

Port Essington

The historical archaeology of a north Australian
nineteenth century military outpost

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Chapter 1

Introduction: The Problem Defined

Prior to 1966 no professional enquiry had been made into the potential of archaeology as a technique for historical research in Australia. In that year the possibilities of excavating the remains of the British settlement of Victoria, in Port Essington in tropical northern Australia (Figures 1 and 2) were investigated by me and my supervisor, D.J. Mulvaney. This thesis presents the results of the project which grew from those investigations.

The work was begun in total ignorance of the amount of historical archaeology which had been carried on in the United States of America and also in Canada and with only the vaguest ideas about industrial archaeology in Britain. The latter discipline proved to have less relevance to the Australian situation than the former, and many aspects of the organisation and analysis of the present work reflect the influence of American historical archaeologists. The cultural affinities of the materials recovered were British, however, and research into these was necessarily directed towards Britain. Terminologies in use have been maintained wherever possible and reflect both American and British influences.

RESEARCH QUESTIONS

A number of themes presented themselves as potential lines of enquiry. The first and major objective was to assess the degree to which archaeology, both in fieldwork and laboratory analysis, might be of value in providing new insights and evidence for Australian colonial history. In the immediate situation this meant demonstrating that archaeology might be able to say something beyond the available documents for the history of Port Essington. These documents were known to be available, although in what quantities was still to be

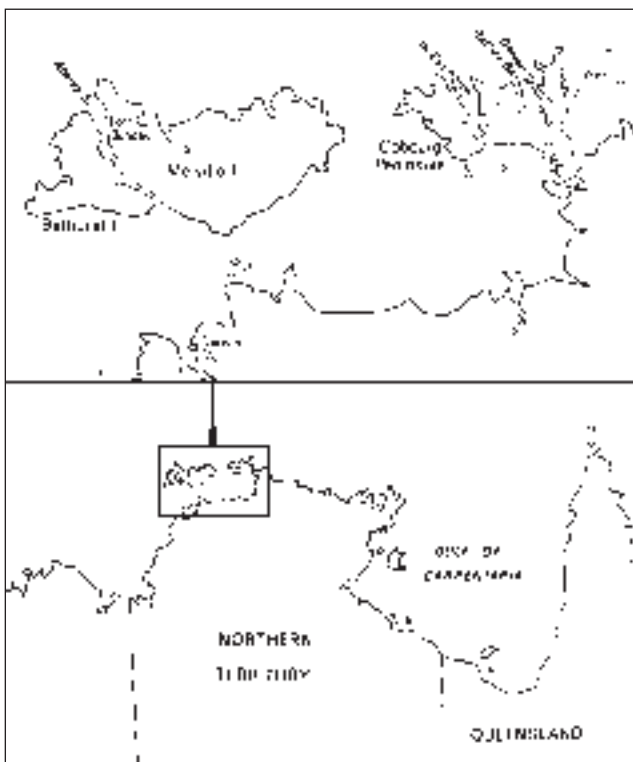


Figure 1. Location map showing Port Essington and other places mentioned in the text.

ascertained, and documentary research was assumed to be an integral part of the project from the beginning. This led to a further consideration, the degree to which two vastly different kinds of evidence might interact and be integrated into history. From the vantage point of hindsight this has emerged as the major problem confronting not only this project but historical archaeology in general.

The second aim of the thesis – to begin compiling a well-dated reference collection of mid-nineteenth century artefacts – both influenced and was influenced by the selection of the site. The settlement at Port Essington was made in 1838 and abandoned in 1849. From that time the area has remained almost totally free from contamination by later European occupation. The exception was in the 1870s when cattle ranchers occupied the area for a brief time, but as reference to the site map (Figure 3) shows, this was not in the settlement proper, nor was it of sufficient intensity to disturb the original occupation debris to any noticeable degree. Today the area is a flora and fauna reserve, superintended by a ranger living at Black Point, 24 km from the settlement. Access to the settlement by land requires a major expedition (see below) and the attendant difficulties of sea or air access limit visitors to the settlement to one or two per year.

Thus the site presented an almost unique opportunity to test the potential for the future analysis of historic sites elsewhere in Australia – the excavation of an uncontaminated site of single phase occupation whose occupation dates were known historically, and which was of sufficient duration to provide a meaningful collection of artefacts and architectural information. At the same time the duration of the settlement was not of an extended time range, and it was expected that the artefacts recovered might therefore constitute a type collection for this period of Australian history. This could then be used in the same manner as types anywhere in archaeology, for working from the known to the unknown. Following the first season's excavations an immediate example of this process was at hand. The Chinese porcelain excavated in the settlement showed similarities with that being excavated in historically undated Macassan (Malayan) trepanning campsites on the Arnhem Land coast, and a comparison of these wares is at present being conducted (Macknight 1969).

Two further areas of consideration presented themselves. The first of these was the possibility of exploring archaeologically for the first time in Australia the culture contact situation between Europeans and Aborigines, not only within the settlement itself, but also in Aboriginal sites in the general area.

The second consideration was that because of the unique possibilities of cross-checking archaeological evidence with historical documents it was thought that archaeology in the recent historical past might be well suited for examining concepts and techniques of fieldwork, analysis and interpretation current in prehistoric archaeological research.

Faced with no knowledge of any theoretical writing in the particular field of historical archaeology, the work was begun with a single basic premise: that the final objective of the fieldwork and analysis was to produce history. In the particular and practical aspect this meant the history of Port Essington constructed from all the available sources. In a more general aspect this meant contributing to the general history of nineteenth century technology and colonial expansion, again using both archaeological and historical data.

Chapter 2

Excavations and Architecture

This chapter describes the excavations and architecture of each site-unit. Any relevant discussion is included at this juncture and the finds from each site-unit are recorded in tabulated form at the end of each section; mostly these are not directly referred to in the text. General discussions of the artefacts follow in the subsequent chapters.

Each site-unit has been dealt with separately and has been given a code prefix listed at the beginning of each section. All weights are given in grams, and measurements in metres, or millimetres as appropriate. The glass in the tables in this chapter is divided into three types. Type A includes all pieces thought to be possible Aboriginal artefacts, Type B includes all pieces of identifiable shape and Type C includes all pieces of glass not identifiable as Types A or B (see Chapter 4).

VICTORIA RUBBISH DUMP (Code prefix VM)

During the initial survey an area was located immediately to the south of the outhouse belonging government house which subsequently proved to be the largest rubbish dump in the settlement. The area was flat and heavily grassed, and was covered with two large clumps of an unidentified green bramble, about 2.5 m in height and particularly thorny. Between these two clumps an animal path had kept the grass down and pieces of glass and pottery were noticed. Since it was almost impossible to delineate the area of rubbish distribution without a thorough clearing of the area, an area twenty metres by twenty-five metres was measured out, taking the animal path as roughly the centre, and this area was cleared to allow a complete surface collection to be made.

VM surface collection

Twenty-five squares, lettered A to T, and each measuring 5 m by 5 m, were completely collected of all cultural material with the exception of a few bricks, and pieces of local ironstone which may have been roughly hewn as a building material. As elsewhere, glass was by far the most common artefact recovered and its distribution gives a good indication of the density of cultural deposit. Most of the area of the heaviest deposit is that covered by the bramble.

The results obtained indicated that the grid had perhaps been set too far to the east. An examination to the west of the grid suggested more deposit, but few actual finds were visible on the surface and it was judged unimportant to extend the grid in that direction. Instead four more squares (U–X) were added to the southern side where another concentration of material was located.

This collection proved to be the most concentrated one found at the settlement. A total of 2,231 pieces of glass and 263 pieces of pottery were recovered, as well as fragments of metal, and an Aboriginal stone implement (a core) in creamy quartzite, a material foreign to the area. As the collection continued it became apparent that even allowing for accidental fracture, some of the glass represented deliberate utilisation by Aborigines.

Because of the density of surface artefacts I decided to excavate this site-unit during the first season to provide the nucleus of the site's type collection.

VM excavations

The distribution of the surface material suggested that the main concentration was lying roughly along the east-west diagonal of the surface grid and I decided to excavate along this line at the point where the slightly raised ground level promised the maximum depth of deposit. At the same time the trench was situated so as to avoid the bramble areas where the roots would interfere with the excavations.

An initial trench VM/1, measuring 2 m by 1 m, was excavated in two spits, the first to a uniform depth of 100 mm, the second to sterile soil, at an average depth of 160 mm. This trench produced an inordinate amount of cultural material, particularly glass. Since no difference could be ascertained between the upper and lower spits, and since the main object of the excavation was to obtain as large a sample of artefacts as possible, it was decided to abandon the stratigraphic differentiation to increase the speed of the excavation, but at the same time to maintain some horizontal control by excavating metre squares. Subsequently in the laboratory the two stratigraphic units of VM/1 were amalgamated for analysis.

The excavations were continued towards the west in a line of adjoining metre squares (Figure 5). Squares VM/10 and VM/11 took the excavations beyond the surface grid to

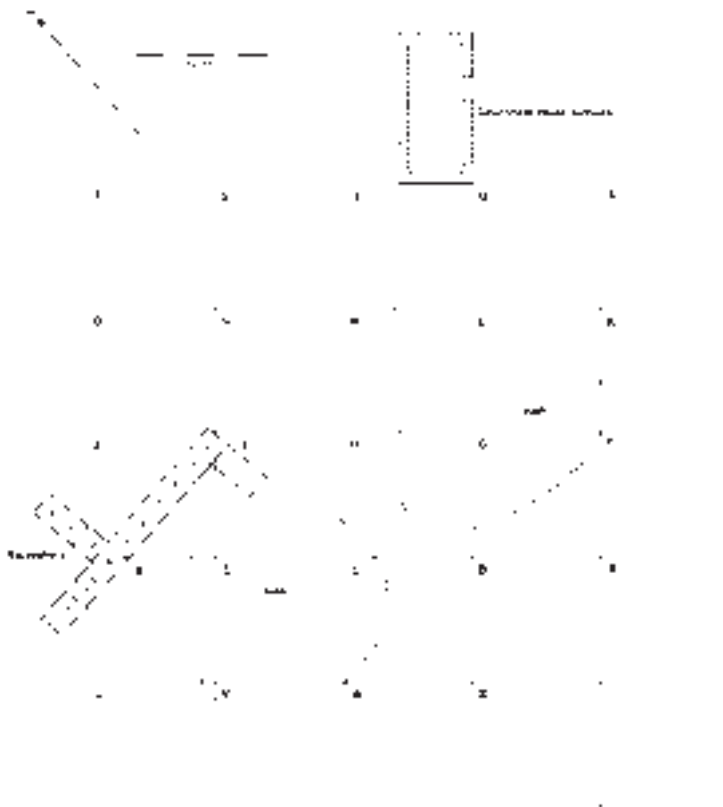


Figure 5. Rubbish dump behind Government House showing foundations of its outhouse, the area of its surface collection and the location of excavation VM.

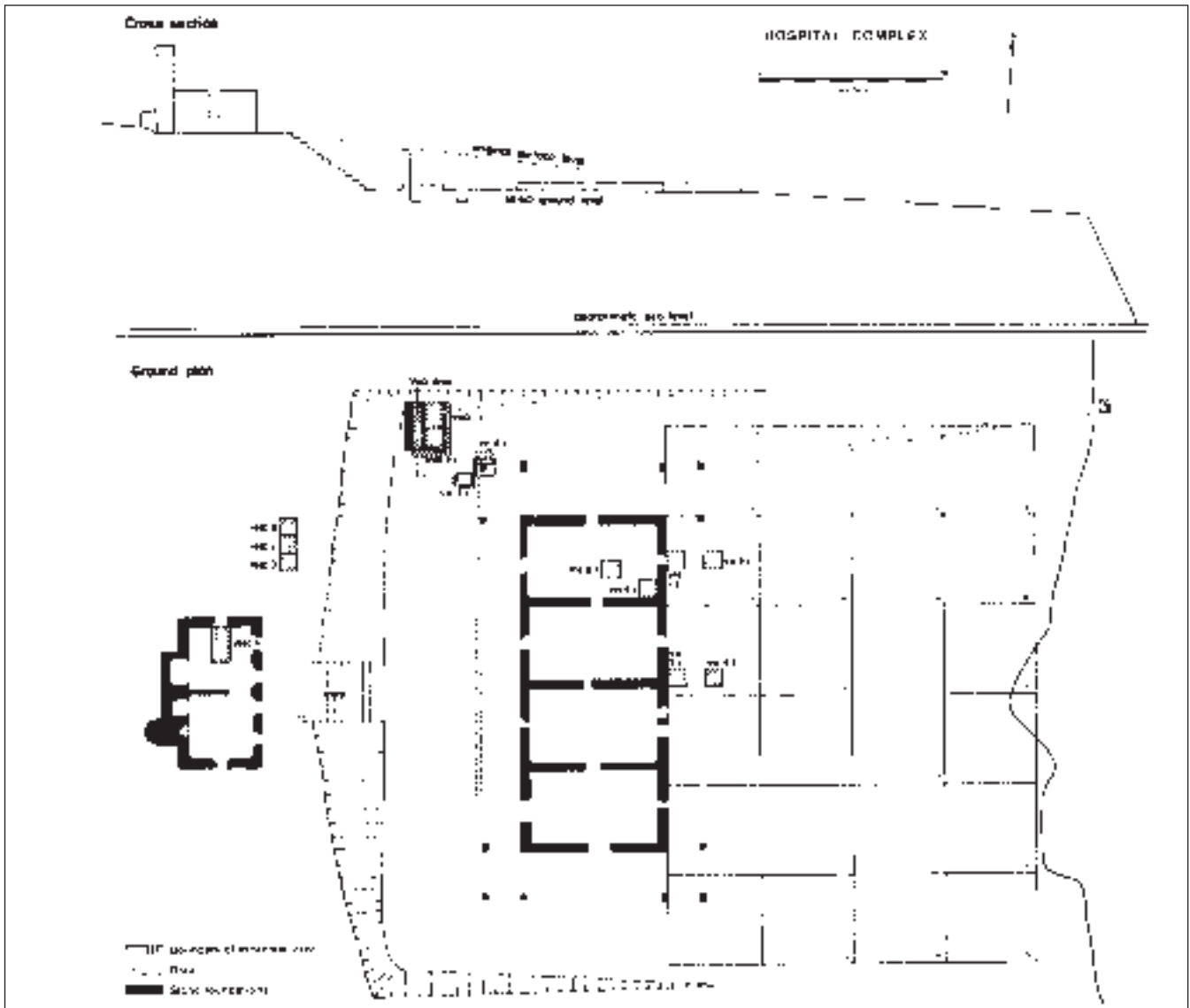


Figure 7. Ground plan of hospital complex showing areas of surface collection and excavation.

