

## **Section 8.2: Glass**

Glass Report  
109-113 George Street, Parramatta



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## 1.0 Glass Artefact Analysis

### 1.1 Introduction

Presented here are the results of the analysis for glass artefacts recovered from archaeological excavations 109 to 113 George Street, Parramatta conducted by Casey and Lowe for Landcom. The study area is on the southern side of George Street. Historically, the site was first lease in 1799 to Reverend Rowland Hassall and the Hassall family maintained possession of the site until 1882.

There are 744 glass artefacts representing 338 MIC. There are different categories of glass forms, including bottles (flasks, phials and jars), stoppers, tableware (tumblers, stemware, bowl, cups, salts, shot glass), window and lamp chimneys. For 12 artefacts no form could be determined because they were too fragmented to determine any attribute beyond colour. During cataloguing minimum vessels were identified for fragmented items. For the purpose of this study minimum vessel counts are used throughout, so that artefact counts represented in the following discussion represent whole, partial, and fragmented items.

### 1.2 Glass Discussion

This study will begin with a discussion of the entire glass collection. Due to their relative high frequency, bottles are subject to in depth discussion. Other categories of glass artefacts are subject to descriptive overviews. Counts for artefact by shape are shown in Table 1.1.

**Table 1.1 Counts of Glass Artefacts by Shape**

<u>Shape</u>	<u>Gen Function</u>	<u>Count</u>
Bottles		
bottle/flask	alcohol	119
bottle	beverage	4
bottle	clerical	6
bottle/jar	food	36
bottle	pharmacy	32
bottle/jar	pharmacy/personal	5
phial	pharmacy	3
bottle	personal	2
bottle/jar	unidentified	62
<b>Total Bottles</b>		221
Tableware		
stemware	food	13
salt	food	1
tumbler	food	14
cup	food	2
<b>Total Tableware</b>		30
Lamp Shade	service	1
Lamp Chimney	service	2
Flat Glass	architecture	22
Stopper	beverage	1
	unidentified	1
Unidentified	food	8

### 1.3 Bottles

Bottles, with 36 whole bottles and 229 partial bottles and/or fragmented bottles, represent approximately 79 percent of the glass assemblage. The term “bottle” is used throughout this

discussion to represent glass storage containers, such as bottles, flasks and jars. Bottle characteristics, such as diagnostic manufacturing technologies, contribute useful chronological data. Recognised bottle shapes enable identification of products consumed by the occupants of a site, which help answer questions about trade and economics. Patented shapes and documented manufacturer and/or bottler embossments contribute chronological data, as well as helping to answer questions on consumer choice and market access.

### 1.3.1 Bottle Chronology

Approximately 35 percent of the bottles are cylindrical English beer/wine bottles. Five of these bottles were manufactured from the mid-seventeenth century to the mid-nineteenth century. These early bottles were manufactured using the standardised technology of the times, however, during this period cylindrical beer/wine bottles underwent major and minor changes in shape and size of the finish, neck, shoulder, body and base.<sup>1</sup> Studies of these forms provide date ranges that were established through datable seals and from dated archaeological contexts.<sup>2</sup> Based on the results of these studies, characteristics of finishes (lip and rim) and base (heel, pontil, push up), as well as shape and size of neck, shoulder, body and base contribute, alone or in combinations, to the temporal placement of these bottles.

By the end of the nineteenth-century glass containers were mass-produced, relatively inexpensive, and consequently readily disposable. Therefore, they became increasingly popular as packaging for all manner of commercial products. The frequency of container glass entering into the archaeological record since the mid-nineteenth century has also increased dramatically as a result. Chronological data for manufacturing techniques is shown in Table 1.2, these techniques form the basis for dating bottles from the mid-nineteenth century to early twentieth century.

