

# Kurth Kiln Collection – assessment of significance



Report for Parks Victoria

August 2008

*Biosis Research Pty Ltd*

*Project no: 6473*

Author: Gary Vines

*Melbourne:*

38 Bertie Street Port Melbourne 3207

Ph: (03) 9646 9499 Fax: (03) 9646 9242

email: [melbourne@biosisresearch.com.au](mailto:melbourne@biosisresearch.com.au)

*Sydney:*

18-20 Mandible Street Alexandria 2015

Ph: (02) 9690 2777 Fax: (02) 9690 2577

email: [sydney@biosisresearch.com.au](mailto:sydney@biosisresearch.com.au)

## ACKNOWLEDGMENTS

Biosis Research acknowledges the contribution of the following people and organisations in preparing this report:

Dan Bowen, Greg Young (Parks Victoria Gembrook)

Catherine Bessant (Parks Victoria collection officer )

Alfred Klink (Friends of Kurth Kiln)

Matthew Churchward (Museum of Victoria)

## ABBREVIATIONS

AHC	Australian Heritage Commission
ARC	Australian Research Council
CAN	Collections Australia Network (CAN)
DCNR	former Department of Conservation and Natural Resources
DNRE	former Department of Natural Resources and Environment
DSE	Department of Sustainability and Environment
DOI	Department of Infrastructure
DPI	Department of Primary Industries
EPBCA 1999	Environmental Protection and Biodiversity Conservation Act 1999
HO	Heritage Overlay
HV	Heritage Victoria (DSE)
HVI	Heritage Victoria Inventory
ICOMOS	International Council on Monuments and Sites
NT	National Trust of Australia (Victoria)
PEA 1987	Planning and Environment Act 1987
PROV	Public Records Office of Victoria
RNE	Register of the National Estate
SLV	State Library of Victoria
VHR	Victorian Heritage Register

## Contents

<b>1.0</b>	<b>BACKGROUND.....</b>	<b>1</b>
1.1	METHOD .....	2
1.2	HISTORY OF KURTH KILN.....	2
1.3	THE KURTH KILN ARTEFACT COLLECTION. ....	7
1.4	INDIVIDUAL ITEMS.....	11
<b>2.0</b>	<b>COMPARATIVE ASSESSMENT .....</b>	<b>20</b>
<b>3.0</b>	<b>SIGNIFICANCE ASSESSMENT .....</b>	<b>24</b>
3.1	STATEMENT OF SIGNIFICANCE FOR THE COLLECTION AS A WHOLE .....	25
<b>4.0</b>	<b>RECOMMENDATIONS / MANAGEMENT .....</b>	<b>27</b>
4.1	SUGGESTED COLLECTION POLICY .....	28
	<b>APPENDICES .....</b>	<b>30</b>
	APPENDIX A STATUTORY HERITAGE LEGISLATION .....	30
	APPENDIX B BACKGROUND TO SIGNIFICANCE ASSESSMENT .....	33
	APPENDIX C HERITAGE ASSESSMENT CRITERIA .....	35
	<b>REFERENCES .....</b>	<b>37</b>

## Figures

Figure 1: Location of Kurth Kiln (also showing line of water race).....	1
Figure 2: One of a number of government publications to assist in managing fuel shortages during WWII .....	6
Figure 3: Schematic of the gasifier system (FAO Forestry Department, 1986).....	14

## Tables

Table 1: Summary of historical development of Kurth Kiln.....	4
Table 2: Quantities of movable artefacts stored in various buildings .....	9
Table 3: <i>Heritage Victoria Criteria for the assessment of historic cultural heritage</i> .....	35
Table 4: <i>Grading of heritage significance (based on NSW Heritage Office)</i> .....	36

## Plates

Plate 1: Trailer type gas producer. ....	5
Plate 2: Kent gasifier from Horsham, a typical example of the basic charcoal gasifier design. ...	5
Plate 3: Charcoal Grader .....	12
Plate 4: Portable motorised Circular Saw bench.....	12

Plate 5: Portable motorised grind stone assumed to be for sharpening axes.....	13
Plate 6: First of the gas producers (KK1292.1).....	15
Plate 7: Electrolux gas producer donated by David Falla, from Donald.....	15
Plate 8: The National War Memorial has a well preserved version of the Electrolux Model C gas producer, (RELAWM32956.001) .....	16
Plate 9: Small gas producer, donated by Mr. Ray Young from Baxter on 15 December .....	16
Plate 10: Tusons Gas Producer on permanent loan from Mr. Graeme Tibbett collected from Noble Park on 18 December. ....	17
Plate 11: Makers plat on Tusons gas producer.....	17
Plate 12: One of two small home built gas producers donated by the Solomano Family from Talbot, February 2007 .....	18
Plate 13: Gas producer donated by the Solomano Family, hand built by Frank Solomano.....	18
Plate 14: Gas producer donated by Wilma Skidmore, for the Family of Cyril H Peatling .....	19
Plate 15: Gas producer used by Wilma Skidmore's father on his 1937 Ford Truck.....	19
Plate 18: Road Chief Gas Producer (photo copyright Paul Pavlinovich).....	22
Plate 16: Trailer mounted gas producer unit National Library image.....	23
Plate 17: A larger truck unit – State Library Victoria image-a37523 .....	23

## 1.0 BACKGROUND

Kurth Kiln is a unique industrial relic, which was established near Gembrook by the Forests Commission Victoria during World War II for the manufacture of charcoal for gas producers. It became a forestry works camp from the 1940s to 1960s. From the 1980s it has been used as a picnic and camping site and in more recent years has been managed for its historical values.

Kurth Kiln is located within the Kurth Kiln Park. The park covers 3,500 ha of a variety of forest types, much of it regrowth following logging in the post war period. The historic site is open for public visits with picnic areas, informal camp ground and horse riding areas adjacent.

Parks Victoria is the responsible managing authority and has undertaken conservation works on several of the most urgent building repairs. It has prepared a Conservation Analysis (Catrice 1996b), and engineering assessments and specifications for some of the structures and a Heritage Action Plan or “Conservation Policy” has been prepared to the conservation and development of the site (Vines 2002).

Considerable conservation works have been undertaken by Parks Victoria and the Friends of Kurth Kiln. The site has been recommended for the Register of the National Estate, The Victorian Heritage Register, is included in the Heritage Overlay of the Cardinia Planning Scheme, and is on the Heritage Inventory.

The purpose of the present report is to carry out a significance assessment of specified parts of the collection of portable artefacts in the context of Parks Victoria’s management objectives for the site, in particular, to consider the various gas producers recently added to the collection, the collection of portable artefacts associated with the Kiln site and provide recommendations for their management. The project has also prepared a draft collections policy for consideration by Parks Victoria and the Friends of Kurth Kiln to guide future acquisitions, display and potentially deaccessioning.

A catalogue of artefacts has been prepared by the Friends of Kurth Kiln, and volunteers with the assistance of Parks Victoria collection officer Catherine Bessant. The detailed electronic catalogue has been prepared in the InMagic program.

The collection of artefacts comprises material originally employed on the site during its history as a charcoal kiln and forestry camp, as well as items brought to the site in order to assist in interpreting its history.

**Figure 1:** Location of Kurth Kiln (also showing line of water race).

## 1.1 Method

A brief review of the existing inventory was initially carried out in order to determine the provenance, and level of historical detail recorded for the items. Inspection of the collection was undertaken on 13 May 2008 to examine the present condition, storage location and context of the collection. This also provided an opportunity to assist in identifying some objects and their functions where such information was lacking from the catalogue.

Contact was made with Museum Victoria staff, specifically Matthew Churchward regarding their views on the significance of the collection and Museum approaches to defining significance. Discussions were also had with Parks Victoria collections officer Catherine Bessant, regarding the on-going management of the collection.

Criteria for determining the significance of items and thresholds was based on Heritage Victoria's guidelines for heritage collections and their criteria for the assessment of cultural heritage significance.

A statement of significance for the collection as a whole has been developed. This is based on established significance criteria– (aesthetic, historic, scientific and social) and is written according to Heritage Victoria's preferred format. The assessment against Heritage Victoria's more specific heritage criteria has also been undertaken.

A suggested collection acquisition and deaccession policy has been prepared for consideration by Parks Victoria and the Friends of Kurth Kiln.

This report was prepared in accordance with the values expressed in the Australia ICOMOS Burra Charter, the specific requirements outlined in the State Heritage Act 1995 as amended 2004, and with reference to the Heritage Collection Council's guide to assessing the significance of cultural heritage objects and collections (2001). Other guides that have been considered include the 'Significance Assessments of Community Collections' Guidance for consultants prepared by Heritage Victoria, the 'standard methodology for assessing the significance of cultural heritage objects and collections' produced by the Collections Australia Network (CAN), and Heritage Victoria's, 'Recognising Victoria's Heritage Objects and Collections', (information Leaflet).