Table 10. Glass from VH/S (surface collection) according to type: number and weight in grams.

	TYPE A		TYPE B		TYPE C		TOTAL	
	No.	Wt	No.	Wt	No.	Wt	No.	Wt
VH/S/A	6	116.4			19	86.5	25	202.9
VH/S/B	20	477.7			39	117.9	59	595.6
VH/S/C	7	88.2			23	401.6	30	489.8
VH/S/D	83	873.8	8	87.8	428	868.9	519	1830.5
VH/S/E	12	127.8	3	117.7	111	347.5	126	593.0
VH/S/F	2	39.0			6	14.0	8	53.0
VH/S/G							0	0
VH/S/H	4	118.0			4	9.7	8	127.7
VH/S/I	7	47.9			31	82.3	38	130.2
VH/S/J	1	5.0			6	73.3	7	78.3
VH/S/K	1	72.3					1	72.3
VH/S/L					1	0.8	1	0.8
VH/S/M	3	2.7			4	5.4	7	8.1
VH/S/N	1	95.8					1	95.8
VH/S/O	7	75.1			3	12.2	10	87.3
VH/S/P					3	34.4	3	34.4
VH/S/Q	6	296.1			3	7.3	9	303.4
VH/S/R	15	273.5			7	29.2	22	302.7
VH/S/S	34	476.9	5	429.7	23	125.5	62	1032.1
VH/S/T	24	266.8			30	100.8	54	367.6
VH/S/U	3	14.2	1	9.7	23	39.4	27	63.3
VH/S/V	7	24.8			18	50.0	25	74.8
VH/S/W	10	36.8			14	43.5	24	80.3
VH/S/X	10	90.9	1	138.1	7	9.2	18	238.2
TOTAL	263	3619.7	18	783.0	803	2459.4	1084	6862.1

Table 11. Pottery counts from VH/S (surface collection) according to type.

	VH/S/ B	VH/S/ C	VH/S/ D	VH/S/ E	VH/S/ F	VH/S/ G	VH/S/ H	VH/S/ I	VH/S/ K	VH/S/ N	VH/S/ O	VH/S/ P	VH/S/ Q	VH/S/ R	VH/S/ S	VH/S/ T	VH/S/ U	VH/S/ V	VH/S/ W	VH/S/ X	TOTAL	
Transfer																						
Printed			1	5		1	1	1		1	1	1	1	1	1	2	1		1			19
Undecorated																						
White Glaze	1	2	16	3	1			1	1	1	1						7					34
Salt Glaze																						
Stoneware		1	11																			12
Unglazed																						
Wheelmade													2	1								3
Clay Pipe																						
Stems			1										1	1	1	1						5
Polychrome																						
Porcelain																			1		2	3
Blue On White																						
Porcelain			1													4	1	1				7
Macassan			1																			1
Unidentified				1																		1
TOTAL	1	3	31	9	1	1	1	2	1	2	2	1	1	4	3	7	10	2	1	2	85	

THE HOSPITAL (Code prefix VH)

VH architecture

As noted, the only remains of the hospital building are the stone foundations on which it originally stood (Figure 8). The foundations were made of a double wall of rough-hewn ironstone with rubble fill, standing to an average height of 400 mm above the ground surface, and varying between 450 and 500 mm wide. There is no reason to suppose these walls ever stood higher, and it seems that the prefabricated wooden frame was erected on them. The foundation walls provide an exact ground-plan of the building which was divided into four rectangular rooms with a narrow entrance in each of the connecting and external walls (see Figure 7). These appear to be rather narrow for doorways, and were probably for ventilation under the building. From a contemporary painting (Sweatman ML A1725: plate 64) it can be discerned that the hospital was bounded on the south and east sides by a verandah and this was confirmed in the archaeological record by the presence of three squared stone post supports set in the ground at each of the four corners of the building,



Figure 8. Foundations of the hospital (VH) in foreground, looking north-west towards the remains of the dispensary (VHD).

demonstrating that the verandah extended around the entire perimeter of the building, being slightly wider on the north and south sides than on the east and west sides. From the painting it was noted that each of the corners was enclosed to provide an additional room. Along the western and northern sides a narrow, open, stone-lined drain or gutter was constructed to carry off the water which must otherwise have accumulated in this levelled area. Unfortunately, time did not permit excavations to determine whether this gutter extended along the southern side, but this assumed likely. At some point along the northern edge of the building the drain was apparently taken underground, since the outlet was located in the cliff (see Figure 7) approximately 1 m below the ground surface, and there is no evidence that there has been any natural soil deposition above it since its construction.

VH excavations

Traces of shell flooring were apparent at the southern end of the eastern face, but not elsewhere around the building. A metre square (VH/1/1) was begun outside the entrance to the northern room on the eastern side to see if this shell flooring extended around the perimeter, but after passing through 120 mm of dark grey topsoil the deposit immediately gave way to small ironstone pebbles overlying sterile sand and clay. Finds consisted of fragments of glass, and nails.

A second metre square (VH/2/1) was begun two metres to the east, taking the square outside the line of the verandah. Here the stratigraphy was identical to that in VH/1/1 but many more glass fragments were recovered. Two more squares (VH/3/1), (VH/4/1) were excavated on the eastern side. The first of these was dug in a similar position to VH/1/1, but 5.5 m south of it, so as to encounter the shell flooring noticed on the surface. Here the shell ran through the deposit layer (although never thick) until the sterile layer was encountered at a depth of 80 mm. Finds in this square were similar to those in VH/1/1, with the addition of a worn gunflint. VH/4/1 was excavated opposite VH/2/1 and 5.5 m south of it. The stratigraphy was the same as that in VH/2/1 but contained few finds, apart from a pewter button.

Two more metre squares (VH/5/1, VH/6/1) were excavated within the northern room of the hospital. In both cases, after passing through the topsoil layer, the same sterile layer was encountered at a depth of 60 mm. This presumably was the floor when the building was occupied. Finds were again few, consisting mainly of nails and several pieces of glass. Ideas of further excavation in this area were abandoned

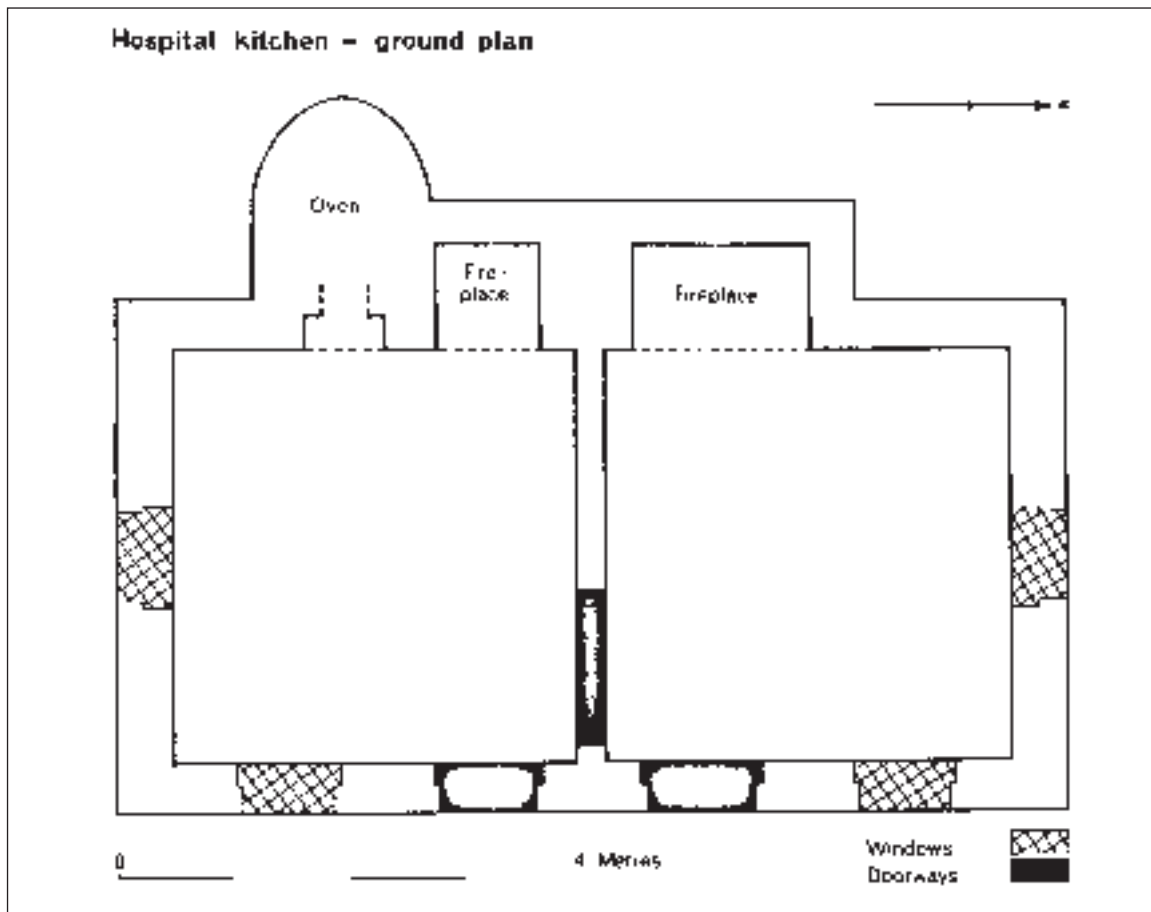


Figure 13.
Ground plan of
hospital kitchen.

plan the oven is oval, with an arched dome and a solid fill floor. This oven apparently worked on the same principle as that described for the bake house (below), with additional heat being supplied from the adjacent fireplace. The opening into the oven is recessed, and above the recess an air vent has been built leading into the southern chimney in order to draw off smoke during the firing. Although combined externally, the chimneys from each room have separate angled exits, with the internal faces pargetted.

A close examination of the western wall indicates that the chimneys and oven were built separately and the thick section of the wall above the oven was added after (see western external and internal elevations and southern elevation Figure 14), presumably for added insulation. This section was built of solid rubble fill, and from the impressions remaining in the cement it had been roofed with wooden shingles, in a similar manner to the bake house (q.v.). Wooden shingles are inferred from the absence of slates or clay tiles near either baking oven. This section of the roof is pitched at an angle of 15°, but it is reasonable to suppose that the shingle or thatch roof over the main part of the building was pitched more steeply than this. That the main roof was pitched along the long axis of the building is suggested by the presence of a row of projecting stones in the eastern face of the chimney, under which the roofing material was butted (Figure 15b). This is reminiscent of similar rows of sloping projected stones on the towers of late medieval English churches, where the object was to carry rainwater off the face of the building. If the purpose of these stones was to prevent rainwater running between the thatch and the face of the chimney into the top of the wall some form of guttering must have been placed below the drip line and above the thatch. No indication of this remains.

The only use of brick in this building is the lining in the top of each of the chimneys.

