REPORT ON THE ARCHAEOLOGICAL EXCAVATION OF PART OF CADIA MINING VILLAGE, NEAR ORANGE, N.S.W.

Volume 3. Artifact analysis and conclusions.

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6 ARTIFACT ANALYSIS

6.1 Introduction.

In this report, the computer catalogue of artifacts has been used for two principal purposes, first the dating of the site, and second to elucidate the usage or function of the site. The dating of the artifacts is essential, so that the chronological sequence of the site may be determined in relation to the stratigraphic evidence. Nonconformity may occur in two distinct ways, first between the stratigraphic and artifact dating evidence, but secondly between the historical and archaeological evidence for the dating of the site. This may indicate:

1. The contamination of the archaeological evidence, either by residual or introduced artifacts,
2. The need to reassess the historical documentation, or
3. The need to reassess the dating of artifact categories.

These processes are standard practice in the advance of archaeological knowledge for sites or artifact types. Once the dating analysis has been successfully completed, the functional analysis of a site can proceed.

There are various procedures common to the dating and functional analysis of a site. The archaeological contexts are grouped into a number of phases in accordance with stratigraphic, chronological and other comparative evidence. The identification of phases is in fact a significant simplification of the function of the "Harris Matrix', but achieves the same result.

6.2 Land use and improvements – historical periods.

The historical research included in Chapters 2 and 3 indicates that the sequence of development on the site can be divided into a number of periods:

	PERIOD	**Date range**
1	INITIAL PHASE OF COPPER MINING	**1858-1869**
1.1	Copper mining prior to the Scottish-Australian Mining Company.	1858-1861
1.2	The Scottish-Australian Mining Company.	1861-1864
1.3	Cadiangullong Consolidated Copper Mining Company.	1864-1868
1.4	No work	1868-1869
2	**The Scottish Australian Mining Company and its quest for payable gold.**	**1870-1891**
2.1	Small workforce up to 30 men	1870-1891
3	**The Scottish Australian Mining Company and litigation in the 1890s.**	**1890s**
3.1	No work of consequence.	1891-1897
3.2	Litigation – no work of consequence.	1897-1899
4	**The Scottish Australian Mining Company and its plans to**	**1899-1928**

	exploit the Iron Duke.	
4.1	No work of consequence.	1899-1904
4.2	Cadia Copper Mining and Smelting Syndicate	1905-1908
4.3	Cadia Copper Mining and Smelting Company Limited.	1909-1917.
4.4	G & C Hoskins and the Iron Duke.	1919-1928
5.	**The final years of mining**	**1929-1945**
5.1	No work of consequence in the 1930s	1929-1940
5.2	The Iron Duke	1941-1945

6.3 Archaeological phases.

The archaeological investigation enabled the recognition of a number of phases from the archaeological evidence, which tie in with the historical outline.

Note that the date range in this table is derived from the archaeological evidence itself. See section entitled "Dating of the site" for the dating of each phase. The table provides the following dates:

Date from	The production cut off date for the earliest artifacts. (Where there is evidence of contamination, the latest date provided by introduced artifacts is given in brackets).
Date to	The production commencement date for the latest artifacts. (Where there is evidence of contamination, the earliest date provided by residual artifacts is given in brackets).

6.3.1 Phases for Cadia Village.

Period	Phase	Phase name	Date from	Date to	No of functions
1-5	000	Total Assemblage	(1750s) 1850s	1940s	
1-5	W001	Chaplain's House	(1816) 1850s	1940s	60
1-2	W002		1860s	1870s (1930s)	71
1-2	W003		1860s	1870s (1920s)	42
	W004		-	-	-
2	W005		1870s	1840s	7
1-2	W006		1850s	1870s	22
1-3	W007		1860s	1890s (1920s)	35
1-2	W008		1860s	1880s	11
1-2	W008, W009, W013, W014		1860s	1880s	14

Period	Phase	Phase name	Date from	Date to	No of functions
	W009		-	-	2
2	W010		1880s	-	6
	W011		-	-	1
	W012		-	-	1
	W013		-	-	8
	W014		-	-	-
1-2	W015		1860s	1880s (1940s)	39
	S001		-	-	-
1-4	S002		1860s	1920s	48
	S003		-	-	-
1-4	S004		1880s	1900s	12
1-5	S005		(1750s) 1850s	1930s	89
	S006		-	-	3
	S007		-	-	1
2	S008		1870s	1870s	9
2	S009		1870s	1870s	12
1-4	S011		1860s	1920s	32
	S012		-	-	1
1-5	S015-S020, S149-S155	Old Village Centre	1850s	1940s	96
	S015		-	-	12
2-4	S015, S151		1870s	1920s	16
1-5	S016		1860s	1930s	43
1-2	S017		1850s	1870s (1920s)	52
1-5	S018	Bakery	1860s	1930s	52
	S019		-	-	14
	S020		-	-	9
	S116		-	-	9
1-4	S149		1860s	1920s	34
2	S150		1870s	1880s	16
	S151		-	-	8
1-4	S152		1850s	1920s	28
1-5	S153		1860s	1940s	62
1-4	S154		1860s	1920s	27
	S155		-	-	13

The historical periods relate to the stages in the historical sequence of development on the site.

The dating of the artifacts may differ significantly from the historical periods because of numerous factors, which have influenced the deposition of objects on the site. The most important factors are identified in the following analysis.

6.4 Artifact dating and methodology.

All datable artifacts have been used for the purpose of dating each site. For every artifact category, it was possible to list the frequency of artifacts, together with the date range of production. These dates were listed as follows:

'**From**' records the date production commenced.
'**To**' records the date production ceased.

Artifact frequency was calculated on total number of pieces found, not on any calculation of the actual number of complete artifacts that might be represented by the total number of pieces.

A phase may be dated by the following methods and considerations:

1. Production commencement dates (from). It is assumed that there is a flow of newly produced artifacts, which are deposited on site. A consistent flow of new artifacts will therefore indicate the occupation date range for a phase, except in the following circumstances:
1. where residual artifacts are introduced from earlier deposits.
2. where artifacts from later deposits have been introduced.
3. where deposition of artifacts ceased by whatever mechanism, but occupation can be demonstrated to have continued on the basis of other evidence. The cessation of deposition may be caused by such mechanisms as municipal garbage collection, or by surfaces, which seal the soil from further deposition.

Where an archaeological context or unit is sealed by another, then the artifacts with the latest production commencement date will provide the date at which the layer was sealed, except in 2 or 3 above.

2. Production cut off dates (to). The earliest date of artifacts going out of production is usually taken to indicate the latest date for the commencement of occupation.

3. Consumables. Because most of the datable artifacts are consumables, it is expected that they will not appear in the archaeological record more than a decade after going out of production, except in certain circumstances.

Ceramics and glass, except where they become items of value, such as collectibles or antiques, will fall into this category.

Building materials, especially bricks, cannot be considered in the same manner as other consumables, since they can be reused so easily. Thus a sandstock brick, which goes out of production in the 1830s, may be

found in much later contexts. Therefore they are not reliable indicators of the commencement of occupation in a phase, especially when considered in isolation.

Coins can usually be dated by their inscriptions. If not, then their date of first production is usually known. Dates when coins and tokens go out of circulation are also known, and can be useful in determining the date of a phase. However the uncertainties of their usage as gaming pieces, collectibles or antiques, often renders currency a very difficult medium to use in the dating of archaeological contexts, when in isolation from other datable artifacts.

4. Accuracy and reliability. The graphs showing the date range of production are in many cases shown to be accurate, since they can be tested against historical documentation and from site to site. In this report, the closest dating is usually by decade, but in certain instances the exact year of production is known. The reliability of the dating is evaluated on the basis of sample size, the concentration of frequencies in consecutive decades, and the conformity of the graph towards a consistent or smooth curve.

6.5 Dating of the site.

The following pages are devoted to the analysis and interpretation of a number of graphs indicating the frequency of artifacts against their production date range, as defined above. In some cases the sample of datable artifacts was too small to give a reliable date range. The result is that historical documentation and the structural fabric of a site has to be relied upon for dating purposes.

The tables provide the following dates:

Date from	The production cut off date for the earliest artifacts. (Where there is evidence of contamination, the latest date provided by introduced artifacts is given in brackets).
Date to	The production commencement date for the latest artifacts. (Where there is evidence of contamination, the earliest date provided by residual artifacts is given in brackets).

The following date range is provided as an example:

Date from:	1830s
Date to:	1880s

The date range indicates occupation by at least the 1830s until the 1880s or soon thereafter.

6.5.1 Phase 000. Total Assemblage.

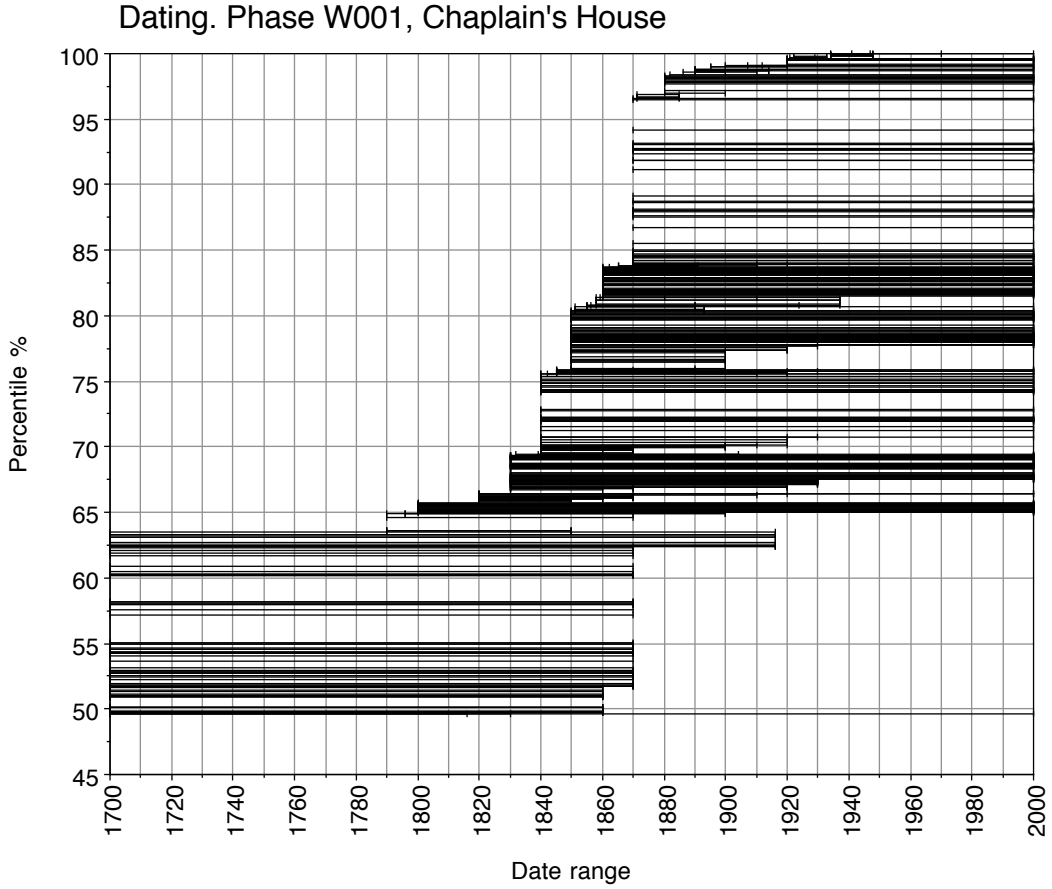
Phase number:	000
Phase description:	Total Assemblage
Total number of artifacts:	45057
Percentage undated	47%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	(1750) 1850s
Date to:	1880s (1940s)

Interpretation of sample: Historical evidence indicates that Cadia was the scene of mining from the later 1850s until the 1940s, with the last phase of mining ending after World War II. This is accurately reflected in the total artifact assemblage from the Cadia Village excavations, although there is a dramatic fall off in artifact deposition from the 1880s onwards. That decline in artifact deposition in the 1880s may indicate a change in the nature of occupation by this time. A number of interpretations are possible. Within Sydney and Parramatta, the similar decline in deposition has been interpreted as evidence of off site garbage disposal. This does not appear to be the case at Cadia. The decline in the rate of deposition may indicate the movement of the centre of the village towards Chilcott Street, with buildings in the lower part of the

village less frequently occupied. In some cases, artifact deposition accelerates again in the 1920s and 1930s, which might indicate a return to higher frequencies of occupation again.

The next major question to arise out of this is – do any of the house sites or groups indicate an early or late occupation phase, or is each site occupied throughout the whole period of village occupation from 1850s to 1940s? To answer this question, the dating of each site needs to be analysed.

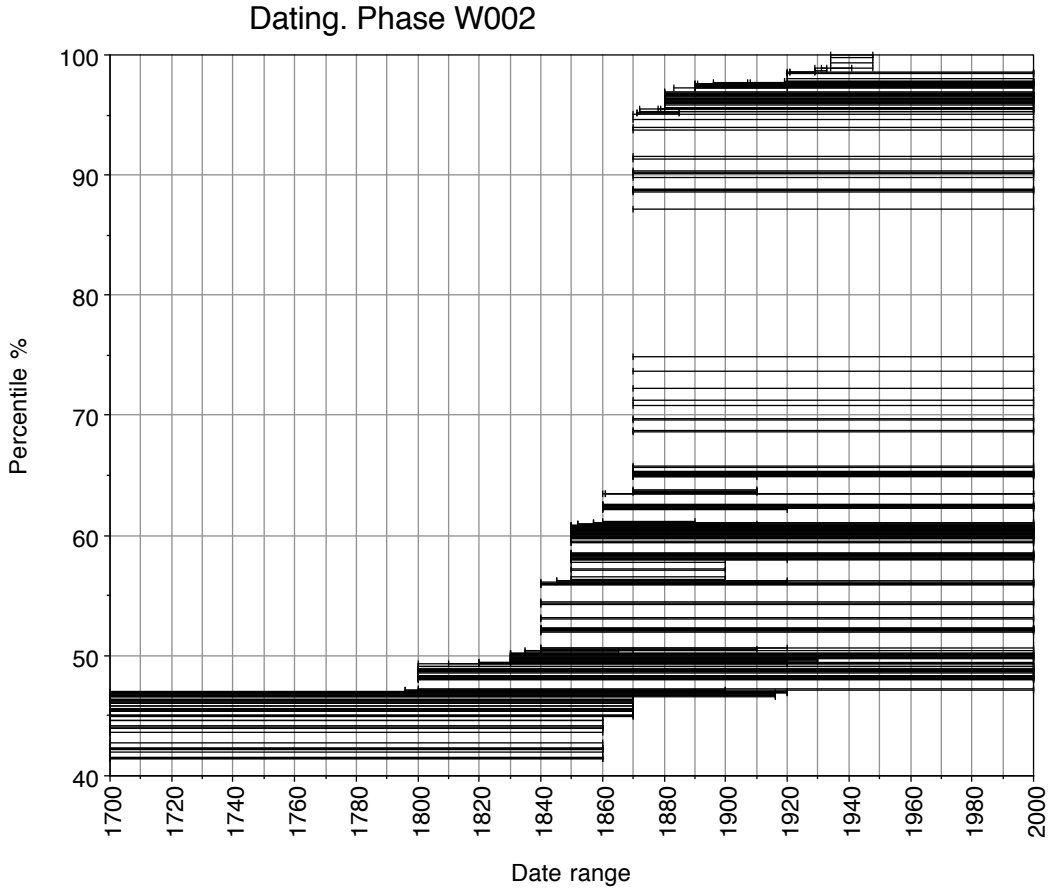
6.5.2 Site subdivision W001 – Chaplain's House.



Phase number:	W001
Phase description:	Chaplain's House.
Total number of artifacts:	4740
Percentage undated	50%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	(1816) 1850s
Date to:	1940s

Interpretation of sample: The date range indicates that the Chaplain's House appears to have been occupied from the 1850s through to the 1940s. There are only 22 glass fragments predating the 1860s, suggesting that the artifacts could be residual or remained in circulation after they went out of production. The dramatic fall off in artifact deposition from the 1870s may indicate a change in the nature of occupation, although the house was still occupied as the Underground Manager's Residence on the PO plan of 1914 (Figure 2.10).

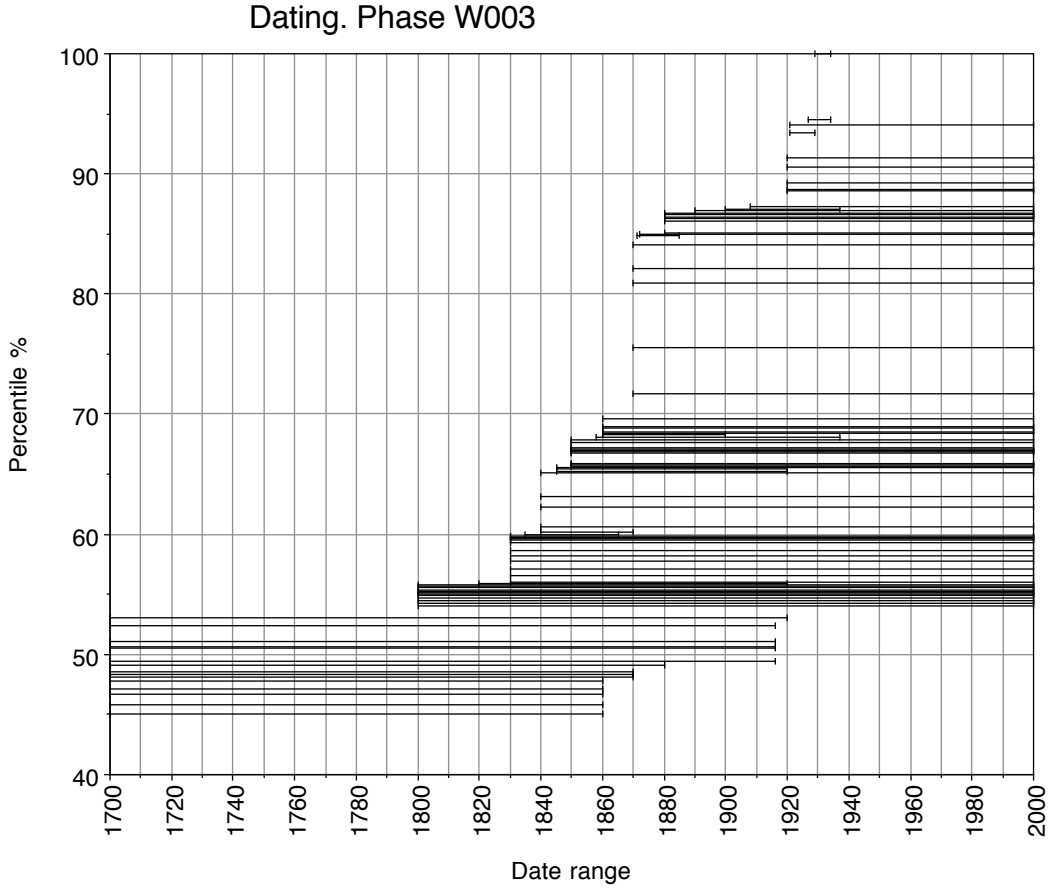
6.5.3 Site subdivision W002.



Phase number:	W002
Phase description:	
Total number of artifacts:	2751
Percentage undated	41%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1870s (1930s)

Interpretation of sample: The date range indicates that W002 was occupied from the 1860s through to the 1930s. The dramatic fall off in artifact deposition from the 1870s may indicate a change in the nature of occupation.

6.5.4 Site subdivision W003.



Phase number:	W003
Phase description:	
Total number of artifacts:	760
Percentage undated	45%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1870s (1920s)

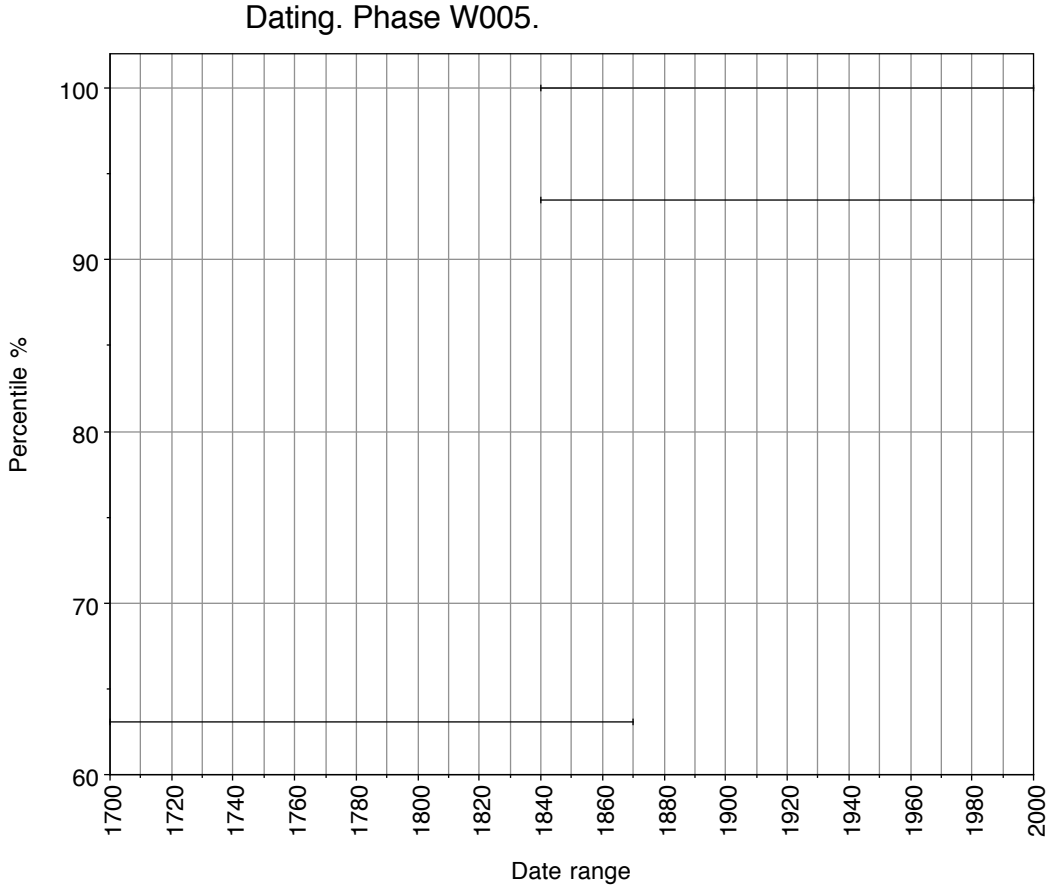
Interpretation of sample: The date range indicates that W003 was occupied from the 1860s through to the 1930s. The dramatic fall off in artifact deposition from the 1870s may indicate a change in the nature of occupation, possibly with a return to higher frequencies of occupation in the 1920s.

6.5.5 Site subdivision W004.

Phase number:	W004
Phase description:	
Total number of artifacts:	0
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

Interpretation of sample: Sample too small for further analysis.

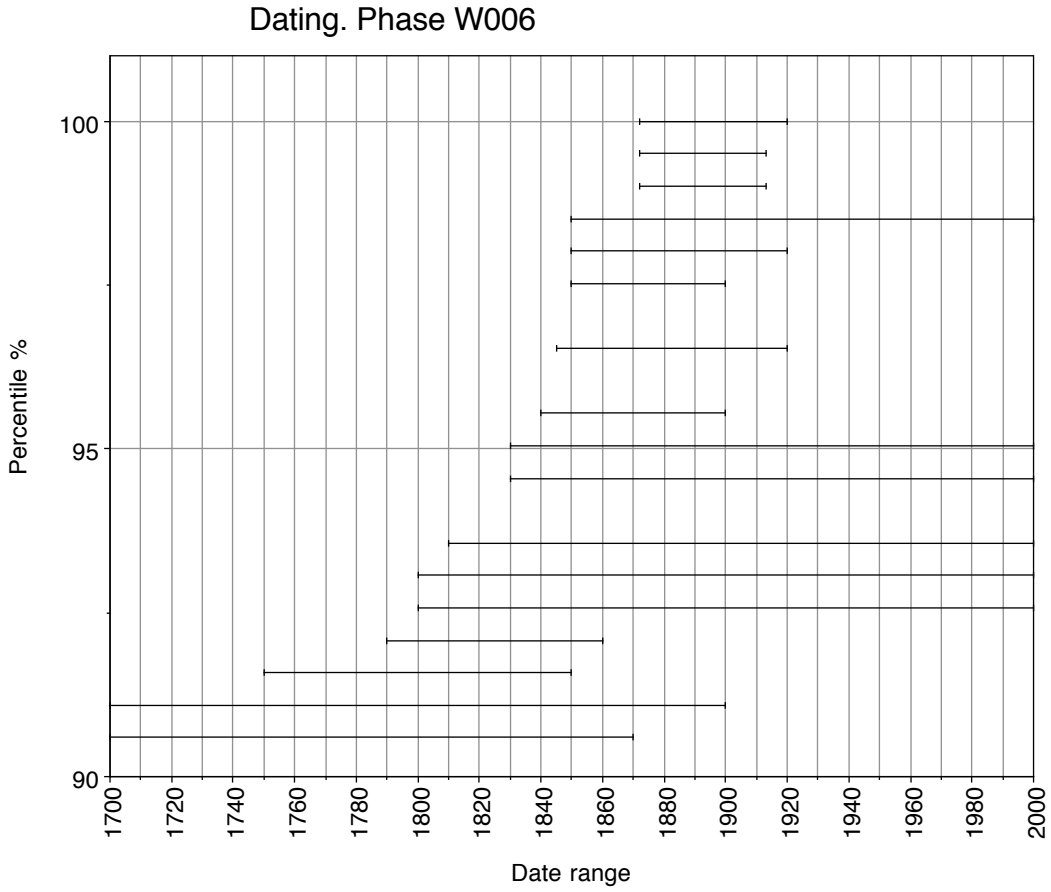
6.5.6 Site subdivision W005.



Phase number:	W005
Phase description:	
Total number of artifacts:	46
Percentage undated	59%
Reliability of sample:	Small sample, unreliable.
Date from:	1870s
Date to:	1840s

Interpretation of sample: The date range indicates that W005 was occupied from the 1840s through to the 1870s. The small sample provides an unreliable date range.

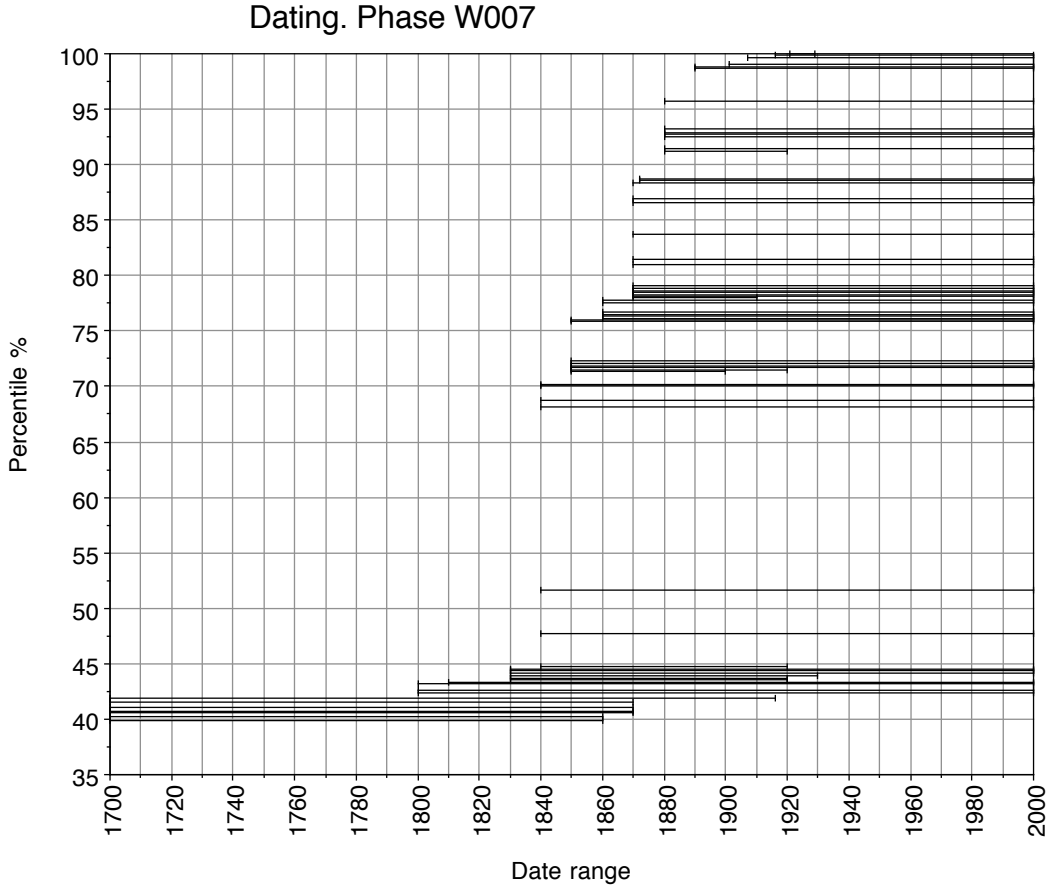
6.5.7 Site subdivision W006.



Phase number:	W006
Phase description:	
Total number of artifacts:	202
Percentage undated	90%
Reliability of sample:	Small sample, possibly unreliable.
Date from:	1850s
Date to:	1870s

Interpretation of sample: The date range indicates that W006 was occupied from the 1850s through to the 1870s. The small sample may provide an unreliable date range.

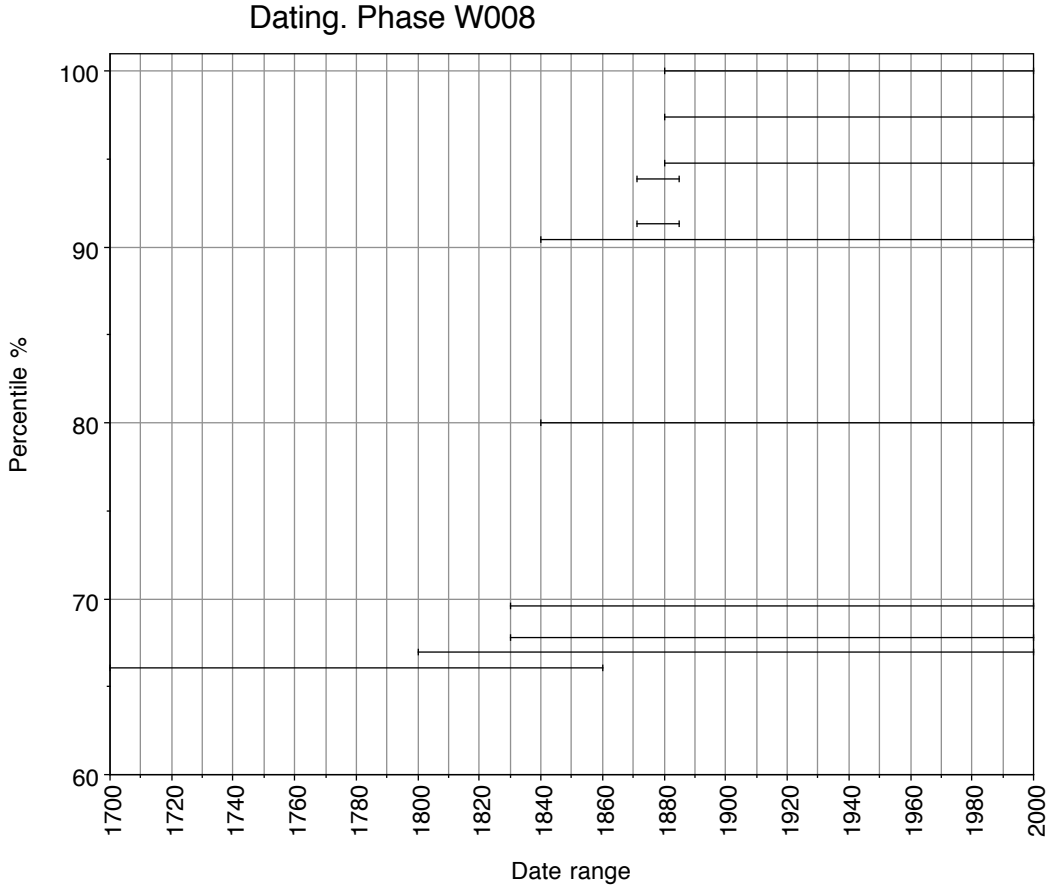
6.5.8 Site subdivision W007.



Phase number:	W007
Phase description:	
Total number of artifacts:	604
Percentage undated	40%
Reliability of sample:	Small sample, possibly unreliable.
Date from:	1860s
Date to:	1890s (1920s)

Interpretation of sample: The date range indicates that W007 was occupied from the 1860s through to the 1920s. The dramatic fall off in artifact deposition from the 1890s may indicate a change in the nature of occupation.

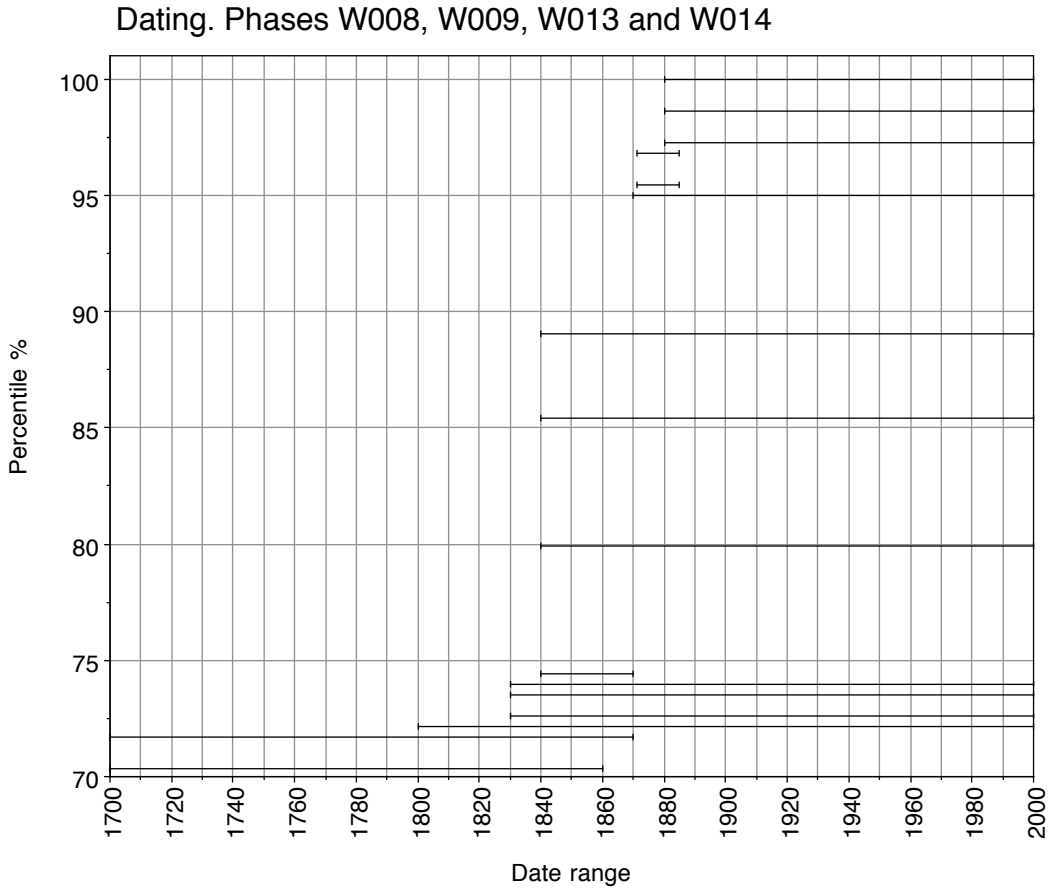
6.5.9 Site subdivision W008.



Phase number:	W008
Phase description:	
Total number of artifacts:	115
Percentage undated	65%
Reliability of sample:	Small sample, possibly unreliable.
Date from:	1860s
Date to:	1880s

Interpretation of sample: The date range indicates that W008 was occupied from the 1860s through to the 1880s. The small sample may provide an unreliable date range. See combined graph for Phases W008, W009, W013 and W014.

6.5.10 Site subdivision W008, W009, W013 and W014.



Phase number:	W008, W009, W013 and W014
Phase description:	
Total number of artifacts:	219
Percentage undated	70%
Reliability of sample:	Small sample, consistent with other phases and historical documentation.
Date from:	1860s
Date to:	1880s

Interpretation of sample: The date range indicates that W008, W009, W013 and W014 were occupied from the 1860s through to the 1880s. The combined sample appears to provide a reliable date range.

6.5.11 Site subdivision W009.

Phase number:	W009
Phase description:	
Total number of artifacts:	7
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

Interpretation of sample: Sample too small for further analysis. See combined graph for Phases W008, W009, W013 and W014.

6.5.12 Site subdivision W010.

Phase number:	W010
Phase description:	
Total number of artifacts:	23
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	1800s
Date to:	-

Interpretation of sample: Sample too small for further analysis.

6.5.13 Site subdivision W011.

Phase number:	W011
Phase description:	
Total number of artifacts:	1
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

Interpretation of sample: Sample too small for further analysis.

6.5.14 Site subdivision W012.

Phase number:	W012
Phase description:	
Total number of artifacts:	1
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

Interpretation of sample: Sample too small for further analysis.

6.5.15 Site subdivision W013.

Phase number:	W013
Phase description:	
Total number of artifacts:	97
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

Interpretation of sample: Sample too small for further analysis. See combined graph for Phases W008, W009, W013 and W014.

6.5.16 Site subdivision W014.

Phase number:	W014
Phase description:	
Total number of artifacts:	0
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

Interpretation of sample: Sample too small for further analysis. See combined graph for Phases W008, W009, W013 and W014.