## 1.2 History of Kurth Kiln

### Charcoal production

Charcoal burning has a history extending back 6,000 years, primarily for use in smelting and working iron. The process involves the controlled combustion of wood at a temperature of about 400 degrees C. Kilns for charcoal burning could take various forms, from primitive shallow earthen pits covered with turf and clay to cylindrical metal kilns made from old drums or boilers and more sophisticated masonry structures with innovative means of controlling fire and draft and loading and clearing the kilns.

The charcoal industry revived during the Second World War. Wartime petrol rationing encouraged the use of charcoal as a source of ‘producer gas’, a substitute fuel for cars and trucks. By 1941, the Forests Commission operated charcoal kilns in many forest locations including Heywood, Dunolly, Ballarat, Yarram, Benalla and Cohuna. At Mt. Cole, the Commission worked six kilns, with the workers camping in the forest nearby. By mid 1942 the Commission had 221 kilns producing 1000 tons of charcoal a month. When petrol rationing ceased at the end of the war the charcoal industry collapsed.

The immediate site of Kurth Kiln does not appear to have been extensively used before Kurth Kiln was established by the Forests Commission of Victoria to produce charcoal for use as a substitute fuel source. During World War Two, demand for charcoal soared due to petrol shortages. The FCV constructed the kiln near Gembrook in early 1942, to the design of Dr Ernest Kurth, Professor of Chemistry at the University of Tasmania. This kiln was the only one of its type erected in Victoria. Initial trials proved positive and a charcoal grader was installed.

Production of commercial quantities of charcoal (20 tons per week on three shifts) was achieved in August 1942, but soon after, repairs were needed to the damper, which suspended production, then brickwork around the inspection doors had loosened and mortar joints had to be redone in asbestos fibre. From July to December 1942 it only produced 29 tons of charcoal, some of this probably coming from a steel kiln on site. By February 1943 the kiln was out of operations and then was used only sporadically over the next two years.

### **FCV camp**

Between 1946 and 1963, the site was used as a forestry camp. The Kurth Kiln camp became the main base camp for the Kallista Forest District housing 80-100 men in eighteen 15 ft. x 12 ft. “masonite” huts purchased from the Army.

In 1963 the site was used as a base camp for fire fighting operations. A number of modifications to the huts and storage shed were undertaken after 1963, when forest operations were scaled down at the site.

In the early 1980s, the Forests Commission developed the site into a picnic area. A number of huts were removed from the site and huts 5 and 6 were dismantled and the materials used to rebuild Hut 4.

The larger of the huts was adapted in the 1980s for use by an on-site caretaker Ron Thornton, who lived here for sixteen years between 1984 and 2000. It is likely that much of the furniture in the huts today is a combination of items retained from the FCV period and later additions.

The following table summarised the key events in the history of Kurth Kiln:

Date	Event
1860s	Small gold mining area north west of Gembrook
1870s	Agricultural settlement in Gembrook area
1885	Logging, timber tramways and forest sawmills in Gembrook forest
18/12/1900	Ferntree Gully-Gembrook narrow gauge railway opens and advances timber industry
1940	Kurth experimenting with pyrolysis
1941	Prototype kiln constructed in ... Tasmania
1942	Construction of Kurth Kiln Gembrook
18/3/1942	First firing of the kiln
1945	Kiln ceases operation
1946	Establishment of FCV forest camp 18 huts in use
8/1/1963	3 huts burnt down,
1963	Scaling down of FCV operations, 8 huts remain
1982-5	Huts modified for caretakers use, 3 huts demolished
1984-2000	Ron Thornton is live in caretaker
1996	Conservation Plan prepared
2000	Formation of Friends of Kurth Kiln

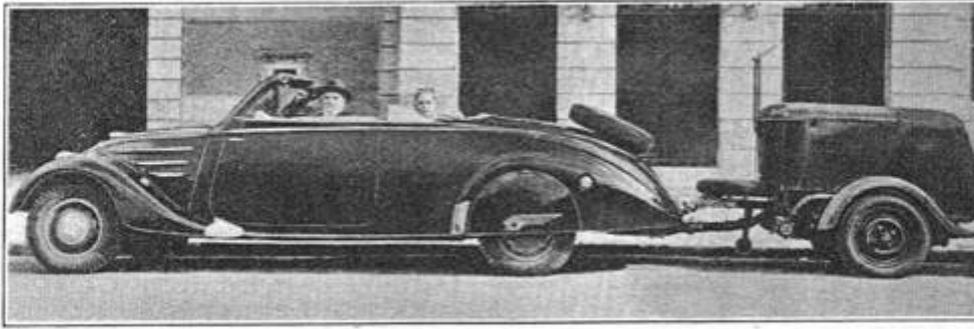
Table 1: Summary of historical development of Kurth Kiln.

### Gasification of charcoal

Gasification is the process of producing combustible gas through a process of converting carbonaceous materials, such as charcoal, into carbon monoxide and hydrogen by reacting the raw material at high temperatures with a controlled amount of oxygen and/or steam. The resulting gas mixture is called synthesis gas or syngas and is itself a fuel. By the early 1900's, numerous vehicles were driving on producer gas, and many large gas engines had been built in Europe and the United States, and imported gas engines were extensively employed in Australian industry and farming applications.

In the 1930's gasifier development was driven by the economics of the depression era and the shortages of petrol. Subsequent fuel shortages in Europe during World War II brought small automotive gas producers to their peak of utilisation. As many as 72,000 vehicles were retro fitted with gasifiers during wartime petrol rationing in Australia, and charcoal production to supply them reached an estimated 20,000 tons per month (Power Farming in Australia 1946).

Gas producers took two main forms, a tall cylindrical or rectangular device mounted on the side or back of the vehicle, or a larger unit carried on a purpose built trailer, which also allowed a larger quantity of fuel.



The British Gasogene's trailer-mounted gas producer is not unsightly in appearance.

Plate 1: Trailer type gas producer.



Plate 2: Kent gasifier from Horsham, a typical example of the basic charcoal gasifier design.

There were a number of gasifier manufacturers in Australia including Powell, Pedrick, Wishart, Brig and Electrolux who also offered hints and tips on operation and improvements such as water drippers, mixing valves, making your own charcoal and the best way of installing that second accelerator pedal. Engineering companies patented numerous devices and systems relating to charcoal gas producers. In 1939 the Australian Government's Department of Information issued a detailed brochure called "Producer Gas Vehicles" which covered all the principles and summarised the operational aspects of a number of models.

Based in Melbourne, John and Martin Cash published what is even now a very comprehensive text on the subject entitled "Producer Gas for Motor Vehicles" in 1940.

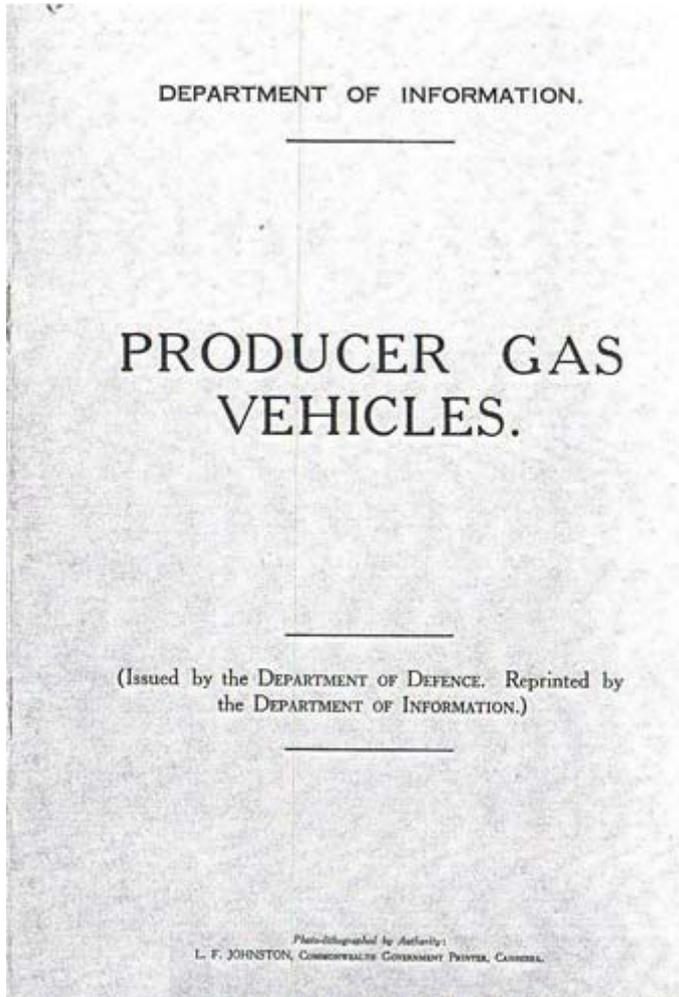


Figure 2: One of a number of government publications to assist in managing fuel shortages during WWII

Australian automotive gasifier manufacturers were controlled through the Australian Emergency Standard [E]D.3001 “Charcoal Gas Producers for Motor Vehicles” which set out stringent design and performance specification for the vehicle-mounted units [the standard was withdrawn in 1959]

The Gas Producer Unit or GPU was generally vehicle mounted with *“one common aspect being the ritual to be followed if you expected reliable performance - and the penalties to be paid by inattentive motorists. The start-up procedure was not as simple as unlocking the car, climbing aboard and turning a key - these things had to be 'lit' up to 15 minutes before you could start the engine. Wear and tear on the engine was significant. Fire and the occasional explosion were associated risks. Spare fuel was carried in Hessian sacks - tied to the fenders or the running board and had to be kept dry in all weather conditions. These infernal devices needed constant attention during trips and hourly stops to recharge the Unit”*<sup>1</sup>

---

<sup>1</sup> Don Bartlett, Chairman, Engineering Heritage Victoria “Producer Gas and the Australian Motorist”, presentation to the Engineering Heritage Committee, IE Australia

After World War 2 ended, abundant and cheap supplies of petroleum fuels quickly put an end to the use of gasifiers on vehicles. When petrol rationing ceased in Australia, many motorists simply drove their car to the nearest municipal tip, unbolted the gasifier and left it there. It would appear that almost no gasifiers continued in use, nor was there any evidence of examples being retained in public or private collections at the time they suddenly became redundant.