VHK excavations

Some glass and pottery fragments had been noticed near the north-east corner of the kitchen, and one conjecture was that this was a rubbish disposal area for the kitchen. A 1 m by 1 m square (VHK/1/1) was excavated in what appeared to be the centre of this deposit (see Figure 7). After passing through a dark soil layer for 200 mm the deposit gave way to a sterile layer similar to that encountered in the previous excavations. The deposit produced quantities of oyster shells (but not other varieties), glass, pottery, metal, and bone food remains. Despite the fact that some of the pieces of glass appeared to be Aboriginal artefacts, the nature of the overall finds appeared equally to suggest that the deposit was as likely European as Aboriginal material laid down after the settlement was abandoned. The excavations were extended one metre to the north (VHK/2/1) and one metre to the south (VHK/3/1). Similar stratigraphy to VHK/1/1 was recorded for both squares, with the depth of deposit lessening at the northern end of VHD/2/1 and the southern end of VHK/3/1. Similar finds were also recorded in these squares, with the addition of a copper coin in VHK/2/1. Un-milled, circular and with a square hole in the centre, the coin was identified by Dr Noel Barnard (Department of Far Eastern History, A.N.U.) as a *supika*, an Indo-Chinese imitation of a Chinese coin, of small value, common in such commercial centres as Singapore at this period. This coin is identical to two others excavated in other parts of the site.

In order to examine the wall foundations and flooring of the kitchen, an area 2 m by 1 m was excavated immediately below the window in the northern room. The flooring proved to be the shell flooring traditional in the settlement. This was laid to a depth of 150 mm over sterile sand. Approximately 900 mm from the wall this sand changed to grey soil, this line demarcating the line of the foundation trench. The footings, of

VHK Architecture



southern external elevation



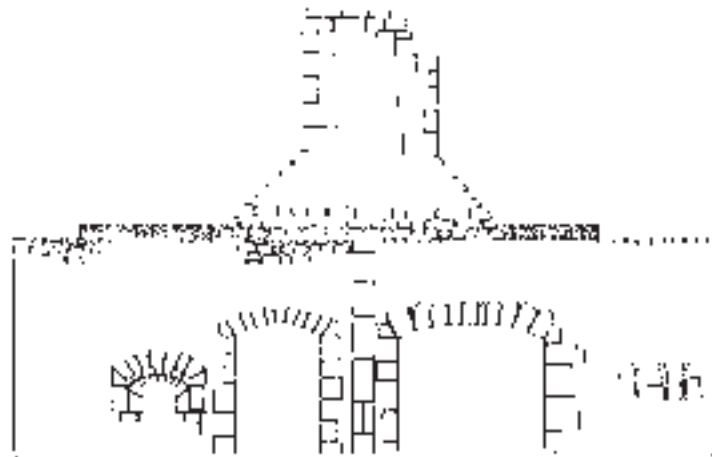
eastern external elevation
(north end)



eastern internal elevation
(south end)



western internal elevation



western external elevation

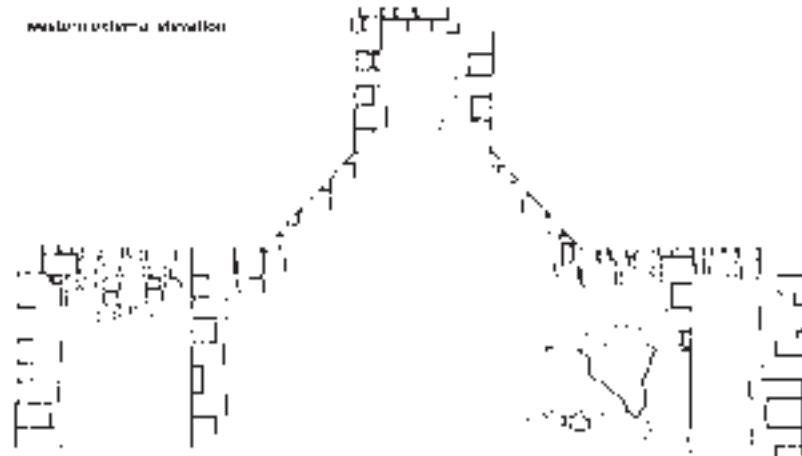


Figure 14. Hospital kitchen elevations.

VAM shell sample

A column sample measuring 300 mm by 300 mm was taken from the southern corner of the east wall of VAM/3 in eleven 50 mm spits, screened through 5 mm mesh sieves to reduce the bulk, bagged and brought to the laboratory where each spit was passed through a set of square mesh sieves. Five sieves were used, having the following mesh measurements: 38 mm, 25.4 mm, 19 mm, 12.7 mm, 9.5 mm. Initially four categories were established, A being the material retained in the largest sieve, B the material retained in the next two sieves, and C and D being the material retained in the fourth and fifth sieves. A preliminary indication suggested that categories A and B might be combined.

The column sample consisted almost entirely of shell, but in addition pieces of charcoal and coral were recovered in all levels, glass was recovered in the top 3 spits and ochre was present in Spits 4 and 10. No bone, and only a single flake of stone was recovered (from Spit 2). A fragment of crab claw in Spit 7 was the only indication of food remains apart from the shell. The density of shell is high throughout the midden. A comparison with the most dense sample taken by White (Malangangerr, column sample 1) (White 1967:146) gives a total volume weight of shell from the present site 4.3 times as great as that at Malangangerr, although the samples were exactly equal in size. The density of shell at the Minto Head site is listed in Table 55.

Table 55. Aboriginal midden no. 1 (VAM): weight in grams of shell from column sample, by spit. See text for details.

Spit	1	2	3	4	5	6
Weight	2071.1	1904.0	1650.4	2976.6	3117.1	2286.9
Spit	7	8	9	10	11	TOTAL
Weight	3015.7	3047.4	2819.6	987.1	153.0	24028.9

The immediate problem concerned with the examination of the shells in this sample was to investigate the varieties of shellfish that were exploited, and to determine any change in species exploitation through time. Twenty different species were isolated in the collection, all of which can be collected in the immediate environment today. The shells represent two principal types, those collected from the shallow sandy-mudflat bay to the west of Minto Head and the rock/coral reef types which are available on the shoreline of Minto Head itself. Table 56 illustrates that the former group constitutes the majority of the shell types, in all spits being >75%.

Table 57. Shell species from VAM by spit expressed as percentage by weight for each spit in the column sample. Key lists Family in upper case, then species present. ARCIDAE: a) *Anadara maculosa* Reeve; b) *Anadara (Jegillarca) granosa* Linné; c) *Imparilarca hubbardi*; d) *Barbatia* sp? (possibly *ustularca renuta*); e) *Trisidos youngei*. VENERIDAE: f) *Tapes ?watlingi* Iredale. MYTILIDAE: g) *Septifer bilocularis* Linné. OSTREIDAE: h) *Cassostrea commercialis* Iredale and Roughley. GARIIDAE: i) *Asaphis deflorata* Linné. MURICIDAE: j) *Chicoreus rosarius* Perry. THAIDIDAE: k) Various genera. PTERIIDAE: l) *Pinctada* sp.? (possibly *maculata* Gould). CARDITIDAE: m) *Cardita crassicostata*. Volutidae: n) *Cymbium umbellatus*. Chamidae: o) *Chama jukesi*. PLACUNIDAE: p) *Placuna placenta* Linné. GALEODIDAE: q) *Syrinx arvanus*. LARDIIDAE: r) *Regozara flava*. FISSURELLIDAE: s) *Fissuredea jukesi*. TURBINIDAE: t) *Turbo porcata* Reeve.

Spit	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t
1	87.9		2.6			4.2	0.8	0.6	0.3	0.1	0.1	0.1		1.9						1.4
2	64.9		1.0			11.4	0.6	19.5		0.8	1.3	0.3								0.2
3	61.0		0.8			16.6	7.2	5.2		0.2		7.7	0.9	0.4						
4	69.5		3.7			15.0	8.6	0.5	0.1		0.1	2.5								
5	83.1	0.2	5.0			9.3	1.0	1.0	0.2	0.1	0.2									
6	69.2	0.1	3.2			20.4	4.0	0.4		1.1	0.4	1.2								
7	56.5	0.3	3.7			27.2	6.5	1.7		0.8	0.4	2.8		0.5						
8	63.6		4.5			25.6	3.1	1.0			0.2	1.5		0.1	0.1				0.2	0.1
9	66.5		0.8		1.0	17.4	4.1	1.3			0.2	4.8		1.5	0.3	1.1	0.9			
10	56.4	2.5	-	-		7.0	6.8				2.6	26.9								
11	48.2		2.4	2.2		-	3.4	6.7			-	36.5	0.6							

Table 56. Aboriginal midden no. 1: percentage of shallow sandy-mudflat shell species from column sample, by spit.

Spit	1	2	3	4	5	6
Percentage	95.1	77.6	87.0	90.8	97.8	94.1
Spit	7	8	9	10	11	
Percentage	90.6	95.4	92.5	85.8	89.9	

The composition of shell species in each spit was calculated by weight in grams. This measure was preferred to number because breakage made it impossible to calculate species numbers accurately. Here it must be remembered that *Anadara maculosa*, which represents the largest proportion of each spit is also a much heavier shell than the other species. The average weight of whole shells was calculated for this species and for *Tapes ?watlingi* and *Septifer bilocularis* (the other two most common species represented) and found to be 17.7 gm, 4.3 gm, and 2.2 gm respectively, so that for example, in Spit 7, *Tapes ?watlingi* is more prevalent than *Anadara maculosa*, despite the weight content being less than half. Both shells are roughly the same size, so that the food content of each is considered here to be roughly equal.

After category A (+B) had been analysed, two spits of the C category were sorted and although some differential breakage was apparent this was not significant for the present test, so that categories C and D were merely weighed, and the analysis rested on the A (+B) category. The results are listed in Table 57.

VAM radiocarbon 14 estimation

A quantity of charcoal pieces was submitted to the Department of Geophysics and Geochemistry, A.N.U., for radiocarbon age determination. This sample was collected from VAM/SS/10, and may be taken to represent the first period of concentrated occupation of the site. The result was: ANU-62, 550 ± 57 B.P. (c. 1400 AD).

VAM discussion

The most important aspect of the excavation of this midden is that it provided a quantity of stratified glass on which to base the analysis of possible Aboriginal glass artefacts from other areas in the settlement (see Chapter 4). However it also provided sufficient additional information to attempt some interpretation of the midden itself.

The midden began to form about 500 years ago with the exploitation of the pearl oyster *Pinctada* sp., supplemented by the common rock oyster and the mudflat species *Anadara maculosa*. In Spit 9 *Pinctada* became less important, although it continued to be collected throughout the entire life of the site. Another mudflat species, *Tapes? walingi*, absent in the lowest levels, together with *A. maculosa* later provided the bulk of the shell food represented in the midden. In Spit 3 the representation of the sandy bay-mudflat types falls below 90% for the first time since the two early layers. The common rock oyster, although present in small quantities in Spits 9 to 4, reasserts itself, and in Spit 2 represents 19.5% of the total weight of shell and the mudflat shells fall to 77.6%, but in the latest occupation the latter group again became predominant.

It is tempting to correlate the change in shell type percentage with the introduction of glass in Spit 3, which can be reasonably dated to c. 1838 AD, the beginning of the European settlement. There is one historical reference to the Aborigines being employed in collecting oysters for the settlement (Brierly 1848 ML A501-4:14 November) and this activity may be reflected also in the Aborigines' own diet. It may also signal a change in site use. The VAM site is much nearer the sandy bay-mudflat habitat and the early dominance of species from this area is as expected. But if the midden was more frequently occupied during the European presence (that is, it became more like a base camp) resources may have been brought to it from further afield. After the Europeans left, it reverted to its earlier use as a more transitory camp.

Although the evidence is slight, this change can also be perceived in the other site evidence. The absence of bone and any implements in the lower levels supports the view that the site was used only as a place for eating shellfish. The arrival of the Europeans was associated with two changes. Glass implements were carried onto the midden and the midden itself expanded in the direction of the settlement. The main body of the midden runs parallel with the cliff and comparable middens in a similar orientation were noticed elsewhere in Port Essington. The inference is that a larger group or a more permanent one occupied the site, which spread towards the settlement. Glass was employed on the site, while the three pieces of stone recovered in the excavations, together with the bored shell, were all in layers containing glass. Significantly the volume of shell in Spits 2 and 3 was markedly less than in the earlier ones. During the 1967 season, a trench VAM/7 was excavated outside the area of the midden to test the possibility of this expansion; and quantities of glass were recovered in the first few centimetres. The top spit of the midden probably represents post-European occupation – an inference reflected in the proportions of shell returning to those found in the middle occupation of the midden.

Table 58. Glass from VAM surface collection and excavations according to type: number and weight in grams. Note category SS = shell sample.

	TYPE A		TYPE B		TYPE C		TOTAL	
	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.
Surface	145	1879.5			61	381.8	206	2261.3
VAM/1/1	39	257.9			16	99.4	55	357.3
VAM/1/2	12	101.9			4	24.8	16	126.7
VAM/2/1	11	64.5			5	22.6	16	87.1
VAM/2/2	2	3.1			2	3.2	4	6.3
VAM/2/3	1	2.0					1	2.0
VAM/3/1	5	26.6			6	6.6	11	33.2
VAM/3/2	1	18.8			1	4.4	2	23.2
VAM/4/1	33	101.9	1	19.8	19	72.5	53	194.2
VAM/5/1	26	128.6			6	33.6	32	162.2
VAM/6/1	28	81.7			20	49.1	48	130.8
VAM/7/1	50	200.4			36	77.5	86	277.9
VAM/SS/1	1	10.1					1	10.1
VAM/SS/2	7	14.2			1	8.6	8	22.8
VAM/SS/3	1	5.1					1	5.1
TOTAL	362	2896.3	1	19.8	177	784.1	540	3700.2

Table 59. Pottery counts from VAM surface collection according to type. There was no pottery in the excavation of this site-unit.

