVE INFORMATION

There are twenty five lime kilns entered on the Heritage Council Database, of which three are on the State Register - P4622 Lime Kilns, Capel; P4558 Lime Kilns - Coopers (12 & 12A); and, P10180 Three Lime Kilns Group, Cockburn.

The Coopers kilns (City of Wanneroo: Mindarie) and the kilns at Cockburn were commercial operations employing a number of men and the kilns are large rectangular structures.

Lime Kilns, Capel is located in the Tuart Forest National Park. It comprises three round kilns arranged in a semicircle, a fourth kiln some distance away, a well and evidence of quarrying. The kilns were possibly constructed in the late 1890s. The circular design eliminated the problem of 'cool spots', which occurred in kilns with right-angled corners. The kilns are constructed of limestone rubble and were originally lined with bricks, but the lining is not extant. They vary in size from 3.3 to 4.6 metres in diameter. Each has a single stoke hole. Access to the top of the kilns is achieved by earth piled

around the structures in a spiral to form a loading ramp. The kilns ceased operation around the mid to late 1930s. Their condition is generally poor.<sup>25</sup>

There are several lime kilns recorded in the City of Wanneroo in the Neerabup and Nowergup area. These places are associated with commercial manufacturers, have multiple kilns constructed of brick and limestone and are generally in poor condition. They are; P9475 Dunstan's Kilns (28-32, 42, 46), Nowergup; P9474 Lime Kilns (7-11), Quarry, Neerabup; P9477 Lime Kiln Brady (3), Neerabup; P9479 East Neerabup Kilns (20 and 21); and P9481 Hale Kilns, Nowergup.<sup>26</sup>

P9842 Old Lime Kiln, Carine, is a very small kiln associated with domestic or small scale use. Outside the metropolitan area several lime kilns are recorded in coastal localities. They are; P12291 Pell Bridge, Quarry and Lime kiln Sites, Yardarino and P8918 Lime Kiln and Quarry Site, Port Gregory.

There are circular and rectangular kilns at Albany in an area known as Limekiln Point. They date from around 1849 to the 1890s. Photographs indicate they are in generally poor to fair condition.<sup>27</sup>

Lime Kilns, Howatharra is a representative example of the ruins of rural vernacular lime kilns dating from the first half of the twentieth century.

## 13.4 KEY REFERENCES

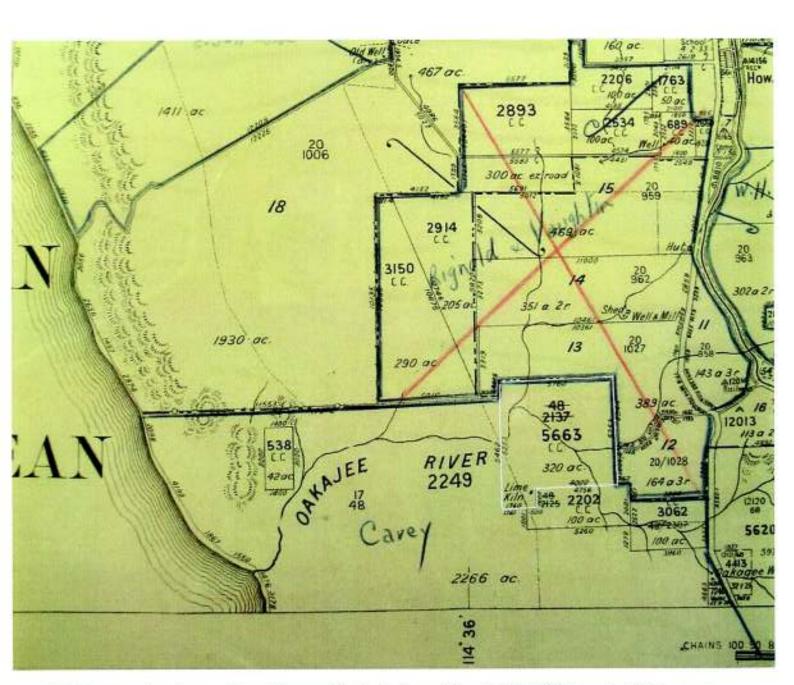
No key references.