### **1.3 The Kurth Kiln artefact collection.**

The large number of small to large portable artefacts on the site comprises a critical part of the significance of Kurth Kiln. The Friends of Kurth Kiln have been in the process of cataloguing these. Determining the original source of the individual items and when they may have first arrived on the site is problematic for the bulk of the objects. There are clearly items that were brought in when the Kiln was first established, such as the charcoal grader. A large number of items can be assumed to relate to the last use of the site as a functional Forestry Camp in the 1960s. The catalogue identifies most items as dating to the period 1940s to 1950s.

Other items have been acquired by the Friends Group and Parks Victoria staff, both from donations and random finds in the local area, and specifically sought objects, which were considered useful in helping interpret the history of the site. In this category are the several gas producer units which are the most recent acquisition.

The catalogue would appear to have been prepared in two separate parts. There is an early had listing of the larger and more prominent objects that were in the Friends' storage area in the large shelter building. The other much larger catalogue is that prepared by the Volunteers under the guidance of Catherine Bessant, and this includes large numbers of small items such as bolts (about 230) dog spikes (200 plus) ceramic insulators (110) and brackets (120) Such items are the typical spare fittings likely to be kept in reserve in a mechanics and maintenance workshop, for repairing equipment and buildings.

Hand and machine tools are also represented, but are not necessarily complete. Several Cross Cut Saw Blades, Blacksmith tongs and spanners are probably the left over items when the workshop closed down, with the more serviceable tools having been removed for continuing use elsewhere.

Some larger machinery and tools include two drill presses, vice, portable forge, log jacks, grinding stone, pump, portable drag saws,

The following table provides a brief summary of some of the moveable artefacts stored in various parts of the site. In this table the Item Number refers back to the partial inventory prepared by the Friends of Kurth Kiln, and the Location code, (e.g. 02) refers to the building numbering system adopted by the friends as part of its cataloguing program. The second column is the matched catalogue reference from the InMagic catalogue, where this can be matched with surety. Some of the items in this list, such as the various boxes of bolts, shelves with iron items off cuts etc. have been individually catalogued producing hundreds of records for what is a single line in the table below.

Item	Catalogue Ref	Location	Description	Comments
		Storage Shed/ Kiln Link		
	1292.1		Gas Producer Unit	Large Stationary Charcoal Gas Producer, tank placed above a cylinder.
			Gas Producer Unit	Tucson Model Official
			Gas Producer Unit	Electrolux made
			Gas Producer Unit	Lanes Motors distributed
			Gas Producer Unit	Fragmentary remains
			Gas Producer Unit	Four filter/condenser chambers
			Gas Producer Unit	Condenser chamber only
		Storage Shed (02)		
	0422		Fruit Box with ceramic insulators	
	0219		Gelignite box filled with insulators	Patent AN Gelignite Tropic "60" 1" x 8
	0421		Plywood box	
			Shelf with iron bars, locks, eyes, hooks, bolts, etc.	On east side of room (partition wall)
			Detour signs x 3	On south wall
			Shelf with small iron items	
15			Three 12" pulleys 4" wide	
7			Rakes	Long handled charcoal rakes x 2
36			Cant hook? "Pillar"	Steel bar, 1m. long with ratchet
37			Spike	
25	1279		Hand Pump	
	1219		Bench Press	Drill with clamp to attach to bench
27	0346		Bench vice	
14			Forge and bellows	Portable unit
			12" pulley 1" wide	
			Rope drum with ratchet gears on side	
38			Swage/puller on bar	"ball & cradle"
	1189		Geared wire rope winch	on wheels with crank
	0019		Wire rope winch	Bolt down unit
	1278		Pulley assembly	Bolt down
16	1190		24" pulley 1" wide	
21	0344		Log Jack (Trehwella)	
39	0345		Chain strainer (log jack?)	
			Timber stack	About 20 lengths on shelf
			Iron components	On shelf
31			Lever tool??	
24			Lathe	30cm reach hand operated
			Small rope drum	
	0327, 0331, 0816, 0817, 0001		Blacksmith tongs	
			Blacksmith chisel on wire handle	
40			Wooden boxes	Small iron components, wire, bar, etc.
			Pick head	
			Tin of bolts	
			Cardboard box of bolts	
			Water valve 1"	
35			Cant hook	Socket for wooden handle
			44 gal drum	
13			Hand rake	Metal teeth
		Main store (01)		
8	1286		Grind stone	Hand cranked on frame
1	1084		drag saw blade	On east wall
2	1085		drag saw blade	On east wall
3	1086		Cross cut saw blade	On east wall
4	1087		Cross cut saw blade	On east wall
5	0340		drag saw blade	On east wall

26	0980		grindstone	40cm. diam. stone only
6	1198		drag saw blade	On east wall
			Box of pipe fittings	
11	1332		Portable circular saw with Ronaldson Tippet petrol engine	
			Slotted wooden implement 12"	
12			Wheel Chains set of two	On back wall
29			Chain	8mm links, 2 m long
28			Wheelbarrow	
22			Anvil on block	
34	0381		Detonator box	Red painted steel
			Oil drum and pump	
33			Tram wheel set, curved spokes	
20			Mattock	Head only, broken
			Drag saw blade	
17			Grease gun	
			Dugout sign	
			Steel ammunition box	with insulators and bar
9	1333		Portable grinding stone and engine	Marked F.C VIC in circle
30			Drag saw on wheels	No engine or blade fitted
33	0013, 0014		Tram wheel sets	2' diam 3' gauge curved spokes
32			2" wire rope	
			5" pulley on post	
			2 Sedan chairs?	4 handles painted red 2' x 5'
			Section of wood flume clad in cgi.	
		Storage Shed (03)		
41			Charcoal grader	Timber framed grading machine
		Hut 1 (06)		
			Range	Possibly early Kooka
			Chest of drawers	C1930 Art Deco style
			Chest of drawers	C1930 Art Deco style
			Wardrobe	C1930 Art Deco style
			Laminex table	1950s
			Steel framed chairs	1960s
		Hut 2 (07)		
			Wardrobe	C1920
			Cupboard	
			2 single beds	
		Hut 3 (08)		
			Armchair	Belonged to Ron Thornton
			Feuerland Hurricane lamp	
			Cupboard	C1930
			Table	
			Wheel barrow	
		Hut 4 (09)		
			Two bay concrete water trough	Original from building reconstruction
			Cast iron copper	“ “ “
			Wooden step ladder	
			Trundle bed and mattress	Modern
			Timber fly screen	
			44 gallon drum	
			Tool Board	possibly from storage shed

Table 2: Quantities of movable artefacts stored in various buildings

The estimated amount of storage required for all the artefacts on the site is about 15 cubic metres of shelf space, not including large machinery items such as the drag saw, charcoal grader, circular saw, motorised grind stone, and now the gas producers.

Apart from the kiln and storage shed, the only item related to the use of the site for charcoal production appears to be the charcoal grader.

Most of the artefacts appear to relate to the period of use in the 1950s to 70s, and reflect the function of the Forest Commission camp in maintaining tracks, clearing vegetation and constructing facilities. These artefacts would be best employed in helping interpret the history of the site as a FCV camp.

In addition a number of items have been brought to the site after being recovered in the forest. Such items would include the log tram wheel sets and some other metal objects. Only a small number of items have been specifically donated or acquired by either Parks Victoria or the Friends Croup for adding to the collection. However, almost all of these items are of direct relevance to the history or the site or useful for interpreting its various themes. The sausage machine is perhaps one of the few items not of any specific connection to the site.

Possibly half of the artefacts identified above would be preferably kept in their current or reinstated original locations as part of interpretation. This is because many of the artefacts have direct associations with particular buildings or areas of the site and therefore contribute to the cultural significance of those particular places.