	Surface
Transfer Printed	3
Undecorated White Glaze	1
Pipe Stems	1
TOTAL	5

Table 60. Metal from VAM surface collection and excavations. Weight in grams.

	VAM/Surface		VAM/5/1	
	No.	Wt.	No.	Wt.
IRON				
Unidentified				17.2
COPPER				
Unidentified		42.1		

Table 61. Stone from VAM surface collection and excavations. Weight in grams. Note category SS = shell sample.

	VAM/Surface		VAM/5/1		VAM/SS/2		TOTAL	
	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.
Quartzite	1	21.9	1	24.7			2	46.6
Slate					1	0.8	1	0.8

ABORIGINAL MIDDEN No. 2 (Code prefix VAMII)

The second Aboriginal midden was located immediately behind the northern end of the beach to the south of the settlement, and just to the north of the building remains identified as belonging to the cattle ranchers who began living there during the 1870s. Because glass was present on the surface two 1 m by 1 m squares (VAMII/1, and VAMII/2) were opened up during the 1966 season.

Both squares were excavated in 50 mm spits down to sterile sand. The deposits throughout were shelly in a black soil matrix, and no stratigraphy was discernible.

VAMII finds

Glass occurred in all spits in both squares so that the earliest occupation of the site may be dated to the beginning of the Victoria settlement. However, because of the close proximity of the 1875 establishment the finds were treated with caution and two of the clay pipe stems were subsequently identified as being manufactured by McDougall of Glasgow whose factory was founded in 1846. This firm did not appear in the Glasgow trade directories until 1852 (Iain C. Walker pers. comm.) so that it is unlikely that this firm exported to Australia during the occupation of Victoria and it seems more reasonable to associate these pipes with the latter occupation of the cattle ranchers.

However, a glass bottle seal marked 'John Alberty Bordeaux Vieux Cognac 1815' can more readily be associated with the Chateau Margaux seals excavated in the settlement proper, where they were introduced by Dumont d'Urville in 1839 (see Chapter 4). The metal, and the remainder of the pottery excavated in this midden provides no positive dating information, but it bears superficial resemblance to that excavated in the settlement, and there is no strong reason to

Chapter 3

Pottery

In essence, pottery from the nineteenth century is no different to prehistoric pottery in regard to its archaeological potential. It is of little intrinsic value, fragile, subject to fashion and hence change, and because of its durable nature it remains in the archaeological record.

Working from these premises it is therefore possible to use pottery from historic sites in much the same way as pottery is used in prehistoric sites. Classifications can be evolved in order to use pottery as space/time markers, for inferring basic economics, inferring standards of technical development, and so on up the inferential scale. Some (for example Deetz 1965) have argued that social organisation may be reflected in pottery because it is a material reflection of culturally patterned behaviour, but whether this would be true in a small, closed society like the marine garrison at Port Essington is problematic.

In attempting to classify the Port Essington pottery the purposes of such a classification should be understood. While the analysis was not needed to date the site or identify the inhabitants, the short life of the site provided a good situation for testing the ability of the collection to do these things. A second test of this kind was to examine the distribution of pottery within the settlement to see what inferences might be made about the various house sites, whose nature was known from the historical record. The analysis was also designed to determine the origins of manufacture of the ceramics. The implications of these origins provide insight into the processes of daily life at Port Essington. For example, the large majority of wares were made in England. Thus for everyday utensils the settlement was dependent upon manufacture from the other side of the world, a nineteenth century reflection of an emerging global economy, even if the pottery was consigned via merchants from Sydney. This also has implications for the level of self-sufficiency of the marines at Port Essington (and also for the settlers at Sydney).

The pottery and other remains from Port Essington also serve as indicators of the rate and volume of diffusion of English manufactures into this area, and of the time lag of this diffusion.

The major difficulty in establishing an effective typology was the lack of comparative material with which to assess the present assemblage. While there are a number of works relating to the pottery industry in England at this period, for example Godden (1963, 1964) and the extensive reference lists he cites, almost all are written from the point of view of the antique collector, and scant attention is paid to the utilitarian pottery that comprises the present collection. The vast number of patterns and variety of styles has deterred any systematic study in this direction. As a result, authors freely admit the difficulty of identifying unstamped examples in more than a general way. During 1967, I visited potteries and specialist pottery museums in England to gather information relating to the Port Essington collection, but detailed work needs to be done over a number of years.

Archaeologists in America and Canada have worked on sites comparable in time to Port Essington but no reports I could obtain have attempted detailed analyses of the ceramics. One detailed unpublished report has been used (Pilling nd) and from other reports, types similar to the Port Essington collection have been identified from the illustrations and an attempt has been made to follow what terminology is already in use (Gjessing *et al.* 1962; Jury and Jury 1959; Pierson 1962;

Poc 1963; Shenkell and Westbury 1965; Smith 1962, 1963). However, in many instances this has proved unsatisfactory and I have been left to invent my own procedures and terminology.

ARNOLD PILLING'S CLASSIFICATION

Pilling (nd) has set up a taxonomic system which divides his ceramics initially into two *Classes*, porcelain and earthenware, on the basis of translucence. *Class* is subdivided into *Ware*. Neither of these divisions is meant to imply any historical unity, this being claimed for the next subdivision, labelled *Type*. Where specific wares can be isolated within a *type*, such as 'Willow Pattern' within 'Transfer Printed Type', this he terms a *Sub-Type*. A further division into *Item* or *Group* allows Pilling to discuss specific pieces. Finally, he uses *motif* to mean a specific design unit, and *pattern* is a combination of specific units.

This is a useful taxonomy which I have modified and adopted. With the present assemblage however, there appears to be as much confusion as validity in attempting to differentiate the collection on the basis of hardness of fabric, which is the criterion Pilling uses at the *Ware* level of his classification. The majority of the Port Essington collection consists of what is commonly called 'china'. The distinction between this and 'stoneware' is technically one of firing temperature and it is more practical to describe differences in fabric at the *Type* level.

Finally, Pilling analysed his collection (which consisted of 185 sherds compared to 1561 from Port Essington) in terms of:

- Fabric, which he confusingly refers to as biscuit. Here he describes colour, hardness, fracture, presence of bubbles, and homogeneity; and
- Glaze, again describing hardness, fracture, presence of bubbles, crackle, colour, and pattern colour. Some attention was also given to decoration pattern and vessel form.

THE PORT ESSINGTON POTTERY CLASSIFICATION

While Pilling's analysis may point the way to significant factors in analysing nineteenth century ceramics in the future, the factors he has chosen do not present ways for making meaningful divisions for an archaeological taxonomy at present. The significance of crackle, for example, which may be deliberate or accidental, and can occur during or after firing, needs to be validated by examination of numbers of comparative collections, so that it is understood just what the significance of different types of crackle is. Similarly the Mohs scale of hardness test, which he employs, is at best inexact (Shepard 1963:115-6).

Given the present state of knowledge, decoration and vessel form suggest themselves as the best indicators of cultural and temporal change in nineteenth century ceramics. Pottery in this period was no longer a craft but rather a mass-produced manufacture, which resulted in a general conformity in shapes and standards of wares, as well as a great increase in individual designs, which nevertheless fall into general broad

TYPE F – LINE DECORATED WARE – 6 sherds (Item 84)

Distribution: VHK, VCC. Thickness: 3.5 mm to 5.5 mm. Fabric colour: BCC 1. Glaze colour: BCC 1. Decoration colours: BCC 19, BCC 44, BCC 188. Decoration: horizontal bands of colour applied under the glaze.

Item 84 VHK/2/1, Figure 73-a.

Form: indeterminate. Thickness: 4 mm. Decoration colour and Decoration: as described in the general description for this type.

TYPE G – HAND PAINTED WARE – 12 sherds (Items 85–86)

Distribution: VM, VMII, VHK, VQS, VCC. Thickness: 2 mm to 3 mm. Fabric colour: BCC 1. Glaze colour: BCC 1. Decoration colours: BCC 24, BCC 38, BCC 46, BCC 103, BCC 149, BCC 220. Decoration: a floral motif is used on all items. Five items are painted in a single colour under the glaze, six items in two colours under the glaze, one item has three underglaze colours and the remaining item has one colour applied under the glaze, and a second above the glaze.

Item 85 VQS/4/1 (32), Figure 73-b

Form: cup? Thickness: 0.3 mm. Decoration colours: BCC 38, BCC 103, BCC 220. Decoration: a single black line internally and externally on the rim; externally, a floral motif.

Item 86 VMII/2/1 (10), Figure 73-c.

Form: indeterminate. Thickness: 3.5 mm. Decoration colours: BCC 24, BCC 149. Decoration: underglaze and overglaze floral motif.

TYPE H – FLOWING BLUE WARE – 1 sherd (Item 87)

Item 87 VCG/GEN SUR (67), Figure 73-d.

Form: indeterminate. Thickness: 4 mm. Decoration colour: BCC 149. Decoration: internal and external 'tree' motif executed in a single dotted line.

Remarks: the colour of the decoration has 'flowed' to the extent of discolouring the surrounding glaze.

GROUP 2 – THE COLOURED CLAY WARES

This group includes all earthenwares represented in the collection not included in the white clay wares. Some, such as the salt glaze stoneware, are of a hard paste variety. Others are soft paste. Both British and Asian wares are included here.

TYPE A – MOCHA WARE – 14 sherds (Items 88–89)

Distribution: VM. Thickness: 3 mm to 9 mm. Fabric colour: BCC 165. Glaze colours: BCC 1, BCC 233. Decoration colour: BCC 45. Decoration: for a detailed description of the method see Godden (1963:142-4). Briefly, a tree-like effect is produced by the chemical reaction of an acid colourant on an alkaline slip.

Remarks: the 14 sherds of this type possibly belong to the same vessel. This ware, first produced in the eighteenth century, was in production at the Copeland Works in 1852, where it was noted by Charles Dickens (Godden 1963:143).

Item 88 VM/GEN SUR (3, 11), Figures 73-e, 68-d.

Form: bowl. Thickness: 5 mm (wall) to 9 mm (rim). Rim diameter: approx. 260 mm (6%). Decoration colour: BCC 45. Decoration: external only. The decoration is contained in a register around the wall of the vessel.

Item 89 VM/GEN SUR (6), Figure 67-m.

Form: base sherd of Item 88. Thickness: 3 mm (base) to 7.5 mm (lower wall). Base diameter: 140 mm. Decoration colour and Decoration: see Item 88.

TYPE B – UNGLAZED WHEELMADE WARE – 30 sherds (Items 90–91)

Distribution: VM, VMII, VH, VMQ. Thickness: 2.5 mm to 9 mm. Fabric colour: BCC55, BCC 133.

Remarks: all the sherds in this group are wheel-made and all except three are of a dark, thin, hard-fired nature, quite unlike the unglazed South East Asian wares. The remaining three sherds are of extremely porous, soft fabric and possibly relate to what were known as 'water monkeys' – containers through which the water could seep and evaporate on the external face thus keeping the water inside at a lower than surrounding air temperature. It is possible that this unglazed earthenware was not of English manufacture but no evidence exists to decide the point.

Item 90 VM/S/E (8, 13), Figure 60-p.

Form: indeterminate. Thickness: 5.5 mm. Base diameter: 120 mm (25%). Fabric colour: BCC 133.

Item 91 VH/S/R (3), Figure 60-q.

Form: indeterminate, possibly dish or bowl. Thickness: 7 mm (base) to 9 mm (wall). Base diameter: approx. 220 mm (6%). Fabric colour: BCC 133.