#### 13.5 FURTHER RESEARCH

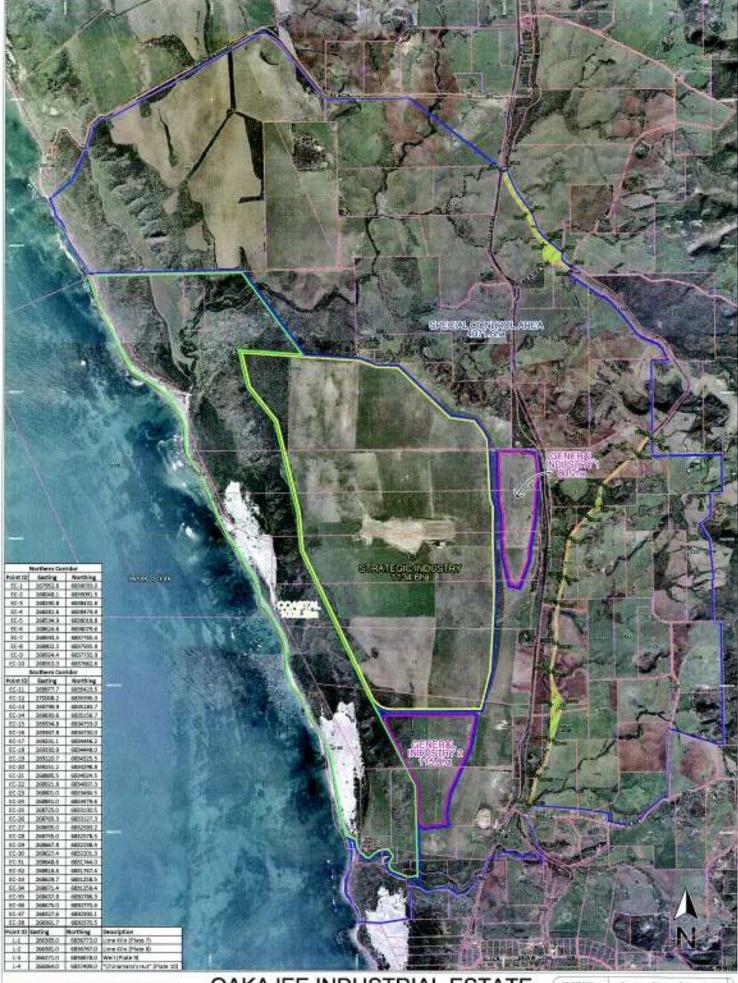
<sup>25</sup> Hammond & Green Pty Ltd and Ecoscape (Australia) Pty Ltd, Heritage assessment and conservation plan for Lime Kilns, Tuart Forest National Park, April 1996.

The City of Wanneroo prepared a report in 2005 identifying Lime Kilns within the city. This report has identified 25 sites, one of which is still burning lime in the traditional method. This reference from HCWA assessment documentation P10180 Lime Kilns Cockburn.

<sup>27</sup> Hammond & Green Pty Ltd and Ecoscape (Australia) Pty Ltd, Heritage assessment and conservation plan for Lime Kilns, Tuart Forest National Park, April 1996.



1926 map showing a lime kiln on Victoria Location 5663. WA Lands & Survey, Bonnes 40 cadastral maps, CN77 157A.