However, more appropriate locations for some of the artefacts may need to be determined to provide for their improved conservation and free up spaces to allow viable use of the buildings. Options might be as follows:

- Consolidate artefacts in one space. Provide racks and shelving to make more efficient use of space.
- Relocate items to dispersed storage throughout the site, based on the use of items for interpretive and display purposes. This may require a larger part of the site set aside for interpretation.
- Identify options for safe storage/keeping off site for any irreplaceable items.

In addition to the rationalisation of storage facilities, provision could be made for more appropriate display storage. This could involve using glass cabinets for displaying key items in public areas of the buildings, or providing museum display furniture such as plinths and barriers for controlling public access to artefacts on public display.

The critical issue is the lack of secure enclosed storage in display space with only the room in the large shelter building available. Options for enhancing storage and display might include the following:

- Enlarging the room in the open sided shelter, perhaps to an extra bay;
- Closing off the northern storage area;
- Infilling the connector building between the kiln and store/workshop; or
- Constructing a new building.

Each of these options would impact on the heritage values of the site, but as the portable artefacts also contribute to heritage value and significance, their management and protection should be seen as integral to managing the site. Conservation, storage and management of

artefacts, should therefore be carried out in accordance with Parks Victoria's Movable Cultural Heritage Management Policy which is currently under development (Parks Victoria 2001).

Construction of a new building, suitably designed to complement the visual character of the site, might provide the best option as it leaves the other buildings for in-situ interpretation of both the buildings and their contents. The modification and use of the large open shelter for display and storage of artefacts might also be considered appropriate, as this structure is believed to have formerly been an enclosed building. Again design of any alterations should be sympathetic with the heritage character of the site.

## 1.4 Individual Items

There are a number of items within the collection, which are either critical to the understanding of the operation and history of the site, or assist in interpreting its significance to the public. In the first category is the charcoal grader, which along with the kiln itself, provides a physical representation of how the site operated, how the charcoal production process worked and potentially what the working conditions might have been like. In the second category are the various hand tools and the gas producers, which extend the understanding of the site to the connected operation of the forestry commission in the latter period, and the significance of the charcoal production in the earlier period.

The **charcoal grader** is a commercially manufactured piece of equipment which may have been made by a mining or agricultural implement maker. The details of construction and decoration suggest a manufacture date prior to WWII.

The grader takes the form of a large mesh screen supported on a timber framework with four timber legs. The legs have rotted at the bases. The screen is in two sizes with 5mm and 30 mm meshes. This would allow three grades of charcoal to be collected, smaller than 5mm and dust at the top end of the screen would come out of the first chute, 5mm to 30mm pieces from the middle of the screens from the second chute, and the larger pieces which would fall through a chute at the end of the grader. The paint scheme is original with an overall green colour and Fleur-de-lis used in the painted decoration along with the other yellow lining.



Plate 3: Charcoal Grader

The **drag saws, grinding wheels** and other larger pieces of equipment offer some insight into the operations of the Forest Commission in the post WW II period, although they probably have little relationship to the period of use of the site as a charcoal producer in World War II. Their contribution to the site, however, lies on helping to interpret the range of activities and other historical themes represented.



Plate 4: Portable motorised Circular Saw bench.



Plate 5: Portable motorised grind stone assumed to be for sharpening axes.

### **Gas Producers**

It would appear that there a very large variety of gas producers were manufactured and used in Australia during World War Two. There were both patented, industrially-manufactured versions, and improvised, one-off, home-made contraptions. There are likely to have been many types manufactured by small engineering firms each producing only small numbers. A brief review of photographic records in the State Library of Victoria and National Library collections, reveals a staggering array of different types, as well as many forms of fitting, with some attached to vehicles running boards, on brackets suspended on the front or back of the vehicle, on trailers, and especially on larger vehicles, the various components attached to different parts of the vehicle.

Technically speaking, gasifiers fall into several categories. While there were both wood gasifiers and charcoal gasifiers available during World War Two, the improved efficiency of charcoal gasifiers and the establishment of a network of charcoal burning facilities around the country saw the latter type dominate. Within these categories there are also technical variations in the layout of the processes with four main forms

- Updraught or counter current gasifier;
- Downdraught or co-current gasifiers;
- Cross-draught gasifier; and
- Fluidized bed gasifier

Further variations are found in the components for cleaning, de-watering and cooling the gas, while patent improvements such as different types of forced ventilation, suction blowers,

metering and regulating systems may also be found. While there was considerable research into gasifier technology and design in the World War Two period, which is documented in technical reports, government papers, patents and some contemporary popular literature, modern interest in the processes and equipment are now confined to alternative technology and environmental groups (FAO Forestry Department, 1986).

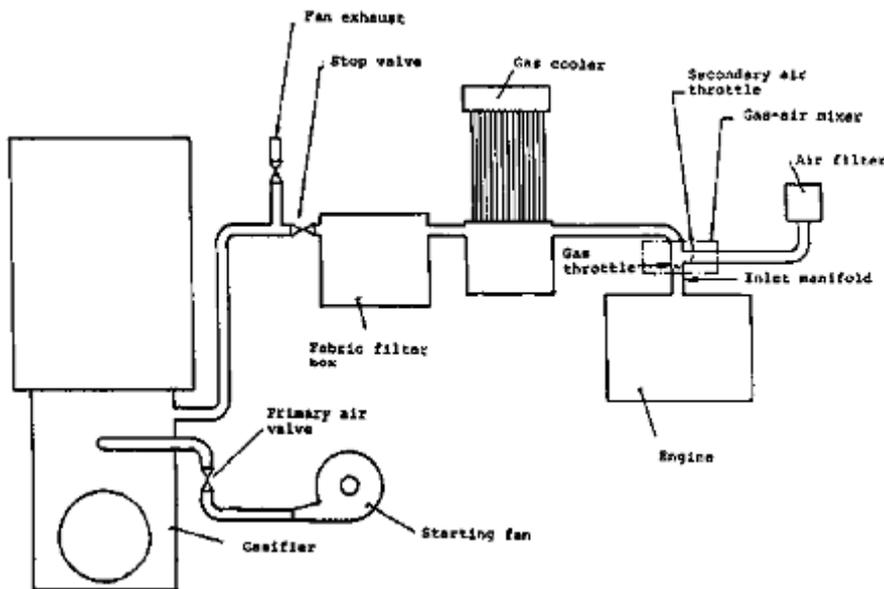


Figure 3: Schematic of the gasifier system (FAO Forestry Department, 1986)

The Kurth Kiln presently has seven gas producers, although some examples would appear to be only fragmentary parts of a whole unit. The gas producers do not appear to have been catalogued as they are recent acquisitions, with the exception of the unit in the enclosed area, which was picked up in the recent cataloguing.

This first of the gas producers collected is a rectangular device, mounted on a frame. It is extensively corroded and would appear to be missing some parts. It has no manufacturer's name, but might be partially hand built. Its construction and form suggest it was intended as a fixed unit, probably for supplying fuel to a stationary engine on a farm.



Plate 6: First of the gas producers (KK1292.1)

The **Electrolux** gas producer is perhaps one of the best preserved, although it shows all the signs of weathering over the last 60 years. At least one similar unit has been identified from another collection (see below) this unit has come from a farm at Donald, and may have been one of the more common types used on private cars. This example appears to have been supplied (and probably fitted) by Lanes Motors of Melbourne.



Plate 7: Electrolux gas producer donated by David Falla, from Donald



Plate 8: The National War Memorial has a well preserved version of the Electrolux Model C gas producer, (RELAWM32956.001)

The next unit is of an unusual form, with four separate condenser tubes set around the main combustion chamber. It would appear to have lost its mounting frame and other fittings, and unfortunately has an illegible maker's plate, but is clearly factory made. It comes from a farm at Baxter



Plate 9: Small gas producer, donated by Mr. Ray Young from Baxter on 15 December

Another more compact unit, which is clearly professionally built, has a makers plate identifying it as having been made by a company called TUSONS, and it is listed as “model OFFICIAL; Type 30hp Heavy Duty, Cross Draught”.

No reference to this maker has been found, but the address suggests a trading company rather than a manufacturer, so it is likely to be an imported make.



Plate 10: Tusons Gas Producer on permanent loan from Mr. Graeme Tibbett collected from Noble Park on 18 December.

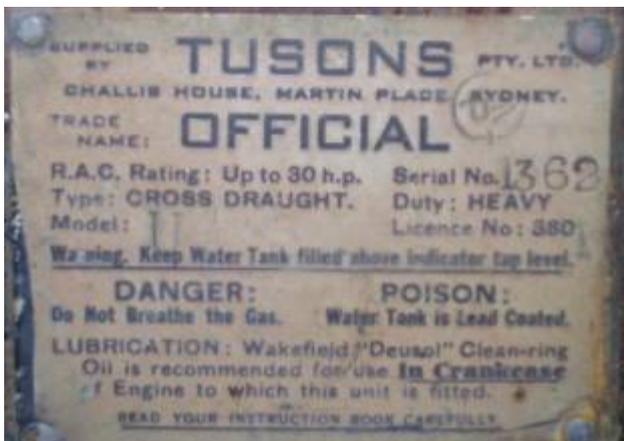


Plate 11: Makers plat on Tusons gas producer.

