3PS – 153 MACQUARIE STREET, PARRAMATTA

ORGANICS, METALS & BUILDING MATERIALS REPORT

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VOLUME 3, SECTION 8.7

Assortment of finds (L-R): hot water jug Area B context 16967; leather shoe Area D context 17852; plaster corbels with rosettes Area C context 16427. Gallery2.

FINAL REPORT | Jill Miskella and Jane Rooke

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1.0 INTRODUCTION

1.1 BACKGROUND

Casey & Lowe were commissioned by Parramatta City Council to undertake the historical archaeological investigations at 3PS- 153 Macquarie Street Parramatta, the former Australia Post Office site on the corner of Macquarie Street and Leigh Place. The site was assessed as being of both State and local heritage significance. Excavation was undertaken between October 2015 and March 2016. The study area was bound to the north by Macquarie Street to the south by the former Parramatta City Library, to the east by PS1 (the University of Western Sydney) and the west by the Leigh Memorial Church Mission Building.

For excavation purposes the site was divided into four main areas (A, B, C and D) that followed the 19th-century allotments (Figure 1.1). Area A was subdivided into Area A and Area A South. Originally the study area included parts of what were historically known as Lot 28, Lot 1 (181), part of Lot 32 and all of Lot 30. Area A and A South formed the western half of Lot 30 while Area B formed the eastern half of Lot 30. Area D was within Lot 28 and Lot 1 (181) and Area C was a long narrow area within the western portion of Lot 32.

Figure 1.1: Schematic plan of the study area showing the historic allotment numbers and excavation areas (Areas A to D), also the location of the main structures on site. C & L 2019.

The following historical activities were well-represented in the archaeological record at the site:

- Early agriculture
- Construction and continued alteration of a of residential building throughout the early and middle periods of the 19th century.
- Ground preparation and construction of later 19th century houses which remained extant until the mid-20th century.
- Water management.

1.2 ARCHAEOLOGICAL PHASES

The study area was divided into six main archaeological phases, based on historical records:

- Phase 1: Natural landscape.
- Phase 2: Aboriginal occupation.
- Phase 3: 1788-c.1819 Early agriculture and land modification.
- Phase 4: c.1819 to 1870s/80s Early occupation.
- Phase 5: 1870s to 1960s Rebuilding and occupation (Cranbrook, Northiam and Harleyville, Lot 30).
- Phase 6: 1960s to 2015 Mid to late 20th-century uses (Parramatta Post Office, construction, occupation and demolition).

The phases were further divided into sub-phases that relate specifically to each allotment (see Table 1.1). These phases will be referred to throughout this report.

1.3 AIM OF REPORT

This report will focus on information from the building materials, metals and organic materials that are related to construction, services, garden vegetations and all-purpose timber-working. As the organic materials make up only a small proportion of the artefact assemblage all organic materials will be discussed in this report including personal, household and food items. The artefacts will be discussed in relation to their excavation areas and historic allotments and archaeological phases and to specific structures on site where known. Section 2 will examine the organic materials which includes structural and non-structural timbers, leather artefacts, fabric and seeds. Section 3 will look at the metal artefacts which include architectural and household items, for examples, nails, tools and household items (containers, pots, pans etc). Personal metal items will be discussed in the Artefact Overview (Vol 1, Section 4). Finally, Section 4 will focus on information from the structural artefacts (building materials) collected from site. These include bricks, tiles, slate, service pipes, mortars and renders and the associated significant structures and contexts. Conclusions about the assemblage will be given in Section 5. A bibliography has been compiled in Section 6.

Table 1.1: Archaeological phases across the site within lot boundaries.

Phase	Date	Phase Title	Lot 28 & Lot 1 (181)	Lot 30	Lot 32
1		Natural Landscape			
2		Aboriginal Occupation			
PHASE 3: BEGINNINGS OF BRITISH SETTLEMENT					
3.1	1788-1790	Government Farming: clearing and agriculture	Government Farming: clearing and agriculture	Government Farming: clearing and agriculture	Government Farming: clearing and agriculture
3.2	1790-c.1819	Land modification and early uses	Timber drain in creekline	Used for Fairs from 1814	
PHASE 4: EARLY OCCUPATION (c.1819-1870/80s)					
4.1	c.1819-1850s	Agriculture, construction, and early cottage occupation.	Plough Lines Lot 1(181) & 28 Town Drain, timber-lined drain, storage pit	House 4 construction by 1822 (levelling fills) – first sump, early occupation	Maughan's garden fenced in by 1819. White Horse Inn (from 1830) drains and outbuildings.
4.2	1850s-1870s	Later phase cottage occupation	Reconfiguration and extension of house - fences and outbuildings – levelling above the Town Drain	Extension to House 4 – construction of outbuilding on eastern part of Lot 30 - continued occupation until 1883.	Hilt's Coach Service (from 1851) outbuildings, occupation and rebuilding
4.3	1870s-1880s	Demolition (Lot 30)	Occupation of Wyverne	Demolition of House 4 (by 1884)	Demolition of former White Horse Inn and outbuildings
PHASE 5: REBUILDING AND OCCUPATION (1870S TO 1960s)					
5.1	1870s-1960s	Construction and occupation	Construction of plaster works (Lot 28). Continued occupation of Wyverne (Lot 27/8).	Levelling fills, construction & occupation of Cranbrook, Northiam and Harleyville (1880s).	Construction and occupation of 1870s houses -Late-19th century outbuilding. -Single storey shop (1950s)
5.2	Late 1950s-1960s	Demolition	Demolition of Plasterworks and Wyverne to make way for Civic Place (Lot 28)	Demolition of Cranbrook, Northiam and Harleyville to make way for the Post Office	Demolition of Macquarie flats in 1978
PHASE 6: MID TO LATE 20TH-CENTURY USES					
6	1960s-2015	Post Office & Civic Place	Civic Place construction and use	Post office construction occupation and demolition	Post office construction occupation and demolition

1.4 METHODOLOGY

The methodology used to catalogue the artefact categories 'building materials', 'metals' and 'organics' analysed in this report was developed by Casey & Lowe Pty Ltd. The cataloguing of the organics and metal artefacts was completed by Jane Rooke. Maggie Butcher catalogued the building materials. All catalogued information was entered onto a Microsoft Access database developed specifically for Casey & Lowe using the methodology developed by Dr Mary Casey.[1] The catalogue sheets used an individual catalogue number for each artefact entry which was assigned in group numbers according to their category. The catalogue numbers on the Casey & Lowe artefact database for each of the categories discussed in this report are shown in Table 1.2. All items discussed in the report will be referenced by the context number followed by the catalogue number (for example, 12345/#8113).

Table 1.2: Summary of the catalogue numbers

Artefacts	Catalogue Numbers
Organic artefacts	#25001 - #25114
Metal artefacts	#22301 - #23092
Building materials	#8500 - #9134

This report contains numerous tables extracted from the database to aid discussion along with photographs of the artefacts. The dimensions of all artefacts were recorded in the sequence of LxWxTh in mm. Unless totally fragmentary, broken examples were catalogued in the same way with the addition of + (plus) indicating an incomplete measurement. Specific methodologies used for each of the categories discussed in this report will be explained in the relevant sections including relevant type series. The catalogue is included in Volume 6, of the Excavation Report.

When discussing any of the artefacts found all the numbers refer to the minimum item count (MIC) unless specifically stated otherwise. The minimum item count (MIC) was ascertained both by the individual catalogue number and the item number. Where items were too small to differentiate from each other and ascertain total numbers with certainty they were grouped together within the one entry and listed as being from at least one item (1 MIC). Items which conjoined between contexts were identified in the join field and entered only once under the 'item' column to avoid doubling up on numbers with the number of fragments entered in all cases (the second part of the object being the smallest or deemed to have been disturbed from the original position was assigned a '0' item). Abbreviations used during cataloguing and listed in the artefact tables are explained in the Appendices in Volume 6 of the Excavation Report.

[1] Casey, Mary 2004 'Falling through the cracks: method and practice at the CSR site, Pyrmont', Australasian Historical Archaeology, 21: 27-43

1.5 AUTHORSHIP

This report has been written by Jill Miskella and Jane Rooke, Casey & Lowe Pty Ltd. The report was reviewed by Dr Mary Casey, Director, Casey & Lowe Pty Ltd.

1.6 BRIEF HISTORICAL TIMELINE[2]

- 1804 - The study area shown as vacant land with identified allotments and agricultural grants to the south.[3]
- 1813 - Fairs held twice annually at the Market Place.[4]
- 1814 - The study area is shown on plan as being 'Reserved space for the Fairs etc.'[5]
- 1814 - The first Annual Feast held by Governor Macquarie 28 December.[6]
- c.1819 - Two related watercolours by Joseph Lycett from c.1819 and 1820 show the space reserved for the fairs and the Market Place as largely open space, with the main features being some fences. Lycett's watercolours are not reliable sets of evidence as he has been found to be inaccurate in a number of instances.
- 1823 - The study area is shown as divided into four separate allotments - Lot 1 and Lot 28 in Section 15 (Civic Place), Lot 30 in Section 15, and the western edge of Lot 32 in Section 15.[7] A building is shown on Lot 30 and one on the eastern side of Lot 32. Lot 30 was leased to John Thorn on June 30 1823.[8]
- 1833 - Edward Lakeman has his publican's licence renewed for the White Horse Inn on the western side of Lot 32 in Section 15.[9]
- 1835 - Last Annual Feast (the event was abolished by Governor Bourke).[10]
- c.1840 - The Town Drain is built within an existing creek line.
- 1844 - On Brownrigg's plan a second building is shown on Lot 32 which is probably the White Horse Inn.[11]
- 1845 - Lot 30 is conveyed to George Cavill.[12]
- 1858 - House on Lot 30 extended and a pond is made at the rear of the lot. A second pond is shown on the southern boundary of Lot 1 and large buildings appear in the rear yard of Lot 32, which are probably stables. [13]
- 1860 - Cavill conveys Lot 30 to John Holland, innkeeper and licensee of the Star Inn on Church Street. The lot included a wooden cottage.
- 1874 - John Holland dies leaving Lot 30 to his wife Harriet Holland.
- 1884 - The wooden cottage is demolished and Harriet Holland builds a pair of two-storey brick terraces on the eastern half of the allotment, Northiam and Harleyville.
- 1888 - A large single-storey brick house is built on the western half of the allotment, Cranbrook.

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[2] Brief Historical Timeline from the 3PS Preliminary Report, March 2016.

[3] Plan of the Township of Parramatta, G.W. Evans Acting Surveyor, Sydney 1804. TNA (UK) CO/700/New South Wales No.22 Evans' plan of Parramatta, 1804.

[4] *Sydney Gazette* 26 December 1812, p 1b; 30 January 1813, p 2a; 6 March 1813, p 1b; 13 March 1813, p 2b; Casey & Lowe 2012:53.

[5] G. W. Evans, 'Plan of the Township of Parramatta' 1814, SLNSW M2 811.1301/1814/1.

[6] Smith 1992:77

[7] 'Plan of the Township of Parramatta', G. C. Stewart, draftsman, SRNSW Item No.4907, P.1.1022.

[8] Grants register 25 No. 63.

[9] Butts of Publicans Licences, 1833, No. 35, SRNSW 4/64.

[10] Smith 1992:77.

[11] 'Plan of the Town of Parramatta and the adjacent properties as surveyed by W. Meadows Brownrigg surveyor', SLNSW M4 811.1301/1844/1.

[12] Grants Register 2838 No. 170.

[13] 'Great Western Railway, Extension Parramatta to Penrith Part 1', Proclaimed Plan. SRNSW NRS 15244, item [1]; formerly in State Rail Archives, Plan 965/2, NID.

- 1895 - The study area is shown to have a pair of two-storey terraces built on the Macquarie Street frontage of Lot 32 with an outbuilding on the western boundary, an outbuilding associated with a house on Lot 27, 'Wyverne', on the western boundary of Lot 28 as well as the houses and associated outbuildings and cesspits of Harleyville, Northiam and Cranbrook.[14]
- 1920s - Thomas Dalton operated a fibrous plaster manufacturing workshop at the rear of Lot 1.[15]
- 1955–1956 - An aerial photo shows that the fibrous plasterworks building at the south end of Lot 1 had been demolished.[16]
- 1961 - Lot 1 and Lot 28 used as a road access into Civic Place (Leigh Place).
- 1960s - All extant houses demolished on Lot 30 and the Parramatta Post Office is built.

[14] 'Parramatta Sheet 18', Parramatta Detail Sheets, NSW Dept. of Lands. SLNSW Z/M SE 4 811.1301/1. Digital order no. a1364020.

[15] *Cumberland Argus* 26 July 1944 p.6d.

[16] [Aerial of Parramatta district], NSW Run 233-5130. NSW LPI Aerial Photographs.

2.0 ORGANICS

The condition of all archaeological artefacts is a result of the interaction between the materials and the surrounding environment, which can be protective or destructive. Environmental factors that impact artefacts include, but is not limited to, water, biological growth, oxygen, temperature, light and human action. It is for this reason that organic materials including animal i.e. leather, wool, silk (bone is catalogued separately) or plant i.e. wood (soft and hard), seeds, as well as fibres i.e. cotton, linen or materials used for textiles, paper, rope etc are less common on archaeological sites than other materials such as glass and ceramic.

2.1 METHODOLOGY

The category of organic artefacts for Parramatta Square 3 (3PS) has its own numbering sequence of #25001-25114 which form part of the Artefact Catalogue in Volume 6.

For the organics, the catalogue records the catalogue numbers including; the context number where the item was found; the shape of the item (i.e. shoe); the general function (i.e. personal); specific function (i.e. clothing); fabric (i.e. leather); portion (i.e. sole/heel); country of manufacture; manufacturer; producer or retailer; mark; age and gender associations; dimensions (in mm); joins (context/#catalogue number); weight (in grams); brief description (includes mark description); from and to dates (of manufacture); number of fragments; minimum item count (MIC).

2.2 ORGANIC ARTEFACT OVERVIEW

This section of the report will look at the 420 MIC (583 fragments) organic artefacts excavated during the historical archaeological investigations at 3PS (Table 2.1). For excavation purposes the site was split into five areas, Areas A and A South, B, C and D based around the location of the 19th century allotments (see Figure 1.1). The organic artefacts reflect the occupation of the site with the most common groups of objects over all areas belonging to the functional category of household (59.8%), followed by items related to food consumption (19.3%) and personal items (12.4%). Architectural artefacts, although less than 6% of all artefacts, provide a reliable dating method of the construction and demolition of the buildings on site.

Table 2.1: Summary of organic artefacts by general function.

General Function	MIC	%	Fragments	%
architecture	23	*5.5*	41	*7*
food	81	*19.3*	1	*0.2*
household	251	*59.8*	254	*43.6*
personal	52	*12.4*	228	*39.1*
transport	1	*0.2*	8	*1.4*
unidentified	7	*1.7*	13	*2.2*
work	1	*0.2*	30	*5.2*
yard	4	*1.0*	8	*1.4*
Total	**420**	*100%*	**583**	*100%*

2.3 AREA A, LOT 30

For recording purposes, Area A was subdivided with the southern half of the area renamed as Area A South. Most of the archaeological remains, including the remains of House 4 and Cranbrook were located in the northern half of Area A. The immediate yard areas close to the houses were also recorded with Area A as they contained a large number of postholes, fence lines, rubbish pits and drains. Area A had 165 MIC (263 fragments) (Table 2.2).

Table 2.2: Total of organic artefacts found in Area A.

General Function	Specific Function	Shape	MIC	Fragments
architecture	structural	base plate	2	13
		floor board	2	2
		post	3	4
		timber	4	4
	structural/non-structural		1	1
food	fruit	nectarine	1	1
household	fuel	coal	127	127
		wood	1	1
	furnishing	trim	1	1
	refuse	charcoal	5	4
person	cloth	fabric	2	26
		gumboot	1	3
		shoe	3	14
		shoe/boot	2	6
		shoe/boot, lace-up	1	16
unidentified	unidentified	timber	2	3
work	tool	brush	1	30
Total			**159**	**256**

Coal is a fuel substance of plant origin, largely or almost entirely composed of carbon with varying amounts of mineral matter. The fuels with the smallest amounts of moisture and volatile matter and the largest amounts of fixed carbon (anthracite) are most useful to humans and are extensively used as a domestic fuel. It is nearly pure carbon, very hard, black and lustrous[17]. 127 fragments of coal were found in Area A along with six fragments of charcoal (Table 2.2).

Early timber floorboards used in Australia were usually square edged and butted together. This was called 'shot' edged. It is uncertain when tongue and groove floorboards were first introduced to Australia however, by the late 1820s some tongue and groove floorboards were being imported. These early imports were often of variable width, unlike shot edged boards which were usually a constant width. After 1840 steam powered milling machines were commonly used to mass produce tongue and grove boards using soft woods such as Kauri, Oregon or Baltic Pine.[18] These floorboards saw the decrease in underfloor deposits due to their tight fitting and lack of holes and cracks for objects to fall through or be swept through.

[17] Geoscience Australia, 'Coal' Available at: https://www.ga.gov.au/education/classroom-resources/minerals-energy/australian-energy-facts/coal

[18] NSW heritage Office, 'Repair of Tongue and Groove Floorboards' 2005. Available at: https://www.environment.nsw.gov.au/resources/heritagebranch/heritage/maintenance54tonguegroove.pdf

Shoes are common organic artefacts found on archaeological sites, often found in wet areas such as wells or cesspits where the leather is conserved due to anaerobic conditions. It is unknown why so many shoes, often only one of the pair, are found. They may be thrown out due to irreparable wear and tear or lost. Six shoes or boots were found in area A as well as fragments of a vulcanised rubber gumboot (Table 2.2). Vulcanised rubber, a rubber that did not go rigid in the cold or sticky in the heat, was invented in 1839 and patented in 1844[19]. They began to be mass produced in 1880 and continue to be used today.[20] The only food related organic object was a partial nectarine pit, found in the historic topsoil (16120).

2.3.1 EARLY COTTAGE - HOUSE 4

An early house was depicted on Stewarts 1823 Plan (Figure 2.1) at the front of Lot 30 in the northwest corner fronting Macquarie Street.

Figure 2.1: Detail of Stewart's 1823 map of Parramatta. Study area shaded in blue and orange. House 4 can be seen in the western half of Lot 30. SRNSW Item No 4907.

Table 2.3: Total of organic artefacts from House 4

House	General Function	Specific Function	Shape	MIC	Fragments
4	architectural	structural	base plate	2	13
			post	2	4
	household	fuel	coal	119	119
		refuse	charcoal	3	3
	personal	clothing	fabric	1	25
			shoe	1	4
			shoe/boot	1	2
	work	tool	brush	1	30
Total				**130**	**200**

[19] Katz 1986: 17.

[20] Pratt & Woolley 1999: 82.

A large timber baseplate (16362/#23245) for the south wall of House 4 was found at the back of the house. Analysis of the southern baseplate established that it was grey ironbark (Eucalyptus ?[2]siderophloia) and although three other samples of timber from 3PS were ironbark this was the only example of the grey species.[21] The ironbark get their name from the normally hard, grey to black, longitudinally furrowed rough bark on their trunks and large branches. They are frequently found growing in coastal NSW, north of Sydney.[22] These hardwood trees grow tall and straight making them ideal for the timber industry as millable logs.

The extensions for House 4 are depicted on the 1858 plan; and shows the house was extended with an additional room to the eastern side of the building along with some yard structures and fence lines (Figure 2.2).

Figure 2.2: Detail of '1858 'Great Western Railway, Extension Parramatta to Penrith Part 1'. Study area outlined in red. The cottage (House 4) in the northwest corner of Lot 30 (Area A) now has an additional room on the eastern side (white arrow). To the west of Lot 30 is Area D which shows the town drain running diagonally across the northwest corner of the site. SRNSW NRS 15224.

Watkin Tench recorded that by December 1791 an extensive lumberyard was under construction in the Domain. He commented that it promises to be of great public benefit and contained:

[21] Ilic 2016.

[22]Planet Net. Nd. http://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&lvl=sp&name=Eucalyptus~siderophloia Accessed July 2019.

nine covered sawpits, a work shed for the carpenters and a large new shop for the blacksmiths.[23]

In c.1820, under Governor Macquarie's policy of removing public activities from the Domain, a new and larger lumberyard was built on the north side of Macquarie Street. The new lumberyard was conveniently close to House 4 (Figure 2.3).

Figure 2.3: 1823 Stewarts plan. The red arrow depicts the 1820s lumberyard. The blue arrow depicts House 4. SRNSW Item No 4907.

Due to the deterioration of the baseplate, it is unclear if the timber was prepared in a lumberyard using a hand held pit saw or split using hand tools on the property. Before the power-driven circular saw was in common use, all the timber would have been cut by hand, using a pit saw, a long wide blade with a handle at either end and teeth made to cut only on the down stroke. The men worked in pairs, the top-sawyer stood on top of the log and the bottom sawyer went into the pit, with the saw being worked up and down. The trees were barked and trimmed and cut into lengths.

The other method of preparing the timber for construction purposes was splitting using an axe or a froe (Figure 2.4).[24]

23 Shaping the Domain. https://www.parrapark.com.au/assets/Shaping-the-Domain-brochures/Shaping-the-Domain-World-Heritage-1788-1856-Parramatta-Park-Brochure.pdf. Accessed July 2019

24 Kephart 1917 https://bookdome.com/outdoors/Camping-Woodcraft/Axemanship-Qualities-And-Utilization-Of-Wood-Part-4.html#.XW3ZuCgzaUl. Accessed July 2019.

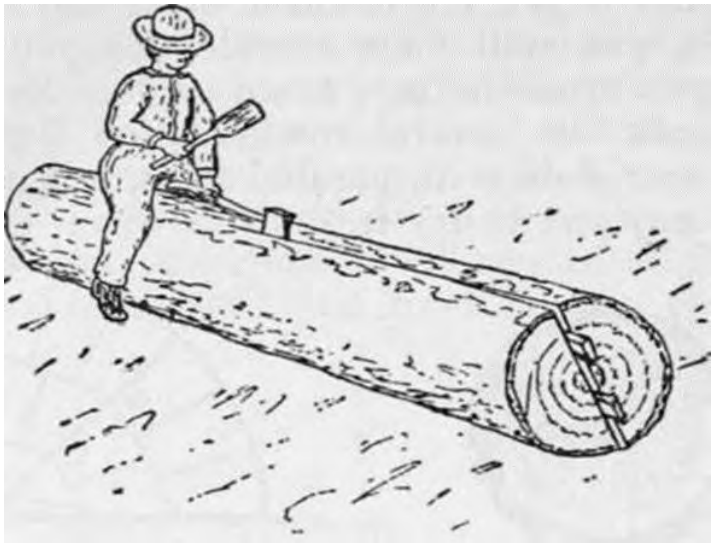

Figure 2.4: Splitting a log with hand tools including a froe, an axe, wedges and a maul.

One method of slab hut construction used in colonial Australia was to use a horizontal baseplate to support the upright timbers, fastened on either side by a nail rail (Figure 2.5).[25]

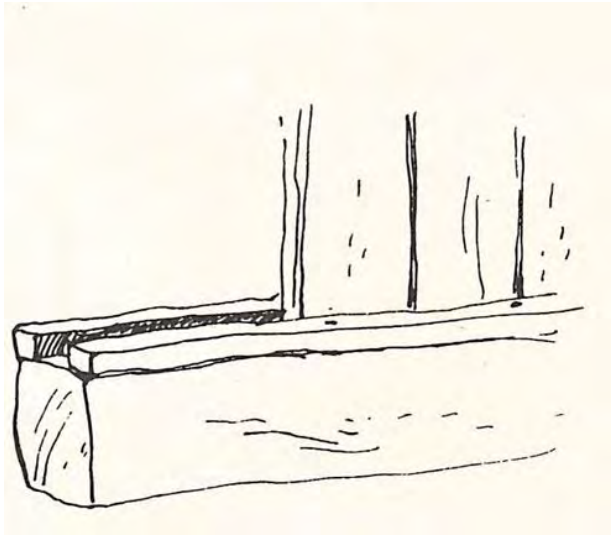

Figure 2.5: Example of a slab hut construction method showing railings.

The baseplate would have stretched across the width of the house but due to erosion it is now in four sections which were allocated A-D (Figure 2.6 to Figure 2.9). The total length of the sections measured 9.18m with the width measuring between 60-190mm and the depth between 60-120mm. The baseplate was trapezoidal in shape (Figure 2.12) with the wider flat surface (170mm) at the top. Decay of the outer barked and trimmed surfaces presented an undulating appearance.

[25] Edwards. 1988: 19.

Figure 2.6: Section A of Southern baseplate from House 4 (16362/#23245). 1-meter scale. DSCN_6882. Casey & Lowe.

Figure 2.7: Section B of Southern baseplate from House 4 (16362/#23245). 1-meter scale. DSCN_6883. Casey & Lowe.

Figure 2.8: Section C of Southern baseplate from House 4 (16362/#23245). 1-meter scale. DSCN_6938. Casey & Lowe.

Figure 2.9: Section D of Southern baseplate from House 4 (16362/#23245). 1-meter scale. DSCN_6986. Casey & Lowe.

One side of the rectangular nail rail was still evident, although fragmented. The hand forged nails, square in section with undiagnostic, encrusted heads are dated from c.1788 (Nails are discussed in Section 3.0). The shrinkage of the wood, corrosion of the nails and the absence of the upright timbers meant it was no longer on top of the baseplate but lying to the south of it (Figure 2.10, Figure 2.11).

Figure 2.10: Section B and C of baseplate with nail rail (16362/#23245). 1-meter scale. DSCN_6916. Casey & Lowe.

Figure 2.11: Detail of nail rail with extant hand forged nails (16362/#23245). 1-meter scale. DSCN_6928. Case & Lowe.

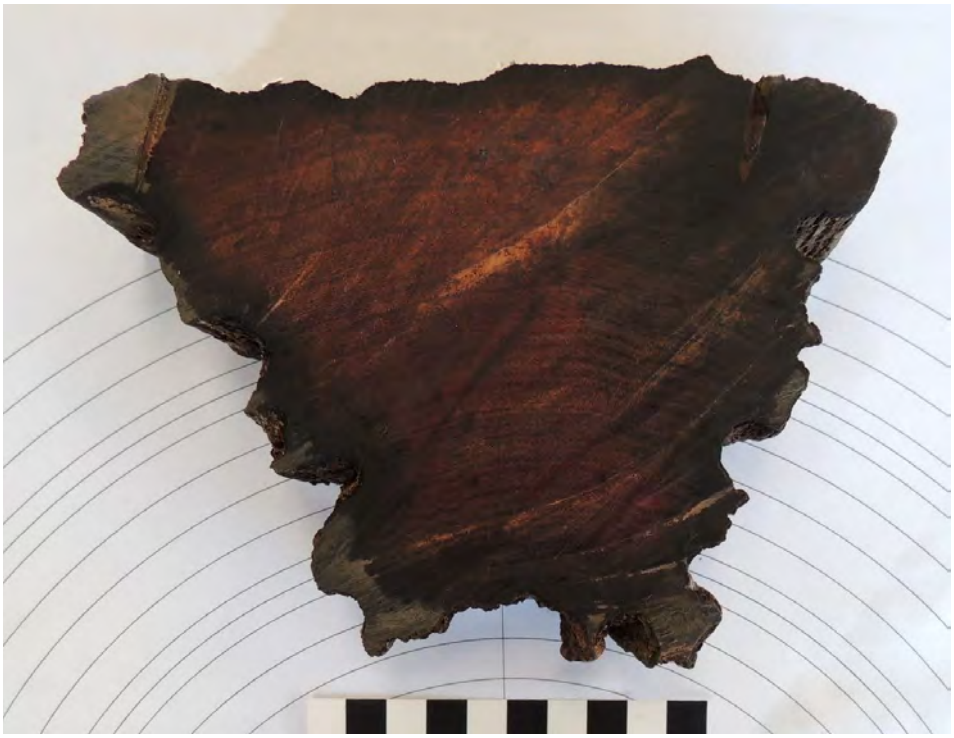

Figure 2.12: Section of trapezoidal shape baseplate (16362/#23245) placed on diameter chart to estimate size. This gives an indication that the section used for the baseplate was a quarter or an eighth size section of the tree. Scale 100mm. DSCN_7808. Casey & Lowe.

A row of six postholes formed the northern wall of the house (Figure 2.13) The larger posts all had sub-circular or sub-rectangular post-pipes. Within posthole 16231 the remains of the timber post (16233/ #23352) survived *in situ*. When the post was removed it measured 850mm in length with a bevelled base. Wood sample analysis determined the species of the post was narrow-leafed red ironbark.[26]

[26] Ilic J, 2016.

A horizontal timber plate (17270) ran east-west on the front wall of the cottage. The timber is a rectangular length of hard wood with very irregular depth and width due to erosion. The timber plate was in poor condition and removed in four sections but would have originally run the full width of the house. There were no nails or joins evident. The plate was not set into a foundation trench and there was nothing to suggest timber uprights. It is more likely that at the front of the house the large posts supported the frame and the horizontal plate only the floor.

Figure 2.13: The remains of the horizontal timber plate (17270/#23248), post-pipe (16233, 16216, 16229) in situ. View east. IMG_4155.

Below excavated post context (16233/ #23352) showing bevelled end. Scale 100mm. IMG_3728. Gallery2.

Approximately 6m west of House 4 a sump or catchment for drains (17228) was exposed. The northeast corner of the sump was cut by another large rectangular feature (17220). The fill of this feature (17221) revealed fragments of a tightly woven men's cotton jacket (Figure 2.14, Figure 2.15). The jacket had a darker brown lining, now only a fragment remaining, with a metal button attached, possibly from the sleeve. The button is a 4-hole trouser type stamped out, sewn through, the surface is obscured. Such buttons more commonly fastened men's trousers and shirts. They were mass produced in the UK from the 1850s and continue to be used and marked by a variety of outfitters, tailors and retailers in Australia until the present day.[27]

Figure 2.14: Fragments of the leather jacket with a fragment of darker lining (17221/#23246). Scale 100mm. IMG_3200. Gallery2.

Figure 2.15: Fragments of possible sleeve or pocket and lapel (17221/#23246). Scale 100mm. IMG_3213. Gallery2.

An adult suede latchet shoe (#23341), was found in the lower fill of the front yard well (17812). The round toe and wooden-pegged sole indicates that it was made c.1840c.1920 (Figure 2.17).[28] The shoe was well-used, with copper alloy rivets attaching a broken latchet strap a worn-down low heel and repaired sole. After reticulated water was introduced to Parramatta, wells were often used as convenient rubbish dumps. This well had few artefacts suggesting that the well was used until the demolition and levelling events in 1883/84.

[27] Lindbergh 1999; Peacock 1978.

[28] Anderson 1968; Butterworth 1998; Huddlestone & Watanable 1990; Mitchell & Ward 1997; Stocks 2009.

Figure 2.16: View into the lower half of the front yard well (16302). No scale. IMG_5363

Figure 2.17: Round toed adult left suede shoe (#23341) found in the lower fill of the front yard well (17812). Scale 100mm. IMG_3289. Gallery2.

Within Area A, the modified topsoil (16120) was sealed by the pre-Cranbrook levelling fills which securely dated the deposit to before the 1880s and to the occupation of the early house (House 4). This context was gridded and manually excavated across the rear yards of House 4 and 100% wet sieved and revealed 90 fragments of coal.

2.3.2 CRANBROOK- HOUSE 1

Cranbrook (House 1) was built in 1888 on the footprint of the earlier c.1822 House 4.
A total of 10 MIC (10 fragments) were found (Table 2.4).

