

FORMER SMELTSYARD AND STORE, BURRA

The ruins of smeltsyard and storehouse are all that are left of substantial subsidiary activities that were associated with the smelting works established by the Patent Copper Company in Burra in 1849.

Previously, the copper ore had been transported to Swansea, Wales, for smelting. Then, after the development of a method of smelting ore using charcoal, a smelting works was established at Yatala. Neither of these situations solved the problem of carting the unprocessed ore over one hundred miles of unmarked roads and dirt tracks. Before the P.C.C. began smelting at Burra, it was estimated that at least 1,200 bullock carts, each carrying 2½ tons of ore, were on the road to Adelaide during the summer of 1848.

The South Australian Mining Association, proprietors of the Burra Burra Mine, leased the area on the west side of the Burra Creek to the English smelting firm, the Patent Copper Company (incorporated later as the English and Australian Copper Company). By mid-June of 1849 the P.C. Co. had completed the smelting works and six large furnaces were ready to fire. Welsh and German smelters were brought in to work the smelting works and added extra 'national' quality to the Cornish mining population of Burra.

By 1851, the smelting works had sixteen furnaces in operation and these were using 150 tons of wood daily, cut from the Murray scrub to the east of Burra. However in the same year the Land Commissioner withdrew permission for any more wood to be cut from Crown Lands, so the company had to revert to carting coal from Port Adelaide.

To augment the carting services of the bullock teams the P.C. Co. imported mules from Chile, along with their drivers, probably in 1853 or 1854. The smeltsyard was the main service centre for these mule teams and the wagons they hauled, containing "every appliance and convenience necessary for repairing the waggons and shoeing the animals" in 1863. The yards also included stables for 30 horses.

An interesting sideline of the smelting works was brick-making and it is possible that some of the brick paved areas still remaining in the storehouse section of the yards are the products of the kiln at the smelting works.

After the railway reached Burra in 1870, the mule teams and bullock teams were no longer necessary for the transportation of copper ore. The yard's next main function was as the site for the annual Burra

Agricultural Show. The first show was held in the smeltsyard in 1877, the year after Burra was incorporated as a town and was held each year until 1885. The yards are now used as animal enclosures.

Sources:

Ian L. Auhl, Burra Sketchbook (Adel., 1969)

Ian L. Auhl and Denis Marfleet, Australia's Earliest Mining Era, South Australia 1841-1851 (Adel., 1975)

Ian L. Auhl and Stephen Gilbert, Burra Conservation Study (Adel., 1978)

J.B. Austin, The Mines of South Australia (Adel., 1863)

F.S. Dutton, South Australia and its Mines (London, 1846)

D. Pike, Paradise of Dissent (Adel., 1957)

Katrina McDougall
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KMcD:JD

30/3/82

BURRA SMELTS HISTORIC SITE
BURRA

HERITAGE SIGNIFICANCE

Historically, the site is significant because it represents one of the earliest major smelting works established in South Australia, and was an integral part of the exploitation of the Burra Mine between 1849, when it was first established, and 1866, when the English Australian Copper Company transferred its operations to Port Adelaide. The mine closed finally 11 years later at Burra.

Physically, the historic site is important for its representative qualities in its larger historical and physical context. The site's proximity to the important Burra mines enhances its individual standing.

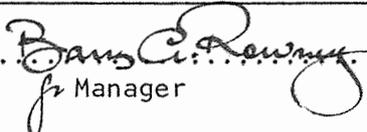
Environmentally, the historic site is not a dominant element but rather a supporting feature in the landscape.

The Integrity of the historic site has been compromised by extensive demolition although enough remains to visualise its extent and reinforce its historical associations.

NOMINATION SOURCE/THREAT/OWNER

This report has been prepared as a result of the programme to evaluate nominated items in Burra. In looking at the Mines area it was noticed that the smelts area too was deficient in its Register coverage. Only the Storeroom/Stables building and an undefined 'smelts site' were listed as individual items. It was decided to amalgamate the items into an area. The eastern half is owned by private individuals while the western half is owned by the District Council. The site is under no known threat other than neglect and natural deterioration.