**Table 1.2. Chronological Data for Bottle Glass**

<u>Technomorphology</u>	<u>Date Range</u>
Conical pushup with sand pontil scar	1820 – 1850
Conical pushup with ridges	1820 – 1870s
Crack-off finish with string rim	1760 –1820s
Cup bottom mould	1850 +
Dip mould	1870s
External threaded finish	1885+
Finishing tool	1820 – 1920s
Fire polished	1880 –1920s
Internal ledge finish	1850-1910
Machine-made	1920+
Post bottom mould	1820s+
Semi-automatic machine-made	1893-1926
Solarised Amethyst	1880s – 1910s
3-part mould	1820s-1920s
2 pt bottom hinge	1810 –1880
<u>Patent Common Name</u>	<u>Date Range</u>
Codd bottle	1875-1930s
Hamilton Patent	1790+
Rickett's bottle	1830 – 1920

<sup>1</sup> O. Jones *Cylindrical English Wine & Beer Bottles 1735-1850*. Studies in Archaeology, Architecture, and History, National Historic Parks and Sites Branch, Parks Canada, 1986, p 9

<sup>2</sup> R Dumbrell 1983 *Understanding Antique Wine Bottles*. Antique Collector's Club, Suffolk

Noël-Hume, I. 1970 *A Guide to Artifacts of Colonial America*. Alfred A. Knopf, New York, p 60-71

O Jones *Cylindrical English Wine & Beer Bottles 1735-1850*. Studies in Archaeology, Architecture, and History, National Historic Parks and Sites Branch, Parks Canada, 1986

Documented manufacturer's marks for glass containers further serve to establish date ranges.<sup>3</sup> Chronological and location data for manufacturers are shown in Table 1.3. A further chronological refinement comes from labelling practices (product embossments and labels on containers) and trademarks that also serve to aid in the establishment of data specific information for these archaeological materials.<sup>4</sup> Chronological data and source for bottlers are shown in Table 1.4.

**Table 1.3. Chronological and Locational Data for Manufacturers**

<u>Manufacturer Name</u>	<u>Date Range</u>	<u>Location</u>	<u>Country</u>
Australian Glass Manufacturers Dominion Glass Co	1912-1922	Melbourne, VIC	Australia Canada
Wood Bros Glass Co.	1828-1970	Barnclay	England
Edinburgh & Leith Glass Co	1864+	Edinburgh & Leith	Scotland

**Table 1.4. Chronological and Locational Data for Products**

<u>Product Name</u>	<u>Date Range</u>	<u>Location</u>	<u>Country</u>
Ashton & Parsons			England
Barry's Safe Hair Dye	1851-1982	New York	USA
Roger & Gallet, Paris	1890+	Paris	France
Hennessy Cognac	1813+		France
Marchant Ltd	1909-1930	Brisbane, Sydney, Paramatta	Australia
Tooth & Co	1835+	Sydney, NSW	Australia
Dinneford's Fluid Magnesia	1880-1930s		
Toohey Ltd		Auburn	Australia
Tooth & Co	1835+	Sydney, NSW	Australia
Sir J. Murray's Recarbonated Patent Magnesia	1860		England
Barry's Tricopherous For the Skin and Hair	1851-1982	New York	USA
Tooth & Co	1835+	Sydney, NSW	Australia
H J Heinz	1860+		USA
Cooper & Wood Co.	1859-1928	Portobello	Scotland

Chronological data was established for 71 percent (n=192) of bottles. *Terminus post quem* dates range from 1760 to 1930. *Terminus anti quem* dates range from 1820 to 1944. Since select areas of the site and discreet context represent different occupational episodes, the 1760s – 1940s hypothetical date range for bottles in the collection reflects the overall occupation of the site through time.

<sup>3</sup> J Boow *Early Australian Commercial Glass: Manufacturing Processes*. Prepared for the Heritage Council of New South Wales, 1991.

J H Toulouse *Bottle Makers and Their Marks*. Thomas Nelson Inc., New York, 1971.

<sup>4</sup> K Arnold *Australian Found Bottles*. Crown Castleton Publishers 1985.

J K Baldwin *Patent and Proprietary Medicine Bottles of the Nineteenth Century*. Thomas Nelson Inc., New York, 1975.

J Boow *Early Australian Commercial Glass: Manufacturing Processes*. Prepared for the Heritage Council of New South Wales, 1991.

K M Deutsher *The Breweriers of Australia: A History*. Lothian Books, Melbourne, 1999.

R Fikes *The Bottle Book: A Comprehensive Guide to Historic, Embossed Medicine Bottles*. Peregrine Smith Books, Salt Lake City, 1987.

B Zumwalt *Ketchup, Pickles, Sauces: 19<sup>th</sup> Century Food in Glass*. Mark West Publishers, Fulton, California, 1980.