Unlike House 4 there were only two fragments of coal collected, found in the rear yards and along the fence line. The amount of coal found in House 4 (119 fragments) compared to the amount found in Cranbrook (2 fragments) suggests less coal was used due to the introduction of gas and electricity to houses in Parramatta as well as the better fitting timber floorboards preventing any accidental loss of artefacts through the cracks. The demolition fills (contexts 16158 and 16154), contained two fragments of tongue and groove floorboards in Rooms 9 (bedroom) and 11 (hallway) of Cranbrook, demonstrating the use of high-quality floorboards. The fragments were slightly burnt, possibly reused as kindling during the demolition process.

Table 2.4: Total of organic artefacts from Cranbrook

House	General Function	Specific Function	Shape	MIC	Fragments
1	architecture	structural	timber	4	4
	architecture	structural	floor board	2	2
	household	furnishing	trim	1	1
	household	fuel	coal	2	2
	personal	cloth	fabric	1	1
Total				**10**	**10**

The demolition fill (16158), also contained a timber trim from the furnishing of the house with remnant pink and cream, or off white, paint, demonstrating the changing décor through time. Similar paint colours were also found on plaster fragments collected from the demolition fills in the rooms of Cranbrook (see Section 4.4).

2.4 AREA A SOUTH, LOT 30

Area A was sub divided with the southern half of the area renamed as Area A South. The construction, occupation and demolition of House 4 are demonstrated through postholes, pits and a pond all in the rear yard. There were also two wooden posts found within postholes associated with the construction or occupation phase of the 1880's house, Cranbrook. There were 43 MIC organic artefacts in Area A South (Table 2.5), consisting of artefacts from the household, architecture and personal functional categories.

Table 2.5: Total MIC of organic artefacts from Area A South.

Context	General Function	Specific Function	Shape	MIC	Fragments
16211	household	refuse	charcoal	1	1
	personal	cloth	fabric	1	2
16308	architecture	structural	post	1	1
	household	fuel	coal	1	1
16314	architecture	structural	post	1	1
16318	household	fuel	coal	4	4
16322	architecture	structural	post	1	1
16357	household	fuel	coal	2	2
16364	household	fuel	coal	30	30
	personal	cloth	shoe	1	10
Total				**43**	**52**

The pond in the far south east rear yard of House 4 (Figure 1.1) had a piece of crumpled black silk fabric (#23228), from an unidentified piece of clothing within the fill (16211). The fabric is very decayed and torn. It is lightweight and could have blown in from the surrounding houses.

Context 16364, a fill from a robbed-out wall in the Cranbrook laundry, contained a partial lace up shoe once belonging to a child (16364/ #23261). The copper alloy headless screws allow the shoe to be give the manufacturing date of c.1862.[29]

[29] Anderson 1968.

2.5 AREA B, LOT 30

Areas B and C were originally excavated together using the designation Area B, with Lot 30/Lot 32 as a secondary spatial division. During the post-excavation analysis, a new designation was assigned for Area C to all contexts recorded within Lot 32.

Area B, the eastern half of Lot 30 contained two semi-detached, two storey brick terraces or villas, 'Northiam' (westernmost structure, House 2) and 'Harleyville' (easternmost structure, House 3), built by Harriet Holland in 1883. The two terraces were built with mirror-image floorplans that consisted of five rooms, central hallway and L-shaped verandah on the ground floor and an unknown number of rooms and another verandah on the upper floor. It is assumed that most, if not all, of the upstairs rooms were bedrooms.

Both houses had two cesspits, one closer to the house (the central cesspit), and one located in between the southern wall of the rear yard outbuilding (possible coachhouse) and the southern property boundary (rear cesspit) (Figure 2.18). It is possible that the rear cesspits were used by staff, while the northern cesspit was for use by the household due to their positioning.

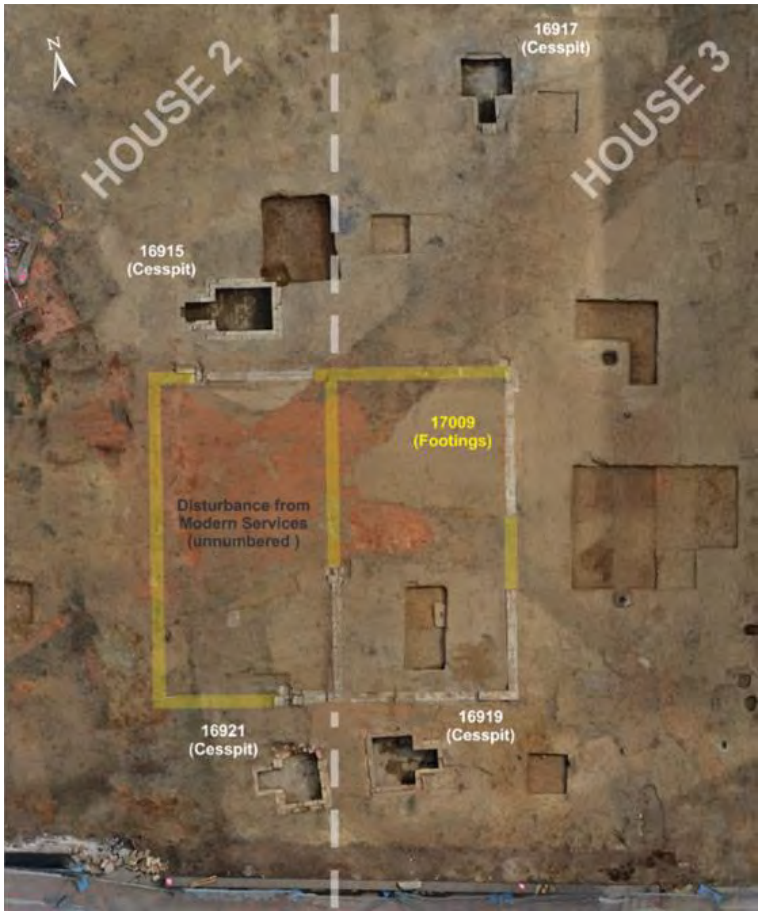

Figure 2.18: Orthophoto showing the surviving footings of the structure at the rear of the properties, with added interpretive lines (yellow), and the locations of the four cesspits (white). No scale. G. Hazell (Arcsurv).

Area B contained 159 MIC (182 fragments) (Table 2.6). The majority of the artefacts came from the four cesspits associated with both houses. Food related items consisted of almost 50 per cent of the artefacts due to the amount of very small seeds revealed when the cesspit fills were sieved.

Table 2.6: Total of MIC and percentage of organic artefacts from Area B.

General Function	Specific Function	Shape	MIC	%	Fragments	%
architecture	structural	post	1		1	
Total architecture percentage			**1**	*0.6*	**1**	*0.5*
food	fruit	blackberry	50		0	
		grape	2		0	
		passion fruit	26		0	
Total food percentage			**78**	*49.1*	**0**	*0*
household	fuel	coal	40		40	
		wood	1		3	
	laundry	plug	1		0	
	refuse	charcoal	2		5	
Total household percentage			**44**	*27.7*	**48**	*26.4*
personal	access	bag	1		6	
	cloth	fabric	4		21	
		shoe	20		71	
		shoe/boot	4		9	
		unidentified	2		7	
Total personal percentage			**31**	*19.5*	**114**	*62.6*
transport	vehicle	tyre	1		8	
Total transport percentage			**1**	*0.6*	**8**	*4.4*
unidentified	unidentified	fabric	2		4	
		timber	1		4	
Total unidentified percentage			**3**	*1.9*	**8**	*4.4*
yard	garden	tree root	**1**		**3**	
Total yard percentage			**1**	*0.6*	**3**	*1.6*
Total			**159**	*100*	**182**	*100*

2.5.1 NORTHIAM, HOUSE 2

House 2 contained 28 MIC (73 fragments) which all came from the two cesspits (Table 2.7, Table 2.8). The majority of the fills recorded in the cesspits were from the final backfilling of the cesspit structures after they had ceased to be in use or as part of their conversion into plumbed toilets in the years between 1907 and 1909 when an effective sewerage network was installed in Parramatta.[30]

[30] *Cumberland Argus* 20 February 1918, p. 2.

Table 2.7: Northiam (House 2) sum of organic artefacts by context.

Context	Context description	General Function	Shape	MIC	Fragments
16916	Back fill of central cesspit	personal	bag	1	6
			shoe	8	10
			shoe/boot	3	4
			unidentified	1	4
16939	Interface between two fills of central cesspit	food	passion fruit	3	0
		household	coal	1	1
			plug	1	0
			wood	1	3
		personal	shoe	4	14
		transport	tyre	1	8
16932	Lower fill of central cesspit	food	passion fruit	2	0
		personal	shoe	1	20
16929	Fill of rear cesspit	personal	fabric	1	3
Total				**28**	**73**

The central cesspit (16915) produced the majority of organic artefacts (Table 2.7). The upper fill or backfill (16916) contained eleven partial leather shoes and where possible these were given an age and a sex association (Figure 2.19). Seven of the shoes were identified as having a manufacture date of c.1862 due to the method of manufacture and the materials used (Table 2.8).[31]

Table 2.8. Table of organic artefacts in backfill (16916) of the central cesspit of House 2

Context	General Function	Shape	Age Association	Sex Association	From	MIC	Fragments
16916	personal	bag				1	6
		shoe				1	2
			Adult			1	1
			Adult	Female	1862	0	0
			Adult			1	0
			Adult		1862	1	1
			Adult	Female	1862	1	2
			Adult	Female	1862	1	2
			Child		1862	1	1
			Child		1862	1	1
		shoe/boot				1	2
					1880	1	1
			Adult		1862	1	1
		unidentified				1	4
Total						**13**	**24**

[31] Anderson 1968; Stocks 2009.

Figure 2.19: Heels and shoe fragments from the backfill of the central cesspit (16916). Top row (l-r): #23327, #23331, #23329, #23328, #23332. Bottom row (l-r) #23335, #23287. Scale 100mm. IMG_3307. Gallery2.

The interface between the two fills (16939) in the central cesspit was waterlogged and potentially the same as context 16932, the in-situ cesspit material. This fill also had several shoe fragments; however, these artefacts were very fragmented and decayed making it hard to place a reliable manufacturing date on them. Within the same context there was also a rubber plug base that can be dated to c.1844 due to the date of vulcanised rubber manufacturing.

A partial child's shoe and several passion fruit seeds came from the lowest fill of the central cesspit (16932). The seeds suggest residue from the use of the structure. Although this context was sieved only one seed type was found which is unusual as many fruits would have been eaten as we see in the cesspit associated with House 3.

2.5.2 HARLEYVILLE, HOUSE 3

Harleyville, House 3, contained 123 MIC (93 fragments) (Table 2.9). Unlike the central cesspit for House 2, which only contained passion fruit seeds, the central cesspits (16917) lower fill contained a variety of fruit seeds, including grape and blackberry as well as the seemingly popular passion fruit seeds. This informs us that fresh fruit was consumed however it does not reveal if the fruits were grown on the property or if the fruits were brought onto the property for consumption. The upper fill of the cesspit, probably the backfill event when the cesspit ceased to be used, also included blackberry and passionfruit seeds.

Table 2.9: Harleyville, House 3, sum of organic artefacts by context.

Context	Context Description	General Function	Specific Function	Shape	MIC	Fragments
16401	General clean-up of area	personal	cloth	fabric	1	1
16404	Demolition fill in fireplace	unidentified	unidentified	timber	1	4
16408	Demolition fill in front of fireplace in room 2	personal	cloth	shoe	1	0
					2	4
					1	3
					1	14
				shoe/boot	1	5
16416	Historic topsoil	personal	cloth	shoe	1	0
16426	Deposit of black coke and charcoal	household	fuel	coal	10	10
		personal	cloth	unidentified	1	3
16592	Tree root	yard	garden	tree root	1	3
16594	Yard surface	household	fuel	coal	9	9
16679	Pipe fill				2	2
16687					8	8
16750					3	3
16826	Post	architectural	structural	post	1	1
16859	Packing for post 16858	household	fuel	coal	2	2
16861	Pipe fill	unidentified	unidentified	fabric	1	3
16918	Upper fill of central cesspit 16917	food	fruit	blackberry	20	0
				grape	2	0
				passion fruit	10	0
16925	Lower fill of central cesspit 16917	food	fruit	blackberry	30	0
				passion fruit	11	0
		personal	cloth	fabric	1	11
16967	Fills in rear yard	personal		shoe	1	6
		unidentified	unidentified	fabric	1	1
Total					**123**	**93**

The study and analysis of footwear has the potential of providing information on dating and an understanding on the social and economic aspects of a site. Providing an end date is possible in terms of an end date of manufacture, determined by the method of manufacture, style and also when the context in which the item was deposited was sealed stratigraphically, if it can be determined. The latest possible date for manufacture does not account for the possible re-use and recycle of the item. The footwear was possibly used over a period of time, and probably re-used in terms of hand-me-downs and second-hand items, this is more difficult to date. Any evidence of repair on many of the items serves as confirmation of at least the prolonged life of much of the footwear, if not also the re-use.[32]

[32] Stocks 2009; Veres 2005.

Table 2.10: Percentage of organic artefacts from House 3.

General Function	MIC	%	Fragments	%
architectural	1	*0.8*	1	*1.1*
food	73	*59.3*	0	*0.0*
household	34	*27.6*	34	*36.6*
personal	11	*8.9*	47	*50.5*
unidentified	3	*2.4*	8	*8.6*
yard	1	*0.8*	3	*3.2*
Total	**123**	***100%***	**93**	***100%***

Context 16408 was the levelling fill for the construction of House 3. A high per cent (50.5% of fragments) of personal items were recorded (Table 2.10), including 26 fragments of shoes or boots. Fragments of shoes often prove more diagnostic in terms of manufacture where whole shoes are diagnostic in terms of style. All shoes from 16408 were adult shoes, due to their condition it was unclear as to the gender of the wearer or the style of the shoes. Two of the shoes (#23271 and 23272) had hand hammered nails, dating their manufacture from c.1812. The other three shoes (#23268-23270) had evidence of machine hammered nails or screws dating the manufacturing date from c.1862 (Figure 2.20).[33]

Figure 2.20: Adult shoes and remnant parts from Area B (16408) found in poor condition and in close proximity. Left column (top-bottom): soles from pair #23268 and beside them another pair #23269; crushed shoe soles on deposit #23272 above #23271. Right column: separated soles and heel of shoe #23270. Scale 100mm. IMG_3319. Gallery2.

As with House 2 there were many seeds in the fills of the central cesspit (16917). The upper fill (16918), a cindery deposit not associated with the use of the cesspit, contained blackberry, grape and passion fruit seeds. The base of the cesspit, context 16925, contained passion fruit and blackberry seeds. Blackberries were deliberately introduced into NSW from Britain in the 1840s for its fruit and for making hedgerows, it escaped into the wild and by the 1880s it was recognised as a weed.[34]

[33] Anderson 1968.

[34] NSW DPIE, 'Blackberry', updated 27 February 2020. Available at: https://www.environment.nsw.gov.au/topics/animals-and-plants/pest-animals-and-weeds/weeds/widespread-weeds/exotic-vines/blackberry, accessed April 2020.

The series of fills in the rear yard (16939) revealed a right shoe sole with a very narrow round toe and the leather upper nailed to the insole (#23338). Evidence of repair can be seen in the form of rubber glued to the insole, suggesting reuse. Glue was first used to seal the sole seam in the 1926.[35]

2.6 AREA C, LOT 32

The archaeological excavation of Area C revealed a large cross or t-shaped timber structure with an extensive network of brick drains and gutters, and a smaller structure or annex, also made of timber, to the south. These structures were potentially constructed prior to 1851, but are not evident on the 1844 plan and are outbuildings or ancillary structures in the yard of the White Horse Inn (located to the east, outside the study area). These structures are most likely a stables and sheds for the White Horse Inn but may have been modified or extended after the property was purchased by Hilt's Coach Service in 1851. A brick drain and a number of postholes were identified that could be fences and drainage features that pre-date the stables and sheds. The stables and sheds were demolished by 1895, but more likely in the 1870s when the site was redeveloped by Catherine Hilt who built terraces fronting Macquarie Street. The outbuildings were replaced by a smaller sandstone building with a hearth; this is interpreted as being a kitchen or workshop for the westernmost semi-detached terrace or villa at 63 Macquarie Street that replaced the White Horse Inn[36].

The entire structure was designated 'House 5' during the excavation in order to easily record the archaeological features associated or contemporary with this structure. This report will refer to the various sections of the building using the letter designations A to E.

Figure 2.21: 1858 base plan showing the approximate location of the 3PS excavation areas (left) and the discrete sections of the stables and sheds (Structure 5) labelled A to E (right).

Area C had a total of 45 MIC organic artefacts. The household function only contained coal (33 MIC) from a series of demolition and construction related deposits (Table 2.11).

[35] Anderson 1968.

[36] Subsidiary Report 1:7.3

Table 2.11: Total MIC and percentage of general function of organic artefacts in Area C.

General Function	Specific Function	Shape	MIC	%	Fragments	%
architectural	structural	post	2	*4.4*	3	*5.3*
household	fuel	coal	33	*73.3*	33	*57.9*
personal	cloth	gumboot	1	*2.2*	10	*17.5*
		shoe	4	*8.9*	6	*10.5*
		shoe/boot	2	*4.4*	2	*3.5*
personal	cloth	stocking	1	*2.2*	1	*1.8*
unidentified	unidentified	offcut	1	*2.2*	1	*1.8*
		string	1	*2.2*	1	*1.8*
Total			**45**	***100%***	**57**	***100%***

There were 95 postholes recorded across Area C. Several posts are used as a later modification or addition to the walls and cut through brick gutters and drains. Context 16727, a 1.25m long, circular post (#23353), cut through brick and timber drain (16662) along the eastern side of the stables (Section B) and was substantially longer than any other post in Area B or Area C signifying a major repair or modification.

Figure 2.22: Photos of in situ post 16727 before excavation (left) and after machine excavation (right). Photo on left: view to northwest, 300mm scale, IMG_1042. Photo on right: detail, 1m scale, IMG_1220.

Several pits backfilled during the demolition of the timber structure revealed partial shoes. A pit in the northeast corner of the stables, Section B (16824), contained frequent charcoal inclusions and large fragments of artefacts. The organic artefact from the backfill (16825) of this pit is represented by a leather heel with 11 lifts, indicating a women's high heel (Figure 2.23).

Figure 2.23: Leather shoe or boot heel with 11 lifts and fragments of the material insole (16825/#23324). IMG_3312. Gallery2.

The large pit, 16745, in the norther arm of the section E annexe, was backfilled (16746) with industrial waste containing two partial shoes. A thin hand hammered heel plate was found along with a very soft, hand stitched, leather sole of a baby's or infants' first shoe #23323 (Figure 2.24).

Figure 2.24: Very soft leather sole from a small child's first shoe (16746/ #23323). Scale 100mm. IMG_3315. Gallery2.

A partial thin hammered heel plate with machine punched headless copper alloy screws was found in the pit 16736 giving a date of manufacture of c.1862.

After the demolition of the White Horse Inn and its associated outbuildings, two new semi-detached brick houses were constructed. Although the houses are outside the 3PS study area an outbuilding at rear of the westernmost brick house was uncovered and recorded in Area C as Structure 6.

Structure 6 had nine organic artefacts. The rear yard of the building had a large bottle dump (16433) that either postdates the latest yard surfacing event of Structure 5 or is possibly contemporary with the use of Structure 6. Along with glass and ceramic fragments there were five organic artefacts, an offcut of leather and irregular lumps of black coal, that

do not clarify the phasing of the dump. There was also a very small fragment of nylon stocking (16433/ #23313). Nylon was invented in 1935 and patented in 1937.[37]

Structure 6 does not appear in the on the 1943 aerial photograph of the site, its absence portraying its demolition before this date. A demolition fill covers the entirety of the house and was capped with a thick layer of orange and pink clay (16427). This clay contained a fragment of rubber gumboot. The gumboot, or wellington boot, named after the Duke of Wellington, fashioned waterproof boots from calfskin leather treated with wax to keep his and his soldiers' feet dry. It was in the 1852 that Charles goodyear developed a process to produce rubber. In World War I almost two million wellington boots were supplied to soldiers. They are called gumboots in Australia and New Zealand meaning made from the rubber tree 'gum'.[38]

2.7 AREA D, LOT 28 & LOT 1(181)

Area D was mostly concerned with the residential development of the site between the 1820s and 1950s. Remains included: agricultural features, the original creek line, the Town Drain and subsidiary drain leading from the sump of the early cottage (see section 4.7.1.1) on Lot 30, ponds, sandstone footings and fences, postholes, mid to late 19th-century yard surfaces, levelling fills, and early 20th-century pits and structural remains.

A total of 13 MIC organic artefacts were recorded (Table 2.12).

Table 2.12: Total of organic artefacts by context from Area D.

Context	General Function	Specific Function	Shape	MIC	Fragments
17845	household	furnishing/fitting	timber	1	1
	personal	cloth	shoe/boot, lace-up	1	10
17852	personal	cloth	shoe	1	8
	yard	garden	flora	1	3
	yard	garden	tree root	2	2
17853	architectural	structural	fence	1	6
17854	architectural	structural	board	2	2
17855	food	seed	seed	2	0
17870	architectural	structural	post	1	1
17888	architectural	structural	post	1	1
Total				**13**	**34**

A large plaster filled rubbish pit associated with the 1920s-1950s plaster works revealed several artefacts including a piece of timber furnishing and a leather shoe (Figure 2.25). The shoe is a large adult shoe, made from fine leather with copper alloy lace hole eyelets (16916/#23344). The manufacturing technology dates the shoe to c.1862.[39]

[37] Katz. 1986: Cutlip. 2015: Smithsonian How 75 Years Ago Nylon Stockings Changed the World. https://www.smithsonianmag.com/smithsonian-institution/how-75-years-ago-nylon-stockings-changed-world Accessed July 2019

[38] Sole, S. New Zealand Geographic Society. Gumboots: https://www.nzgeo.com/stories/gumboots/Accessed July 2019

[39] Anderson 1968; Pratt & Woolley 1999; Stocks 2009.

Figure 2.25: Square-toed right adult, fine leather lace-up shoe (16916/#23344). Scale 100mm. IMG_3303. Gallery2.

A natural creek line or drainage channel diagonally bisected the northern end of Area D. This creek line was later formalised as the Town Drain – first as a timber lined channel then as a sandstone box drain. The base of the channel was filled with the water-logged silty clay creek line sediment (context 17852) into which a series of upright timbers, context 17853, were embedded.

The grey deposit (17852), includes remnant reeds (#23346) (Figure 2.26) and a partial leather shoe (Figure 2.20, Figure 2.21).

Figure 2.26: Reeds from sediment along creek line (17852/#23346). Scale 100mm. DSCN_0227. Casey & Lowe.

The shoe is a hand-stitched square duckbill-toed lace-up shoe, a style which generally dates to between 1820s to 1840s.[40]

[40] Bower 1999; Mitchell & Ward 1997; Stocks 2009.

Figure 2.27: Parts of a duckbill-toed shoe (17852/#23349). Top row-l-r: Duckbill toe cap; hand stitched throat with 4 lace holes. Second row: insole; hand stitched counter. Third row: insole support/repair: partial thick insole. Bottom row: thick insole; worn, low heel. Scale 100mm. IMG_3300. Gallery2.

Figure 2.28: Assembled Duckbill-toed lace-up shoe (17852/#23349). Scale 100mm. IMG_3296. Gallery2.

The linear timber palings (17853), embedded in the fill, created a shoring or barrier and was connected with the formalisation of the drainage channel (Figure 2.29). The timber was identified as narrow-leafed ironbark.

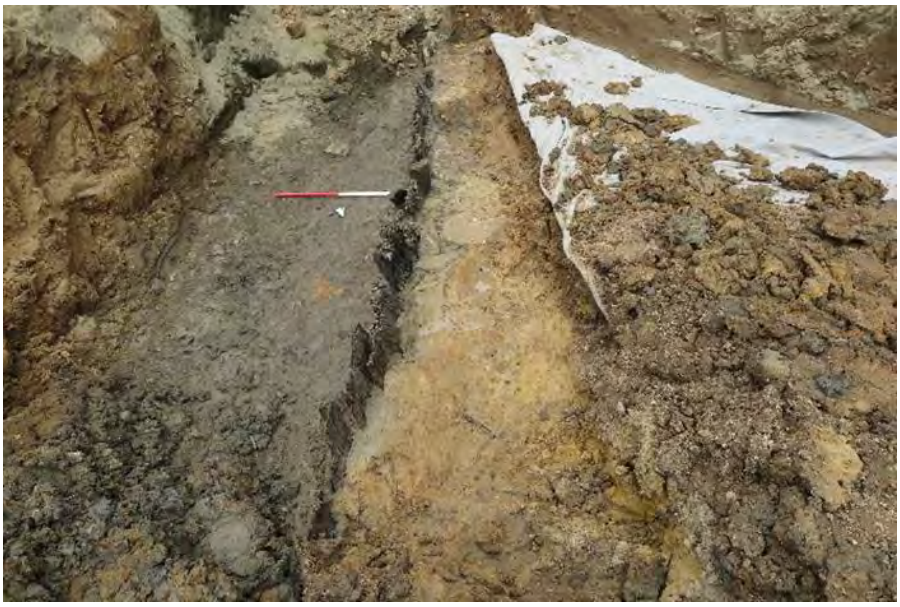

Figure 2.29: Timber shoring 17853 within the creek line at the western end of the drainage channel. View to the south, 1m scale. IMG_5814.

The five timber palings (timbers 1, 2, 3, 5 and 6) and one post (timber 4) (17853/#23354), running north to south, were positioned closely together for the support of the creek wall and possibly to help control the water flow direction.

Figure 2.30: Timber shoring (17853/#23354). L-r timbers numbers 6-1. Scale 1m and 0.5m. DSCN_0064. Casey & Lowe.

Thin horizontal indents on palings 1, 2, 3 and 4 suggest they were bound together tightly with a thin wire (Figure 2.32).

Figure 2.31: Timber 4 from shoring (17853/#23354). Scale 100mm. IMG_3497. Gallery2.

Figure 2.32: Possible marks from wire tightly binding posts and palings together (17853/#23354). No scale. DSCN_0060. Casey & Lowe.

Timber 5 has been bevelled/chamfered into a wedge shape at a 30-degree angle (Figure 2.33). There is evidence of adze marks on the timber with the bit width measuring 60mm.

Figure 2.33: Adze marks on Timber 5 (17853#23354). Scale 100mm. IMG_3501. Gallery2.

The lowest silty fill of a manmade structure, possibly a pond or a dam, immediately above the natural clays (17854) contained two thin pieces of timber amongst the sandstock brick fragments and glass artefacts. The two pieces of timber are thin and narrow rectangular planks, tapering at one end. At the wider end of both the timbers, there was a round nail hole with vertical splits on either side. The circular nail hole suggests a wire drawn nail was used to connect the two pieces of timber. Wire drawn nails have a manufacturing date of c.1853 to present.

Sewerage from the sump behind the Phase 4.1 House 4 in Area A (Lot 30) flowed west within a timber-lined drain 17888 into the Town Drain. Part of a rectangular timber with convex top and flat underside (#23357) was used to line the base of the drain.

A series of plough lines were revealed and collectively assigned the context number 17855. The only organic artefact found within the furrows was an unidentified, black ovoid seed pod (#23350).

3.0 METAL

Metal is commonly found on archaeological sites. The most common metals are cast and wrought iron, copper and its alloys (brass and bronze), lead, tin and their alloys, and zinc. To know the properties of a metal, hardness, resilience, ease of working and appearance can help to determine how it is used.

The condition of all archaeological artefacts is a result of the interaction between the materials and the surrounding environment, which can be protective or destructive. Most metals corrode and the deterioration, as a continuing process, can be affected by long periods in the ground and exposure to biological factors including salt and water. Effects of this exposure include the metal dissolving or layers of disfiguring crusts forming which obscure the details of the object and sometimes the object itself. During excavation, increased exposure to oxygen and temperature will increase the corrosion rates.

3.1 METHODOLOGY

The category of metal artefacts for Parramatta Square 3 (PS3) has its own numbering sequence of #22301-23092 which form part of the Artefact Catalogue in Volume 6, Section 6.6.

For the metal artefacts, the catalogue records the catalogue numbers; the context number where the item was found; the shape of the item (i.e. nail); the general function (i.e. architecture); specific function (i.e. structural); fabric (i.e. fe); portion (i.e. head/shank); country of manufacture; manufacturer; producer or retailer; mark; age and gender associations; dimensions (in mm); joins (context/#catalogue number); weight (in grams); brief description (includes mark description); from and to dates (of manufacture); number of fragments; minimum item count (MIC).

Nails are a cheap commodity that are mass produced and can be studied as the product of an industry with changes in the industry tracked through the changing product. The low value of the nail means that they are frequently lost, not recycled or replaced (unless damaged). This is useful for dating when modifications are recorded. They are, however, extremely vulnerable to their environment and can become heavily corroded and encrusted explaining why so many nails from any archaeological site are hard to identify. For the metal artefacts the state of corrosion and encrustation is noted and written as Fabric Decay (FD), High Fabric Decay (HFD) or Very High Fabric Decay (VHFD) or Heavy Encrustation (HE) or Very Heavy Encrustation (VHE).

For this report the metal artefacts are looked at according to their context within the area they were found and the house or structure they were associated with.

3.2 METAL ARTEFACT OVERVIEW

This section of the report will look at the 1533 MIC (1614 fragments) of metal artefacts excavated during the historical archaeological investigations at 3PS (Table 3.1).

Table 3.1: Summary of metal artefacts by general function from 3PS.

General Function	MIC	%	Fragments	%
agriculture	1	*0.1*	1	*0.1*
alcohol	2	*0.1*	4	*0.2*
architecture	1036	*67.6*	868	*53.8*
architecture/household	30	*2.0*	26	*1.6*
architecture/industrial	2	*0.1*	2	*0.1*
beverage	23	*1.5*	136	*8.4*
container	2	*0.1*	32	*2*
food	28	*1.8*	51	*3.2*
food/recreation	1	*0.1*	1	*0.1*
household	118	*7.7*	87	*5.4*
household/architecture	1	*0.1*	2	*0.1*
household/industrial	48	*3.1*	56	*3.5*
household/personal	1	*0.1*	0	*0*
household/transport	1	*0.1*	1	*0.1*
industrial	4	*0.3*	4	*0.2*
personal	8	*0.5*	1	*0.1*
Personal/food	1	*0.1*	1	*0.1*
recreational	1	*0.1*	0	*0*
service	15	*1.0*	26	*1.6*
store	19	*1.2*	21	*1.3*
transport	20	*1.3*	10	*0.6*
transport/agriculture	1	*0.1*	0	*0*
transport/industrial	1	*0.1*	0	*0*
unidentified	152	*9.9*	271	*16.8*
work	16	*1.0*	12	*0.7*
yard	1	*0.1*	1	*0.1*
Total	**1533**	***100%***	**1614**	***100%***

With 1036 MIC of the metal classed as architectural (Table 3.2) it is the largest representation of metal artefacts on 3PS (67.6%) and was associated with specific functions such as doors, windows and roof.

Structural/non-structural is allocated to an item when it is unclear if it has been used for the structural integrity of the building it is associated with or for non-structural purposes, such as furnishings or household items within the building.

Table 3.2: Summary of all metal artefacts in the architectural general function from 3PS.