HERITAGE CONSERVATION BRANCH RECOMMENDATION:

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for Manager

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

SOUTH AUSTRALIAN HERITAGE COMMITTEE RECOMMENDATION:

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Chairman

South Australian Heritage Act 1978-82	Register of State Heritage Items ITEM EVALUATION SHEET Historic Site	Ref. No. 6630-10989
	Item BURRA SMELTS HISTORIC SITE BURRA	Status One set buildings N.Tr. (CL)
Age 1849	Subject SECONDARY INDUSTRY - Processing of Primary Products	Site Type Smelter

		E	VG	AG	FP	NA
History	Context Associated with the Burra mine, the English Australian Copper Company smelted ore extracted by the Association at Burra and invested heavily in infrastructure at Port Wakefield, Port Adelaide and Adelaide. One of the earliest major foreign investors in the State in mining processes.	X				
	Person/Group Associated with the patent Copper Company, which was taken over by the English Australian Copper Company in 1851.		X			
	Event 1858-1861 Period of Prosperity and Expansion 1868-9 Burra smelting works closed, Site of first Agricultural Show at Burra.	X				
Physical	Natural Elements A flat open site at the base of the more dramatic mines area, basically devoid of vegetation except around the existing structures, a deeply eroded creek along the west boundary.			X		
	Man-Made Elements Sparsely developed site with mostly ground level ruins, simple residence and former office adjacent to the more substantial ruins of the stables and storeroom, miscellaneous stone walls, although the remains are extensive they are not necessarily self explanatory.			X		
	Representation In a regional sense it is very important although other smelters do exist elsewhere in the State, its intimate association with the important Burra Mines enhances its significance.		X			
	Continuity In its cleared condition the site is sympathetic of the surrounding landscape.					
	Local Character Provides a 'natural' buffer defining Burra from Burra North, an important physical feature but in a passive sense. Individual buildings supportive of Burra's character.			X		
Integrity	Landmark Not a highly visual site except as an expanse of open ground.			X		
	Alterations Only the secondary structures remain intact to any extent, residence and former office basically intact, stables more substantial, smelter demolished to ground level.				X	
	Condition Remaining buildings need varying degrees of maintenance, ground level remains require stabilisation and protection.			X		
	Compatibility Basically vacant or used for grazing, house and office lived in, stables and storeroom vacant.			X		

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Supplementary Information

Adaptation: The site's open nature should be maintained. New structures or facilities should not intrude upon the ruins. The form and appearance of the cottages and storeroom group should be maintained while retention of elements, internally and externally should be encouraged. Restoration to any large degree should not be mandatory. Ground level ruins should be protected and stabilised.

Interpretation: The site has a potential for active interpretation but in its current state, and private ownership, the size could be interpreted from the Mines area. Access to the ruins would be desirable but not mandatory. The site's association with the adjacent mines area should be stressed but, again, this may not require a separate interpretative exercise.

History and Sources

The area opposite the Burra Mine on the other side of Burra Creek was the site chosen for the smelting of copper ore. After unsuccessful attempts to smelt the rich copper ore from their mine, the South Australian Mining Association arranged with the Patent Copper Company in 1848 for the latter to smelt solely for the Association for a period of seven years. A few years earlier, a new flux process had been invented by a chemist called Napier, and a patent had been taken out on the process. Messrs. Schneider and Company, a firm with smelting interests in Cuba, purchased the inventor's interests in the patent and formed the Company in question. Burra copper ore, free of sulphur, seemed ideally suited for the new smelting process.

Under Mr. Walter, the Company's agent, a smelting establishment was soon built at Burra. A description of it in 1851 states:

"The buildings containing 19 furnaces are about 3 stories high, and are constructed of fire bricks and most elaborately finished, perhaps too much so when compared with similar buildings in Swansea. They boast a gigantic towering chimney, surpassing everything of the kind in any of the Australasian colonies, while the flues connecting the furnaces to this chimney run under the floor of the building, and are so spacious that a tandem can with ease be driven through them. When the furnaces are in full work, a thousand fire bricks a week are required for repairs alone. Formerly these were imported, but an excellent fire-brick clay being pretty abundant in the neighbourhood, an engine house and other buildings have been put up for the manufacture of firebricks on the spot. An engine house in which a circular saw is driven by steam, a Superintendent's house and garden connected with a long range of handsome cottages, numerous stores and outbuildings, and about twenty cottages built at the rear of the furnace houses to accommodate the smelter workers, comprise the rest of this establishment". (T.J. Fisher: A Visit to the Burra Mines and Smelting Works Jan-April 1851, cited in Cumming, 1982, 60).