TYPE C – SALT GLAZE STONEWARE – 170 sherds (Items 92–99)

Distribution: VM, VH, VSD, VMQ, VSF, VOM, VCC, VB, VAM II. Thickness: 5 mm, to 15.5 mm. Fabric colours: BCC 2, BCC 3, BCC 187. Glaze colours: BCC 29, BCC 60, BCC 61, BCC 64, BCC 66, BCC 67, BCC 72, BCC 73, BCC 76, BCC 136, BCC 138, BCC 204, and BCC 205. Decoration: any decoration is found mainly on the jars

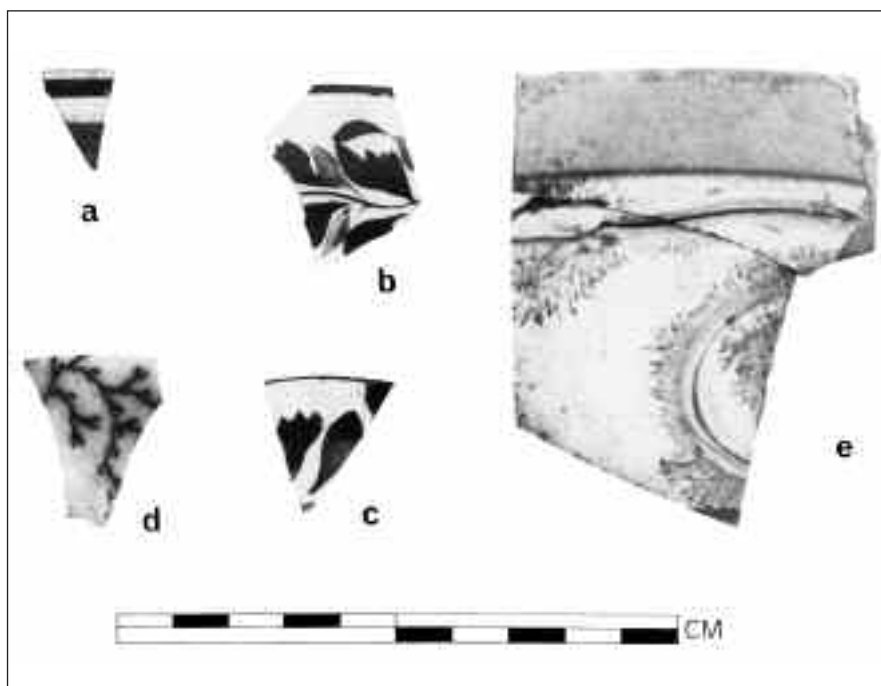


Figure 73. Port Essington pottery: Line Decorated Ware (a); Hand Painted Ware (b-c); Flowing Blue Ware (d); Mocha Ware (e).

and consists usually of one or more incised lines running horizontally around the shoulder of the pot, although similar lines can occur around the body in the centre and towards the base. It is common for the mouth, neck and shoulder to be glazed a darker colour than the body. Of the jars, all examples are glazed on the internal face; examples of both glazed and unglazed interior surfaces of bottles are present.

Remarks: vessel shapes are confined to inkwells, bottles and open mouthed jars.

Item 92 VM/S/E (4) and VM/8/1 (42), Figures 74-a, 75-a.

Form: jar. Thickness: 7.5 mm (body) to 15.5 mm (neck). Glaze colour: external BCC 73, BCC 136; internal BCC 66, BCC 76. Rim diameter: 150 mm (50%+) approx. body diameter: 250 mm. Decoration: three incised rings on shoulder.

Item 93 VM/S/E (3), Figure 75-b.

Form: jar. Thickness: 6 mm. Rim diameter: 150 mm (26%). Glaze colours: external BCC 60; internal BCC 204. Decoration: the shoulder line in this item has a distinct ridge.

Item 94 V/GEN SUR /67 (27), Figures 74-b, 75-c.

Form: bottle. Thickness: 4.5 mm. Rim diameter: 23 mm. Glaze colour: BCC 138.

Remarks: unglazed internally.

Item 95 VAMII/2/2 (1), Figure 74-c.

Form: bottle. Thickness: 0.75 mm. Glaze colour: BCC 61.

Remarks: this item has a high, even glaze. While it was in a sealed deposit in association with material associated with the 1840s settlement, the ware is much more similar to the salt glaze bottles of the later nineteenth century. Therefore the authenticity of this item is uncertain.



Figure 74. Port Essington pottery: Salt Glaze Stoneware (a-f).

Item 96 VMQ/1/1 (21 & 23) and VMQ/6/1 (11) and VMQ/32/1 (27) and VMQ/32/2 (4), Figures 74-d, 75-g.

Form: bottle. Thickness: 4 mm (base) to 8 mm (body). Base diameter: 90 mm (50%). Glaze colour: BCC 67.

Remarks: the surface is extremely uneven, and is unglazed internally.

Item 97 VCC/GEN SUR (1), Figures 75-d, 75-g

Form: bottle. Thickness: 6.5 mm. Base diameter: 90 mm (35%). Glaze colour: BCC 204.

Remarks: unglazed internally, external surface uneven.

Item 98 VCC/GEN SUR (3), Figures 74-e, 75-d.

Form: inkwell. Thickness: 4 mm (base) to 6 mm (body). Base diameter: 55 mm (50%). Height from base to shoulder: 40 mm. Glaze colour: BCC 205.

Remarks: unglazed internally.

Item 99 VOM/6/1 (7), Figures 74-f, 75-f.

Form: inkwell. Thickness: 3 mm (base) to 10 mm (body). Base diameter: 45 mm (50%). Glaze colour: BCC 67.

Remarks: unglazed internally. The body has been flaked to form an Aboriginal artefact.

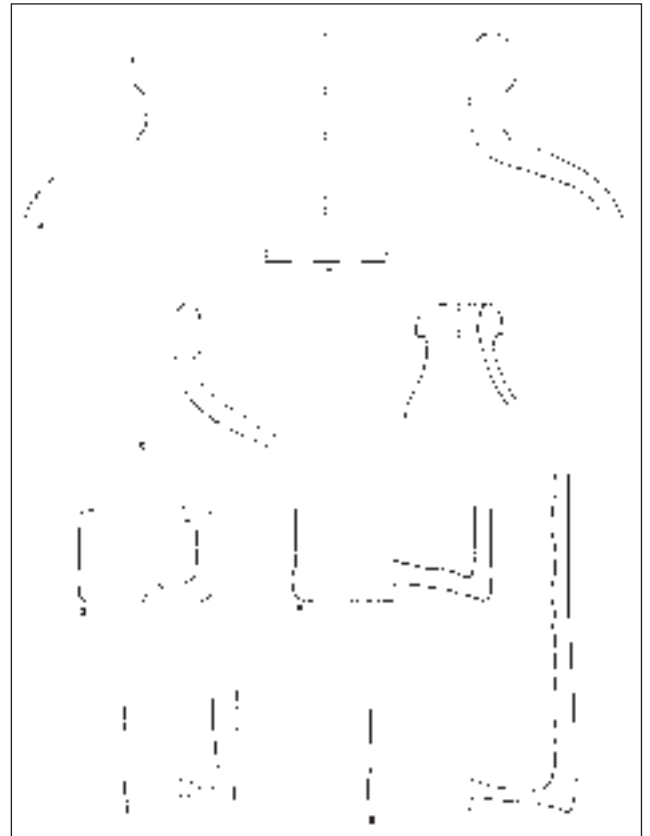


Figure 75. Port Essington pottery: Salt Glaze Stoneware profiles.

TYPE D – MACASSAN WARE – 8 sherds (Items 100–101)

Distribution: VMII, VH, VQS, VCC. Thickness: 3.5 mm to 15 mm. Fabric colours: BCC 58, BCC 59, BCC 72, BCC 204. Decoration: although formal decoration can occur on this pottery it is infrequent and is not present in this collection. Several items bear traces of slip and one rim (Item 100) has thumb impressions on the underside that does not reflect formal decoration.

Remarks: from work carried out on Macassan sites in north Australia by Campbell Macknight (1969), the most common

Table 71. Distribution of pottery types at Port Essington. X = present.

LOCATION TYPE	VM	VMII	VH	VHD	VHK	VMQ	VQS	VSF	VSFII	VCC	VOM	VSD	VB	VS	VAM	VAMII	VCH
Undecorated Porcelain	X					X											
Overglaze Polychrome Porcelain	X	X			X					X							X
Blue On White Porcelain	X	X	X		X	X	X			X		X					
Transfer Printed Porcelain										X							
Green Floral Transfer	X	X					X										
Green Scenic Transfer		X	X									X					
Green Geometric Transfer	X	X								X	X						
Green/Red Transfer		X															
Red Floral Transfer	X							X		X							
Red Scenic Transfer											X						
Brown Floral Transfer	X	X				X				X							
Blue Scenic Transfer	X	X				X				X							
Willow Pattern	X	X	X		X	X	X	X	X	X	X	X	X				X
Blue Floral Transfer	X	X			X			X		X	X	X					
Blue Geometric Transfer	X	X					X			X	X						
Green Featheredge	X	X															
Blue Featheredge	X				X					X							
Blue Spatterware						X	X			X							
Undec. White Glaze	X	X	X	X	X	X	X	X		X		X	X		X		X
Line Decorated					X					X							
Hand Painted	X	X			X		X			X							
Mocha	X																
Unglazed Wheel Made	X	X	X			X											X
Salt Glaze Stoneware	X		X			X		X		X	X	X	X	X	X	X	
Macassan		X	X				X			X							
Rim Glazed Stoneware												X					X
Nga-Kwun								X									

Figure 77a shows the relative proportions of types within the collection. The white clay wares constitute 73.9% of the collection, the porcelain 14.1%, and the remainder 12%. Almost all of the porcelain can be classed as being of mainland South East Asian and probably Chinese manufacture. Two sources of entry for Chinese wares into Port Essington were the Macassan trepang fishermen and traders from Singapore or Canton/Hong Kong. The latter source is more probable on several grounds. Firstly, porcelain on Macassan sites in Australia makes up only a small portion of the total pottery assemblages, and amongst the porcelain found on these sites, the overglaze polychrome decorated type is extremely rare, the bulk consisting of blue on white ware. Of the porcelain in the present collection both types are present in almost equal proportions and together they represent 178 sherds (as well as 39 pieces of undecorated porcelain), compared with only seven pieces of Macassan pottery. Secondly, brief mention is made in the historical records to traders coming from Asia (Earl 1846:67). The relevance of the archaeology is vividly demonstrated here, for the percentage of these wares is quite significant, and these are the archaeological expression of a trade that probably formed a significant part of the economy of the settlement. This fact is not apparent in the historical record.

Of the white clay wares, 63.2% are the transfer printed wares which form the single largest group (46.7%) of the total collection. Excluding the undecorated white glaze ware, the remaining white clay wares constitute less than 5% of this group. Referring to Figure 77b, it will be noted the blue transfer wares constitute 89.8% of this type and that a single pattern, the Willow Pattern, alone represents 40.9% of the transfer printed type. These appear to be the important type distribution patterns which emerge from the analysis.

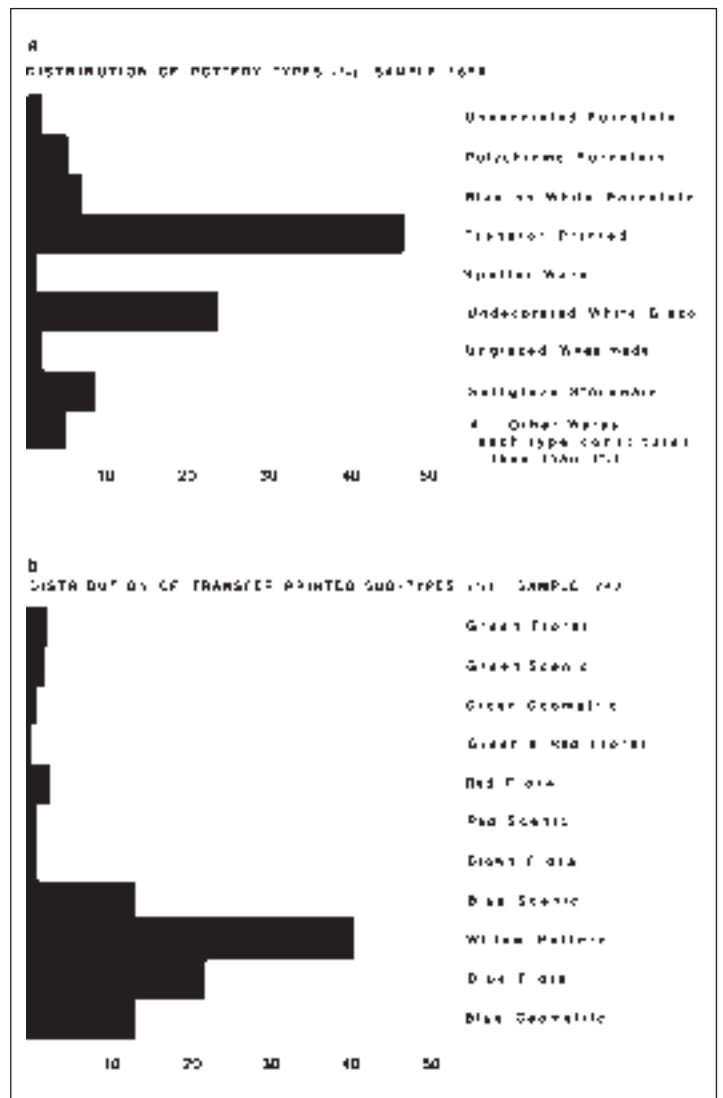


Figure 77. a) Distribution of pottery types at Port Essington by percentage; b) distribution of transfer printed sub-types at Port Essington by percentage.

Chapter 4

Glass

Almost the total collection of glass from the Victoria excavations comprises the remains of so-called 'black' liquor bottles. In addition, some fragments of clear glass tumblers and broken wine glasses were recovered. In all, 96.6 kilograms of glass were recovered from the settlement.