Two fragmentary gas producers from the Solomano family farm near Talbot provide further examples of the variations in designs. Both show evidence of some commercial manufactured parts, although they are not sufficiently complete to confirm a manufacturer. The donor considered them home made, so it is likely they commenced with some manufactured containers and components which were adapted to create the gas producers.

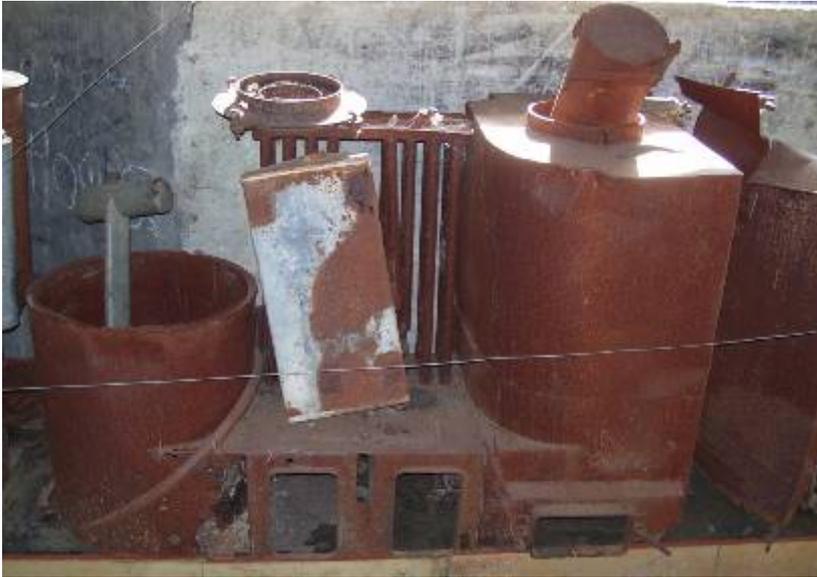


Plate 12: One of two small home built gas producers donated by the Solomano Family from Talbot, February 2007



Plate 13: Gas producer donated by the Solomano Family, hand built by Frank Solomano.

The final unit is an incomplete combustion chamber donated by Wilma Skidmore, for the Family of Cyril H Peatling from their farm at Bagshot, near Bendigo. This unit, while fragmentary, would have been somewhat larger in its original condition, than the others in the collection, and was mounted to the side of a 1937 Ford truck. The combustion chamber and filter and condenser, appear to have been mounted in separate locations, some possibly under the bonnet. The associated documentation including purchase receipts and photograph of the unit

installed on the vehicle are important for interpreting the item, and contribute to his cultural significance.



Plate 14: Gas producer donated by Wilma Skidmore, for the Family of Cyril H Peatling



Plate 15: Gas producer used by Wilma Skidmore's father on his 1937 Ford Truck

## 2.0 COMPARATIVE ASSESSMENT

There are a number of collections of forestry related items in Australia. The principle collections are held by dedicated forestry and timber museums, generally run as community or volunteer organisations. There are four museums in Australia which are primarily dedicated to the history and collection of forestry related activities, one each in Victoria, Western Australia, Tasmania and Queensland.

### **Alexandra Timber Tramway & Museum Victoria**

Located at the old Railway Station and staffed by railway and steam enthusiasts, the Alexandra Timber Tramway and Museum was formed in 1985 and has built up an impressive collection of 2 foot narrow gauge steam, diesel and petrol locomotives and assorted rolling stock. A large range of historical artifacts from the early logging period is also on display.

### **Manjimup Timber Museum Western Australia**

The Manjimup Timber Museum, designed to resemble a group of Karri trees, and displays a history of the timber industry in Western Australia. The museum, now an integral part of the larger timber park complex, also displays some forest ecology, agriculture and forest management information. Of special interest is the time clock which consists of a log section which protrudes through the wall into the Museum showing various dates relevant to Australian discovery and settlement. External displays include a sawpit, whim, Willamette steam hauler, locomotive engine, tractor and logging arch and timber jinker.

### **Forest and Heritage Centre**

The Forest and Heritage Centre tells the story of the timber industry in Geeveston with displays of old photographs, tools and equipment to explanations of the modern day timber industry accessed on computer terminals within the forest room. Visitors to the centre can also view a wood turner in action, creating the local timbers.

### **Wood Works Queensland**

Constructed completely out of timber, Wood Works is operated in partnership by the Queensland Department of Primary Industries and the Queensland Museum. The wide range of static and working displays include a steam-driven sawmill; bullock drays, timber snigging and haulage wagons; pit saw and crosscut saw demonstration area; a working blacksmith's shop; timber cutter's bark hut; a 1925 Republic winch truck; a springboard display; and pioneering forest hand tools display. On various occasions throughout the year Wood Works runs steam-driven sawmill days which demonstrates the operations of a typical bush sawmill of the 1860's.

There are also a number of smaller local historical society museums which because of their location in forest areas, some of these include Beech Forrest Museum in the Otways, and Old Gipps town at Morwell. Interstate the Eumundi Museum in Queensland has a number of timber getting items in a small general local history collection in old school house. The Eden Killer Whale Museum and Historical Society also has forestry related items including hand tools and

log jinker, as part of local history and maritime collection. Melrose Courthouse Museum South Australia is a local history collection with a few forestry related items

There are very few items in museum collections around Australia related to production of charcoal and a fuel during the war. However, there are some automotive gas producers in museum collections around Australia.

The RACV Heritage Collection, has some information about gas producers, such as original user leaflets, *Radiator* magazine articles and images of vehicles with the gas producers attached.<sup>2</sup>

Individual items in the collection of note include the following:

- The first charcoal gas producer display in Australia was organised by RACV & Melbourne City Council on August 10th, 1940. (The Radiator)
- 'Nasco' gas producer manufactured by National Automotive Service Company, a division of General Motors Holden's Ltd.
- 'Fleetway' was a brand of gas producer used by Melbourne City Council, State Electricity Commission, Metropolitan Gas Co. Large truck units were sold for £69, car/trailer units £89.
- 'Wishart' Gas Producers – manufacturer, King St, Melbourne.
- 'Making your own charcoal' – article, The Radiator, August 1941.
- Pamphlet: 'Producer Gas: as an aid to Australia and Australian Motorists.

The Herberton Mining Centre in Far North Queensland has a fair example of a gas producer.<sup>3</sup> Wagin Historical Village has a unit, in poor condition. Cliff Pederick made gas producers in Wagin from 1930s, starting with tractors, then trucks and finally for private cars. He evidently travelled the country lecturing on charcoal production in the 1940/50s. The Whiteman Park Museum has some information on Pedrericks Works, including owners manual and a brochure. Volunteers at the museum are keen to source a producer and/or make a replica.<sup>4</sup>

The National Museum has a Paulsen and Leaver brand charcoal-burning automotive wood gas producer. (Suncoast Pioneer Village collection(Object Number 1990.0074.0010).<sup>5</sup> The Main Roads Heritage Centre has a WWII gas producer in the collection and a variety of information including schematics, history etc.<sup>6</sup> The Canowindra Historical Society and Museum and the Corowa and District Historical Society, Federation Museum each have a gas producer in their collection.<sup>7</sup> The National Motor Museum in South Australia has 2 or 3 gas producers.<sup>8</sup> Museum Victoria History & Technology collection has gas producer manuals in the trade lit collection and some photos of units in use on tractors and other vehicles.<sup>9</sup> The National Transport Hall of

---

<sup>2</sup> Marissa Gardiner pers. com. RACV Heritage Collection Assistant Noble Park Ph: 9790 2995

<sup>3</sup> Gordon Grimwade pers com., CONVERGE Heritage + Community,

<sup>4</sup> Val Humphrey pers com. Curator, Revolutions Whiteman Park

<sup>5</sup> Laina Hall, pers com. National Museum of Australia

<sup>6</sup> Karen Barrett, pers com. Heritage Support Officer, Main Roads Heritage Centre Toowoomba

<sup>7</sup> Sarah-Jane Rennie, pers. com. Manager, Sector Development, Museums & Galleries NSW

<sup>8</sup> Allison Russell, pers com. Senior Curator National Motor Museum

<sup>9</sup> David Crotty, pers com. Curator Museum Victoria

Fame at Alice Springs houses the vehicle used by Kurt Johannson in central Australia with a charcoal burner for his vehicle. Over the years this featured in the several magazines.<sup>10</sup>



Plate 16: Road Chief Gas Producer (photo copyright Paul Pavlinovich)

Melbourne Steam Traction engine Cub has an original condition Road Chief Gas Producers. These were manufactured in Melbourne during World War II. This unit belongs to Bill Sides and is unused and complete with accessories.

The State Library of Victoria and National Library have many images of gas producers, in the case of the National Library, many of which appear to have originated from the department of defence production, illustrating the various types in use during the war.