### 1.3.2 Bottle Use Patterns

As shown in Table 1.1, bottles were classified on function or original use into six general function categories; Alcohol/liquor, Beverage, Clerical, Food, Personal, Pharmaceutical, Personal/pharmaceutical. For eight bottles no specific use could be identified. Each category is discussed below.

#### Alcohol/liquor

Alcohol related bottles are subcategorised into four specific functions: beer/wine (n=96), beer (n=3), champagne (n=8) and spirits/whisky (n=4). Eight bottles could not be identified beyond the general "Alcohol" classification.

Observations on alcohol bottles include:

- The majority (81percent) of alcohol-related bottles are classified as beer/wine. Manufacture dates for beer/wine bottles range from the late seventeenth century to late nineteenth century.
- Most of the champagne bottles were manufacture between 1860 and 1920. Archaeological and historical records indicate that from the mid-nineteenth imported beer and wine was commonly stored in these "champagne style" bottles.<sup>5</sup> Therefore, bottles classified in this study as champagne contained alcohol (champagne, beer and wine), but it cannot be verified that they did indeed contain champagne.
- There are two marked Scottish whisky bottles: one from Cooper & Wood Distillers and one from Edinburgh & Leith Glass Co.
- There is also one seal from a Hennessy Cognac bottle (1813+)

#### Beverage

All beverage containers are aerated water bottles. Two bottles are Hamilton patent shape. One bottle is from Marchant Ltd (Brisbane, Sydney, Parramatta).

#### Clerical/Ink

There are six glass ink bottles in the collection. One bottle was manufactured by Australian Glass Manufacturers (1930+) and one has a partial embossment "Thomas &.."/ "Ink."

#### Food

There are 35 food related bottles subcategorised into two identified categories: oil/vinegar (n=8) and pickle/chutney (n=15). In addition there are three are catergorised as condiment and nine food related bottles with no specific function. Of note is one pickle bottle by H. J. Heinz (1860+).

#### Personal

Personal related bottles include containers for grooming products, such as, Roger & Gallet perfume (1890+) and Barry's Safe Hair Dye (1851 – 1982).

#### Pharmacy

The collection consists of 32 medicine and 5 medicine/toiletries. Medicine bottles are subdivided in pharmacy/chemist bottles and patent medicine bottles.

- Medicine

<sup>5</sup> J Boow *Early Australian Commercial Glass: Manufacturing Processes*. Prepared for the Heritage Council of New South Wales 1991, p 68

M Stanbury *The Barque Eglinton: wrecked Western Australia 1852*. Australian National Centre of Excellence for Maritime Archaeology, Special Publication No 6., The Australasian Institute for Maritime Archaeology, Pecial Publication No. 13, 2003, p 155 –157

O Jones, C Sullivan, G L Miller, E A Smith, J E Harris, K Lunn *The Parks Canada Glass Glossary*. Studies in Archaeology, Architecture, and History, National Historic Parks and Sites Branch, Parks Canada, 1985, p 79

- pharmacy bottles – These are bottles manufactured for exclusive use by physicians and chemists. Bottles are typically high quality flint glass that has been fire polished. There is one such bottle in the collection.
- patent medicine bottles – There are 17 schnapps and gin bottles. While these products had a high percentage of alcohol, they were typically marketed and sold as patent medicines during the nineteenth century. One has a partial embossment “Aromatic Schnapps” / “Schiedam,” which is most likely a Udolpho Wolfe bottle. Other identified patent medicines include two castor oil bottles and the following embossed bottles:
  - Sir J. Murray's recarbonated patent magnesia (1860+)
  - Ashton & Parsons' infant teething powder
  - Dinneford's fluid magnesia (1880-1930s)

### 1.3.3 Market Access

A market access study is the examination of factors affecting individual selection of goods in the context of the supply-demand interactions and spatial distribution of goods along transportation networks from manufacturer to distributor to consumer. A network could be as small as purchases from the neighbourhood shop or extend half way around the world. To determine where Parramatta was looking to for its commerce requires understanding the commerce of its closest port, Sydney and of the entire nation. To understand changes in market access in Australia requires the examination of worldwide commerce.