The glass was sorted initially into three categories, which are listed in each of the separate excavation reports. Type A includes all pieces thought to be possible Aboriginal artefacts, Type B includes all pieces of identifiable shape (bases, necks, rims *et cetera*) and Type C includes all pieces of unidentifiable glass. Following the analysis of category A, 206 fragments of bases were re-used in the analysis of category B. Table 74 shows the distribution of the total collection. The three areas of the hospital complex, VH, VHD, VHK, are included in the table as a single group.

The average weight of the samples in each unit (squares of surface collection and excavation) has been calculated. The largest collection, from VM, which constitutes more than half the total glass collection, was subjected to an analysis of variance according to weight (Bishop 1966:57-61). The analysis demonstrated a significant difference at the 1% probability level between the three categories, both of the surface collection and the excavated material. However, there was no significant difference between the surface and excavated material in any of the three categories.

Such a result appeared self-evident between Types B and C in terms of their initial selection, because those items readily identifiable by shape were almost always larger. However, the importance of this result is a) that there was little difference in the average weight between excavated and surface items in any category, suggesting that the breakage factor was similar whether the object was buried or exposed to natural agencies on the surface; and b) that there was a significant difference between Type A and each of the other two categories in both the surface and excavated material.

Type A items were heavier than Type C items but lighter than Type B items. In cultural terms this suggests deliberate selection of the raw material (the discarded bottles) by the Aborigines, who chose the heavier pieces of glass as being more suitable for modification as artefacts. In practice this

usually meant a preference for the bases of bottles which were considerably thicker than the walls and necks. The process of modification normally resulted in these bases or 'cores' being broken, and these cores, the flakes detached from them and the retouched items that together comprise Type A, are consequently of less average weight than Type B.

TYPE A GLASS: THE ABORIGINAL ARTEFACTS

A total of 2,775 (18.2%) pieces of glass were isolated in the initial sorting as possible Aboriginal artefacts. In general, the assemblage is not a well defined one in terms of exact types which might be isolated in a comparable stone assemblage. This is probably because broken glass provides a larger number of random edges ready for use than stone. Thus, in this pre-selected group only 7.1% of the pieces bear definite secondary retouch.

As mentioned, Aborigines made special use of the heavy base portion of the bottle, and by examining the ways in which this raw material has been used the following classification of the glass artefacts has been established. Because of their broad nature it seems likely that these types may coincide with types as perceived by the original knappers, so that certain functional inferences can be drawn.

Because of the way in which these bottles were originally manufactured, the glass begins to thicken about two thirds of the way down the body wall. The bases in the Port Essington collection are formed predominantly with high conical omphaloi, that is, with much the same base shape as modern champagne bottles. In American glass terminology this is referred to as a 'kick'. In the Port Essington bottles this base can be up to 30 mm thick, providing a solid block of glass not unlike obsidian. The process appears to have been to flake the thickened part of the wall, downwards to the base, detaching flakes with similar attributes to stone flakes – a bulb of percussion, stress lines *et cetera*. Thus the base can be regarded as a core, which if broken in half, can also be flaked on the kick; it can also be utilised as a tool.

Table 74. Total collection of glass from Victoria, by type, percentage and average weight in grams.

Location	TYPE A			TYPE B			TYPE C			TOTAL No.
	No.	%	Av. Wt	No.	%	Av. Wt	No.	%	Av. Wt	
VM	1275	14.9	11.2	239	2.8	56.2	7046	82.3	3.8	8560
VMII	32	10.1	12.9	14	4.4	26.4	272	85.5	3.6	318
VH	335	15.1	13.0	61	2.7	65.6	1830	82.2	3.4	2226
VMQ	388	49.2	5.1	14	1.8	7.1	386	49.0	2.9	788
VQS	107	16.9	5.3	4	0.6	125.2	523	82.5	3.2	634
VOM	45	33.3	4.6	8	5.9	91.9	82	60.7	5.7	135
VSD	19	2.3	14.4	11	1.4	38.1	787	96.3	2.8	817
VSF	57	13.7	5.7	4	1.0	27.8	355	85.3	1.9	416
VSFII	17	10.8	5.0	2	1.3	6.6	138	87.9	4.8	157
VN	4	4.0	9.0	6	6.1	48.8	89	89.9	5.8	99
VS							37	100.0	3.5	37
VAM	362	67.0	8.0	1	0.2	19.8	177	32.8	4.4	540
VAMII	64	37.4	5.8	5	2.9	56.0	102	59.6	3.4	171
VCH	9	9.7	11.2	2	2.2	166.2	82	88.2	4.7	93
Total	2714	18.1	9.5	371	2.5	55.6	11906	79.4	3.6	14991
Surface Coll.	60			62			162			284
TOTAL	2774	18.2		433	2.8		12068	79.0		15275

Two methods of flaking the wall of the bottle appear to have been used in this collection. If the blow is directed at the broken edge of the glass, that is, the broken edge is used as the striking platform, the detached flake assumes the form of an ordinary stone flake. However, if the inside surface of the bottle wall is struck, a complete semicircular section of the inside wall detaches so that a flange of glass is produced on the outer wall of the detached flake, whose circumference is greater than the inside wall section. I was able to replicate both sorts of flakes experimentally using simple direct percussion with a hammer stone.

Figures 81a and 81b illustrate these two types. Both sorts of flake were produced at Port Essington, and they are treated as a single group in the present analysis, with the presence of the internal face being taken as the equivalent of the bulb of percussion. The important point is that both flakes produce a sharp cutting edge without the necessity of retouch. Base cores and flakes form the two common types of glass implements found at Port Essington. The retouched implements are mainly scrapers, although some 'cutting flakes' bear secondary retouch as well as usewear. An additional category of 'utilised pieces' is included where usewear occurs on pieces of glass which do not exhibit the characteristics of flakes – bulbs or percussion and so on. In this secondary analysis a large percentage of pieces originally included in Type A have been excluded and are treated as waste flakes. These are pieces which either have a bulb of percussion but lack usewear, or pieces on which the usewear flaking was probably produced by non-human agencies. The percentage type distribution is shown in Table 75.

Table 75. Glass Type A: percentage distribution of Type A glass according to artefact classification.

Location	Number	Base Cores	Flakes	Retouched	Utilised Pieces	Waste Flakes
VM	1275	7.0	9.4	8.7	22.6	52.3
VAll	32	6.3	3.1	15.6	50.0	25.0
VH	335	9.9	12.5	5.4	29.3	43.0
VMQ	388	4.1	17.0	2.1	16.8	60.1
VQS	107	1.9	16.8	7.5	23.4	50.5
VOM	45	4.4	26.7	4.4	11.1	53.3
VSD	19	10.5	15.8	10.5	42.1	21.1
VSF	57	8.8	7.0	5.3	15.8	63.2
VSFII	17	17.7	11.8			70.6
VB	4			25.0	25.0	50.0
VAM	362	8.0	16.9	8.6	21.8	44.8
VAMII	64	4.7	12.5	3.1	26.6	53.1
VCH	9		22.2	11.1	33.3	33.3
Surface Collection	60	33.3	20.0	8.3	28.3	10.0
TOTAL	2774	7.4	12.7	7.1	22.8	50.1

In this table the surface and excavated materials have been added together. Figures 82a and 82b give two histograms, showing the relationship between the excavated and surface material for the two areas in which large quantities of glass were present on the surface. In the case of VM a definite pattern is discernible. The excavated material contains a far greater number of waste flakes and consistently fewer base cores and implements than the surface material. A reasonable explanation is that during the British occupation, VM provided an area of raw material for the manufacture of

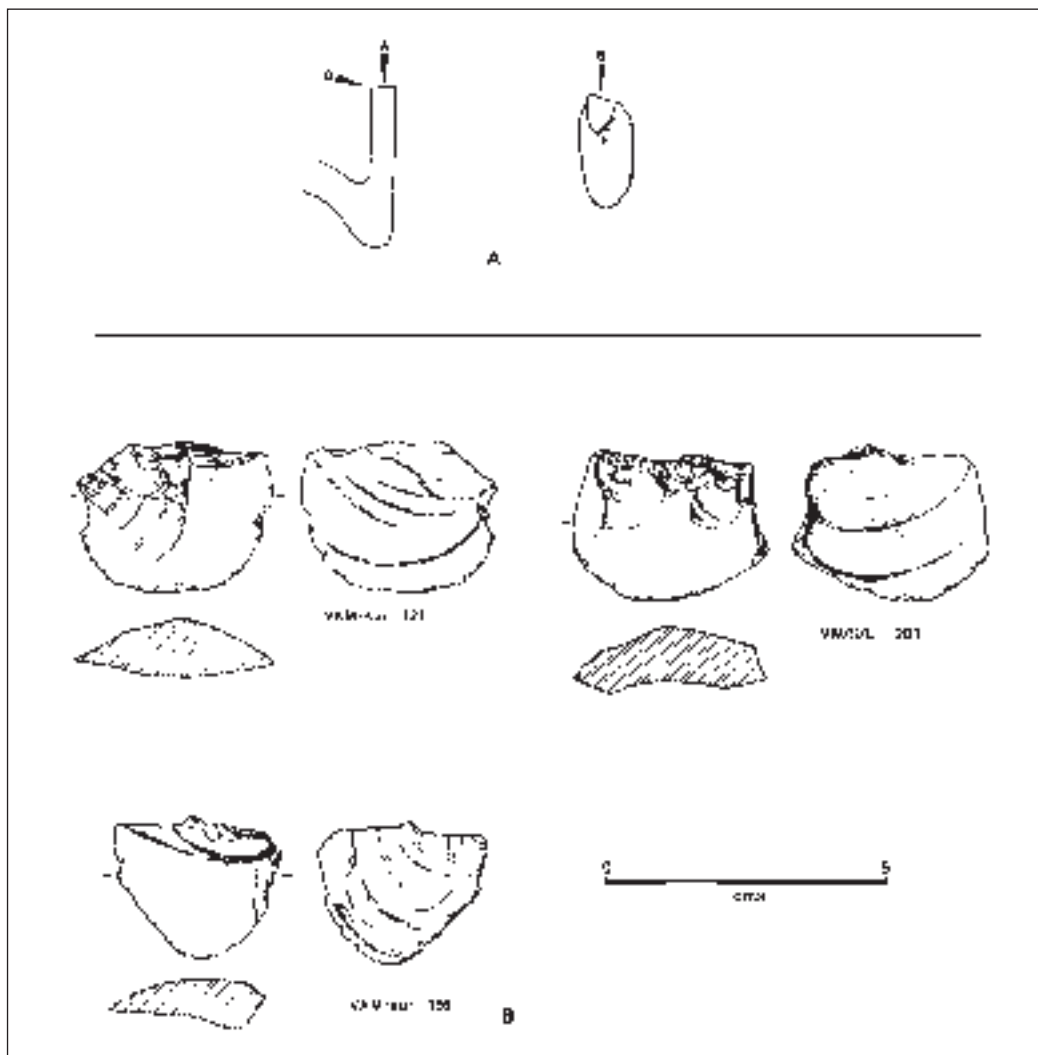


Figure 81. a) Glass flake production techniques. Both the top of the wall and the inside of the wall might be used as a striking platform. In the latter case part of the interior surface might be retained. b) Numbers 121 and 201 retain part of the interior surface, while 159 does not.

wall surface. At Port Essington external unifacial flaking is more common.

- Where flaking does occur, it most commonly appears along the total remaining wall edge, and this is unlikely to occur fortuitously.

Although bifacial flaking occurs only 65 times in the total collection of Type A glass, the fact that it is present is a strong indication of deliberate fracture. I carried out a series of experiments by smashing glass on a concrete path, treading on glass, hitting pieces of glass together, etc., and found it impossible to produce bifacial flaking of the size and regularity that occurs in the Port Essington material.

The analysis of the cutting flakes provided a significant piece of evidence for judging the authenticity of the collection, this being the size of the utilised struck flakes. In my experiments breaking glass I found that flakes with bulbs of percussion could be manufactured accidentally, but never of the size of the Port Essington cutting flakes, unless a deliberate striking technique was employed. In the archaeological collection some flakes were shown to be much longer than they are broad, and on a base core from VM/8/1 two flake scars measuring 43 mm by 16 mm and 41 mm by 15 mm were noted. On a base core from VM/9/1 a flake scar measuring 52 mm by 12 mm was recorded, and part of the flake taken from this base was fitted back onto the core. In all these examples, the detached flake was extremely thin and it seems likely that these flakes could only have been produced by using a pressure flaking technique.