---

<sup>10</sup> Margaret Hill pers. com. Junee NSW



Plate 17: Trailer mounted gas producer unit National Library image.



Plate 18: A larger truck unit – State Library Victoria image-a37523

### 3.0 SIGNIFICANCE ASSESSMENT

The significance of the Kurth Kiln collection lies in its ability to demonstrate the representative tools machinery and artefacts of the 1940s and 50s as related to both charcoal production and general forestry activities in Victorian. When compared to other collections of a similar nature, the Kurth Kiln collection stands out because of its specific focus on a particular site and period and more comprehensive nature. However, some items common in historical collections and museums, such as hand axes, personal effects, and not well represented. This is primarily a result of the collection being in-situ – i.e. made up of items already provenanced to the site, and on the subsequent activities of Parks Victoria and the Friends of Kurth Kiln in obtaining further items related to the site’s historic themes, However, there is potential for the scope of the collection to be gradually broadened to the detriment of its current integrity if there is no guiding principle and policy to determine future collecting and management of objects. Therefore a collection policy is suggested below, which is based on the existing strengths of the collection, an understanding of the history and development of the site, and reference to a statement of significance for the collection as it stands.

Comparison with other collections of forestry related of timber equipment in Victoria and other states, shows that the Kurth Kiln collection is on par or superior in its extent and representativeness. The collection has a breadth not found in more general collections, and has a greater sense of integrity that the few museum collections wich concentrate on forestry as a collecting theme, such as the Alexander Timber and Tramway Museum.

### **3.1 Statement of Significance for the collection as a whole**

#### **What is Significant?**

The collection of objects at Kurth Kiln comprises over 1300 individual items, the majority of which have been catalogued. While the bulk of this number is made up of small metal items such as bolts and nuts, brackets, spikes and the like (which account for about a third of the total number of catalogued items) the collection also has a number of hand and machine tools, larger items of machinery and fittings. These items are housed as part of the collection of the Kurth Kiln historical, which is managed by Parks Victoria and located Kurth Kiln Park, near Gembrook.. The collection of items for which this statement of significance applies are partly listed in Table 1 above and most are included on the InMagic catalogue maintained by Parks Victoria.

#### **How is it significant?**

The Kurth Kiln collection is of historical, technological and aesthetic significance to the State of Victoria. A number of items are also individually significant at the State level.

#### **Why is it significant?**

The collection is historically significant for its association with the development of the unique charcoal kiln and subsequent use of the site as a Forest Commission Victoria forestry camp.

The collection reflects the technical development and day to day operation of the charcoal kiln in the World War Two period, and the working lives of forestry workers in the post war period to approximately the 1960s. Many of the items demonstrate a way of life which has since disappeared, and reflect on the slower pace and closer community ties of the time and place.

The collection of objects is of social and historical significance because it is unique in its breadth and scope as a representative collection of items used in a typical isolated forestry camp during late twentieth century. Individual items are likely to have associations with specific individuals from the district and their specialist activities. The tools and equipment also demonstrate the varying occupations and activities of the camp workers and possibly their hierarchic roles.

The collection is of technical and scientific significance for its ability to educate and provide data on the design and operation of the patented Kurth Kiln, and the broader technology of charcoal production and gasification for powering vehicles. The charcoal grader relates specifically to the kiln, while the gas producers expand the interpretive potential of the collection to show ultimate uses and social and economic implications of the technology.

The collection is also of technical significance for its ability to illustrate and provide evidence of the standard of craftsmanship and specific operations involved in timber getting and in demonstrating the methods, techniques and technologies current at the time of its operation.

The collection is also significant for the extensive evidence of vernacular improvised objects which reflect both the frugality and ingenuity of forestry workers and a more general thread in Australian rural culture, where 'making-do' was seen as evidence of working prowess and skill.

The collection is of aesthetic significance for the vernacular quality of some aspects of the design and artisan's skills employed in the manufacture and decoration of individual items. A number of the items retain original finishes, which although deteriorating, are rare in such collections where objects have either been left to weather or have been heavily restored.

The collection is used for educational purposes in demonstrating past ways of life and historical associations in the district to both school groups and individuals. The collection has further potential for revealing historical and technical data through closer research and analysis, particularly in terms of the application of charcoal gasification technology and vernacular timber getting and forestry methods.

The collection has social significance because it is valued highly by the local community, and enthusiasts who have had the opportunity to experience the collection.

This collection has rarity value because it represents a diminishing resource of historical artefacts, and includes some items thought to be unique or extremely rare in Victoria, for example the charcoal grader may be the only one of its specific type.

This collection has representative value as examples of the range of designs, materials, appearance and methods of construction of forestry tools and equipment of the late twentieth century in rural Victoria.

The collection also has a relatively high level of integrity, with most of the items being provenanced directly to the Kurth Kiln site and many retaining their original elements. Most of the acquired items including the gas producers, are also well documented and provenanced

## 4.0 RECOMMENDATIONS / MANAGEMENT

The governing principle of heritage management in Australia is conservation of the identified heritage values associated with a place or object. In our increasingly urbanised environment agricultural cultural heritage sites, places and objects are a rapidly dwindling resource. Hence, wherever practicable the protection, promotion and conservation of heritage assets and their attached values is the preferred management option.

On the basis of the statement of significance for the collection, and in light of the various guidelines for the conservation of cultural material, including the Burra Charter, the following recommendations are proposed:

1. The significance of the Kurth Kiln collection is such that the management of the place and objects should ensure the retention, conservation and appropriate care and storage of the items.
2. The inventory of objects should be maintained and expanded, and be updated with current location and condition information whenever objects are relocated.
3. A program of conservation, maintenance and auditing of the collection should be planned and carried out to ensure the long term protection of the collection. This should include improved storage, active conservation and arresting deterioration processes – (such as fumigation) and regular condition assessment. In particular, improvements to weather, dust and vermin protection are required. In recognising the current storage and display conditions are not ideal, the following options might be considered:
  - a. Consolidate artefacts in one space. Provide racks and shelving to make more efficient use of space. This may require consideration of the loadings on the walls.
  - b. Relocate items to dispersed storage throughout the site, based on the use of items for interpretive and display purposes. This may require a larger part of the site set aside for interpretation.
  - c. Identify options for safe storage/keeping off site for any irreplaceable items.
4. Public interpretation and education including displays and use of the collection in research and demonstrations, where this is consistent with appropriate conservation practice should be encouraged.
5. If there is any change in the management structure of the overall site, appropriate management mechanisms should be put in place to ensure the on-going protection and conservation of the collection.
6. In addition to the rationalisation of storage facilities, provision could be made for more appropriate display storage. This could involve using glass cabinets for displaying key items in public areas of the buildings, or providing museum display furniture such as plinths and barriers for controlling public access to artefacts on public display.

7. The critical issue is the lack of secure enclosed storage in display space with only the room in the large shelter building available. Options for enhancing storage and display might include the following:
  - Enlarging the room in the open sided shelter, perhaps to an extra bay;
  - Closing off the northern storage area;
  - Infilling the connector building between the kiln and store/workshop; or
  - Constructing a new building.

Each of these options would impact on the heritage values of the site, but as the portable artefacts also contribute to heritage value and significance, their management and protection

8. A collection acquisition and deaccessioning policy should be developed which guides future decisions about what should be retained, discarded or added to the collection. A suggestion for this is provided in the following section.

#### **4.1 Suggested Collection Policy**

1. The collection policy and collection areas are determined by the Statement of significance for both the Kurth Kiln historic site and the collection.
2. The collection themes are the social, historic and technological aspects of charcoal production and use in gasification during World War Two, and the operation of a FCV Forestry Camp and visitor facility in the second half of the twentieth century.
3. In order for any material to be accepted into the Kurth Kiln collection it must meet the following criteria:
  - It must bear specific reference to one of the Collection areas.
  - It can be used in current or future education programs, exhibitions or displays.
  - It is not duplicated in the Collection.
  - Material is in a sound physical condition.
  - Adequate documented information is available on the material to establish provenance.
  - There is adequate funds and resources for the storage and conservation of the object.
  - All acquired collection items become the property of Parks Victoria/Friends of Kurth Kiln – note this issue may need to be resolved between Parks Victorian and the friends group before adopting any specific policy.
  - Where applicable all copyright relating to the collection item remain with Parks Victoria/Friends of Kurth Kiln
  - There are no conditions placed on the admission of the collection item to the Kurth Kiln Collection.
4. Deaccession and Disposal Policy - Criteria for deaccessioning. Parks Victoria/Friends of Kurth Kiln will consider deaccessioning and disposal of a collection item when it:

- cannot be used in current or future exhibitions or displays;
  - no longer serve teaching or research purposes;
  - do not fit into the collection areas of Kurth Kiln;
  - are duplicated within the Kurth Kiln Collection;
  - are no longer in a sound physical condition and the conservation resources of Parks Victoria / Friends of Kurth Kiln will not sustain their restoration and/or preservation.
5. Procedure for deaccessioning
- An accessioned object must meet one or more of the above deaccessioning criteria.
  - A request to deaccession collection items in the collection must be made by the Park Manager (or collections officer) Parks Victoria and Chairperson of Friends of Kurth Kiln for approval.
  - Documentation must be completed for each piece of collection items disposed of. (a photograph of the collection item must be attached at time of disposal)
  - A copy of documentation (and photograph) will be kept on file within Parks Victoria.
6. Methods of disposal - collection items approved for deaccessioning and disposal by the Park Manager (or collections officer) Parks Victoria and Chairperson of Friends of Kurth Kiln will be disposed of via the following methods subject to Management Committee approval (listed in order of desirability):
- Returned to donor or donor's family (if details are on record and easily retrievable)
  - Transfer to another museum/gallery with first preference given to a locally-based and similarly-themed collection (if possible)
  - Donation to a charitable organisation (e.g. Salvation Army, St Vincent De Paul)
  - Destroy or recycle

## APPENDICES

### Appendix A Statutory Heritage Legislation

#### **The Protection of Australia's Movable Cultural Heritage: Overview**

Objects that people create or collect can be an important part of our cultural heritage. These objects can be artistic, technological or natural in origin.