During the nineteenth century many developments affected international commerce on a worldwide basis. In the 1869, the opening of the Suez Canal brought new and faster trade routes to Australia from Europe. The late nineteenth-century introduction of the iron steam freighter led the way to new trans-Pacific routes between Sydney and major North American ports, such as Vancouver and San Francisco.<sup>6</sup> While Germany and America were new market competitors actively cultivating the Australian market, Britain was still Australia's major trading partner. Australia's place in the world market elevated considerably due to Britain's increased dependency on Australian wool and the downturn in British agriculture. In the 1870s, Circular Quay was rebuilt to accommodate this increasing trade and Darling Harbour, Balmain, and Pyrmont all underwent reconstruction by the mid-1880s.<sup>7</sup>

One way to determine where Parramatta was looking for its commerce is to look to the archaeological record. Bottles, with embossments, as well as those with paper and applied colour labels, are one of the best sources of information for observing trade practices. As previously mentioned, sources of goods ranged from local to very distant. For example, a bottle manufactured in Canada, by the Dominion Glass Co., contained infant teething powder from the English company Ashton & Parsons.

To interpret this data, the analysis identified trends in international and domestic markets, comparing and contrasting these trends and identifying patterns of consumerism for a particular market. Sixteen bottles exhibit embossment that provided information on either manufacturers or bottlers (see Tables 1.3 and 1.4). Of this number, manufacturers were identified for four bottles, one each from Australia, Canada, England and Scotland. Associated bottle manufacturers are listed below:

- Australia - Australian Glass Manufacturers
- Canada - Dominion Glass Co
- England - Wood Bros Glass Co.

<sup>6</sup> J. Bach *A Maritime History of Australia*. Pan Books, Sydney, 1976, p 146

<sup>7</sup> M. Canon *Life In the Cities: Australia in the Victorian Age: 3*. Thomas Nelson Pty, Ltd, Melbourne 1975, p 186

- Scotland - Edinburgh & Leith Glass Co

Thirteen bottles provided locational information for bottlers: Australia (n=5), England (n=2), France (n=2), Netherlands (n=1), Scotland (n=1) and USA (n=2). Products identified through embossments included aerated waters, alcohol, grooming, food, and patent medicines. Observed trends on products include:

- Nineteenth-century Australian-made products consist of beer and aerated waters.
- French products consist of perfume and cognac
- Patent medicines were imported from the USA and England.

Due to the paucity of identifiable marked bottles, results of the market access study found no discernable trade patterns beyond a few general trends;

- A preference for American patent remedies
- Scotland whisky was a favourite.

A comparative analysis of market access with other known nineteenth-century archaeology sites in Parramatta (1 Smith Street and Parramatta Children's Court) to this site demonstrates only a few similarities in market access trends. Preferences for whisky (Scotland) and schnapps (Netherlands) were the same for all sites. While there were no marked patent medicines from the Parramatta Children's Court Site, patent medicines from 1 Smith Street (75%, 5 MIC) and 109 George Street (67%, 2 MIC) sites were primarily American.

#### 1.4 Tableware

There are 38 tableware items in the collection, including cups (n = 2), stemware (n = 13), tumblers (n = 14) and a salt. For eight items no form could be assigned. Temporal information was established for 21 items through identified manufacturing technologies and decorative design patterning. Pressed glass, which was developed in the 1820s, is the foremost in the identified manufacturing techniques (n=11). Pressed glass is commonly described and dated by its decorative motif. Throughout the nineteenth century and twentieth century there were shifts in popularity of decorative motif that serve to aide in assigning dates to individual items.<sup>8</sup> Also used in temporal assessment were:

- solarisation
- empointilling method
- stemware bowl and stem shapes

Of note in this collection is one press moulded 'master' salt that dates from 1870s. Also there are two bucket-shaped stemmed wine glasses with rounded knobs on the stems, a style that has been popular since the early 1800s

#### 1.5 Lighting

The three lighting-related glass artefacts: two cylindrical lamp chimneys (1820+) and a white opaque light shade (1850+).

#### 1.6 Flat Glass

There are 81 fragments of window glass in the collection. For the purpose of this study window glass is not subject to minimum item counts. All but one fragment was identified as crown window glass.