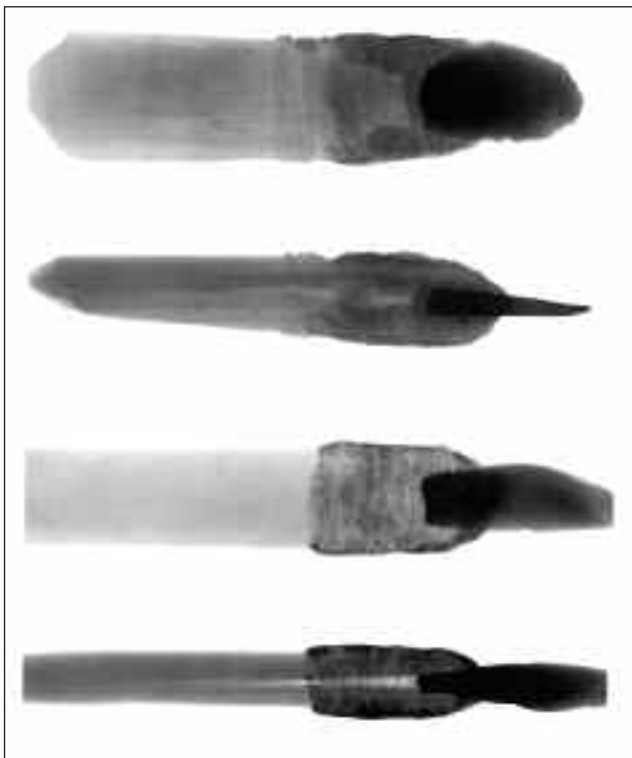


Figure 87. X-rays of two hafted glass cutting flakes from north-west Queensland now in the Queensland Museum. Top Q.E.588, bottom Q.E.2291.

As discussed, in the course of examining museum collections three glass 'knives' were examined. Specimen E.54602 in the Australian Museum collection, has as its provenience 'Central Australia' and has a struck flake of glass which measures 32 mm in length mounted sideways onto a handle with gum. Two hafted glass implements from north west Queensland are in the collection of the Queensland Museum (Q.E.588, Q.E.2291). X-ray photographs show that

these two knives were made by inserting struck flakes of glass into split wooden handles, compacted with string and gum (Figure 87). One flake measured 59 mm by 20 mm and the other 43 mm by 28 mm. The important point about each of these three specimens is that none has retouched edges, although all bear signs of usewear similar to those from Port Essington. On the basis of only a single cutting flake from Port Essington (VAMII/1/1(1)) with traces of gum on the surface, no claim of direct evidence for hafting of the Port Essington cutting flakes can be made. However the use of non-retouched flakes in ethnographic specimens lends support to the authenticity of the Port Essington cutting flakes and their classification as a distinctive glass tool type.

The analysis of the retouched implements points up the difficulty of verifying the authenticity of claimed glass artefacts. Any section of bottle glass placed on a hard surface and with pressure applied against the natural curve of the glass will produce 'scrapers'. But taking into consideration

- the average weight of the claimed artefacts compared to the wider collection
- the technology recorded for both flakes and cores
- the presence of some bifacial working
- the difference in edge shapes between 'side' and 'end' scrapers
- the presence of retouch on some cutting flakes, and
- the environmental setting

then the authenticity of glass implements at Port Essington is not open to serious doubt. At the same time there appears to be no way of positively identifying single glass artefacts, but commonsense should suggest the probable validity in terms of the above discussion.

At Port Essington, then, we may safely assume that the Aborigines quickly utilised this new material in an area lacking suitable stone. The implications of the archaeology are that this material was collected from the European rubbish dump and often modified there, and then taken onto the Aboriginal midden for utilisation for cutting and scraping activities. This analysis reflects some degree of specialised usage of the bottles available but the technology was not complex, as, for example, when compared to Kimberley bifacial point production. It is best seen as a transference of stone techniques to glass in an area where, from the present archaeological evidence, stone played a minor role in the technology and economy of the Aborigines, and what stone used was imported (see Chapter 5).

TYPE B GLASS

A total of 239 pieces of glass were initially sorted as items which would assist in the shape classification of the glass from Port Essington. The majority of these pieces are fragments of dark green ('black') bottle glass, and consist of base, neck and rim fragments. In addition, 15 prunts, or glass seals, were recovered, and a number of other items made of glass.

Two whole bottles (Figure 88) and a third with the lip missing were recovered from the excavations and these appear to reflect the main types in the collection as a whole. Figure 89 illustrates the measurements taken on both the whole bottles and the fragments where possible.

In all, measurements were taken from 85 bases and 134 rims and necks. No measurement was taken unless more than 50% of the base or rim was present so that these figures represent minimum numbers. In view of the utilisation of bases by the Aborigines it is not surprising that almost twice as many rims as bases are represented in the present category. While the collection represents a minimum of 134 bottles, an

Chapter 5

Metal, Stone and Bone

METAL

A wide range of metal artefacts was recovered from the excavations and these are presented in Tables 91, 92 and 93, according to the nature of the metal. In addition to these tables, a large quantity of unidentified iron, mainly hoop-iron, and unidentified scrap lead and copper, was recovered. These have been presented in the individual reports by weight and are not discussed further here.

Iron and lead

Apart from the hoop-iron, nails are the most predominant iron artefacts in the deposit. In general they are badly decayed and fragile and the exact measurements of all but a few items were impossible. Instead, they have been grouped into ranges. For example, as Table 91 indicates, of the 1,954 iron nails in the collection, 81.7% are less than 50 mm (2 inches) in length. The application of machinery to nail manufacture was first made in the United States at the end of the eighteenth century, and 120 American patents were taken out on machines that cut nails between 1790 and 1825 (Fontana and Greenleaf 1962:45; Fontana 1965). In contrast, machine made nails in England appear not to have been made until their production was begun in Birmingham in 1811 (Martineau 1866:613).

Fontana and Greenleaf present a number of useful criteria based on technological improvements in the industry which help to date the nails in question. All the nails from the Port Essington collection are cut nails, and may be most easily recognised by the manner in which two sides of the shank run parallel while the two opposite sides taper away from the head. In the early American and English machines this taper was achieved by turning the nail plate upside down at each stroke so as to continue the taper by reversing the cut. This produced nails with a particular cross-section (Fontana and Greenleaf 1962:fig. 11q). Between 1810 and 1825 machinery was developed which obviated the need to reverse the plate and which produced a nail with a different cross-section (Fontana and Greenleaf 1962:fig. 11r). Martineau (1866:614)

however, still describes this turning operation in use at about the mid-1850s in England, so that this dating criterion may not be effective in Australia (where imported English nails as well as locally made nails were used), at least in time equatable to the American situation. Because of the eroded nature of the nails in the present collection, it is impossible to record the cross-sections of many nails.

Although a large number of nail shapes and sizes were in existence in the nineteenth century, the nails from Port Essington are almost all 'common cut nails with a square crowned head' (Figure 96-a-d), similar to the fencing nails illustrated in an 1876 catalogue published by Fontana (1965:92). The major exceptions are nails less than 30 mm in length excavated in large numbers from VS, which have large



Figure 96. Nails from Port Essington: a-d) iron cut nails with square crowned heads; e) iron tufting nail; f) copper rivet; g-h) square shanked countersunk copper nails.

Table 91. Distribution by number of all identified iron and lead artefacts for the whole site. Nail measurements in mm.

Iron	VM	VMII	VH	VHD	VHK	VMQ	VQS	VOM	VSD	VSF	VSF11	VB	VS	VAMII	VCH	Gen/Sur	TOTAL
Nails < 30	28	4	37	21	16	4	66	2	123	3	6		190				500
Nails 30-50	122	12	34	339	40	27	97	20	346	20	32			4	3		1096
Nails 50-80	58	19	9	89	5	8	13	7	81	13	6	5			1		314
Nails > 80	10	8		7		1	2		7	3	4			1	1		44
Belt Buckles												1					1
Rings			1					1									2
Screws	3								2								5
Hooks	3																3
Hinges	1								1								3
Locks							1										1
Nuts						1											1
Bolts	1																1
Angle Iron	1							1	1								3
Pins						1											1
Forks										2							2
Boot Heels	4						1			1							6
Stove Feet										1							1
Lead																	
Shot																1	1
Cannon Balls									7								7
Musket Balls		4		2			1	1								1	9



Figure 98. *Supikas*, coins of Southeast Asian origin, showing obverse and reverse: a) V/Gen. Sur./ Town Square (37); b) VCH/2 (40); c) VHK/2/1 (63).



Figure 99. Royal Marines officer's shako plate from officers' mess excavations.

The first two coins relate to the reign of Ch'ien lung (1736–1795), and the third to the reign of Chia-ch'ing (1796–1820). The various obverse designs relate to provincial mints. Schj oth No 1480 refers to Yunnan province; No 1484 to Szechuan province; No 1501 to the Chihli mint.

Brass

A number of different brass artefacts (Table 93) were recovered from the excavations which can be grouped as follows.

Uniform Insignia

From the floor of the Officers' Mess four pieces of a Royal Marines shako plate (Figure 99) were recovered during the excavations. This consists of an irregular shaped shield of radiating lines, topped by a crown and bearing in the centre an anchor. Above the anchor is the legend 'GIBRALTER' and below, the motto of the Royal Marines 'PER MARE [PER TERRAM]'. The last fragment was not recovered. From the excavations in VQS, a medallion bearing the 'Royal Crest' (crowned lion standing astride a crown) was recovered (Figure

100-d). This measured 45 mm in diameter, and has been identified as a shako chinstrap terminal, although it is similar to a harness ornament in the collection of Professor A.C. Thomas of the University of Leicester (pers. comm. 11.11.1966). Professor Thomas' example comes from the Military Train in the Crimea (1859-1865). My identification is based on an example examined in the Royal Marines Barracks Museum, Portsmouth.

- Two brass wreaths (Figure 100-e-f) were recovered, one each from VMQ and VQS. Each has two eye hooks on the back. They are part of the insignia worn by other ranks of the Royal Marines on the glengarry, the 'pork-pie' or 'pill-box' cap. Complete, these wreaths enclosed a small brass half-hemisphere of the globe, separated from the wreath, and with a separate bugle above.
- A free-standing crown and anchor (Figure 100-c) was excavated from VM/9/1, measuring 62 mm in length. One fluke of the anchor was missing, but this was recovered from the adjoining square, VM/10/1. There appears no way of indicating whether this was a marine or naval insignia. (But see uniform buttons below).

All these insignia would originally have been gilded.

Table 93. Distribution by number of all identified brass and pewter artefacts for the whole site.

Brass	VM	VMII	VH	VHD	VHK	VMQ	VQS	VOM	VSD	VSF	VSF11	VAMII	Gen/Sur	TOTAL
Uniform Insignia	2	1				1	2	1			1		1	9
Uniform Buttons	5	2	1			1	1			4	1			15
Plain Buttons	6	1				2	2		3	1	2			17
Percussion Caps	7					1					1			9
Harmonica Reeds	1									1				2
Collar Studs		2							1					3
Belt Buckles								1					1	2
Furniture Knobs	1						1		1					3
Keyhole					1									1
Brooch Frames						1								1
Rings	1			1										2
Ferrule												1		1
Spike							1							1
Hinge		1												1
Washers						2								2
Pewter														
Uniform Buttons	1		1			1	1			4	1			9

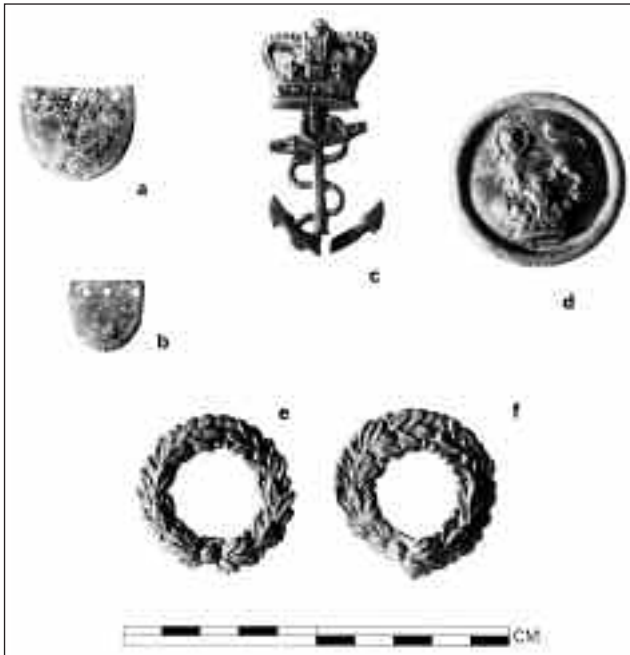


Figure 100. Uniform insignia from Port Essington: a-b) copper 'scales' from epaulettes or shako chin straps (VM, VSF I); c) crown and anchor naval insignia (VM); d) royal crest shako chin strap terminal (VQS); e-f) other ranks Marine cap insignia (VMQ, VQS).

Uniform Buttons

An extensive typology of naval buttons has been set up by Michael Lewis (1945) where he lists a number of datable innovations in the evolution of these buttons. Four brass buttons were excavated, all from VM (Figure 101-a-d). All are identical in design. Each consists of a raised anchor and cable, with crown above, against a lined background; the whole surrounded by a raised circle, with the outer rim decorated with large indentations, which is the precursor of the true 'rope-rim' which appears on naval buttons at the end of the nineteenth century. In shape, these buttons have a flat base and a convex face. They are made in two pieces, with a single eye hook. Of the present examples, one has a diameter of 17 mm, the others diameters of 15 mm. Gilt is still present on the larger example, and it may be assumed that all were gilt buttons.