There is increasing trade and exchange of this movable cultural heritage between nations. This exchange can be of great benefit by enhancing international appreciation of cultural diversity. It can also lead to the loss of significant aspects of a nation's cultural heritage as these objects are traded in the international market.

Australia's movable cultural heritage is protected at both Commonwealth and State levels.

In 1970 the United Nations Educational, Scientific and Cultural Organisation (UNESCO) adopted the UNESCO Convention on the Means of Prohibiting the Illicit Import, Export and Transfer of Ownership of Cultural Property. Australia ratified the convention by passing the *Protection of Movable Cultural Heritage Act 1986* (the Act), giving the 1970 Convention force in Australian law.

The Act regulates the export of Australia's significant cultural heritage objects. It is not intended to restrict normal and legitimate trade in cultural property and does not affect an individual's right to own or sell within Australia.

It implements a system of export permits for certain heritage objects defined by the Act as 'Australian protected objects'. Australian protected objects are objects which form part of the movable cultural heritage of Australia and which meet the criteria established under the National Cultural Heritage Control List. The Control List is located in the Regulations to the Act, and divides Australian protected objects into two classes:

- Class A objects which may not be exported
- Class B objects which may be exported if granted a permit under the Act.

A person wishing to export a Class B object is required to apply for a permit in writing. Applications are processed in accordance with the legislative process established under section 10 of the Act.

Certificates of Exemption, granted under section 12 of the Act, allow Australian protected objects that are currently overseas to be imported into Australia and subsequently re-exported. This includes Class A objects.

The Act also includes provisions that allow Australia to respond to an official request by a foreign government to return movable cultural heritage objects that have been illegally exported from their country of origin.

The *Protection of Movable Cultural Heritage Act 1986* is administered by the Minister for the Environment and Water Resources. This responsibility was transferred from the Minister for Communication, Information Technology and the Arts in November 2001.

The Movable Cultural Heritage Unit in the Department of the Environment and Water Resources provides the Secretariat to the National Cultural Heritage Committee.

### **Victorian Heritage Act 1995**

Heritage Places are protected under the *Heritage Act 1995* through inclusion on a statutory list, being one of the Victorian Heritage Register, the Heritage Inventory or the Shipwrecks Register. Blanket protection is also provided for archaeological relics and sites greater than 50 years old, regardless of whether they are listed on the Heritage Inventory or not.

A permit is required for any works or activity that may impact the significance of a place listed on the Victorian Heritage Register, and a Consent to Disturb is required for impacts to any place on the Heritage Inventory. Permit applications must be submitted to the Executive Director who will consider the application and decide on the matter. Should the applicant or owner object to the decision of the Executive Director, an appeal can be made to the Heritage Council.

Under the Heritage Act it is an offence to damage or disturb a registered heritage place or archaeological sites or relics, without obtaining permission from the Executive Director.

Consultation and discussion with Heritage Victoria should begin well before lodging an application for a Consent or Permit to disturb or destroy a historical archaeological site. General queries about listed places, and Consent and Permit applications can be made to:

Heritage Victoria  
Level 7  
8 Nicholson Street  
EAST MELBOURNE VIC 3002  
Ph: (03) 9637 9475  
Fax: (03) 9637 9503

### **Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)**

The Commonwealth Australian Heritage Commission Act was repealed in 2003 and in its place amendments to the EPBC Act and the provision of an Australian Heritage Council have also been made in new legislation.

Under the EPBC Act Amendments (No 88, 2003) two mechanisms have been created for protection of heritage places of Commonwealth or National significance. Initially places in

Commonwealth ownership may be placed on the Commonwealth list with similar protection measures as under the previous AHC act. In addition the National list provides protection to places of cultural significance to Australia. By law, no one can take any action that has, will have, or is likely to have, a significant impact on any places of national heritage value, without approval. Such actions must be referred to the Australian Government Minister for the Environment and Heritage. The relevant heritage listings for places protected under this legislation are the National Heritage List, the Commonwealth Heritage List and the Register of the National Estate.

### **The National Trust of Australia (Vic)**

The National Trust of Australia (Vic) is a community-based conservation organisation. The Trust maintains a Register of heritage items and places. Although the Register has no legal foundation or statutory power, it is recognised as an authoritative statement on the significance to the community of particular items, and is held in high esteem by the public. The National Trust lists items or places that have heritage or cultural value to the community and, as such, the Trust encourages and promotes the public appreciation, knowledge, and enjoyment of heritage items for future and present generations.

## Appendix B Background to Significance Assessment

Assessing the heritage significance of a historic building, cultural heritage place heritage object or archaeological site is undertaken to make decisions about the best way to protect and manage the particular heritage place. The nature and level of cultural significance will also determine if statutory protection is appropriate under State or Federal heritage legislation. The statutory frameworks that govern heritage protection are discussed in detail in Section 2 above.

Heritage assessment criteria in Victoria fall broadly within the significance values outlined in the Australia ICOMOS Burra Charter (Australia ICOMOS 1999). This approach to heritage has been adopted by cultural heritage managers and government agencies as the set of guidelines for best practice heritage management in Australia. These values include the following:

- **Historical** significance (evolution and association) refers to historic values and encompasses the history of aesthetics, science and society, and therefore to a large extent underlies all of the terms set out in this section. A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.
- **Aesthetic** significance (Scenic/architectural qualities, creative accomplishment) refers to the sensory, scenic, architectural and creative aspects of the place. It is often closely linked with social values and may include consideration of form, scale, colour, texture, and material of the fabric or landscape, and the smell and sounds associated with the place and its use.
- **Social** significance (contemporary community esteem) refers to the spiritual, traditional, historical or contemporary associations and attachment that the place or area has for the present-day community. Places of social significance have associations with contemporary community identity. These places can have associations with tragic or warmly remembered experiences, periods or events. Communities can experience a sense of loss should a place of social significance be damaged or destroyed. These aspects of heritage significance can only be determined through consultative processes with local communities.
- **Scientific** significance (Archaeological, industrial, educational, research potential and scientific significance values) refers to the importance of a landscape, area, place or object because of its archaeological and/or other technical aspects. Assessment of scientific value is often based on the likely research potential of the area, place or object and will consider the importance of the data involved, its rarity, quality or

representativeness, and the degree to which it may contribute further substantial information.

As well as the ICOMOS Burra Charter significance guidelines, various government agencies have developed formal criteria and guidelines that have application when assessing the significance of heritage places within Victoria. Of primary interest are the Commonwealth Department of Environment and Water Resources, Heritage Victoria, Aboriginal Affairs Victoria and the Department of Sustainability and Environment. The relevant aspects of these guidelines are presented below.

There are an additional five comparative criteria which are used as modifiers of the primary criteria to evaluate the degree of significance:

- **Provenance** – Provenance refers to the chain of ownership and context of use from the objects' origin until it is acquired by the museum. Knowing the provenance enables the museum not only to tell powerful stories surrounding the object but also related stories that may be revealed by the investigation process. If there is no provenance, the museum runs the risk of falsifying the history and origins of the object.
- **Representativeness** - Objects that represent a particular category of object, or activity, way of life or theme relevant to the museum
- **Rarity** - Rare or uncommon objects that relate to the museum's mission statement and policies
- **Condition, completeness or intactness and integrity**- Objects that may be complete or intact, for example, a complete dinner set in good condition.
- **Interpretive potential** - An objects ability to interpret and demonstrate particular themes, people or ideas.

## Appendix C Heritage Assessment Criteria

The Victorian Heritage Register, which is managed by Heritage Victoria under the *Heritage Act 1995*, uses a separate set of significance assessment criteria broadly based on those of the Australia ICOMOS Burra Charter (1999). Heritage Victoria's significance assessment criteria are intended to assist in determining if a place meets a significance threshold that would warrant its listing on the Victorian Heritage Register, with the associated obligations for conservation and protection of the place.