General Function	Specific Function	MIC	Fragments
architectural	door	15	8
	door/window	2	0
	non-structural	135	101
	roof	25	26
	structural	300	224
	structural/non-structural	546	501
	unidentified	9	7
	window	4	1
Total		**1036**	**868**

891 MIC of the structural/non-structural specific function are nails (Table 3.3).

Table 3.3: Sum of nails within the architectural general function from 3PS.

General Function	Specific Function	Shape	MIC	Fragments
Architectural	Non-structural	nail	102	68
	structural	nail	249	174
	Structural/non-structural	nail	540	495
Total			**891**	**737**

Due to corrosion many metal artefacts are unable to be identified. Within 3PS this accounts for 152 MIC (Table 3.1). After unidentified the next most common functional group were house hold objects. These can provide an indication of how the houses were furnished, how the occupants cooked and what tools they used in the house and in the yards and gardens.

3.2.1 AREA A, LOT 30

For recording purposes, Area A was subdivided with the southern half of the area renamed as Area A South. Most of the archaeological remains, including the remains of House 4 and Cranbrook were located in the northern half of Area A. The immediate yard areas close to the houses were also recorded with Area A as they contained a large number of postholes, fence lines, rubbish pits and drains. Area A has 841 MIC (843 fragments) (Table 3.4).

Table 3.4: Metal artefacts from Area A by general and specific function.

General Function	Specific Function	MIC	Fragments
architectural	door	4	4
	door/window	1	0
	non-structural	32	25
	roof	12	6
	structural	219	163
	structural/non-structural	367	352
	unidentified	4	4
	window	3	0
architectural/household	door/furnishing	1	1
	non-structural/furnishing	18	17
	structural /furnishing	8	8
	structural /machinery	1	1
beverage	beer	2	2
	container	2	2
container	unidentified	2	32
food	container	1	15
	prep	1	1
	tea	1	1
food/rec	container/smoking	1	1
household	by-prod	4	5
	cooking	1	3
	fireplace	4	3
	fitting	1	0
	floor/furnishing	3	2
	furnishing	18	11
	furnishing/fitting	25	19
	light	1	2
	non-structural	2	2
	picture	1	0
	security	1	2
	unidentified	6	2
household/industrial	by-prod	1	1
household/personal	furnishing/jewellery	1	0
industrial	by-prod	2	3
personal	access	2	0
service	elect	1	1
store	store	6	8
transport	horse	2	1
unidentified	container	7	26
	fastener	1	0
	non-structural	3	3
	structural	1	1
	unidentified	63	108
work	soldering	1	1
	tool	3	4
Total		**841**	**843**

3.2.1.1 HOUSE 4

An early house was depicted on Stewarts 1823 Plan (Figure 3.1) at the front of Lot 30 in the northwest corner fronting Macquarie Street.

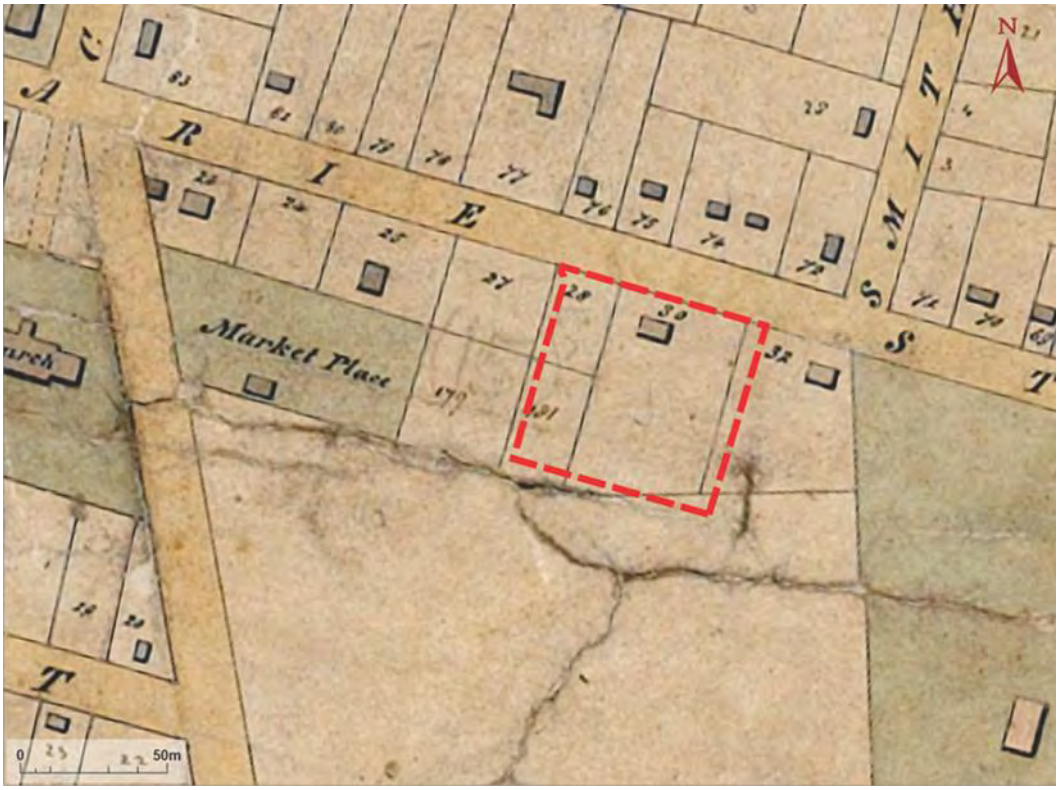

Figure 3.1: Detail of Stewart's 1823 map of Parramatta. Study area is dashed. The only structure is the house in the western half of Lot 30. SRNSW Item No 4907.

3.2.1.1.1 ARCHITECTURAL

The archaeological investigations revealed the timber construction of House 4. The metal, sandstone, timber, window glass and other artefacts revealed evidence of the structure of the house as well as the daily life in Parramatta. Metal artefacts associated with the construction, including the later additions, and the demolition of House 4 are listed in Table 3.5.

Table 3.5: Architectural metal artefacts associated with House 4.

Specific Function	Shape	MIC	Fragments
door	bolt	1	0
	hinge	2	1
door/window	latch	1	0
non-structural	flashing	1	1
	nail	19	14
	scupper	1	0
	staple	1	0
	strap	1	1
	tack	1	0
	washer	2	4
	wire	1	1
roof	flashing	2	2
	nail & washer	1	0
	screw	1	0
	washer	2	0
structural	bolt	1	1
	bolt/spike	1	0
	nail	125	89
	nail/screw	1	1
	nail/spike	5	4
	rod	0	0
	rod/spike	1	1
	screw	1	1
	spike	3	5
	staple	1	0
	unidentified	3	9
structural/non-structural	bolt	1	1
	nail	375	361
unidentified	strap	1	0
window	pulley	1	0
non-structural/furnishing	hinge	2	2
	nail	10	9
structural/furnishing	nail	8	8
structural/machinery	bolt	1	1
Total		**578**	**517**

The 559 MIC nails associated with all phases of House 4 are listed in Table 3.6. The majority of nails from House 4 are unidentified due to the corrosion and encrustation of rust. Wire nails, the largest identified type of nail in House 4, were manufactured from drawn wire in a process that allowed cheaper mass production and these were first imported into Australia

in 1853, but did not replace the wrought nail in popular use until about the 1870s.[41] The type of head can provide an end date of the manufacture of the nail. However, if the nail has a flat head there is no end date as they are still manufactured today. The wire drawn nails date of manufacture can be associated with the later occupation and extension of the house between c.1850 and 1870.

Table 3.6: Nail types from House 4

General Function	Specific Function	Type	From c.	To c.	MIC	Fragments
architectural	non-structural	Unidentified			11	10
		CW	1820	1870	2	0
		CW Clasp	1820	1870	1	1
		CW Rose	1820	1870	2	0
		HF Flat	1788	1890	1	0
		MW	1840	1870	1	1
		WD	1853		1	2
	structural	Unidentified			55	44
		Cut	1805		5	3
		CW	1820	1870	14	11
		CW Rose	1820	1870	2	0
		HF	1788	1890	8	3
		HF Rose	1788	1890	1	1
		MW	1840	1870	16	5
		MW	1840	1890	1	0
		WD	1853		18	20
		WD	1853	1890	1	0
		WD	1853	1940	2	2
		WD Rose	1853	1940	5	0
	structural/non-structural	Unidentified			188	188
		CW	1820	1870	9	3
		CW Rose	1820	1870	1	0
		MW	1840	1870	5	3
		WD	1853		166	165
		WD	1853	1890	1	1
		WD	1853	1940	2	1
		WD Rhomboid	1890	1940	1	0
		WD Square			2	0
architectural/ household	non-structural/furnishing	Unidentified			9	9
		MW	1840	1870	1	0
	structural/furnishing	WD	1853		8	8
household	furnishing/fitting	Unidentified			17	14
		WD	1853	1870	1	0
		WD Square	1836		1	1
	non-structural	MW	1840	1870	1	1
Total					**559**	**497**

In the late eighteenth and early nineteenth centuries, wrought nails were hand forged in British industrial towns, manufactured by hammering a length of square-shanked iron rod on four sides to form a point, or, for a chisel pointed nail, hammering on two sides to a flat end. The head was then formed by 'swaging', or drawing the length of the nail through a bore, snapping off the rod above the bore, and beating the nail to shape the head.[42] The side railings once attached to the northern baseplate at the rear of the house were fastened

[41] Varman 1993: 107.

[42] Middleton 2005.

with hand forged nails. The heads were extremely encrusted with layers of rust; however, the square shanks and chisel points were able to be identified (Figure 3.2).[43]

Figure 3.2: Large hand forged nails with heavily encrusted heads used to attach railings to northern baseplate (16362/#23245). Scale 100mm. IMG_3098. Gallery2.

3.2.1.1.2 NON-ARCHITECTURAL

There were 119 MIC non-architectural metal artefacts that were associated with the occupation of the early house (Table 3.7). The household function contains artefacts that are expected to be found in a working family house, including cooking pots, fireplace tools, containers and tin cans.

Figure 3.3: Fireplace tools associated with House 4 and the levelling fills for Cranbrook. L-R- left side of callipers (16159/#22468), right side of callipers (16194/#22494, unidentified fireplace tool fragments (16194/#22497). Scale 100mm. IMG_3011. Gallery2.

The yard contained evidence of small-scale industrial work with evidence of soldering as well as by-products such as slag. One horse shoe was found in a fill of a timber feature associated with the later occupation of the house.

[43] Varman 1987: 107.

Table 3.7: Non architectural metal artefacts from House 4.

General Function	Specific Function	MIC	Fragments
container	unidentified	2	32
food	prep	1	1
household	by-prod	2	3
	cooking	1	3
	fireplace	1	1
	fitting	1	0
	floor/furnishing	2	1
	furnishing	14	10
	furnishing/fitting	24	16
	non-structural	1	1
	picture	1	0
	unidentified	4	2
household/industrial	by-prod	1	1
household/personal	furnishing/jewellery	1	0
industrial	by-prod	1	2
personal	access	2	0
service	electrical	1	1
store	store	2	3
transport	horse	2	1
unidentified	container	5	10
	non-structural	2	2
	unidentified	43	77
work	soldering	1	1
	tool	1	0
Total		**116**	**168**

Within Area A, the modified topsoil (16120) was sealed by the pre-Cranbrook levelling fills which securely dated the deposit to before the 1880s and to the occupation of the early house (House 4). This context was gridded into 1m by 1m squares, a sample of grid squares were manually excavated across the rear yards of House 4 and 100% wet sieved. A total of 18 metal items were found in this deposit (Table 3.8) and more than likely relate to the demolition of the early house.

Table 3.8: Metal artefacts found in historic topsoil.

General Function	Specific Function	MIC	Fragments
architectural	roof	1	0
	structural	4	2
	structural/non-structural	1	1
architectural/industrial	Structural/machinery	1	1
container	unidentified	0	1
household	floor/furnishing	1	0
	furnishing	7	8
	unidentified	1	1
unidentified	unidentified	2	9
Total		**18**	**23**

3.2.1.2 CRANBROOK- HOUSE 1

Cranbrook (House 1), a single-storey brick house, was built in 1888 to replace the earlier c.1822 cottage (House 4).

A total of 135 MIC (132 fragments) metal artefacts were found (Table 2.4). As with the earlier house the majority of metal artefacts are architectural (68.9 per cent).

Table 3.9: Metal artefacts found associated with Cranbrook.

General Function	MIC	%	Fragments	%
architectural	93	*68.9*	65	49.2
architectural/household	7	*5.2*	7	5.3
beverage	4	*3.0*	4	3.0
food	2	*1.5*	16	12.1
household	9	*6.7*	6	4.5
store	4	*3.0*	5	3.8
unidentified	14	*10.4*	25	18.9
work	2	*1.5*	4	3.0
Total	**135**	***100***	**132**	***100***

3.2.1.2.1 ARCHITECTURAL

The architectural metal artefacts found were associated with the near eighty-year phase of Cranbrook, including the construction, occupation and the demolition of Cranbrook. The 72 nails (Table 3.10) reflect this period with the majority wire drawn and no hand forged nails. The cut wrought nails came from the levelling fills that were intentionally brought into the area to raise and level the ground prior to the construction of Cranbrook house.

Table 3.10: Types of nails from Cranbrook

General Function	Specific Function	Type	From	To	MIC	Frags
architectural	structural	CW	1815	1870	2	0
		MW	1840	1870	1	0
		Unidentified			9	17
		WD	1853		41	15
			1853	1890	3	3
			1890	1940	1	0
		WD Flat	1853	1890	2	1
		WD Rose	1853	1940	5	1
	structural/non-structural	MW	1840	1870	1	1
architectural/household	non-structural/furnishing	WD			6	6
household	non-structural	WD	1853		1	1
Total					**72**	**45**

3.2.1.2.2 NON-ARCHITECTURAL

The non-architectural metal artefacts from Cranbrook tell a little about the lifestyle of the household. The two beer bottle tops, crown in design, were patented in America in 1892, it was brought to Australia by 1895 and continues to be used today.[44] A partial handle of a tea pot or a jug was also discovered.

Table 3.11: Non-architectural metal artefacts from Area A.

General Function	Specific Function	MIC	Fragments
architectural/household	door/furnishing	1	1
	non-structural/furnishing	6	6
beverage	beer	2	2
	container	2	2
food	tea	1	1
household	fireplace	2	1
	floor/furnishing	1	1
	furnishing	2	1
	non-structural	1	1
	security	1	2
	unidentified	2	0
store	store	4	5
unidentified	container	1	1
	fastener	1	0
	non-structural	1	1
	structural	1	1
	unidentified	10	22
work	tool	2	4
Total		**41**	**52**

[44] https://patents.google.com/patent/US468226

3.2.2 AREA A SOUTH, LOT 30

For recording purposes, Area A was subdivided with the southern half of the area renamed as Area A South.

A total of 193 MIC metal artefacts were found in 12 contexts across Area A South (Table 3.12).

Table 3.12: Metal artefacts from Area A South

Context	General Function	MIC	Fragments
16211	household	1	0
	unidentified	1	0
16252	architectural	9	9
	architectural/household	1	0
	food	2	16
	household	1	1
	store	1	1
	transport	1	0
	unidentified	9	13
16261	agricultural	1	1
	architectural	3	0
	architectural/household	2	0
	food	5	4
	household	4	2
	service	2	0
	work	2	1
16274	architectural	3	0
16286	food	1	0
	store	1	1
	unidentified	1	1
16308	architectural	1	1
16316	architectural	5	5
16318	architectural	5	3
16328	architectural	14	14
	household	2	0
	transport/agricultural	1	0
16349	architectural	2	2
	household	1	0
16350	architectural	14	14
	food	1	1
	store	9	9
16352	architectural	8	8
	food	1	9
	household	1	0
16353	architectural	43	55
	architectural/industrial	1	1
	food	1	1
	household	2	0
	household/industrial	12	20
	service	1	0
	transport	1	2
	unidentified	7	18
	work	1	1
16354	architectural	1	1
	household	1	1
	unidentified	1	0
16357	household/industrial	2	2
16374	architectural	3	0
Total		**193**	**218**

3.2.2.1.1 HISTORIC TOP SOIL

The topsoil context 16318 was very shallow and mixed with 20th-century features and inclusions. It was not sealed by the levelling fills as in Area A. The metal artefacts from this context were all architectural, four nails, two hand forged, as well as one partial screw.

3.2.2.1.2 HOUSE 4

The only artefacts that related to the later occupation phase of House 4 came from context 16328. The 14 nails from here were very heavily corroded and their type was unable to be identified.

3.2.2.1.3 POND

Context 16211 was the fill of the rectangular shaped pond on the property boundary of lot 30. Two artefacts were found from this fill, a bolt or spike, possibly hand forged and a copper alloy plate used as part of furnishings or fittings.

3.2.2.1.4 RAISING FILLS

Above the top soil (16318) but below the raising/levelling fills for Cranbrook were several rubbish dumps not associated with either House 4 or Cranbrook. Contexts 16350, 16352, 16353 revealed 103 MIC (Table 3.13).

Table 3.13: Metal artefacts from rubbish dumps in Area A South.

Context	General Function	Shape	#MIC	#Fragments
16350	architectural	nail	11	11
			2	2
		nail/spike	1	1
	food	pot	1	1
	store	barrel hoop	9	9
16352	architectural	nail	8	8
	food	pan	1	9
	household	link	1	0
16353	architectural	bolt	1	1
		hinge	1	1
		latch	1	1
		nail	25	25
			2	2
			6	6
		nail/spike	3	3
		rod	1	0
		sheet	1	14
		strap	1	2
		washer	1	0
	architectural/industrial	bolt & nut	1	1
	food	key	1	1
	household	hook	1	0
		strap	1	0
	household/industrial	slag	12	20
	service	lamp	1	0
	transport	horseshoe	1	2
	unidentified	strap	6	16
		tin can	0	1
		unidentified	1	1
	work	handle	1	1
Total			**103**	**139**

3.2.2.1.5 CRANBROOK

Six contexts associated with the southern area of Cranbrook, including a fill from a rubbish pit and the demolition of the house, revealed metal artefacts (Table 3.14).

Table 3.14: Metal artefacts found in Area A South associated with Cranbrook.

Context	General Function	MIC	Fragments
16252	architectural	9	9
	architectural/household	1	0
	food	2	16
	household	1	1
	store	1	1
	transport	1	0
	unidentified	9	13
16261	agricultural	1	1
	architectural	3	0
	architectural/household	2	0
	food	5	4
	household	4	2
	service	2	0
	work	2	1
16274	architectural	3	0
16286	food	1	0
16286	store	1	1
16286	unidentified	1	1
16308	architectural	1	1
16316	architectural	5	5
Total		**55**	**56**

Several tools were found in Area A South representing work and agricultural duties carried out in the gardens and yards of Cranbrook.

Figure 3.4: Iron tools associated with work & agricultural duties. First column (one artefact): iron fork (16261/#22598). Last column (top-down): iron rake (16261/#22599); (lhs) iron pliers (16261/#22600); (rhs) chisel (16211/#22530). Scale 100mm. IMG_3028. Gallery2.

Context 16261 also revealed several household items including an enamel tea pot, door knobs, several rose plates and a partial whale oil burner (#22608) (Figure 3.5). It is unclear if the items came from the house or the outbuildings. The enamel tea pot and dish would have been used in the garden for the workers meals.

Figure 3.5: Household group from the rear yard of Cranbrook (16261). Top row (l-r): enamel teapot #22610; enamel bowl/dish #22611/#22616. Middle row (l-r): door knob #22603; bell #22609; 3 prongs of whale oil burner #22608; door knob #22604. Bottom row (l-r): rose plates #22606; #22607; #22605. Scale 100mm. IMG_3400. Gallery2.

Whale oil lamps were the precursors for the common kerosene lamp. Comprising of a blown glass enclosed reservoir, it was invented in America in the 1770's. This example has three burners and would have looked similar to the image below (Figure 3.6, Figure 3.7).

Figure 3.6: Detail of whale oil lamp 3 prong burner.

Figure 3.7: Antique whale oil lamp with 3 prong burner.[45]

3.2.3 AREA B, LOT 30

Areas B and C were originally excavated together using the designation Area B, with Lot 30/Lot 32 as a secondary spatial division. During the post-excavation analysis, a new designation was assigned for Area C to all contexts recorded within Lot 32.

Area B contained two semi-detached, two storey brick terraces or villas, 'Northiam' (westernmost structure, House 2) and 'Harleyville' (easternmost structure, House 3), built by Harriet Holland in 1883. The two terraces were built with mirror-image floorplans that consisted of five rooms, central hallway and L-shaped verandah on the ground floor and an unknown number of rooms and another verandah on the upper floor. It is assumed that most, if not all, of the upstairs rooms were bedrooms.

Both houses had two cesspits, one closer to the house (the central cesspit), and one located in between the southern wall of the coachhouse and the southern property boundary (rear cesspit) (Figure 2.18). It is possible that the rear cesspits were used by staff, while the northern cesspit was for use by the household due to their positioning.

A total of 162 MIC metal artefacts were found in Area B (Table 3.15). The majority of the artefacts were architectural (96 MIC) and came from the two cesspits.

Table 3.15: Total of metal artefacts from Area B.

General Function	MIC	Fragments
architectural	96	88
beverage	3	1
food	7	9
household	20	19
household/industrial	3	3
household/transport	1	1
industrial	1	0
personal	2	1
personal/food	1	1
service	3	0
store	1	1
transport	3	1
unidentified	20	29
work	1	0
Total	**162**	**154**

[45] https://www.worthpoint.com/worthopedia/antique-brass-marble-glass-whale-oil-1908168093

3.2.3.1 NORTHIAM HOUSE 2

House 2 contained 43 MIC with the majority found in the two cesspits (Table 3.16). The backfill of the central cesspit and the fill of the rear cesspit revealed a high per cent of architectural artefacts, however the interface between the two fills of the central cesspit had a high content of household and personal items.

Table 3.16: Metal artefacts from House 2 by context.

Context	Location	General Function	Shape	MIC	Fragments
16458	3	architectural	bolt	1	0
			nail	17	15
		household	unidentified	1	1
		unidentified	unidentified	1	1
16635	Rear Yard	architectural	nail	1	0
16916	Back fill of central cesspit	architectural	pipe	1	0
			strap	1	2
			wire	1	2
		store	barrel	1	1
16929	Fill of rear cesspit	architectural	nail	1	0
			offcut	1	1
		food	bowl	1	2
		unidentified	wire	0	0
16939	Interface between two fills of central cesspit	architectural	nail	4	5
			rod	1	1
		beverage	corkscrew	1	1
		household	nail/tack	3	3
			tack	1	0
		household/industrial	slag	3	3
		personal	umbrella	1	0
		unidentified	container	1	6
Total				**43**	**44**

3.2.3.2 HARLEYVILLE HOUSE 3

A total of 108 metal artefacts were found associated with House 3 (Table 3.17). Although built at the same time as House 2, and with the same layout and the same number of cesspits, House 3 has more than double the number of metal artefacts, with the majority of them architectural.

Table 3.17: Harleyville, House 3, sum of metal artefacts by context.

Context	Context Description	General Function	MIC	Fragments
16406	Demolition Fill	household	1	1
16416	Historic Topsoil	architectural	1	0
		household	1	5
		unidentified	1	0
16426	Deposit of black coke and charcoal	architectural	44	44
		unidentified	1	2
16440	Yard Fill	architectural	1	1
16442	Yard Fill	architectural	1	0
		unidentified	1	1
16484	Fill of Linear feature	personal	1	1
16594	Yard Surface	household	1	1
16595	Yard Surface	architectural	1	1
16630	Yard Fill	architectural	1	1
16677	Post hole on fence line	beverage	1	0
16743	Yard post hole	architectural	5	5
16752	Post hole in rear yard	household	0	0
		unidentified	1	5
16802	Post hole in rear yard	architectural	1	0
16829	Yard fill	architectural	2	2
16918	Upper fill of central cesspit 16917	household	1	4
		unidentified	1	1
16967	Yard fill	architectural	3	4
		food	6	7
		household	7	3
		household/transport	1	1
		Industrial	1	0
		personal/food	1	1
		service	3	0
		transport	1	1
		unidentified	13	13
		work	1	0
17135	Rubbish pit rear yard	transport	1	0
TOTAL			**106**	**105**

Another noticeable difference between the two houses is the number of artefacts found within the cesspits. In House 2 the majority of the artefacts came from the cesspits whereas the artefacts associated with House 3 came from multiple contexts.

Context 16967 was the fill of a large, very neat, rectangular feature at the rear of House 3 (context 17134). The fill contained a moderate number of artefacts including roughly made sandstock bricks, ceramic, bone, clay pipes and bottle glass as well as 37 metal artefacts (Table 3.18 and Figure 3.8). Some items that were undiagnostic and in very bad condition were discarded on site.

Table 3.18: Metal artefacts from context 16967.

General Function	Specific Function	Shape	MIC	Fragments
architectural	door	escutcheon	1	0
	non-structural	peg	1	3
	roof	flashing	1	1
food	container	key	1	1
	prep	kettle	1	2
		milk strainer	1	2
		pot	2	1
	prep/serve	bowl	1	1
household	container	bucket	1	1
	cooking	stove	1	0
	fitting	hook	1	0
		unidentified	2	1
	ornament	mirror	1	0
	security	chain	1	1
household/transport	furnishing/vehicle	spring	1	1
industrial	machinery	wheel	1	0
personal/food	hygiene/serve	ewer/jug	1	1
service	tele/elect	box	1	0
	unidentified	pipe	2	0
transport	vehicle	battery	1	1
unidentified	container	box	1	1
		unidentified	1	1
	non-structural	sheet	0	0
	power	battery	1	1
	unidentified	rod	1	1
		strap	1	2
		unidentified	6	6
		wire	2	1
work	tool	unidentified	1	0
Total			**37**	**30**

Figure 3.8: Sample of metal artefacts from context 16967. Scale 500mm. IMG_3838. Casey & Lowe.

The brass hot water jug or pitcher was a design by manufacturers Joseph Sankey and Sons (J.S & S).[46] The company was registered as manufacturers and described as tinplate workers and japanners. The exact date for Sankey and Sons is not known, however the art nouveau styles found on many pieces tends to indicate that it would have been around the 1890s. In July 1932 a letter was sent out with their catalogue giving a discount on stock due to a decision to liquidate. There are at least eight different designs and six different sizes of pitchers, this example has the handle attached to the lip, with a hammered art nouveau design on two sides of the jug depicting an image of a clover with six tulips below with the full design on two sides of the jug (Figure 3.9). There is often the size number stamped on the base but it is not visible on this example.

Figure 3.9: Brass hot water jug post conservation (16967/#22840). Scale 100mm. IMG_4325. Gallery2.

[46] http://www.englishmetalware.com/JSS.htm
http://www.historywebsite.co.uk/Museum/metalware/sankeys/sankey02.htm

The stowage box lid (Figure 3.10), Patent 1196, a small rectangular iron lid with a copper alloy label, is compatible with a particular type of field telephone, Mk III, commonly used by the Australian Navy in WWII.[47]

Figure 3.10: Stowage box lid (16967/#22841). Scale 100mm. IMG_3082. Gallery2.

Milk strainers were used to filter unwanted contaminants that had fallen into the bucket while the cow was being milked by hand. As the example from context 16967 came from a 20th century pit it suggests that this piece of equipment had been kept from the time households had a cow or two on their land which was used for their milk and to make butter.

[47] Admiralty Fleet Orders 1942: http://www.navy.gov.au/sites/default/files/documents/3194-3333.pdf Accessed July 2019.

Figure 3.11: Milk Jug (16967/ #22839). Scale 100mm. IMG_3077. Gallery2.

3.2.4 AREA C, LOT 32

The archaeological excavation of Area C revealed a large cross or t-shaped timber structure with an extensive network of brick drains and gutters, and a smaller structure or annex, also made of timber, to the south. These structures were not on the 1844 plan but were potentially constructed prior to 1851 and are outbuildings or ancillary structures in the yard of the White Horse Inn (located to the east, outside the study area) which after 1851 became Hilt's Coach Service. These structures are most likely stables and sheds for the White Horse Inn or Hilt's Coach Service. A brick drain and a number of postholes were identified that could be fences and drainage features that pre-date the stables and sheds.

The entire structure was designated 'Structure 5' during the excavation in order to easily record the archaeological features associated or contemporary with this structure. This report will refer to the various sections of the building using the letter designations A to E (Figure 2.21).

The stables and sheds were demolished by 1895 and replaced by a smaller sandstone building. This structure was recorded as Structure 6 and interpreted as being a detached kitchen, laundry or workshop for the westernmost semi-detached terrace or villa at 63 Macquarie Street built in the 1870s and replaced the White Horse Inn.

Area C had 281 MIC metal artefacts. The biggest category is architectural with 161 MIC. There are few household items however the category household/industry had 30 MIC. The majority of these artefacts were slag, a by-product of heating metal for smelting or smithing. Context 16853, had 24 items of slag, possibly indicating a working blacksmith in the area.

Table 3.19: Total of metal artefacts from Area B.

General Function	MIC	Fragments
architectural	161	98
food	6	7
household	17	13
household/architectural	1	2
household/industrial	30	30
Industrial	1	1
personal	4	0
service	8	25
store	1	1
transport	13	6
transport/industrial	1	0
unidentified	29	65
work	8	5
yard	1	1
Total	**281**	**254**

3.2.4.1.1 ARCHITECTURAL

There were 161 MIC in the architectural category (Table 3.20) found in various contexts from Area C. The nail types range from cut wrought to wire drawn with a date of manufacture spanning from 1820-1940, with many related to the demolition phase of the stables and sheds.

Table 3.20: Architectural metal artefacts from Area C.

Specific Function	Shape	MIC	Fragments
door	hinge	3	3
	key escutcheon & cover	1	0
	rose plate	2	0
door/window	latch	1	0
non-structural	decor	1	1
	flashing	3	3
	nail	36	8
	nail & washer	1	0
	rod	1	0
roof	flashing	2	1
	offcut	2	3
	washer	3	0
structural	bolt	3	2
	bolt & nut	1	0
	nail	29	21
	nail/spike	5	5
	screw	1	0
	spike	2	2
	unidentified	1	1
	vent	1	1
	wall hook	0	0
	wire	1	1
structural/non-structural	bar	1	2
	nail	57	42
	washer	1	0
unidentified	bolt	2	2
Total		**161**	**98**

3.2.4.1.2 NON-ARCHITECTURAL

120 MIC non-architectural artefacts were found in Area C.

Table 3.21: Non architectural metal from Area C.

General Function	Specific Function	Shape	MIC	Fragments
food	container	lid	1	1
	prep		1	1
	prep	pot	4	5
household	container	canister	1	0
	fitting	bell	1	1
		hook	1	0
		ring	0	0
		rose plate	1	1
		stand	1	0
	furnishing	frame	1	3
		key	1	0
		spring	1	0
		unidentified	1	1
	furnishing/fitting	plate	1	0
	security	lock	1	0
		padlock	1	1
	tool	file	2	2
	unidentified	handle	1	1
		strap	1	2
		tool	1	1
household/architectural	furnishing/door	handle plate	1	2
household/industrial	by-prod	offcut	2	2
		slag	28	28
industrial	by-prod	slag	1	1
personal	access	umbrella	3	0
	saving	moneybox	1	0
service	drainage	pipe	1	1
	elect	light bulb	1	1
		wire	1	18
	gas	connector	1	1
		pipe	3	2
	unidentified	pipe	1	2
store	store	barrel hoop	1	1
transport	bicycle	pedal	1	1
		wheel	1	1
	horse	horseshoe	8	3
		ring	1	0
	vehicle	unidentified	2	1
transport/industrial	vehicle/machinery	washer	1	0
unidentified	container	container	1	1
		seal	1	0
	non-structural	strap	2	12
	security	wire	2	2
	unidentified	bar	1	1
		container	2	19
		ferrule	2	0
		finial	1	0
		lid	1	0
		offcut	1	1
		rod	3	1
		sheet	2	8
		spring	1	1
		strap	2	3
		unidentified	3	3
		washer	1	0

General Function	Specific Function	Shape	MIC	Fragments
		wire	3	13
work	tool	axe	1	1
		drill bit	1	1
		file	1	1
		mattock	1	0
		pliers	2	1
		rake	1	1
		spanner	1	0
yard	garden	hose	1	1
Total			**120**	**156**

After the demolition of the White Horse Inn and its associated outbuildings, two new semi-detached brick houses were constructed. Although the houses are outside the 3PS study area an outbuilding at the rear of the westernmost brick house was uncovered and recorded in Area C as Structure 6.