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<sup>8</sup> O Jones 'A Guide to Dating Glass Tableware: 1800 – 1940', *Studies in Material Culture Research*, edited by Karlis Karklins, Society for Historical Archaeology, 2000, p 141 – 232

A total of 59 fragments have a thickness of 1.1 –1.5mm and an approximate 1870s end date. The remaining 21 crown window glass fragments range in thickness from 1.6 – 2.5 mm, which have an approximate 1880s end date. The one broad glass fragment, for which importation into Australia did start until the 1850s, is 3.2mm in thickness.

## 1.7 Stoppers

Two stoppers are included in the collection. One is a moulded marble from a Codd-patented bottle (1875). The other is a partial stopper that is missing the finial, which provides the most diagnostic attributes for use interpretation.

## 2.0 Context Analysis

There were 37 contexts with glass artefacts. The majority of context (76%) had less than ten glass MIC. Approximately 76 percent of context (29) provided temporal information (Table 2.1). The focus of glass analysis are the contents located in Area B - the southwest area of the site. In this area, at the rear of the Hassall's, house, were four groups of inter-cutting pits. Fill from these features is discussed below within these groupings. For the most contexts the assemblage size is too small to determine use association. Artefacts are predominately bottles, tableware and window glass.

AREA	FEATURE	CONTEXT	DETAILS	TPQ	TAQ	QTY
A	clean up	4801	Fill-clean-up	1820	1920	15
	demolition	4805	Fill from brick & S/S feature	1760	1920	14
	demolition	4802	demolition	1760	1920	4
	4893	4894	shallow pit	–	1850	1
		4806	oval pit	1820	1920	12
	shallow pit	5033	Fill of series of depressions	–	1865	2
	4817	4804	Fill of largish pit	1800	1880	17
	4927	4927	Fill for shallow pit	1820	1880	1
	4821	4822	Fill in[4821]	1820	1920	4
	4824	4803	Fill of rectangular feature	1760	1865	3
	4836	4835	Fill of S/S-brick well	1820	1880	5
	4914	5014	Burnt deposit in	1850	1920	3
	5072	5071	Fill of pit		1870	3
	bedding	5065	Bedding for cellar paving	1820	1920	4
		fill	4837	Fill below demo in brick-S/S structure	1850	1920
	trench fill	4912	Wall trench in NE corner	1850	1920	3
A/B	Unstratified	5067	Unstratified	1835	1944	24
B	Centre Structure	5036	Wall trench fill	1875	1930	4
B	Centre Structure	5032	Demolition	1820	1920	3
B	5068	5070	Cleanup of Rectangular pit	1810	1920	4
B	4816	4815	fill of cut	–	1920	3
B	4820	4818	Fill-of cut	–	1860	1
B	4828	4827	Fill of pit cut	1810	1870	7
B	4847	4844	Fill of timber-lined cut	1800	1920	34
B	4956	4954	Fill of cut	1820	1920	3
B	5001	5000	Fill of rectangular cut	1810	1920	26
B	5018	5017	Sandy pit fills of cut	1810	1920	19
B	5058	5059	Fill of pit	1820	1920	7
B	5061	5062	Fill for pit	–	1920	3
B	5069	5068	Fill over brick "paving"	–	1880	3
B	5073	5074	Fill	1790	1920	81
B	5076	5077	Fill	1820	1920	3

## 2.1 Group 1

Group 1 consists of two distinct pit features from Area B 1: 4816 and 4820. The fill of each feature is discussed below.

### 2.1.1 Context 4815 – Fill of Rectilinear Pit (Context 4816)

There are three glass MIC from Context 4815; two beer/wine bottles and one unspecified non-machine made bottle. One item is a beer/wine base that has a bulged heel, a technological characteristic of English bottle manufacturing until the 1850s.<sup>9</sup> The other item is a beer/wine bottle finish that has an applied lip and string rim and has a 1790s – 1850s date range.<sup>10</sup> The manufacturing characteristics and resulting temporal data of these two items suggest that they might represent one bottle.

### 2.1.2 Context 4818 – Fill of Pit Feature (Context 4820)

Context 4818 is the upper most of two fill episodes from Context 4820. Glass from context 4818 is limited to one thin fragment of crown window glass (until 1870s).

### 2.1.3 Discussion of Group 1

The paucity of glass artefacts from contexts in Group 1 precluded in-depth temporal and functional analysis beyond suggestion of a 1790 – 1850s date range for Context 4815 and an 1870s end date for structural remains from Context 4818.