6.5.17 Site subdivision W015.

Phase number:	W015
Phase description:	
Total number of artifacts:	823
Percentage undated	41%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1880s (1940s)

Interpretation of sample: The date range indicates that W015 was occupied from the 1860s through to the 1940s. The dramatic fall off in artifact deposition from the 1880s may indicate a change in the nature of occupation, possibly with a return to higher frequencies of occupation in the 1920s.

6.5.18 Site subdivision S001.

Phase number:	S001
Phase description:	
Total number of artifacts:	0
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

Interpretation of sample: Sample too small for further analysis.

6.5.19 Site subdivision S002.

Phase number:	S002
Phase description:	
Total number of artifacts:	1850
Percentage undated	42%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1920s

Interpretation of sample: The date range indicates that S002 was occupied from the 1860s through to the 1920s. The decline in artifact deposition from the 1890s may indicate a change in the nature of occupation.

6.5.20 Site subdivision S003.

Phase number:	S003
Phase description:	
Total number of artifacts:	0
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

Interpretation of sample: Sample too small for further analysis.

6.5.21 Site subdivision S004.

Phase number:	S004
Phase description:	
Total number of artifacts:	96
Percentage undated	29%
Reliability of sample:	Small sample, possibly unreliable.
Date from:	1880s
Date to:	1900s

Interpretation of sample: The date range indicates that S004 was occupied from the 1880s through to the 1900s. The small sample may provide an unreliable date range.

6.5.22 Site subdivision S005.

Phase number:	S005
Phase description:	
Total number of artifacts:	19149
Percentage undated	40%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	(1750s) 1850s
Date to:	1930s

Interpretation of sample: The date range indicates that S005 was occupied from the 1850s through to the 1930s. The decline in artifact deposition from the 1880s may indicate a change in the nature of occupation. However the building (S005) is shown on historical photographs dated to the 20th century (Plates 2.4 and 2.5).

6.5.23 Site subdivision S006.

Phase number:	S006
Phase description:	
Total number of artifacts:	10
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

Interpretation of sample: Sample too small for further analysis.

6.5.24 Site subdivision S007.

Phase number:	S007
Phase description:	
Total number of artifacts:	1
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

Interpretation of sample: Sample too small for further analysis.

6.5.25 Site subdivision S008.

Phase number:	S008
Phase description:	
Total number of artifacts:	46
Percentage undated	9%
Reliability of sample:	Small sample, possibly unreliable.
Date from:	1870s
Date to:	1870s

Interpretation of sample: The date range indicates that S008 was occupied from the 1870s through to the 1870s, a relatively short period. The small sample may provide an unreliable date range, yet the available historical photographs show nothing in this vicinity during the early 1900s (Plates 2.3 and 2.5).

6.5.26 Site subdivision S009.

Phase number:	S009
Phase description:	
Total number of artifacts:	49
Percentage undated	20%
Reliability of sample:	Small sample, possibly unreliable.
Date from:	1870s
Date to:	1870s

Interpretation of sample: The date range indicates that S009 was occupied from the 1870s through to the 1870s, a relatively short period. The small sample may provide an unreliable date range, since the available historical photograph shows a structure present between 1909 and1914 (Plate 2.5).

6.5.27 Site subdivision S011.

Phase number:	S011
Phase description:	
Total number of artifacts:	401
Percentage undated	27%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1920s

Interpretation of sample: The date range indicates that S011 was occupied from the 1860s through to the 1920s. The decline in artifact deposition from the 1880s may indicate a change in the nature of occupation, and possible return to higher frequencies of occupation in the 1920s. A building (S011) is shown on historical photographs after 1907 (Plates 2.3, 2.4 and 2.5).

6.5.28 Site subdivision S012.

Phase number:	S012
Phase description:	
Total number of artifacts:	1
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

Interpretation of sample: Sample too small for further analysis.

6.5.29 Site subdivision S015-S020, S149-S155, Old Village Centre.

Phase number:	S015-S020, S149-S155
Phase description:	Old Village Centre
Total number of artifacts:	8770
Percentage undated	39%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1850s
Date to:	1940s

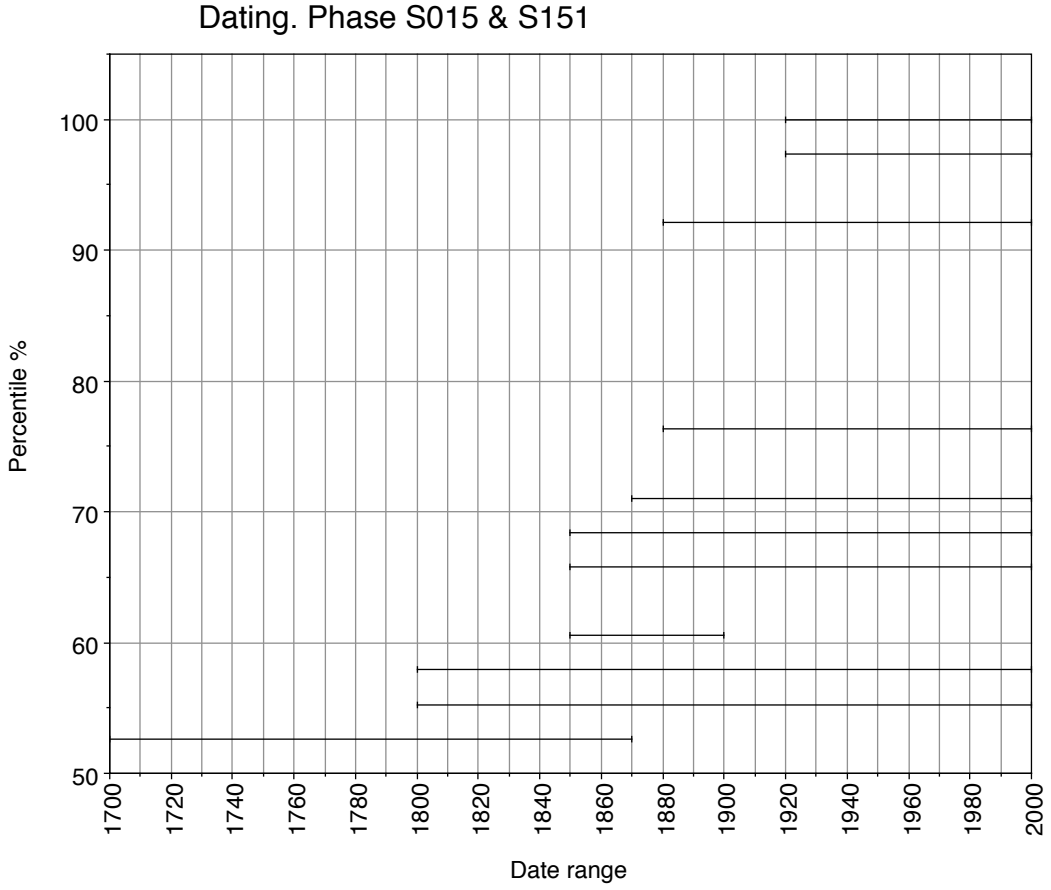
Interpretation of sample: The date range indicates that S015 – S020 and S149 to S155 were occupied from the 1850s through to the 1940s. The decline in artifact deposition from the 1880s onwards may indicate a change in the nature of occupation, although deposition picks up slightly in the 1920s. The buildings (S015 – S020 and S149 to S155) form a group shown on historical photographs dated to the early 20th century (Plates 2.3, 2.5 and 2.9 most clearly).

6.5.30 Site subdivision S015.

Phase number:	S015
Phase description:	
Total number of artifacts:	16
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	1870s
Date to:	-

Interpretation of sample: Sample too small for further analysis. See S015 and S151.

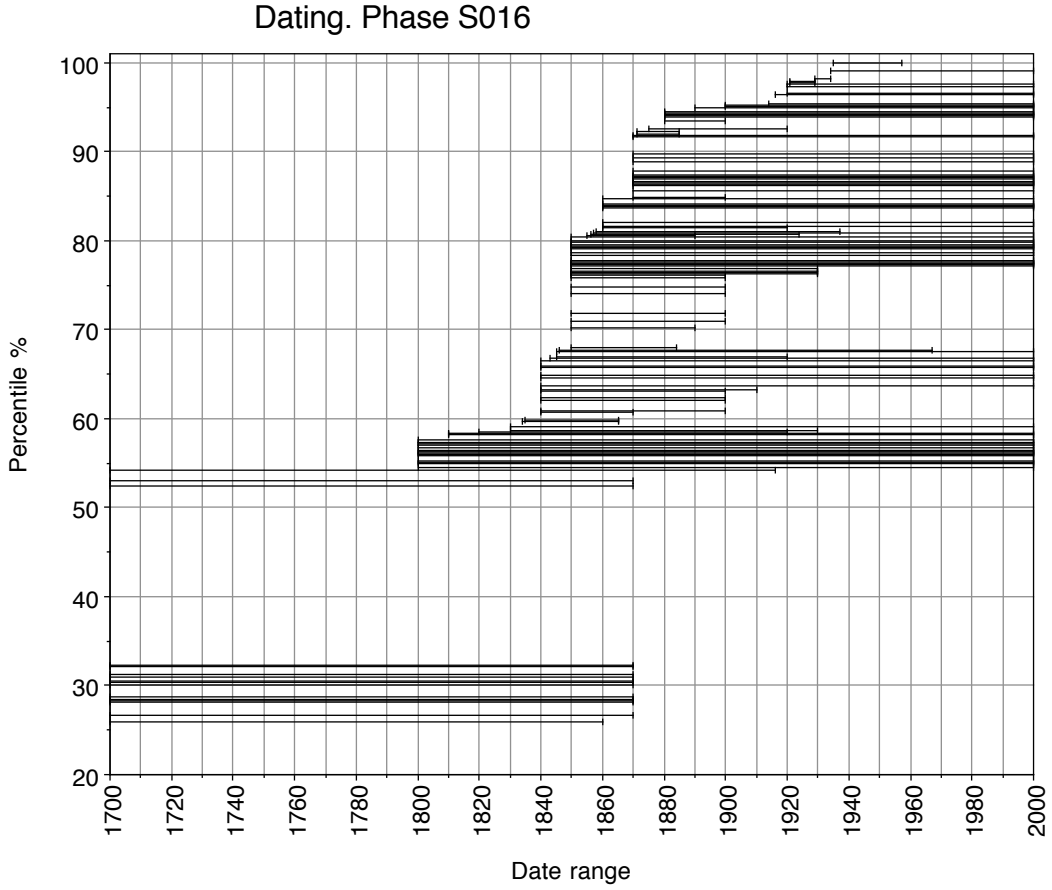
6.5.31 Site subdivision S015 and S151.



Phase number:	S015 and S151
Phase description:	
Total number of artifacts:	38
Percentage undated	50%
Reliability of sample:	Small sample, possibly unreliable.
Date from:	1870
Date to:	1920

Interpretation of sample: The date range indicates that S015 and S151 were occupied from the 1870s through to the 1920s. The building (S015, S151) is one of a complex of buildings shown on historical photographs dated to the early 20th century (Plates 2.3, 2.5 and 2.9 most clearly).

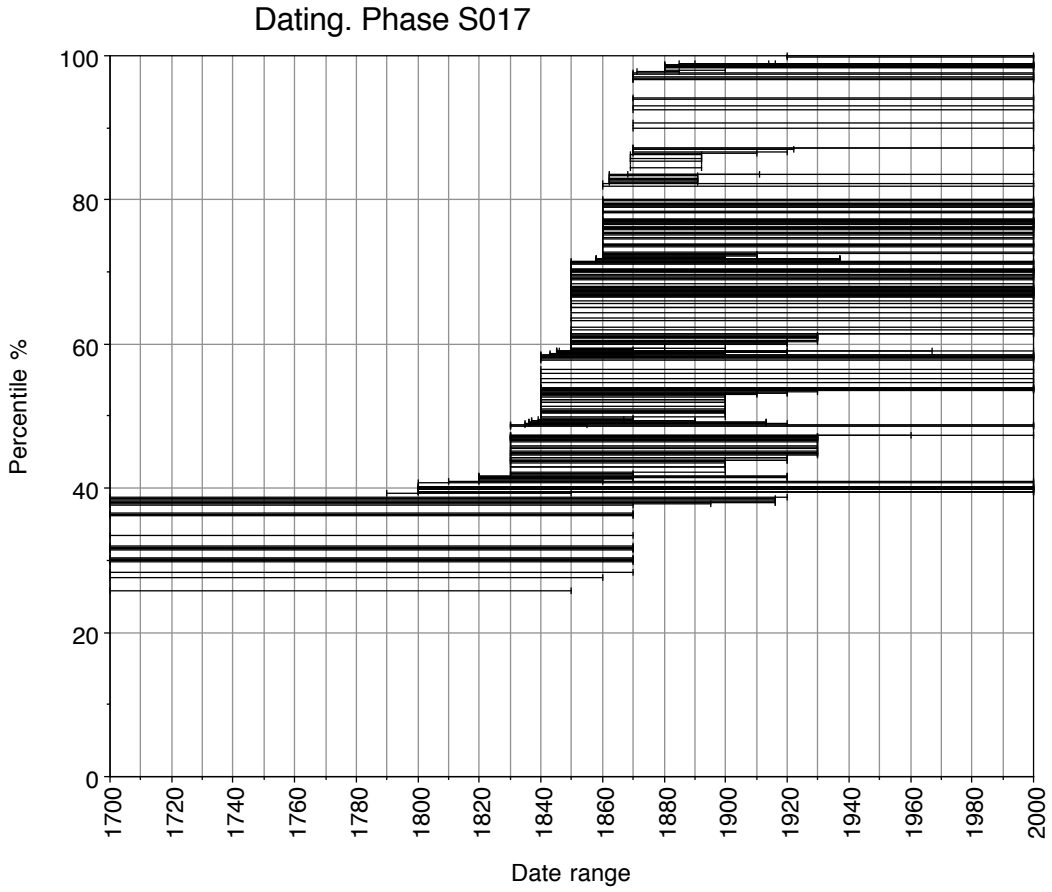
6.5.32 Site subdivision S016.



Phase number:	S016
Phase description:	
Total number of artifacts:	586
Percentage undated	26%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1930s

Interpretation of sample: The date range indicates that S016 was occupied from the 1860s through to the 1930s. The decline in artifact deposition from the 1880s may indicate a change in the nature of occupation. The building (S016) is shown on historical photographs dated to the early 20th centuries (Plates 2.3, 2.5 and 2.9 most clearly).

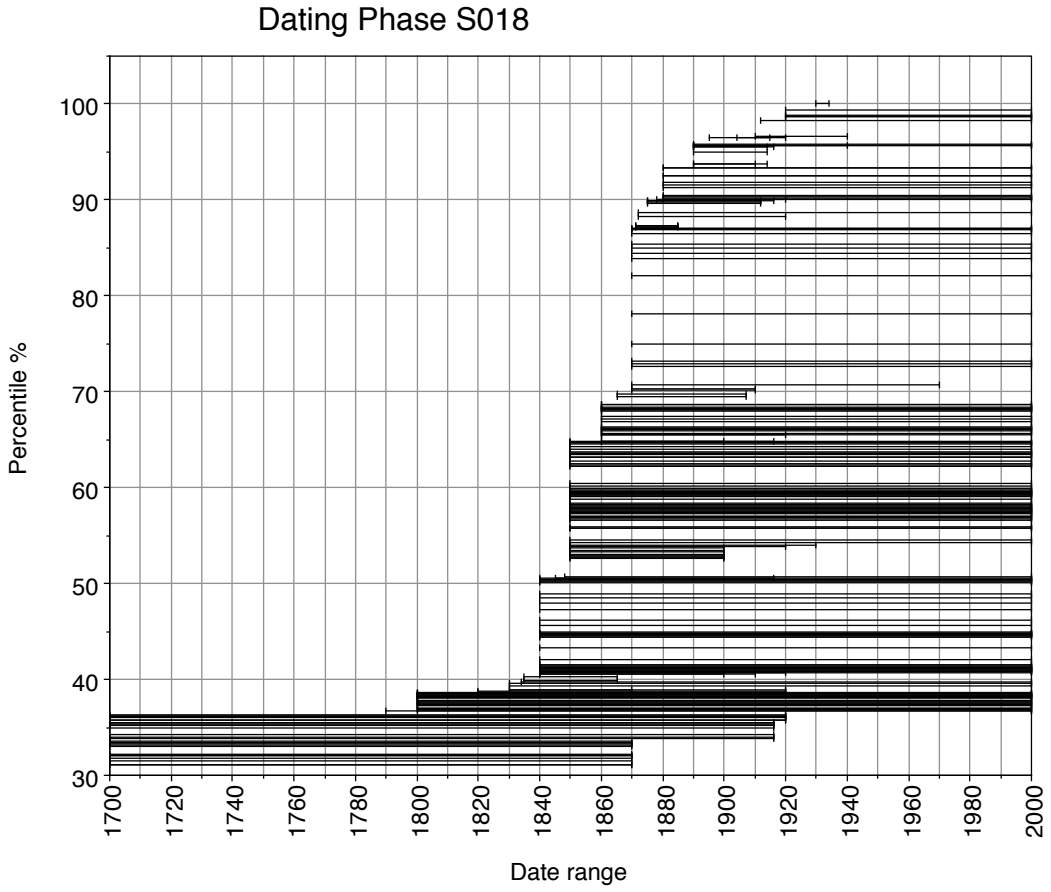
6.5.33 Site subdivision S017.



Phase number:	S017
Phase description:	
Total number of artifacts:	1543
Percentage undated	26%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1850s
Date to:	1870s (1920s).

Interpretation of sample: The date range indicates that S017 was occupied from the 1850s through to the 1920s. The decline in artifact deposition from the 1870s may indicate a change in the nature of occupation. The building (S017) is one of a complex of buildings shown on historical photographs dated to the early 20th century (Plates 2.3, 2.5 and 2.9 most clearly).

6.5.34 Site subdivision S018, Bakery.



Phase number:	S018
Phase description:	Bakery
Total number of artifacts:	1714
Percentage undated	31%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1930s

Interpretation of sample: The date range indicates that S018 was occupied from the 1850s through to the 1920s. There is a decline in artifact deposition from the 1880s onwards, but not as dramatic as in other cases. It may indicate a change in the nature of occupation. The building (S018) is one of a complex of buildings shown on historical photographs dated to the early 20th century (Plates 2.3, 2.5 and 2.9 most clearly).

6.5.35 Site subdivision S019.

Phase number:	S019
Phase description:	
Total number of artifacts:	29
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

Interpretation of sample: Sample too small for further analysis.

6.5.36 Site subdivision S020.

Phase number:	S020
Phase description:	
Total number of artifacts:	27
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

Interpretation of sample: Sample too small for further analysis.

6.5.37 Site subdivision S116.

Phase number:	S116
Phase description:	
Total number of artifacts:	15
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

Interpretation of sample: Sample too small for further analysis.

6.5.38 Site subdivision S149.

Phase number:	S149
Phase description:	
Total number of artifacts:	6214
Percentage undated	81%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1920s

Interpretation of sample: The date range indicates that S149 was occupied from the 1860s through to the 1920s. The decline in artifact deposition from the 1880s onwards may indicate a change in the nature of occupation. The building (S149) is one of a complex of buildings shown on historical photographs dated to the early 20th century (Plates 2.3, 2.5 and 2.9 most clearly).

6.5.39 Site subdivision S150.

Phase number:	S150
Phase description:	
Total number of artifacts:	108
Percentage undated	34%
Reliability of sample:	Small sample, possibly unreliable.
Date from:	1870s
Date to:	1880s

Interpretation of sample: The date range indicates that S150 was occupied from the 1870s to the 1880s. The building (S149) is one of a complex of buildings shown on historical photographs dated to the early 20th century (Plates 2.3, 2.5 and 2.9 most clearly).

6.5.40 Site subdivision S151.

Phase number:	S151
Phase description:	
Total number of artifacts:	22
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

Interpretation of sample: Sample too small for further analysis.

6.5.41 Site subdivision S152.

Phase number:	S152
Phase description:	
Total number of artifacts:	746
Percentage undated	38%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1850s
Date to:	1920s

Interpretation of sample: The date range indicates that S152 was occupied from the 1850s through to the 1920s. The decline in artifact deposition from the 1880s may indicate a change in the nature of occupation, although the frequency of deposition is regained in the 1920s. The building (S152) is one of a complex of buildings shown on historical photographs dated to the early 20th century (Plates 2.3, 2.5 and 2.9 most clearly).

6.5.42 Site subdivision S153.

Phase number:	S153
Phase description:	
Total number of artifacts:	2500
Percentage undated	64%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1940s

Interpretation of sample: The date range indicates that S153 was occupied from the 1860s through to the 1940s. The decline in artifact deposition from the 1870s onwards may indicate a change in the nature of occupation. The building (S153) is one of a complex of buildings shown on historical photographs dated to the early 20th century (Plates 2.3, 2.5 and 2.9 most clearly).

6.5.43 Site subdivision S154.

Phase number:	S154
Phase description:	
Total number of artifacts:	493
Percentage undated	33%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1920s

Interpretation of sample: The date range indicates that S154 was occupied from the 1860s through to the 1920s. The decline in artifact deposition from the 1880s onwards may indicate a change in the nature of occupation, although deposition picks up slightly in the 1920s. The building (S154) is one of a complex of buildings shown on historical photographs dated to the early 20th century (Plates 2.3, 2.5 and 2.9 most clearly).

6.5.44 Site subdivision S155.

Phase number:	S155
Phase description:	
Total number of artifacts:	47
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

Interpretation of sample: Sample too small for further analysis.

6.6 Inventory of functions.

The cataloguing of the each artifact includes a brief description, an object name, a function and key function, in accordance with general practice in archaeology. There is a very extensive range of possible uses for artifacts. The key function is therefore used to cut down on the number of functions recognised, allowing them to be grouped for analysis. The following table lists all the key functions that may be used in the artifact catalogue, together with the range of objects usually listed under each heading.

For the Cadia Village excavations, various functions have been renamed or regrouped. Most functions can be grouped under main headings, including construction, container, food, household, husbandry, personal, recreation, services and work. A new category of "Miscellaneous" has been used to group many of the remaining functions.

The artifact assemblage from Cadia Village has required some reworking of the function names.

The major grouping of "Building" has been renamed "Construction", since building materials are unlikely to simply belong to houses at Cadia, but also industrial buildings, fencing, etc. "Construction" provides a more neutral term for this purpose, with a greater range of associated functions providing more precision on building and construction typology.

One of the features of the assemblage from Cadia Village was the large quantity of metalwork, particularly iron. This has demanded the expansion of the "Work" category to include a larger number of functions, allowing a closer identification of the industry, trade or occupation to be made.

The terms "Male", "Female", "Children" can be added to function names where there is a direct association with men, women or children.

The term "Improvised" can be added to a function to indicate bush craft or the adaptation of items to serve other purposes.

Aboriginal items are not included in the catalogue and were handed over to Dr. Jim Kohen and the local land council after the excavation.

Last updated: 21 December 2004

Key functions.	**Object names.**
Aboriginal	Aboriginal artifacts.
Children	Items associated with children. The word "children" may be attached to any function.

Key functions.	**Object names.**
Construction	This function includes all construction materials, but, where possible, is divided into specific categories, see below.
Construction canvas tent	Large eyelets for canvas materials, for example tents.
Construction door or gate	Door or gate hinges and fittings
Construction fastener	Clips Nails, Spikes, Brackets Pegs Rivets Studs Tacks
Construction fencing	Fencing wire and other fencing components.
Construction hardware	Principally metal items, the specific usage unidentified, including: Band. Bar. Cover Disc Offcut. Piping. Plate. Ring. Rod. Tubing. Wire.
Construction improvised	Construction materials that have been hand made, representing bush craft or reuse of materials.
Construction masonry	Brick Stone
Construction metal sheeting	Galvanised iron or other iron, zinc, tin sheeting
Construction mortar and plaster	Plaster, mortar, render
Construction or household furnishing	Items which could be part of a building, household furnishing or other item of furniture, usually nails and screws, brass and other.
Construction or work mechanical	Nuts Bolts Washers
Construction roofing	Roof coverings or fasteners.
Construction timber	Wood, worked, sawn, etc.

Key functions.	**Object names.**
Construction window.	Window glass. Sash weights
Container	Containers, use not specifically identified Bottles Containers Fragments Handle, Jar, Lead foil bottle tops. Lid, Rim, Storage jars, Unidentified ceramic and glass fragments.
Container barrel	Barrel hoops. Taps for barrels, usually brass.
Container petrol or oil	Container for petrol or oil, oil can, petrol can.
Container shipping	Shipping containers
Female	Items particularly associated with women.
Food aerated water	All aerated water containers, including soft drinks and ginger beer.
Food alcohol	All containers of alcohol, for example: Fragments. Stout Bottles.
Food baby goods	Items used in baby food preparation or feeding.
Food container	Containers, sardine type. Fragments of food containers. Ginger jars. Jars, for food. Storage jars or jugs, for food.
Food debris	Bone and shell debris from food species.
Food service appliance	Kitchen appliances, meat mincers.
Food service cooking	Cast iron cooking pots and other cooking containers
Food service cooking or household heating	Items used to cook food or heating of the household.
Food service cutlery	All cutlery.

Key functions.	**Object names.**
Food service kitchenware	Basins. Bowls. Containers. Handles. Jars. Jugs. Lids, etc. Usually in cheaper or coarser ceramics, metal, etc.
Food service tableware	All parts of ceramic dinner sets, including food serving items. Glass bowls and other tablewares, principally clear glass, stemwares and tumblers.
Food service tableware children	Tablewares associated with children, with alphabet, verses and pictures associated with children's stories. See also recreation toy for children's toys and children's tea sets.
Food service utilitarian	Enamel wares and other hard wearing food service wares, other than cooking pots (listed as food service kitchenwares).
Food unidentified	Bone fragments, species not identified, but most likely food species.
Household accessory	Items used in the household, not as appliances, but as accessories, for example: A stand for an iron. Fire iron. Coat hangers.
Household appliance	Appliances.
Household collectible	Items collected for their intrinsic beauty, rather than usefulness, including: Shells, non-edible species.
Household furnishing	Household furnishing, other item of furniture, including fittings. Fixed toilet bowls, but not chamber pots. Mirror glass.
Household maintenance	Blacking bottles. Polish. Laundry blue
Household ornamental	Vases, ornaments and other household decorative items.
Household packaging	All packaging materials, including foil, plastic, foam.

Key functions.	**Object names.**
Household pet or animal	Bone from cats or dogs and other objects associated with pets, including bird cages.
Household poison	Usually cobalt blue glass bottles
Household timekeeping	All component parts of clocks, but not watches.
Household toilet	Chamber pots. Wash basins and bowls. Wash jugs. Excluding fitted toilet bowls.
Household vermin	Rodent bones. Rat or mouse traps.
Husbandry farming	Items associated with farming, including ceramic eggs to induce hens to lay eggs. Ploughshares, branding irons. Cow bells
Husbandry fishing	Items used in fishing.
Husbandry hardware	Fencing wire
Husbandry horticulture	Items associated with horticulture including basins, bowls, plant pots in coarse earthenwares or terracotta. Where fine earthenware or similar place in Household ornamental. Shovels, spades, forks, hoes, etc.
Husbandry hunting or trapping	Rabbit trap
Improvised	Hand made items, representing bush craft or reuse of materials. The word “improvised” may be attached to any function.
Male	Items particularly associated with men.
Mechanical or work tool	
Misc clerical	All stationery items, excluding writing materials. Glue bottles, paper scissors, magnifying glasses.
Misc clerical writing	Writing materials, including: Penny ink bottles. Slate pencils. Slate tablets.
Misc commercial media	Newspaper, printing equipment, typesetting, TV aerials.
Misc commercial merchandising	Labels, brand names and signs for the marketing or advertising of goods.
Misc economic	Coinage, tokens used as currency.
Misc firearms	Items used in combat or hunting including: Musket balls. Cartridges.

Key functions.	**Object names.**
Misc government or administration	Items associated with government administration or regulation. For example, seals, mayoral insignia, ceremonial robes of office bearers.
Misc human skeletal	Human bone or teeth.
Misc Measurement	Weights and measures.
Misc natural	Items not altered by man, including: Roots. Branches.
Misc natural fauna	Native animals, if not used for food
Misc scientific	Scientific instruments, telescopes, etc.
Misc scientific Photography	All items associated with photography.
Misc security	All items associated with the security of property, including latches, bolts, locks, keys, padlocks, window locks, escutcheon plates.
Personal accessory	Personal accessories, including: Belt buckles. Handbags, purses. Suitcases
Personal clothing	Items of clothing, including: Buttons. Studs. Cloth or fabric. Eyelets, hooks studs, safety pins,
Personal cosmetics	All containers of perfume and other cosmetics
Personal dental	Dentures.
Personal footwear	All component parts of boots and shoes.
Personal jewellery	Items of jewellery. Note that glass beads may also be used in cloth covers for jugs and bowls.
Personal medicine	Pill boxes, medicine bottles, phials, tubes, syringes and other medicine containers.
Personal medicine or perfume	
Personal medicine or toilet	All containers of medicines or toiletries, excluding perfumes or cosmetics.
Personal military	Items of military uniform.
Personal optical	Spectacles and lenses.
Personal religion	All items associated with religious beliefs, including icons, rosaries, Chinese tear bottles.

Key functions.	**Object names.**
Personal timekeeping	All component parts of watches and fob watches.
Personal toilet	Personal toiletries, excluding perfume. Including combs, toothbrushes
Personal trophy	Plaques, cups, medals and trophies awarded for excellence in sport or other endeavour. Memorabilia associated with sports.
Recreation game	Counters, dice, balls, quoits and other gaming pieces, not already included under Toys.
Recreation music	All component parts of musical instruments, including pianos and mouth organs.
Recreation smoking	All tobacco pipes, of kaolin or other materials.
Recreation toy	Children's toys, including: Marbles. Children's tea-sets.
Services battery	Batteries for torches and other items.
Services drainage	Items associated with stormwater drainage.
Services drainage or sanitation	Principally ceramic drainage pipes, which may be used for stormwater and/or sewerage.
Services electricity	All items associated with the supply and use of electrical items, including brass and copper wiring, electrical cables, conduits and fittings.
Services energy	Gas piping, petrol containers.
Services energy or water	Principally iron piping which may be used for gas or water supply.
Services fuel	Coal. Coke. Charcoal. Burnt wood.
Services lighting	Items relating to the provision of light, including: Glass covers.
Services lighting arc	Items relating to arc lighting
Services lighting candle	All items associated with the provision of candle lighting
Services lighting candle	All items associated with the provision of candle lighting
Services lighting electric	All items associated with the provision of electric lighting.

Key functions.	**Object names.**
Services lighting gas	All items associated with the provision of gas lighting.
Services lighting oil	All items associated with the provision of oil lighting.
Services sanitation	Fitted toilet bowls, excluding chamber pots.
Services telephony	Items associated with telephony, insulators of various types for telegraph wires.
Transport	Items associated with vehicular transport, including parts and accessories.
Transport automotive	Items associated with vehicular transport, specifically cars, trucks and buses.
Transport bicycle	Items associated with bicycles, including parts and accessories.
Transport equestrian	All items associated with horse transport, including: Horseshoes. Horseshoe nails. Harness.
Transport equestrian draught	Horseshoes over 150 mm in dimensions
Transport equestrian pony	Horseshoes less than 115mm in dimensions
Transport rail narrow gauge	Narrow gauge tramways and associated equipment
Transport vehicular	Buggy, trap, cart or other vehicles
Unidentified	Unidentified usage.
Work blacksmithing	Iron slag
Work copper assay	Crucibles for copper assay
Work copper smelting	Copper slag
Work glassblowing by-product	Rupert's drops, a by-product of glassblowing.
Work haberdashery	Items used in making or mending cloth or clothing, including: Pins. Safety pins Thimbles. Bobbins. Scissors
Work leatherworking	Leather offcuts.
Work mechanical	Items of machinery or other equipment. Chains and chain links.

Key functions.	**Object names.**
Work metalworking	Slags and other residues of metalworking. Note that slag like materials may be produced in ordinary fires.
Work tool	Tools or other items associated with trades or employment.
Work tool	See also mechanical
Work tool blacksmith	Tools associated with blacksmithing
Work tool butchery	Butcher's hook.
Work tool chain	Chains and links. Pulleys Block & tackle Hooks
Work tool copper smelting	Tools used in the smelting of copper
Work tool improvised	Work tools that have been hand made, representing bush craft or reuse of materials.
Work tool labouring	Tools used in copper smelting
Work tool leatherworking	Tools associated with leatherworking, saddlery
Work tool mechanical	Tolls used on machinery
Work tool metalwork	Hacksaw blades, used to cut piping, etc
Work tool mining	Tools associated with mining, gads, picks, mining picks, mattocks, etc.
Work tool regional	Tools of regional origin, for example, round bladed shovel – often referred to as a Cornish shovel, regional style of shovel in UK.
Work tool sheep shearing	Shears
Work tool timber working	Axes, usually associated with working timber, as in timber getting, fencing, cutting firewood, bush construction, etc.
Work tool woodwork	Brass hinged ruler Drill bits
Work tool woodwork or blacksmith	Chisels, files, rasps, punches, used in woodwork or blacksmithing. Punches associated with leatherworking, see Work tool leatherworking

6.7 Depositional Theory or taphonomy.

The graphs summarising the functional analysis are simply a means of graphically describing the range of functions and the number of artifacts belonging to each function in a phase or group of phases.

The graphs do not indicate a direct relationship with the activities that have taken place on site. 'Depositional or Post-depositional Theory' (more recently termed 'taphonomy') has been developed by archaeologists to assist in the interpretation of the processes whereby artifacts find their way into the archaeological record.[1] Each stage in the 'life' of an artifact has to be considered in order to gain a better understanding of the archaeological record, including manufacturing, usage, depositional and post-depositional stages.

The dating of the artifacts has already revealed evidence concerning the taphonomy of the assemblages in depositional and post-depositional stages. Analysis has indicated the possibility of residual artifacts. In other words artifacts deposited in one phase or period may have been disturbed by later occupation (post-depositional processes), so that they are incorporated into a later assemblage. Furthermore artifact dating indicated that artifacts were discarded off site, by means of various possible mechanisms, including municipal or other organised garbage disposal, the presence of scavenging districts, or possibly by disposal in a watercourse, if located nearby (depositional processes). These examples illustrate the factors to be considered at particular stages in the 'life' of artifacts. The above examples of taphonomic processes reduce the reliability of any interpretation based upon an analysis of the functions of the artifact assemblage.

Nonetheless the archaeological excavation and analysis of a large number of assemblages from urban sites in Sydney, Parramatta and elsewhere reveal various common features. The broad range of artifacts is duplicated on most urban sites, which were domestic residences in the 18th or 19th centuries. In other words the typical assemblage may be described as characteristic of domestic occupation. The assemblages vary in accordance with date range or with socio-economic grouping, although the nature of variation between socio-economic groups has yet to be described, interpreted or explained in most cases.

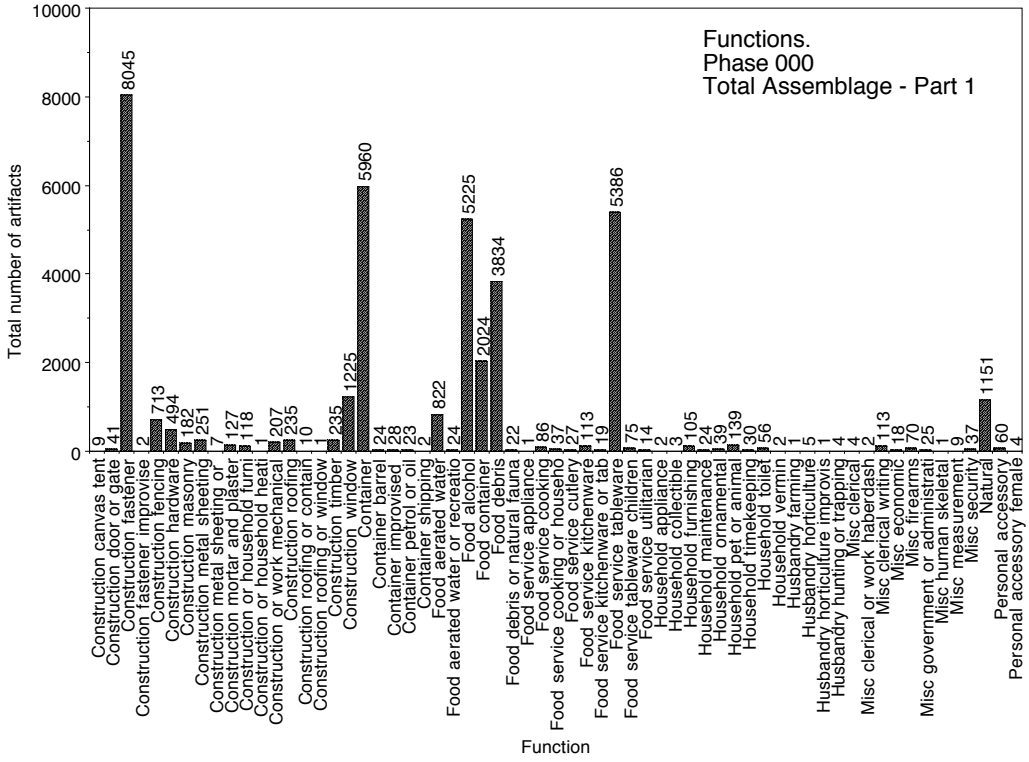
The extent of variation between the various phases on a site is evident from the graphs contained in the following pages. The assemblages vary both in the number of functions and the number of artifacts. Depositional or Post-Depositional Theory (Taphonomy) will be used to assist in the description, interpretation and explanation of the archaeological record.