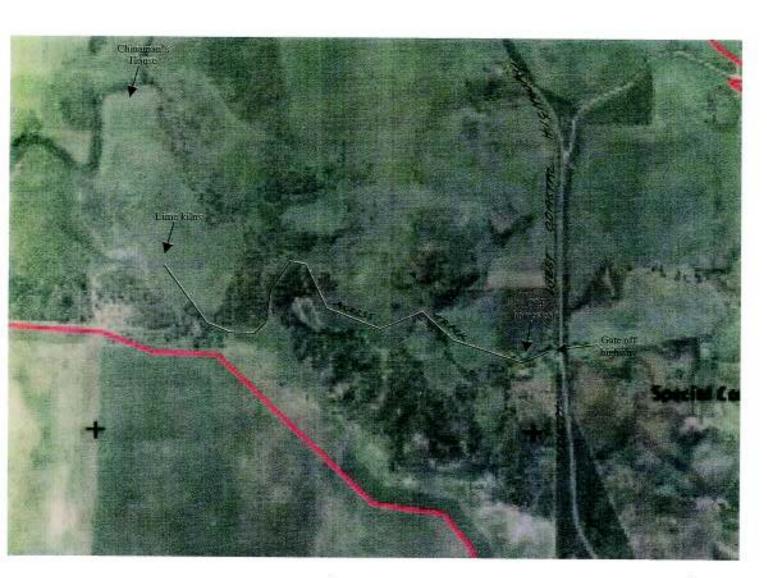




OAKAJEE INDUSTRIAL ESTATE EUROPEAN HERITAGE PLAN

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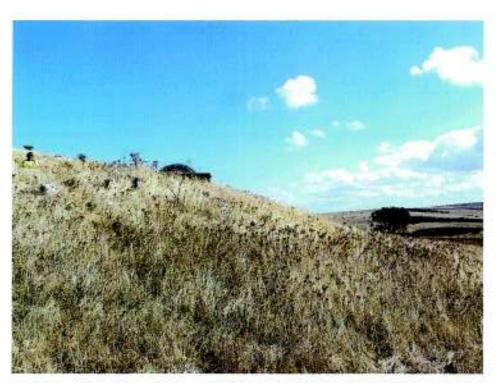
P13670 Lime Kilns, Howatharra

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W002 ZONES & ELEMENTS OF LITTLE OR NO SIGNIFICANCE OR INTRUSIVE PROPOSED CURTICAG P13670 Lime Kilns, Howatharra Little significance No significance Intrusive PROPOSED CURTLAGE & FOOM Same CD . K12N1

PROPOSED CURTILAGE



P13670 Lime Kilns, Howatharra Kiln 1: view approaching from the south. L Gray 15 April 2010



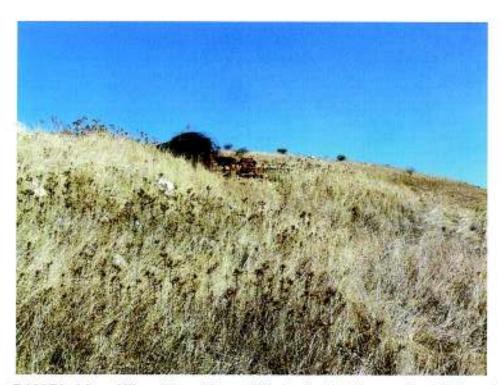
P13670 Lime Kilns, Howatharra Kiln 1: view to northeast. L Gray 15 April 2010



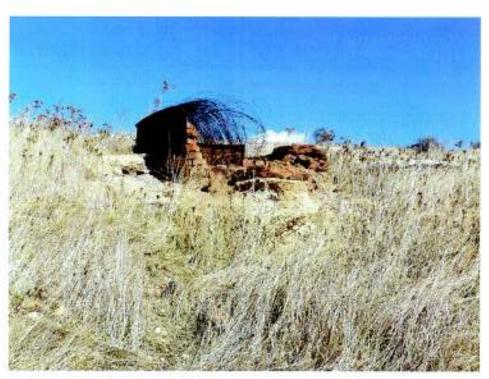
P13670 Lime Kilns, Howatharra Kiln 1: northeast view showing concrete remnant on north side of kiln. L Gray 15 April 2010