Structure 6 does not appear on the 1943 aerial photograph of the site, its absence portraying its demolition before this date. A demolition fill covered the entirety of the building and was capped with a thick layer of orange and pink clay (16427) which is where all ten artefacts came from (Table 3.22).

Table 3.22: Non architectural artefacts found in context 16427.

Context	General Function	Specific Function	Shape	MIC	Fragments
16427	food	prep	pot	1	1
	household	furnishings	frame	1	3
			spring	1	0
			unidentified	1	1
		security	padlock	1	1
	transport	bicycle	pedal	1	1
			wheel	1	1
	work	tool	file	1	1
			pliers	1	1
			spanner	1	0
Total				**10**	**10**

The metal artefacts are a good representation of an outhouse or shed. Three tools were found, partial pliers (#22897), a large rectangular file (#22896) and a ring spanner (#22898) suggesting the shed was used to store and possibly work in. The bicycle pedal shank (#22894) and wheel (#22895) strengthen the argument that this structure was used as a storage area for the family in the terraces. The padlock (#22898) was possibly used to lock the storage area or it was unused and stored in the shed. All artefacts had heavy ferrous encrustation and many were broken or partial items (Figure 3.12).

Figure 3.12: A selection of the metal artefacts from context 16427. Top row; bicycle pedal shank #22894; left side top row; partial pliers #22897; middle row; file #22896; bottom row l-r; furniture spring #22902; spanner #22898. Right side padlock #22899. Scale 100mm. IMG_3471. Gallery2.

3.2.5 AREA D, LOT 28

Area D was mostly concerned with the residential development of the site between the 1820s and 1950s. Remains included: agricultural features, the original creek line, the Town Drain and subsidiary drain leading from the cottage on Lot 30, ponds, sandstone footings and fences, postholes, mid to late 19th-century yard surfaces, levelling fills, and early 20th-century pits and structural remains.

A total of 46 MIC (35 fragments) were recorded in Area D (Table 3.23).

Table 3.23: Total of metal artefacts by context from Area D.

Context	General Function	Specific Function	MIC	Fragments
17519	household	furnishing	1	0
17818	architectural	structural	4	0
	rec	equip	1	0
17819	architectural	non-structural	1	1
		structural/non-structural	3	2
	architectural	structural	3	0
	food	closure	1	1
	household	furnishing/fitting	1	1
	unidentified	unidentified	1	1
17835	unidentified	container	1	1
17855	architectural	non-structural	4	5
		roof	1	1
		structural/non-structural	14	11
	unidentified	non-structural	3	3
		unidentified	4	5
17874	architectural	structural/non-structural	2	2
	food	prep/serve	1	1
Total			**46**	**35**

A series of plough lines or furrows were revealed within Area D and were collectively given the context number 17855. The distinct plough lines represent a single cultivation activity

associated with Phase 4.1. 26 metal artefacts were found within this context (Table 3.24), 15 items were nails and although heavily corroded and with ferrous encrustation it was possible to identify these as a mix of hand forged nails, dating from 1788 and cut wrought nails which date from 1815 or 1820 depending on the shape and type of head (Figure 3.13).

Table 3.24: Total number of metal artefacts from context 17855.

General Function	Specific Function	Shape	Type	From	To	MIC	Fragments
Architectural	non-structural	flashing				1	1
		nail	HF	1788	1890	1	1
		strap				1	3
		tack	HF	1788	1890	1	0
	roof	flashing				1	1
	structural /non-structural	nail	HF Rose	1788	1890	2	2
						2	2
			HF	1788	1890	2	2
			HF Clasp	1788	1890	2	2
			CW	1815	1870	2	0
			CW Rose	1820	1870	1	0
			HF Rose	1788	1890	3	3
unidentified	non-structural	sheet				3	3
unidentified	unidentified	strap				1	2
		strip				1	1
		unidentified				1	1
		wire				1	1
Total						26	25

Figure 3.13: Nail and straps from 4th Furrow context 17855. Top row (l-r) HF clasp #23061, CW #23065, CW #23064, HF #23066, MW or CW #23066, HF #23062; Middle row, HF Rose #23060, strip #23070, unidentified nail #23071, HF Rose #23059, wire #23067. Bottom row: strap #23058, unidentified #23069, strap #23069. Scale 100mm. IMG_3096. Gallery2.

Context 17818 was a general clean up number assigned to the modern fills and demolition removed during the machining process in Area D. The metal artefacts from 17818 reveal the mixed nature of the context. Four large bolts protruding through wood fragments above square nuts were found as well as a large cast iron dumbbell (Figure 3.14, Figure 3.15).

It is questionable as to why they were originally called dumbbells. The most obvious answer is that it is what the name implies, bell shaped forms cast from the moulds used to make bells but either poured solid or without the clapper or tongue so they are dumb. Dumbbells in various forms have been used since ancient Greece and are still in common use today.

Figure 3.14: Four large bolts protruding through wood fragments above square nuts (17818/#23054). Scale 100mm. IMG_3036. Gallery2.

Figure 3.15: A iron dumbbell (17818/#23055) used during weight bearing exercise. Scale 100mm. IMG_3046. Gallery2.

4.0 BUILDING MATERIALS

4.1 OVERVIEW OF ASSEMBLAGE

This section will look specifically at the structural artefacts collected from the site. These include bricks, tiles, slate, service pipes, mortars and renders. Metal artefacts have been discussed in Section 3.0 above. Many of the building materials have been sampled from known structures for example, drains, footings, fireplaces and paving. Other bricks have come from modified topsoils, occupation related deposits, pits, trenches and demolition fills. Specific structures and contexts will also be analysed in order to address research questions pertinent to the excavation project.

The assemblage comprised of 825 MIC (1143 fragments) structural artefacts (Table 4.1). 65% were found in Area A & A South, Lot 30. Some 16% were recovered from Area B, Lot 30. 14% from Area C, Lot 32 located along the eastern side of the site and a further 5% from contexts that were located in Area D, Lot 28 1(181) along the western side of the study area.

Table 4.1: Summary of structural artefacts from 3PS by general and specific function.

Area	Gen Function	Spec Funct	#Frags	#MIC	%
A	archit	finish	230	131	15.9%
		floor	5	7	0.8%
		roof	112	52	6.3%
		structural	311	260	31.5%
		structural /finish	6	3	0.4%
	h'hold	fireplace	1	1	0.1%
	service	drainage	5	5	0.6%
		unid	3	3	0.4%
	yard	garden	20	13	1.6%
A Sth	archit	finish	25	10	1.2%
		floor	3	3	0.4%
		roof	28	13	1.6%
		structural	28	28	3.4%
	service	unid	3	3	0.4%
	yard	garden	2	2	0.2%
B	archit	finish	51	45	5.5%
		floor	1	1	0.1%
		roof	56	25	3.0%
		structural	55	61	7.4%
		structural /finish	0	1	0.1%
	service	drainage	2	2	0.2%
		unid	2	1	0.1%
		water/sewer	1	1	0.1%
C	archit	finish	41	31	3.8%
		floor	2	2	0.2%
		roof	36	21	2.5%
		stru	25	41	5.0%
	service	drainage	7	5	0.6%
		unid	33	14	1.7%
		water/sewer	1	1	0.1%
D	archit	finish	14	6	0.7%
		floor	1	1	0.1%
		roof	9	6	0.7%
		stru	23	25	3.0%
	service	water	1	1	0.1%
TOTAL			1143	825	100%

4.2 BRICKS

Overview

A wide range of bricks were collected from the site of 3PS, 153 Macquarie Street made from the time of first occupation at Parramatta to modern times. The bricks were grouped into fifteen types (Table 4.2) which had quite broad manufacturing date ranges. Within the broad date ranges some of the bricks were further sub-divided into more specific types. The brick type series depended on fabric, size, manufacturing methods including firing, and how these processes changed over time and the quality of bricks improved. Most of the bricks sampled were flat (no frog) sandstock bricks, although there were some later rectangular and heart-shaped frog sandstock bricks, occasional firebricks, followed by extruded and then dry-pressed bricks.

The earliest bricks found on site were likely made in Parramatta from the 1790s by the convict James Beckett and his labour force. The information from the bricks will be utilised in the discussion of different structures found on site (see Section 4.7). The following is a summary of the catalogued brick types collected from 3PS and their date ranges:

Table 4.2:Brick types series for all the bricks sampled and recorded within the study area, 3PS. *Ss lime and Ss conc are sandstock bricks with later phased mortar attached.

Brick Type	Date Range	#Frags	%	#MIC	%
Ss (generic)	c.1790-c.1890	127	36.8%	106	29.9%
Ss flat	1790-1860	103	29.9%	119	33.5%
Ss flat slop	1792-1830	54	15.7%	47	13.2%
Ss heart	1860-1900	23	6.7%	39	11.0%
Ss rect long	1860-1900	1	0.3%	2	0.6%
Ss rect narrow	1860-1900	5	1.4%	6	1.7%
Ss rect wide	1850-1890	15	4.3%	17	4.8%
Ss Lime*	1840-1890	6	1.7%	4	1.1%
Ss Conc*	1880-1890	2	0.6%	1	0.3%
Firebrick extruded press Goodsell	1869-1890	1	0.3%	1	0.3%
Firebrick semi DP 2	1870-	1	0.3%	1	0.3%
Semi DP rect	1870-	1	0.3%	2	0.6%
Extrud semi plastic press rect	1870-	1	0.3%	2	0.6%
Extrud semi plastic press double rect	1870-	2	0.6%	3	0.8%
DP (dry-pressed)	1890-	3	0.9%	5	1.4%
	TOTAL	345	100%	355	100%

A total of 355 (MIC) bricks were catalogued. Only 30 whole bricks were included in the sample register, the rest were fragmentary. The sampling methodology for bricks from structural remains involved keeping one whole and one half-size brick of each brick type from a structure, this would allow for accurate measurements of the whole brick, while the half brick allows you to see the quality and mix of the fabric. Many of the larger brick fragments (>30% in size) were still identifiable to a particular type. The majority 341 (96%) of the bricks were made using the sandstock method. 30% (106 MIC) of the sandstock bricks fragments were too fragmentary to be further classified (Ss generic) their fabric enabled them to be broadly dated from c.1790 – c.1890. In some incidences the date range could be narrowed down further even without any evidence of a frog on the bricks. If the clays were poorly mixed and crushed, or irregularly fired these were often earlier in date (1790-1830 or 1790-1860), while the later bricks were generally a better quality (1830-1890). Also, if the brick fragments had remnant mortar or render (for example lime or cement) this

would result in a later date range based on the dating of the mortar and could suggest reuse.

4.2.1 BRICK TYPES

4.2.1.1 FLAT SANDSTOCK BRICKS

The identifiable flat sandstock bricks (Ss flat) made up a total of 166 items (MIC) or 46.7% of the brick assemblage. Locally made flat sandstock bricks have been found on numerous archaeological sites in Parramatta and Sydney Cove. In Parramatta the flat sandstock bricks are broadly dated from c.1790 – c.1860. The earliest known bricks made in Parramatta were by James Beckett, a convict with experience in brickmaking at Birmingham, England, who was tasked to make bricks in Parramatta from 1790. In these early years, bricks were only used for government buildings and select private houses. The clay was dug from the Parramatta River and nearby creek banks, processed and fired in a clamp kiln on the south side of the river at the Crescent below Old Government House. The difficulty in manufacturing bricks using unfamiliar local clay and local wood for fuel is reflected in the poor-quality sandy bricks that caused many buildings in the new settlement to collapse within a few seasons.

The flat sandstock bricks from the 3PS site were subdivided into types and date ranges based on fabric, size, density and manufacturing methods. As brick making techniques improved over time within the colony, so too did the bricks. The flat sandstock bricks were subdivided by date as follows (Table 4.3):

Table 4.3: Flat sandstock bricks from the 3PS site. The majority of these bricks came from Area A.

Type	From	To	Area A #MIC	Area A South #MIC	Area B #MIC	Area C #MIC	Area D #MIC
Ss flat	1790	1830	8	2	1	-	-
	1800	1830	30	4	2	-	3
	1800	1860	7	-	3	5	-
	1830	1860	21	2	3	19	-
Ss flat slop	1792	1830	37	2	4	-	4
TOTAL			**96**	**10**	**13**	**24**	**7**

The majority of the flat sandstock bricks (96 MIC) came from Area A, the western half of Lot 30 and were associated with the early cottage (House 4) dated c.1822-1884 (Phase 4). The early Parramatta slop mould bricks (Ss flat slop) were quite distinct (37 MIC) and have been discussed separately in Section 4.2.1.1.1 .

The majority of the Ss flat bricks in Area A were dated to either 1800-1830 (30 MIC) and 1830-1860 (21 MIC) and were locally made in Parramatta. The change in the date ranges for the flat sandstock bricks reflect the quality, fabric and size of the bricks.

Ss flat 1790-1830

These early flat bricks were quite distinct as the clay fabric was generally poorly mixed and crushed with common ironstones and organic voids and occasional swirls of white/buff clay. The bricks were often unevenly fired the faces were often lumpy in appearance. They varied in colour from pale brown to light red to red. The higher fired bricks were a deeper red in colour and had divots from exploded ironstones. No whole bricks, only fragments were recovered. These early, poor quality brick fragments were mostly found redeposited into

later features including the backfill (17325) of a feature near the southwest corner of House 4, also in a number of yard features (17331, 17453) from the later phase of occupation of House 4 (1850s-1880s). A brick fragment was found in the pond fill (16211) at the rear of Lot 30, a demolition fill (16134) and underfloor deposit (16136) from House 1 (1880s-1960s, Phase 5) and a modern pit (16250) in Area A South. Only one brick fragment (16426/#8960) was located in Area B in a charcoal rich dump (16426) that predated the construction of the terrace houses (Northiam and Harleyville).

Ss flat 1800-1830 and Ss flat 1800-1860

The majority of the bricks dated 1800-1830 and 1800-1860 came from the early cottage (House 4) in Area A, Lot 30 and its associated features and deposits. By the 1800s, the flat sandstock bricks were improving in quality and were becoming more regular in shape (Figure 4.1, Figure 4.2). The clay fabric mix was generally well mixed and crushed but still contained frequent ironstones, clay lumps and organic voids. The colour was mostly orange and red, higher fired bricks were a red-brown colour. The bricks had smoother faces, particularly the stockface, less lumps and measured from 214-220 x 107-113 x 66-70mm. Some of the c.1800-1830 bricks were shorter in length and narrower (measuring 210-214 x 100-103 x 67-70mm), this may represent use of a different stockboard (16159/#8624).

Within House 4, these bricks were used for either shallow partition walls or floor supports (16341), as brick pads for floor supports (17231) and in the construction of the fireplace (16202) in Room 4. They were also found in the occupation deposits (16282, Room 3) and the brick paving (16181) and east-west yard drain (16200) that were later additions to House 4 (1850s-1880s) and the brick sump (16187) to the west of the house near the property boundary. Fragments of flat sandstock bricks were found in yard features/pits (16340, 17253, 17568, 17272, 17513, 17541) the backfill (16377) of the brick sump (16187, Phase 4.2) and fenceline postholes (17487, 17297) and demolition fill (16200) in the front verandah. A whole brick (17499/#8870) from the postpipe fill of a posthole associated with an early skillion (c.1822-1850) to the southeast of House 4 (Phase 4.1) was similar to brick fragments (17821/#9090) collected from an early storage pit (17820) in the neighbouring allotment (Lot 28, Area D, Phase 3). A number of flat sandstock bricks were also found redeposited into later fills and trenches.

Ss flat 1830-1860

Most of the Ss flat bricks dated 1830-1860 were orange or red in colour. The bricks were generally dense, the fabric a better mix and crush and the bricks were large in size. The darker red-brown coloured bricks were higher fired while the paler light orange/red bricks were low fired. The average brick size was more regular than the earlier bricks 230-236mm x 112-117mm x 68-70mm. Of the 24 (MIC) Ss flat bricks recorded from Area C (Lot 32), 19 items were dated 1830-1860. All the flat sandstock bricks in Area C (Lot 32) were associated with structures or located within fills from Phase 4 (c.1819-1870s). Many of the bricks were sampled from the large number of drains (16471, 16608, 16620, 16692) associated with the outbuildings/stables of the White Horse Inn (Phase 4.2). These sheds/outbuildings were not evident on the 1844 plan but were on the 1858 plan (Figure 2.21) by which time was taken over and expanded by Hilt's Couching Services (Structure 5). The dating of the flat sandstock bricks in Area C are all contemporary with these structures.

In Area A the flat sandstock brick types dated 1830-1860 were predominantly found in the later phased additions to House 4 (1850s-1880s, Phase 4.2) and House 4 demolition fills (16201, 16230, Phase 4.3). Samples of these bricks were taken from bricks pads (16215) and the partition wall or floor support (16235) between Rooms 2 and 4 suggesting they too were a later addition to the original cottage. New timber floors may have been added or replaced

when the extension was built to the east (Room 5) in the 1850s. The bricks were used in the construction of the fireplace (16203) in Room 5 (Phase 4.2). Other features associated with House 4 containing these bricks were the yard drain (16337), brick rubble (16275) beside the sump (16187) along the western boundary of Lot 30 and the occupation deposits (16328) in Room 2 (all Phased 4.2). They were also found within some of the Phase 5 (1880s-1960s) features including pits (16205) postholes (16294) and fencelines (17382).

Figure 4.1: Two varieties of flat sandstock brick types made in Parramatta. Top: Ss flat slop (16146/#8630). Middle: Ss flat (16159/#8624), slightly shorter in length. Bottom: Ss flat (16137/#8572). Side view. Scale 100mm. IMG_3158. Gallery2.

Figure 4.2: Two varieties of Ss flat type bricks made in Parramatta, showing the strikeface. Left Top: Ss flat slop (16146/#8630, 1792-1830). Left bottom: Ss flat (16159/#8624, 1800-1860). Right: Ss flat (16137/#8572, 1800-1830). Scale 100mm. IMG_3160. Gallery2.

4.2.1.1.1 BECKETT (SLOP MOULD) FLAT BRICKS – C.1792-1830

James Beckett was making bricks in Parramatta from as early as 1790. Due to the poor quality of the first bricks at Parramatta, Beckett soon began to experiment with different methods of preparation and established a new brickfield north of the Parramatta river (near present day Brickfield Street). The re-invented bricks were made from a fairly wet (slop) combination of poorly or partially crushed and mixed red clay and rounded lumps or streaks of white/buff clay, common ironstone nodules and vegetation matter leaving voids. The moisture may have aided the removal of the green brick from the mould or frame. The high moisture content meant that the bricks shrank at an uneven rate, resulting in a range of sizes and a number of irregular forms. At Parramatta these bricks were used to construct the footings of the 1792 Convict Hospital on Marsden Street, and a storage cellar behind the house belonging to Samuel Larkin fronting George Street at PCC site. They have also been found on a number of other excavated sites in Parramatta including 15 Macquarie Street (2009).[48]

47(MIC) slop moulded sandstock bricks (Ss slop) were identified from the 3PS study area (Table 4.4). The majority of the bricks (37 MIC) were located in Area A and were associated with the construction, occupation and demolition of the early cottage (House 4) in the western half of Lot 30 dated c.1822-1884. These bricks were quite distinct, many retaining water marks or evidence of being a wet sloppy clay mix (Figure 4.3, Figure 4.4, Figure 4.5, Figure 4.6).

[48] Stocks, 2008a: Draft Structural Report – for Casey & Lowe, discusses Beckett's bricks in more detail. Also, Miskella 2013, Draft Structural Materials Report, 15 Macquarie Street Parramatta for Casey & Lowe,

Table 4.4: Summary of all Beckett slop mould bricks identified including their broad range of dimensions and colours.

Type	From	To	Area	House	Room	Context	Dimension	Colour	#MIC
Ss slop	1792	1830	A			16188	117+x106x62	or	1
						16276	215x112x60	lt or	1
						16303	209x99-102x64; 95+x102x60	or/red	2
						17357	39+x24+x29+	brn	2
						17360	91+x90+x67	or/red	1
						17443	102+x106x69	red	1
						17449	101+x71+x59	or/red	1
						17812	207x98x64-66	red	2
					Yard	17238	215x102-104x70	brn	1
				1	2	16143	150+x110x57	dk red	1
				4		16159	169+x111x59	mid or/brn	1
						16164	220x116x62	or	1
						16377	90+x49+x49	red	1
						17249	55+x60+x40+	red/or	1
						17594	220x114x57-59	red	2
					1	16193	55+x53+x33+	or	2
					3	16282	71+x42+x64	or/red	2
					4	16193	65+x34+x20+	or-red-maroon	3
					5	16248	31+x63+x54+	or	1
					5	16248	49+x36+x29	red/brn	2
					Front yard	17542	135+x116x69; 70+x106x71	or/maroon	2
					Rear Yard	17267	43+x30+x29+	or-brn	1
					Verandah	17525	102+x95+x64	lt brn/ or/red	1
					Verandah	17570	44+x80+x66, 55+x80+x70	or	2
					Yard	16332	211x100x67	red	1
			A Sth			16306	210x103x69;213 x107x67	red, pink	2
			B	2	Rear yard	16921	120+x96x64	lt brn	1
				3		16418	42+x44+x40	or	1
						16586	102+x78+x71, 92+x102x65+	or/brn	2
			D			17852	220x105x68	red-brn	2
						17854	90+x69+x65	or	1
						17875	98+x110x70	dk or-brn	1
								TOTAL	46

A number of the slop mould bricks formed part of the structural elements of House 4, either as a shallow wall or to support a timber floor (16276). The bricks were also identified along the northeastern corner of the front verandah (17594) which is the original part of the house (Phase 4.1). A number of slop moulded bricks were located in the backfills of the well (16303, 17812) associated with demolition of House 4. The well itself was constructed of frogged bricks (16302) with a post-1850 date and was a later addition to the original cottage (Phase 4.2, Figure 2.16). The bricks in the well fill were stained with burning/soot on one side (17812/#8888) indicating they came from the demolition of a chimney of House 4 and were intentionally dumped as backfill into the well (Figure 4.5). These early bricks were

also found in drains (16332) and used as pavers (17542) both of which were associated with the later modifications to House 4 (Phase 4.2, 1850s-1880s) and probably recycled from an earlier structure. The slop mould bricks came in a broad size range with whole Ss slop bricks ranging from 207-220mm in length x 98-112mm in width and 60-70mm thick. The colours varied from light-orange, to orange/red and red-brown (Table 4.4). The darker coloured bricks indicate they were more highly fired. A few bricks have hack marks, others had side marks coming from when the bricks were stacked in the kiln. The bricks were also found in fills of pits and postholes, occupations deposits and demolition fills associated with House 4 and redeposited into the wall trenches of later phased structures (Cranbrook and the post office).

Only 4 (MIC) slop mould bricks were found in Area B, the eastern half of Lot 30. There were no known structures in this area until the 1880s. Two were within the packing fill of a posthole (16586, Phase 4.2), one within a yard surface associated with the 1880s brick houses (16418, Phase 5.1) and finally one brick within the brick cesspit (16921) located in the rear yard of House 2 (Phase 5.1). Here the Ss flat slop bricks were reused in the construction of the cesspit which also contained rectangular and heart-shaped frogged bricks. The remaining four slop mould bricks were located in Area D but were not related to any structures. They were found in the sediment (17852, Phase 3) in the base of the creekline that was later covered with the town drain, within the pond fill (17854, Phase 4.1) at the southern end of Area D and within a stone fenceline (17875) evident on historic plans and associated with the 1850s-1870s occupation (Phase 4.2) of Lot 28.

Figure 4.3: Early Parramatta slop/wet moulded bricks (Ss flat slop) dated 1792-1830 associated with House 4 (17812/#8888). Strikefaces of bricks both showing linear strikemarks. Scale 100mm. IMG_3227. Gallery2.

Figure 4.4: The sandy stockface of same bricks 17812/#8888. Scale 100mm. IMG_3227. Gallery2.

Figure 4.5: Slop/wet moulded bricks (Ss flat slop) with black soot on the sides of the brick (17812/#8888). The bricks were within the backfill of the House 4 well and are probably from the demolition of a chimney from House 4. Scale 100mm. IMG_3233. Gallery2.

Figure 4.6: Side view of Ss flat slop bricks from the demolition debris of House 4. Top brick 16159/#8627 shows overheating with darkened side and surface possibly from a fireplace. Bottom, whole brick (16164/#8630) from the demolition fill Room 5, House 4. Scale 100mm. IMG_3125. Gallery2.

4.2.1.2 FROGGED SANDSTOCK BRICKS (C.1850-1890)

Two main types of frogged sandstock bricks were identified on 3PS. Heart-shaped frogs and rectangular frogs which were found in most of the late 19th-century structural remains but only a sample of each of these bricks were retained. The bricks were also located in postholes, pits, demolition and yard fills. The rectangular frogged bricks were subdivided into either a wide, long or narrow rectangular frog (Table 4.5). The variation in frogs and the sizes of the bricks suggests different manufacturers, batches or production methods. The frog could be impressed by hand using a stamp, be a kick in the mould or steam powered pressed bricks. Early plugging and pressing machinery came into use from the 1840s which then changed the manufacturing of bricks.[49]

Table 4.5: Summary of the frogged sandstock bricks from the 3PS site.

Type	Area	From	To	#MIC
Ss rect wide	A	1850	1890	13
	B	1850	1890	3
	C	1850	1890	1
Ss rect long	A	1860	1900	1
	B	1860	1900	1
Ss rect narrow	B	1860	1900	6
Ss heart	A	1860	1900	11
	A South	1860	1900	2
	B	1860	1900	14
	C	1860	1900	11
	D	1860	1900	1
			TOTAL	64

[49] Stocks, 2008a, p.14.

4.2.1.2.1 RECTANGULAR FROGS (WIDE, LONG AND NARROW)

A number of rectangular sandstock bricks were collected from site, the majority of these bricks coming from Area A, Lot 30 (Table 4.6).

The wide rectangular frogged bricks (Ss rect wide) were the most common (16 MIC). They measured from 233-235 x 108-115 x 66-69mm. The frogs were concave in shape, 40-55mm wide and 10-13mm deep (Figure 4.7, Figure 4.8, Figure 4.9). Many of these bricks were high-fired and orange-brown to dark red in colour, some with blackened ironstones and vitrification (contexts, 16182, 16302, 16755, 17325, 17343). Some of the bricks were worn on one side and had been used as pavers (16181, 16337). The wide rectangular frog bricks were used in the construction of the well (16302) and paving (16181) both associated with the later phase of expansion and renovation to the early cottage (House 4, Phase 4.2). They were found in the brick yard drain (16337) and the brick rubble (16275) beside the sump (16178), again all associated with the later occupation of House 4 (c.1850s-1884). Within Area B the wide frogged rectangular bricks were used in a garden path (16437) associated with House 2 (Phase 5). They were also sampled (BM samples #43, #44) from the brick footings of House 3. The footing bricks 16449/#8952 and 16552/#8944 both had remnant lime mortar while 16449 also had light grey brown concrete render attached from later renovation/repairs to the house.

Table 4.6: Sub-types of rectangular frogged sandstock bricks including, context, dimensions and fabric colour ranges.

Type	Area	House	Context	Dimension	Colour	From	To	#MIC
Ss rect wide	A	4	16181	235x112-116x67; Frag Th=40-55; Frog=122x52x12	lt red-brn	1850	1890	2
			16182	125+x105x67; Frog=80+x45-55x12	dk or-brn	1850	1890	1
			16275	142+x114x69; Frog=70+x55+x10	or	1850	1890	1
			16302	156+x115x57; Frog=93+x50x13	brn/or	1850	1890	1
			16302	96+x105x65	red	1850	1890	1
			16337	OR=239x116x64; Frog=128x53x10; BRN=237x115x75; Frog=132x49x10	or, brn	1850	1890	2
			17325	105+x115x65; Frog=40+x45x9+	maroon	1850	1890	1
			17325	105+x113x73; Frog=40+x50+x10	or	1850	1890	1
			17325	117+x106x67; Frog=70+x50x10	brn	1850	1890	1
			17343	85+x95+x67	or	1850	1890	1
			17343	110+x63+x66	brn	1850	1890	1
	B	2	16437	207+x116x74	or	1850	1890	1
		3	16452	230x111x83; Mortar Th=11	red-brn	1850	1890	1
			16449	230x112x80; Frog=97x38x?	lt or	1880	1900	1
	C		16755	233x114x67; Frog=102x33x4	dk red/or/brn	1850	1890	1
Ss rect long	A	4	16302	225x105x69; Frog=150x33-40x10	brn-blk	1860	1900	1
	B	2	16921	220x105x70; Frog=156x40-43x10	or	1860	1900	1
Ss rect narrow	B		17105	132+x104x75	or	1860	1900	1
		3	16602	234x108x77; Frog=125x30x14	red-brn	1860	1900	2
			16449	225x105x77; Frog=103x37x16	red-brn	1860	1900	2
			16448	225x107x77; Render Th=15; Frog=105x37x16	red-brn	1860	1900	1
							TOTAL	25

Many of these rectangular frogged sandstock bricks had been reused in drains, garden beds and as pavers. The use of bricks, particularly high fired bricks in drains was common practice as these bricks were less porous. The paving (16181) at the rear of House 4 covered an area 3.65m in length and 400-700mm wide and was only 60-80mm deep. The pavers were a mix of flat and frogged sandstock bricks. The frogged bricks were laid stockface

down while the strikeface was worn (Figure 4.7, Figure 4.8). The presence of frogged bricks confirmed it's phasing to at least 1850s-1880s (Phase 4.2).

Figure 4.7: Ss wide, shallow rect brick; 16337/#8789; used as paver; stockface view showing rect frog. Phase 4.2, Area A (BM sample #93). Scale 100mm. .IMG_3242. Gallery2.

Figure 4.8: Footworn strikeface of same brick; 16337/ #8789; shows very large red ironstone inclusions (BM sample #93). Scale 100mm. IMG_3244. Gallery2.