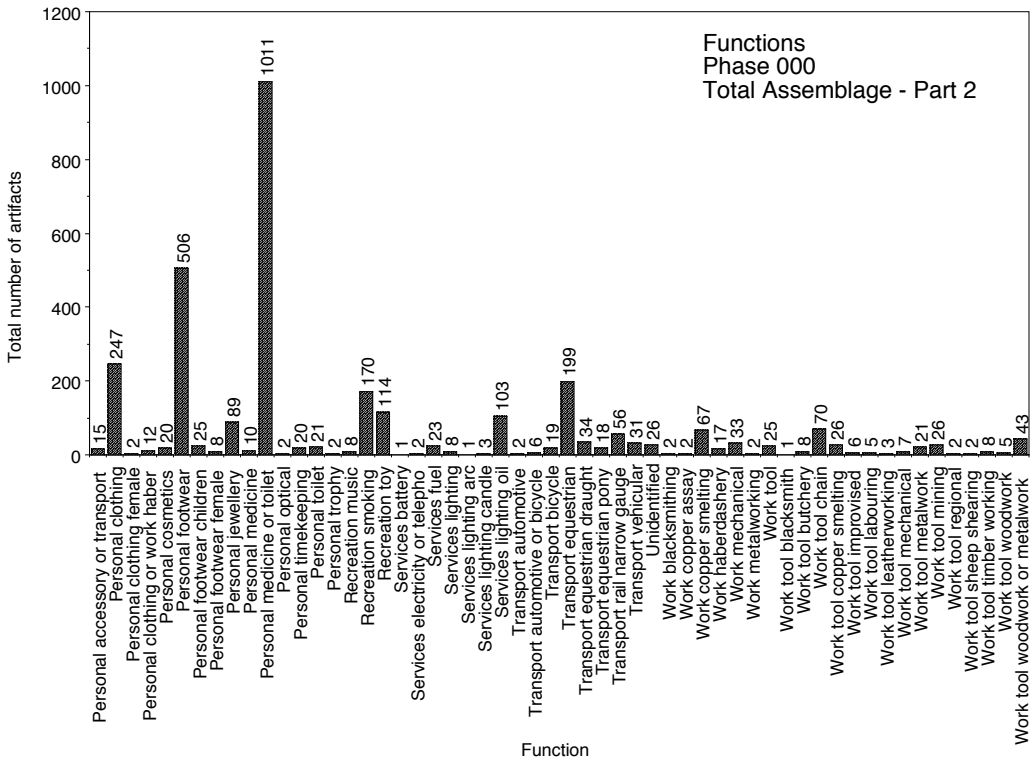
6.8 Functional analysis of the site.

For the purpose of the functional analysis of the site, the archaeological contexts were initially grouped into the phases already used for dating the site. Various phases revealed similar date ranges, and could be grouped together into periods. The following pages are devoted to the analysis and interpretation of a number of graphs indicating the frequency of artifacts against the range of key functions in each phase.

[1] Clarke, 1972: passim.

6.8.1 Phase 000. Total Assemblage.





Phase number:	000
Phase description:	Total Assemblage
Total number of artifacts:	45057
Percentage undated	47%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	(1750) 1850s
Date to:	1880s (1940s)
Total number of functions	119

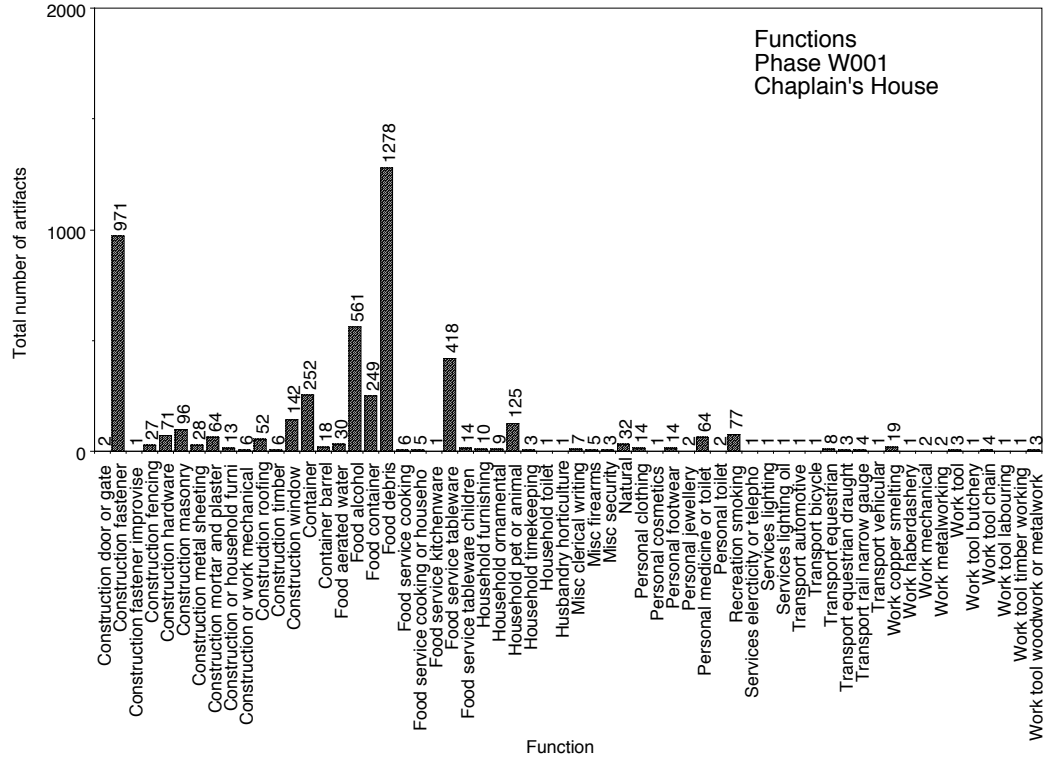
6.8.2 List of functions in Cadia Village Assemblage, together with frequency.

Functions	**Total number of artifacts**
Construction canvas tent	9
Construction door or gate	41
Construction fastener	8045
Construction fastener improvised	2
Construction fencing	713
Construction hardware	494
Construction masonry	182
Construction metal sheeting	251
Construction metal sheeting or container petrol or oil	7
Construction mortar and plaster	127
Construction or household furnishing	118
Construction or household heating	1
Construction or work mechanical	207
Construction roofing	235
Construction roofing or container	10
Construction roofing or window	1
Construction timber	235
Construction window	1225
Container	5960
Container barrel	24
Container improvised	28
Container petrol or oil	23
Container shipping	2
Food aerated water	822
Food aerated water or recreation toy	24
Food alcohol	5225
Food container	2024
Food debris	3834
Food debris or natural fauna	22
Food service appliance	1
Food service cooking	86
Food service cooking or household heating	37
Food service cutlery	27

Functions	Total number of artifacts
Food service kitchenware	113
Food service kitchenware or tableware	19
Food service tableware	5386
Food service tableware children	75
Food service utilitarian	14
Household appliance	2
Household collectible	3
Household furnishing	105
Household maintenance	24
Household ornamental	39
Household pet or animal	139
Household timekeeping	30
Household toilet	56
Household vermin	2
Husbandry farming	1
Husbandry horticulture	5
Husbandry horticulture improvised	1
Husbandry hunting or trapping	4
Misc clerical	4
Misc clerical or work haberdashery	2
Misc clerical writing	113
Misc economic	18
Misc firearms	70
Misc government or administration	25
Misc human skeletal	1
Misc measurement	9
Misc security	37
Natural	1151
Personal accessory	60
Personal accessory female	4
Personal accessory or transport equestrian	15
Personal clothing	247
Personal clothing female	2
Personal clothing or work haberdashery	12
Personal cosmetics	20
Personal footwear	506
Personal footwear children	25
Personal footwear female	8
Personal jewellery	89
Personal medicine	10
Personal medicine or toilet	1011
Personal optical	2
Personal timekeeping	20
Personal toilet	21
Personal trophy	2
Recreation music	8

Functions	Total number of artifacts
Recreation smoking	170
Recreation toy	114
Services battery	1
Services electricity or telephony	2
Services fuel	23
Services lighting	8
Services lighting arc	1
Services lighting candle	3
Services lighting oil	103
Transport automotive	2
Transport automotive or bicycle	6
Transport bicycle	19
Transport equestrian	199
Transport equestrian draught	34
Transport equestrian pony	18
Transport rail narrow gauge	56
Transport vehicular	31
Unidentified	26
Work blacksmithing	2
Work copper assay	2
Work copper smelting	67
Work haberdashery	17
Work mechanical	33
Work metalworking	2
Work tool	25
Work tool blacksmith	1
Work tool butchery	8
Work tool chain	70
Work tool copper smelting	26
Work tool improvised	6
Work tool labouring	5
Work tool leatherworking	3
Work tool mechanical	7
Work tool metalwork	21
Work tool mining	26
Work tool regional	2
Work tool sheep shearing	2
Work tool timber working	8
Work tool woodwork	5
Work tool woodwork or metalwork	43

6.8.3 Site subdivision W001 – Chaplain's House.



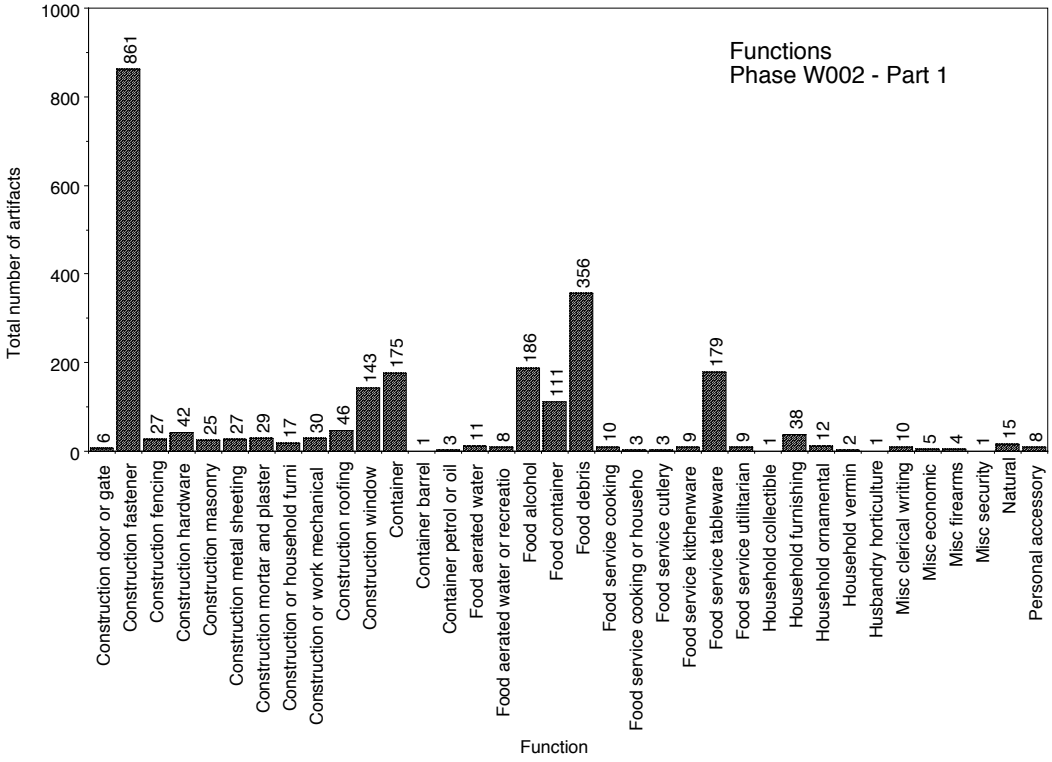
Phase number:	W001
Phase description:	Chaplain's House.
Total number of artifacts:	4740
Percentage undated	50%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	(1816) 1850s
Date to:	1940s
Number of functions	60

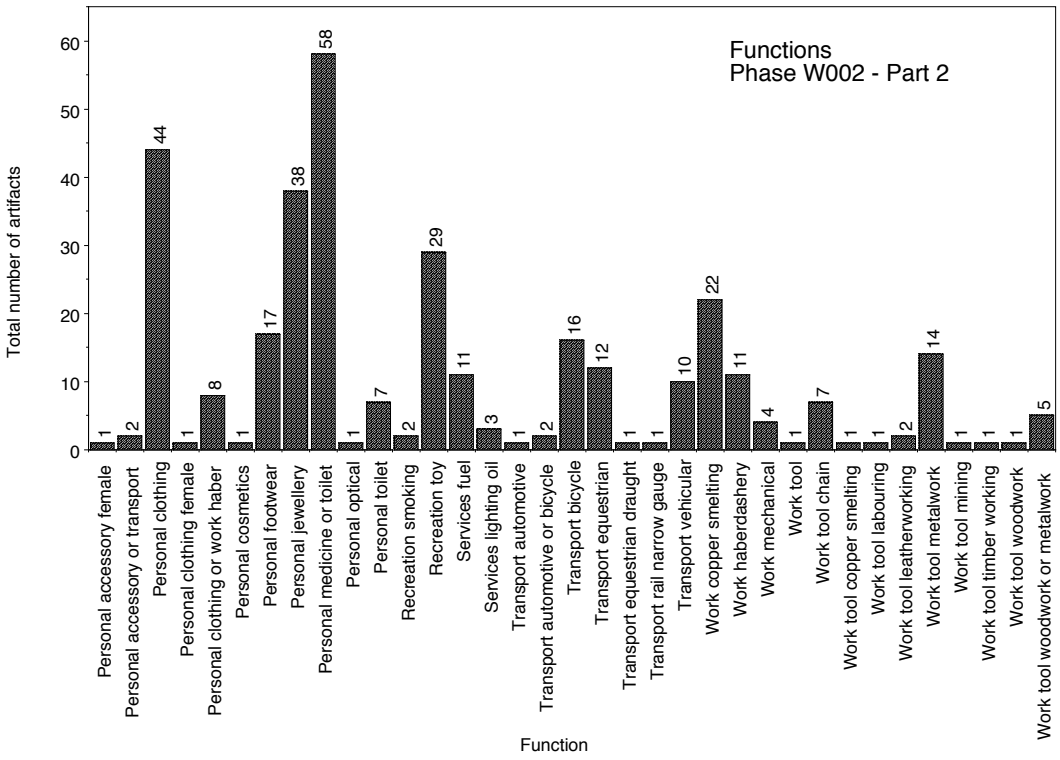
Functions	**Total number of artifacts**
Construction door or gate	2
Construction fastener	971
Construction fastener improvised	1
Construction fencing	27
Construction hardware	71
Construction masonry	96
Construction metal sheeting	28
Construction mortar and plaster	64
Construction or household furnishing	13
Construction or work mechanical	6
Construction roofing	52
Construction timber	6

Functions	Total number of artifacts
Construction window	142
Container	252
Container barrel	18
Food aerated water	30
Food alcohol	561
Food container	249
Food debris	1278
Food service cooking	6
Food service cooking or household heating	5
Food service kitchenware	1
Food service tableware	418
Food service tableware children	14
Household furnishing	10
Household ornamental	9
Household pet or animal	125
Household timekeeping	3
Household toilet	1
Husbandry horticulture	1
Misc clerical writing	7
Misc firearms	5
Misc security	3
Natural	32
Personal clothing	14
Personal cosmetics	1
Personal footwear	14
Personal jewellery	2
Personal medicine or toilet	64
Personal toilet	2
Recreation smoking	77
Services electricity or telephony	1
Services lighting	1
Services lighting oil	1
Transport automotive	1
Transport bicycle	1
Transport equestrian	8
Transport equestrian draught	3
Transport rail narrow gauge	4
Transport vehicular	1
Work copper smelting	19
Work haberdashery	1
Work mechanical	2
Work metalworking	2
Work tool	3
Work tool butchery	1
Work tool chain	4
Work tool labouring	1

Functions	Total number of artifacts
Work tool timber working	1
Work tool woodwork or metalwork	3

6.8.4 Site subdivision W002.



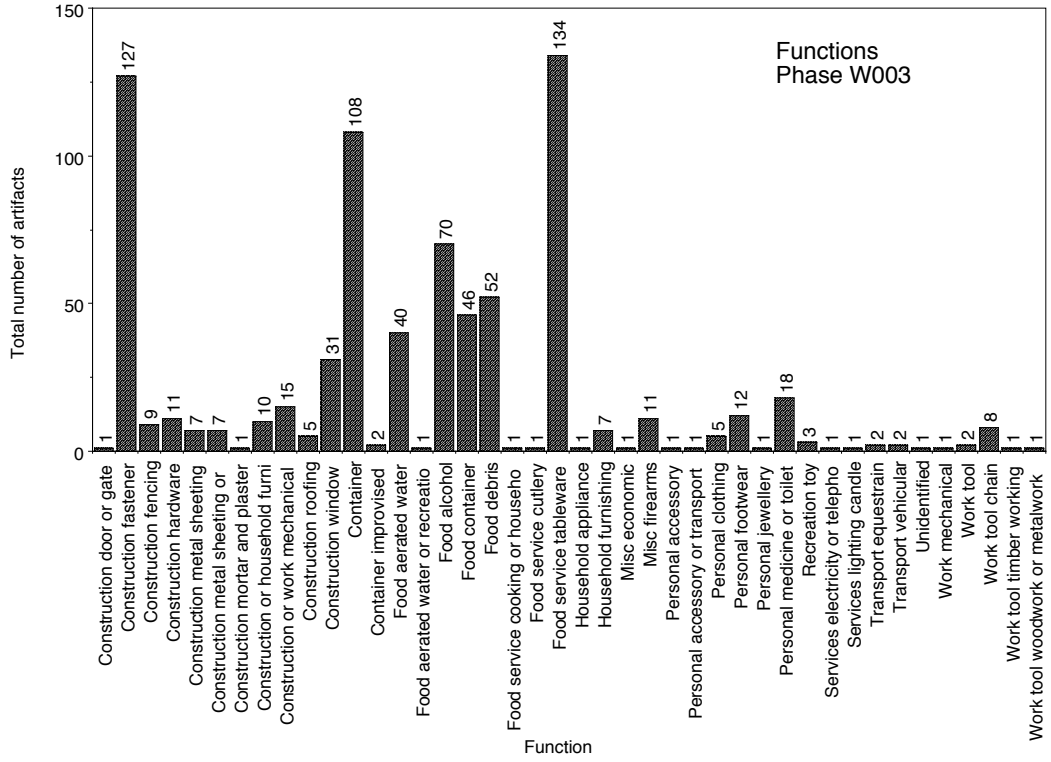


Phase number:	W002
Phase description:	
Total number of artifacts:	2751
Percentage undated	41%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1870s (1930s)
Number of functions	71

Functions	**Total number of artifacts**
Construction door or gate	6
Construction fastener	861
Construction fencing	27
Construction hardware	42
Construction masonry	25
Construction metal sheeting	27
Construction mortar and plaster	29
Construction or household furnishing	17
Construction or work mechanical	30
Construction roofing	46
Construction window	143
Container	175
Container barrel	1
Container petrol or oil	3
Food aerated water	11
Food aerated water or recreation toy	8
Food alcohol	186
Food container	111
Food debris	356
Food service cooking	10
Food service cooking or household heating	3
Food service cutlery	3
Food service kitchenware	9
Food service tableware	179
Food service utilitarian	9
Household collectible	1
Household furnishing	38
Household ornamental	12
Household vermin	2
Husbandry horticulture	1
Misc clerical writing	10
Misc economic	5
Misc firearms	4
Misc security	1
Natural	15
Personal accessory	8

Functions	Total number of artifacts
Personal accessory female	1
Personal accessory or transport equestrian	2
Personal clothing	44
Personal clothing female	1
Personal clothing or work haberdashery	8
Personal cosmetics	1
Personal footwear	17
Personal jewellery	38
Personal medicine or toilet	58
Personal optical	1
Personal toilet	7
Personal toilet	1
Recreation smoking	2
Recreation toy	29
Services fuel	11
Services lighting oil	3
Transport automotive	1
Transport automotive or bicycle	2
Transport bicycle	16
Transport equestrian	12
Transport equestrian draught	1
Transport rail narrow gauge	1
Transport vehicular	10
Work copper smelting	22
Work haberdashery	11
Work mechanical	4
Work tool	1
Work tool chain	7
Work tool copper smelting	1
Work tool labouring	1
Work tool leatherworking	2
Work tool metalwork	14
Work tool mining	1
Work tool timber working	1
Work tool woodwork	1
Work tool woodwork or metalwork	5

6.8.5 Site subdivision W003.



Phase number:	W003
Phase description:	
Total number of artifacts:	760
Percentage undated	45%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1870s (1920s)
Number of functions	42

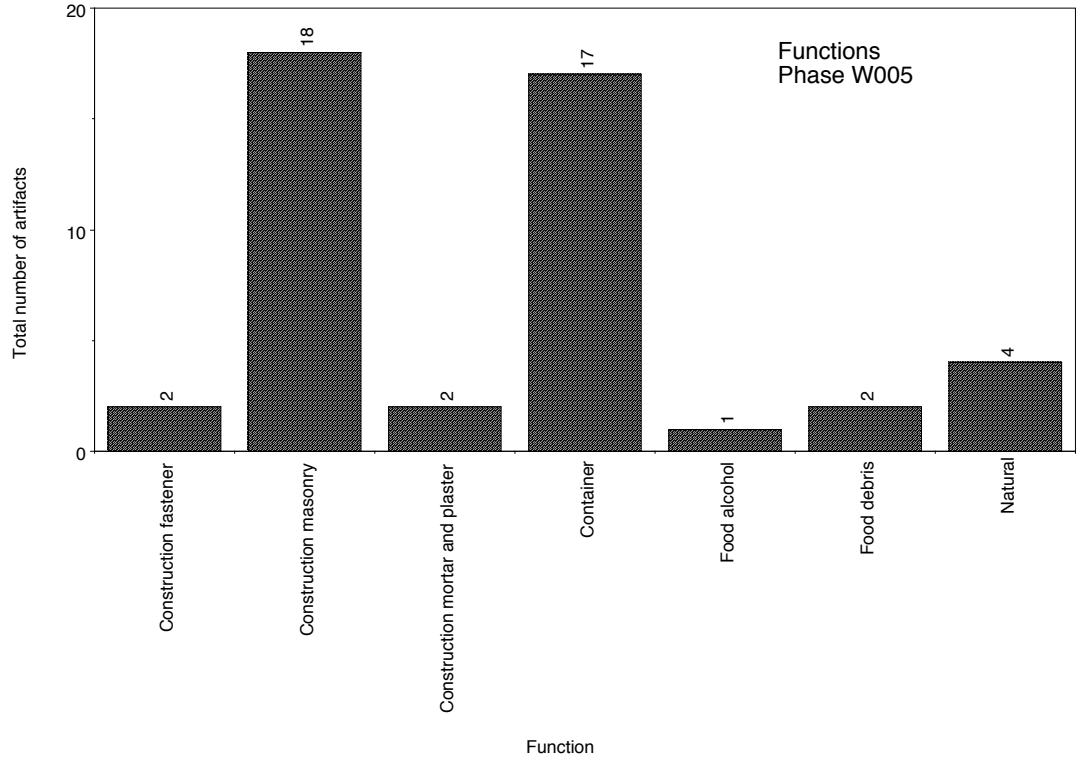
Functions	**Total number of artifacts**
Construction door or gate	1
Construction fastener	127
Construction fencing	9
Construction hardware	11
Construction metal sheeting	7
Construction metal sheeting or container petrol or oil	7
Construction mortar and plaster	1
Construction or household furnishing	10
Construction or work mechanical	15
Construction roofing	5
Construction window	31
Container	108

Functions	Total number of artifacts
Container improvised	2
Food aerated water	40
Food aerated water or recreation toy	1
Food alcohol	70
Food container	46
Food debris	52
Food service cooking or household heating	1
Food service cutlery	1
Food service tableware	134
Household appliance	1
Household furnishing	7
Misc economic	1
Misc firearms	11
Personal accessory	1
Personal accessory or transport equestrian	1
Personal clothing	5
Personal footwear	12
Personal jewellery	1
Personal medicine or toilet	18
Recreation toy	3
Services electricity or telephony	1
Services lighting candle	1
Transport equestrian	2
Transport vehicular	2
Unidentified	1
Work mechanical	1
Work tool	2
Work tool chain	8
Work tool timber working	1
Work tool woodwork or metalwork	1

6.8.6 Site subdivision W004.

Phase number:	W004
Phase description:	
Total number of artifacts:	0
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-

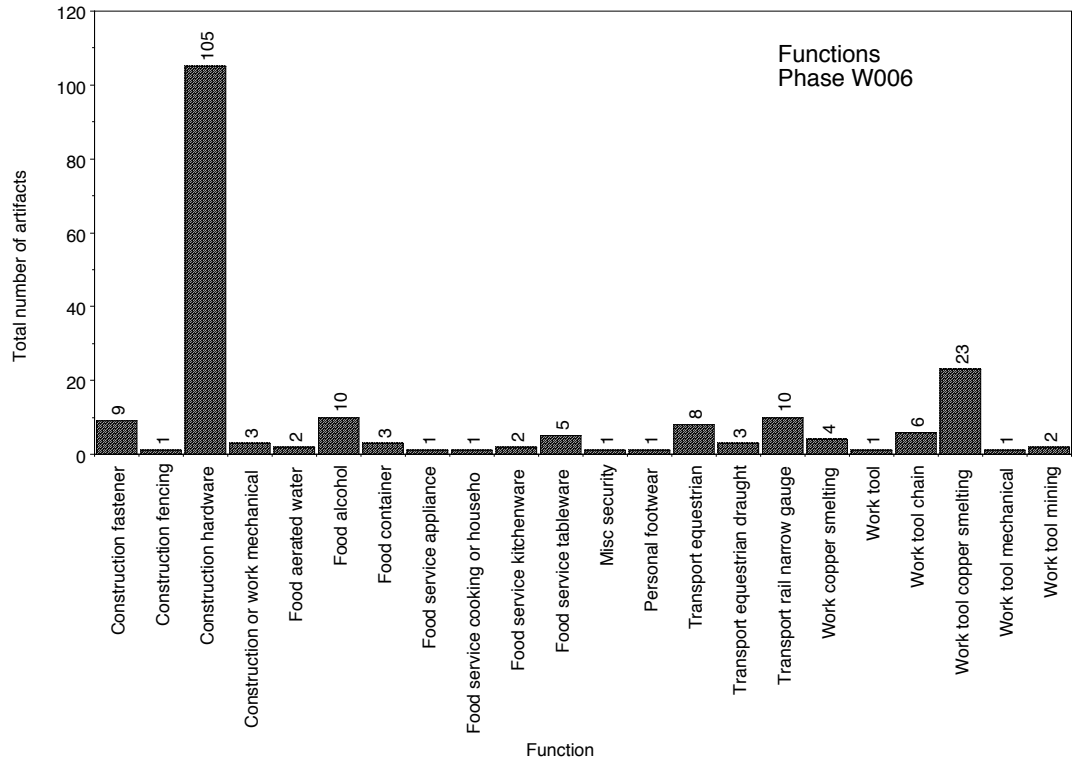
6.8.7 Site subdivision W005.



Phase number:	W005
Phase description:	
Total number of artifacts:	46
Percentage undated	59%
Reliability of sample:	Small sample, unreliable.
Date from:	1840s
Date to:	1870s
Number of functions	7

Functions	**Total number of artifacts**
Construction fastener	2
Construction masonry	18
Construction mortar and plaster	2
Container	17
Food alcohol	1
Food debris	2
Natural	4

6.8.8 Site subdivision W006.

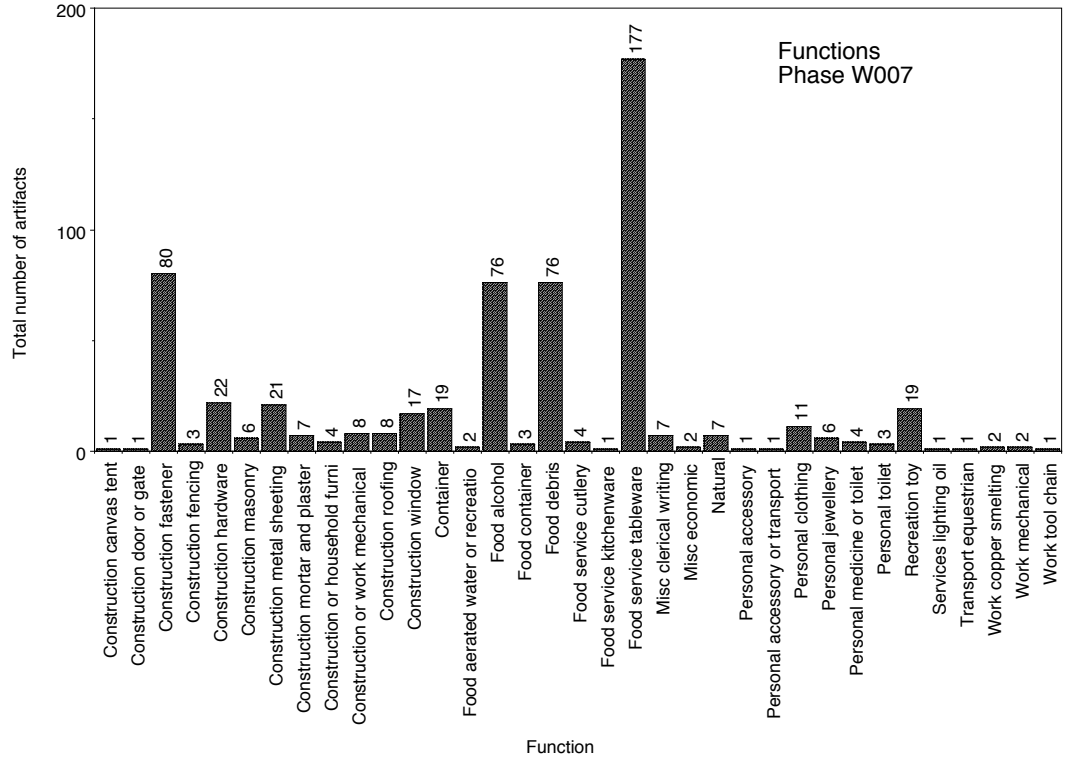


Phase number:	W006
Phase description:	
Total number of artifacts:	202
Percentage undated	90%
Reliability of sample:	Small sample, possibly unreliable.
Date from:	1850s
Date to:	1870s
Number of functions	22

Functions	**Total number of artifacts**
Construction fastener	9
Construction fencing	1
Construction hardware	105
Construction or work mechanical	3
Food aerated water	2
Food alcohol	10
Food container	3
Food service appliance	1
Food service cooking or household heating	1
Food service kitchenware	2
Food service tableware	5
Misc security	1
Personal footwear	1

Functions	Total number of artifacts
Transport equestrian	8
Transport equestrian draught	3
Transport rail narrow gauge	10
Work copper smelting	4
Work tool	1
Work tool chain	6
Work tool copper smelting	23
Work tool mechanical	1
Work tool mining	2

6.8.9 Site subdivision W007.

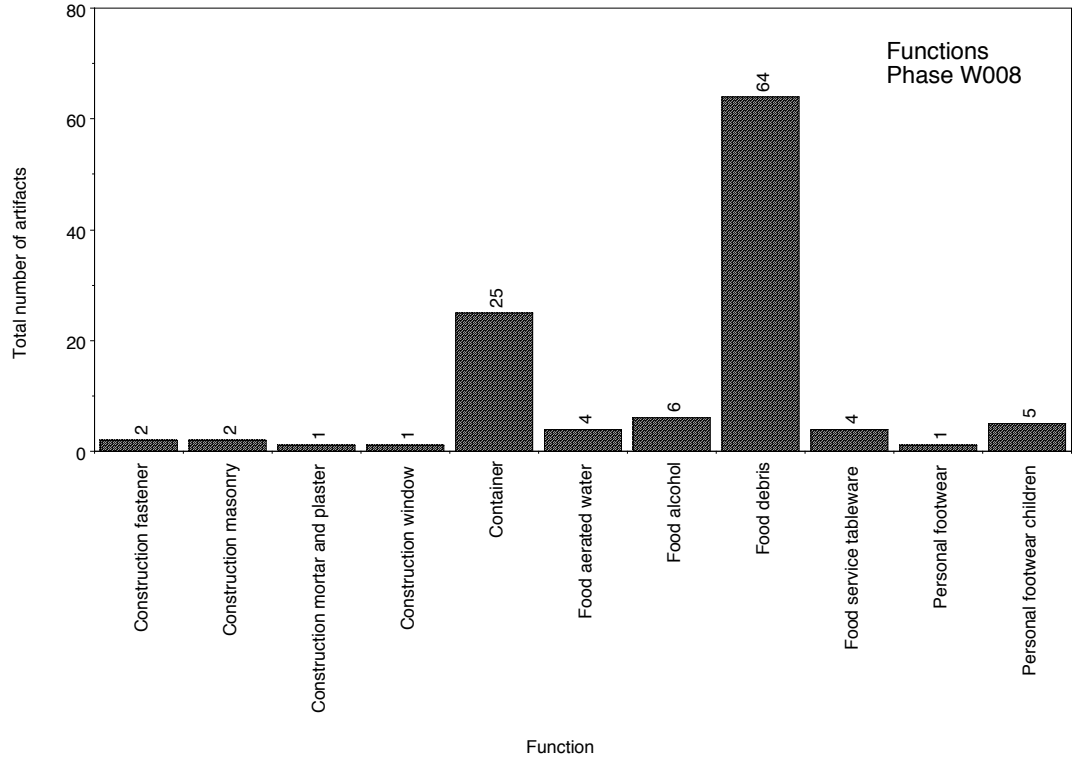


Phase number:	W007
Phase description:	
Total number of artifacts:	604
Percentage undated	40%
Reliability of sample:	Small sample, possibly unreliable.
Date from:	1860s
Date to:	1890s (1920s)
Number of functions	35

Functions	**Total number of artifacts**
Construction canvas tent	1
Construction door or gate	1
Construction fastener	80
Construction fencing	3
Construction hardware	22
Construction masonry	6
Construction metal sheeting	21
Construction mortar and plaster	7
Construction or household furnishing	4
Construction or work mechanical	8
Construction roofing	8
Construction window	17
Container	19

Functions	Total number of artifacts
Food aerated water or recreation	2
Food alcohol	76
Food container	3
Food debris	76
Food service cutlery	4
Food service kitchenware	1
Food service tableware	177
Misc clerical writing	7
Misc economic	2
Natural	7
Personal accessory	1
Personal accessory or transport	1
Personal clothing	11
Personal jewellery	6
Personal medicine or toilet	4
Personal toilet	3
Recreation toy	19
Services lighting oil	1
Transport equestrian	1
Work copper smelting	2
Work mechanical	2
Work tool chain	1

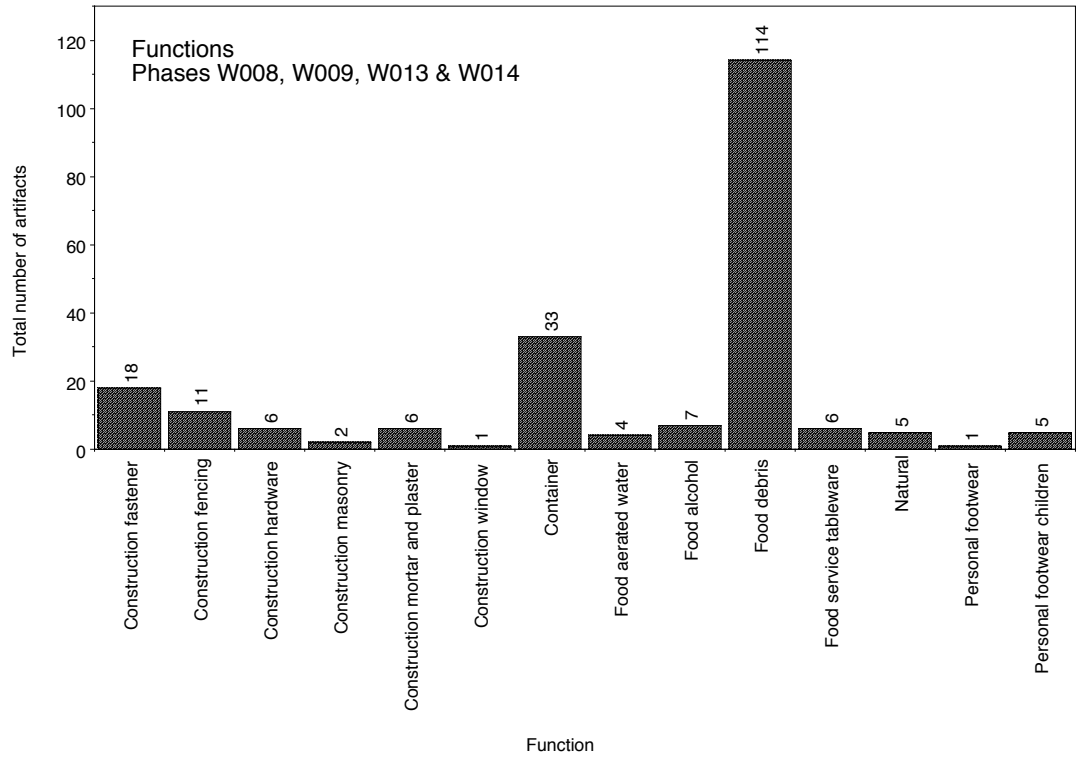
6.8.10 Site subdivision W008.