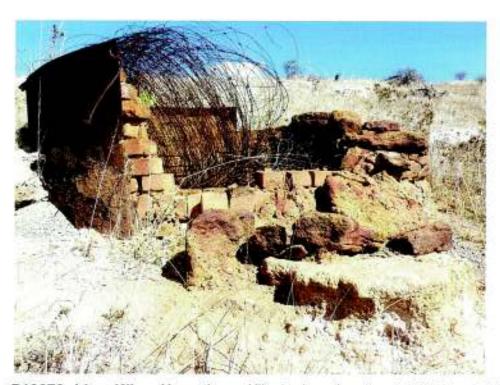
P13670 Lime Kilns, Howatharra Kiln 1: view looking into the kiln from southwest. L Gray 15 April 2010



P13670 Lime Kilns, Howatharra Kiln 1: view looking up the hill from the southeast. L Gray 15 April 2010



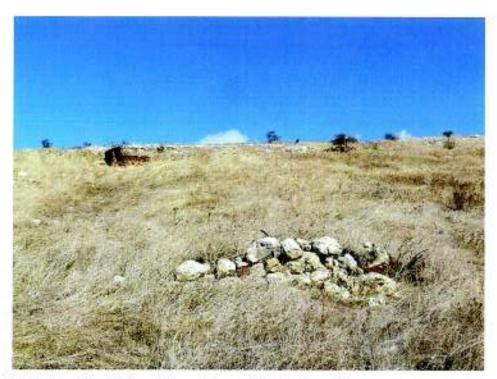
P13670 Lime Kilns, Howatharra Kiln 1: view looking up the hill. L Gray 15 April 2010



P13670 Lime Kilns, Howatharra Kiln 1: view showing detail of east side. L Gray 15 April 2010



P13670 Lime Kilns, Howatharra Kiln 1: view showing detail of perimeter wall. L Gray 15 April 2010



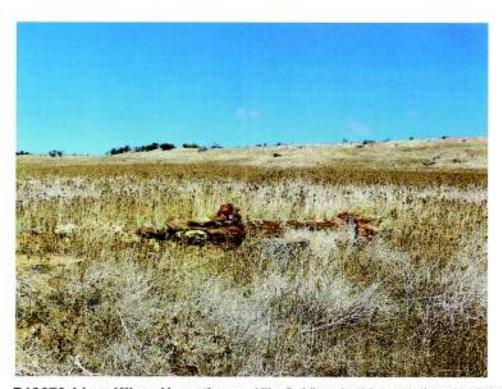
P13670 Lime Kilns, Howatharra Kiln 2: view of remnant stone looking to kiln 1. L Gray 15 April 2010



P13670 Lime Kilns, Howatharra Kilns 3, 4 (centre): view looking east from Kiln 1. L Gray 15 April 2010



P13670 Lime Kilns, Howatharra View looking west showing kiln 1 (top left) and kiln 4 (mid right). L Gray 15 April 2010



P13670 Lime Kilns, Howatharra Kiln 3: View looking southwest showing kilns 1 (directly behind on the hillside). L Gray 15 April 2010

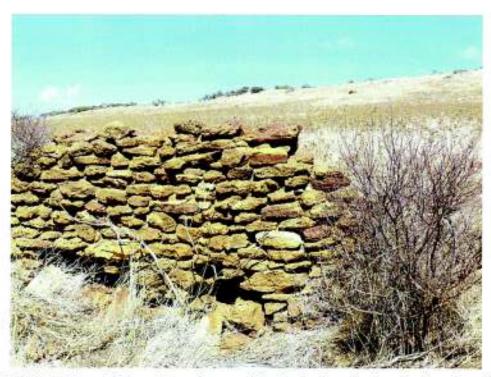


P13670 Lime Kilns, Howatharra Kiln 3: View looking west showing rectangular form.

L Gray 15 April 2010



P13670 Lime Kilns, Howatharra Kiln 4: View looking northwest. L Gray 15 April 2010



P13670 Lime Kilns, Howatharra Kiln 4: East wall showing low level openings, and kiln 1 on the hillside (looking northwest). L Gray 15 April 2010



P13670 Lime Kilns, Howatharra Kiln 4: View looking south, showing the remnant stone pile (right), and Kiln 3 behind (centre left). L Gray 15 April 2010



P13670 Lime Kilns, Howatharra Kiln 4: View looking southeast. L Gray 15 April 2010