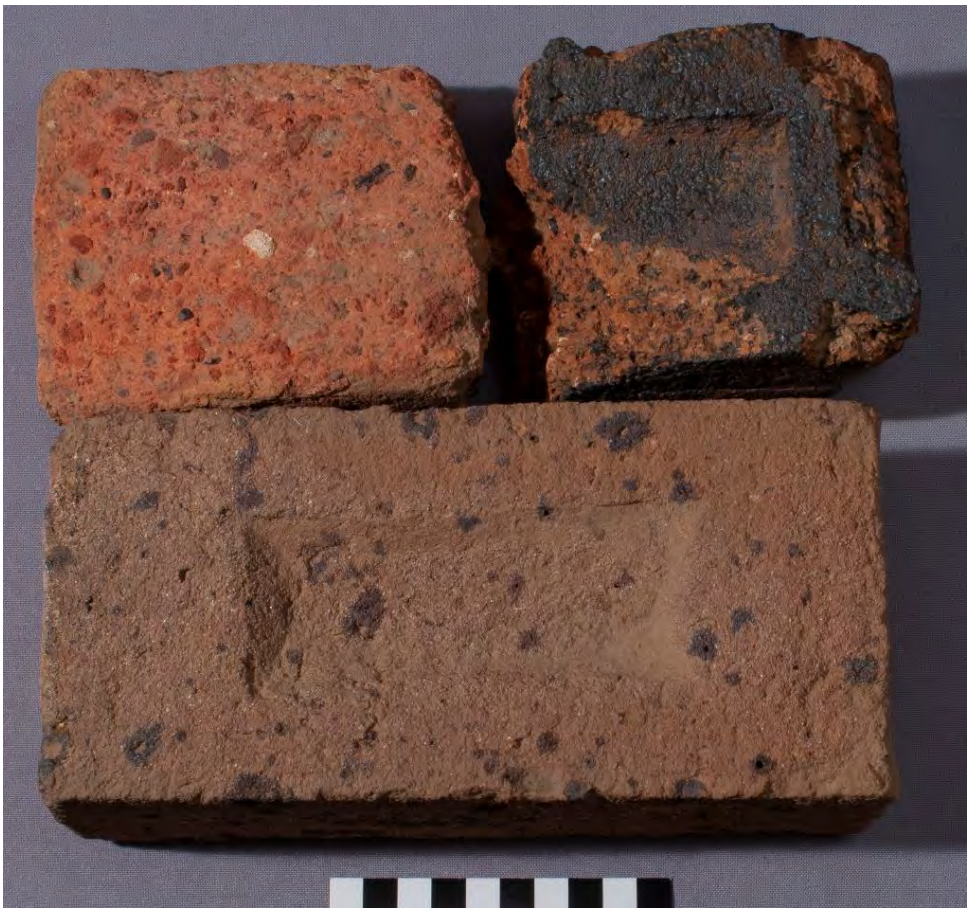

Figure 4.9: Ss rect wide brick type from Area A, House 4. Top row (l-r): broken red brick, footworn strikeface, from paving 16181/#8638 laid after c.1850 (BM sample #76); broken brick stockface with frog and black vitirifed surface from overfiring in the kiln, from levelling fill 16182 (#8639). Bottom row: whole brick with frog in stockface from same paving 16181/#8638. Scale 100mm. IMG_3168. Gallery2.

The narrow rectangular frogged bricks (Ss rect narrow) were only sampled from Area B. Bricks were sampled from the wall footings of House 3 (BM samples #29 and #32). Some of the narrow-frogged bricks still had a hard, grey lime mortar and lime render attached (16448/#8940 and 16449/#8941). Both bricks were overfired to a red-brown colour. Two bricks were sampled (16602, BM sample #21) from a garden path running north-south along the eastern side of House 3 (Phase 5.1). The bricks were overfired both with kiln stacking marks visible on one side (Figure 4.10, Figure 4.11). The bricks were quite poorly mixed and crushed with large exploded ironstones. The whole brick measured 234 x 108 x 77mm while the narrow frog measured 125 x 30 x 14mm. A fragment of a narrow rectangular frogged brick was also collected from the post-pipe fill (16448/#8940) of a posthole in Area B associated with Phase 5 (1880s-1960s) with remnant hard lime mortar attached to the brick.

Figure 4.10: Ss narrow rectangular type bricks from Area B, House 3 garden path (16602/#9862, BM #21). Top: fragment showing overfired clay fabric. Bottom: whole brick showing narrow rectangular frog in stockface. Scale 100mm. IMG_3162. Gallery2.

Figure 4.11: The same brick (16602/#9862, BM #21) showing one side with vertical kiln stacking marks. Scale 1m. IMG_3164. Gallery2.

The long rectangular frogged bricks were also used in the construction of the brick well (16302/#9107) associated with the later phase of House 4 (1850s-1880s, Phase 4.2). The sampled brick from the well (BM sample #109) was an overfired clinker with frequent overfired ironstones and a patchy black vitreous surface and kiln marks (Munsell 5YR 4/1, dark grey). The brick measured 225 x 105 x 69mm. The frog was warped and measured 150 x 33-40 x 10mm. Similar bricks were also found in the cesspit (16921/#8993, BM sample #54)) at the rear of House 2 (Phase 5.1).

4.2.1.2.2 HEART-SHAPED FROGS (C.1860-1890)

Heart-shaped frogs were primarily used in the construction of Cranbrook (House 1) in 1888. The manufacture dated for these bricks dated from c.1860-1890s although the use of a heart mark on bricks can be found on bricks as early as 1830. The bricks varied in colour from orange-brown to red-brown with frequent ironstones (Figure 4.12), while the overfired bricks were a darker red-brown with common exploded ironstones. The heart shaped frogs were quite shallow 6-11mm deep, usually with a concave base and showed no evidence of reuse., suggesting they were intentionally sourced for the construction of Cranbrook. On average they measured 230mm long, 110mm wide and 79mm high. Some of the bricks sampled from the Cranbrook footings had light grey lime mortar attached (16146/#8581 and #8584). Some heart-shaped frogged bricks were also found in the footings of the

outbuilding/laundry (16342) at the rear of House 1, although this structure was predominantly constructed from dry-pressed and machined bricks. A number of heart-shaped bricks (14 MIC) were also found in Area B associated with House 2 and House 3 (Northiam and Harleyville). Although the foundations of these two houses were constructed using rectangular frogged bricks, the Ss heart bricks were found in areas of paving (16598), the dividing wall of the front verandah (16429) and the property dividing wall in the back yard. The heart-frog bricks were also used in the laundry room, as brick pads for timber floors (16466) within the rooms and in the construction of the larger outbuilding and all four cesspits at the rear of both houses.[50] The heart-frogged bricks were found in structures which also had later dated bricks indicating they were reused throughout the study area.

Table 4.7: Heart-shaped frogged bricks within 3PS. Some of the bricks sampled have later manufacture due to the presence of concrete mortar/renders on the bricks.

Type	Area	House	Context	Dimension	Colour	From	To	#MIC
Ss heart	A		16205	92+x114x75, 235+x112x75	or/lt brn	1860	1900	2
		Laundry	16342	201+x113x79	brn	1890		1
		1	16130	226x104x80; Frog=80x60x6	mid brn/or	1860	1900	1
			16143	230x107x76	red/or	1860	1900	1
			16158	236x110x71	dk red/brn/ maroon	1860	1900	1
			16146	232x110x74	dk yell/red	1860	1900	2
			16146	225x106x76	red-brn, ppl-brn	1860	1900	2
			16158	230x106x79	dk red-brn	1880	1900	1
	A South		16353	153+x110x75	red-brn	1860	1900	1
			16252	232x114x77; Frog=90x55x11	dk or-brn	1860	1900	1
	B	2	16598	230x110x78	bright or	1860	1900	1
			16635	45+x114x76	dk red/brn	1860	1900	1
			16708	84+x100x79; Frog 84+x65x9	brn	1860	1900	1
			16785	200+x106x75; Frog=80x42x7	dk grey	1860	1900	1
			16921	234x115x73	dull brn-or	1860	1900	1
		3	16917	232x112x74	or, lt brn/red	1860	1900	2
			16919	232x110x73	or	1860	1900	1
			16466	223x114x72	dk or-brn	1860	1900	2
			16429	230x114x75	lt red-brn	1860	1900	2
			17009	235x112x74	red	1860	1900	2
	C		16706	92+x112x81	or/brn	1860	1900	1
			16421	230x103x78	red/brn	1860	1900	1
			16421	230x109x81	red/brn	1860	1900	1
		5	16616	229x112x79	or/brn	1860	1900	2

[50] For detail of context numbers, see Section 8.1, Area B Trench Report, 3PS, Parramatta, Vol 2, Sec 7.2 of the Final Report.

Type	Area	House	Context	Dimension	Colour	From	To	#MIC
			16662	232x111x78	or/brn	1860	1900	2
			16746	104+x83+x74	or/brn	1860	1900	1
			16706	75+x115x76	or/brn	1860	1900	1
		6	16604	225x111x49	red-brn	1860	1900	2
	D		17856	230x114x78	dk red-brn	1860	1900	1
							TOTAL	39

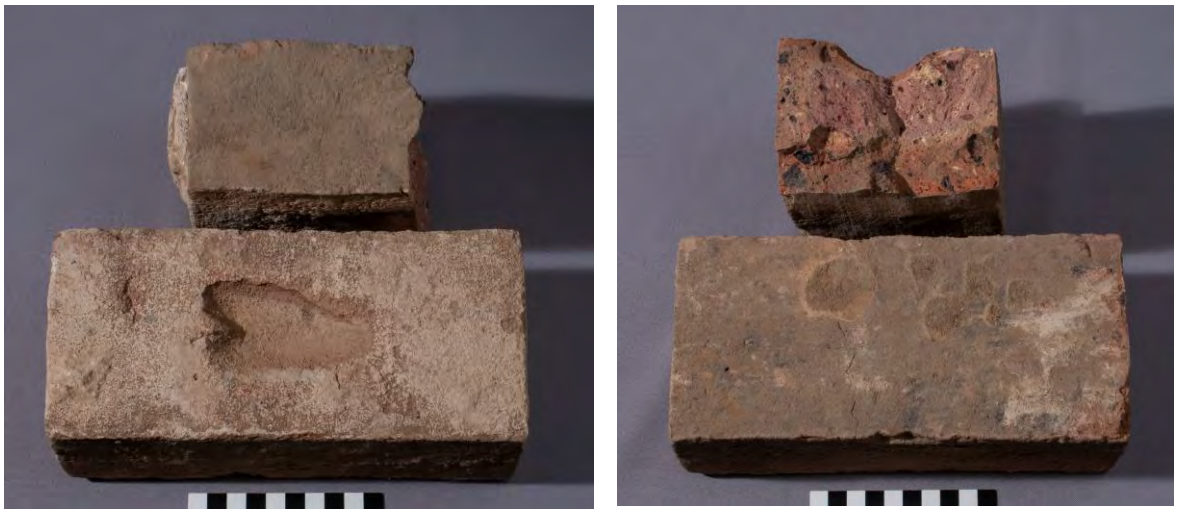

Figure 4.12: Ss heart brick 16146/#8584 from wall footings of Cranbrook (House 1). The brick has a pink-grey lime mortar on the faces and ends and measured 225x106x76mm. Right: the same brick showing mortar on the strikeface and fabric interior (BM sample #69). Scale 100mm. IMG_3172 and IMG_3174. Gallery2.

4.2.1.3 FIREBRICKS AND EXTRUDED PRESS BRICKS (C.1870-1890)

In the 1870s the introduction of steam-powered brickmaking machines had an enormous impact on brick production particularly in Sydney within the next ten years the process of brick making was almost entirely mechanical. The earliest of these machines was extrusion and semi-plastic machines. The extruded machines required a soft moist clay to pass through the die then the clay was cut off by a wire (wire-cuts) into slices the size of a brick. To improve on the drying time needed for this extraction method mechanically operated hard-presses were introduced to consolidate the bricks, this method was termed "pressed bricks".[51] The machine-made bricks are all summarised in Table 4.8.

Table 4.8: Summary of the machine-made bricks collected from 3PS site.

Type	Area	House	Context	Dimension	Colour	From	To	#MIC
Firebrick extruded press Goodsell	A		16198	75+x58+x20+	lt grey	1869		1
Firebrick semi DP 2	A		16186	157+x90x75	yell-brn	1870		1
Extrud semi plastic press double rect	B	2/3	16446	242x117x80; Frog=165x60-x13; Mrtr Th=10	bright or	1870		1

[51] Gemmell 1986: 21-23.

Type	Area	House	Context	Dimension	Colour	From	To	#MIC
		3	16429	240x118x80; Frog=170x65x9, 160x62x7	bright or	1870		2
Extrud semi plastic press rect	A	4	16201	240x120; Frog=160x60x8	or	1870		1
	B	3	16677	102+x90+x52	or	1870		1
Semi DP rect	A		17574	59+x56+x81	lt red	1870		1
	B		16591	235x112x80; Frog=80x65x9	pink-brn	1870		1
Dry-pressed (DP)	A		16342	240x114x77	maroon	1890		2
	B		16708	151+x112x80	Pink-brn	1890		1
		2	16598	242x106x82	dk maroon	1890		1
	C		16754	100+x112x79	or/brn	1890		1
							TOTAL	14

Two different types of firebrick were found during excavation. They were not directly associated with any structures on site but could be phased between the later occupation of House 4 (Phase 4.2) and the pre-Cranbrook levelling fills (Phase 5.1). Firebricks were hard and fire-resistant, being made from clays rich in alumina and silica. There was large scale importation of firebricks from the UK by the late 1850s. They often came as ballast in ships and fetched good prices in the colony being used mainly in arches of fireplaces by foundries and bakeries. Local production of firebricks in Sydney only began in the 1860s.[52]

A fragment of a locally made extruded firebrick (16198/#8658) was found within back yard fill associated with the later occupation phase of House 4 (c.1850s-1884) and pre-dating the levelling fills for House 1 (c.1884-1888). The firebrick was machine extruded and pressed, medium fired and a light brown colour (Munsell 10YR 8/4). Impressed letters 'NE[WTOWN] were evident on the broken face of the brick near the left-hand side border. The first steam brickmaking machine installed in NSW was at the Newtown Brickworks in 1869 which was operated by Frederick J Goodsell in partnership with Alfred Tye. Early bricks manufactured by Goodsell were stamped “G T Newtown”.[53] Sometimes the bricks were stamped G & T on one face and NEWTOWN on the reverse face.[54]

The second firebrick, was a partial brick, semi dry-pressed (Figure 4.13) and was found within an artefact rich dump (16186/#8644). The dump was located near the southwest corner of House 4 in the backyard area but post-dated the demolition of the early house. The fill (16186) mostly contained broken bottles along with pipes, buttons, ceramics and was believed to have been opportunistic disposal of household rubbish in dips and hollows while the land was vacant (c.1884-1888) and before the building of Cranbrook (House 1) and not related to any structures on 3PS site. The brick was very dense, well mixed and crushed, fired to a yellow-brown colour (Munsell 10YR 8/3). It measured 90mm (wide) x 70mm (depth). The full length was not known. The number ‘2’ was impressed at the broken end (Figure 4.13), there were no other markings. It is not known if this brick was imported or locally made.

[52] Varman 1993: 51-55; Gemmell 1986: 56.

[53] Varmen 1993: 104-106.

[54] Gemmell 1986: 67-68.

Figure 4.13: Partial semi DP firebrick with mark '2' visible on the face. This brick is from a bottle dump (16186/#8644) within the levelling fills that pre-dated Cranbrook. Scale 100mm. IMG_3101. Gallery2.

Extruded Press Bricks

Five (MIC) extruded semi-plastic bricks were collected from site (Table 4.8). This brick type was further subdivided as some of the bricks had a rectangular frog on both faces "double rect" (Figure 4.14, Figure 4.15), while others just had one frog. These extruded-press bricks had manufacture dates from 1870 onwards and were used in the construction of the terraces (Northiam & Harleyville) in Area B, Lot 30. Only samples of the bricks were retained from each of the houses. Brick sample #37 (16446/#8939) came from Northiam (House 2) and sample #40 from Harleyville (16429/#8933). The houses were built at the same time and shared foundations and walls with same double rectangular frogged bricks found in both. The bricks were all a bright orange/red colour, well mixed and crushed, very dense and measured approximately 240 x 118 x 80mm. The frogs were wide but shallow (170 x 65 x 9mm). Kiln marks were visible on some bricks. A remnant hard lime mortar was also present on the bricks (Figure 4.19, Figure 4.20). Within Area A, a semi-plastic extruded brick with one rectangular frog (16201/#8664) was collected from the demolition debris within House 4, Room 5 (Phase 4.2). This brick had clear evidence of overfiring on one side (Figure 4.16), it also had remnant lime mortar and cyclopean concrete attached to the brick suggesting it was not from the occupation phase of House 4.

Figure 4.14: Extruded semi-plastic pressed brick (BM sample #40) with opposing rectangular frogs from Northiam (House 2) in Area B (16249/#8933). Scale 100mm. IMG_3102. Gallery2

Figure 4.15: The same brick (16249/#8933) showing the second frog on the opposite face with machine marks within the frog. Scale 100mm. IMG_3107. Gallery2

Figure 4.16: Side view of two extruded semi-plastic bricks. Top: Brick from demolition fill in Room 5, House 4 (16201/#8644) from Area A, with disintegrated clay and slag showing overheating in kiln or furnace. Bottom: brick from Area B, House 2 (16249/#8933) with darker horizontal kiln mark. Scale 100mm. IMG_3114. Gallery2

4.2.1.4 DRY-PRESSED AND SEMI DRY-PRESSED BRICKS

Only 5 (MIC) dry-pressed machine-made bricks and 2 (MIC) semi dry-pressed bricks were collected and catalogued from the 3PS site (Table 4.8).Table 4.8: Summary of the machine-made bricks collected from 3PS site. Each had the usual characteristics of dry-pressed bricks all with rectangular inverted hipped-roof shaped frogs and manufacture dates from 1890 onwards. The dry-pressed bricks continued to be used throughout the 20th century. The sampled bricks were from the outbuilding (16342/#8795) at the rear of Cranbrook (Phase 5), most of the footings of this structure were dry-pressed bricks. Two 20th-century rubbish pits (16708, 16754) and from a brick structure (possible brick base for laundry copper) in Room 5, House 2 (16598) which was also constructed from a variety of sandstock brick types. The later dating of this brick indicates that the structure in Room 5 (16598) was not part of the original construction of House 2 but a later addition to the room.

The semi-dry pressed bricks were also machine-made and have an earlier manufacture date (1870 onwards) than the dry-pressed bricks. These bricks were used in the construction of Northiam and Harleyville (c.1883). One brick was sampled (BM sample #38) from a north-south internal dividing wall between House 2 and House 3, Area B (16591/#8954). The brick was well fired light red-brown colour, extremely dense with a rectangular inverted hipped frog and machine screws within the frog. It measured 235 x 112 x 80mm. The frog measured 80 x 65 x 9mm.

4.3 TILES

4.3.1 OVERVIEW OF TYPES

A range of tiles were found on site including roofing tiles, geometric floor/paving tiles, indoor decorative finish tiles and garden edging tiles (Table 4.9). The majority of the tiles came from Lot 30 and were associated with the occupation of the 1880s brick houses (Cranbrook, Northiam and Harleyville). The tiles were mostly found within demolition fills associated with these houses. The following is a summary of the tiles recorded and catalogued from site and their respective date ranges:

Roof and garden tiles:

- Sandstock clay roof tiles (Sydney made) 1788-c.1810
- Sandstock clay roof tiles (Parramatta made) 1790-c.1810
- Sandstock garden edging tiles 1865-
- Marseilles roof tiles 1886-

Finish and floor tiles, all dust-pressed clay tiles:

- Geometric tiles c.1840s-1970s
- Finish tiles (general) c.1840s-1960s
- Glazed aesthetic tiles c.1870s-1920s
- Glazed majolica tiles 1890-1940

Table 4.9: Summary of all tiles collected from 3PS site.

Spec Funct	Area	Type	From	To	#MIC	%
finish	A	Dust pressed geometric	1840	1970	4	2.7%
		Dust pressed glz	1850		1	0.7%
		Dust pressed geometric	1850	1970	1	0.7%
			1852	1883	2	1.4%
			1860	1970	2	1.4%
		Dust pressed glz	1870		1	0.7%
		Dust pressed glz tp aesthetic floral	1870	1920	2	1.4%
		Dust pressed glz tp aesthetic peony	1870	1920	7	4.8%
		Dust pressed glz tp aesthetic chrys	1880	1911	5	3.4%
		Dust pressed glz block Gothic Arts & Crafts	1880	1920	13	8.8%
		Dust pressed glz tp aesthetic primrose	1884	1920	6	4.1%
		Dust pressed glz tp aesthetic strawb	1884	1920	3	2.0%
		Dust pressed glz majolica	1890	1940	1	0.7%
garden		Semi-plast sglz cable	1865		13	8.8%
roof		Ss Ridge 1	1788	1810	1	0.7%
		Ss SL1/Peg1	1788	1810	1	0.7%
		Ss DL1/SL2	1790	1810	3	2.0%
		Ss Ridge 2	1790	1810	1	0.7%
finish	A Sth	Dust pressed geometric	1840	1970	1	0.7%
			1860	1900	2	1.4%
		Dust pressed glz majolica	1890	1940	3	2.0%
garden		Semi-plast sglz cable	1865		2	1.4%
finish	B	Dust pressed geometric	1850	1970	5	3.4%
			1852	1883	18	12.2%
		Dust pressed glz	1880		1	0.7%
			1880	1960	5	3.4%
		Dust pressed glz majolica	1890	1940	1	0.7%
		Dust pressed glz	1891	1960	1	0.7%
		Dust pressed glz majolica	1895	1940	1	0.7%
		Dust pressed glz majolica tubeline	1895	1940	1	0.7%

Spec Funct	Area	Type	From	To	#MIC	%
roof	B	Marseilles sglz	1886		4	2.7%
		Marseilles Wunderlich	1913	1969	4	2.7%
finish	C	Dust pressed glz	1840		3	2.0%
		Dust pressed geometric	1840	1970	3	2.0%
		Dust pressed glz	1850		1	0.7%
			1852		1	0.7%
		Dust pressed geometric	1852	1883	1	0.7%
		Dust pressed glz	1860		2	1.4%
		Dust pressed geometric	1860	1970	1	0.7%
		Dust pressed glz	1870		3	2.0%
			1880	1960	1	0.7%
		Dust pressed glz majolica	1890	1940	7	4.8%
		Dust pressed glz	1901	1940	1	0.7%
roof		Marseilles	1886		2	1.4%
		Marseilles sglz	1886		1	0.7%
roof	D	Ss Ridge 1	1788	1810	1	0.7%
		Ss DL1/SL2	1790	1810	3	2.0%
				TOTAL	147	*100%*

4.3.1.1 ROOF TILES

Both early sandstock clay roof tiles (1788-c.1810) and later Marseilles roof tiles (1886 - 1969) were found on site along with slate roof tiles.

4.3.1.1.1 SANDSTOCK CLAY ROOF TILES 1788-C.1810

Ten (MIC) clay roof tiles were found within the 3PS study area. Sandstock clay roof tiles are recorded as having been made as early as 1788 in Sydney at Brickfield Hill and from 1790 in Parramatta. These early tiles were made in rectangular wooden moulds and were not very successful with one third of the tiles from any one kiln commonly destroyed during firing and many more losses during transportation. After excavations of a number of Parramatta sites by Casey and Lowe[55] it was possible to identify seven different varieties of early roof tiles made according to two distinct typologies (see Figure 4.17).[56]

Of the 10 sandstock roof tiles collected from 3PS they represented four of the different identified varieties (Table 4.10). Three were identifiable as Sydney made, while the other seven were locally made Parramatta roof tiles. The Sydney tiles were a light pink or pink-buff colour, distinct from the Parramatta tiles which were browner in colour reflecting different clay sources. The clay was poorly mixed and crushed. The pale colour was due to low firing. As the fragments were small there were no lugs/nib or pegs evident. The curved or ridge shape was what distinguished the ridge roof tiles from the rectangular tiles (Figure 4.18). The Parramatta made tiles ranged in colour from buff (low fired) to orange, then to a red-brown colour. The clays were well mixed and crushed and less sandy than the Sydney tiles. The thickness of the Parramatta tiles was also generally larger (15-17mm). Again, the fragments were small but the ridge tile fragments were clearly distinguishable from the rectangular tiles.

[55] A large number of roof tiles were found at Parramatta Hospital Site (PJP) excavated in 2005-06, and the adjacent Parramatta Children's Court Site (PCC) excavated in 2004.

[56] Stocks, 2008a, p.17-23 (with full references).

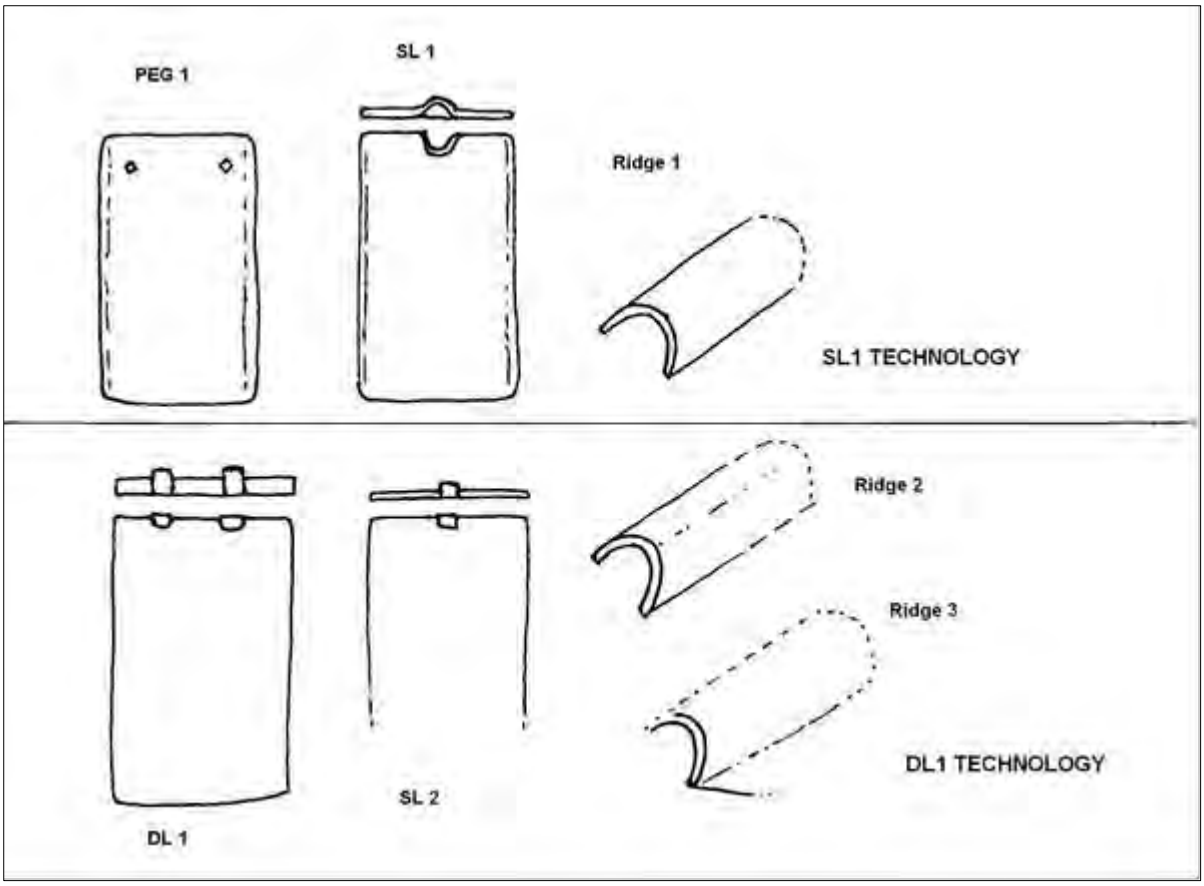

Figure 4.17: Sandstock roof tile typology. Four varieties of tiles were found on site (see table below). The different tiles types and technologies used are discussed in detail in Journal of Australasian Historical Archaeology (AHA), Volume 26, 2008b:32.

Table 4.10: Sydney and Parramatta early sandstock clay roof tiles and their contexts.

Manufacture Location	Tile Type	From	To	Area	Context	Colour	#MIC
Sydney	Ss Ridge 1	1788	1810	A	16101	pink	1
				D	17819	pink	1
	Ss SL1/Peg1			A	16101	buff-pink	1
Parramatta	Ss Ridge 2	1790	1810	A	16177	light red-pink	1
	Ss DL1/SL2	1790	1810	A	17548	buff	1
					16164	buff	1
					16101	pink	1
				D	17818	orange	1
						pink, light-brown	2
						TOTAL	10

The majority of the tile fragments were small and worn edge fragments. They were found within general clean up contexts (16101, 17818), imported levelling fill from the 1880s (16177) and modified topsoil (16177), therefore not directly associated with any structures on site. One fragment was located in the levelling fill (17548) that pre-dated the early 1820s cottage, House 4 on Lot 30 (Phase 4.1) and finally a fragment was found in the demolition debris (16164) in the extension room (Room 5, Phase 4.2) of the early cottage. These tile fragments all appear to have been redeposited and not associated with the occupation of the early cottage in Lot 30. Evidence that these early tiles have been reused has been found at other

sites in Parramatta, where they were used as drain linings and informal path or surface paving.[57]

Figure 4.18: Ss roof tiles dating c. 1788-1810. Top row (l-r): first three frags pink in colour; final frag red. Middle row (l-r): White, pink, red. Last row: first two frags white in colour, final large frag is red. Scale 100mm. Contexts 17818 and 17819. IMG_3246. Gallery2.

4.3.1.1.2 MARSEILLES ROOF TILES (1886-)

A small number (11 MIC) of glazed and unglazed Marseilles (or French Pattern) roof tiles were retrieved from the 3PS study site. They were first imported into Australia in c.1860, gaining popularity after 1888. These terracotta tiles were typically used to cover thousands of Australian homes in the late 19th and most of the 20th century. The sampled tiles fragments were all a red to red-brown colour and were found in both Area B (Lot 30) and Area C (Lot 32).

A large concentration of glazed terracotta Marseilles roof tiles was found in a shallow depression (16776) in the rear yard of Harleyville (House 3, Lot 30) close to the outbuilding covering an area 700 x 800mm to a depth of 50mm (see Plan 18, Vol. 4, Sec. 10). The tiles may have been used on the roof of the outbuilding/coachhouse, or one of the WCs in the rear yard of House 3, then used to fill and level the depression when the structure was demolished.

The dumping of the tiles in a depression would have also aided with poor localised drainage. The tiles within context 16776 were impressed with 'WUNDERLICH LIMITED / SYDNEY' (cat #9113) indicating Sydney made tiles with the Wunderlich brand (c.1913-1969) and not imported tiles. The Wunderlich company was established in Sydney in 1885 by Ernest Wunderlich. The company operated as manufacturers and importers of pressed metal ceilings, tiles and fibro sheeting throughout the latter part of the 19th century until it was dissolved in 1969. They imported their first batch of Marseilles roof tiles in 1892.[58] Only the export tiles were red the European French tiles retained a slate grey, this was to change the face of Australian Colonial cities. In their forty-year history Wunderlich Limited claims "Wunderlich's have literally painted the town red".[59] World War 1 made importation of Marseilles tiles almost impossible, hence Wunderlich Limited began producing their own branded roof tiles. The dating of the tiles in context 16776 to the early 20th century could

[57] Stocks 2008a, PJP Structural ref from 2nd Hospital paved areas. Tiles were also found in the drain behind the Byrnes residence during the George &Charles Street excavation in 2002.

[58] Varman, R 2006: 7-10

[59] https://collection.maas.museum/object/190698

suggest the broken tiles may have been leftover or damaged stock from a re-roofing event in the early-mid 20th century. The remaining Marseilles tile fragments were found within a garden bed fill (16442) which also contained an 1952 three pence coin, a late 20th century yard surface (16615) in Area C and the packing fill (16677) of a modern posthole (Figure 4.19, Figure 4.20).