Phase number:	W008
Phase description:	
Total number of artifacts:	115
Percentage undated	65%
Reliability of sample:	Small sample, possibly unreliable.
Date from:	1860s
Date to:	1880s
Number of functions	11

Functions	**Total number of artifacts**
Construction fastener	2
Construction masonry	2
Construction mortar and plaster	1
Construction window	1
Container	25
Food aerated water	4
Food alcohol	6
Food debris	64
Food service tableware	4
Personal footwear	1
Personal footwear children	5

6.8.11 Site subdivision W008, W009, W013 and W014.



Phase number:	W008, W009, W013 and W014
Phase description:	
Total number of artifacts:	219
Percentage undated	70%
Reliability of sample:	Small sample, consistent with other phases and historical documentation.
Date from:	1860s
Date to:	1880s
Number of functions	14

Functions	**Total number of artifacts**
Construction fastener	18
Construction fencing	11
Construction hardware	6
Construction masonry	2
Construction mortar and plaster	6
Construction window	1
Container	33
Food aerated water	4
Food alcohol	7
Food debris	114
Food service tableware	6
Natural	5

Functions	Total number of artifacts
Personal footwear	1
Personal footwear children	5

6.8.12 Site subdivision W009.

Phase number:	W009
Phase description:	
Total number of artifacts:	7
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-
Number of functions	2

6.8.13 Site subdivision W010.

Phase number:	W010
Phase description:	
Total number of artifacts:	23
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	1800s
Date to:	-
Number of functions	6

6.8.14 Site subdivision W011.

Phase number:	W011
Phase description:	
Total number of artifacts:	1
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-
Number of functions	1

6.8.15 Site subdivision W012.

Phase number:	W012
Phase description:	
Total number of artifacts:	1
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-
Number of functions	1

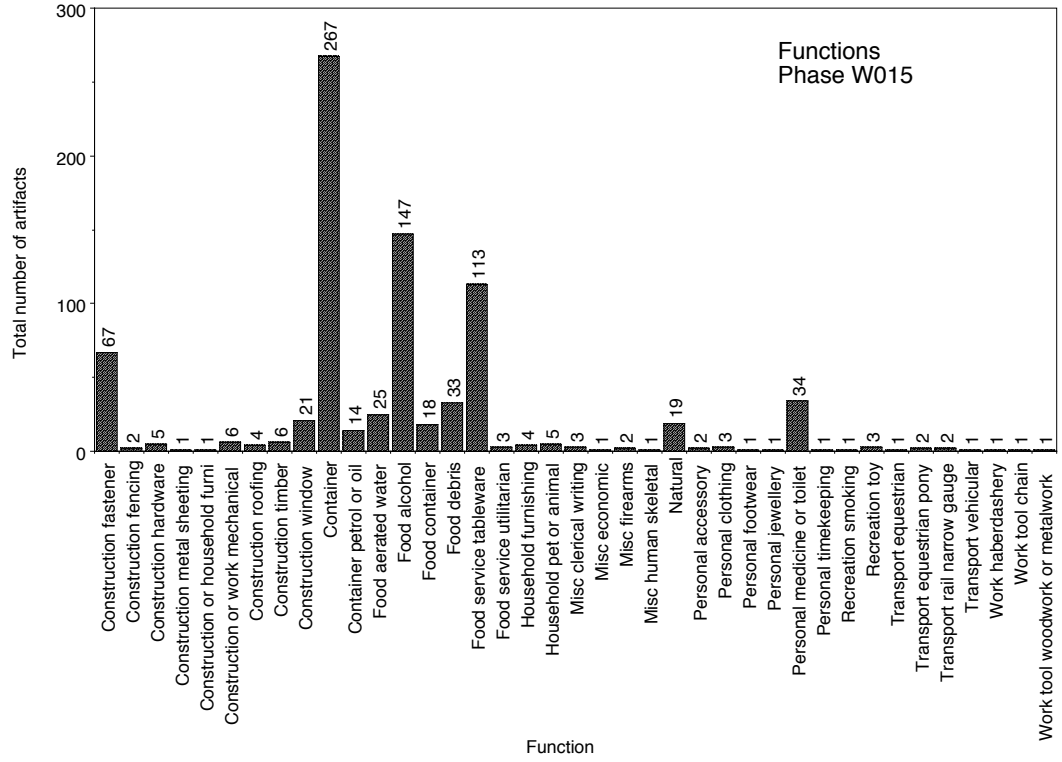
6.8.16 Site subdivision W013.

Phase number:	W013
Phase description:	
Total number of artifacts:	97
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-
Number of functions	8

6.8.17 Site subdivision W014.

Phase number:	W014
Phase description:	
Total number of artifacts:	0
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-
Number of functions	-

6.8.18 Site subdivision W015.



Phase number:	W015
Phase description:	
Total number of artifacts:	823
Percentage undated	41%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1880s (1940s)
Number of functions	39

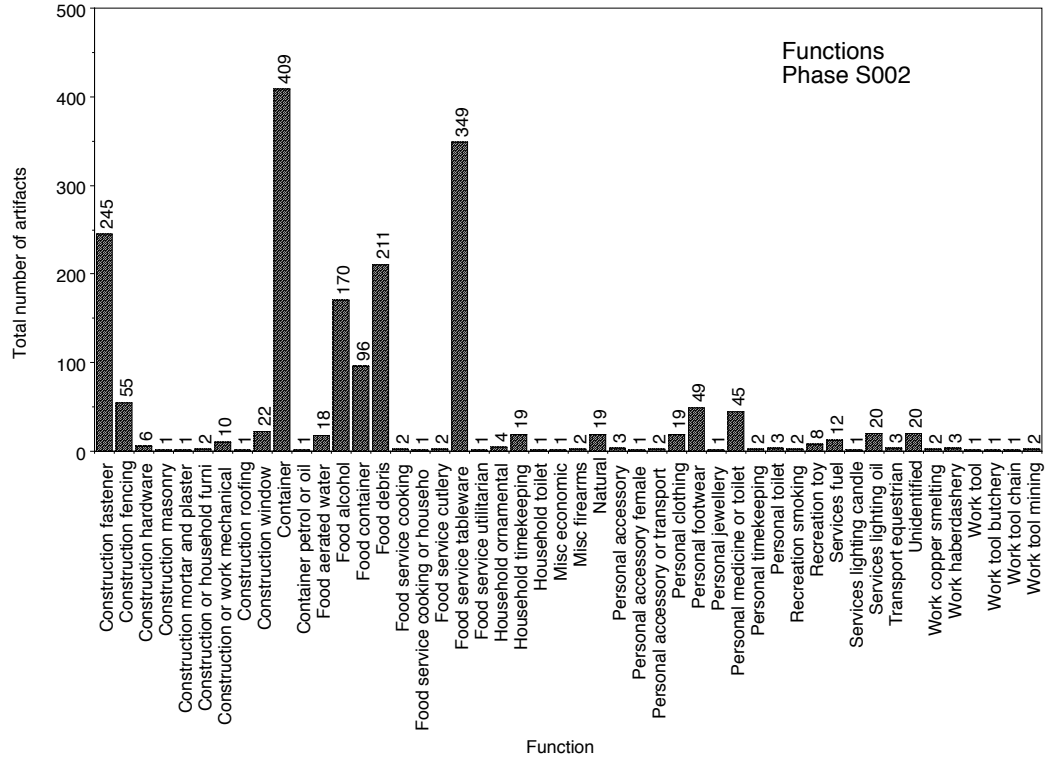
Functions	**Total number of artifacts**
Construction fastener	67
Construction fencing	2
Construction hardware	5
Construction metal sheeting	1
Construction or household furnishing	1
Construction or work mechanical	6
Construction roofing	4
Construction timber	6
Construction window	21
Container	267
Container petrol or oil	14
Food aerated water	25

Functions	Total number of artifacts
Food alcohol	147
Food container	18
Food debris	33
Food service tableware	113
Food service utilitarian	3
Household furnishing	4
Household pet or animal	5
Misc clerical writing	3
Misc economic	1
Misc firearms	2
Misc human skeletal	1
Natural	19
Personal accessory	2
Personal clothing	3
Personal footwear	1
Personal jewellery	1
Personal medicine or toilet	34
Personal timekeeping	1
Recreation smoking	1
Recreation toy	3
Transport equestrian	1
Transport equestrian pony	2
Transport rail narrow gauge	2
Transport vehicular	1
Work haberdashery	1
Work tool chain	1
Work tool woodwork or metalwork	1

6.8.19 Site subdivision S001.

Phase number:	S001
Phase description:	
Total number of artifacts:	0
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-
Number of functions	-

6.8.20 Site subdivision S002.



Phase number:	S002
Phase description:	
Total number of artifacts:	1850
Percentage undated	42%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1920s
Number of functions	48

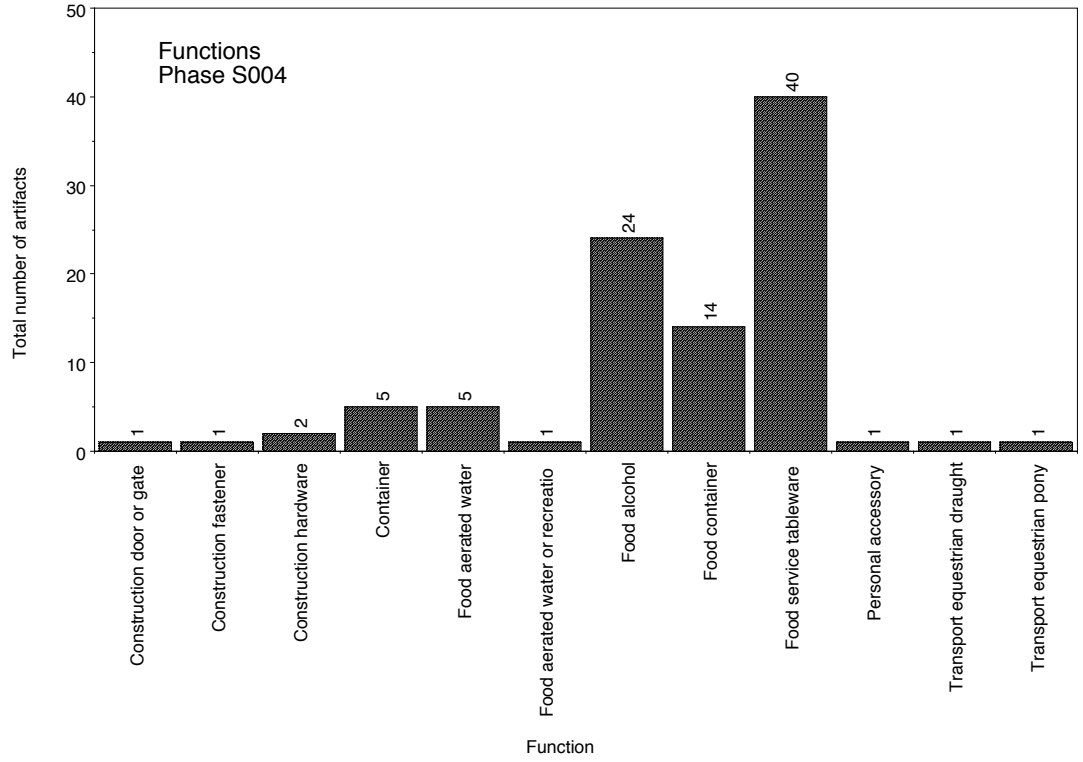
Functions	**Total number of artifacts**
Construction fastener	245
Construction fencing	55
Construction hardware	6
Construction masonry	1
Construction mortar and plaster	1
Construction or household furnishing	2
Construction or work mechanical	10
Construction roofing	1
Construction window	22
Container	409
Container petrol or oil	1
Food aerated water	18

Functions	Total number of artifacts
Food alcohol	170
Food container	96
Food debris	211
Food service cooking	2
Food service cooking or household heating	1
Food service cutlery	2
Food service tableware	349
Food service utilitarian	1
Household ornamental	4
Household timekeeping	19
Household toilet	1
Misc economic	1
Misc firearms	2
Natural	19
Personal accessory	3
Personal accessory female	1
Personal accessory or transport equestrian	2
Personal clothing	19
Personal footwear	49
Personal jewellery	1
Personal medicine or toilet	45
Personal timekeeping	2
Personal toilet	3
Recreation smoking	2
Recreation toy	8
Services fuel	12
Services lighting candle	1
Services lighting oil	20
Transport equestrian	3
Unidentified	20
Work copper smelting	2
Work haberdashery	3
Work tool	1
Work tool butchery	1
Work tool chain	1
Work tool mining	2

6.8.21 Site subdivision S003.

Phase number:	S003
Phase description:	
Total number of artifacts:	0
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-
Number of functions	

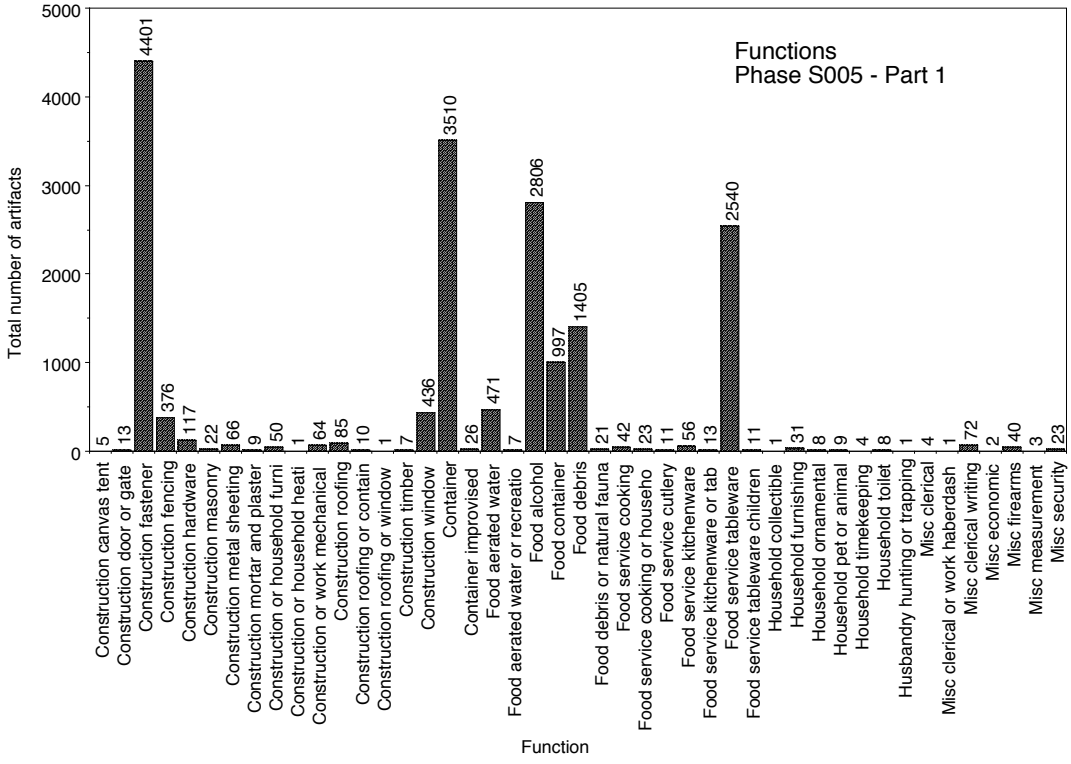
6.8.22 Site subdivision S004.

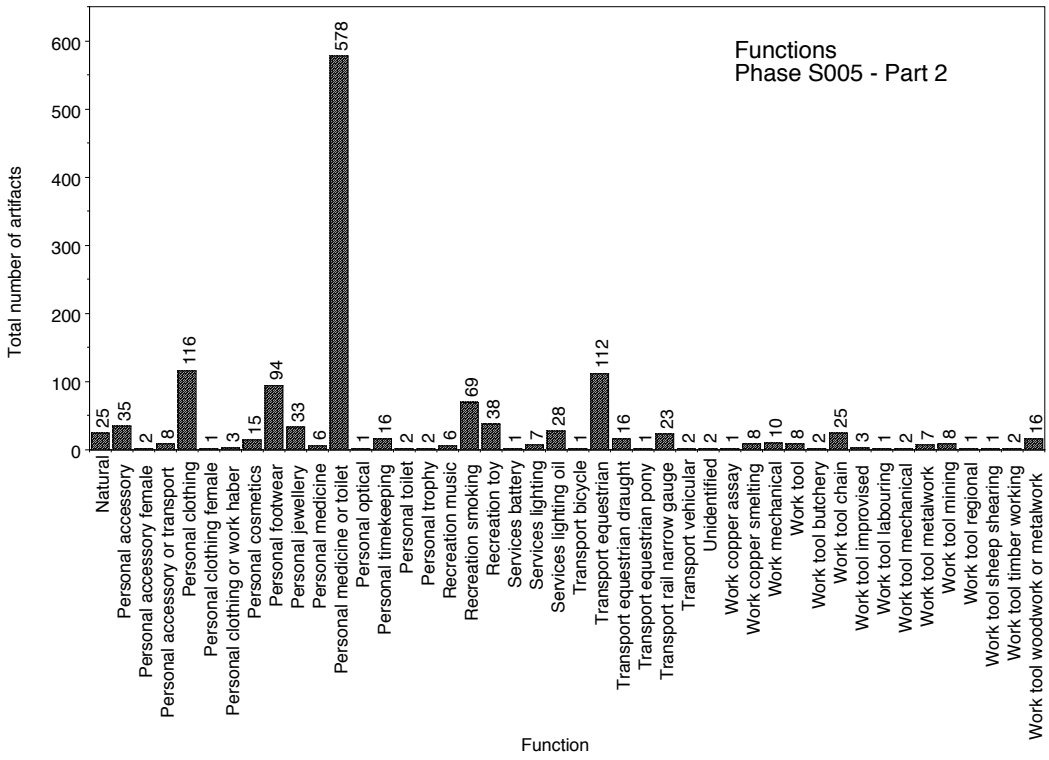


Phase number:	S004
Phase description:	
Total number of artifacts:	96
Percentage undated	29%
Reliability of sample:	Small sample, possibly unreliable.
Date from:	1880s
Date to:	1900s
Number of functions	12

Functions	**Total number of artifacts**
Construction door or gate	1
Construction fastener	1
Construction hardware	2
Container	5
Food aerated water	5
Food aerated water or recreation toy	1
Food alcohol	24
Food container	14
Food service tableware	40
Personal accessory	1
Transport equestrian draught	1
Transport equestrian pony	1

6.8.23 Site subdivision S005.





Phase number:	S005
Phase description:	
Total number of artifacts:	19149
Percentage undated	40%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	(1750s) 1850s
Date to:	1930s
Number of functions	89

Functions	**Total number of artifacts**
Construction canvas tent	5
Construction door or gate	13
Construction fastener	4401
Construction fencing	376
Construction hardware	117
Construction masonry	22
Construction metal sheeting	66
Construction mortar and plaster	9
Construction or household furnishing	50
Construction or household heating	1
Construction or work mechanical	64
Construction roofing	85
Construction roofing or container	10
Construction roofing or window	1
Construction timber	7
Construction window	436
Container	3510
Container improvised	26
Food aerated water	471
Food aerated water or recreation toy	7
Food alcohol	2806
Food container	997
Food debris	1405
Food debris or natural fauna	21
Food service cooking	42
Food service cooking or household heating	23
Food service cutlery	11
Food service kitchenware	56
Food service kitchenware or tableware	13
Food service tableware	2540
Food service tableware children	11
Household collectible	1
Household furnishing	31
Household ornamental	8
Household pet or animal	9
Household timekeeping	4

Household toilet	8
Husbandry hunting or trapping	1
Misc clerical	4
Misc clerical or work haberdashery	1
Misc clerical writing	72
Misc economic	2
Misc firearms	40
Misc measurement	3
Misc security	23
Natural	25
Personal accessory	35
Personal accessory female	2
Personal accessory or transport equestrian	8
Personal clothing	116
Personal clothing female	1
Personal clothing or work haberdashery	3
Personal cosmetics	15
Personal footwear	94
Personal jewellery	33
Personal medicine	6
Personal medicine or toilet	578
Personal optical	1
Personal timekeeping	16
Personal toilet	2
Personal trophy	2
Recreation music	6
Recreation smoking	69
Recreation toy	38
Services battery	1
Services lighting	7
Services lighting oil	28
Transport bicycle	1
Transport equestrian	112
Transport equestrian draught	16
Transport equestrian pony	1
Transport rail narrow gauge	23
Transport vehicular	2
Unidentified	2
Work copper assay	1
Work copper smelting	8
Work mechanical	10
Work tool	8
Work tool butchery	2
Work tool chain	25
Work tool improvised	3
Work tool labouring	1
Work tool mechanical	2

Work tool metalwork	7
Work tool mining	8
Work tool regional	1
Work tool sheep shearing	1
Work tool timber working	2
Work tool woodwork or metalwork	16

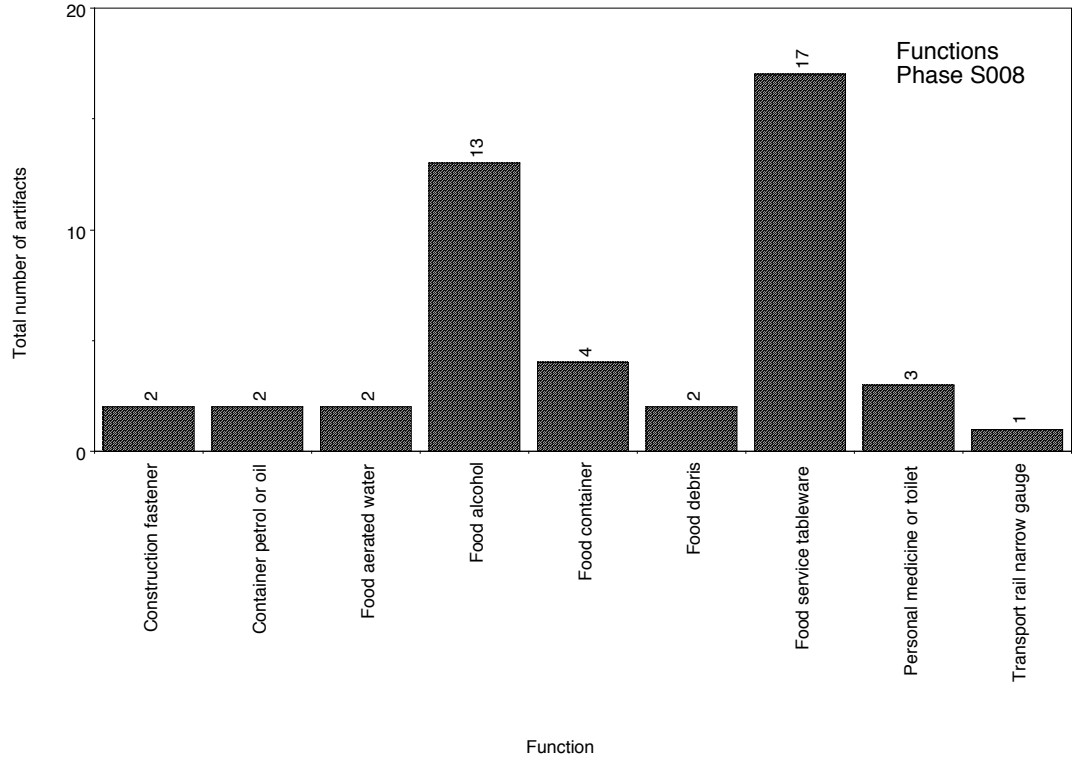
6.8.24 Site subdivision S006.

Phase number:	S006
Phase description:	
Total number of artifacts:	10
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-
Number of functions	3

6.8.25 Site subdivision S007.

Phase number:	S007
Phase description:	
Total number of artifacts:	1
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-
Number of functions	1

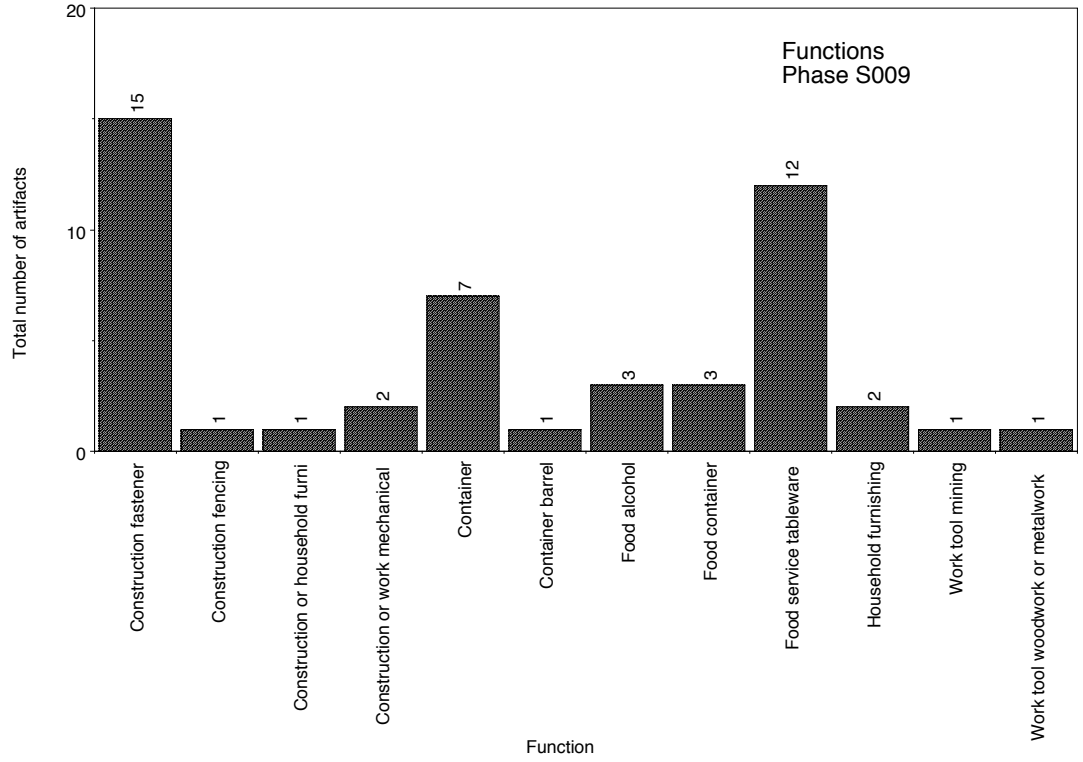
6.8.26 Site subdivision S008.



Phase number:	S008
Phase description:	
Total number of artifacts:	46
Percentage undated	9%
Reliability of sample:	Small sample, possibly unreliable.
Date from:	1870s
Date to:	1870s
Number of functions	9

Functions	**Total number of artifacts**
Construction fastener	2
Container petrol or oil	2
Food aerated water	2
Food alcohol	13
Food container	4
Food debris	2
Food service tableware	17
Personal medicine or toilet	3
Transport rail narrow gauge	1

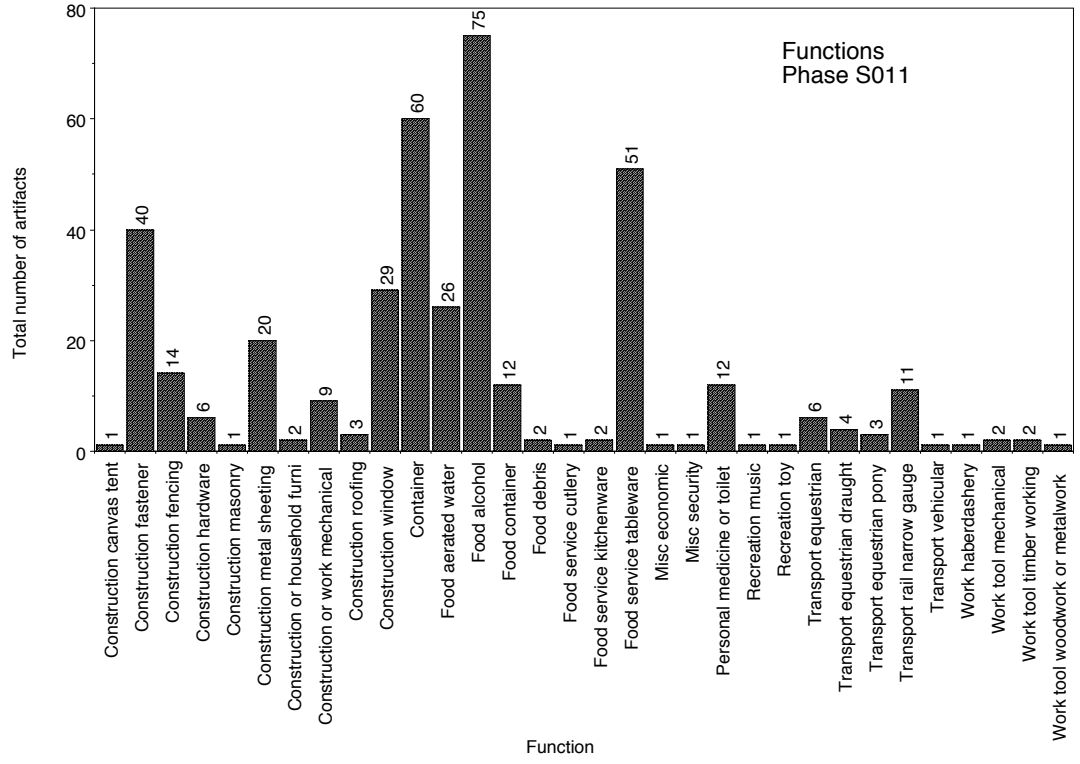
6.8.27 Site subdivision S009.



Phase number:	S009
Phase description:	
Total number of artifacts:	49
Percentage undated	20%
Reliability of sample:	Small sample, possibly unreliable.
Date from:	1870s
Date to:	1870s
Number of functions	12

Functions	**Total number of artifacts**
Construction fastener	15
Construction fencing	1
Construction or household furnishing	1
Construction or work mechanical	2
Container	7
Container barrel	1
Food alcohol	3
Food container	3
Food service tableware	12
Household furnishing	2
Work tool mining	1
Work tool woodwork or metalwork	1

6.8.28 Site subdivision S011.



Phase number:	S011
Phase description:	
Total number of artifacts:	401
Percentage undated	27%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1920s
Number of functions	32

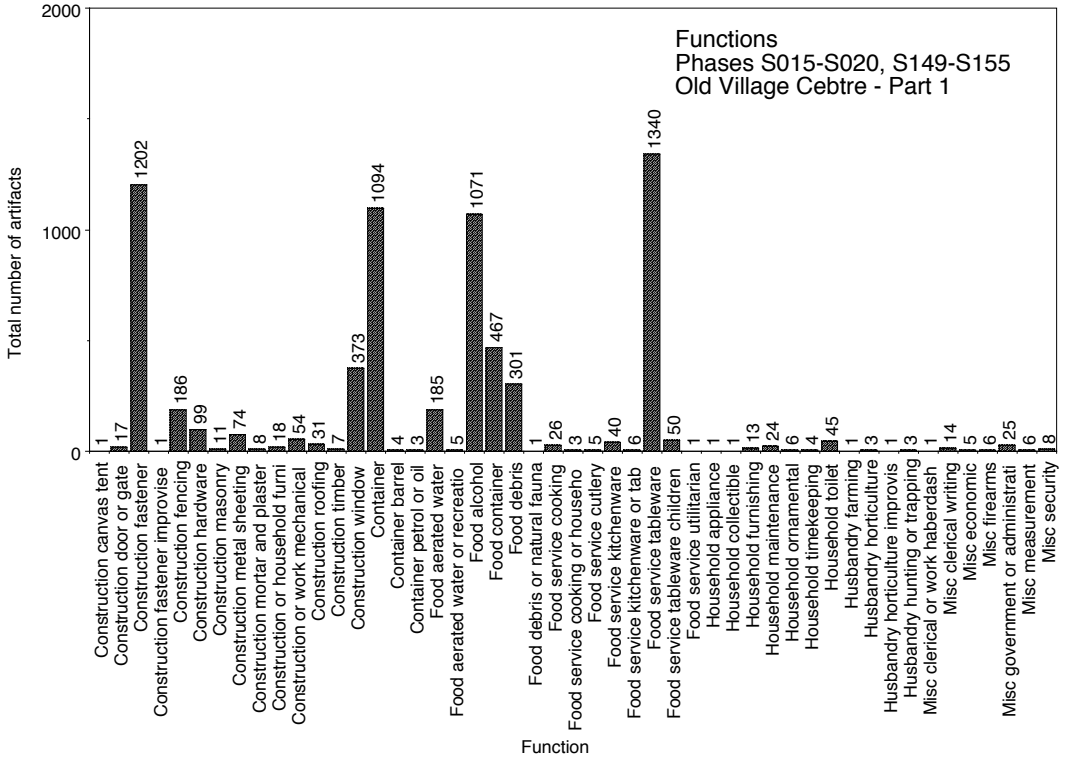
Functions	**Total number of artifacts**
Construction canvas tent	1
Construction fastener	40
Construction fencing	14
Construction hardware	6
Construction masonry	1
Construction metal sheeting	20
Construction or household furnishing	2
Construction or work mechanical	9
Construction roofing	3
Construction window	29
Container	60
Food aerated water	26

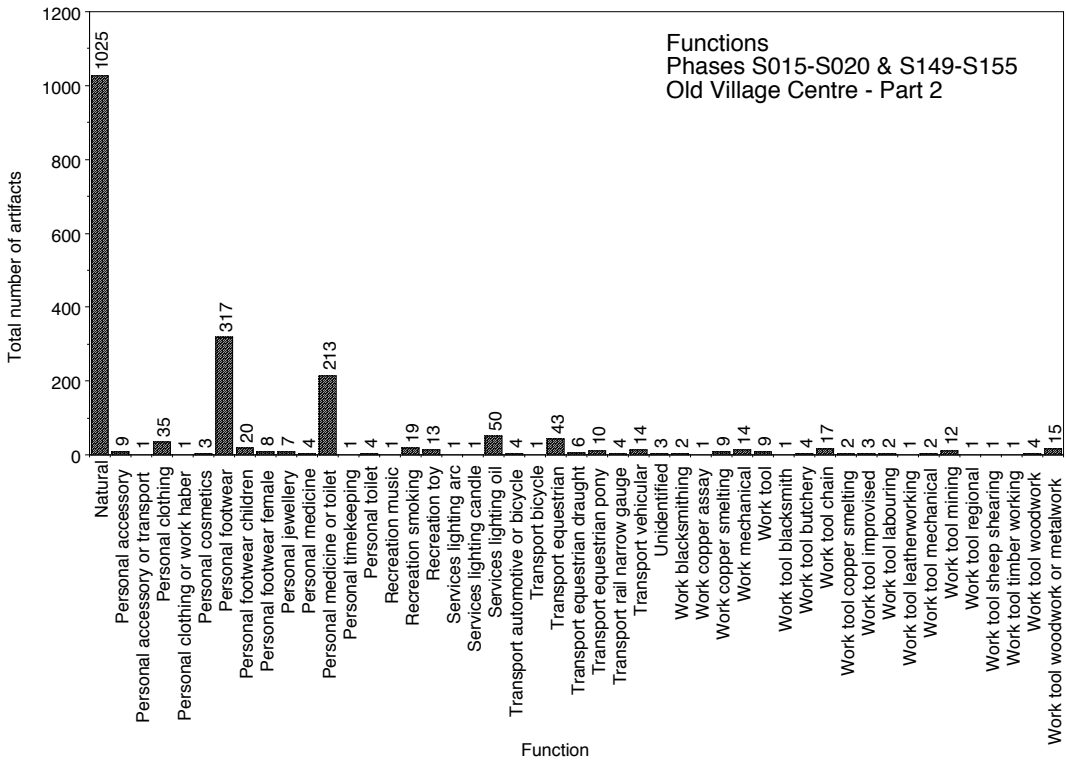
Food alcohol	75
Food container	12
Food debris	2
Food service cutlery	1
Food service kitchenware	2
Food service tableware	51
Misc economic	1
Misc security	1
Personal medicine or toilet	12
Recreation music	1
Recreation toy	1
Transport equestrian	6
Transport equestrian draught	4
Transport equestrian pony	3
Transport rail narrow gauge	11
Transport vehicular	1
Work haberdashery	1
Work tool mechanical	2
Work tool timber working	2
Work tool woodwork or metalwork	1

6.8.29 Site subdivision S012.

Phase number:	S012
Phase description:	
Total number of artifacts:	1
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-
Number of functions	1

6.8.30 Site subdivision S015-S020, S149-S155, Old Village Centre.





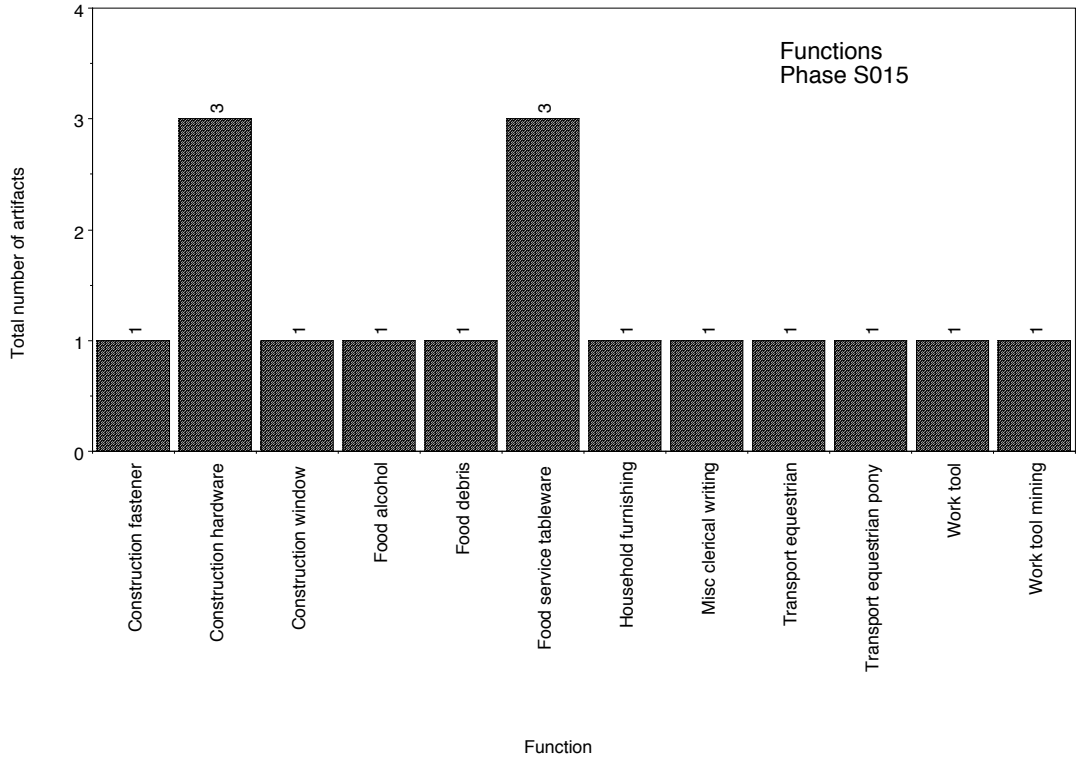
Phase number:	S015-S020, S149-S155
Phase description:	Old Village Centre
Total number of artifacts:	8770
Percentage undated	%
Reliability of sample:	
Date from:	
Date to:	
Number of functions	96