Curiously, there was no signed agreement between S.A.M.A. and the Patent Copper

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History and Sources

Company, before the outlay of considerable capital for plant and infrastructure. The terms of the arrangement were to the advantage of the Association. The smelting company was obliged to take up to 30,000 tons of copper ore per year, and was to deliver the Association's share of copper within two month's delivery of the ore; the penalty being its cash equivalent. (Any precious metals extracted were to be shared equally). Smelting charges were to vary inversely with the quality of the ore smelted, and to be calculated in terms of copper. Contention arose over the condition that the Association could sell ore exceeding 35% copper to whomsoever it pleased. Early ore yields were exceedingly rich, varying from 40% to 80%. The Association sold ore over 35% rich in copper to Mr. Penny, who established a smelter at Apoinga, 30 miles south of the Burra Mine, amongst well timbered country. There was some friction between the parties involved over this situation.

As a result of the agreement, the Association was free to concentrate on extracting the ore from the earth, and the smelting company inherited the headaches of transportation and shipping arrangements. The Association's freight and carting bill fell from 68,000 pounds to 19,000 a year after the arrangements had been made between the smelting company and the Association. Shortage of timber and drought exacerbated the smelting company's problems.

In 1851, the Patent Copper Company of Wales was taken over by the English and Australian Copper Company. At the time it had a capital of £350,000 in 70,000 shares of 5 pounds each. Its South Australian assets totalled £203,000, comprising:

Works	£65,000
Cattle drays, barges	18,000
Wharves, land	20,000
Coal, fuel	24,000
Ore	70,000
Copper	6,000

The company had establishments at Kooringa, Adelaide, Port Adelaide, and Port Wakefield. After carting the ore to Port Wakefield (later railed from Gawler, and Kapunda) the company's barges transported the ore to Port Adelaide. Bullock drays were slow and expensive, and ceased during the winter months, when the company concentrated on smelting. In 1853 the company imported Chilean muleteers and mules in an experiment to improve the transportation process. This proved unsuccessful, for the mules although initially managing to stagger from Burra to Port Wakefield with 300-500 lb. loads, could not continue. In 1853, the company also managed to pay its first dividend of 2/6.

Between 1858-1861 a period of expansion and comparative prosperity occurred, the total profit for the period being 91,000 pounds. Smelting ceased at Burra in 1868-9, and was carried out from then on at Port Adelaide.

As Brown observes:

"This Company continued to operate long after the "Monster Mine" was abandoned, but it was of special importance in the period between 1850-1877 not only as an example of English participation in colonial enterprise but also as an essential unit in the productive organisation thereof."(SAA 1385, 2).

Today, ruins of the smelters and remains of the slag heaps can be seen near the former offices and manager's residence, now used as a private home. The storehouse