## 2.2 Group 2

Group 2 consisted of three distinct pit: 5001, 5018 and 5041. The fill contexts associated with these features are discussed below.

### 2.2.1 Context 5000 – Fill of Possible Rectilinear Rubbish Pit (Context 5001)

There are 26 glass MIC from Context 5000. Sixty-five percent of the artefacts provided date-specific information with the majority of these being bottles that have an 1820s – 1870s date range. Thin crown window glass (1.0 – 1.1mm) associated with this context most likely was imported prior to the 1870s. Datable tableware items (stemware and tumblers) are press moulded (1820+), however, one stemware vessel is also solarised (amethyst). Solarised glass was a result of the introduction of manganese into the flux as a decolourant, but when exposed to ultra-violet light for extended periods of time. The use of manganese as a decolourant for bottles was common from 1870s – 1914. This artefact most likely results from disturbance.

### 2.2.2 Context 5017 – Fill of Context Sub-Rectangular Pit (Context 5018)

There are 17 glass MIC from Context 5017. Datable artefacts consist of bottles, tumblers and window glass. The bottles have an 1810 – 1870s date range. The tumblers are turn-moulded, a technology that was phased out in the early twentieth century. Window glass fragments are very thin crown glass (1.0 – 1.2mm) and most likely imported by the 1870s.

### 2.2.3 Context 5040 – Fill of Context Irregular Shaped Cut (Context 5041)

There is one non-diagnostic bottle glass fragment from Context 5040.

### 2.2.4 Discussion of Group 2

Analysis results for the glass assemblage from the pit features in Group 2 suggest that Context 5000 and Context 5017 might be contemporaneous. Both contain bottles dating from the first quarter of the nineteenth century to the 1870s. Window glass from both Context 5000 and Context 5040 date to

<sup>9</sup> O Jones *Cylindrical English Wine & Beer Bottles 1735-1850*. Studies in Archaeology, Architecture, and History, National Historic Parks and Sites Branch, Parks Canada, 1986, p 96 – 97

<sup>10</sup> O Jones *Cylindrical English Wine & Beer Bottles 1735-1850*. Studies in Archaeology, Architecture, and History, National Historic Parks and Sites Branch, Parks Canada, 1986, p 61 – 71

the 1870s. The inclusion of one solarised stemware item is possibly associated with later disturbance of Context 5000.

### 2.3 Group 3

There are seven distinct pit features in this group: 4828, 4830, 4832, 4845, 4847, 4955, and 5016. The fill of three of these features had glass artefacts: 4827 (4828), 4954 (4955) and 5015 (5016). Fill context is discussed below.

#### 2.3.1 Context 4827 – Fill of a Rectangular Pit (Context 4828)

There are seven glass MIC from Context 4827. Artefacts consist of bottles and a press-moulded cup fragment. Datable items are beer/wine bottles that collectively have an 1810 – 1870s date range.

#### 2.3.2 Context 4954 – Fill of Context 4955 a sub-circular pit

There are three glass MIC from Context 4954: two beer/wine bottles and a tumbler base. All contributed to an 1820 – 1880s date range. The tumbler is press moulded and its shape and decorative motif were popular between 1820 and 1880. Datable attributes on beer/wine bottles have an 1820s TPQ.

#### 2.3.3 Context 5015 – Fill of Context 5016, a large irregular shaped cut

There is one glass item from Context 5015: a small green alcohol bottle fragment.

#### 2.3.4 Discussion of Group 3

Artefacts from Group 3 consisted of tableware and beer/wine bottles. Both contexts with datable glass have early to late nineteenth century date ranges. The paucity of glass precludes further interpretation of analysis data.

### 2.4 Group 4

Group 4 consisted of two pit features in Area B: 5074 and 5077. The fill of these features is discussed separately below.

#### 2.4.1 Context 5074 – Fill of a Rectangular Pit (Context 5073)

There are 81 glass MIC from Context 5074. Sixty-one MIC contributed to temporal placement. The majority of this number (92 percent) is bottles. TPQ for bottles range from 1790 – 1860, but the majority of datable bottles (n = 39) have 1820 TPQs. No bottles are machine made. Of note are two whisky bottles embossed “Cooper and Woods” (1859–1928) and Edinburgh & Leith Glass Co. (1864+).