Functions	**Total number of artifacts**
Construction canvas tent	1
Construction door or gate	17
Construction fastener	1202
Construction fastener improvised	1
Construction fencing	186
Construction hardware	99
Construction masonry	11
Construction metal sheeting	74
Construction mortar and plaster	8
Construction or household furnishing	18
Construction or work mechanical	54
Construction roofing	31
Construction timber	7
Construction window	373
Container	1094
Container barrel	4
Container petrol or oil	3
Food aerated water	185
Food aerated water or recreation toy	5
Food alcohol	1071
Food container	467
Food debris	301
Food debris or natural fauna	1
Food service cooking	26
Food service cooking or household heating	3
Food service cutlery	5
Food service kitchenware	40
Food service kitchenware or tableware	6
Food service tableware	1340
Food service tableware children	50
Food service utilitarian	1
Household appliance	1
Household collectible	1
Household furnishing	13
Household maintenance	24
Household ornamental	6
Household timekeeping	4

Household toilet	45
Husbandry farming	1
Husbandry horticulture	3
Husbandry horticulture improvised	1
Husbandry hunting or trapping	3
Misc clerical or work haberdashery	1
Misc clerical writing	14
Misc economic	5
Misc firearms	6
Misc government or administration	25
Misc measurement	6
Misc security	8
Natural	1025
Personal accessory	9
Personal accessory or transport equestrian	1
Personal clothing	35
Personal clothing or work haberdashery	1
Personal cosmetics	3
Personal footwear	317
Personal footwear children	20
Personal footwear female	8
Personal jewellery	7
Personal medicine	4
Personal medicine or toilet	213
Personal timekeeping	1
Personal toilet	4
Recreation music	1
Recreation smoking	19
Recreation toy	13
Services lighting arc	1
Services lighting candle	1
Services lighting oil	50
Transport automotive or bicycle	4
Transport bicycle	1
Transport equestrian	43
Transport equestrian draught	6
Transport equestrian pony	10
Transport rail narrow gauge	4
Transport vehicular	14
Unidentified	3
Work blacksmithing	2
Work copper assay	1
Work copper smelting	9
Work mechanical	14
Work tool	9
Work tool blacksmith	1
Work tool butchery	4

Work tool chain	17
Work tool copper smelting	2
Work tool improvised	3
Work tool labouring	2
Work tool leatherworking	1
Work tool mechanical	2
Work tool mining	12
Work tool regional	1
Work tool sheep shearing	1
Work tool timber working	1
Work tool woodwork	4
Work tool woodwork or metalwork	15

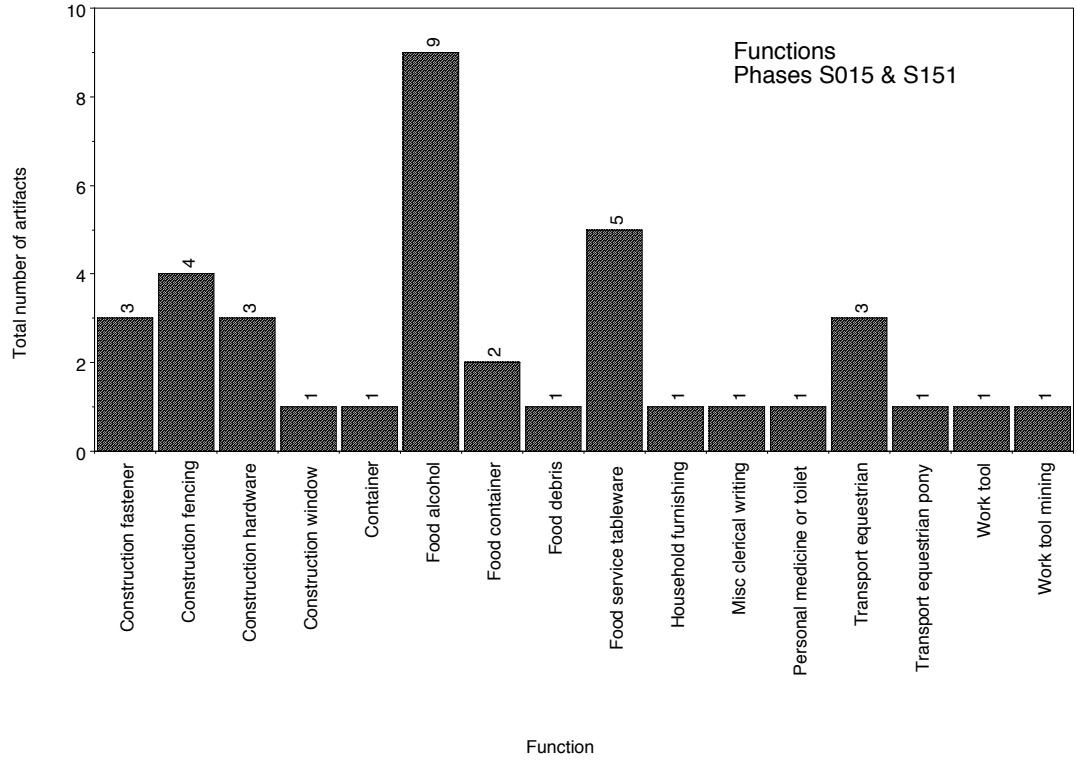
6.8.31 Site subdivision S015.



Phase number:	S015
Phase description:	
Total number of artifacts:	16
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	1870s
Date to:	-
Number of functions	12

Functions	**Total number of artifacts**
Construction fastener	1
Construction hardware	3
Construction window	1
Food alcohol	1
Food debris	1
Food service tableware	3
Household furnishing	1
Misc clerical writing	1
Transport equestrian	1
Transport equestrian pony	1
Work tool	1
Work tool mining	1

6.8.32 Site subdivision S015 and S151.

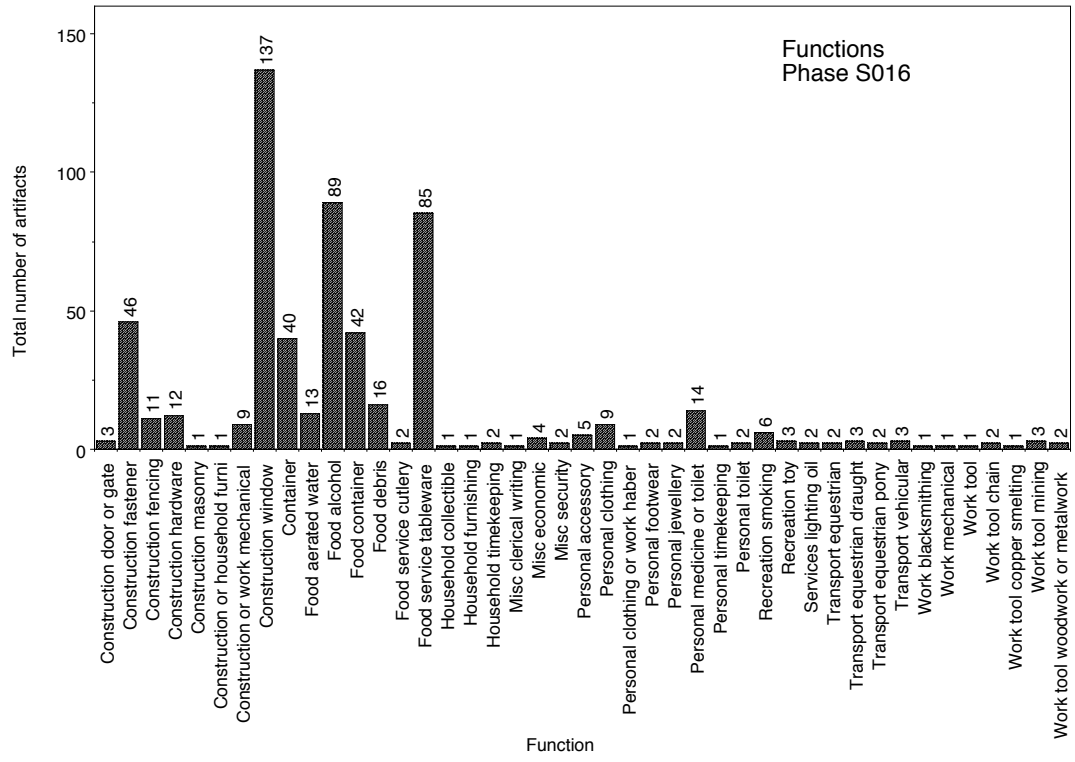


Phase number:	S015 and S151
Phase description:	
Total number of artifacts:	38
Percentage undated	%
Reliability of sample:	
Date from:	
Date to:	
Number of functions	16

Functions	**Total number of artifacts**
Construction fastener	3
Construction fencing	4
Construction hardware	3
Construction window	1
Container	1
Food alcohol	9
Food container	2
Food debris	1
Food service tableware	5
Household furnishing	1
Misc clerical writing	1
Personal medicine or toilet	1
Transport equestrian	3

Transport equestrian pony	1
Work tool	1
Work tool mining	1

6.8.33 Site subdivision S016.

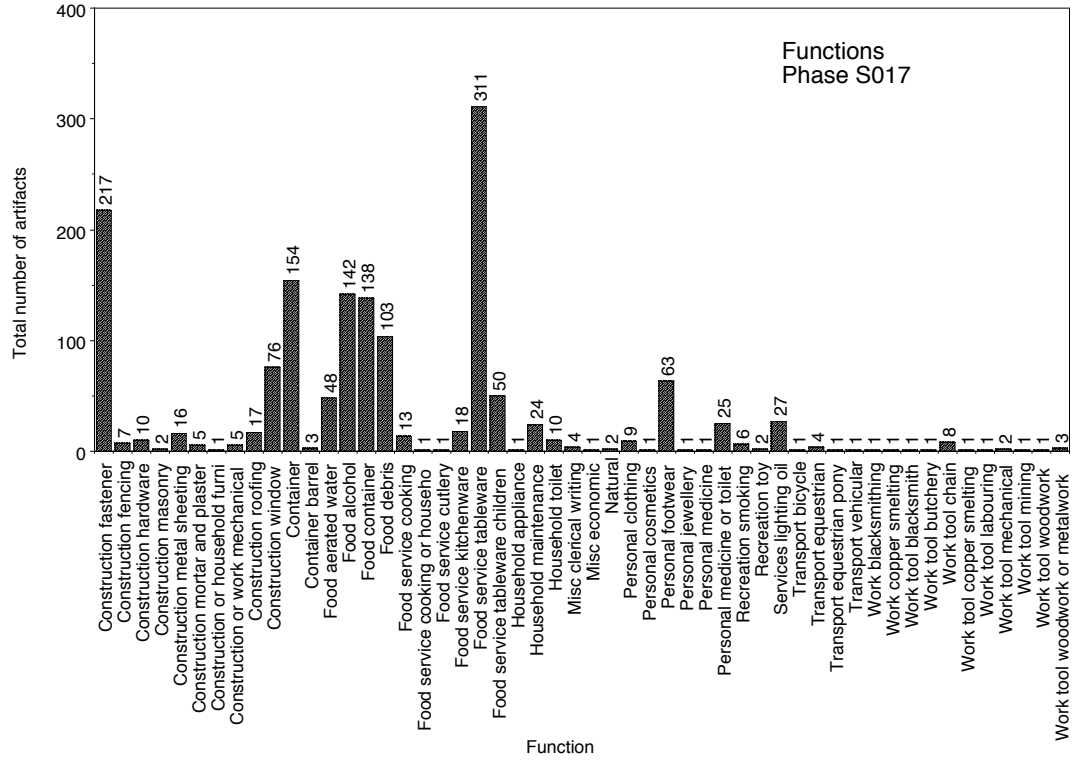


Phase number:	S016
Phase description:	
Total number of artifacts:	586
Percentage undated	26%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1930s
Number of functions	43

Functions	**Total number of artifacts**
Construction door or gate	3
Construction fastener	46
Construction fencing	11
Construction hardware	12
Construction masonry	1
Construction or household furnishing	1
Construction or work mechanical	9
Construction window	137
Container	40
Food aerated water	13
Food alcohol	89
Food container	42

Food debris	16
Food service cutlery	2
Food service tableware	85
Household collectible	1
Household furnishing	1
Household timekeeping	2
Misc clerical writing	1
Misc economic	4
Misc security	2
Personal accessory	5
Personal clothing	9
Personal clothing or work haberdashery	1
Personal footwear	2
Personal jewellery	2
Personal medicine or toilet	14
Personal timekeeping	1
Personal toilet	2
Recreation smoking	6
Recreation toy	3
Services lighting oil	2
Transport equestrian	2
Transport equestrian draught	3
Transport equestrian pony	2
Transport vehicular	3
Work blacksmithing	1
Work mechanical	1
Work tool	1
Work tool chain	2
Work tool copper smelting	1
Work tool mining	3
Work tool woodwork or metalwork	2

6.8.34 Site subdivision S017.

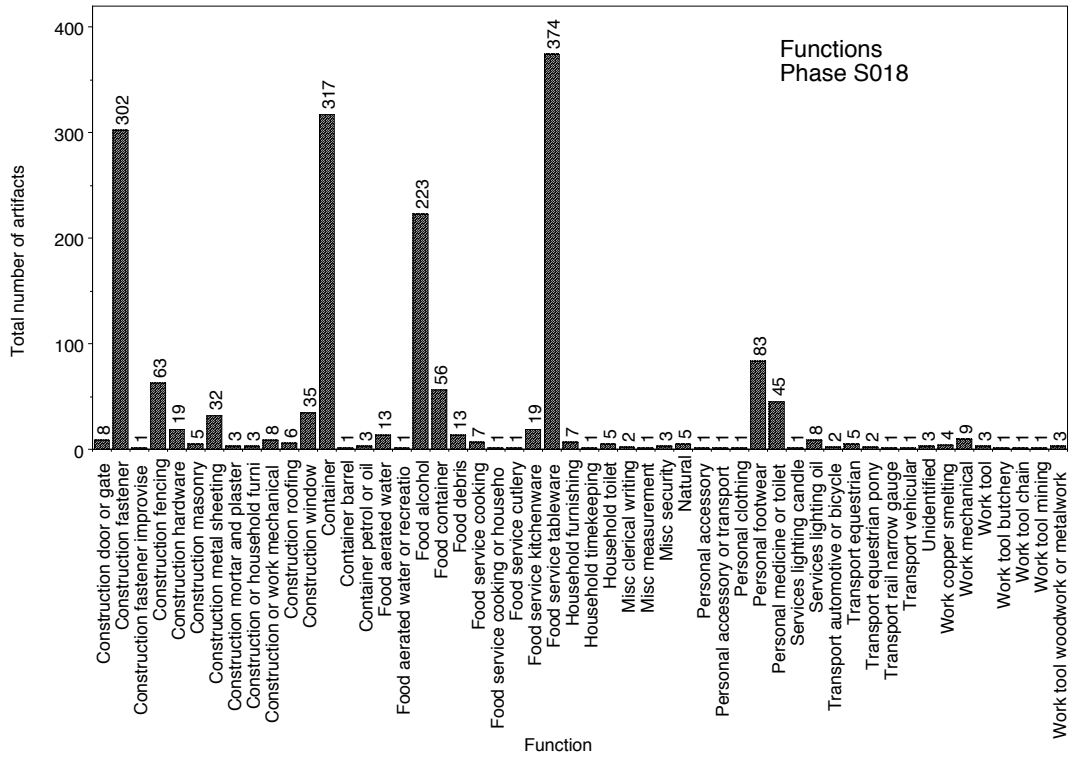


Phase number:	S017
Phase description:	
Total number of artifacts:	1543
Percentage undated	26%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1850s
Date to:	1870s (1920s).
Number of functions	52

Functions	**Total number of artifacts**
Construction fastener	217
Construction fencing	7
Construction hardware	10
Construction masonry	2
Construction metal sheeting	16
Construction mortar and plaster	5
Construction or household furnishing	1
Construction or work mechanical	5
Construction roofing	17
Construction window	76
Container	154
Container barrel	3

Food aerated water	48
Food alcohol	142
Food container	138
Food debris	103
Food service cooking	13
Food service cooking or household heating	1
Food service cutlery	1
Food service kitchenware	18
Food service tableware	311
Food service tableware children	50
Household appliance	1
Household maintenance	24
Household toilet	10
Misc clerical writing	4
Misc economic	1
Natural	2
Personal clothing	9
Personal cosmetics	1
Personal footwear	63
Personal jewellery	1
Personal medicine	1
Personal medicine or toilet	25
Recreation smoking	6
Recreation toy	2
Services lighting oil	27
Transport bicycle	1
Transport equestrian	4
Transport equestrian pony	1
Transport vehicular	1
Work blacksmithing	1
Work copper smelting	1
Work tool blacksmith	1
Work tool butchery	1
Work tool chain	8
Work tool copper smelting	1
Work tool labouring	1
Work tool mechanical	2
Work tool mining	1
Work tool woodwork	1
Work tool woodwork or metalwork	3

6.8.35 Site subdivision S018, Bakery.



Phase number:	S018
Phase description:	Bakery
Total number of artifacts:	6214
Percentage undated	81%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1930s
Number of functions	52

Functions	**Total number of artifacts**
Construction door or gate	8
Construction fastener	302
Construction fastener improvised	1
Construction fencing	63
Construction hardware	19
Construction masonry	5
Construction metal sheeting	32
Construction mortar and plaster	3
Construction or household furnishing	3
Construction or work mechanical	8
Construction roofing	6
Construction window	35

Container	317
Container barrel	1
Container petrol or oil	3
Food aerated water	13
Food aerated water or recreation toy	1
Food alcohol	223
Food container	56
Food debris	13
Food service cooking	7
Food service cooking or household heating	1
Food service cutlery	1
Food service kitchenware	19
Food service tableware	374
Household furnishing	7
Household timekeeping	1
Household toilet	5
Misc clerical writing	2
Misc measurement	1
Misc security	3
Natural	5
Personal accessory	1
Personal accessory or transport equestrian	1
Personal clothing	1
Personal footwear	83
Personal medicine or toilet	45
Services lighting candle	1
Services lighting oil	8
Transport automotive or bicycle	2
Transport equestrian	5
Transport equestrian pony	2
Transport rail narrow gauge	1
Transport vehicular	1
Unidentified	3
Work copper smelting	4
Work mechanical	9
Work tool	3
Work tool butchery	1
Work tool chain	1
Work tool mining	1
Work tool woodwork or metalwork	3

6.8.36 Site subdivision S019.

Phase number:	S019
Phase description:	
Total number of artifacts:	29
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-
Number of functions	14

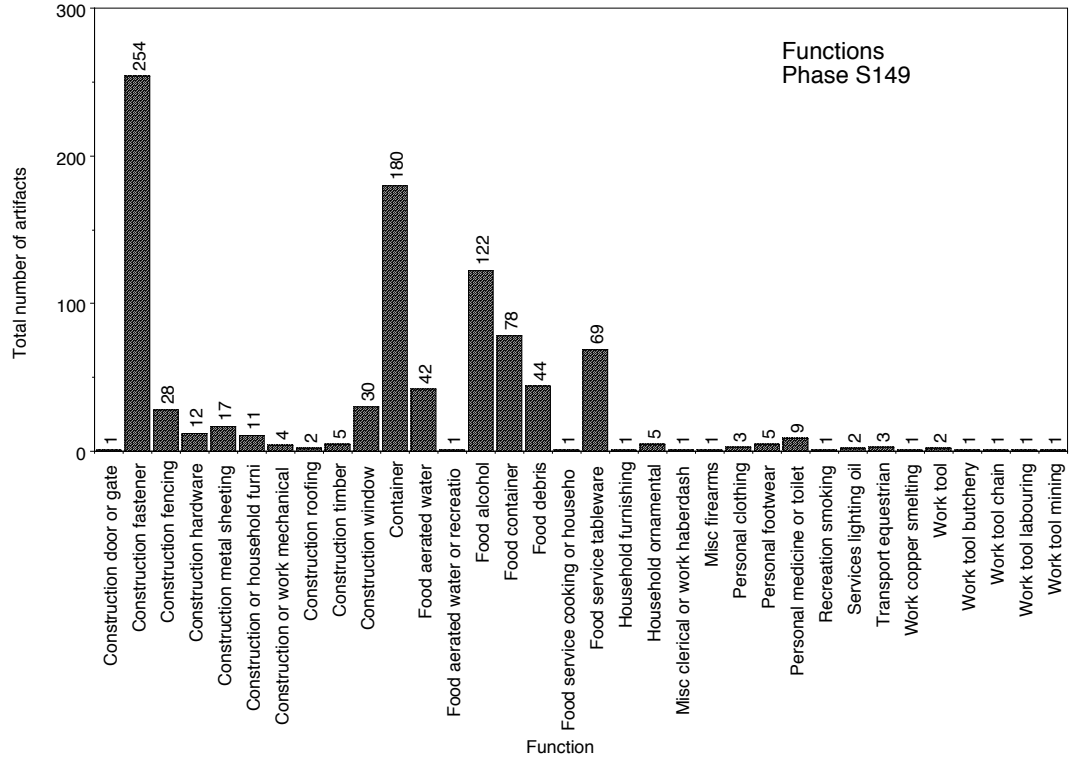
6.8.37 Site subdivision S020.

Phase number:	S020
Phase description:	
Total number of artifacts:	27
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-
Number of functions	9

6.8.38 Site subdivision S116.

Phase number:	S116
Phase description:	
Total number of artifacts:	15
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-
Number of functions	9

6.8.39 Site subdivision S149.

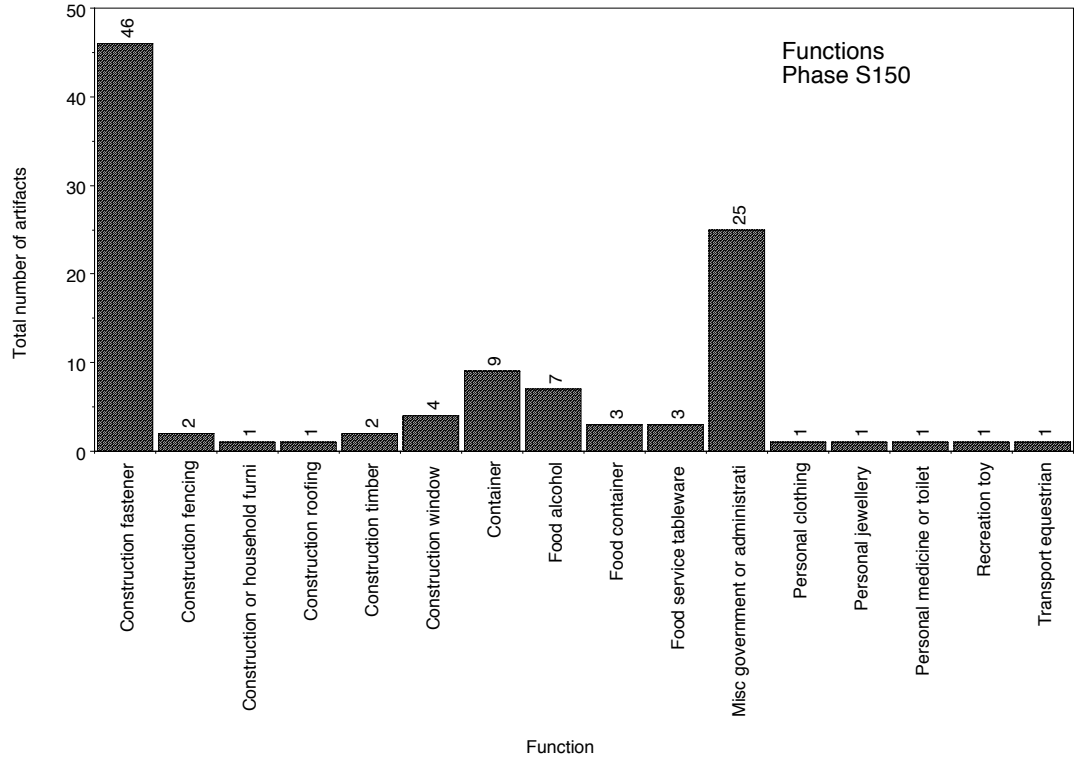


Phase number:	S149
Phase description:	
Total number of artifacts:	6214
Percentage undated	81%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1920s
Number of functions	34

Functions	**Total number of artifacts**
Construction door or gate	1
Construction fastener	254
Construction fencing	28
Construction hardware	12
Construction metal sheeting	17
Construction or household furnishing	11
Construction or work mechanical	4
Construction roofing	2
Construction timber	5
Construction window	30
Container	180
Food aerated water	42

Food aerated water or recreation toy	1
Food alcohol	122
Food container	78
Food debris	44
Food service cooking or household heating	1
Food service tableware	69
Household furnishing	1
Household ornamental	5
Misc clerical or work haberdashery	1
Misc firearms	1
Personal clothing	3
Personal footwear	5
Personal medicine or toilet	9
Recreation smoking	1
Services lighting oil	2
Transport equestrian	3
Work copper smelting	1
Work tool	2
Work tool butchery	1
Work tool chain	1
Work tool labouring	1
Work tool mining	1

6.8.40 Site subdivision S150.



Phase number:	S150
Phase description:	
Total number of artifacts:	108
Percentage undated	34%
Reliability of sample:	Small sample, possibly unreliable.
Date from:	1870s
Date to:	1880s
Number of functions	16

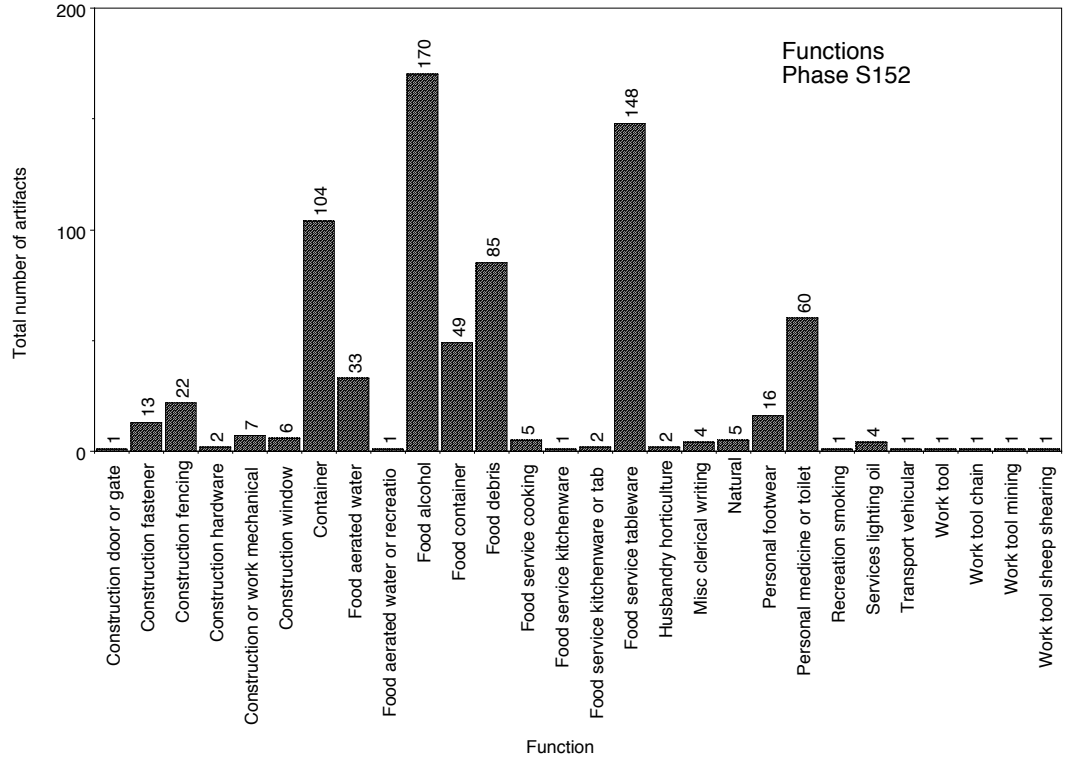
Functions	**Total number of artifacts**
Construction fastener	46
Construction fencing	2
Construction or household furnishing	1
Construction roofing	1
Construction timber	2
Construction window	4
Container	9
Food alcohol	7
Food container	3
Food service tableware	3
Misc government or administration	25
Personal clothing	1
Personal jewellery	1

Personal medicine or toilet	1
Recreation toy	1
Transport equestrian	1

6.8.41 Site subdivision S151.

Phase number:	S151
Phase description:	
Total number of artifacts:	22
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-
Number of functions	8

6.8.42 Site subdivision S152.

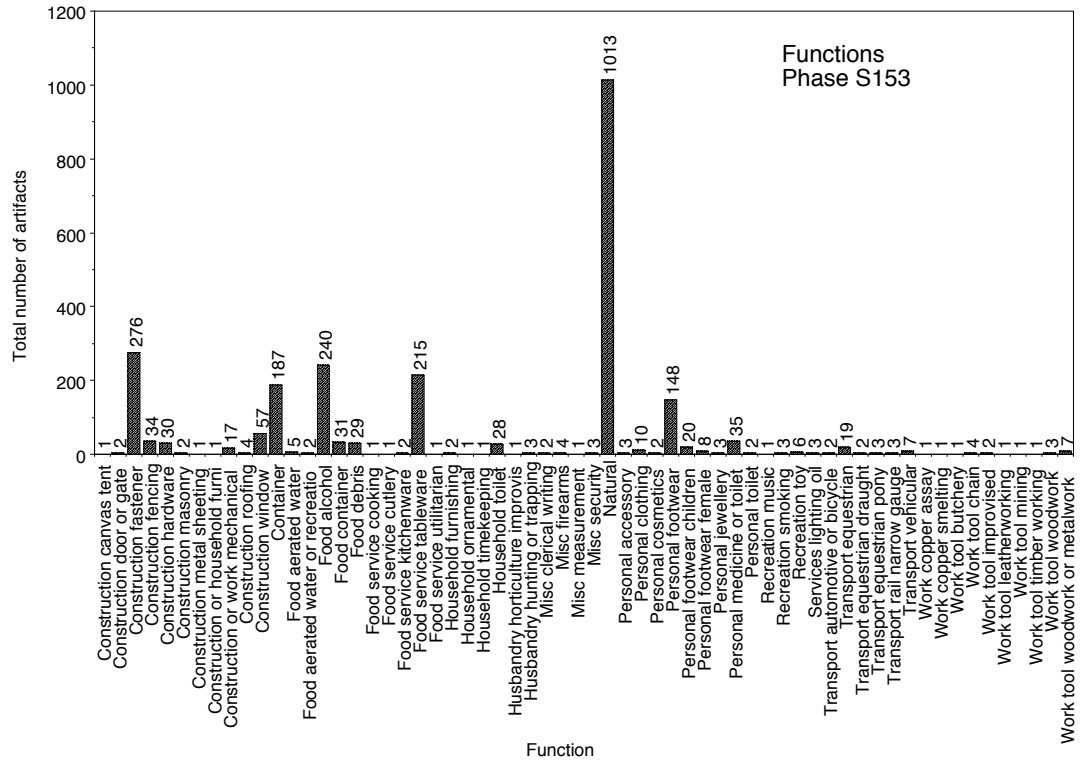


Phase number:	S152
Phase description:	
Total number of artifacts:	746
Percentage undated	38%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1850s
Date to:	1920s
Number of functions	28

Functions	**Total number of artifacts**
Construction door or gate	1
Construction fastener	13
Construction fencing	22
Construction hardware	2
Construction or work mechanical	7
Construction window	6
Container	104
Food aerated water	33
Food aerated water or recreation toy	1
Food alcohol	170
Food container	49
Food debris	85

Food service cooking	5
Food service kitchenware	1
Food service kitchenware or tableware	2
Food service tableware	148
Husbandry horticulture	2
Misc clerical writing	4
Natural	5
Personal footwear	16
Personal medicine or toilet	60
Recreation smoking	1
Services lighting oil	4
Transport vehicular	1
Work tool	1
Work tool chain	1
Work tool mining	1
Work tool sheep shearing	1

6.8.43 Site subdivision S153.



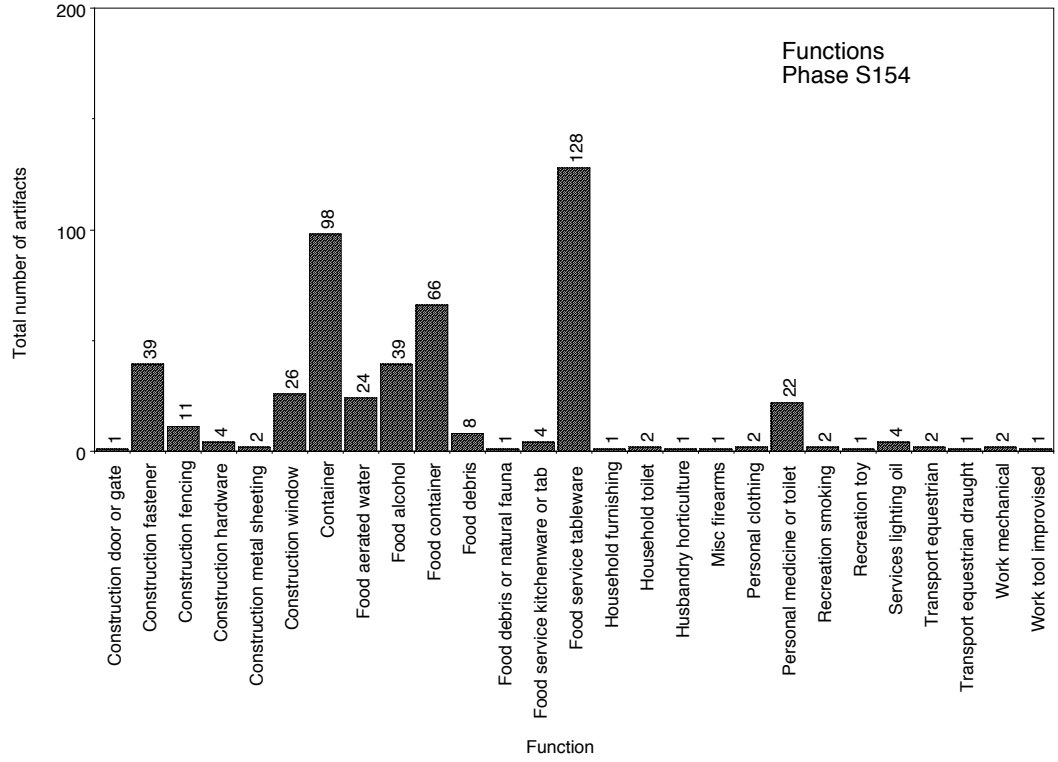
Phase number:	S153
Phase description:	
Total number of artifacts:	2500
Percentage undated	64%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1940s
Number of functions	62

Functions	**Total number of artifacts**
Construction canvas tent	1
Construction door or gate	2
Construction fastener	276
Construction fencing	34
Construction hardware	30
Construction masonry	2
Construction metal sheeting	1
Construction or household furnishing	1
Construction or work mechanical	17
Construction roofing	4
Construction window	57
Container	187

Food aerated water	5
Food aerated water or recreation toy	2
Food alcohol	240
Food container	31
Food debris	29
Food service cooking	1
Food service cutlery	1
Food service kitchenware	2
Food service tableware	215
Food service utilitarian	1
Household furnishing	2
Household ornamental	1
Household timekeeping	1
Household toilet	28
Husbandry horticulture improvised	1
Husbandry hunting or trapping	3
Misc clerical writing	2
Misc firearms	4
Misc measurement	1
Misc security	3
Natural	1013
Personal accessory	3
Personal clothing	10
Personal cosmetics	2
Personal footwear	148
Personal footwear children	20
Personal footwear female	8
Personal jewellery	3
Personal medicine or toilet	35
Personal toilet	2
Recreation music	1
Recreation smoking	3
Recreation toy	6
Services lighting oil	3
Transport automotive or bicycle	2
Transport equestrian	19
Transport equestrian draught	2
Transport equestrian pony	3
Transport rail narrow gauge	3
Transport vehicular	7
Work copper assay	1
Work copper smelting	1
Work tool butchery	1
Work tool chain	4
Work tool improvised	2
Work tool leatherworking	1
Work tool mining	1

Work tool timber working	1
Work tool woodwork	3
Work tool woodwork or metalwork	7

6.8.44 Site subdivision S154.



Phase number:	S154
Phase description:	
Total number of artifacts:	493
Percentage undated	33%
Reliability of sample:	Large sample consistent with other phases and historical documentation
Date from:	1860s
Date to:	1920s
Number of functions	27

Functions	**Total number of artifacts**
Construction door or gate	1
Construction fastener	39
Construction fencing	11
Construction hardware	4
Construction metal sheeting	2
Construction window	26
Container	98
Food aerated water	24
Food alcohol	39
Food container	66
Food debris	8
Food debris or natural fauna	1

Food service kitchenware or tableware	4
Food service tableware	128
Household furnishing	1
Household toilet	2
Husbandry horticulture	1
Misc firearms	1
Personal clothing	2
Personal medicine or toilet	22
Recreation smoking	2
Recreation toy	1
Services lighting oil	4
Transport equestrian	2
Transport equestrian draught	1
Work mechanical	2
Work tool improvised	1

6.8.45 Site subdivision S155.

Phase number:	S155
Phase description:	
Total number of artifacts:	47
Percentage undated	%
Reliability of sample:	Sample too small for further analysis.
Date from:	-
Date to:	-
Number of functions	13

6.9 Characteristics of the assemblage.

The assemblage from the excavations of Cadia Village revealed a number of characteristics, which can be compared with other excavated sites at or near Cadia and also elsewhere.