Figure 4.19: Left: large broken slate roof tile with peg hole from Cranbrook (16194/#8654). Right: Marseilles roof tile from rear yard of House 3 (16677/#8965). Bottom tile has a shiny glaze. IMG_3255. Gallery2.

Figure 4.20: Marseilles tiles from Figure 4.19 inverse view. Mark on underside of top tile, '08 1129'. Bottom tile shows underside of corner frag with shiny glaze. From Hs 3 rear yard 16677/#8965. IMG_3256. Gallery2.

4.3.1.1.3 SLATE ROOF TILES (C.1840 -)

Roofing slate was a material that was commonly used in Australia from c.1840 and most popular during the 1870s to the end of the century. Most slate found on this site was of the dark grey variety with occasional grey-purple coloured tiles (Figure 4.19). Fragments of slate were found throughout the entire study area of 3PS with 95 MIC (205 fragments) collected and catalogued. Some of the fragments had evidence of nibbled edges and nail holes. Historic records indicate Cranbrook had a slate roof.[60] The slate roof tiles were also used for paving, as damp coursing between the brick walls of houses or when tiles were broken, scattered as yard fill.

4.3.1.2 FINISH & FLOOR TILES

All the finish tiles (111 MIC) collected from site were clay tiles made using the dust-pressed method. These tiles were used to finish various structures or to protect or decorate walls and floors. The tiles included pretty floral aesthetic tiles and art nouveau style tiles, possibly from around the fireplaces. The geometric tiles were predominantly used for a tessellated floor or pavement but could have also been found around the front of a fireplace. Most of the tiles were glazed and decorated using a range of colours (Table 4.11). The plain glazed tiles were from bathrooms or kitchens. The majority of the tiles were found within the demolition debris associated with the 1880s brick houses (Cranbrook, Northiam and

[60] 3PSTrench Report, Area A and A South, May 2016: 128. Volume 2, Section 7.1 of the Final Excavation Report.

Harleyville) within Lot 30 and dated from the mid 19th to early 20th century (Phase 5.1). There were no finish tiles found associated with the early cottage (House 4) or within Area D.

Table 4.11: Finish tiles from 3PS study area.

Area	Type (Dust Pressed)	Colour	Decoration Colour	From	To	#MIC
A	Geometric	ivory		1840	1970	2
		white		1840	1970	2
		red-brown		1850	1970	1
		blue		1852	1883	1
		tan		1852	1883	1
		dk red	yellow mottle	1860	1970	1
		grey speckle		1860	1970	1
	Glazed	white	cream	1850		1
		or/brn	white	1870		1
	Glazed aesthetic transfer print floral	white	cream, dk brn	1870	1920	2
	Glazed aesthetic transfer print peony			1870	1920	7
	Glazed aesthetic transfer print chrysanthemum	grey-grn	brn, yellow, grn, blue	1880	1911	5
	Glazed block Gothic Arts & Crafts	white	black	1880	1920	13
	Glazed aesthetic transfer print primrose	cream	brn	1884	1920	6
	Glazed aesthetic transfer print strawberry	white	cream, dk brn	1884	1920	3
	Glazed majolica	cream	red-brn	1890	1940	1
A South	Geometric	white		1840	1970	1
		dk grey		1860	1900	2
	Glazed majolica	cream	blue	1890	1940	1
		white	dk brn	1890	1940	1
			green	1890	1940	1
B	Geometric	blue		1850	1970	5
				1852	1883	4
		dk grey		1852	1883	4
		tan		1852	1883	10
	Glazed	white	white	1880		1
			lt blue	1880	1960	3
			yellow	1880	1960	2
			maroon	1890	1940	1
			yellow	1891	1960	1
			dk blue	1895	1940	1

Area	Type (Dust Pressed)	Colour	Decoration Colour	From	To	#MIC
			dk blue-blk	1895	1940	1
	Glazed majolica tubeline	white	blue	1895	1940	1
C	Geometric	white		1840	1970	3
		brn speckle		1860	1970	1
		tan		1852	1883	1
	Glazed	white	white	1840		3
		white	cream	1850		1
			white	1852		1
		cream	black	1860		1
		white	blue-grn	1860		1
		cream	green mottle	1870		1
			grn marble	1870		1
		white	dk grn	1870		1
			yellow	1880	1960	1
			white	1901	1940	1
	Glazed majolica	white	dk brn	1890	1940	7
					TOTAL	111

48% (48 MIC) of the finish tiles came from Area A, Lot 30 and were all associated with Cranbrook (House 1). Only 5% (6 MIC) of finish tiles were from Area A South and all came from the same context (16252), the fill of a 20th-century rubbish pit associated with the occupation phase (Phase 5.1) of Cranbrook. 30% (33 MIC) of the finish tiles came from Area B and were found within contexts associated with the occupation and demolition of Northiam (House 2) and Harleyville (House 3). The remaining 22% (24 MIC) of tiles came from Area C (Lot 32). Within Area C, the tiles were found in yard fills, demolition fills associated with outbuildings (Structures 5 and 6) and 20th-century rubbish pits.

4.3.1.2.1 PAVING TILES (DUST-PRESSED GEOMETRIC TILES)

Geometric tiles were predominantly used to form a tessellated pavement. The clay tiles were machine pressed and cut and could be glazed or unglazed. An advertisement for the sale of Cranbrook in 1926 stated it had a tiled verandah on three sides (see Section 4.7.1.1). It is quite possible that the neighbouring terraces (Northiam and Harleyville) also had decorative tiled verandahs. Geometric tiles were also used on fireplace fronts so it is not possible to say with certainty if the tiles collected are from paving or a fireplace surround. A total of 40 MIC geometric tiles were recovered from site. The largest number was from Area B (23 MIC), followed by Area A (9 MIC) and only a few from Area A South (3 MIC) and Area C (5 MIC). All the dust-pressed geometric tiles within Area B were found within the demolition debris (16402 to 16406) of Rooms 1, 2 and 3 of House 3 (Harleyville) with only one fragment located within House 2 (16431). Rooms 1, 2 and 3 were believed to be the parlour, dining room and kitchen (Figure 8.12, Area A Trench Report, Vol 2., Sec. 7.1). These tiles were all made from two manufacturers, Maw and Co (1852-1883) and Minton Hollins &

Co (1850-1970). Minton and Maw were both major tile makers of the 1870-1910 period.[61] The tile shapes included triangle, square, rectangle and octagonal, most were unglazed or a thin clear glaze. The tiles were all a single colour, and the three colours were dark grey, tan and blue (Figure 4.21). Some of the tiles had remnant light grey hard cement grout still attached. Many of the tiles had raised bars on the back with manufacturer marks in relief, for example, '[MAW] & CO / [BRO]SELEY' and '[MA]W & Co / [BEN]THALL', both in context 16403, Room 3 (see Artefact Catalogue 6.3. Vol 6, 3PS Final Excavation Report). The Minton Hollins & Co tiles in House 3 were all blue in colour with horizontal bars and raised letters including the initials of Minton Holland and Company (e.g. 'M H & Co / 16 W' and 'M.H. & Co / 1/W6').

The geometric tiles in House 1 (Cranbrook) included the same manufacturers Maw and Co, Minton Hollins & Co and a number of unidentifiable tiles with no marks or initials visible. The same blue and tan clay tiles were only found in the clean-up fill (16101) in Area A. A number of coloured tiles (white, ivory, red-brown, dark red/ yellow mottle and grey speckle) were found within the rooms of Cranbrook that were not found in the other two houses (Figure 4.22). Cranbrook, a single-story house had a total of twelve rooms and three verandahs. Although the tiles are believed to be mainly paving tiles, they were located within the demolition fills of Rooms 3, 8 and 9, which were all bedrooms. This could suggest the tiles were from a fireplace surround and not necessarily used as pavers or the remnant demolition debris was not in situ but were scattered throughout the house. Most of the geometric tiles were either 10mm or 12mm in thickness. The two mottled coloured tiles were alot narrower (6mm thick) with smooth backs and no glaze. Both of these tiles (16158/ cat #8612, #8613) were within the demolition fill of Room 9, House 1. The rectangular grey speckled tile (cat 16158/#8612, Figure 4.29) had bevelled edges along two sides. These geometric tiles with smooth backs and multi colours are generally more recent in date, possibly a renovation or repair in the 20th century. The thinner tiles use less clay and the speckle or multicolour designs may be a fashion trend or different manufacturer.

Figure 4.21: A collection of pavement tiles. From the demolition fills of House 3, Area B. Contexts 16402, 16404, 16405 and 16406. Scale 100mm. IMG_3413. Gallery2.

[61] Riley, 1987:103

Figure 4.22: Geometric tiles from a number of contexts associated with the demolition phase of Cranbrook, House 1, Area A. Note the blue and tan tiles were found in a general clean-up context (Area A) and are the same as the tiles within House 3. The lower photo shows the same tiles in reverse with raised bars and manufacture marks on the back. Contexts 16101, 16104, 16127, 16152, 16157, 16158. Scale 100mm. IMG_3422 + 3430. Gallery2.

4.3.1.2.2 AESTHETIC TILES (DUST-PRESSED) - FIREPLACE TILES AND MARBLE

Five different types of decorative dust pressed glazed clay tiles (36 MIC) were found within the demolition fills and general cleaning fills of Cranbrook (House 1). Many of the tiles were within the demolition fills where separate context numbers were assigned to each room. The rooms containing tiles were Rooms 2, 3, 8 and 9 (bedrooms) and Room 6, believed to have been a bathroom. The two main types were glazed block print Gothic Arts and Crafts and glazed transfer print aesthetic floral tiles. The floral patterns included chrysanthemum, poeny, primrose and strawberry plant spray with flowers and fruit (Figure 4.23). The block print tiles were all white rectangular tiles with a lithograph block printed alternating stylised thick black flowers and tendrils bordered by 2 black lines (Figure 4.24). These rectangular border tiles could be from the border of a fireplace, floor or wall. A large concentration of these tiles (8 MIC, 24 fragments) were found in Rooms 2 and 9 (Table 4.12) suggesting they are from a fireplace surround as these rooms were both bedrooms.

13 fragments (5 MIC) of glazed transfer print aesthetic tiles with chrysanthemums print and tint were collected from Area A, 8 fragments were from the demolition fill of Room 3 (bedroom), House 1. These stylish colourful 6-inch tiles (Figure 4.25) were from a fireplace surround, and fashionable for the time. The tiles are dated 1880-1911, contemporary with the construction of Cranbrook. The reverse of one tile (16106/#8525) had a brown stamped diamond registration mark partly legible 'J' for 1880, '31' for day, month and bundle illegible; and stamped 'S.819', manufacturer Sherwin & Cotton, Hanley in the Country of Stafford operating from 1877 to 1911. Sherwin & Cotton made many tiles especially for the fireplace market. Aesthetic cream and white tiles with either a brown transfer print primrose spray or a dark brown transfer print design were also found in the demolition fills of Rooms 2, 3 and 8. A large number (18 fragments, 6 MIC) of white tiles with a dark brown transfer print of blooming peony bush and stems and a white glaze (Figure 4.26) were found within Room 9, House 1 in context 16127 and dated 1870-1920. This context (16127) was a levelling sand that pre-dated the construction of Cranbrook but it seems more plausible that these tiles were from the demolition of Cranbrook and pressed into the top of the levelling fill as there was also a large concentration of tiles found within the demolition fill (16158) of Room 9. Floral tiles with either a brown transfer print primrose spray or a dark brown strawberry

plant spray with flowers and fruit were found in the demolition fills (16104, 16106 and 16157) of Rooms 3 and 8, House 1 (Figure 4.27) both believed to be bedrooms. Tiles 16106/#8526 and 16157/#8597 both had a registration mark dated 1884. These tiles have manufacture dates from 1884 to 1920. The aesthetic nature of these tiles again suggests they are fireplace surround tiles.

Table 4.12: Summary of decorative dust pressed clay tiles found within demolition fills and cleaning fills within House 1 (Cranbrook) in Area A. The tiles have been separated by types and location within each room of the house.

Type	Room	Colour	From	To	Frags	#MIC
Glazed block Gothic Arts & Crafts	-	white, black	1880	1920	-	1
	9				11	4
	8				2	1
	6				1	1
	3				2	2
	2				13	4
Glazed transfer print aesthetic chrysanthemum	-	grey-grn, brn, yell, grn, blue	1880	1911	5	2
	3				8	3
Glazed tp aesthetic floral	9	white, cream, dk brown	1870	1920	9	2
Glazed tp aesthetic peony		white, cream, dk brown	1870	1920	2	1
	9				18	6
Glazed tp aesthetic primrose	2	cream, brown	1884	1920	2	2
	3				5	4
Glazed tp aesthetic strawberry	-	white, cream, dk brown	1884	1920	1	1
	8				1	1
	3				2	1
				TOTAL	82	36

Marble

15 fragments of white marble were collected from the demolition fill (16158), Room 9 of Cranbrook. This room is believed to be a bedroom and contained a fireplace. The white marble fragments (cat #8615) were all 19-20mm thick, polished on one face suggesting they came from a fireplace mantle or surround (Figure 4.23). Four of the fragments had compact lime mortar on the back. The remaining 4 fragments of marble found on site were from general clean up contexts (16401 Area B and 16423, Area C) and the clay capping (16427) sealing the demolition debris of Structure 6, Lot 3 (Phase 5.1).

Figure 4.23: Group shot of white marble and glazed fireplace tiles from the aesthetic movement and art nouveau dated to c.1870-1920s: left column from context 16158; middle from 16158; right from 16104 all within Area A. Scale 100mm. IMG_4932 (C&L 2018).

Figure 4.24: Detail of black and white gothic arts and craft border tile: (l-r) 16103/#8512 (1 piece), 16103/#8511 (5 pieces), 16104/#8519 (1 piece). Scale 100mm. IMG_3404. Gallery2.

Figure 4.25: Glazed aesthetic chrysanthemum coloured tiles. List (l-r) 16106/#8525 (1 piece), 16104/#9124 (1 piece), 16101/#8506 (2 pieces). Scale 100mm. IMG_3406. Gallery2.

Figure 4.26: Dark brown transfer print 6" square tile with framed blooming peony bush and stems from Room 9/House 1 demolition fill (16158/ #8609). Scale 100mm. IMG_3441. Gallery2.

Figure 4.27: Aesthetic tiles with primrose print from a fireplace surround, Room 3, House 1 (contexts 16104/#8517, 16106/#8526). Scale 100mm. IMG_3461. Gallery2.

4.3.1.2.3 PLAIN TILES (DUST-PRESED) - WALL/FLOOR TILES

Glazed tiles

28 fragments (21 MIC) of non-decorative, glazed tiles were collected from the 3PS study area with manufacture dates ranging from 1840 to 1960. The plain tiles were commonly used on bathroom, laundry and kitchen walls and bathroom floors (Figure 4.28) and were rectangular or square in shape. One orange-brown clay tile with a white glaze was found in a clean-up fill (16198/ #8657) in Area A, while all the other tiles on site were white or cream dust-pressed clay tiles with a variety of coloured glazes including yellow, white, light blue, black and dark green. Only one tile came from Cranbrook, located in the demolition of Room 5 (kitchen). A combination of plain tiles (dated 1880-1960) with a light blue and a yellow glaze (Figure 4.28) came from the demolition fill (16407) in Room 4, House 3 (Harleyville). The tiles were all 6-7mm in thickness, some had grey hard cement mortar attached. Room 4 at the rear of the house was interpreted to be the bathroom. Most of the plain tiles came from Area C. 12 MIC (16 fragments) were catalogued. 8 items were plain white tiles with a white or cream glaze. The remaining 4 items had coloured glazes (black, green marble, blue-green and green mottle). None of the tiles could be linked directly to any structures on Lot 32. Most fragments came from Phase 5.1 fills/surfaces (16615, 16427, 16489) and the Post Office footings (Phase 6).

Majolica Glazed Tiles

24 fragments (15 MIC) of majolica glazed tiles were identified, many found within the same contexts as the glazed tiles. Majolica has been used to describe several types of wares over the centuries which are similar in that the colours are strong and bright but the materials and processes to achieve the effect have progressed over time.[62] The manufacture date for majolica tiles recovered from 3PS site dates from c.1890 to 1940s. These plain tiles were quite distinct with deep coloured glazes (mid blue, dark brown, olive green, dark green). Although the majolica tiles from Area C, Lot 32 all came from different contexts they all had either a dark green or dark brown/maroon glaze (Figure 4.29) suggesting they may have come from the same structure. The only majolica glazed tile within a house was 16136/ #8553 in Room 5 (kitchen), House 1. This red-brown glazed tile had a swan mark in relief on the back of the tile. Swan marks were on Mintons ceramics between 1895 and 1900.

[62] http://www.tile-heaven.co.uk/cats/majolica.htm#what-is-majolica 2000-2009

With the manufacture date of the tile post-dating the house construction this suggests the tile was part of a later modification or renovation within the structure. One art nouveau majolica tile was found in Area B. It was a rectangular border tile glazed white with blue infilled tubeline guilloche design (16401/#8903). It appeared to be part of the same tiling event as other tiles with either a white or a deep dark blue glaze (#8905 and #8899) found in the same context (16401) but could not be tied to a known structure on site (Figure 4.28). All were attached to a hard, grey concrete and dated 1895-1940.

Figure 4.28: Plain kitchen/bathroom tiles from House 1 and House 3. Top row (light blue and yellow glaze) all Area B (#8923, 8922, 8901). Bottom row majolica tiles 16401/#8903, 8905, 8899). The dark blue tile in the bottom right corner had been brush painted cream. Scale 100mm. IMG_3437. Gallery2.

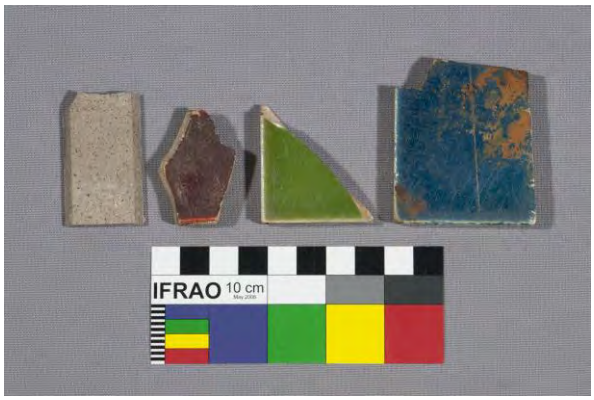

Figure 4.29: Coloured tiles. Left to right: Grey speckled geometric tile (16158/#8612), brown tile (16136/#8553), green tile (16252/#8724) and blue (16252/#8725). Scale 100mm. IMG_3439. Gallery2.

4.3.1.3 GARDEN EDGING TILES (C.1865 -)

Fifteen (15 MIC) garden edging tiles were collected from site, mostly within demolition fills from Cranbrook (Phase 5.3) and mid 20th-century rubbish pits. Two of the tiles came from the levelling fills (16127) pre-dating Cranbrook (Phase 5.1). All the tiles came from Area A and A South, Lot 30. The tiles were all very similar light-brow to brown semi-plastic extruded pressed stoneware tiles with Victorian cable pattern and a salt glaze with a manufacture date from 1865 onwards (Figure 4.30). The cable decoration varied in style and thickness between the tiles. The tiles varied in width from 142-157mm and 20-46mm in thickness. The full length of the whole tiles was 200mm.

Figure 4.30: Cable garden tile, #8542, from levelling fill (16127) in Area A that pre-dated the brick house, Cranbrook. IMG_3184. Gallery2.

4.4 MORTAR, RENDER AND PAINT

4.4.1 OVERVIEW

Numerous fragments of mortar and render were found throughout the site in various deposits, fills and structures. Many of the samples had great similarities and can be grouped together. Some of the mortar samples can be compared to mortar found on bricks to help with dating and phasing the mortar. A total of 194 items (MIC) of mortar and render were sampled and are summarised in Table 4.13. This table includes mortar and render samples still attached to brick samples. The focus of the mortar and render samples discussed here will be those from structures within the study area of 3PS and not on isolated fragments collected from postholes, pits and fills.

Table 4.13: Mortar and render samples catalogued from 3PS study area were separated and discussed under the following shapes. The mortar/render samples attached to bricks have been included with this total.

Specific Function	Shape	#MIC
Structural	Mortar	45
	Concrete	2
Structural/finish	Brick & Mortar	43
	Brick & Render	3
	Mortar/Render	2
Finish	Render	21
	Render & Set	70
	Set	1
	Mouldings	7
	TOTAL	**194**

All the mortar and render samples could be further divided into three main types: shell, lime and concrete, based on the fabric used. Crushed and burnt shell was widely used as a source of lime right up to the 1880s as rock lime did not become available until the 1840s and even then, it was not widely used until the 1880s. By the late 19th century lime was readily available and hard durable cement and concrete was commonly used. Although the same

techniques and materials were used to make both the renders/plaster and mortars, they were separated based on their function. Mortar was used in the construction of the walls and footings of a structure while the render or plaster refers to the finish and decoration on the walls, floors and ceilings including mouldings.

4.4.1.1 SHELL SAND MORTAR AND RENDER

The early nineteenth century shell sand mortars and renders found on site had some distinct differences in their colour and composition. These changes in colour and composition indicate different batches/mixes and even different phases of construction. The majority of the shell sand mortar and render samples came from Area A and were within postholes features and fills, occupation deposits and demolition fills associated with House 4 (c.1822-1884). Most of the samples were of render (2-coat or 3-coat plaster), with a range of different paint colours.

Shell Sand Mortar

Few samples of mortar were collected from the structural remains of House 4 as most of the house was a timber construction. The front verandah footings, fireplaces, brick pads in the front verandah and shallow single brick rows (also to support floors) were the only brick remains. Timber posts, postholes and base plates formed the rest of the early cottage. Two distinctly different coloured shell sand mortars were identified. A red and a light grey. Examples of the contexts where these mortars were found are summarised in Table 4.14.

Mortar samples were collected from the sandstone footings and fireplace in Room 5 (see Table 4.14) the later extension to the original house (Phase 4.2). A light red coloured soft crumbly sandy shell mortar was found in the brick fireplace (16203) and between the sandstone footings (16183) of Room 5 (Figure 4.33). The mortar had rare shell inclusions and was quite different to the light grey mortar sampled from the rest of the house. A reddish-brown shell sand mortar was also found between the brick floor pads in the front verandah (16215), this mortar was firm but crumbly and contained mid-sized shell frags (including top shell gastropods <12mm). Although the brick pads were initially thought to be a later addition to the house the mortar contained more frequent and larger shell inclusions to that found in the mortar of Room 5. The sandstock bricks sampled from the pads also had varying date ranges (1800-1830 and 1830-1860) again suggesting a later addition.

A very pale, almost white to light grey mortar (Munsell 10 YR 7/3) was also found on a brick sampled (BM sample #79) from the east-west drain at the rear of House 4 (16332/#8782). This drain contained a mix of both whole and broken, and reused bricks. There was no other bonding within the drain suggesting this mortar was from a different structure and the brick was reused in the drain. Similar samples of white to light grey shell sand mortar with frequent large fragments of burnt and crushed shell (<12mm) were found in other contexts in Area A including a construction deposit (17230/#8820) and an occupation related deposit within the area of the south verandah, House 4.

Within Area B, there were few structures with shell sand mortar. When the terraces were built in the 1880s lime was more readily available. A very pale brown sand mortar with few shell inclusions was found on the brick pads/floor supports (16601) within House 2, Room 3 and in the front verandah of House 2. The brick pads were a mix of heart frogged and flat sandstock bricks (BM sample #34). This verandah was constructed with a mix of bricks types and was not keyed into the rest of the house footings which could suggested a different construction phase to the main house. Finally, in Area C (Lot 32) a crumbly, light brown shell sand mortar with rare shell inclusions was used in the sandstone footings of

Structure 6, an outbuilding associated with the terraces that were built in the 1870s on Lot 32 (Phase 5.1). The terraces on Lot 32 were not within the 3PS study area.

Table 4.14: Examples of different shell sand mortar from structures within the 3PS study area. V=Verandah.

House	Rm	Context / # Cat	Description	Mortar	Colour	Munsell mortar	BM sample
4	5	16203/ #8667	Brick fireplace	shell	lt red,	7.5YR 7/6 reddish yellow	#86
		16183 /#8641	Sandstone footings	shell	red	5YR 5/4 reddish-brown	#85
	V	16215/ #9105	Brick pads, north verandah	shell	brn	7.5YR 6/4 lt brown	#98, 99
	V	17229/ #8819	South verandah	shell	lt grey		
		17230/ #8220	Construction deposit	shell	white- lt grey	5YR 8/1 white	#89
		16332/ #8782	Brick drain, back yard	shell	lt grey-brn	10YR 7/3 v pale brown	#79
2	3	16601/ #8961	Brick pads, floor supports	shell	lt brn	10YR 7/3 v pale brown	#35
6		16428/ #9026	Sandstone footings	shell	lt brn	2.5YR 8/4 pale brown	#48

Shell Sand Render

All the shell sand render samples came from Area A and are mostly associated with the early cottage (House 4) with only a few items from House 1 where it was backfilled into wall trenches and yard fills and likely also from House 4 but redeposited into later features. There was only one sample from a yard surface associated with House 3, Area B (16418/#8927) and no samples from the other areas. The samples of plaster mouldings are discussed separately in Section 4.4.1.3. Table 4.15 summarises the contexts with shell sand render samples and their associated houses and rooms. Many of the renders had 2 or 3 coat plaster. The technique of three-coat lime plaster involved applying the plaster in three steps and allowing each coat to dry before applying the next. Like with the mortar crushed burnt shell was the main source of lime with frequent shell fragments visible in the plaster. The first 'render or scratch' coat was the coarsest and was directly applied to stone, brick or lath walls and ceilings. It was then scratched to allow the second or 'float' coat to adhere. The float coat was sandier and could be built up in stages to allow for the 'setting' coat. The set coat which includes the mouldings was the finest and left a smooth finish for any subsequent painting.[63]

[63] Stocks, 2008a, p.30.

Figure 4.31: Shell sand mortar and render examples all associated with House 4. Top row (l-r) 16215/#9105 four red mortar samples remnants from House 4, BM #99; 17380/#8854 and #8855 (render & set) House 4, fill near back door. Middle row (l-r): 16334/#8784 (render & set) from postpipe, west wall, Rm 1; 17584/#8883 (render & set) from postpipe, west wall, Rm 1; 16245/#8700 two render & set remnants (positioned vertically) from Rm 4; 16258/#8733 render & set from demolition fill Rm 4. Bottom row (l-r): 16230/#8680 (render & set) from postpipe (south verandah); 17230/#8820 mortar from context south verandah, BM #89; 17544/#8876 render & set from south verandah; 16340/#8790 render & set from pit (rear yard). Scale 100mm.Left: IMG_3340. Right: samples turned over IMG_3342. Gallery2.

Most of the render and set fragments from House 4 were all from fills and deposits, in particular demolition fills and post-pipe fills (see Table 4.15). The majority of the render samples collected were from the demolition deposit, context 16159. Most samples had 2-coat plaster (render and set) with occasional fragments of 3-coat plaster. Although some fragments had no set coat. There was no animal hair used as binding in any of the plaster fragments.

The following are the different coloured shell sand plaster renders identified that are associated with House 4:

- Light grey-brown ashy fine silty sand with small infrequent shell fragments (<2mm), occasional brick specks (<7mm) and mostly rare charcoal. Examples 16230/#8680, 16200/#8661, 16244/#8686, 16159/#8621, #8617 and #8619. Some of the samples contained thin white set coat (0.5-1mm) and salmon pink paint on white (Munsell 10YR 7/2-7/3).
- Firm light yellow-brown coarse sand with infrequent small shell fragments (e.g. 16164/#8629). The plaster was 2-coat. The set was white smooth and thin. Examples include 16164/#8629, 17380/#8854 and 16334/#8784, all from demolition events.
- Firm light grey coarse sand with frequent shell fragments (<5mm) and a thick compact white/cream sandy set (2-6) with shell inclusions. Examples included 16340/#8790, 16159/#8618, 17380/#8855, 17544/#8876 (south verandah) and 17584/#8883. Not all fragments had a set coat.
- Light brown, compact fine sand with frequent shell fragments (<2mm) and frequent air voids. Similar to mortar (Munsell 10YR 8/2, very pale brown). White set (2mm) mostly missing, salmon pink paint on white. Example 16159/#8622.

- Light yellow 2 coat plaster, scratch/float: firm yellow-brown sand with frequent shell (<3mm), charcoal (<9mm). Thin white set, pale salmon pink paint. Example 16218/#8678, Munsell 2.5YR 7/4, pale yellow, BM sample #68.

The renders were either a pale grey (almost white), light brown, yellow brown or light-yellow colour. Some of the fragments were quite worn (Figure 4.32). The subtle differences between samples and coats may just reflect different batches of plaster made up on different days. There were variations in the thickness of the set coats and size and quantity of shell inclusions, but the silty sand used likely came from the local topsoil. The set coats varied in thickness from very thin (<1mm) up to 6mm thick. Fine crushed shell specks were visible in the set. The thickness of the set coat may just be an indication that the undercoat was not very even. The paint colours noted were, white, light brown and salmon pink but could not be associated directly with any particular room.

A very distinct demolition fill (16218) was given a separate context number as it was only found in the back rooms (Rooms 2 & 4) of House 4. This yellow sandy demolition fill was a mix of both sandy mortar and pale-yellow plaster fragments with white set (16218/#8678, BM sample #68) and was interpreted as not being part of the original construction of the house but from a later renovation phase to the walls of the back rooms. 16218 was only 10-40mm deep and did not contain the brick fragments as found in 16159. The plaster fragments also had salmon pink paint which could indicate the back rooms were painted pink (see Section 7.1, Area A Trench Report, Vol 2).

Figure 4.32: Painted plaster render & set with shell frags from Area A, House 4. Top row (l-r): two light grey from a verandah post pipe fill (16230/#8682); yellow-brown, one from wall demolition (16164/#8629) and two from a verandah post pipe fill (16244/#8686). Bottom row: back of wash from Room 3 fireplace hearth (16199/#8659) and set from Room 4 occupation deposit (16245/#8698). Scale 100mm. IMG_3327. Right: same samples showing mix and impressions on the opposite side. IMG_3329. Gallery2.

Table 4.15: Shell sand render fragments from the 3PS study area and associated structures and fills. Note when three colours are listed it is distinguishing the colours of the scratch coat, float coat and set coat in that order. Two colours are float and set coat only. It does not include the paint colours.

House	Room	Context	Description	Colour	From	To
1	Verandah	16127	Fill	lt brn-grey		1880
	2	16143	Wall trench fill	lt grey, lt grey-brn, white		1880
	5	16136	Underfloor deposit	lt grey-brn, white		1880
	Yard	16252	Rubbish pit	grey		1880
-	16177	Lev fill (pre- Hs 1)	brn			1880
3		16418	Yard fill	white		1880
4		16159	Demolition fill	lt grey-brn, lt grey brn, white		1880
				lt grey, cream		1880
				lt brn, white		1880
		16164	Demolition fill	lt yell-brn		1880
	1	16334	Post-pipe fill, west wall	lt yell-brn		1880
		17584	Post-pipe fill, west wall	lt grey, white		1880
	2 and 4	16218	Demolition fill	lt yellow		1880
	3	16282	Occupation deposit	lt grey/yell		1880
	4	16245	Occupation deposit	lt grey		1880
				white		1880
		17505	Post-pipe fill, east wall	lt yell		1880
		16258	Demolition fill	lt grey, lt brn		1880
	South Verandah	17544	Post-pipe fill	grey, cream		1880
		17380	Fill	lt yell-brn		1880
		17380	Rubble fill	white		1880
	Front Verandah	16200	Demolition fill	lt grey-brn, lt grey brn, white		1880
		16230	Post-pipe fill, north wall	lt grey-brn		1880
		16244	Post-pipe fill, ornth wall	lt grey-brn		1880
	Rear Yard	16266	Lev fill	lt brn		1880
		16340	Pit fill	lt grey, cream		1880
		16247	Pit fill	lt grey		1880

4.4.1.2 LIME, CEMENT MORTAR AND RENDERS

Mortar

Rock lime replaced crush shell lime. It was not easily available in the Sydney region until at least the 1840s, and then not commonly used until the 1880s. Early lime mortars were still quite sandy and crumbly but were easily distinguishable from shell mortars due to the absence of broken shell fragments in the mix. The brick foundations of all the 1880s houses on site (Cranbrook, Northiam and Harleyville) were bonded with lime mortar. Samples of render and plaster from the interior of these houses were also lime based. There was also evidence of later phased hard concrete used in repairs or renovations to the buildings (Table 4.16). Into the 20th century, stronger concrete replaced sandy lime mortars. Lime-based cement binders created harder, well bonded concrete with small heat voids but particles of lime were no longer visible as the mix was all very fine and well fused. These 1880s houses all remained extant until the 1960s.