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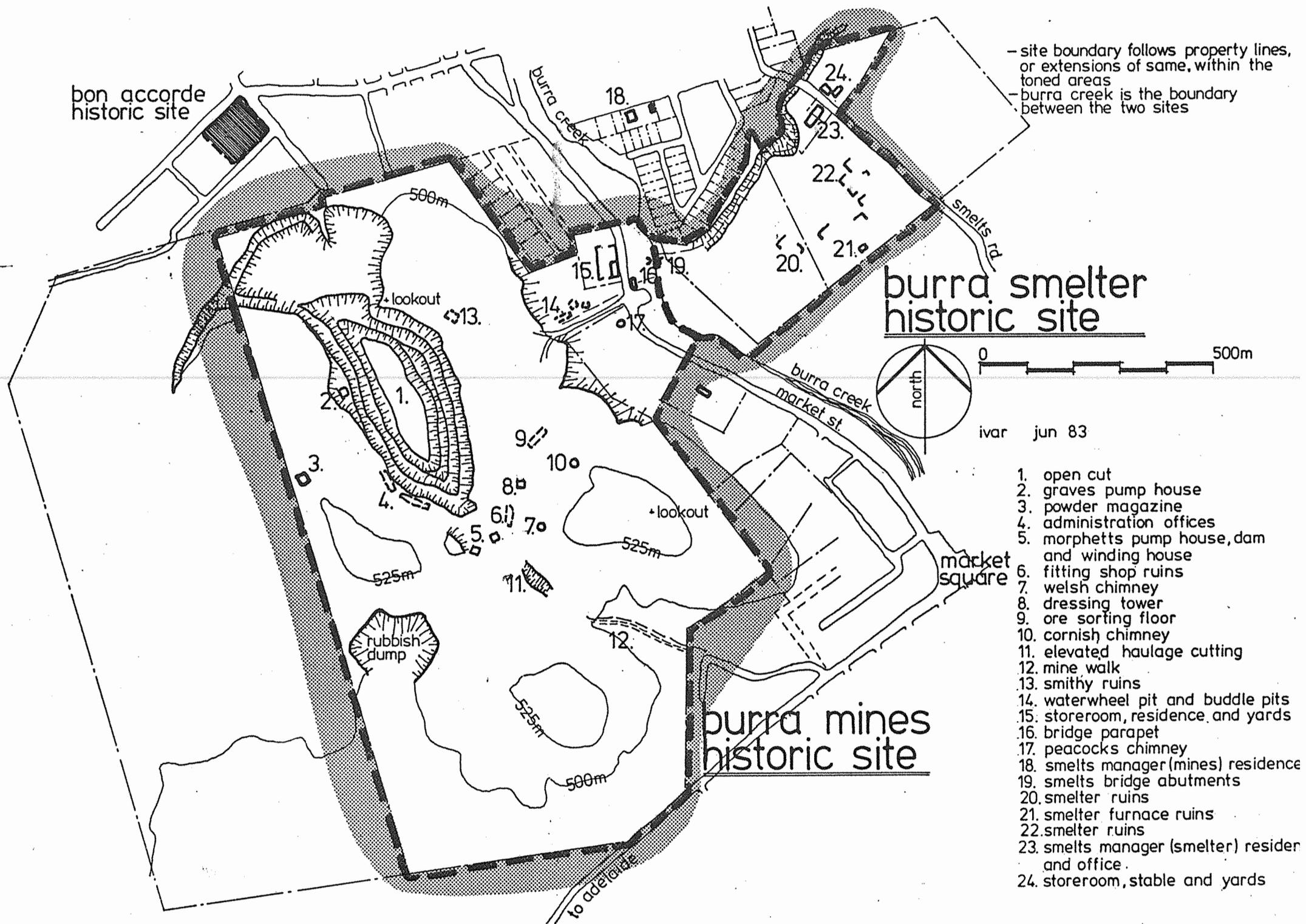
History and Sources

and former stables, east of Smelts Road, was used for Burra's first Agricultural and Horticultural Show).

At a State and regional level, the smelts site is an integral part of the "Monster Mine", and represents the first major overseas venture into the smelting industry in Australia.

Sources:

Ian Auhl & Denis Marfleet: Australia's Earliest Mining Era, Rigby
H. Brown: "The Copper Industry of S.A.", Thesis, SAA 1385
L.T.O. Searches
National Trust Records
D.A. Cumming: Notes on Burra Mine & Smelter, I.E.A., Nov. 1983
Greg Drew: Mines Department
Bob Noye, historian, Clare
SAA. BRG 30.