The excavations differ from those undertaken on domestic sites in several ways. The first differences were noted during excavation itself. They included:

1. The high frequency of ironwork or metalwork in various functional categories, as a result of the industrial (mining) basis of the Cadia Village community (see Section 6.6)
2. The distribution of artifacts in defined areas (House sites, fireplaces, cess-pits, rubbish dumps and unstratified.
3. Dating from unstratified artifacts.
4. Post 1870s to 1890s artifact deposition.

6.9.1 Distribution of artifacts.

Many of the house sites at Cadia Village do not possess associated soils with large numbers of artifacts. In fact the number of artifacts is usually very low, with some notable exceptions. This is in contrast to the large number of artifacts usually associated with archaeological sites elsewhere, especially those in the Cumberland Plain or sites in Sydney, Parramatta, Liverpool or other centres, even though they have been excavated by machine in the same manner. The artifacts on the sites at Cadia are concentrated in features, including fireplaces, rubbish pits, cess pits and rubbish dumps. Rubbish dumps are highly characteristic of Cadia and neighbouring sites.

The most common archaeological features may be listed as follows:

1. Pits and post-holes.
2. Slots and narrow trenches.
3. Fireplaces.
4. Cess-pits or outdoor toilets.
5. Rubbish dumps.

Cess-pits, fireplaces and rubbish pits provide the best opportunities for the recovery of artifacts related to house occupation.

The topsoil revealed only a limited number of artifacts, which were allotted to unstratified contexts, usually resulting from machine excavation to open up each site or from the initial cleaning of each site. This was found generally to be the case at Cadia Village, but also at other excavations in the area, for example, Tynan's Slaughterhouse and Waringa Hut, both near Cadia. [2]

The rubbish dumps appear to be a characteristic of rural sites. They can be recognised by topsoils containing high concentrations of ash or charcoal flecks, together with large quantities of artifacts. The soils are a darker colour than surrounding topsoils and also appear to be more humic, though this could be a factor of the high ash and charcoal content. .[3]

6.9.2 Dating of artifact assemblages.

As a result of the distribution of artifacts and excavation methodology, the artifact assemblage tends to be like unstratified deposits recovered from other sites. Unstratified artifacts tend to provide an overall date range for occupation of the site, in other words the whole date range for occupation, rather than the specific date range for an individual structure. As long as this trend is recognised, the dating evidence can still be used productively in the analysis of the site.

6.9.3 Post 1870s to 1890s artifact deposition.

It is a characteristic of archaeological sites on the Cumberland Plain and especially on urban sites (Sydney, Parramatta, Liverpool, Richmond, etc) for artifact deposition to dramatically fall off during the 1870s to 1890s period. This has previously been

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[2] Edward Higginbotham & Associates Pty Ltd. Report on the archaeological excavation of Tynan's Slaughterhouse, Old Cadia Road, Cadia, NSW. Cadia Holdings Pty Limited. 2001.
Edward Higginbotham & Associates Pty Ltd. Report on the archaeological excavation of Waringa Hut, near Cadia, N.S.W. Cadia Holdings Pty Limited. 2003.

[3] Rubbish dumps of this type are rare or unknown on urban sites within the Cumberland Plain (for example, Sydney, Parramatta, Liverpool, Windsor, Richmond). Without the excavation of additional rural sites in the Cumberland Plain, their frequency cannot be gauged for rural sites.

interpreted as evidence for off site garbage disposal, rather than a decline in the occupation of a site, for which there is no evidence in the urban context.

At Cadia Village, the same trend occurs in the artifact assemblage. There is a dramatic fall off in artifact deposition after the 1870s to 1880s, but a small increase in deposition in the 1910s to 1940s period. While there is no evidence at Cadia of a change in rubbish disposal after the 1870s to 1880s, there is clear historical documentation of a decline in population after 1867 to 1868, only to be reversed in the 1900s to 1920s period. While artifact deposition on urban sites in the Cumberland Plain may reflect a change to off site garbage disposal, it is suggested that in the case of Cadia the artifact deposition more accurately represents the level of the population in the Village.

6.10 Spatial analysis.

The artifact assemblage on this site is similar in many respects to those found on most other archaeological sites in Sydney, Parramatta and other suburban sites in the Sydney area. They are characteristic of what may be termed a 'domestic assemblage'. As discussed above, the Cadia Village assemblage also has a distinct industrial component, associated with mining focus of the community.

While the artifacts may seem repetitive from one site to another, further information on the occupation and usage of each site may be gained from spatial analysis.

While there is little scope for detailed analysis of the artifacts in this excavation report, there are many opportunities for research of this material as part of ongoing studies. The spatial analysis of the artifacts reveals interesting insights into the living conditions, garbage disposal patterns and activities of the occupants over the period of occupation.

Since the artifacts are deposited over a period of time, interpretation of the assemblage has to concentrate on describing and explaining the patterns of behaviour, resulting in artifact deposition over a number of decades. The artifact assemblage provides a summary of activities, repeated many times over several decades, during which time the house sites may have been occupied by a number of different individuals or groups. It is the repetition of activities associated with garbage disposal, which eventually form patterns in the distribution of artifacts.

It can be understood from the above that it is more unusual to be able to interpret a single event from the artifact assemblage, because of the broad date range of the artifacts, though of course, on occasion the single event can be explained and described from the evidence.

The following table has been used to indicate the frequency of each artifact function in each part of the site. The frequency is given as a percentage of the total number of artifacts in that function category.

If the artifacts were discarded in a random fashion, then the distribution of artifacts across the site should be evenly spread. We have already seen that this is not the case. It would also be assumed that each function represented by the artifacts should be evenly spread, if the distribution was random. This again is not the case.

The primary assumption is therefore that the distribution of artifacts is not random, but highly patterned. If the functions were random, it would be expected that their distribution should match the overall frequency of artifacts for each phase or area. For example, if 20% of the total assemblage appears in Phase 8, then 20% of the artifacts in each function should also appear in that phase. This distribution should be followed in each functional category, unless there is strong patterning in the spatial distribution. Patterning in the spatial distribution of artifacts can be the result of small samples or other biases, but in other cases may reflect patterns of behaviour in the usage or disposal of artifacts.[4]

[4] "Other biases" may include the following factor, namely fragmentation rates among different artifacts. It is clear that items of glass and ceramic may break into a large number of pieces, whereas a metal object, for example a nail, may not break at all. Thus in ceramics or glass one original object may be represented by 10-30 or more fragments, while in metals one object may still represent one artifact. Since the number of artifacts is compared within function, the bias in the sample caused by this factor is considered to be minimised. However another effect of fragmentation rates is on the total number of artifacts in a phase in relation to the functions represented in that phase. For example, one phase may be composed entirely of ceramics with a high fragmentation rate, while another phase may be composed of metals with a low fragmentation rate. This will affect the total number of artifacts in a phase and thus the percentage of the total assemblage represented by that phase. The effect of this factor has not been measured or assessed, but an attempt is made to negate its effect by only accepting large variations of the frequencies of each function from those of each phase as significant.

In the following table, frequencies of functions which vary by more than the percentage of artifacts in that phase + or - 60% are considered to be potentially significant variation. For example, if Phase 14 contains 40% of the total number of artifacts in the assemblage, then variation of 40 + or - (40/100 x 60) = -16% and + 64% is considered to be potentially significant variation. The standard is used only as a guide to highlight variation and will be influenced by size of sample and number of artifacts in any one function.

	W001, W008-W014	**W005, W006**	**W002, W003, W007, W015**	**S002**	**S004**	**S005, S006, S007**	**S008**	**S009**	**S011**	**OVC**
Total number of artifacts	1115	305	2457	498	20	4216	11	14	190	3076
% of total assemblage	9.37	2.56	20.64	4.18	0.17	35.42	0.09	0.12	1.60	25.84
+ or -	5.62	1.54	12.38	2.51	0.10	21.25	0.05	0.07	0.96	15.50
+ 60%	**14.99**	**4.10**	**33.02**	**6.69**	**0.27**	**56.67**	**0.14**	**0.19**	**2.56**	**41.34**
- 60%	3.75	1.02	8.26	1.67	0.07	14.17	0.04	0.05	0.64	10.34

Key Function **%**	**W001, W008-W014**	**W005, W006**	**W002, W003, W007, W015**	**S002**	**S004**	**S005, S006, S007**	**S008**	**S009**	**S011**	**OVC**
Construction canvas tent	0	0	12	0	0	**62**	0	0	**12**	12
Construction door or gate	5	0	20	0	**2**	32	0	0	0	41
Construction fastener	13	0	15	3	0	**56**	0	0	1	13
Construction fastener improvise	**50**	0	0	0	0	0	0	0	0	**50**
Construction fencing	5	0	6	**8**	0	54	0	0	2	24
Construction hardware	**16**	**22**	17	1	0	24	0	0	1	18
Construction masonry	**54**	**10**	17	1	0	12	0	0	1	6
Construction metal sheeting	12	0	24	0	0	31	0	0	**9**	25
Construction metal sheeting or	0	0	**100**	0	0	0	0	0	0	0
Construction mortar and plaster	**55**	2	29	1	0	7	0	0	0	6
Construction or household furnishing	12	0	30	2	0	47	0	**1**	2	7

Key Function **%**	**W001, W008-W014**	**W005, W006**	**W002, W003, W007, W015**	**S002**	**S004**	**S005, S006, S007**	**S008**	**S009**	**S011**	**OVC**
Construction or household heating	0	0	0	0	0	**100**	0	0	0	0
Construction or work mechanical	3	2	30	5	0	32	0	**1**	**5**	23
Construction roofing	**22**	0	27	0	0	37	0	0	1	12
Construction roofing or contain	0	0	0	0	0	**100**	0	0	0	0
Construction roofing or window	0	0	0	0	0	**100**	0	0	0	0
Construction timber	**23**	0	23	0	0	27	0	0	0	27
Construction window	**16**	0	23	0	0	48	0	0	**3**	10
Container	5	0	10	**7**	0	**60**	0	0	1	17
Container barrel	**75**	0	4	0	0	0	0	**4**	0	17
Container improvised	0	0	7	0	0	**93**	0	0	0	0
Container petrol or oil	0	0	**74**	4	0	0	**9**	0	0	13
Container shipping	0	0	0	0	0	**100**	0	0	0	0
Food aerated water	4	0	9	2	**1**	**59**	0	0	**3**	21
Food aerated water or recreation toy.	0	0	**48**	0	**4**	30	0	0	0	17
Food alcohol	11	0	9	3	0	55	0	0	1	19
Food container	12	0	9	5	**1**	50	0	0	1	23
Food debris	**37**	0	14	6	0	37	0	0	0	7
Food debris or natural fauna	0	0	0	0	0	**91**	0	0	0	9
Food service appliance	0	**100**	0	0	0	0	0	0	0	0
Food service cooking	7	0	12	2	0	49	0	0	0	30
Food service cooking or household heating	14	3	11	3	0	**64**	0	0	0	6
Food service cutlery	0	0	30	**7**	0	41	0	0	**4**	19
Food service kitchenware	1	2	9	0	0	50	0	0	2	36
Food service kitchenware or tab	0	0	0	0	0	**57**	0	0	0	**43**
Food service tableware	8	0	11	6	**1**	47	0	0	1	26

Key Function *%*	**W001, W008-W014**	**W005, W006**	**W002, W003, W007, W015**	**S002**	**S004**	**S005, S006, S007**	**S008**	**S009**	**S011**	**OVC**
Food service tableware children	**19**	0	0	0	0	15	0	0	0	**67**
Food service utilitarian	0	0	**86**	**7**	0	0	0	0	0	7
Household appliance	0	0	**50**	0	0	0	0	0	0	**50**
Household collectible	0	0	**33**	0	0	33	0	0	0	33
Household furnishing	10	0	**47**	0	0	30	0	**2**	0	12
Household maintenance	0	0	0	0	0	0	0	0	0	**100**
Household ornamental	**26**	0	**35**	**12**	0	24	0	0	0	3
Household pet or animal	**90**	0	4	0	0	6	0	0	0	0
Household timekeeping	10	0	0	**63**	0	13	0	0	0	13
Household toilet	2	0	0	2	0	14	0	0	0	**82**
Household vermin	0	0	**100**	0	0	0	0	0	0	0
Husbandry farming	0	0	0	0	0	0	0	0	0	**100**
Husbandry horticulture	**17**	0	17	0	0	0	0	0	0	**67**
Husbandry horticulture improvised.	0	0	0	0	0	0	0	0	0	**100**
Husbandry hunting or trapping	0	0	0	0	0	25	0	0	0	**75**
Misc clerical	0	0	0	0	0	**100**	0	0	0	0
Misc clerical or work haberdashery	0	0	0	0	0	**100**	0	0	0	0
Misc clerical writing	6	0	18	0	0	**64**	0	0	0	12
Misc economic	0	0	**50**	6	0	11	0	0	**6**	28
Misc firearms	7	0	24	3	0	**57**	0	0	0	9
Misc government or administration	0	0	0	0	0	0	0	0	0	**100**
Misc human skeletal	0	0	**100**	0	0	0	0	0	0	0
Misc measurement	0	0	0	0	0	**60**	0	0	0	40
Misc security	8	3	3	0	0	**62**	0	0	**3**	22
Natural	3	0	4	2	0	2	0	0	0	**89**
Personal accessory	0	0	20	5	2	**58**	0	0	0	15

Key Function **%**	**W001, W008-W014**	**W005, W006**	**W002, W003, W007, W015**	**S002**	**S004**	**S005, S006, S007**	**S008**	**S009**	**S011**	**OVC**
Personal accessory female	0	0	25	**25**	0	50	0	0	0	0
Personal accessory or transport	0	0	27	**13**	0	53	0	0	0	7
Personal clothing	6	0	26	**8**	0	47	0	0	0	14
Personal clothing female	0	0	**50**	0	0	50	0	0	0	0
Personal clothing or work haberdashery	0	0	**67**	0	0	25	0	0	0	8
Personal cosmetics	5	0	5	0	0	**75**	0	0	0	15
Personal footwear	3	0	6	**10**	0	19	0	0	0	**62**
Personal footwear children	**20**	0	0	0	0	0	0	0	0	**80**
Personal footwear female	0	0	0	0	0	0	0	0	0	**100**
Personal jewellery	2	0	**52**	1	0	37	0	0	0	8
Personal medicine	0	0	0	0	0	**60**	0	0	0	40
Personal medicine or toilet	7	0	4	5	0	**60**	0	0	1	23
Personal optical	0	0	**50**	0	0	50	0	0	0	0
Personal timekeeping	0	0	5	**10**	0	**80**	0	0	0	5
Personal toilet	10	0	**48**	**14**	0	10	0	0	0	19
Personal trophy	0	0	0	0	0	**100**	0	0	0	0
Recreation music	0	0	0	0	0	**75**	0	0	**12**	12
Recreation smoking	**45**	0	2	1	0	40	0	0	1	12
Recreation toy	0	0	**47**	**7**	0	33	0	0	1	12
Services battery	0	0	0	0	0	**100**	0	0	0	0
Services electricity or telephone	**50**	0	**50**	0	0	0	0	0	0	0
Services fuel	0	0	**48**	**52**	0	0	0	0	0	0
Services lighting	12	0	0	0	0	**88**	0	0	0	0
Services lighting arc	0	0	0	0	0	**100**	0	0	0	0

Key Function **%**	**W001, W008-W014**	**W005, W006**	**W002, W003, W007, W015**	**S002**	**S004**	**S005, S006, S007**	**S008**	**S009**	**S011**	**OVC**
Services lighting candle	0	0	**33**	**33**	0	0	0	0	0	33
Services lighting oil	1	0	5	**26**	0	0	0	0	0	**68**
Transport automotive	**50**	0	**50**	0	0	0	0	0	0	0
Transport automotive or bicycle	0	0	**100**	0	0	0	0	0	0	0
Transport bicycle	4	0	**70**	0	0	4	0	0	0	22
Transport equestrian	4	4	8	2	0	**59**	0	0	**3**	20
Transport equestrian draught	9	9	3	0	3	46	0	0	**11**	20
Transport equestrian pony	0	0	12	0	6	6	0	0	**18**	**59**
Transport rail narrow gauge	7	**18**	5	0	0	41	**2**	0	**20**	7
Transport vehicular	3	0	**43**	0	0	7	0	0	**3**	**43**
Unidentified	0	0	4	**77**	0	8	0	0	0	12
Work blacksmithing	0	0	0	0	0	0	0	0	0	**100**
Work copper assay	0	0	0	0	0	50	0	0	0	**50**
Work copper smelting	**30**	**6**	**38**	3	0	14	0	0	0	9
Work haberdashery	6	0	**71**	**18**	0	0	0	0	**6**	0
Work mechanical	6	0	20	0	0	29	0	0	0	**46**
Work metalworking	**100**	0	0	0	0	0	0	0	0	0
Work tool	13	4	13	4	0	35	0	0	0	30
Work tool blacksmith	0	0	0	0	0	0	0	0	0	**100**
Work tool butchery	14	0	0	**14**	0	29	0	0	0	**43**
Work tool chain	6	**9**	25	1	0	36	0	0	0	23
Work tool copper smelting	0	**88**	4	0	0	0	0	0	0	8
Work tool improvised	0	0	0	0	0	43	0	0	0	57
Work tool labouring	**25**	0	25	0	0	25	0	0	0	25
Work tool leatherworking	0	0	**67**	0	0	0	0	0	0	33
Work tool mechanical	0	**14**	0	0	0	29	0	0	**29**	29

Key Function **%**	**W001, W008-W014**	**W005, W006**	**W002, W003, W007, W015**	**S002**	**S004**	**S005, S006, S007**	**S008**	**S009**	**S011**	**OVC**
Work tool metalwork	0	0	**67**	0	0	33	0	0	0	0
Work tool mining	0	**8**	4	**8**	0	32	0	**4**	0	**44**
Work tool regional	0	0	0	0	0	33	0	0	0	**66**
Work tool sheep shearing	0	0	0	0	0	50	0	0	0	**50**
Work tool timber working	12	0	25	0	0	25	0	0	**25**	12
Work tool woodwork	0	0	20	0	0	0	0	0	0	**80**
Work tool woodwork or metalwork	7	0	16	0	0	37	0	**2**	2	35

6.10.1 Research questions.

The description of the archaeological excavation in Chapter 5 resulted in a discussion and interpretation of the various sites that were excavated. The buildings were divided into a number of groups, having different uses, sequences of development and housing different types of people, all of whom were part of the Cadia Village community.

These groups may be listed as follows:

Group	**Sub-divisions**	**Interpretation – functions.**
Building (W001) and associated buildings	W001, W008, W009, W010, W011, W012, W013, W014	Mine management – housing of senior staff at mine or chaplain and respective families.
Buildings (W005 and W006)	W005, W006	Industrial or agricultural use
Building (W002) and associated buildings.	W002, W003, W007, W015	Domestic use – housing of mine employee and family.

Group	**Sub-divisions**	**Interpretation – functions.**
Buildings (S005) and associated structures	S005, S006, S007	Bon Accord Hotel
Individual buildings (S002, S004, S008, S009, S011) and associated structures.	S002, S004, S008, S009, S011	Miner's huts – accommodation for a miner and family or for groups of miners.
The Old Village Centre.	S015-S020, S149-S155	Shops and residences for shopkeepers

The interpretations of the archaeological and historical evidence can be tested against the artifact assemblages found in association with each group of buildings. Important questions include:

1. Different standards of living for mine management and mine employees.
2. Composition of households.
3. Identification of business premises.
4. Butchery practices – on site butchery or remote slaughterhouse.

Standards of living.

The living standards of the occupants of buildings may be assessed using the following information:

1. Dietary information, as indicated by bone and shell food debris, and other food remains.
2. Standard of living, as indicated by range of goods and services available to occupants.
3. Standard of living, as indicated by building techniques and house size.

Composition of households.

The composition of households may be assessed on the basis of:

1. Size of living space and number of rooms.
2. Artifacts associated with males, females and children.
3. Building techniques and house size.

Identification of business premises.

The identification of business premises may be investigated on the basis of:

1. Building technique, form, size and number of rooms.
2. Quantitative analysis of artifacts / commercial or traded goods.

3. Artifacts specifically related to trades or businesses.

Butchery practices.
The nature of butchery practices may be assessed through:

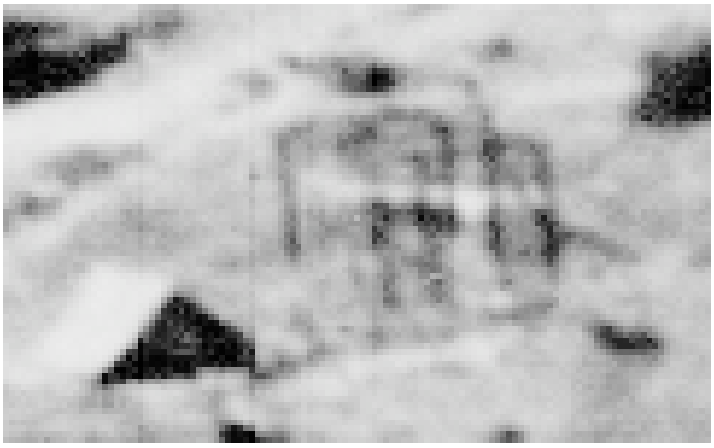
1. The frequency and distribution of animal bone.

The evidence of building techniques and house sizes has already been discussed in Chapter 5 and has led to various explanations or interpretations of the archaeological evidence, which will be tested against the other avenues of research.

6.10.2 Spatial analysis of each function.

Most of the construction functions have been considered in Chapter 5 in the context of the description of each phase or site subdivision. Only a few comments on the Construction functions will be added here.

Construction canvas tent. The function recognises the eyelets inserted into canvas material for tents, etc. For a mobile population, swags and tents were an essential item. While the concentration of these items around S005, S006, S007 and S011 is hard to explain in meaningful terms, it is surprising that at least one historical photograph reveals how common this form of accommodation was at Cadia in the early 20th century (Plate 2.3, detail).



Detail of Plate 2.3, showing a tent pitched next to the frame of a hut under construction around 1905-1907, when Cadia grew rapidly in response to new mining opportunities (the tent was located to the north of S004).

Construction door or gate
Construction fastener
Construction fastener improvised
Construction fencing
Construction hardware
Construction masonry
Construction metal sheeting
Construction metal sheeting or container petrol or oil.
Construction mortar and plaster
Construction or household furnishing.
Construction or household heating
Construction or work mechanical
Construction roofing
Construction roofing or container
Construction roofing or window
Construction timber
Construction window
For discussion of the artifacts in the above functions, see Chapter 5.

Container. This function includes all containers for which the contents is unknown or unspecified. It is therefore of little use for interpretation. Nonetheless higher than expected frequencies are found in S005 and associated group. The high frequency in S002 is due to small sample size.

Container barrel. Barrels could be used for the storage and transport of both wet and dry goods, and could also be used for water butts after primary use, if they were not recycled. There are only 24 items in this function, principally fragments of barrel hoop. The two important items are brass spigots or taps for barrels found at S017 (118). The taps may indicate a primary use of barrels for containing liquor of some sort.

Container improvised. Improvised wire handles. The high frequency in S005 is due to small sample size.

Container petrol or oil. Large tin cans were often used for other purposes, for example, to make bush furniture or in the case of W015 to form sheet tin wall cladding, another improvised use.

Container shipping. Shipping containers are relatively common on historical sites. This example was reused to form the lid of an outdoor toilet (S006), yet another improvised use.

Food aerated water. The high frequency of aerated water bottles (cordial, bitters, sarsaparilla, ginger beer) at S005 is probably significant and supports the identification of this site as the Bon Accord Hotel, run by Humphrey Hicks. The high frequency in S004 and S011 is due to small sample size, but there is also a high frequency in the Old Village Centre. Demijohns tend to suggest the retail sale of ginger beers and the like. Examples were found at S005, but not elsewhere.

Food aerated water or recreation toy. Marbles from aerated water bottles can either represent their use as aerated water bottles or as marbles by children. The high frequency in S004 is due to small sample size, but there are also high frequencies at S005 and in the Old Village Centre. It might be assumed that a primary use as a container of soda or other carbonated drink is indicated where high frequencies of aerated water bottle occur with the marbles from these containers. Where few if any glass fragments are found, yet a higher frequency of marbles, then a secondary use as a children's toy might be more likely. Such evidence for children at S005 would have to be assessed in relation to other evidence for children.

Food alcohol. Alcohol bottles are a common part of many archaeological sites. At Cadia they occur at all the main habitation sites, except those with small sample size.

Consumption of beverages at Cadia Village. By combining food aerated water and food alcohol the preferences for (bottled) beverages for the Cadia Village community can be tabulated as follows:

Beverages **%**	**All**	**W001** **W008-** **W014**	**W005** **W006**	**W002** **W003** **W007** **W015**	**S002**	**S004**
0. Aerated water	13.9	5.7	15.3	15.3	9.57	20
1. Beer or wine	61.5	87.1	46.1	53.7	56.9	73.3
2. Champagne	12	3.6	23.0	12.0	24.4	0
3. Gin or schnapps	10	2.4	15.3	4.5	8.5	6.6
4. Spirits	2.4	0.9	0	14.3	0.5	0

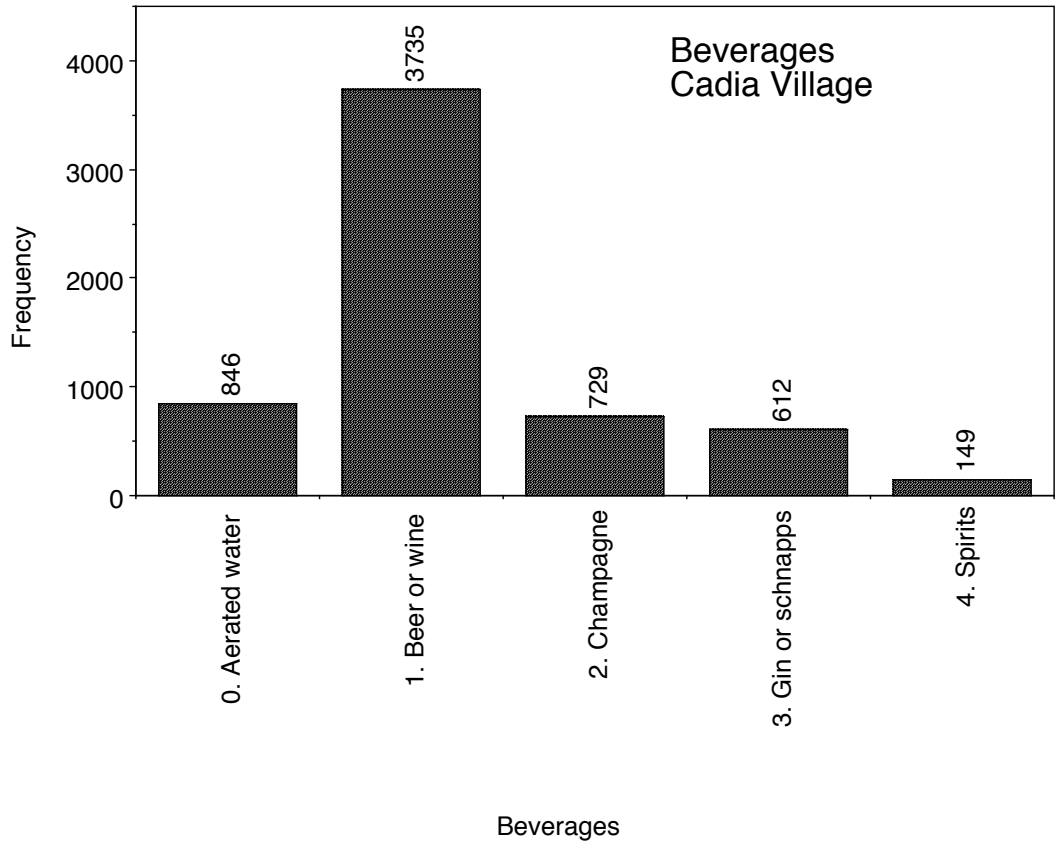
Beverages **%**	**All**	**S005** **S006** **S007**	**S008**	**S009**	**S011**	**OVC**
0. Aerated water	13.9	14.5	13.3	0	25.7	15
1. Beer or wine	61.5	59.6	86.6	0	64.3	57.9

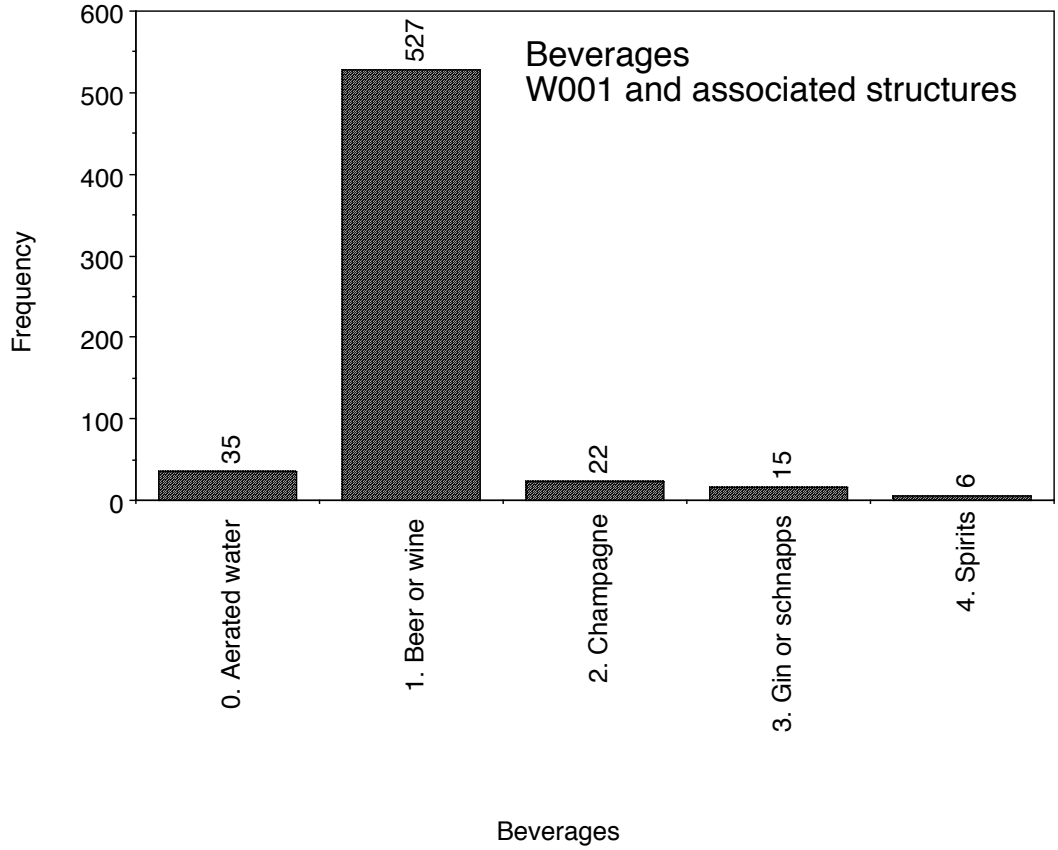
2. Champagne	12	11.8	0	100	6.9	15
3. Gin or schnapps	10	13.3	0	0	2.9	8.7
4. Spirits	2.4	0.6	0	0	0	3.1

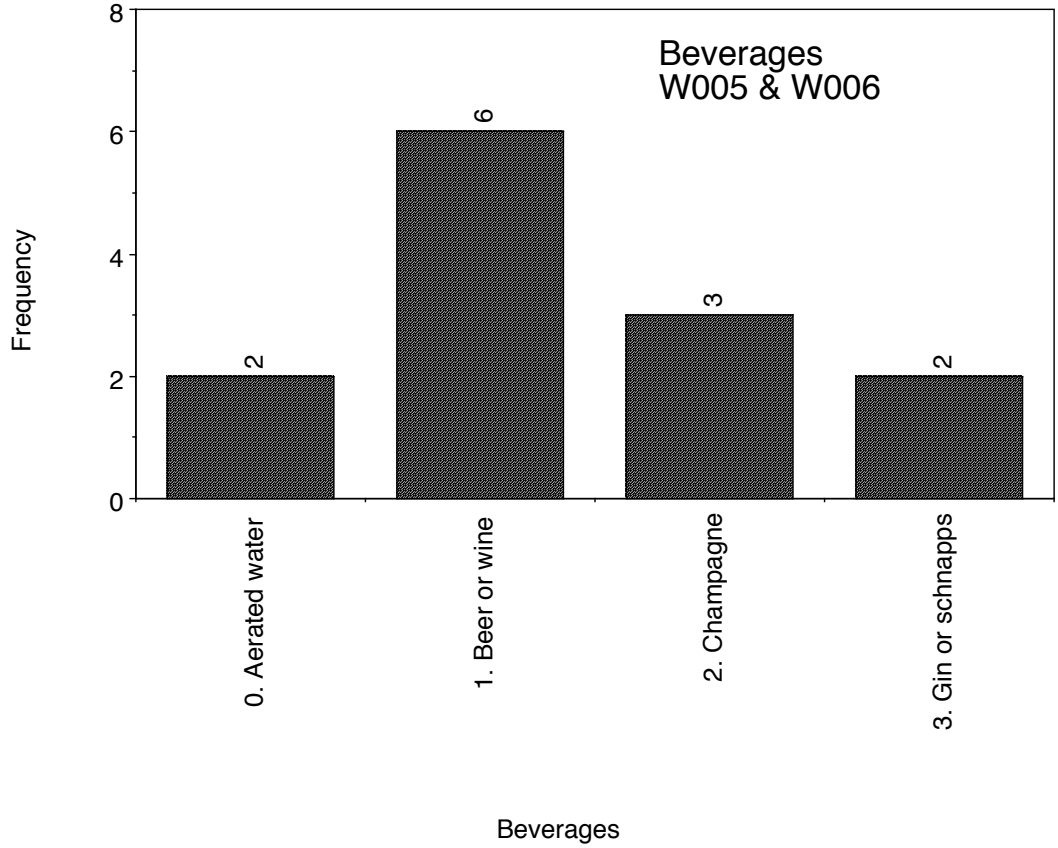
The frequencies for the total assemblage recovered from the excavation area of Cadia Village indicate a preference for beer and wine, followed by aerated waters, then champagne, gin and schnapps and finally spirits. This frequency is not followed on a number of sites. At W005 and W006, S002, S004, S008, S009 and possibly S011 the size of the sample means that the overall preferences are partly obscured by sample bias, but are nonetheless still evident, except perhaps in the case of S002.

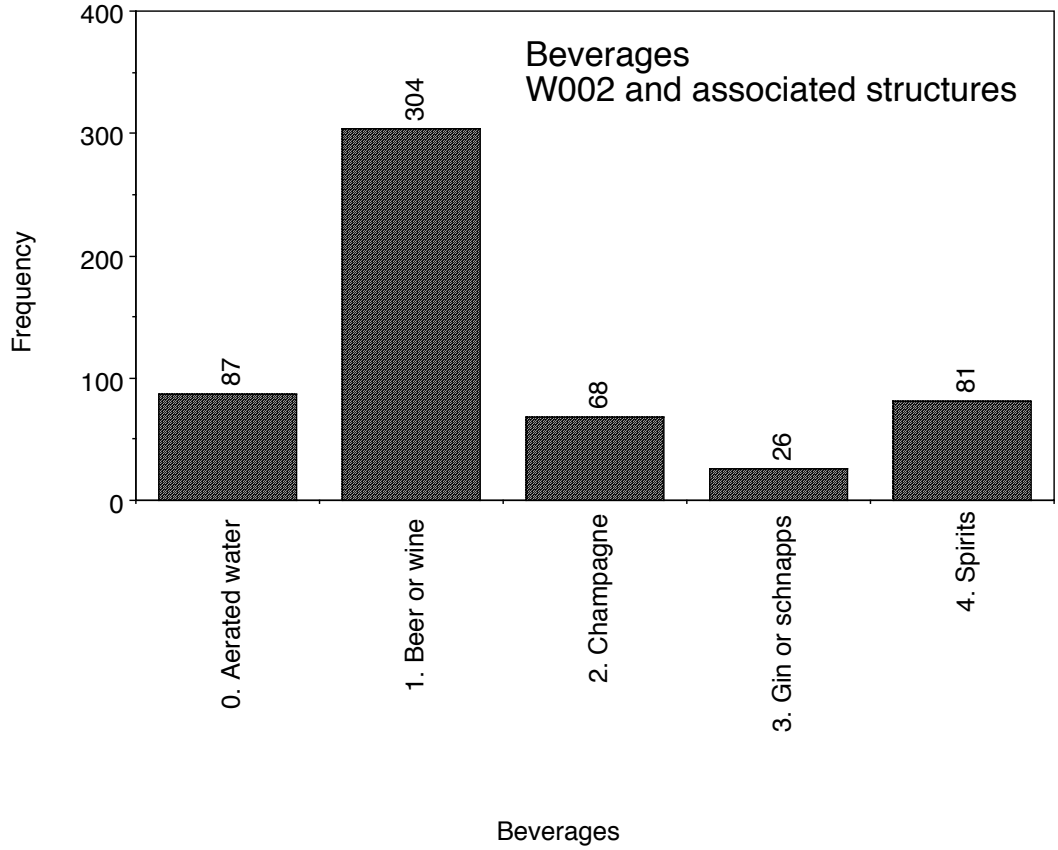
Where larger samples are available, W001 conforms to the overall preferences, except that aerated waters, champagne and stronger liquors are all under-represented, suggesting almost an eversion to strong liquors and alcohol, except for wine and beer. This may be significant, considering the house was occupied by the chaplain for a period of time around 1881.