Table 4.16: Samples of lime mortar and concrete and their associated contexts and structures.

Area	House	Room	Context	Description	Type	Colour	From	To
A	4	5	16248	occup deposit	Lime	lt grey	1840	
		Yard	16187	brick Sump	Lime	brn	1840	
	1	5	16136	occup deposit	Lime	lt brn mid-brn	1840	
					Concrete	mid grey, lt grey	1880	
			16150		Concrete	lt brn/grey	1880	
			16143	wall trench fill	Lime	lt grey	1840	
			16146	wall footing	Lime	lt grey/pinkish grey	1840	
			16150	wall footing	Lime	lt grey mid-brn	1840	
			16114	wall footing	Lime	lt brn-grey	1840	
		7	16175	wall footing	Lime	lt grey	1840	
B	2	Rear yard	16915	cesspit	Lime	lt brn	1840	
			16921	cesspit	Lime	mid brn	1840	
	3	V	16429	verandah footing	Lime	grey/yell	1840	
			16448	wall footing	Lime	mid grey	1840	
		5	16466	brick base laundry	Lime	lt grey	1840	
		Rear yard	16917	cesspit	Lime	mid brn	1840	
			16919	cesspit	Lime	dk brn/yell	1840	
			16715	Sump fill	Concrete	grey	1880	
			16591	wall footing	Concrete	grey	1880	
D			17875	sandstone fence	Lime	lt brn	1840	
			17275	sandstone fence	Lime	grey	1840	
			17833	sandstone fence	Lime	lt grey	1840	

A number of samples of lime mortar were taken from the footings of Cranbrook (House 1). And were a light grey or light brown-grey colour with frequent fragments of lime (1-5mm),

rare charcoal (<3mm), and small pebbles (<10mm) and frequent air voids, Munsell: 10YR 7/3 very pale brown (example 16136/#8555). The mortar samples from Northiam and Harleyville (House 2 and 3) were very hard grey with frequent lime (<5mm) and charcoal (<4mm), Munsell 10YR 6/2 light brownish grey (examples 16448/#8938 and 16466/#8947). Lime based mortars and renders were also used in the construction of the cesspits in the rear yards of House 2 and 3. A light grey/yellow crumbly lime mortar with rare lime and charcoal inclusions was sampled from the front verandah of House 3 (16429/#8931, BM sample #41). The verandah was not keyed into the rest of the house footings and the variation in bricks, mortar and render may suggest it was a different construction event or later addition.

Three sandstone wall footings and fences (17275, 17875 and 17833) located in Lot 28, Area D were of similar construction and it is probable that they were contemporary with each other. They are associated with the occupation of Wyverne and Cranbrook. Context 17275 formed the north-south property boundary between Lots 28 and 30. The sandstone footings 17833 and 17275 were bonded with a light grey, crumbly sandy lime mortar with some harder pieces and common lime specks. (<3mm), Munsell: 10YR 7/2 light grey. The mortar in 17875 was a similar mix but a lighter brown colour, Munsell: 10YR 8/3 very pale brown (BM sample #111).

Render and Paint

Most of the render samples from 3PS study are from structural remains, including footings, cesspits and drains or from fills associated with these structures: occupation deposits and demolition fills. The remaining fragments were found as fill in features or yard deposits throughout the site. Like with the mortar, lime and concrete renders were used in the houses on Lot 30 (Phase 5.1). A light grey or light grey-brown 2-coat sandy lime plaster with frequent lime flecks was found in the demolition fills of a number of rooms of House 1 (Cranbrook) which was built in the 1880s (Table 4.17). This plaster was quite distinct as the set coat was flat thin and a salmon pink colour. The pink set may have been used as the first colour in the rooms before re-painting. The same render and pink set was found in Rooms 2, 3, 5, 8 and 9. Some of the plaster fragments (16133/#8546) had impressions of timber or brushwork and joints where they were attached to laths or bricks. A range of paint colours were also recorded (Table 4.17) using the British Standards guide[64] and included white, light blue-grey, cream, light yellow, blue-green and maroon. Some of the concrete renders had salmon pink paint on the surface and no visible set coat. Render fragments from 16133/#8548 in Room 5 and 16101/#8543 had a dark green paint very similar to that on the plaster moulding found in Room 4a (16130/#8543).

In Houses 2 and 3 (Northiam and Harleyville) the renders were either a firm sandy lime light grey or light brown colour or a grey concrete. The renders were very similar to the lime mortar used in the foundations. Some came from the walls but most were from demolition debris. A sample of 3-coat plaster was sampled from the demolition fill (16406/#8920) in Room 3, House 3. The scratch coat was light brown firm and sandy with rare frags lime (<1mm) with timber impressions on the back. The float was a light grey-brown and sandy with frequent air voids & rare charcoal (0.5mm), while the set coat was flat thin white and sandy with mid pink paint (British Standard approx 2660:1021). There were few items of painted render and set from Houses 2 and 3, unlike the variety of paint colours in Cranbrook. Within the demolition fill (16470/#8950) of House 2, Room 5 was another example of 3-coat lime plaster. The base set coat was a pale pink colour (<3mm) followed by a thin white plaster (<1mm) and patched of light green plaster/paint. The concrete render was hard, grey cement mix (Munsell 2.5Y 7/1 light grey) with no inclusions and frequent air voids and was sampled from a number of walls (e.g. House 3, 16449/#8942, BM sample #27).

[64] Evans et al 1984

Table 4.17: Lime and concrete renders and paint colours from the different houses in 3PS. Where there are two colours of render listed, the second colour is referring to the set coat.

Area	House	Room	Context	Type	Colour	Paint	From	To
A			16328	Lime	white		1840	
			16336	Conc	grey		1800	
	1		16146	Lime	lt grey/pinkish grey		1840	
				Conc	lt grey		1880	
			16101	Lime	lt grey, salm pink	greenish-blue	1840	
		2	16103	Lime	lt brn, salm pink		1840	
		3	16106	Conc	grey	pale yell on samon pink	1880	
		5	16133	Lime	lt grey-brn, white	lt blue on cream	1840	
				Lime	lt grey-brown, salm pink	mid-green on yellow on lt blue	1840	
			16136	Lime	lt brn	lt blue-grey cream on grey on blue-green on maroon	1840	
			16136	Lime	lt grey-brn, salm pink	lt blue-grey on cream	1840	
			16136	Conc	lt brn- grey		1880	
		8	16157	Lime	lt pink-brn, lt brn,white	cream-white	1840	
		9	16158	Lime	lt grey-brn, salm pink	lt yellow	1840	
			16158	Conc	lt grey		1880	
			16157	Lime	lt grey, salm pink	greenish-blue	1840	
	4	3	16282	Lime	grey	white	1840	
A Sth			16252	Conc	lt brn	salmon pink	1880	
B	2		16921	Lime	lt brn		1840	
		5	16470	Lime	lt grey		1840	
		Rear yard	16915	Lime	lt yell/grey		1840	
			16452	Conc	grey		1880	
	3		16449	Lime	grey		1860	
			16919	Lime	lt brn		1840	
		3	16406	Lime	lt brn, grey-brn, white		1880	
		Rear yard	16917	Lime	lt yell/mid brn		1840	
			16449	Lime	grey		1880	
				Conc	grey		1880	
C	5		16825	Conc	grey		1880	
D			17839	Lime	white		1840	

Table 4.18: Paint colours from the render samples collected from the demolition fills of Cranbrook (House 1) based on British Standards 2660 and 381C.[65]

Paint colour	British Standard
Salmon pink	2660:1020
Mid green	381C:216
Yellow	2660:4053
Light blue	381C:112
Maroon	318C:445
Grey	2660:9095
Blue-green	381C:280/221
Light greenish-blue	2660:7080
Cream	2660:9095

4.4.1.3 PLASTER MOULDINGS

Shell, lime and concrete plaster mouldings were collected from the 3PS site (Table 4.19). The earliest of the mouldings was a small, worn three-coat shell plaster moulding fragment from a cornice or similar (17568/#8879). It was collected from the fill of pit 16567 (Phase 4.1). This pit pre-dated most of the other features in this front yard area of House 4. This moulding sample may have come from House 4 although no other moulding samples were found within the rooms or demolition debris of House 4. The scratch coat was soft fine yellow-grey, while the float coat was thicker and crumbly with shell inclusions. The upper surface of float had the bottom of the moulding which was reed beside a concave element. The set coat was missing. A single fragment of a shell plaster moulding of a wide reed was found in a pit in Area D (17519/#9085, Phase 5). The float was a light yellow-brown sand with frequent shell inclusions, the set was white plaster with a white paint finish (Figure 4.33).

Two items of lime moulded plaster were found in the demolition fills in Cranbrook (House 1) which was built in the 1880s (Phase 5). One fragment (16104/#8522) was found in Room 3 and the second fragment (16158/#8605) in Room 9 both bedrooms. A third concrete moulding was located in the demolition debris of Room 4a (16130/#8543) the breakfast room.

Three small fragments (16158/#8605) of finely moulded Plaster of Paris formed a rough circle and may be part of a ceiling moulding around a missing central circular/oval piece, possibly a light fitting. The upper surface was rippled with some floral (bud or fruit) elements. All fragments were quite worn. Plaster ceiling centre pieces were originally installed to protect the ceiling from heat and charring caused by candle and gas lighting. As a result, the owner had only to redecorate the plaster Centre Piece rather than the entire ceiling.[66]

The moulded cornice render and set fragment 16104/#8522 had three coats. The scratch coat was firm, light grey coarse sand with lime specks while the float coat was a hard, grey concrete which may suggest re-rendering had occurred. The thick white plaster moulding (set coat) had remains of one narrow reed above a concave groove and then sloping wide

[65] Evans et al, 1984: 42

[66] Regency-mouldings.com

fillet. Three layers of paint were visible, the latest was grey on top of brown-maroon on top of pale pink (Figure 4.33).

In the demolition debris of Room 4a, House 1 (16130/#8543) a very hard grey concrete frag was found with a convex moulding. The concrete was similar to that used in the float coat of the moulding in Room 3 (16104). There was only one coat of plaster which was then painted with a number of paints. The latest paint was dark green (British colour standard 381C:6066).[67] Earlier colours included light green on brown on yellow on white (Figure 4.33)

Two fragments of corbel plaster moulding were found in a mixed clay capping and demolition fill (16427) that covered the remains of a sandstone outbuilding (Structure 6) in the rear Lot of Lot 32 (Area C). Structure 6 may have been a workshop or laundry at the rear of the terraces built by Catherine Hilt in the 1870s (Phase 5). The clay capping was likely imported suggesting the artefacts within this fill may not be from the structure itself. The lime plaster mouldings (16427/#9025) consisted of an outer thick Plaster of Paris set coat on firm light grey sandy plaster with common tiny lime frags (<1mm). The moulding was scroll-shaped with rosette in centre of wider end of faces and a 3-reeded curved outer edge, a typical traditional Victorian style (Figure 4.34). The paint was white stained light yellow. The main function of plaster corbels is as decorative supports for arches. Corbels are also used as shelf supports and to enrich and add elegant detail to beam ends.

Table 4.19: Plaster mouldings from the 3PS site.

Area	House	Context	Type	Colour	Fabric	From	To	#Frag	#MIC
A	4 Yard	17568	Shell moulded	lt yellow, grey, lt grey	plaster		1880	1	1
D		17519	Shell moulded	lt yellow brn	plaster		2880	1	1
A	1 Rm 9	16158	Lime moulded	white	plaster	1840		3	1
C		16427	Lime moulded	white	plaster	1840		2	2
A	1 Rm 4a	16130	Concrete moulded	grey	concrete	1880		1	1
A	1 Rm 3	16104	Lime & Conc moulded	lt brown, grey	Concrete / plaster	1880		1	1
A Sth		16318	Conc moulded	grey	concrete	1880		14	1
							TOTAL	23	8

[67] Evens et al 1984

Figure 4.33: Painted moulded cornice fragments. Top row (l-r): Area A, House 1, 3-coat concrete and plaster with narrow reed and fillet from Room 3 (16104/#8522), and 1-coat convex from Room 4 (16130/#8543); Area D shell plaster with reed (17519/#9085). Bottom row: thick concrete with double reed and fillet (16318/#8768) from the modified historic topsoil in Area A South. Scale 100mm. IMG_3271. Image to right are the same mouldings in reverse. IMG_3273 Gallery2.

Figure 4.34: Left: Painted moulded plaster corbel with rosettes, found in clay capping fill over the sandstone footings of an outbuilding (Structure 6) in the rear yard of Lot 32 (16427/#9024). Right: Side view of the same moulding showing outer reeded curve and light-yellow paint. Scale 100mm. IMG_3283 and IMG_3285. Gallery2.

4.5 BUILDING STONE

Samples of building stone including cobbles and fireplace stone were collected and catalogued from the study area. Sandstone structures (footings, paving, drains) were recorded in detail on site with only mortar and render samples from these structures collected.

18 MIC (20 fragments) of building stone were catalogued from the 3PS study area. 14 of the items came from Area A and A South. Three pieces of basalt (16350/#8798) came from a bottle dump (Phase 5.1) the remaining stones were all irregularly shaped small sandstone

fragments (<150mm in length), some roughly shaped most not. Most of the building stone fragments collected from Area A were related to either the construction or occupation phase (Phase 4.2) of the early cottage (House 4). Some of the roughly shaped building stone used in the fireplace of Room 4 (see below) and the front verandah of House 4[68] were fine-grained sandstone with mica particles and thin black layers of shale with an undulating top and bottom and identifiable as from a local outcrop in Parramatta.

Cobbles

Three cobble stones originally used for flooring/paving, were found within the fills of rubbish pits (16186, 16288, 16252) in the rear yard of Area A. The rubbish pits were all associated with the occupation phase of Cranbrook (Phase 5.1).

Fireplace stone

The original fireplace in the early cottage (House 4, Room 4) in Area A was constructed of stone (Figure 4.35). It was then replaced with a brick fireplace when a new room (Room 5) was added to the east. A large corner stone in the southwest corner of the original fireplace (17528/#8999) had five conical shaped holes. Three holes aligned in a row and were 35 to 45mm in diameter and 40mm deep (Figure 4.36). The holes were used to place an upright post as a mechanism for suspending pots over the fire with a chimney crane. The conical shaped holes supported a metal chimney crane to hold pots over the fire. The holes could have also been caused by a fire grate or firedogs (side supports).

Figure 4.35: The original sandstone fireplace, Room 4 within the early cottage (House 4) in Area A showing the large fireplace base stone in the lower right corner (17528/#8999) with the circular holes for a chimney crane pivot. View east. Scale 1m. IMG_5283.

[68] See Trench Report 3PS, Area A & A South, Section 7.1.4.

Figure 4.36: Detail of the corner stone with conical holes (17528/#8999) used to place an upright post as a mechanism for suspending pots over the fire with a chimney crane. Scale 300mm. IMG_4928. C&L 2019.

4.6 SERVICE PIPES

Early-mid 19th-century drainage across the site was predominantly drainage channels made of sandstock bricks and in some areas timber and sandstone was used (see Town drain in Area D). Service pipes were installed in the later part of the 19th century and continued into the 20th century. Metal pipes were used to either feed gas or water into buildings while ceramic pipes were used for sewage and drainage. Two main types of ceramic pipes were collected from site making up 33 items in total (Table 4.20). The earliest were the extruded wire cut clay pipes (glazed or unglazed) with a manufacture date from 1860 followed by stoneware pipes (mostly salt glazed) which are given a general date from 1865 onwards.

Table 4.20: Ceramic service pipes sampled throughout the 3PS study area. Pipes with a manufacture date from 1860 are all the extruded clay pipes while the stoneware pipes were dated from 1865. Many of the smaller fragments were catalogued as unidentifiable.

Area	Context	Spec Funct	From	To	#Frags	#MIC
A	16137	drainage	1860		1	1
		unid	1865		1	1
	17218	drainage	1860		1	1
			1865		1	1
	16184	drainage	1865		1	1
	17238	drainage	1865		1	1
	16154	unid	1865		1	1
	16158	unid	1865		1	1
A South	16261	unid	1865		1	1
B	16418	water/sewer	1860		1	1
		unid	1865		2	1
	16686	drainage	1865		1	1

Area	Context	Spec Funct	From	To	#Frags	#MIC
C	16825	drainage	1865		5	4
	16931	drainage	1865		2	1
	16708	drainage	1865		1	1
	16427	unid	1865		13	7
	16427	water/sewer	1865		1	1
	16435	unid	1865		1	1
	16485	unid	1865		14	1
	16489	unid	1865		1	1
	16606	unid	1865		1	1
	16644	unid	1865		1	1
	16737	unid	1865		1	1
	16787	unid	1865		1	1
				TOTAL	**55**	**33**

The pipes varied in colours from buff, light-brown to light grey, orange and red-brown. The pipes also came in a range of sizes and thickness. Glazes were mostly brown.

The pipe fragments collected from site were either sampled directly from remnant *in situ* pipes or were located within fills including: demolition fills of the brick houses (Phase 5), a clay capping fill (16427) post-dating the demolition of Structure 6 (Area C), yard surfaces, and 20th-century rubbish pits. The majority of the pipes collected from Area A were associated with House 1 (Cranbrook). Work began on the installation of the main sewer lines in Parramatta from c.1907. At this time many of the brick cesspits at the rear of the houses became redundant with the WC's either plumbed into the sewer mains or the toilet facilities relocated to a room within the house.

Fragments of salt glazed stoneware service covers were found in a rubbish pit in Area A South (16288) associated with Cranbrook occupation. A fragment of concrete capping (17824/#9091) was sampled from the town drain in Area D (post-1880). This drain cover was very hard light grey lime cement with frequent. blue stone aggregate (BM Sample #110).

4.7 SIGNIFICANT STRUCTURES AND CONTEXTS

4.7.1 AREA A, LOT 30

A detailed discussion of the more significant structures and contexts on the 3PS site can be found in the Trench Reports (Volume 2, Section 7) and in the Archaeological Excavation Results (Volume 1, Section 3 of the Main Excavation Report). Some significant structures and their contexts have been briefly discussed here in relation to the building materials found within them. This information may assist with the dating and phasing of structures and deposits and will provide a greater insight into the lives of the occupants at this site. The significant contexts and structures will be discussed within their historic allotment numbers. A detailed history of the allotments is found in Volume 1, Section 2 of the 3PS Final Excavation Report.

4.7.1.1 HOUSE 4, EARLY COTTAGE C.1822-1884

Remains of an early cottage (House 4) were found in the western half of Lot 30 (Area A) fronting Macquarie Street. The cottage was believed to have been built c.1822 and remained extant until 1884 when it was demolished and replaced with a new brick house named Cranbrook (House 1). The archaeological remains showed the original cottage (Phase 4.1) was 4 roomed with a front and rear verandah and a small timber skillion off the rear verandah to the southwest (see Plan 7.1, Vol 4, Section 10, 3PS Final Excavation Report). The original 4 roomed house measured 7.18m (north-south) by 9.45m (east-west). Including the verandahs the total length north-south was 10.52m. The eastern most rooms (Rooms 3 and 4) both had a fireplace along the eastern wall. Expansion to the house took place by the 1850s (Phase 4.2) when it first appeared on plan in 1858. An additional room was built to the east of the original house (Room 5). This room had a fireplace (16203) along the west wall and shared the chimney with Room 4 fireplace (16202). Room 5 was a new kitchen replacing the original kitchen (Room 4). Along with the additional room, new brick paving (16181) was laid abutting the rear of the house and joined another brick path (17542) along the east side of the house which ran to Macquarie Street. To the north of Room 5 was a brick well (16302). Remains of brick drains were found behind the house (16332 and 16337) and along the eastern property boundary with Lot 28 a formalised brick sump (16187) replaced an earlier dam/sump that flowed into the town drain located further west in Area D (Lot 28) (see section 2.3.1).

The building materials retrieved from these 19th-century structures and associated yard fills, occupation deposits and demolition deposits all contained valuable evidence for the early-mid 19th-century occupation of Lot 30 as well as that relating to how the structures were built and finished. All the bricks associated with House 4 and its yard structures are summarised in Table 4.21.

Although impacted by later structures, the foundations of the original house consisted of postholes and two larger horizontal timber base plates along the front wall and rear wall (see Section 2.0 for discussion on timber artefacts). Single rows of bricks (16281, 17594, 16276, 16235, 16317) laid end to end were also found along the perimeter of the house and room partitions. These rows of bricks did not appear particularly structural, there was no mortar or bonding, occasionally some fine mud mortar. The bricks were not within foundation trenches and were sitting directly on top of the imported fills and were believed to be floor supports. They contained a mix of sandstock bricks, Ss flat slop (1792-1830) and Ss flat (1830-1830 and 1830-1860). Many of the bricks appeared locally made and were similar to bricks found on other Parramatta sites. The slop mould bricks were identifiable as they used a wetter clay mix a technique adopted by the brickmaker James Beckett (see Section 4.2.1.1.1).

Table 4.21: Summary of bricks and associated mortars sampled from archaeological remains associated with House 4, Lot 30 and it associated deposits and yards structures. Bricks were sampled from most walls and structures but not all.

House 4	Context	Ss flat slop 1792-1830	Ss flat 1800-1860	Ss flat 1830-1860	Ss rect 1850-1890	Extrud semi plastic 1870-	Sand stone	Fire Brick 1870-	Mortar
Front verandah	17525	x	x	x					
	16215		x	x			x		red-brn shell
	17594/ 16281	x							
Floor pads:	16215		x	x					red-brn shell
Rear verandah: construction deposit	17229								l grey shell
	17230								l grey shell
	17525	x	x	x					
Fireplace (Rm 3)	16199						dressed		none
Fireplace (Rm 4)	16202		x	x			dressed		l brn shell
Orig Fireplace (Rm 4)	17528						x		none
Walls/floor support:	16341		x						none
	16276	x							none
	16235 (Rm 2 + 4)			x					Yellow shell sand
	17231/ Rm 5		x						none
Fireplace (Rm 5)	16203			x					lt red shell
Brick Paving	16181		x		x				none
	17542	x							none
	16338								none
Yard drains	16332	x		x					none
	16337		x	x	x				none
Well	16302				x				mud
Brick Sump	16187			x			x		mud
Demolition fills	16200 (Front verandah)		x						Or-red shell sand
	16159	x	x	x					l grey shell, l brn shell
	16164	x							
	16201/ Rm 5			x		x			
Occupation deposits	16282 /Rm 3		x						
	16326/ Rm 2	x		x					
	17229/ Rear ver								lt gry shell

The Ss flat slop (1792-1830) and Ss flats (1800-1830, 1800-1860) were found throughout the early house (House 4), while some of the later flat sandstock bricks (1830-1860) were used in the floor pads/supports, suggesting the timber floors were replaced during the lifespan of the house or perhaps the original construction never had timber floors to begin with. The front verandah footings were a combination of locally sourced Parramatta sandstone and bricks (16215) with a mixture of flat bricks (Table 4.21). The stone may be evidence of an earlier phase of verandah replaced with brick as was also found in Room 4 with the fireplace

(Figure 4.37). The hearthstone of the fireplace in Room 3 (16199) was a large dressed stone with whitewash/ paint on the surface and was later addition (Phase 4.2). This fireplace was truncated by the post office footings leaving no evidence of an earlier fireplace. The original stone fireplace (17528) in Room 4 was replaced with a brick fireplace (16202). The brick fireplace (16202/#8666 & #8665) was constructed entirely of flat sandstock bricks dated 1800-1860 with a loose light brown shell sand mortar (Figure 4.38).

Figure 4.37: Eastern end of the front verandah constructed of brick and locally sourced stone. This photo also shows a square brick pier/pad (16125), 3 courses in height. View east. Scale 1m. IMG_5263.

Figure 4.38: The later phased fireplace and hearthstone (16202) in Room 4 is in the foreground abutting the brick fireplace (16203) in Room 5 in the background. View east. Scale 1m. IMG_4005.

Different coloured mortars and painted plaster/renders were identified during excavation. The samples mainly came from the demolition debris. All mortars and renders from House 4 contained crushed shell fragments in the mix. The most common was a light grey or light brown crumbly shell sand mortar. An orange-red shell sand mortar with frequent shell inclusions was attached to some of the bricks associated with the brick floor pads (16125).

A red shell sand mortar with occasional shell specks was found on the sandstone footings (16183/#8641) of Room 5. Unlike the demolition debris in the other rooms, the bricks in Room 5 were a mix of flat and rectangular frogged sandstock bricks. Not all the bricks were sandstock bricks, three or four rectangular frogged bricks and machine pressed or extruded bricks were recorded in the demolition debris and dated post-1870. A number of bricks had white paint and whitewash on them including some from the brick floor pads (17231) in Room 5 which were positioned below the timber floors suggesting they were reused.

A large number of render/ plaster fragments were collected from the demolition fills and post-pipe fills of House 4 but it was not possible to associate any of these directly to any one room. The main coloured renders were a light grey, a light grey-brown and a light/pale yellow. Pieces of light grey fine shell sand plaster with a thin white set coat (1 to 2mm thick) were the most common. This grey silty-sandy mix used for the plaster may have come from the localised original topsoil. The thin set had either a cream or pink (salmon) coloured paint on it. Some of the painted 2-coat render and set samples from post-pipe fills of House 4 had a thicker (3-5mm) set coat (16230/#8682). The shape of one fragment from 16230/ #8682) abutted a door or window jam which may explain the thicker set coat. It too had salmon pink paint on white paint (Figure 4.32). The scratch/float on 16230/ #8682 was the same as 17584/#8883 and 16245/#8700. Other samples of a thick set coast (up to 10mm thick) were 16340/#8790, 16159/#8618 and 17380/#8855 but the float-scratch coat was a coarser yellowish-buff coloured sandy shell plaster. Identical fragments of plaster and mortar were found in a number of post-pipe fills of the postholes associated with the early house.

Within Rooms 2 and 4 at the rear of the house was a strong yellow sandy demolition fill mottled with pale yellow sand and small white shell and crushed plaster fragments, occasional charcoal flecks and some mottling of grey-brown silty sand (context 16218). This finely crushed demolition deposit was only 10 to 40mm deep (Figure 4.39) and did not contain all the large fragments of brick rubble that was within 16159. It was sitting above the occupation related deposits in Rooms 2 and 4 and also filled the linear impressions (16313) left behind from the removal of the joists. The pale-yellow render and set may be from the walls of these back rooms (BM sample #68). As it was also found within the timber impressions this indicates it was a demolition event and not a construction related deposit. The difference in colour in this render compared to the pale grey renders found in the front verandah area could suggest the back rooms, or at least Room 4 (the original kitchen) was re-plastered/ renovated during the life of the house, probably when the house was extended to the east (Room 5). Evidence of salmon pink paint was visible on the white set coat. Only one fragment of plaster moulding (17568) from a wall or ceiling was found in a large pit (17567) to the north of the house but no moulding fragments were found within the demolition debris of the footprint of the house. One fragment of lime mortar was found in the occupation deposit (16248/#8715) in Room 5, House 4.

Most of the yards structures, the drains, paving and sump (Figure 4.40, Figure 4.41, Table 4.21) associated with House 4 were constructed from a combination of all the flat sandstock bricks (Ss slop, Ss flat) and all date ranges from 1792 up to 1860. There were even some frogged bricks (Ss rect wide, 1850-1890) within these structures confirming the dating of these yard features to the later phase of construction and occupation of House 4 (Phase 4.2). None of these features contained mortars or renders. A yellowish-brown sand clay mud mortar was used as bonding in the brick sump (16187). The sump was constructed from whole and broken bricks some with whitewash and black staining again suggesting reuse. A pile of brick rubble (16275) abutting the south side of the sump contained mostly

flat sandstock bricks (same as 16187) but also an occasional rectangular frogged brick (Ss rect wide, 16275/#8740) like those found in paving (16181) and the yard drain (16332).

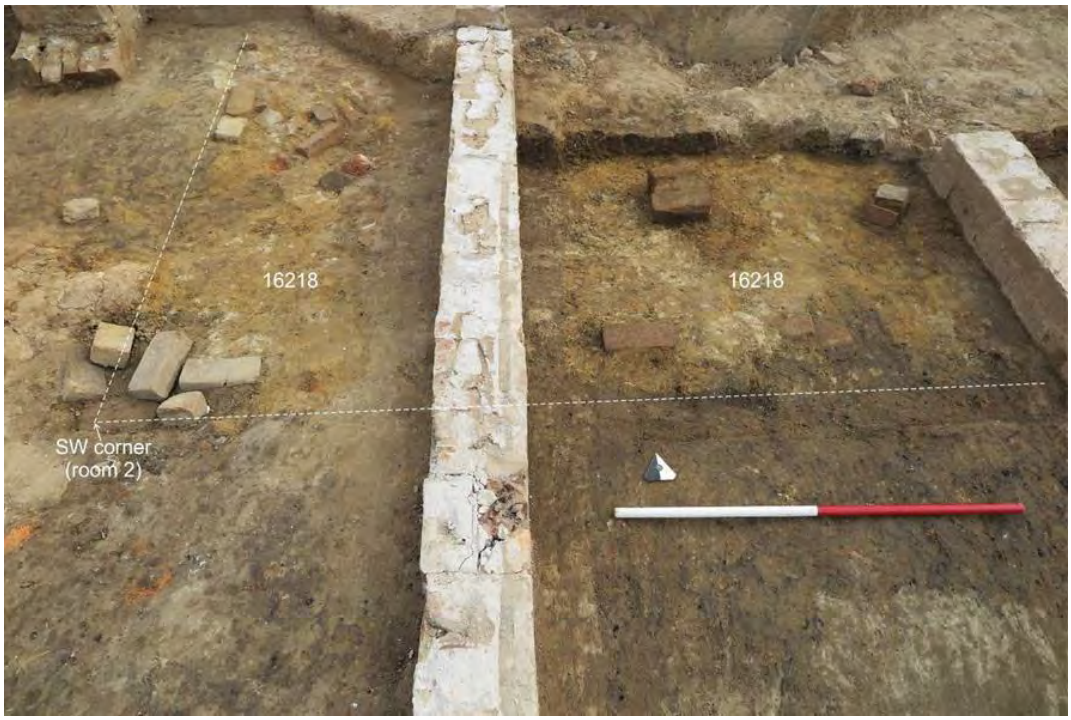

Figure 4.39: Yellow sandy demolition debris (16218) in Room 2. This thin deposit was only found in the back rooms of the house above the occupation deposits. View north. Scale 1m.