All four buttons are inscribed on the reverse side. The large example (VM/8/1 (43)) (Figure 101-a) is stamped

'TREBLE GILT STANDARD'; two of the smaller buttons (VM/14/1 (39) and VM/10/1 (56)) (Figure 101-b-c) are identical and are stamped 'EXTRA STANDARD'; and the third small example (Figure 101-d) is stamped '& S FIRM', i.e. Firmin and Son(s), button makers.

Referring to Lewis' classification the buttons are almost identical to that author's type D.2 (Lewis 1945:plate 3), which came into use in 1827 and was worn by commissioned officers, master's mates, and midshipmen. The slight difference which occurs is that on the present buttons the cable ring lies to the right of the shank instead of on the shank as in Lewis's example. However, on Lewis's type D.1 the ring lies to the right, although this button has the addition of a laurel wreath and was worn only by flag-officers.

On the Firmin button, and VM/8/1 (43) the anchor stock slopes down on the right. On the other two examples it is horizontal.

It is reasonable to identify these buttons as naval rather than marine in origin, and may well have come from a discarded garment which also may have been the source of the free-standing crown and anchor described above. According to Parkyn (1956:4) the precise designation 'FIRMIN & SONS' was used only in the period 1824-1826. However, specimens in Professor Thomas's collection make it reasonably certain that this designation can occur up until about 1850.

At this point it is expedient to include uniform buttons made of pewter (Figure 101-e-g). Altogether nine of these buttons were recovered, four from VSF I, and one each from VM, VH, VMQ, VQS and VSFII. All are convex shaped with a single iron eye hook set in the back. Eight are identical in design, bearing a raised crown and anchor, surrounded by a laurel wreath, with the legend 'ROYAL MARINES' above. Each of these carry the maker's name on the reverse. Seven are inscribed 'NUTTING LONDON', the eighth 'M GOWAN LONDON'. The ninth button in this group has a crown above '59' and has been identified as the other ranks button of the 59th Foot (2nd Battalion, East Lancashire Regiment) of the type worn between 1840 and 1859. No maker's name is discernible. The marine buttons are a normal early pattern of other ranks coatee button. Professor Thomas states that these pewter buttons went out of use in 1855, and that an example of a similar button in his collection is dated to 1830. Little is known of the makers recorded here, although Nutting is an early nineteenth century manufacturer. The Royal Marines contracted for the manufacture of their buttons to a number of firms, so that no very close date can be obtained from this

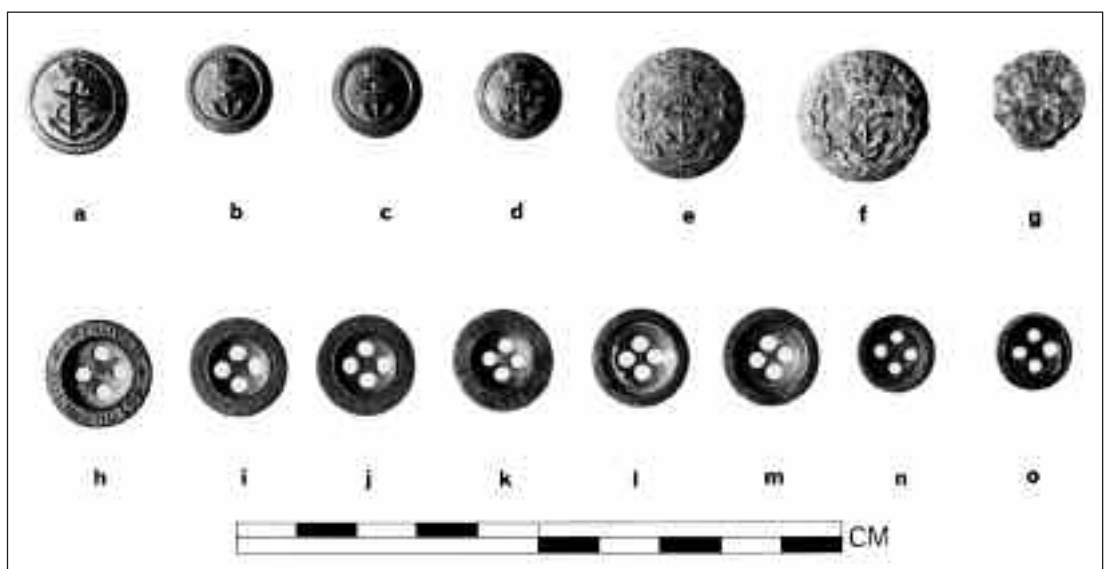


Figure 101. Buttons from Port Essington: a-d) brass naval buttons (VM); e-f) Royal Marines pewter buttons (VSF I); g) other ranks pewter button of the 59th Foot (2nd Battalion, East Lancashire Regiment) (VSF I); h-o) four hole brass buttons from various site-units.

Chapter 8

Life at Port Essington

Archaeologists have established that the Aborigines had occupied the immediate area of the Cobourg Peninsula upwards of 24,000 years before the British first tried to settle there (White 1967). During that time they had come to terms with their environment, modifying it to some degree by the use of fire, but probably not altering the face of the country as much as hunters and gatherers in more temperate climates may have (Jones forthcoming [1971]). The region appears to have provided plentifully for the subsistence needs of its human occupants, who in turn bowed gracefully to the will of the seasons, perhaps moving with the wet and the dry seasons to places best able to support their semi-sedentary existence. Then perhaps for the last thousand years on the basis of new radiocarbon dates (Macknight pers. comm.) the north coast became the scene of a new activity, the seasonal visits of the Macassans. These people were also in tune with nature, utilising the monsoons for travel, and the natural resources for profit.

The British however brought with them a mentality based on the lush meadows of England and the genteel society of London, and with an arrogance backed by an empire which spanned the world, met the problems of planting the flag in north Australia head on. The pomp and circumstance of the parade ground might have little application in Port Essington but since it was considered necessary for discipline, the marines paraded while the white ants unceremoniously attacked the sofa in Sir Gordon Bremer's tent, although he caused it to be moved every day (HDL In Letters B.798: Bremer to Beaufort 7.12.1838).

The first garrison 1838–1844: getting started

Forty marines disembarked to form the garrison, a captain, a lieutenant, and 38 enlisted men (RMAP Port Essington personnel list). While Earl reported that the men had little interest in the success of the venture, their own despondency at such a posting can be imagined. They were a motley group whose trades ill-fitted the challenges they were to face. They comprised 18 labourers, four carpenters, two wheelwrights, two shoemakers, a carter, a gardener, a clerk, a blacksmith, a whitesmith, a tailor, a brass-founder, a stonemason, a cabinet-maker, a miner and a butcher. The fifer was listed as having no trade and may still have been a boy. The archaeology suggests that the five married quarters dated to the beginning of the settlement imply that five men brought their wives with them, although these are not listed, nor the number of children in the settlement.

With the *Britomart*, the *Alligator* and the *Orontes* in port, the ships' crews were employed to assist the garrison and the beginnings of the settlement progressed at a favourable pace. Prefabricated buildings brought from Sydney were erected, including Government House (Figure 105). Bremer had been instructed to erect such defensive earthworks as might be necessary (Adm. 2/1965: Adam and Parker to Stanley 30.1.1838) and this appears to have been done, from the remains of a square area enclosed by a ditch and bank, on the high ground on Minto Head. This is shown as foundations for a blockhouse on the McArthur map (Figure 4) but it is uncertain whether there was ever a building here. If the



Figure 105. The prefabricated Government House, shortly after it was erected. Watercolour by Owen Stanley, entitled *Government House Victoria January 12 39*. Mitchell Library GPO 1 25200. Published with permission of the Mitchell Library.

Chapter 9

Conclusions

DENOUEMENT: SUCCESS OR FAILURE?

On 10 June 1849, Grey wrote to Fitzroy informing him that Port Essington was to be abandoned, since it had failed to realise the advantages expected from its formation (CO 202/56: Grey to Fitzroy 10.6.1849). On 12 November the news reached the forlorn garrison when H.M.S. *Maeander* arrived to expedite the relief, and was met with much rejoicing. The settlement was destroyed by fire, as the archaeological evidence has confirmed, and Captain Keppel (1854:490) related that this was done on orders to prevent any re-use of the buildings. On 1 December 1849, led by the band, the garrison marched to the jetty for the last time and embarked for Sydney. Unimpressed by the pomp and circumstance, the Aborigines scavenged among the ruins, while McArthur turned his back on eleven years in the Australian tropics.

A limpet port

The earlier chapters have outlined the reasons given for the formation of the settlement at Port Essington and the ways in which these failed to come to fruition. Speculations on whether Port Essington could ever have succeeded miss the point. If Port Essington had had another Raffles, if the administration and finance of the settlement had been more efficient, if the Anglo-Dutch treaties had been better implemented in practice, are questions that blur the single fact that in terms of the overriding political considerations given to drawing a ring-fence about the Australian coastline, then Port Essington was a success despite the costs. It was not a question of whether other powers had designs on Australia by the late 1830s, but rather that the British government thought they did.

Port Essington, then, can be seen as a successful political manoeuvre which extends Blainey's (1966:82-96) concept of the limpet ports of the 1820s well into the 1840s. That the settlement lingered beyond 1845, by which time the French threat had diminished, with France transferring its interests to the Pacific, is best explained by the problems of communication which plagued the settlement from the beginning. A second reason was the lingering importance of a northern land base for the surveying voyages which were carried on in northern Australian waters between 1837 and 1849. This fact was recognised before the expedition left England in 1838 (Adm. 2/1695: Barrow to Bremer 30.1.1838) and was alluded to throughout the lifetime of the settlement (e.g. HDL SL24: Wickham to Beaufort 27.8.1839; CO 201/320: Stokes to Gipps 19.3.1842 in Gipps to Stanley 5.5.1842; AONSW 4783 Lambrick letter books In Letters: Commissariat Office Sydney to Lambrick 3.4.1846). In addition, Port Essington did prove a haven for some shipwrecked crews. In 1841 the crew of the *Montreal* reached the settlement (HDL SL.15P: Stanley to Beaufort 1.11.1844) and in 1843 the survivors of the *Hyderabad* and *Coringa Packet* arrived in Port Essington (McIntosh 1958:14). In April 1846 the *Heroine* struck a reef and foundered on a voyage to Port Essington. The survivors were carried to Port Essington in the *Enchantress* and *Sapphire* (RMAP Port Essington Correspondence: McArthur to Owen 23.5.1846; Essenhigh 1846:550-1). In general, however, the settlement was too far from the Barrier Reef, the cause of most disasters.

A missionary presence

Amongst the survivors of the *Heroine* who reached Port Essington was a Roman Catholic priest, Father Angelo Confalonieri, who had embarked with two lay brothers to begin missionary work amongst the Aborigines of northern Australia (Christie 1943). Despite the loss of both assistants and all his belongings, Don Angelo determined to continue his work, and given assistance by McArthur and the garrison, he quickly learnt the Aboriginal dialect in the area and went to live at Black Point where he became the first missionary in the north. Pottery and glass fragments c. 100 m south-east of the present ranger's house perhaps marks the site of his dwelling. Despite his devotion he seems to have had little success with the Aborigines and two years later died, presumably of malaria. The pathos of his hardships at Port Essington was reflected in the account of his death given by MacGillivray (1852 I:157-8) who recounted how in his final delirium he died denying the existence of God.

During his brief time at Port Essington, Father Confalonieri travelled over much of the Cobourg Peninsula, mapping and recording Aboriginal tribal distributions and compiling a vocabulary of the local dialects. He also translated parts of the New Testament and prayers into the language of the people with whom he lived (Flynn 1963:48). The vault in the cemetery at present inscribed with the name of a German missionary is thought to contain his remains (see chapter 2).

For McArthur, the perfunctory note of thanks which he received from the Admiralty (RMAP Port Essington Correspondence: Parker to McArthur 17.1.1851) could have been but small consolation for the apparently wasted years he spent at Port Essington. Yet under his guidance the tiny outpost continued to exist within, if not with, the hostile environment in which it was placed. The difficulties of his command were ones of distance, discipline and disinterest. These he faced with the only weapons at his disposal, the Books of Regulation and Revelation. If his view was limited, nevertheless by painful trial and error he helped demonstrate the problems of colonial expansion in tropical Australia, and some of the ways to overcome them.

European legacies

This settlement together with its predecessor at Raffles Bay was responsible for introducing the buffalo which formed the nucleus of the large herds now in the Northern Territory, as well as the banteng cattle which range over the Cobourg Peninsula. With its experiments in horticulture it pointed up the limited potential of the area for any agricultural development, which even with a hundred years of technological improvement remains largely true today.

Perhaps the most lasting monument to the endeavour of the first Europeans at Port Essington lies in the fact that the settlement provided a base for investigations and observations into a number of fields of natural science, so much so that the Cobourg Peninsula is at present a flora and fauna reserve. Many residents and visitors wrote detailed accounts of the language, customs and habits of the Aborigines so that the area is among the best ethnologically documented area in north Australia (e.g. Keppel 1853; Sweatman ML A1725; Leichhardt 1847; Jukes 1847; MacGillivray 1852).