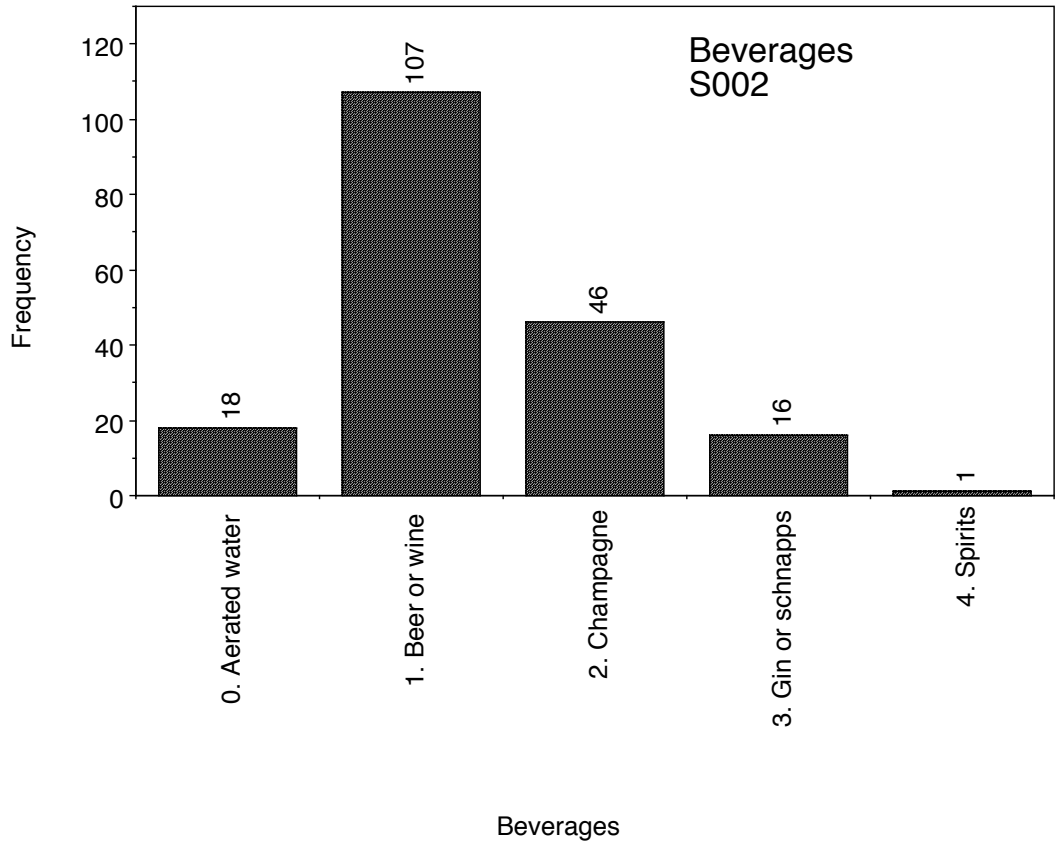
W002 and associated structures follow the overall preferences for the village community, except in terms of the higher level of spirits that was consumed by the occupants. S005 and associated structures also stands out as an anomaly with a higher frequency of gin and schnapps. The Old Village Centre follows the overall trends for the village community.

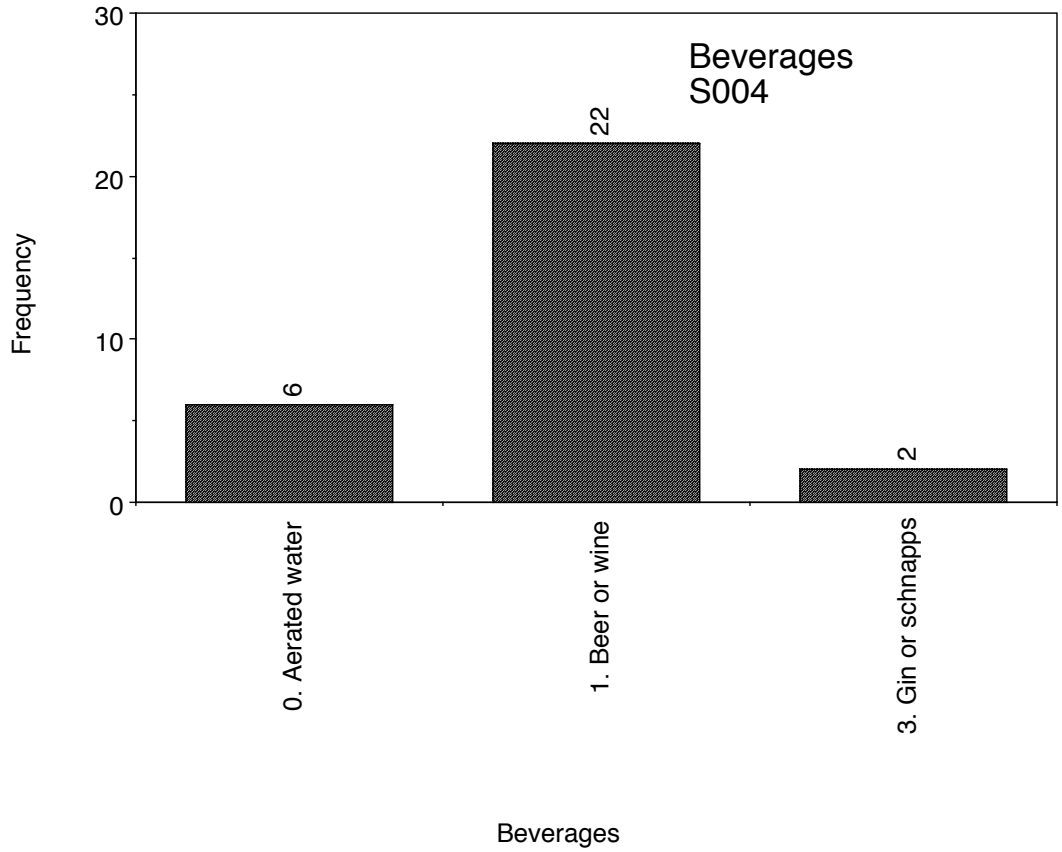

Beverages
Cadia Village
Frequency
4000
3000
2000
1000
0
846
3735
729
612
149
0. Aerated water
1. Beer or wine
2. Champagne
3. Gin or schnapps
4. Spirits
Beverages

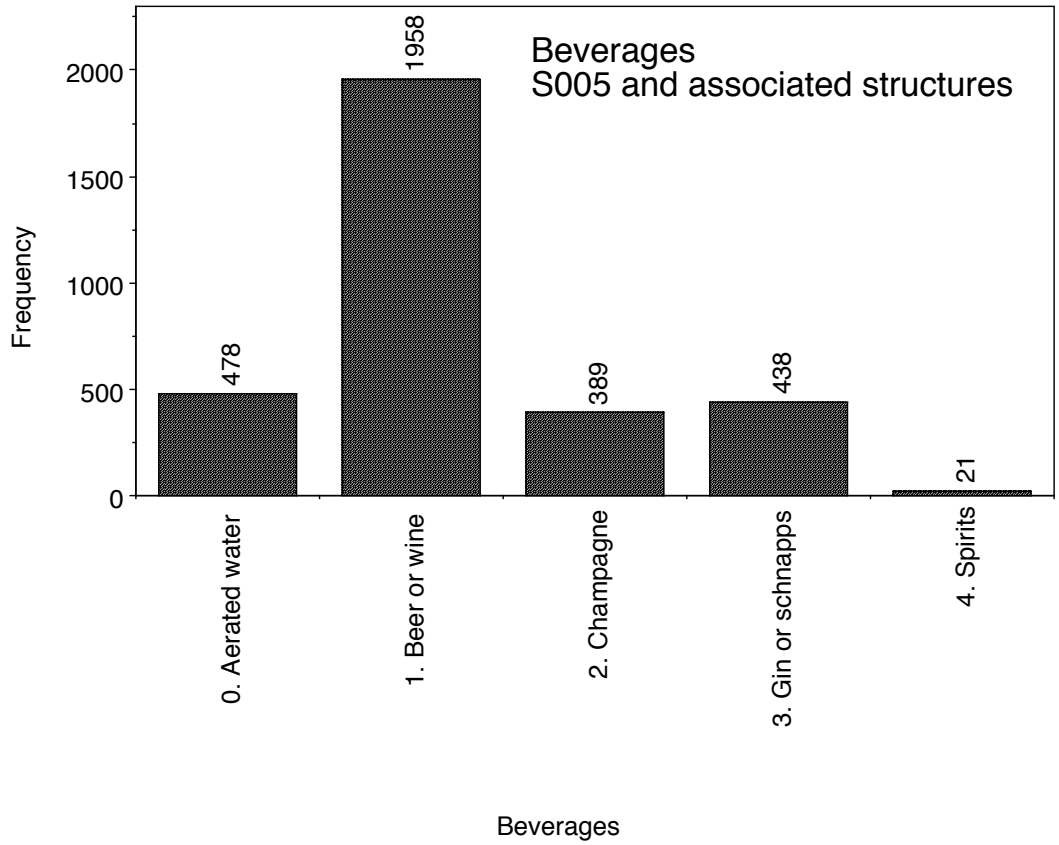

Beverages
W001 and associated structures
Frequency
600
500
400
300
200
100
0
35
527
22
15
6
0. Aerated water
1. Beer or wine
2. Champagne
3. Gin or schnapps
4. Spirits
Beverages

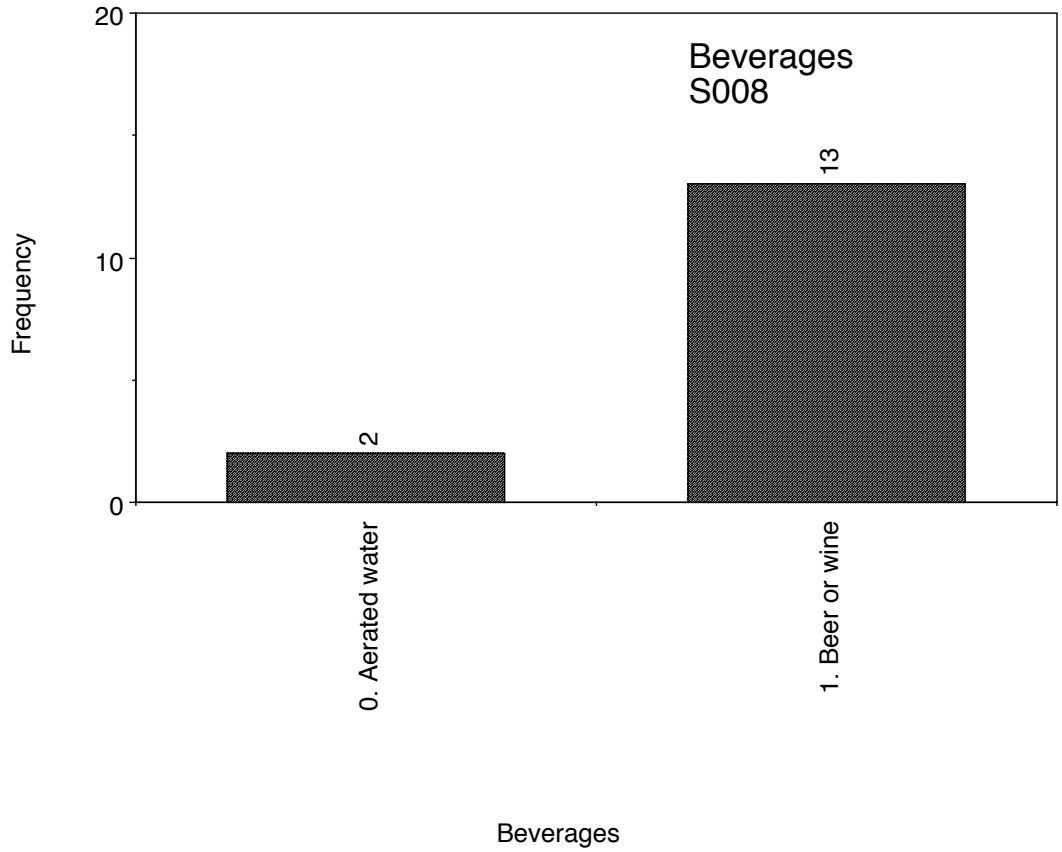

Beverages
W005 & W006
Frequency
8
6
4
2
0
2
6
3
2
0. Aerated water
1. Beer or wine
2. Champagne
3. Gin or schnapps
Beverages

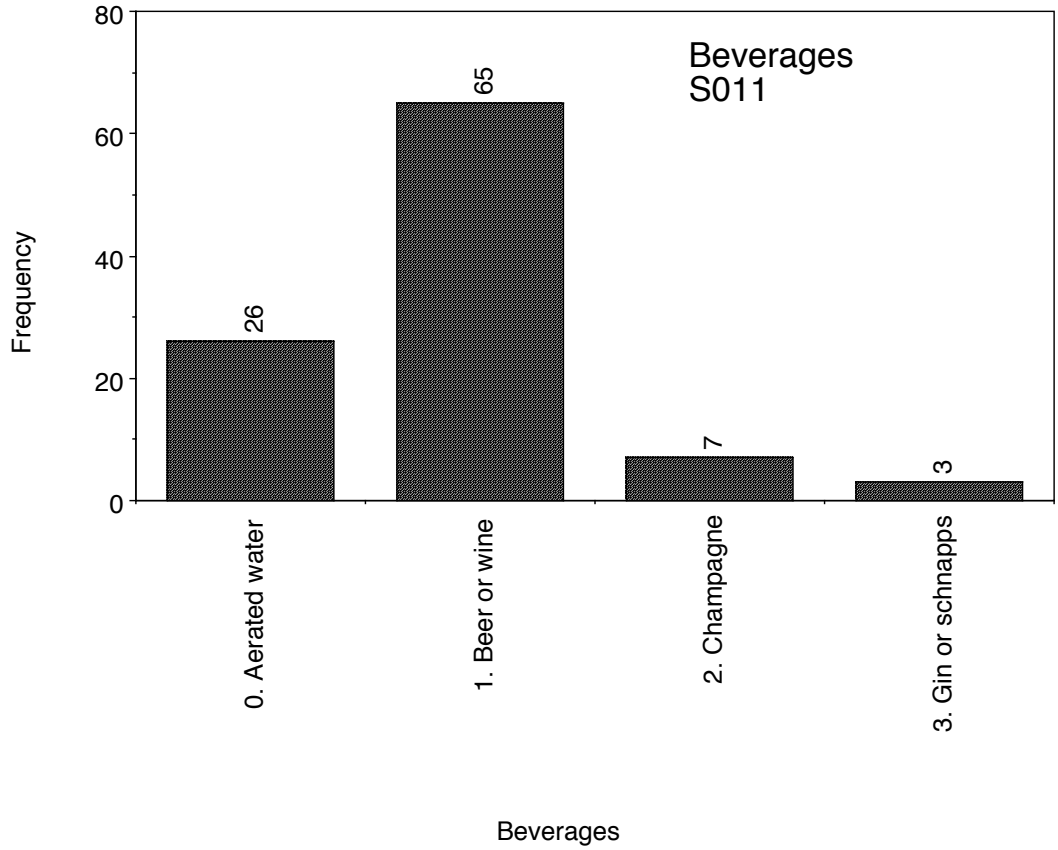

Beverages
W002 and associated structures
Frequency
400
300
200
100
0
87
304
68
26
81
0. Aerated water
1. Beer or wine
2. Champagne
3. Gin or schnapps
4. Spirits
Beverages

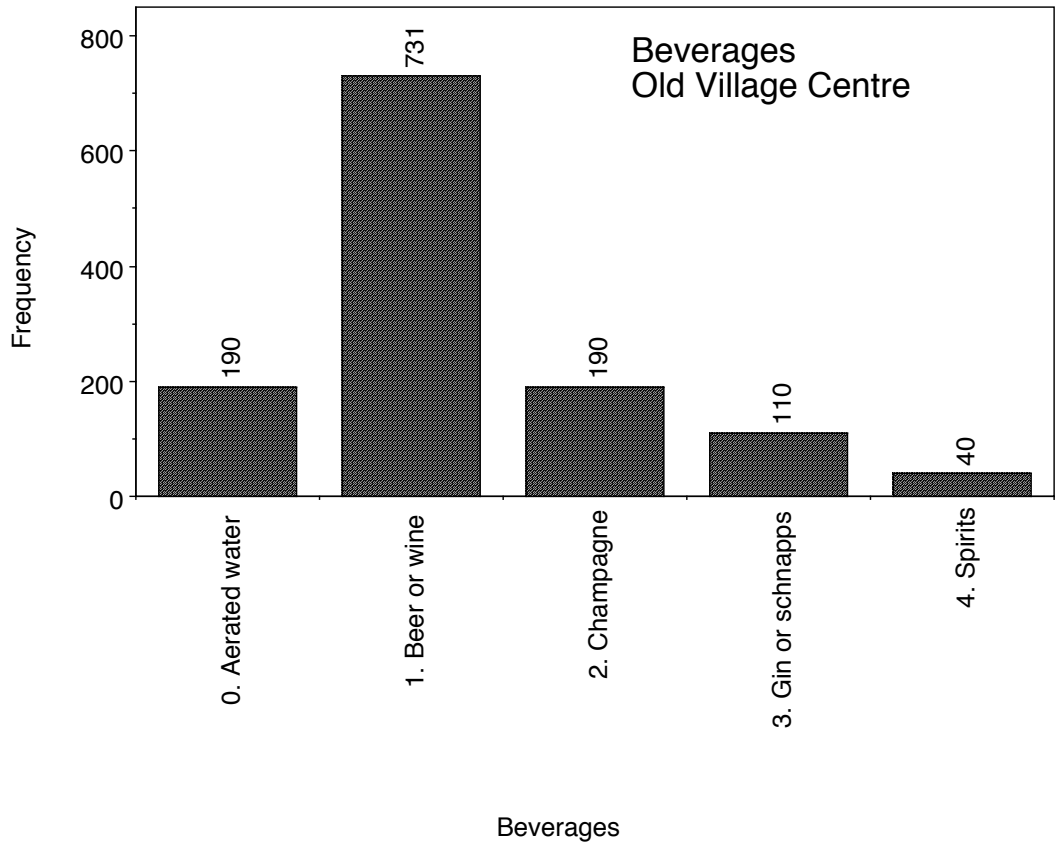

Beverages
S002
Frequency
120
100
80
60
40
20
0
18
107
46
16
1
0. Aerated water
1. Beer or wine
2. Champagne
3. Gin or schnapps
4. Spirits
Beverages


Beverages
S004
Frequency
30
20
10
0
6
22
2
0. Aerated water
1. Beer or wine
3. Gin or schnapps
Beverages


Beverages
S005 and associated structures
Frequency
2000
1500
1000
500
0
1958
478
389
438
21
0. Aerated water
1. Beer or wine
2. Champagne
3. Gin or schnapps
4. Spirits
Beverages


Beverages
S008
Frequency
20
10
0
13
2
0. Aerated water
1. Beer or wine
Beverages


Beverages
S011
Frequency
80
60
40
20
0
26
65
7
3
0. Aerated water
1. Beer or wine
2. Champagne
3. Gin or schnapps
Beverages


Beverages
Old Village Centre
Frequency
800
600
400
200
0
190
731
190
110
40
0. Aerated water
1. Beer or wine
2. Champagne
3. Gin or schnapps
4. Spirits
Beverages

Food container. Food containers are predominantly glass, but also include tins and cans of various sorts. While cans do not survive well, the keys to sardine type cans generally survive in better condition. Glass food containers include condiments, fruits, jams, oil and vinegar, sauces, tea, pickles and chutneys, preserving jars, lids and seals. Relatively high frequencies of food container are found at S005 and the Old Village Centre. The distribution supports the interpretation of S005 as the Bon Accord Hotel and the focus of other commercial activity in the Old Village Centre.

Food debris. Predominantly comprising animal bone debris, but also shell, the evidence provided by this category is discussed in a separate report. (See Appendix 6).

Food debris or natural fauna. The high frequency in S005 is due to small sample size.

Food service appliance. The high frequency in W005 and W006 is due to small sample size.

Food service cooking. High frequencies of cast iron cooking pots, other cooking containers and handles are found at most house sites, except those with small sample size. The highest relative frequencies for these items were found at S005 and in the Old Village Centre. The distribution supports the interpretation of S005 as the Bon Accord Hotel and the focus of other commercial activity in the Old Village Centre.

Food service cooking or household heating. Cast iron fragments, which could belong to cooking pots or stoves are found on most sites at Cadia, except those with small sample size. S005 has a high frequency of these items. Cast iron pieces that are more likely to be stoves were found at W001, W002, S002, S005 and S017.

Food service cutlery. It is perhaps fortuitous that no items of cutlery were found at W001, because cutlery is found on most habitation sites, except those with small sample size. The high frequency in S002 and S011 is due to small sample size.

Food service kitchenware. High frequencies of kitchenwares were found at S005 and in the Old Village Centre. The distribution supports the interpretation of S005 as the Bon Accord Hotel and the focus of other commercial activity in the Old Village Centre.

Food service kitchenware or tableware. The high frequency in S005 and the Old Village Centre is due to small sample size.

Food service tableware. Common on all habitation sites, except those with small sample size, the highest frequencies of tablewares are found at W001, W002, S005 and the Old Village Centre.

Food service tableware children. Tablewares with patterns and transfer prints associated with children were found on a limited number of sites. Significantly high frequencies were found at W001 and the Old Village Centre, while some was found at S005.

Food service utilitarian. Enamel wares and other hard wearing plates, bowls, billies, teapots and coffee pots were not frequently found, probably because of their durability. Small sample bias may reflect the high frequency at W002, but they were also found at S002 and the Old Village Centre.

Household.
Items associated with the Household generally appear only in small numbers. This can be understood in terms of their durability and low discard rate. The occupants would have taken most of these items with them when they moved, or may have sold them to others.

Household appliance. The high frequency in W002 and W006 is due to small sample size.

Household collectible. The high frequency in W002 is due to small sample size. The function comprises 3 collectible seashells and it is interesting to note that their distribution is restricted to the major habitation sites, except for W001, but again the small sample bias needs to be emphasised.

Household furnishing. This function is distributed on all the major habitation sites in the excavation area, including W001, W002, S005, and the Old Village Centre, but also S009. There is a particularly high frequency at S005, again giving credence to the interpretation of the site as the Bon Accord Hotel.

Household maintenance. The high frequency in the Old Village Centre is due to small sample size, but it is the only place on site where bottles of stove blacking were

found (24 fragments). This may point to the focus of commercial activity at the Old Village Centre, but again the small sample bias needs to be emphasised.

Household ornamental. Household ornaments were found on most of the major habitation sites, including W001, W002 and S005. The low frequency for the Old Village Centre and the high frequency for S002 are both surprising, although again small sample bias cannot be ruled out.

Household pet or animal. The high frequency in W001 may be due to small sample size. Alternative interpretations are possible:

1. The occupants of W001 liked cats.
2. The occupants of W001 got rid of a dead cat in one rubbish pit, while the occupants of other house merely chucked the carcase away where it would not be found almost whole on an archaeological excavation years later.

The second interpretation is the likely outcome. The resulting high frequency in W001 is due to small sample size. The range of bones at W001 indicate only one cat, while the bones elsewhere might only represent two animals. This example illustrates the pitfalls of small samples.

Household timekeeping. Clocks and their component parts were found at most of the major habitations in the excavation area of Cadia Village, including W001, S005 and the Old Village Centre. The absence at W002 and the high frequency at S002 are surprising, but again small sample bias needs to be emphasised.

The seasonal cycle of agriculture was traditionally regulated by the hours of daylight. The Industrial Revolution (1750-1850 in Britain) changed this with work required for set hours. The measuring of time with mechanical timepieces made this possible. Others have claimed that the introduction of high levels of caffeine into western society at approximately the same time (1650s for tea, becoming common in the population; 1650s for coffee but predominantly a drink of the middle and upper classes; chocolate available in Britain from the 1650s as drinking chocolate, but as eating chocolate from the 1840s) was responsible for boosting the energy of the population in general, providing impetus for change in a society where the labouring class had previously assuaged its thirst with cider, ales and other liquors of a less stimulating and indeed soporific type.[5]

[5] T & W Musgrave. *An Empire of Plants. People and plants that changed the world*. Cassell. 2000: 150.

Household toilet. Fragments of chamber pots, wash basins and jugs are found on most of the main habitation sites, including W001, S005, with a high frequency at the Old Village Centre. The latter could support the retail or domestic interpretation of the Old Village Centre. The absence at W002 and the presence at S002 are surprising, but again small sample bias needs to be emphasised.

Household vermin. The high frequency in W002 is due to small sample size. Only three rodent bones were found.

Husbandry farming. The high frequency in the Old Village Centre is due to small sample size. Only one cow bell was located there, notably at S155, which is the most likely location of the butcher.

Husbandry horticulture. The high frequency at W001 and the Old Village Centre is due to small sample size. Comprising a small number of flower pots and parts of rakes, the function was also found at W002. While only a small sample, the evidence does indicate the supplementing of the diet with vegetables and other plants. Fruit trees also survived at W001 and S005 until removed by development. The latter indicate plantings of the early to mid 20th century, since none of the trees at S005 are shown in the early 20th century photographs.

Husbandry horticulture improvised. The high frequency in the Old Village Centre is due to small sample size

Husbandry hunting or trapping. The high frequency in the Old Village Centre is due to small sample size. Animal traps were located at S005 and the Old Village Centre and were possibly used to catch rabbit, which forms a substantial part of the meat diet available at Cadia.

Misc clerical. The high frequency in S005 is due to small sample size. Comprising one drawing pin and fragments of a set of dividers and a protractor, the latter items may be associated with education and children. See Misc clerical writing.

Misc clerical or work haberdashery. The high frequency in S005 is due to small sample size. Two parts of scissors were located here. See Misc clerical writing.

T. R. Reid. “Caffeine”. *National Geographic*. January 2005:3-31.

Misc clerical writing. Ink bottles, ink wells, slate pencils, writing slates and pens are only found on the major habitation sites, including W001, W002, S005 and the Old Village Centre. They are not found on the other habitation sites, namely S002, S004, S008, S009 and S011. A high frequency was located at S005.

Clerical items form only a small sample, with possibilities of sample bias, but are predominantly located at S005. The presence of writing materials may indicate the distribution of literacy among the inhabitants at Cadia, being restricted to the more established habitation sites and not at the presumed habitations of miners and their families. Writing materials are often associated with education and children, but can also have been used in business for tallies and other purposes.

Misc economic. The high frequency in S002 and S011 is due to small sample size. With the exception of W001, it is found on all the main habitation sites, including W002, S005 and the Old Village Centre, as well as some of the other habitations namely S002 and S011.

Misc firearms. Predominantly comprising cartridges, but also parts of rifles, this function is found on all the major habitation sites, including W001, W002, S005 and the Old Village Centre. It is also found at S002.

Misc government or administration. Only one item was placed in this function. It is a chain or belt formed of filigree brass sections, as one might see today in mayoral regalia or perhaps as a trophy. The object (25 fragments) were found together at the Old Village Centre (S150). The object may have been used by a senior member of the mining company or a senior figure in the Cadia Village community. There is no historical evidence for any municipal or other form of community organisation at Cadia Village, except for a Lodge of the Oddfellows, which operated in Cadia in the 1860s. In May 1866, a Lodge of the Independent Order of Oddfellows, named the Loyal Cadia Mines Lodge existed, with William Selwood as the NG (Governor?) and James Hicks as the VG (Vice-Governor) with Richard Collins as Secretary. They met in the school during the evening.[6]

The brass chain or belt could also be associated with sports endeavour or could be an item of women's adornment, though the latter interpretation is unlikely.

[6] Board of National Education, Correspondence, SRNSW 1/440, pp 395-6

Misc human skeletal. A single human molar was found at W015, part of the W002 group.

Misc measurement. Items associated with weights and scales were located only at S005 and the Old Village Centre. While this may be due to small sample bias, the distribution does support the retail use of the Old Village Centre and possibly suggests a similar function for S005. While S005 has been interpreted as the site of the Bon Accord Hotel, its potential use for retail purposes may add another dimension to the use of the site, unless the retail sale of alcohol is the sole retail use.

Misc security. Locks, keys and padlocks secure property, so the distribution of these items across the excavation area at Cadia Village might pinpoint wealth and valuables, but also reflect the higher standard of door furniture at some sites. This function is found in high frequencies at S005, but is also found at W001, W006, W002, S011 and the Old Village Centre. The high frequency at S005 might be due to the greater need to secure property in a public house, rather than the privacy of a family residence.

Natural. Predominantly unworked wood fragments, but included nutshells, this function is largely not indicative of human behaviour, except that some of the nuts may have formed part of the diet. The latter were found in small quantities at W001, W002 and S005.

Personal accessory. Present on all the major habitation sites, W002, S005 and the Old Villager Centre, except for W001, personal accessories are also found on the smaller habitation sites, including S002 and S004. A high frequency was found at S005. Comprising buckles, belt buckles, braces buckles, snap fasteners, tie pins, a spur, but also penknives, and parts of purse or handbag clasps, the items may predominantly represent male attire, except for the latter items.

Purse or handbag components, together with a personal mirror fragment, were not placed in the personal accessory female function (see below), but were found on S005 and the Old Village Centre.

Personal accessory female. A total of four suspender buckles were found in the excavated area at W002, S002 and S005. By including female items like purse or

handbag fragments and a personal mirror, the distribution is extended to the Old Village Centre.

Personal accessory or transport. Small iron rings, some chromed, were placed in this function, since they were deemed to represent belt buckles or part of horse harness. The high frequency in S002 and the other variation in the distribution pattern may be due to small sample size.

Personal clothing. This function is present at all the main habitation sites, including W001, W002, S005 and the Old Village Centre, but is also present at S002. The high frequency in S002 is due to small sample size.

Personal clothing female. This function is restricted to women's stockings or suspender elements. The high frequency in W002 and S005 is due to small sample size.

Personal clothing or work haberdashery. Safety pins could have been used for a number of purposes, including clothing, dress making, fabric repairs, in baby wear or even as part of medical treatment. Safety pins were found at W002, S005 and the Old Village Centre. The high frequency in W002 and S005 is due to small sample size.

Personal cosmetics. This function is present at all the main habitation sites, including W001, W002, S005 and the Old Village Centre. The high frequency in S005 is due to small sample size.

Personal footwear. This function is present at all the main habitation sites, including W001, W002, S005 and the Old Village Centre, but also at S002. The high frequency in S002 is due to small sample size.

Personal footwear children. Children's footwear is limited to W001 and the Old Village Centre. The high frequency in W001 and the Old Village Centre is due to small sample size.

Personal footwear female. Women's footwear is limited to the Old Village Centre. The high frequency in the Old Village Centre is due to small sample size.

Personal jewellery. As a clear indication of the presence of women, this function is present at all the main habitation sites, including W001, W002, S005 and the Old

Village Centre, but also at S002. The high frequency in W002 is due to small sample size.

Personal medicine. The distribution of personal medicines is limited to S005 and the Old Village Centre. Since only a small sample of the personal medicine or toilet function can be precisely defined as medicines, it is better to consider the overall distribution of the personal medicine or toilet function, than to rely on the small sample of personal medicine bottles. The high frequency in S005 is due to small sample size.

Personal medicine or toilet. This function is present at all the main habitation sites, including W001, W002, S005 and the Old Village Centre, but also at S002 and S011. The high frequency in S005 is due to small sample size.

Personal optical. This function is present at W002 and S005. The high frequency in W002 is due to small sample size.

Personal timekeeping. This function is present at all the main habitation sites, including W002, S005 and the Old Village Centre, with the exception of W001. It is also present on S002. The high frequency in S002 is due to small sample size.

Personal toilet. This function is present at all the main habitation sites, including W001, W002, S005 and the Old Village Centre, but is also present at S002. The high frequency in W002 and S002 is due to small sample size.

Personal trophy. Restricted to 2 items, found only at S005, one was a belt buckle with the word cricket inscribed upon it, the other a medal, inscribed "International Exhibition Cameron / First Prize 1860". The high frequency in S005 is due to small sample size.

Recreation music. Harmonicas may have been the musical instruments of choice for the travelling man and fragments are often found on archaeological excavations. This function was distributed at S005, S011 and the Old Village Centre, but again may be influenced by small sample bias.

Recreation smoking. This function is present at all the main habitation sites, including W001, W002, S005 and the Old Village Centre, but is also present at S002 and S011. The high frequency in W001 may be due to small sample size.

Recreation toy. This function is present at all the main habitation sites, including W002, S005 and the Old Village Centre, with the exception of W001. It is also present on S002 and S011. The high frequency in W002 and S002 may be due to small sample size.

Services battery. The high frequency in S005 is due to small sample size.

Services electricity or telephone. The high frequency in W001 and W002 is due to small sample size.

Services fuel. The high frequency in W002 and S002 is due to small sample size.

Services lighting.
Services lighting arc
Services lighting candle
Services lighting oil
All the services lighting functions are affected by small sample bias. Taken collectively, evidence of lighting is found on all the major habitation sites, W001, W002, S005 and the Old Village Centre, as well as S002.

Transport automotive
Transport automotive or bicycle
Transport bicycle
Transport equestrian
Transport equestrian draught
Transport equestrian pony
Transport rail narrow gauge
Transport vehicular
Most of the transport functions are affected by small sample bias. Evidence for horse transportation is most widespread, as would be expected before the age of motor transportation. The widespread evidence for narrow gauge tramways is more surprising. Such a distribution may be explained, first by proximity to a mine site using tramways in its underground and other workings, but also by the scavenging and reuse of such useful items for other purposes. The high frequency of narrow gauge rail and wagon components at W006 may be partly explained as part of the dump of scrap metal located there. Elsewhere the reuse of rail spikes in construction may explain the distribution at habitation sites.

Unidentified. Distribution not significant.

Work functions.

Because of the industrial basis of the mining village, large quantities of metalwork were found on the excavation. This has allowed a greater variety of trades and occupations to be identified in the archaeological record. The work functions are primarily divided into items associated with a trade or occupation, as opposed to tools associated with a trade or occupation. Where a trade or occupation is indicated by both tools and other items, it is preferable to look at the distribution of all the relevant evidence for a trade or occupation, rather than making conclusions based on only part of the evidence. For example, copper smelting is indicated by crucibles, tools as well as other artifacts and is therefore spread across three functions, which should be considered together with the historical and other archaeological evidence.

The work functions will be considered in order of industrial and mining trades, followed by rural industry, commercial and cottage or domestic industry.

Work blacksmithing

Work tool blacksmith

Slag iron and a pair of tongs used by a blacksmith were found in the Old Village Centre (S016 and S017). Iron slag was used around the mine in road metalling and can therefore have a wide distribution. The iron slag indicates the presence of iron working or blacksmithing at Cadia and this is attested by both historical and archaeological evidence. The company had a "Blacksmith's and Carpenter's shop", measuring 42 by 15 feet and costing £23 by December 1861.[7] The products of the blacksmith and the site of a forge have been identified at the site of Smelter No. 1 and there is also the heap of scrap iron by the shed (W006).[8] By 1865 there were 2

[7] *Directors' Reports. Scottish Australian Mining Company.*
31 December 1861 - Cadiangullong Stock Plant, Improvements, etc. in the Cadiangullong Mine and Works.
B. A. French, 'Extracts from the Directors Reports of the Scottish Australian Mining Company, 1868-1909', September 2000. unpaginated.

[8] Edward Higginbotham & Associates Pty Ltd. 2001. Report on the archaeological excavation of Smelter No. 1, Old Cadia Road, Cadia, NSW. Volumes 1 and 2. Cadia Holdings Pty Limited. 2001

blacksmith's shops.[9] The location of the second shop was probably at the Engine House, erected in 1865.

While the fireplaces in the building (S017 (2)) at the Old Village Centre may have a superficial resemblance to the forge at Smelter No. 1, it is suggested that the absence of large quantities of ashes, slags and other residues of smithing indicate that this building was not a smithy, even though the tongs and 2 nodules of slag were found in relation to this building.

Work metalworking.
Work tool metalwork
Work tool woodwork or metalwork.
Three additional functions provide further evidence of metalworking. The work metalworking function is limited to an unspecified type of slag from W001. The adjacent road was metalled with slag or waste from copper smelting and may explain how slag might bet onto the site of the house (W001). The function of work tool metalworking comprises hacksaw blades, used in cutting metal pipes, etc, and were found on W002 and S005.

A range of chisels, punches, files, rasps, wedges may reflect the timberworking trades (sawyer, carpenter), but can also be used in metalworking or even mining. The latter were found on all the major habitation sites, including W001, W002, S005 and the Old Village Centre, but were also found at S009 and S011, where the high frequency at S009 is due to small sample bias.

Work copper assay
Work copper smelting
Work tool copper smelting
A selection of ceramic crucibles were found during the previous excavation of Smelter No. 1. A small number of examples listed under work copper assay were found during the village excavation at S005 and the Old Village Centre (S053). The high frequency in the Old Village Centre (S153) is due to small sample size.

The work copper smelting function largely consists of copper slags and wastes. It does also include a furnace arch bar, vitrified bricks, copper ore and smelted copper, as well as a number of tie-rods and buckstays for reverberatory furnaces.

[9] *Sydney Morning Herald*, 16 May 1868.

The work tool copper smelting function includes a selection of ladles, paddles, scrapers and a curved shovel like tool.