Figure 4.40: Interior of sump (16187) with outlet leading to town drain. View west. Scale 1m. IMG_4515.

Figure 4.41: Segment of brick drain (16332) in rear yard of House 4. View northeast. Scale 1m. IMG_4370.

4.7.1.1.1 CRANBROOK, HOUSE 1, C.1888-1960S

After the early cottage (House 4) on the western side of Lot 30 (Area A) was demolished in 1884 and the ground raised and levelled, a large brick single storey house named Cranbrook (House 1) was built on the same site by Harriett Holland c.1888 (Phase 5). Just a few years before Harriet had already built two two-storey brick terraces named Northiam and Harleyville (House 2 and House 3) on the western side of Lot 30 (Area B). Historical records suggest Harriet Holland may have built this house with the proceeds from the sale of the Star Inn on Church Street. The house remained extant until the 1960s when it was demolished for the construction of the Parramatta Post Office. The archaeological remains of Cranbrook were impacted by the concrete post office footings. A detailed description, photographs and plans of the archaeological remains of the house is found in Section 8, Area A Trench Report (Vol 2, Sec 7, 3PS Final Excavation Report).

In 1926 Cranbrook was auctioned off under an order of the Supreme Court of New South Wales. An advertisement for this auction described Cranbrook as:

> a spacious and well-built brick cottage (cement plastered) with slate roof, containing a tiled verandah on three sides, wide through hall, sitting room, dining room, 4 bedrooms (all large rooms with marble mantles), pantry, kitchen, storeroom, breakfast room, bathroom, detached laundry, and brick lumber room. gas and sewer connected. Electric light available. The land has a frontage of 73 feet by a depth of 223 feet on the east side and 242 feet on the west side, and a rear of 76 feet.[69]

Many of the artefacts associated with Cranbrook came from the demolition fills within each of the rooms of House 1. These demolition deposits were all given separate context numbers (Table 4.22, Table 4.23) to allow for spatial retrieval of artefacts and architectural remains from each room. There were no underfloor deposits in this house as the floor boards were likely tongue and groove. Only two small patches of occupation deposit (16136 and 16140) were found in the kitchen (Room 5) near the fireplace.

Table 4.22: Brick types and mortar used in the construction of Cranbrook (House 1). The context numbers for all the demolitions fill are shown in Table 4.22 and for all the walls are in Table 4.23.

House 1 -	Context	Sand stone	Ss heart	DP rect	DP	Mortar (lime)	Render, exterior
Footings	see below*		x			l grey, l brn, pinkish grey	
Render exterior wall	16146						grey cement based/ conc
Fireplaces		x	x			l grey-brown	
Outbuilding/ Laundry	16242		x		x	l grey-brn	
Sump	16178		x			l grey	
Floor pads/ supports	?		x			l grey	
Flagged stone, front path	16107	x				none	
Boundary fence (Lot 28/30)	17275	x				grey lime	

[69] The Cumberland Argus and Fruitgrowers Advocate, 11 June 1926.

Table 4.23: Demolition fills within each room of Cranbrook (House 1)

ROOM	Room Function	Context No (demolition fill)
1	Sitting room	-
2	Bedroom	16103, 16105
3	Bedroom	16104, 16106
4	Breakfast room (4a) Pantry (4b)	16130
5	Kitchen	16155
6	Bathroom/ scullery	16133
7	Dining room	16131, 16134
8	Bedroom	16157
9	Bedroom	16158
10	Bedroom	-
11	Hall	16154
12	Back verandah	16155
13	Front verandah	-
West verandah	Side verandah	-

Table 4.24: Context numbers assigned to each of the wall footings of Cranbrook (House 1).

*House 1 – context numbers of all the wall footings												
16110	16111	16112	16113	16114	16115	16116	16121	16141	16146	16148	16149	16150
16151	16165	16167	16168	16169	16170	16171	16172	16173	16174	16175	16176	

The walls and footings of Cranbrook consisted of uniform and well-made sandstock bricks. Although the walls were given separate contexts numbers (Table 4.24), the bricks were all orange to light red-brown colour with frequent ironstone. They had a shallow, heart shaped frog and showed no evidence of reuse (see Section 4.2.1.2.2) and are dated 1860-1900. This batch of heart-frogged bricks appears intentionally sourced for the construction of House 1. Pairs of parallel iron straps were found to run along the length of some of the footings between the courses of bricks (Figure 4.42). These straps were 32mm wide and 1.5mm thick, and appeared to act as braces for the walls. The bricks were bonded with hard, compact, cement-like sandy lime mortar with common white flecks. This mortar was light grey when dry and buff/beige when wet. The mortar became softer and slightly pinker in the lower parts of the foundations, probably as a result of water-logging. The depth of the outer load bearing walls were 13 courses (c.1.1m) deep, while verandah footings were only three to five courses deep. The northwest corner of Area A was close to the creekline and was prone to water logging, deep footings and ground raising were needed to ensure the stability of the house. Render was observed on the upper coursing of the western outer wall of Cranbrook (context 16146/ #8581). The render was 300-400mm high and its base would have corresponded to the ground level in this part of the yard at the time of its application (Figure 4.43). Samples of the render were collected (BM sample #71) which was a compact, light grey cement.

The large rectangular free-standing building at the rear of Cranbrook is believed to be the detached laundry and lumber room described in an auction advertisement for the house in 1926. The laundry building (16342) measured 8.8m (north-south) by 4.4m (east-west), and the south room was slightly larger than the north room. The footings were at least 7 courses high in places and generally 230mm wide, but stepped out toward the bottom. The bricks were mostly different to those used throughout Cranbrook, and consisted of a mixture of

purple-red machine made dry pressed bricks (DP/ DP rect) with rectangular inverted hip-roof frogs (230 x 115 x 75mm), and some high fired red/ maroon DP rect bricks (BM sample #77). Occasional sandstock bricks with heart shaped frogs were also used within the footing, possibly indicating that at least some of the building materials were re-used. The bricks were bonded by compact, cement-like lime mortar which was pale greyish-buff/light brown in colour and contained sand with white lime specs. There were no finished or underfloor deposits within this structure.

The architectural finishes collected from the demolition fills in House 1 give interesting information on the interior design, what styles were fashionable at the time and the social status of the occupant/owner. Harriet Hollands new found wealth and gentrification is evident in the size of her house and the building materials collected during excavation. A single-storey building was likely an intentional decision on Harriet's part to allow her ease of movement through her house as she aged. A significant number of finish (wall and floor) tiles were collected from the demolition debris (see Section 4.3.1.2). All the tiles were dust-pressed and glazed. Geometric tiles were predominantly used for a tessellated floor or pavement. The 1926 auction advertisement mentions the verandah were all tiled, but could have also been found around the front of a fireplace. Each of the five bedrooms in Cranbrook had a fireplace. A number of pretty floral aesthetic tiles, art nouveau and gothic arts & crafts styled tiles were collected from the bedrooms, in particular Rooms 3, 8 and 9. Most of the floral patterns are dated from the 1870/80s up to the 1920s, contemporary with the construction of Cranbrook and were likely border tiles on the bedroom fireplaces. Samples of marble were also collected from Room 9 (Table 4.25) with the house and finishes reflecting a middle-class residence. The auction advertisement from 1926 also makes reference to marble fireplaces.

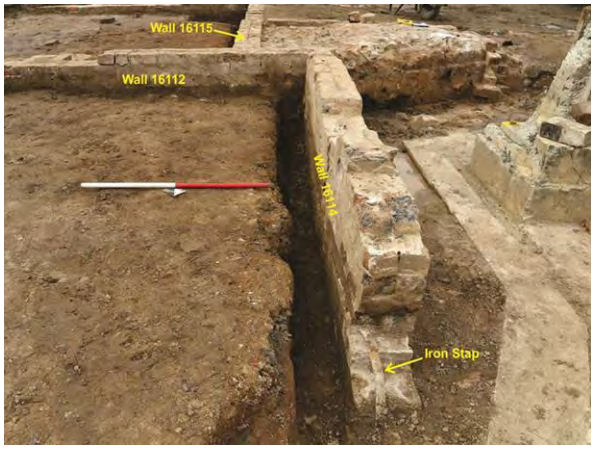

Figure 4.42: Brick foundations of House 1 and an iron strap protrudes from where the wall has been cut by the Post Office footings. View to the south. Scale 1m. IMG_3124.

Figure 4.43: Render covering the upper three to four courses of outside wall 14146, House 1. View to the south. IMG_3239(2).

Table 4.25: Paint colours and finish tiles and their locations within the different room of Cranbrook (House 1). Each of these items came from the demolition fills.

HOUSE 1 - Finishes	**Room Numbers**											
Paint colours	1	2	3	4	5	6	7	8	9	10	11	12
white/cream												
Salmon pink			x									
yellow			x		x				x			

HOUSE 1 - Finishes	Room Numbers											
green					x							
blue-green					x							
l blue					x							
maroon					x							
grey					x							
light greenish-blue									x			
cream					x		x					
white							x					
Tiles (Dust pressed)	1	2	3	4	5	6	7	8	9	10	11	12
Geometric			x					x	x			
Glz aesth tp floral									x			
Glz aesth tp peony									x			
Glz aesth tp chrysanthemum			x									
Glz aesth tp primrose		x	x									
Glz aesth tp strawberry			x					x				
Glz block Gothic Arts & Crafts		x	x			x		x	x			
Glazed plain - colour?					x							
Glz majolica - red- brn					x							
Other Finishes												
Marble - fireplace									x			
Mouldings-Lime			x	x						x		
Mouldings-Concrete				x								

The red-brown glazed majolica tile in Room 5 (the kitchen) had a swan mark in relief on the back of the tile. Swan marks were found on Mintons ceramics between 1895 and 1900, therefore post-dating the original construction phase of House 1, indicating the tile was part of a later modification or renovation within the structure or within Room 5. Decorative floral, lime plaster ceiling mouldings were found in the demolition fill of two bedroom, Room 3 (16104/ #8522) and Room 9 (16158/ 8543) while a later phased grey concrete convex moulding was found in Room 4a (see Section 4.4.1.3). The largest range of paint colours came from the render samples in Room 5 (the kitchen). Samples of a thin salmon pink coloured set coast were found in Rooms 2, 5 and 9. No render samples were recorded in the external laundry building at the rear of the house.

4.7.2 AREA A SOUTH, LOT 30

A number of building materials were collected and catalogued from Area A South and have been discussed throughout earlier sections of this report. Most of the items came from 19th and 20th-century pits, postholes and yard deposits associated with the occupation of House 4 (Phase 4) and House 1 (Phase 5). As there were no structural remains in this part of the site there will be no further discussion on Area A South here.

4.7.3 AREA B, LOT 30

Prior to building Cranbrook, Harriet Holland built two semi-detached houses on the eastern side of Lot 30 (Area B). There were no known structures on this side of the allotment prior to the 1880s. The houses were two-storey brick buildings built by 1882 with Rates Assessment Books showing Harriet Holland as the owner. The westernmost house was named Northiam (House 2) while the house on the eastern side of the allotment was named Harleyville (House 3). A detailed history and description of these houses can be found in the Area B Trench Report (Vol 2, Sec 7 of the 3PS Final Excavation Report).

4.7.3.1 NORTHIAM (HOUSE 2 AND HARLEYVILLE (HOUSE 3) – C.1882-1960[70]

House 2 and 3 were contemporary structures, a mirror image of each other with five rooms, a central hallway and an L-shaped verandah on the ground floor. The houses shared continuous brick foundations keyed into each other. The terraces were built of large, dense extruded semi plastic bricks and semi dry-pressed bricks. Some of the bricks had rectangular frogs on both sides. The manufacture of these machine-made bricks was becoming more widespread from the 1870s onwards, replace the sandstock bricks. Only samples of these bricks were retained from the extant footings (see Section 4.2.1.3 and Table 4.8). The bricks were bonded with hard light grey lime mortar.

Ss heart-frogged bricks were found in areas of paving (16598), the dividing wall of the front verandah and the property dividing wall in the back yard, neither of which were keyed into the rest of the foundations suggesting a different construction event. The heart-frog bricks were also used in the laundry room (Room 5) at the rear of the houses, as brick pads for timber floors within rooms and in the construction of the larger outbuilding (coach house, context 17009) and cesspits at the rear of both houses. The heart-frogged bricks may have been left over stock from the construction of House 1 (Cranbrook). If this was the case then these structures were not contemporary with the terraces (House 2 and 3) and were built 3 or 4 years after when Cranbrook was built, or they may be just from a different, earlier batch of bricks made by the same brickmaker using the same frog.

All five of the ground floor rooms had fireplaces (see Plan 17, Vol 4, Sec 10 of the 3PS Final Excavation Report). Many of the rooms also had square brick pads/ piers to support timber floors.

Table 4.26: Bricks, mortar and render sampled from House 2 and House 3, Lot 30 and their associated structures.

House 2 Northiam	Context	Ss slop	Ss flat	Ss rect	Ss heart	Fire brick	Extrud semi-plastic	Semi DP	DP	Mortar	Render
Footings	see below*						x	x		l grey lime	
Front verandah										pale brn shell	
Brick pads/ floor supports	16601 Rm 3		x							l brn shell	
Laundry - copper base Rm 5	16598				x				x	l yell-brn shell	
Front verandah					x		x			l grey lime	
outbuilding	17009				x					grey lime	
Cesspit (central)	16915			x	x					l brn lime	yell-grey lime
Cesspit (rear)	16921	x		x	x					mid yell-brn lime	l brn lime
Garden path	16437			x						none	

[70] See Section 8.1, 3PS Area B Trench Report for a detailed description of House 2 and 3 (Vol 2, Sec 7, Final Excavation Report).

House 3 Harleyville	Context	Ss slop	Ss flat	Ss rect	Ss heart	Fire brick	Extrud semi-plastic	Semi DP	DP	Mortar	Render
Footings							x	x		l grey lime	
Front verandah										l grey lime	
Brick pads/ floor supports	16417										
	16438										
	16466				x						
outbuilding	17009				x					grey lime	
Cesspit (central)	16917				x					mid-brn lime	l yell-brn lime
Cesspit (rear)	16919		x		x					mid yell-brn lime	l brn lime
Garden path	16602			x						none	

In Houses 2 and 3 (Northiam and Harleyville) the renders were mostly collected from the demolition fills either a firm sandy lime light grey or light brown in colour or a hard grey concrete from later additions or repairs to the finishes (see Section 4.4.1.2). 2 coat and 3 coat plasters were sampled. There were fewer items of painted render and set from Houses 2 and 3 and could not be connected to any one room, unlike the variety of paint colours in Cranbrook. In Room 5, House 2 the lime plaster had a pale pink set coat (16470/ #8950). Similar pink set coats were also found on plaster samples in the bedrooms of House 1. No plaster mouldings were found in either of these houses.

A collection of (23 MIC) geometric pavement tiles were recovered from Area B and were found within the demolition debris (16402 to 16406) of Rooms 1, 2 and 3 of House 3 (Harleyville) with only one fragment located within House 2, Room 3 (16431). Rooms 1, 2 and 3 are believed to be the parlour, dining room and kitchen. Plain dust-pressed tiles with a light blue and a yellow glaze (see Section 4.3.1.2.3) and dated 1880-1960 came from the demolition fill (16407) in Room 4 (bathroom), House 3. The floral pattern aesthetic and art nouveau tiles of Cranbrook were not found in the terraces (Northiam and Harleyville). Either these houses lacked some of the grandeur of Cranbrook or were removed with the demolition of the buildings.

Table 4.27: Finish tiles and their locations within House 2 and 3, Lot 30.

House 2 - Finishes	Rooms						
Tiles	1	2	3	4	5	Verandah	Hall
Geometric			x				
House 3 - Finishes	**Rooms**						
Tiles	1	2	3	4	5	Verandah	Hall
Geometric	x	x	x				
Glz aesth tp floral							
Glz block Gothic Arts & Crafts							
Glazed l blue - plain				x			
Glazed yellow - plain				x			

Outbuildings

Remains of a rear shed/ outbuilding were found during excavation. This building was shown on plan in 1895 and was initially interpreted to be a coach house although it may also have been servants quarters as there were two cesspits at the rear of the structure along with two more cesspits in the centre of the yard associated with the houses (Figure 2.18). The buildings were built with a matching footprint on both properties sharing the central dividing wall. The structure was impacted by a network of deep service trenches. The bricks were all heart-frogged sandstocks with a compact grey lime mortar (17009/#8997).

Cesspits (rear yard)

Two cesspits were located along the southern property boundary. Cesspit 16921 associated with House 2 and cesspit 16919 was in the rear yard of House 3 (Table 4.26). The cesspits were the characteristic square or rectangular shape, with an additional square extension to provide access for collection of the accumulated waste (Figure 2.18). 16921 was constructed of a mix of sandstock bricks, (Ss slop, Ss rect long and Ss heart) suggesting reuse of bricks, possibly even from the demolition of House 4 next door. The rectangular frogged brick (16921/#8993) was the same as the bricks used in the construction of the well (16302) associated with House 4 and the slop mould bricks (16921/#8992) were also found in the early cottage. The bricks were bonded with a yellowish-brown hard sandy lime mortar while the interior was rendered with a light brown hard cement render (up to 7mm thick) with occasion white lime specks. The neighbouring cesspit (16919) in the rear yard of House 3 was a mix of flat (Ss flat) and heart-frogged sandstock bricks with the same mortar and render as 16921 suggesting contemporary construction phase.

Cesspits (central yard)

Cesspit 16915 in the centre of the yard area of House 2 and 16917 in the central yard of House 3 were nor symmetrically positioned. Both structures were built of sandstock bricks, mostly heart-frogged bricks although the mortar and render sampled from both structures was different. In 16915/#8980 the light brown crumbly, lime mortar contained frequent lime pieces while the mortar in cesspit 16917 #8984 was the same consistency as 16915 but a lot less lime inclusions. The light yellow-brown render on the interior of cesspit 16917/#8985 was soft and crumbly, it too had less lime inclusion and was quite different to the firm grey cement render used in 16915/ #8981.

4.7.4 AREA C, LOT 32

Lot 32, was to the east of Lot 30. Only a small portion of this allotment was within the 3PS study area. Two drains in the northern portion of Lot 32. It contained an extensive network of brick drains, gutters and yard structures, possibly stables/ sheds associated with the occupation of the White Horse Inn (1830-1851) which later became Hilt's coaching service (1851-1870s, Phase 4.2). There was also a number of postholes remains of both structures and fencelines. By 1870s the allotment was redeveloped with terraces along Macquarie Street and a new stone building and new brick drains (Phase 5, 1870s-1960s) replaced the earlier structures in the rear of the allotment.

Two early drains (16608 and 16563) were initially thought to be associated with the cultivation of Maughan's garden (c.1819-1830) but analysis of the flat sandstock bricks sampled from these two drains dated the bricks to a manufacture date from 1830 to 1860 suggesting they are from the White Horse Inn occupation phase of the site and not the earlier use of the allotment (Table 4.28). The outbuildings (sheds/stables of the White Horse Inn) were not on plan in 1844 but were shown on the 1858 plan. These early drains may have pre-dated the outbuildings (pre-1850s).

Both bricks were described as very similar, with similar thickness 67-68mm but different lengths. The bricks were medium well mixed and crushed, medium fired, moderately sandy (16605/#9048 and 16563/#9041). The bricks were compared to similar bricks in House 4 (17499/#8870) all believed to be locally made in Parramatta. There was no mortar associated with these drains.

Table 4.28: Bricks and mortar associated with structures within Area C, Lot 32.

Early drains (Phase 3 4)	**Context**	**Ss flat slop**	**Ss flat 1800-1860**	**Ss flat 1830-1860**	**Ss rect**	**Ss heart 1860-1900**	**Fire brick**	**Extru semi-plastic**	**Semi DP**	**DP**	**Mortar**
Drain (serp)	16608			x							none
Drain	16563			x							none
Structure 5 (Phase 4)	**Context**	**Ss flat slop**	**Ss flat 1800-1860**	**Ss flat 1830-1860**	**Ss rect**	**Ss heart**	**Fire brick**	**Extru semi-plastic**	**Semi DP**	**DP**	**Mortar**
Footings											
Demolition fill	16565			x							-
Drain	16471			x							none
Drain	16608			x							none
Drain	16620			x							none
Drain	16692			x							none
Brick, stone & timber drain	16662					x					none
Structure 6 (Phase 5)	**Context**	**Ss flat slop**	**Ss flat 1800-1860**	**Ss flat 1830-1860**	**Ss rect**	**Ss heart**	**Fire brick**	**Extru semi-plastic**	**Semi DP**	**DP**	**Mortar**
Footings - sandstone	16428										l brn shell?
Fireplace	16605										l brn shell
Brick platform	16604					x					l brn lime
Demolition fill	16427										l grey shell
Drain	16616		x			x					
Drain	16421										
Brick edging	16420		x								

4.7.4.1 STRUCTURE 5 (1830-1870S)

Structure 5 refers to a series of outbuildings and sheds that formed a cross shape in the rear yard of Lot 32 and also includes a building in the rear yard of Lot 30 (Figure 2.21). The outbuildings were subdivided into five sections labelled Section A to Section E and are discussed in detail in the Area C Trench Report (Vol 2, Sec 7 of the 3PS Final Excavation Report). As these structures were mainly timber, there were mostly posthole remains, fills and surfaces. The structural remains comprised of a large network of brick drains (Table 4.28). Most of the bricks sampled from these drains are flat sandstock bricks (dated 1830-1860) or an occasional heart-frogged sandstock brick (1850-1900), all contemporary with the phasing of the outbuilding and will not be discussed further here. The finish tiles were all found in pits and fills and cannot be directly associated with Structure 5. The tiles are all discussed in Section 4.3.1.2.

4.7.4.2 STRUCTURE 6 (1870S-1960S)[71]

A square outbuilding (16428) constructed along the western boundary of Lot 32 was built out of sandstone. The structure was divided into two rooms with a fireplace (16605) in the westernmost room (Figure 4.44). The function of the building was not clear it may have been a laundry or workshop. Three sandstock bricks (one with a heart-shaped frog) were noted on the interior of the structure and were part of a joist/ bearer floor support system. A brick platform (16604) two course deep was located in the northwest corner of the structure. It was constructed of whole and broken sandstock bricks. A mortar sample from the structure was described as light brown sandy shell with very rare shell inclusions (16428/#9026). The mortar within the fireplace (16605) was also described as shell sand mortar. A heart-frogged sandstock brick with remnant pale brown soft sandy lime mortar with rare inclusions was sampled from the platform (16604/#9044). The platform was interpreted as supporting a copper for boiling laundry and may have been a later addition. A number of building material items (23 MIC) were collected from the demolition debris (16427) associated with Structure 6 which are summarised in Table 4.29 and have been discussed in the relevant sections earlier on in this report. The artefacts are all contemporary with the phasing of Structure 6.

Figure 4.44: Structure 6, including fireplace (16605), brick platform (16604), Lot 32. View to east, 1m scale.

[71] See Section 8.1, Area C Trench Report, 3 PS in Vol 2, Sec 7.3 of the 3PS Final Excavation Report.

Table 4.29: Building materials catalogued from the demolition fill (16427) associated with outbuilding (Structure 6) in the rear yard of Lot 32.

Context	Gen Funct	Spec Funct	Shape	Type	Fabric	From	To	#Frags	#MIC
16427	archit	finish	marble		marble			3	2
			moulding	Lime moulded	plaster	1840		2	2
			tile	Dust pressed geometric	clay	1840	1970	0	2
				Dust pressed glz	clay	1840		2	2
						1852		2	1
						1850		1	1
						1870		1	1
				Dust pressed glz majolica	clay	1890	1940	10	3
		stru	mortar	Shell	mortar		1880	1	1
	service	unid	pipe	Extrud sglz	stw	1865		13	7
		water/ sewer	pipe	Extrud sglz	clay	1865		1	1
							TOTAL	36	23

Two brick dish drains constructed in the same manner may have been associated with Structure 6 (Phase 5). A long north-south drain (16621) ran close to the property boundary with Lot 30 and was intersected by an east-west drain (16616) to the south of Structure 6. The drains are also stratigraphically above the Structure 5 demolition and levelling fills but part of drain 16421 appeared to be either cut by Structure 6 or deliberately cut around it. The bricks sampled from both drains were mostly heart-frogged sandstock bricks (16421/#9001, #9002 and 16616/#9049) and when catalogued were described as the same as the bricks in Cranbrook (House 1, Area A). Drain 16616 also contained a flat sandstock brick (1800-1860) with shell sand mortar (#9050) which may suggest reused.

4.7.5 AREA D, LOT 28 & 1(181)

The building materials collected from Area D (25 MIC) have already been discussed in the relevant sections earlier on in this report and are summarised in Table 4.30. Many of the building materials collected from Area D came from fills, deposits and pits and are not directly related to any houses or structures. The archaeological remains within Area D were mostly stone structures, (Town Drain and stone fences) and have been discussed in detail in the Area D Trench Report, (Vol. 2, Sec. 10 of the 3PS Final Excavation Report).

Table 4.30: Summary of the building materials and their relevant contexts catalogued from Area D, 3PS.

Gen Funct	Spec Funct	Shape	Context	Type	Fabric	From	To	#Frags	#MIC
archit	finish	render & set	17519	Shell moulded	plaster		1880	1	1
			17839	Lime	lime	1840		4	1
			17843	Sample	plaster			1	1
			17845	Sample	plaster			1	1
			17890		plaster			1	1
	floor	lino	17845		lino	1880		1	1
	roof	tile	17818	Ss DL1/SL2	clay	1790	1810	5	3
		slate	17818		slate	1840		2	1
		tile	17819	Ss Ridge 1	clay	1788	1810	1	1
		slate	17868		slate	1830		1	1
	stru	mortar	17275	Lime	mortar	1840		1	1
		brick	17819	Ss flat	clay	1800	1830	1	1
			17821	Ss flat	clay	1800	1830	2	2
		mortar	17833	Lime	mortar	1840		1	1
		brick	17852	Ss flat slop	clay	1792	1830	0	2
			17854	Ss flat slop	clay	1792	1830	1	1
		brick & mortar	17856	Ss heart	clay	1860	1900	1	1
		brick	17874	Ss	clay	1790	1860	1	1
		mortar	17875	Lime	mortar	1840		1	1
		brick	17875	Ss flat slop	clay	1792	1830	1	1
service	water	drain cover	17824		concrete	1880		1	1
							TOTAL	**29**	**25**

5.0 REPORT SUMMARY AND RESULTS

The analysis of the organic, metal and building material artefacts has been done according to their location and context. Where possible, the evidence from these items have been related to the chronological sequence of the structures and deposits at Parramatta Square. The following discussion answers research questions relevant to the structural and non-structural metal and organic assemblage.

How does it link into issues associated with local, regional and global economies?

The commercial potential of timber was discussed as one of the many reasons for the decision of the British Government to establish a colony in Australia. However, Cook reported that the tools brought out in the first fleet were not suited to the 'hard and ponderous nature' of the native trees.[72] Arthur Phillip commented on the gum trees as a tree 'which splits and warps in such a manner when used green'.[73.] Using the native hard wood, grey ironbark, for the baseplate at the rear of House 4 informs us that these issues, first faced on arrival in Australia, had been solved. The timber working industry was a large and important part of the economy. After Governor King became concerned with the indiscriminate cutting down of the trees, the process for timber getting became more regulated. In 1820 a licence was required for cutting and removal of timber from vacant crown lands.[74.] This suggests that the construction of House 4 relied on the timber from the local timber yard, however in a large area, with a limited workforce, control of the regulations would have been hard to enforce.

What does it tell us about cultural and social practices in colonial Parramatta, relating to lifeways, diet and other issues associated with consumption?

The evidence of fruit seeds in the lower fill of the cesspits of House 2 and 3, not only indicates the consumption of fresh fruit, possibly grown on the property but also the possibility of opportunistic picking of wild blackberries either as a leisure activity or to supplement the diet of the household.

Evidence associated with the occupation of this site by known individuals may reveal interesting insights into family patterns and behaviour.

Both the metal and the organic artefacts reflect family patterns and behaviour. The fireplace tools and the amount of coal found in House 4 indicate that the fire place was frequently used and would be a central feature in the house, used for cooking, heating and a place the family gravitated to in the cooler months. Enamel tea pots and bowls indicate rest breaks during long days working outside in the yard.

Analysis of the building materials found during the excavation at 3PS Parramatta gives us an insight into the building practices and raw materials used by the early settlers and how they adapted to their environment. Dating of the building materials has been provided where possible. The first known house (House 4) within the study area was a timber structure located in the northwest corner of Area A. This area was along the edge of a creekline and prone to flooding. The house was built on levelling fills to raise the ground and adapt to this difficult topography. Modifications and additions to the original house were evident with the use of different mortars, plasters and brick types, changing from flat sandstock bricks to frogged bricks. These modifications appear to correspond with a change in occupancy after the sale from George Thorn to George Cahill in 1845. A number of drains were constructed particularly in the backyard area throughout the occupancy of

[72] Captain Cook's Gum Tree

[73] L.T Carron. 1985 A History of Forestry in Australia. ANU press 1985

[74] L.T Carron; 1985 p4.

House 4 all draining towards the town drain further to the west. It was clear that drainage was always an issue for the residents.

A large number of drains was also found in Lot 32 on the perimeter of the stables and sheds associated with the White Horse Inn, Hilt's Coach Service and the later outbuilding of Hilt's terraces. The vast network of drains in Lot 32 involved varying construction styles and materials but were predominantly of sandstock brick construction. A full discussion of water management on the 3PS site can be found in Section 3 of the Excavation Report (Vol. 1, Sec. 3).

Evidence for evolving patterns of consumption and commerce from early colonial period into the early 20th century.

The 3PS building materials also provide some insight into the identities, consumer patterns, and economic circumstances of the occupants of the site, and how this in turn relates to the broader population of Parramatta and Sydney, and its place in the world.

The so called 'gentrification' of the Parramatta Square area was part of a property development boom that took place in the late 19th century. The advent of the railway extension to Penrith in the early 1860s shifted the transport hub from the waterways and Parramatta River at the end of George Street, to the new Parramatta Railway Station, immediately to the south of the study area. The railway passed through the Wentworth Estate which was subdivided and auctioned off in 1873.

Two female property owners along Church and Macquarie Streets at this time were Harriet Holland and Catherine Hilt. During the 1870s and 1880s both ladies built new houses along Macquarie Street. These new brick houses were much larger than the original cottages built in the 1820s and 30s. The two-storey terraces were primarily rental properties providing stable income. Catherine Hilt's houses (Lot 32) were outside the 3PS study area. All three of Harriet Hollands houses were within the study area (Lot 30). The terraces named Northiam and Harleyville were built first while the later house (Cranbrook) replaced the early cottage (House 4) on the western side of Lot 30. Cranbrook was a large single-story residence where Harriet Holland resided until she died in 1898. A 12 roomed house for a lady living alone clearly suggests her financial situation was quite secure to afford to build this house.

Demolition material from the three houses on Lot 30 showed that the decorative finishes in Cranbrook were more elaborate and expensive than those from Northiam and Harleyville. Cranbrook finishes included decorative fireplace tiles, marble mantles, tessellated verandah floors (see Section 4.7.1.1.1). This may have been a conscious choice on the part of Harriet Holland who did not ever live in the terrace houses but rented them out for income, whereas she built Cranbrook for her own use and chose a large single-storey villa configuration and expensive decorative finishes in her own house. The choice of finishes and size of the villa may also reflect her middle-class aspirations and was probably a reflection of her success and business acumen. Holland's sale of the Star Inn in 1887, for £4050, probably facilitated her building program.

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