Many local heritage studies use a form of these criteria, or the equivalent Australian Heritage commission criteria in determining places of local heritage significance. In such cases the criteria are adapted to the local or regional area.

The criteria are:

A	The historical importance, association with or relationship to Victoria's history of the place or object.
B	The importance of a place or object in demonstrating rarity or uniqueness.
C	The place or object's potential to educate, illustrate or provide further scientific investigation in relation to Victoria's cultural heritage.
D	The importance of a place or object in exhibiting the principal characteristics or the representative nature of a place or object as part of a class or type of places or objects.
E	The importance of the place or object in exhibiting good design or aesthetic characteristics and/or in exhibiting a richness, diversity or unusual integration of features.
F	The importance of the place or object in demonstrating or being associated with scientific or technical innovations or achievements.
G	The importance of the place or object in demonstrating social or cultural associations.
H	Any other matter which the Council considers relevant to the determination of cultural heritage significance.

**Table 3: *Heritage Victoria Criteria for the assessment of historic cultural heritage***

While not yet formally adopted in Victoria, the use of thresholds or gradings of significance is a common way to assess what level of protection is appropriate to a place. Consequently, heritage places can be assessed as having National, State or Local significance. A heritage place can also be assigned a grading to better explain its place within a cultural landscape.

A place cannot be excluded from listing on the Victorian Heritage Register on the basis that places with similar characteristics have already been listed.

The assessment criteria are useful in considering a wide range of heritage items, and may be applied to sites with standing heritage structures, cultural landscapes, moveable objects and

collections of Aboriginal or historic artefacts, as well as areas with the potential to contain archaeological deposits.

### Grading of significance

The heritage guidelines on assessing significance also include a set of gradings of significance. These are used to identify if loss of integrity or condition diminishes significance.

<i>GRADING</i>	<i>JUSTIFICATION</i>	<i>STATUS</i>
Exceptional	Rare or outstanding element directly contributing to an item's local and State significance.	Fulfils criteria for local or State listing.
High	High degree of original fabric. Demonstrates a key element of the item's significance. Alterations do not detract from the significance.	Fulfils criteria for local or State listing.
Moderate	Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item.	Fulfils criteria for local or State listing.
Little	Alterations may detract from the overall significance but its role, function, design or fabric can still be interpreted.	Does not fulfil criteria for local or State listing.
Intrusive / Nil	Damaging to the item's heritage significance. Difficult to interpret.	Does not fulfil criteria for local or State listing.

**Table 4: Grading of heritage significance (based on NSW Heritage Office)**

An assessment of significance is based on the attributed value of an item or place, while the grading also considers the current condition. The grading system works both ways. An item may be inherently significant at a State level, yet modifications and alterations have detracted from the significance, resulting in an assessment of Low State significance. Conversely, an item that is highly significant at the Local level may not fill the criteria for State significance. The context of items may affect the grading as well. Several items with Low Local significance at individual levels, when considered as a group, may be assessed as of Moderate or High Local significance.

## REFERENCES

- APT/AIC New Orleans Charter for the Joint Preservation of Historic Structures and Artifacts* (1993). <http://www.apti.org/resources/charters1.cfm>
- Australian Historic Themes. A framework for use in heritage assessment and management <http://www.ahc.gov.au/publications/generalpubs/framework/index.html>
- Australian ICOMOS Charter for the Conservation of Places of Cultural Significance* (Burra Charter) 1999 and its guidelines <http://www.icomos.org/australia/>
- Australian Standard (Emergency Series) No. (E) D.3001 – 1941 Specification for Charcoal Gas Producers for Motor Vehicles. (withdrawn on 16th March 1959).
- Cash John D. and Martin G. Cash 1940, *Producer Gas for Motor Vehicles* by, Angus and Robertson, Sydney,. (Note: The 1942 revised 2nd Edition was reprinted by Lindsay Publications <http://www.lindsaybks.com/> in 1997.)
- Catrice, Daniel, 1996a, 'A History of Forest Activities in the Central Highlands and East Gippsland', unpublished report, Historic Places Section, National Parks Service.
- Catrice, Daniel, 1996b, Kurth Kiln Gembrook Conservation Plan, Report to Historic Places Section, National Parks Service, Department of Natural Resources and Environment.
- Catrice, Daniel, 1998, 'A processing industry in the forest: Kurth Kiln', *Historic Environment* 14(1):4–9.
- Egloff, G. and P. Van Arsdell, 1943, "Motor Vehicles Propelled by Producer Gas" *Petroleum Engineer*, Vol. 15, p645
- FAO Forestry Department, 1986, *Wood gas as engine fuel*, Mechanical Wood Products Branch, Forest Industries Division Food and Agriculture Organisation of the United Nations.
- "Farewell Charcoal", *Power Farming in Australia*, June 1946, p43.
- Gasification Australia Pty. Ltd., Web Resource, "History of gasification, [http://www.gasificationaustralia.com/index.php?option=com\\_content&task=view&id=15&Itemid=31](http://www.gasificationaustralia.com/index.php?option=com_content&task=view&id=15&Itemid=31), page viewed 22/8/08.
- Heritage Collections Council, 1998. *reCollections: Caring for Collections Across Australia, Managing Collections*, Collection Management and Conservation Working Party Heritage Collections Council [http://www.collectionsaustralia.net/sector\\_info\\_item/62](http://www.collectionsaustralia.net/sector_info_item/62)
- Heritage Collections Council, 2001, *Significance, A guide to assessing the significance of cultural heritage objects and collections*.
- Heritage Council of Victoria Victoria's Guidelines: *Guidelines for nominations to the Register* (steps 1 &2) <http://www.heritage.vic.gov.au/pages/pdfs/brochures/guidelines.pdf>
- Heritage Victoria, 'Recognising Victoria's Heritage Objects and Collections', (information Leaflet).
- Heritage Victoria, *Criteria for assessment of cultural heritage significance* <http://www.heritage.vic.gov.au/pages/pdfs/criteria.pdf>
- Historic Places Section National Parks Service, Site records, DNRE.

- Information on the operation of the Humphrey pump was summarized by Towne in 2003 at the following: [http://www.steamengine.com.au/ic/history/humphrey\\_pumps/](http://www.steamengine.com.au/ic/history/humphrey_pumps/)
- Irvine, C.J. 1941, *The Manufacture of Wood Charcoal*, Forests Commission of Victoria, Melbourne.
- Kaupp, A. and J.R. Goss, 1984. *Small Scale Gas Producer-Engine Systems*, Friedr. Vieweg & Sohn, Braunschweig/Wiesbaden,
- Kerr, James Semple, 1996, *The Conservation Plan, A Guide to the Preparation of Conservation Plans for Places of European Cultural Significance.*, National Trust of Australiana (New South Wales)
- Land Conservation Council, 1994, *Melbourne Area District 2 Review*, Final Recommendations, Land Conservation Council.
- Land Conservation Council. 1996, *Historic places special investigation south-western Victoria descriptive report*, Melbourne: Land Conservation Council.
- Marquis-Kyle, P. and Walker, M. 1992 *The Illustrated Burra Charter: Making Good Decisions about the Care of Important Places*, Australia ICOMOS, Brisbane.
- McCarthy, M. 1987, *Bellbrakes Bullocks and Bushman, A Sawmilling and Tramway History of Gembrook*, LRRSA.
- Moulds, F. 1991, *The Dynamic Forest: A History of Forestry and Forest Industries in Victoria* Lynedoch Publications, Melbourne.
- National Trust of Australia (Victoria) : File no. 40.
- NSW Heritage Office, 1999 Reprinted 2004, *Objects in their place, An introduction to movable heritage*, HO 99/26
- NSW Heritage Office, *Movable Heritage Principles Heritage Information Series*
- NSW Heritage Office, *Safe in the Shed: Caring for Historic Farm Machinery*, Produced by NSW Heritage Office and Ministry for the Arts Movable Heritage Project.
- Parks Victoria, 2001, *Movable Cultural Heritage Management Policy*, Parks Victoria, *Draft as of 12<sup>th</sup> September 2001*
- Pearson, M. and Sullivan, S. 1995, *Looking After Heritage Places*, Melbourne University Press.
- Royal Australian Chemical Institute, 1966, 'Obituary: Ernest Edgar Kurth', *Proceedings of the Royal Australian Chemical Institute*, vol. 33, no. 3, p. 63
- Schmitt, D. 1992a, 'Gold, timber, Charcoal and Recreation: A History of the Gembrook Kurth Kiln', typescript, F/C:3/1, Resource Collection, Historic Places Section, Department of Natural Resources and Environment.
- Schmitt, D. 1992b, 'The Gembrook Kurth Kiln' in T. Griffiths, *Secrets of the Forest: Discovering History in Melbourne's Ash Range*, Allen & Unwin, Sydney.
- Storey, A, & P. Davies, 1995, 'Historic Forest and Forest-Based Places in South West Victoria'. Report to the Land Conservation Council.