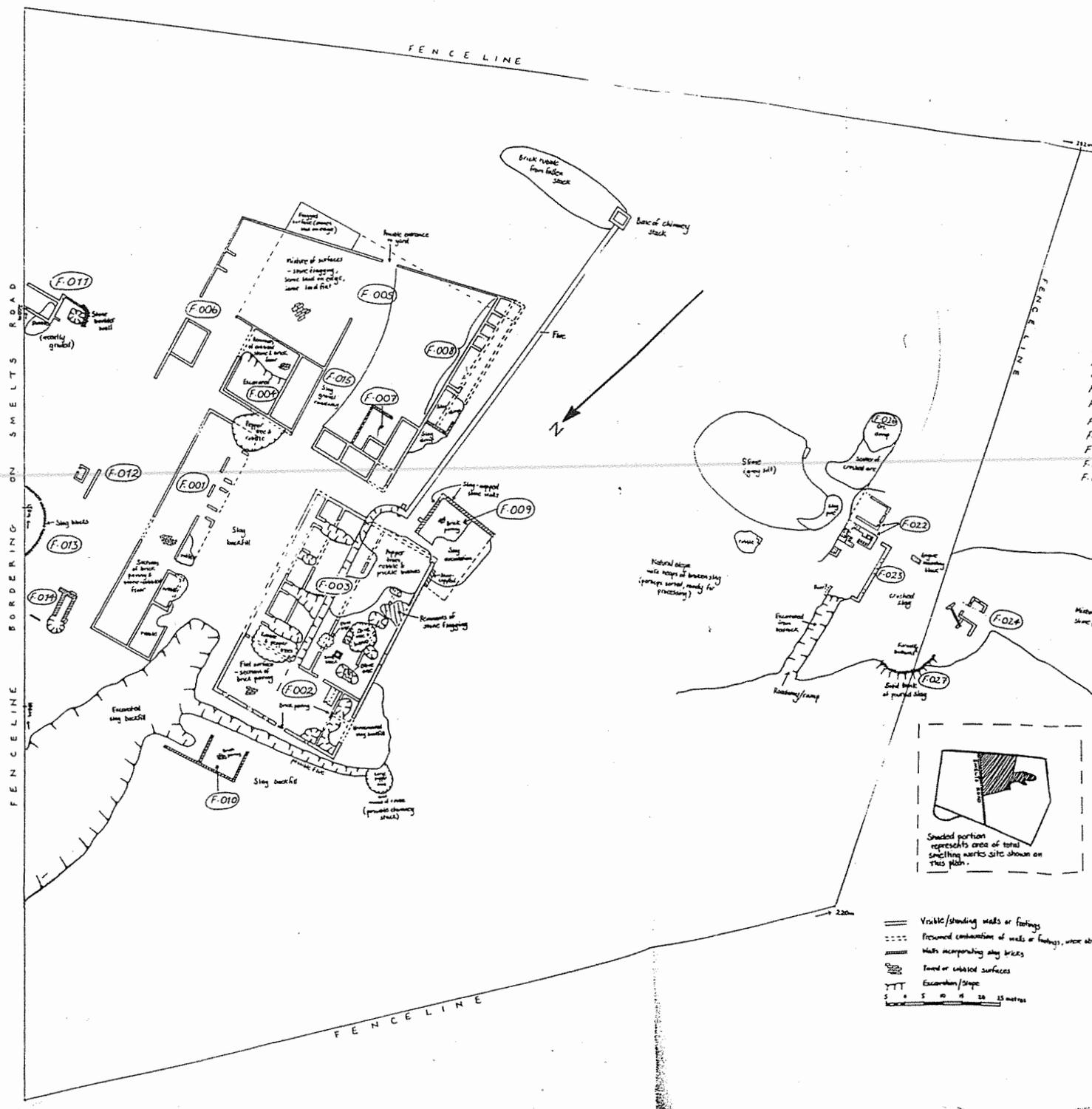


FIGURE 6 Archaeological survey plan, January 1990

Key to features indicated on this plan:

- F.001 First furnace house
- F.002 Refining house
- F.003 Second furnace house, & associated
- F.004 First brick chimney
- F.005 Casting house
- F.006, 7, 8 Large yards enclosed by walls
- F.009, 10 Workers' cottages
- F.011 Change yards
- F.012 Kiln?
- F.013 Stone wall & cellar?
- F.014 Drain
- F.015 Kiln?
- F.022 Slag Extraction Works - Engine & Sucker Heads
- F.023 Slag Battery Platform
- F.024 Drain & turn tanks
- F.025 Heap of finely crushed slag
- F.026 Small dump of copper ore
- F.027 Bank of poured slag

- Visible/standing walls or footings
 - Presumed combination of walls or footings, where obscured
 - Walls incorporating slag bricks
 - Found or exposed surfaces
 - Excavation/slope
- 0 5 10 15 20 25 metres



FILM NO.

6630-10989
BURRA SHOALS HISTORIC SITE - RESIDENCE & OFFICE

JUN 83



Film No.

6630-10989

BURRA SHOTS HISTORIC SITE - RESIDENCE & OFFICE

JUN 83



FILM NO.

6630-10989 10024
BURRA SHOTS HISTORIC SITE - STILLROOM

JUN 83



FILM NO.

6630-10989
BURRA SHOOTS HISTORIC SITE

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FILM NO.

6630-10989
BURRA SHOOTS HISTORIC SITE

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FILM NO.

6630-10989
BUCKA SHALES HISTORIC SITE

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FILM NO.

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BUCKA SHALES HISTORIC SITE

JUN 83



FILM NO.

6630-10989
BURRA SHULTS HISTORIC SITE - ROSEBANK OFFICE.

JUN 83



FILM NO.

6630-10989
BURRA SHULTS HISTORIC SITE

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Film No.

6530-10989
BURKA SHOTS HISTORIC SITE - RESIDENCE OFFICE

JUN 83



Film No.

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BURKA SHOTS HISTORIC SITE

JUN 83



manager
(mine)
▼
bridge
abutments
▼

manager
(smelts)
▼
storeroom
and stables
▼

▼ smelter

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MINING SITE - FORMER BURRA SMELTS HISTORIC SITE

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MINING SITE - FORMER BURRA SMELTS HISTORIC SITE

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