Tableware and window glass also contributed to temporal placement. One tableware item, a ‘master’ salt is a style common from the early 1870s.<sup>11</sup> There are also a few fragments of crown window glass; some of which is the very thin (1.0 – 1.3mm) variety that was imported until circa 1870s.

As part of the temporal analysis for the glass from this context, an 1860s mean date was calculated and results of temporal analysis for the glass assemblage suggest a circa 1860s – 1880s date range for the context. This date range encompasses TPQs for all datable glass artefacts from the context.

The glass assemblage size for this context was sufficient to conduct a functional analysis. Functional analysis classified 98 percent of the glass assemblage into six identified groups; Alcohol (n = 37), Architecture (n = 2), Beverage (n = 3), Food (n=18), pharmacy/personal (n=10) and Service (n=1). Alcohol related items consist of beer/wine, spirits and unspecified bottles. Architectural items are crown window glass fragments. Beverage items are aerated water bottles. Food related items

<sup>11</sup> O Jones ‘A Guide to Dating Glass Tableware: 1800 – 1940’, *Studies in Material Culture Research*, edited by Karlis Karklins, Society for Historical Archaeology, 2000, p 183

include condiment bottles (oil/vinegar, pickle/chutney and unspecified condiment) and tableware (stemware, tumblers, and a salt). Pharmacy/personal grooming items include patent medicine bottles (castor oil and gin/schnapps) as well as unspecified pharmaceutical bottles. One partial lamp chimney comprises the Service Group.

Results of functional analysis indicate that the glass assemblage reflects that resulting from a typical mid-nineteenth century residence. The relative frequency of alcohol-related bottle might be somewhat lower than those from other contemporary archaeological investigations, but the common condiments and patent medicine are typical of those found on mid-nineteenth century archaeological sites throughout Australia.

#### **2.4.2 Context 5077 – Fill of a Rectangular Pit Context (Context 5076)**

There are three glass bottles from Context 5077: one beer/wine, one champagne type, and one personal/ grooming. All bottles provided date ranges based on diagnostic technological attributes and provided a mid- to late-nineteenth century date range. This date was reinforced by one bottle that bears the embossment for Barry's Tricopherous for Skin and Hair (1851–1880).

#### **2.4.3 Discussion of Group 4**

Based on glass analysis the deposits from the two pits in Group 4 potentially represent two different time periods of occupation. The fill from one rectangular pit has an 1820 – 1860s (5073) date range while the other rectangular pit has an 1850s – 1880s date range (5076). The fill of the former contained a wide variety of domestic materials including tableware, alcohol bottles and condiment bottles that typify a residential setting, however the paucity of glass artefacts from the latter limited use interpretation to the mere suggestion that individuals who produced this rubbish, drank alcohol and used hair-care products.

### **3.0 Conclusion**

Results of analysis for glass artefacts were discussed in four Groups. Each group consisted of a number of pit features. Glass from each feature deposits was subject to separate analysis. For the purpose of this study, the fill from the rectangular pit in Area B (Group 4) was the only context to provide a sufficient quantity of glass artefacts to adequately contribute temporal and functional information. For Groups 1 –3 the quantity of diagnostic glass was insufficient to contribute any substantive functional analysis and only marginally to temporal analysis.

Results of temporal analysis for glass suggest that these grouped features resulted from the Hassall occupation of the site over time. Group 1 features had a 1790s–1870s date range. However, the paucity of glass artefacts makes this date marginal at best. An 1820s –1870s date range was established for both fill deposits from Group 2. While broad ranged, this date range was achieved with chronological data from several artefact types. Group 3's features also had an 1820s – 1870s date range, which like chronological data for Group 1, is based on a few diagnostic artefact types. The two analysed deposits from Group 4 had consecutive 1820 –1860s and 1850s –1880s date ranges. These date ranges were established by manufacturing date ranges for glass artefact types and reinforced by documented product manufactures' dates.

Groups 1–3 also produced a limited variety of functionally associated items. Group 1 had only beer/wine bottles and window glass. Group 2 had beer/wine bottles, window glass and tableware. Group 3 had beer/wine bottles and tableware. Group 4 produced sufficient numbers and varieties of use-specific artefacts as to determine that the artefacts resulted from domestic activities.

#### 4.0 References

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