Slags were found at all the major habitation sites, including W001, W002, S005 and the Old Village Centre, as well as S002. The distribution is considered to be fortuitous.

The distribution of other copper smelting items is more instructive. A large quantity of items (27 items) is found in the dump of scrap iron at W006, hence the high frequency there. The remaining tools or parts of reverberatory furnaces are found at W001 (1 item), W002 (1 item), S005 (1 item) and in the Old Village Centre (8 items). The artifact distribution does not indicate the location of copper smelting or assay, since the location of all the smelters at Cadia is well known and the assay office at Smelter No. 1 has been previously subject to archaeological excavation.[10] Instead the distribution indicates the expected result of scavenging for reusable items and the spread of work related items around a neighbouring occupation area.

Work tool mining. Tools associated with mining activity include gads and miners' picks (combining a hammer with a pick). These tools were found at all the major habitation sites, W002, S005 and the Old Village Centre, but not at W001. They were also found at W006 as part of the scrap metal dump, S002 and S009. Wedges cannot be defined as mining tools, since they could also be used in timber trades and metalworking, but their distribution includes W001.

Work tool regional. Long handled shovels with a curved blade are known in the South West of England as Cornish shovels, and elsewhere in Britain as south western shovels. Their association with labouring or mining in the South West of England is therefore well known. How far this regional identification can be assigned to Cornish immigrants and copper mining activities in Australia is open to further study, yet the regional origin of this tool should not be completely ignored. Three examples were found, one at S005, the other two in the Old Village Centre.

[10] Edward Higginbotham & Associates Pty Ltd. 2001. Report on the archaeological excavation of Smelter No. 1, Old Cadia Road, Cadia, NSW. Volumes 1 and 2. Cadia Holdings Pty Limited. 2001

Work mechanical

Work tool mechanical

A number of tools and other items may be associated with industrial or mechanical technology.

Nuts and bolts, bars, brackets, rods, iron straps and large washers can be associated with construction of timber buildings as well as mechanical items, hence the non specific function of construction or work mechanical. There are however a number of items, which can be recognised as having a mechanical context and even fewer can be interpreted as mechanical tools, like levers and wrenches. The distribution of the latter more diagnostic items is again at all the major habitation sites, W001, W002, S005 and the Old Village Centre, but also at the dump of scrap metal (W006) and at S011. As with items associated with copper smelting, the distribution indicates the expected result of scavenging for reusable items and the spread of work related items around a neighbouring occupation area.

Work tool timber working

Work tool woodwork

The inability to distinguish between tools, which could have been used for metalworking, in timber trades or mining has already been discussed. Other tools, like axes, small hammers, rulers with brass hinges and drill bits are more obviously associated with the timber working trades, whether sawyer, fencer, carpenter or joiner. The distribution of these items is again in all the main habitation sites, namely W001, W002, S005 and the Old Village Centre, as well as S011, while high frequency at S011 and the Old Village Centre is again due to small sample bias.

Work tool chain. Chains were used in a range of trades and occupations, as well as in industrial, mechanical or transport contexts. They were distributed in all the major habitation sites, including W001, W002, S005 and the Old Village Centre, together with one of the minor occupation sites, namely S002. Items were also found in the dump of scrap iron at W006.

Work tool sheep shearing. Three fragmentary sheep shears were found at S005 and the Old Village Centre.

Work tool labouring. Shovels could have been used for labouring, mining or a number of other activities. These items are found on all the major habitation sites,

including W001, W002, S005 and the Old Village Centre, but not in association with the minor habitation sites.

Work tool. This function includes a number of poorly preserved and non specific tools, apart from two whetstones. They were distributed in all the major habitation sites, including W001, W002, S005 and the Old Village Centre, together with one of the minor occupation sites, namely S002. Items were also found in the dump of scrap iron at W006.

Work tool improvised. A number of items found during the excavations have indicated the improvisation of objects for different functions. They indicate the resourcefulness of the population in the bush, where cost or unavailability led to ingenuity and imaginative reuse of many items. Included in this function were improvised wire hooks and a homemade knife. The distribution of these items in S005 and the Old Village Centre is due to small sample bias.

Work tool butchery. Butchers hooks were located on all the main habitation sites, including W001, S005 and the Old Village Centre, but not at W002. They were also present at S002. Their use for hanging meat need not indicate the presence of a butcher and again small sample bias may be present. At the Old Village Centre, butchers hooks are associated with S017, S018, S149 and S153. They do not clearly indicate the buildings, which may have been occupied by the village butcher, but only suggest a possible area, behind the Store (S016) and other shops (S152).

Work tool leatherworking. A pair of leather punches, used in saddlery, were found at W002, while a heavy duty needle, also probably used in saddlery was found at S153 in the Old Village Centre. The evidence is inconclusive but might indicate the presence of a saddler at Cadia, possibly housed at W002 or in the village centre, where there is one possible historical reference to a shoemaker.

> "Stores and shops, in different lines of business, are ranged in something approaching to a row, whilst trades of various descriptions - the butcher, the baker, the shoemaker, the tailor - are carried on actively as if the work was not being done in a mountain fastness."[11]

[11] Sydney Mail of Saturday, 16 September 1865.

Work haberdashery. Items associated with the making or mending of clothes, with lacework, were found at W001, but with high frequencies at W002, S002 and S011, probably due to sample bias. When other possible attributions to the haberdashery function are taken into account, the distribution includes all the major habitation sites, as well as S002 and S011. The fragments of a Singer sewing machine at W002 and S002 tend to suggest the presence of a cottage industry at Cadia.

6.11 Spatial analysis - synthesis of results.

6.11.1 Major Habitation Sites and Minor Habitation Sites.

The historical and archaeological evidence has suggested that this large building (W001) and its associated structures can be identified as the "Manager's House" in the 1860s, but was occupied by the Chaplain by 1881 and the Underground Manager by 1914.

The artifact assemblage can be used to assess whether there are any differences in the standard of living enjoyed by mine management, as opposed to the mine employee or other staff members.

On the basis of artifact analysis W001 is included in what have been termed the major habitation sites, namely W001, W002, S005 and the Old Village Centre. These house sites can be contrasted with the minor habitation sites, namely S002, S004, S008, S009 and S011. W005 and W006 are not included in this latter category, since they are interpreted as farm or industrial buildings and were never inhabited.

All the major habitation sites, with larger relative assemblages and larger or multiple buildings, can be contrasted with the minor habitation sites, with smaller assemblages and small or single buildings. This contrast is tabulated below:

Major Habitation Sites	**Minor Habitation Sites**
Large artifact assemblages	Small artifact assemblages
Large buildings	Small buildings
Multiple structures	Single structures
Extensive development	Minimal development

The artifact analysis has demonstrated that the dichotomy between mine management and company employee is not so simple. Until the artifact analysis was included in the equation, it was assumed that W002 and associated structures represented a miner and his family, since the initially *small* building had been extended as required when the family grew.

The occupants of W002 need to be reassessed in terms of their standing in the Cadia Village community, since they artifact assemblage and house indicate a family that partook of the benefits shared by the better off in the village community.

Likewise S005 and related structures have been interpreted as the site of the Bon Accord Hotel, run by Humphrey Hicks. As a hotelier, he and his family and no doubt his customers had a share in the benefits available to the better off in the village community. The same is also true for the Old Village Centre, with the Cadiangullong Store, the Post Office, the baker and butcher, among others.

So the contrast between mine management and company employee actually becomes more complex, because the village entrepreneurs and hotelkeepers shared in the wealth available to mine management. The shared social standing of the mine management and entrepreneurs is further confirmed by the closely related genealogical and biographical details of the families who occupied these roles in the mine and community (see Chapter 4).

In contrast to the major habitation sites, the single huts form the minor habitation group. These sites are characterised by small assemblages. Interpretation may suffer from sample bias, because only a few artifacts were recovered from each of these sites. But the artifact assemblage is only one type of evidence, which enables the minor habitation sites to be recognised. The grouping is also supported by small building size and the lack of any development of these sites from this basic status over the life of the mining community.

One of the most obvious differences between the major and minor habitation sites is the range of the artifacts in the assemblage. The range of functions, the total number of functions is a measure of the access to good and services enjoyed by the occupants of a house. This attribute of artifact assemblages has already been discussed in terms of archaeological sites in the Cadia area in contrast to sites in the Cumberland Plain

(Sydney, Parramatta, Liverpool, Richmond, etc).[12] In order to use this correlation between number of functions and access to goods and services, it is necessary to consider how to minimise the bias that may be present in small assemblages. First of all it is necessary to compare like with like in terms of the archaeological sites themselves. This may be assessed by comparing the types of archaeological features present at each of the minor sites, to see if they can be expected to provide an unbiased sample. The evidence is tabulated below:

House site	Site of building	Within house artifact deposits	Rubbish dumps or rubbish pits	Cess-pits	Total artifacts
S002	1	0	0	0	1850
S004	1	0	0	1	96
S008	1	0	1	0	46
S009	1	0	0	0	49
S011	1	0	0	0	401

Where there is at least one major source of artifacts, there is a possibility of obtaining a representative sample from the site. It is suggested that S002 and S011 provide the most likely contenders, though S004 and S008 had features (rubbish dumps and cess-pits), which normally provide large artifact assemblages. The fact that they did not provide a large assemblage is therefore more likely due to the nature of occupation, rather than sample bias. Apart from S009, the small range and limited diversity of the assemblages for remaining four sites in the minor habitation group may actually reflect the nature of occupation rather than sample bias (see summary table giving number of functions in Section 6.3.1 and 6.13.4).

The above discussion has indicated that the Cadia Village community did not simply reflect a contrast in standing between mine management and company staff, but that the entrepreneurs and hoteliers of the community also shared the social and economic status of mine management. The analysis has also shown that the artifact assemblages of the minor habitation sites, with the exception of S009, can be accepted as reflecting the limited access to goods and services available to their occupants, believed to be the miners themselves and also their families.

[12] Edward Higginbotham & Associates Pty Ltd. Report on the archaeological excavation of Waringa Hut, near Cadia, N.S.W. Cadia Holdings Pty Limited. 2003.

6.11.2 Miners and their families.

The historical documentation reveals that the single huts were occupied by miners and their families, or by groups of men sharing accommodation. The references are repeated here:

> "Nearly the whole of the buildings on the ground belong to the Company, and they are let to the men at very moderate rents. For an ordinary slab cottage, sufficient for a married man and his family, 4s. per month are charged; whilst single men who lodge together are charged Is. per month" [13]

> "upwards of 60 huts suitable for officers and workpeople's residences, a few of the latter built of slabs with shingled roofs, the remainder of slabs and bark roofs," [14]

The dating evidence suggests that buildings S002 and S004 may represent company huts built in the 1860s to 1880s, although the photographic evidence indicates that similar buildings were being erected in the early 20th century (S008, S009 and S011).

Does the artifact assemblages recovered from the single huts included in the Minor Habitation Group support the interpretation that these huts were indeed occupied by miners and their families or by groups of men? There is only one of the huts, namely S002, which provides consistent evidence of women and children. In only one other case, namely S011, is there any evidence of women and children. The evidence for S002 includes personal belongings such as a suspender buckle, a knob, believed to be part of a hairpin or brooch, and a ornamental hairclip. It also includes a leg from a sewing machine stand and a thimble, which the evidence for children is restricted to stone marbles. For S011 the evidence is sparse, confined to a lace bobbin and a broken leg or arm of a china doll.

It is tempting to suggest that the female or females occupying S002 were involved in a cottage industry of tailoring, dressmaking, clothing repairs or the like. Comparative

[13] The Sydney Mail of Saturday, 16 September 1865.
[14] B. A. French. 'Extracts from the Directors Reports of the Scottish and Australian Mining Company, 1868-1909. September 2000. Unpaginated. Entry, 11 June 1868.

historical documentation indicates that most opportunities to supplement the income provided by the male family members would have been readily taken up by the females. The presence of a sewing machine indicates the potential for greater productivity that is usually the case where pins, needles and thimbles provide the only evidence for tailor related occupations.

For all the other huts in the Minor Habitation Group, namely S004, S008 and S009, there is no evidence of females or children. In fact these huts possess evidence for a number of male occupations. Hut S002 has a high proportion of tools associated with mining (miners picks) and butchery (butcher's hook). Hut S009 also has a high proportion of items associated with mining (gad) and a chisel with octagonal head, which may relate to mining, woodwork or metalworking. Building S011 possessed high frequencies of functions associated with horses, both draught horses and ponies, transport, as well as items associated with mine tramways, mechanical and timber or metal working tools.

Susan Lawrence has claimed that the creation of domestic surroundings in a mining community is indicative of the presence and role of women.

> "During the Victorian era the domestic environment was central to nineteenth century culture because it was there that the Victorian esteem for family life, or domesticity, found material expression.....Women had the necessary skills and training to acquire and present the consumer goods that were a fundamental part of family identity and social position.....Wallpaper, pressed glass dishes and a decorative clock, all of which might be considered appropriate furnishings for a parlour, were found at two households (at Dolly's Creek) where there is also firm evidence for the presence of women. This association further substantiates the identification of maintaining a proper household environment as women's work".[15]

> "However, particularly at the two family households they [the artifact assemblages] reveal a diversity and function extending well beyond

[15] Lawrence, S. Gender and community structure on Australian colonial goldfields", in A Bernard Knapp et alia (ed). 1998. Social approaches to an industrial past. The archaeology and anthropology of mining. p. 50.

> the basic goods necessary for subsistence in a short term diggings camp".[16]

The assumptions behind these statements can be tested against the Minor Habitation Sites at Cadia, where there is no evidence for women, namely huts S004, S008 and S009.

The supposedly male occupants of hut S004 enjoyed few of the refinements of domesticity, namely a narrow range of cups, saucers and plates, but no evidence of utilitarian wares. The occupants of huts S008 and S009 were not much better off, yet in S009 there is evidence of at least some furnishings, like a bed and another piece with a New York patent. In none of these huts was there any evidence of window glass, so they were either very dark or very breezy habitations.

In contrast at S002, where there is evidence of women and children, the occupants lived in comparative comfort and luxury. Glazed windows kept out the weather, meals were eaten with knives and forks, food served on plates and bowls, drinks poured into cups and saucers, tea brewed in stoneware or even china teapots and served in china tea cups and saucers. There was a figurine on the mantelpiece and a clock to keep time, a large jug for washing hands and face. One of the occupants even had a fob watch, while at night the hut was lit with candles in pottery candle holders or by oil lamps. Yet even here, a hot cup of tea or coffee was sipped from a white enamel mug!

In some contrast, the occupants of Building S011 lived relatively frugal lives, with little more than the men's huts to enliven their domestic surroundings. Yes, meals were eaten from china plates and serving dishes, using cutlery. There were cups and saucers, even glazed windows, but there is no other evidence for domesticity.

In conclusion, even the men's huts had some china tablewares. They were not confined necessarily to the utilitarian enamelwares of the swagman or itinerant. Even a poorer family could live in a similar basic fashion, as indicated in Building S011. A family with slightly better opportunities (S002) could afford to make their hut comfortable with some items reminiscent of a settled home.

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[16] Lawrence, S. Gender and community structure on Australian colonial goldfields", in A Bernard Knapp et alia (ed). 1998. Social approaches to an industrial past. The archaeology and anthropology of mining. p. 53.

However one thing appears to have been common to all the occupants of the basic miner's huts, namely, illiteracy. While some may argue that slate pencils and tablets are indicative of the education of children alone, there is ample evidence to suggest that this was also a basic writing material for adults as well. If there is no evidence for children on a site, there is thus no need to suggest there will be a similar absence of writing materials. Even in the huts where there is evidence of children, there is none for literacy. In contrast, all the major habitation sites possess evidence for literacy. The importance placed on schooling by the Cadia community, as reflected by the petition for the school in 1863, should have benefited all the children of the village, yet the archaeological evidence suggests that literacy did not necessary include the poorest miners and their families.

The above discussion has suggested that a number of huts were occupied by single men, who may have shared their basic accommodation (S004, S008 and S009). Two of the huts (S002 and S011) provided evidence of occupation by families. One family (S002) possessed sufficient means or opportunities to make their hut comfortable, with the female members of the family supplementing the income of the males by tailor related occupations. Another family group in Building (S011) possessed little more than the single men's huts and lived a frugal existence.

6.11.3 Mine Manager, Chaplain or Underground Manager – the occupants of Building (W001).

As one of the Major Habitation Sites at Cadia Village, Building (W001) is immediately contrasted with the basic miner's huts on the basis of artifact assemblage. The house was one of the few quality houses within the excavation area that was a true timber framed building on piers. There is ample evidence for family occupation, including children's tablewares, children's shoes, women's cosmetics and jewellery. The house was well furnished, had glazed windows, a stove for heating and cooking. The occupants enjoyed a full range of ceramic tablewares, cups, saucers, plates, serving bowls and dishes, tureens and platters, china teapots, even stemmed glassware and tumblers. A clock was placed in a prominent position, while the family were able to wash using china jugs and basins. There is ample evidence of literacy, with penny ink bottles indicating the use of pens, while slate pencils may have been for more basic needs or for the education of the children.

The occupants of the house were also involved in horticulture (rake), labouring (spade) and possessed an orchard (surviving fruit trees). Hunting was a pastime (cartridges), while timberworking or metalworking were additional tasks (axe, files, wedges). There is evidence for horses and draught horses on the property, as well as the spikes from mine tramways, the remains of a cart wheel and a bicycle tyre valve.

The outbuildings on the property indicate other farming activities, probably including the farming of cattle and sheep, since both species are well represented in the dietary evidence.

The preferences in the household for alcoholic beverages showed some variation from the general pattern in Cadia Village, since there is little evidence for the consumption of champagne or strong liquors. Perhaps the Chaplain did not mind beer or wine, but had an aversion to strong liquor.

In conclusion, the house (W001) and its artifact assemblage indicate the relative comfort of the lifestyle of the occupants, namely mine management and for at least a short time, the Chaplain. The next section quantifies the variation between W001 and the other house sites at Cadia, presenting the evidence in a different way.

6.11.4 Interpretation beyond the domestic assemblage.

The excavations of Cadia Village have highlighted the differences between what have been called the Major Habitation and the Minor Habitation sites (see above). The size of the artifact assemblage and the number of functions as indicators of the social and economic standing of the occupants of a building have already been discussed.

The grouping of the functions into various categories helps to quantify the subtle differences between assemblages. The major categories used in functional analysis were Construction, Container, Food, Household, Husbandry, Miscellaneous, (Natural), Personal, Recreation, Services, Transport, (Unidentified) and Work. The function categories in brackets do not indicate human activity and have not been included in the following tables.

Minor Habitation Sites	Construction	Container	Food	Household	Husbandry	Miscellaneous	Personal	Recreation	Services	Transport	Work.	Total functions
S002	9	2	9	3	0	2	9	2	3	1	6	46
S004	3	1	5	0	0	0	1	0	0	2	0	12
S008	1	1	5	0	0	0	1	0	0	1	0	9
S009	4	2	3	1	0	0	0	0	0	0	2	12
S011	10	1	7	0	0	2	1	2	0	5	4	32

Major Habitation Sites	Construction	Container	Food	Household	Husbandry	Miscellaneous	Personal	Recreation	Services	Transport	Work.	Total functions
W001	13	2	10	5	1	3	7	1	3	6	10	61
W002	13	2	11	6	1	5	13	2	4	8	13	78
S005	16	1	13	6	1	7	15	3	3	6	15	86
OVC	14	2	14	7	4	6	13	3	2	6	18	89

The two tables above contrast the Major and Minor Habitation sites at Cadia Village. The differences may be summarised below:

Major Habitation Sites	Minor Habitation Sites
Large artifact assemblages	Small artifact assemblages
Large number of functions	Small number of functions
More disposable income (Food, Household, Miscellaneous, Personal, Recreation, Services)	Less disposable income (Food, Household, Miscellaneous, Personal, Recreation, Services)
More access to income producing resources (Husbandry, Transport, Work).	Less access to income producing resources (Husbandry, Transport, Work).

The above list of differences can be added to the existing list of differences between Major and Minor Habitation sites.

It is noteworthy that the presence of women and children is limited to two of the Minor Habitation Sites. Both of these sites also have a higher disposable income and more access to income producing resources than those house sites with no evidence of women or children. This data is tabulated below.

Number of Functions	**S002**	**S004**	**S008**	**S009**	**S011**
Disposable income	28	6	6	4	12
Access to income producing resources	7	2	1	2	9
Women and children	Yes	No	No	No	Yes

There is sufficient documentation, even from the 1828 Census, to show that the possession of a reliable income, a trade or other occupation ensuring a good income, was a prerequisite for marriage, so the correlation between access to income producing resources, disposable income and women and children is not surprising.[17]

The above sites would all characterise domestic sites and could be termed typical of the range of 'domestic assemblages'. To extrapolate any commercial retail or other use of a site on the basis of these assemblages is fraught with difficulty. The greater number of functions associated with disposable income or access to income producing resources is insufficient in most cases to extrapolate a commercial or other function of a typical domestic assemblage. For example, it might be assumed that a hotel or public house might produce vastly greater quantities of artifacts relating to the consumption of alcohol. Yet this is not necessarily the case, when it is considered that large quantities of beer and even wines would be delivered in barrels, which would be recycled by the brewery or other wholesaler. The same is true of many bottled alcoholic beverages, where crates holding a dozen or more bottles would be used for delivery and recycling. It could even be argued that less bottles and barrels would be found at a hotel site than a house or other residence because of this recycling factor.

Instead the archaeologist is usually forced to rely on historical documentation or structural archaeological evidence to determine the function of a commercial site. This is the case with Cadia Village and the interpretation of S005 as the Bon Accord

[17] Edward Higginbotham. 1994. The historical archaeology of rural settlement in the South Western Districts of New South Wales, PhD Thesis, University of Sydney.

Hotel and the Old Village Centre as the commercial hub of the village. In some cases there are a number of artifacts, which may be more indicative of a commercial purpose. Comments have already been made on the possibility of the remains of a Singer sewing machine as possible evidence of a cottage industry at S002. The possibility conforms with the higher level of domestic comfort discernable at this house site.

Other artifacts, which may indicate commercial uses or have associations with a trade of occupation include:

1. Two brass spigots for barrels, which may indicate a primary role in dispensing the contents of barrels (Context 651, S017, OVC).
2. Demijohns, containing large quantities of aerated waters (sodas, etc), are more indicative of retail sale and consumption than individual bottles. The former are more likely to be restricted to retail locations, while bottles may occur either in retail or domestic situations. Remains of stoneware demijohns were only found at S005 (Context 364, 369).
3. The preferences for alcohol are relatively standard across the Cadia Village excavation area. S005 is anomalous in possessing a higher than expected frequency of gin and schnapps, but in other respects does not differ from the overall preferences. Likewise W002 possesses a higher frequency of spirits.
4. Relatively high frequencies of food container are found at S005 and the Old Village Centre.
5. Relatively high frequencies of cast iron cooking pots (Food service coking) are found at S005 and the Old Village Centre.
6. High frequencies of kitchenwares were found at S005 and in the Old Village Centre.
7. The Old Village Centre is the only place on site where bottles of stove blacking were found (24 fragments) (Household maintenance).
8. Fragments of chamber pots, washbasins and jugs are found on most of the main habitation sites, including W001, S005, with a high frequency at the Old Village Centre (Household Toilet).
9. A cow bell was located in the Old Village Centre, notably at S155, which is the most likely location of the butcher (Husbandry farming).
10. Animal traps were located only at S005 and the Old Village Centre (Husbandry hunting or trapping).
11. Items associated with weights and scales were located only at S005 and the Old Village Centre (Misc measurement).

12. Locks, keys and padlocks to secure property were found in high frequencies at S005, but is also found at W001, W006, W002, S011 and the Old Village Centre (Misc security).
13. Several of the personal functions have high frequencies at S0005 (Personal accessory, Personal cosmetics, Personal medicine, Personal medicine or toilet, Personal timekeeping, Personal trophy).
14. Items of footwear have the highest frequency in the Old Village Centre, mostly at S153) and may indicate the presence of a shoemaker (Personal footwear, Personal footwear children, Personal footwear female).
15. Items associated with females, female clothing, haberdashery and child rearing have a high frequency at W002 (Personal clothing female, Personal clothing or work haberdashery, Personal jewellery, recreation toy, work haberdashery).
16. Harmonicas were distributed at S005, S011 and the Old Village Centre (Recreation music).
17. At the Old Village Centre, butchers hooks are associated with S017, S018, S149 and S153 (Work tool butchery). They do not clearly indicate the buildings, which may have been occupied by the village butcher, but only suggest a possible area, behind the Store (S016) and other shops (S152).
18. Leatherworking tools were found at W002 and at S153 in the Old Village Centre. The evidence is inconclusive but might indicate the presence of a saddler or shoemaker at Cadia, possibly housed at W002 or in the village centre Work tool leatherworking).
19. The fragments of a Singer sewing machine at W002 and S002 tend to suggest the presence of a cottage industry at Cadia Work haberdashery.

While none of the above evidence is conclusive, considered in total and together with all available historical and archaeological evidence, the above evidence supports the interpretation of the Old Village Centre as the hub of commercial and retail activity at Cadia Village, at least for the 1860s. It included the Cadiangullong Store, the Post Office, the Bakery, and on the basis of both historical and artifact evidence, a butcher and a shoemaker. The presence of five possible shops and residences is a good fit with the archaeological evidence, which indicates the store and four other pairs of buildings (see section 5.10.6).

The evidence also supports the conclusion that S005 was the Bon Accord Hotel, run by Humphrey Hicks.

6.11.5 The occupants of building W002.

The historical documentation is silent on the inhabitants of W002. The description of the archaeological remains indicated a three roomed hut, which grew by additions and alterations into at least seven rooms. The humble hut indicated a miner, while the progressive extension implied a growing family.

This was the level of interpretation possible before artifact analysis.

Artifact analysis first placed W002 and its associated group of buildings into the Major Habitation Sites. It possessed all the defining characteristics of large artifact assemblage, larger buildings (if the extensions are included), multiple structures and extensive development. More detailed analysis has also added a further range of characteristics, namely large number of functions, disposable income and income producing resources.

The analysis of the Minor Habitation Sites has shown the high level of contrast between miners accommodation, as groups of single men and even miner's with families, and building group (W002). The occupants of W002 are not likely to fall into the same category as those inhabiting S002, S004, S008, S009 and S011. The occupants of W002 were obviously better off in terms of employment, income, wealth and standing in the Cadia Village community.

While it is unlikely that the names of the occupants will ever be known, all the available evidence can be used to pinpoint the type of person who may have lived in the house with his growing family.

The building itself implies a man and wife with a large family, probably with four or more children. The family arrived in the 1860s. They may have brought children with them, given that the original building (W002 and W007) had three rooms.

The house was occupied right through to the 1940s, though there was a dramatic fall off in artifact deposition in the 1870s to 1890s. This may reflect the closure of the mine in 1867 to 1868 and the downturn in available work until the 1900s. It may also mean that the family as a whole or some family members left Cadia in the period 1870s to 1890s, leaving the house to be occupied by others. The house continued to

be occupied through the second mining boom of the 1900s with less and less occupation up to the 1940s.

The presence of women and children is indicated by a number of functions (Food aerated water or recreation toy, Misc clerical writing, Personal accessory female, Personal clothing female, Personal cosmetics, Personal jewellery, Recreation toy, Work haberdashery). The lady of the family liked suspenders and stockings, she enjoyed imported bath waters, she had costume jewellery, glass beads, a gold coloured brooch, a bracelet with loops for pendants. The boys played with marbles, the girls had toy tea sets and dolls. The children could probably write using slate pencils and tablets and probably went to the Cadia Public School. Literacy in the household is also indicated by ink bottles, suggesting the adults were in the habit of writing (correspondence, accounts, etc). The females in the family probably spent time sewing, dressmaking and other tailoring, as indicated by pieces of a Singer sewing machine.

As already seen from the comparative analysis of the Major Habitation and Minor Habitation sites, the family were well off. They had ample funds for food, tablewares, including stemmed wine glasses and decanters. They had the same preferences for alcoholic beverages as others in the Cadia Village community, though a partiality for spirits.

The buildings, though primitive, had glazed windows and were well furnished. There were iron bed frames, mosquito netting over the beds, sprung mattresses, furniture, probably chests of drawers, upholstered chairs. There were bone china ornaments, a collection of coral and a stalactite. The cat was set to catch the rats.

Persons in the household used firearms (22 and 33 gauge shotgun), could afford glasses and possessed a watch. They had the use of horses, draughthorses and ponies, owned a buggy, bicycles and also a car (Willys Overlander).

Several trades and occupations are revealed by the artifact functions, including timber mechanical and metalworking trades (axes, hacksaw blades, drill bit, files, rasps, wedges). Leather punches may indicate shoemaking or saddlery, though the low level of footwear at the site might suggest saddlery.

One of the problems with the above analysis is that it covers a period from the 1860s to the 1940s, that is up to 80 years. The assemblage is a result of the whole period of

occupation and may not necessarily be a representative profile of the house during any particular decade, for example the 1860s or 1910s. However the overall picture is of a family, who played an important part in the Cadia Village community. The principal occupation of the head of the household may have been mining, but it is more likely that he occupied a more senior position in the company or village community.

The historical biographical information available for Cadia Village may allow the identity of the person to be narrowed down. He was married, must have arrived in the 1860s, may have brought children with him and had other children at Cadia, both male and female. He may have sent them to the Cadia School, and being a prominent person in the community, who was literate, may have signed various petitions for the Cadia Common, Post Office and School.

Since all the other sites belonging to the Major Habitation Group belonged to similar prominent persons in the company and community, it is highly likely that the house group (W002) also belonged to a person of this standing.

There are a number of possibilities. The following are those whose names appear on documents relating to the Cadia Public School in the 1860s. The residence of some of these persons is already known and where this is the case, they can be ruled out as the occupants of W002. Where other details of the families are known, principally through biographical research for Cadia Cemetery, the documentation can be assessed for closeness of fit with the profile for the occupants of W002.

Name	**Occupation**	**Fit with profile**	**Possible**
John Aspinall	Cadia	John (Jack) Aspinall was a labourer, had one child at the school. His occupation and family size do not fit the profile. See biographies.	No
John Bice	Cadia	John Bice, miner and Caroline Selwood arrived at Cadia c.1867. They had three children at the school by the 1870s.. See biographies.	Possible
William Smyth Blood	Accountant, school patron	W S Blood had no children in the 1860s and his residence is likely to have been the Store or Post Office. He does not fit the profile. See biographies.	No
James Buckley	Miner, school patron	No information.	-

Name	Occupation	Fit with profile	Possible
Emma Burfitt James Burfitt Thomas Burfitt William Burfitt	Cadia	As a farmer, James Burfitt was unlikely to have lived in Cadia itself. Emma Burfitt married Josiah Holman junior in 1877. See biographies.	No
John P Christoe	Mine manager, school patron	Christoe's residence is shown on the 1881 map, even though he was not at Cadia by this date. He does not appear to fit the profile.	No
Richard Collins	Secretary of Oddfellows Lodge	No information.	-
Robert Costello	Cadia	Robert Costello was a farmer and is unlikely to have lived in Cadia Village. He does not fit the profile, although he had two girls at Cadia School. See biographies.	No
Randle Crewe	Cadia	Randle/Randolph Crewe/Crew was a miner and labourer, moving with his family to Cadia between 1860 and 1865. He had a number of children, two of whom were at Cadia School. His occupation may not fit the profile, but is still a possibility. See biographies.	Possible
Eynon Deer	Mason, school patron	Eynon Deer arrived at Cadia at the commencement of mining, but left by about 1868, taking his family with him. His family size does not fit the profile. See biographies.	No
Thomas Faull Ellen Faull	Cadia	Little information is available. The family does not appear to fit the profile. See biographies.	No
Humphrey Hicks	Bon Accord Hotel Cadiangullong	The residence of H Hicks was the hotel, so he will not have lived at W002. See biographies.	No
James Hicks	Vice President of Oddfellows Lodge	Brother of Humphrey Hicks, he does not appear to fit the profile. See biographies.	No
Josiah Holman Elizabeth Holman	Mining captain, school patron	As mine captain, Josiah Holman probably lived in W001 for a period before purchasing his own property. He does not fit the profile. See biographies.	No
Joshua Hunt	Teamster, school patron	No information.	-

Name	Occupation	Fit with profile	Possible
Thomas Hussey	Smelter, school patron	No information.	-
John Jenkin	Carpenter, school patron	There is insufficient detail available for John Jenkin, miner, and Francis Jenkin to determine their fit with the profile. See biographies.	Possible
Robert Northey	Cadiangullong	Robert Northey, miner, arrived at Cadia in about 1863. He had eight children, some of whom were miners. Other may have been of school age. There is insufficient detail to determine his fit with the profile. See biographies.	Possible
Robert Roberts	Cadia	Robert Roberts arrived at Cadia in 1869 and became a storekeeper and later a publican at Cadia. He was unfortunate for the death of at least 6 children in infancy, although one was at Cadia School. He does not fit the profile. See biographies.	No
George Rycroft	Butcher, school patron	In all likelihood, George Rycroft lived in the Old Village Centre. He does not fit the profile.	No
William Selwood	President of Oddfellows Lodge	No information.	-
Edwin Stevens	Cadia	No information.	-
Christopher Strathen	Cadia	Christopher Strathen was a miner. He brought his wife and children to Cadia by 1865. He had more children at Cadia, where the family stayed until 1880. The family fits the profile. See biographies.	Possible
Ellen Trathen	Cadiangullong Cadia	John Trathen was a miner. He married at Cadia in 1862. The family had several children. He became a storekeeper and rented a hut from the company. He became a landholder and was responsible for a number of mining enterprises. There is insufficient information to determine his fit to the profile. See biographies.	Possible
Caroline Webb	Cadia	No information.	-

There are approximately 25 families who could have been in occupation of W002. The list is narrowed down by the available evidence to six families, though there is no

information available for a further seven families. (refer to biographies in Cadia Cemetery Report).[18] All the potential residents were in fact miners and their families, with farmers being ruled out on the basis of likely residence on their land.

In conclusion, this passage has formulated a profile for the occupants of building group W002, based on all the available archaeological evidence. Using this profile, the historical documentation and biographies of families for Cadia Cemetery has been used to narrow down the group of potential households, all of whom are in fact miners and their families. More detailed biographical research would be required to narrow down this potential group further.

6.11.6 Comparative sites near Cadia.

In addition to the archaeological excavation of Cadia Village, two additional investigations have been completed on the huts belonging to farmers, who took up land under the generous conditions of the 1861 Crown Land Alienation Act. This act allowed persons with few resources to purchase and improve small acreages of land. Both blocks of land were taken up in the late 1870s. The first, namely Portion 251, Parish of Waldegrave, 200 acres, was known as 'Waringa". The first house was built in 1879 and was occupied until 1886 or 1887, being then abandoned for a more favourable farm site on the neighbouring portion. The second was located on Portion 84, Parish of Clarendon and was again taken up in 1879 with a longer period of residence up to 1929.[19]

An important research question is to determine where on the scale of social and economic standing the pioneer farmers related to the miners and other residents of the Cadia Village community. This can be relatively simply achieved by comparing the artifact assemblages from each site, first adjusting the functional analysis and nomenclature to fit the Cadia Village investigation.

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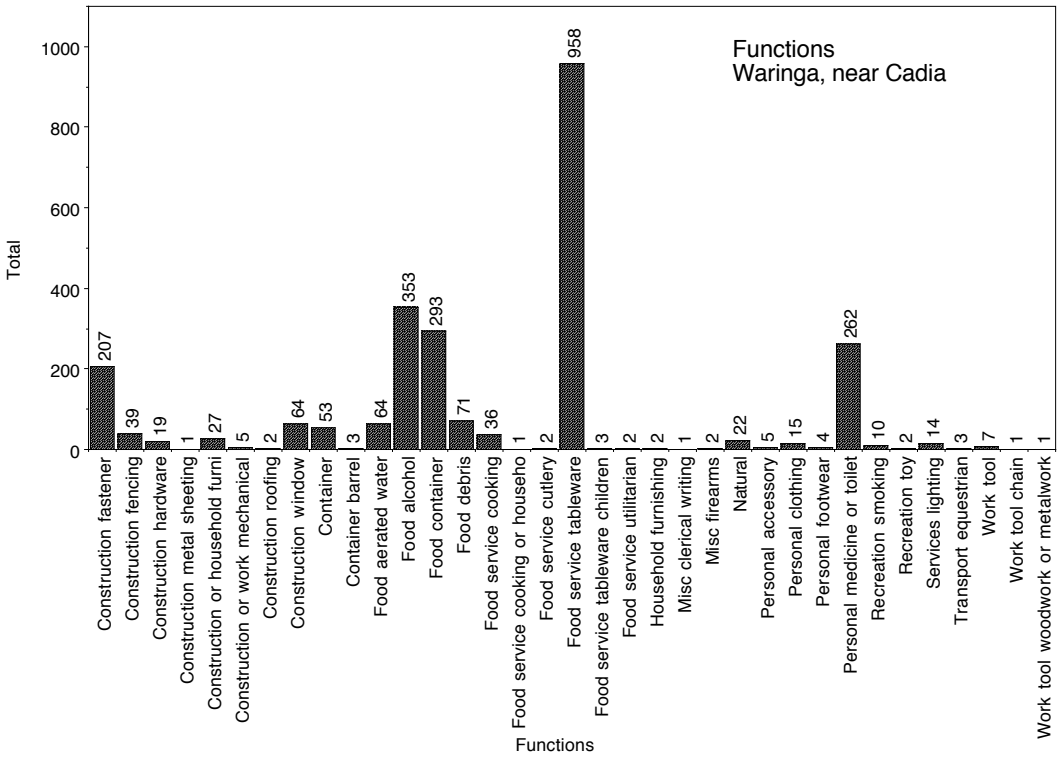
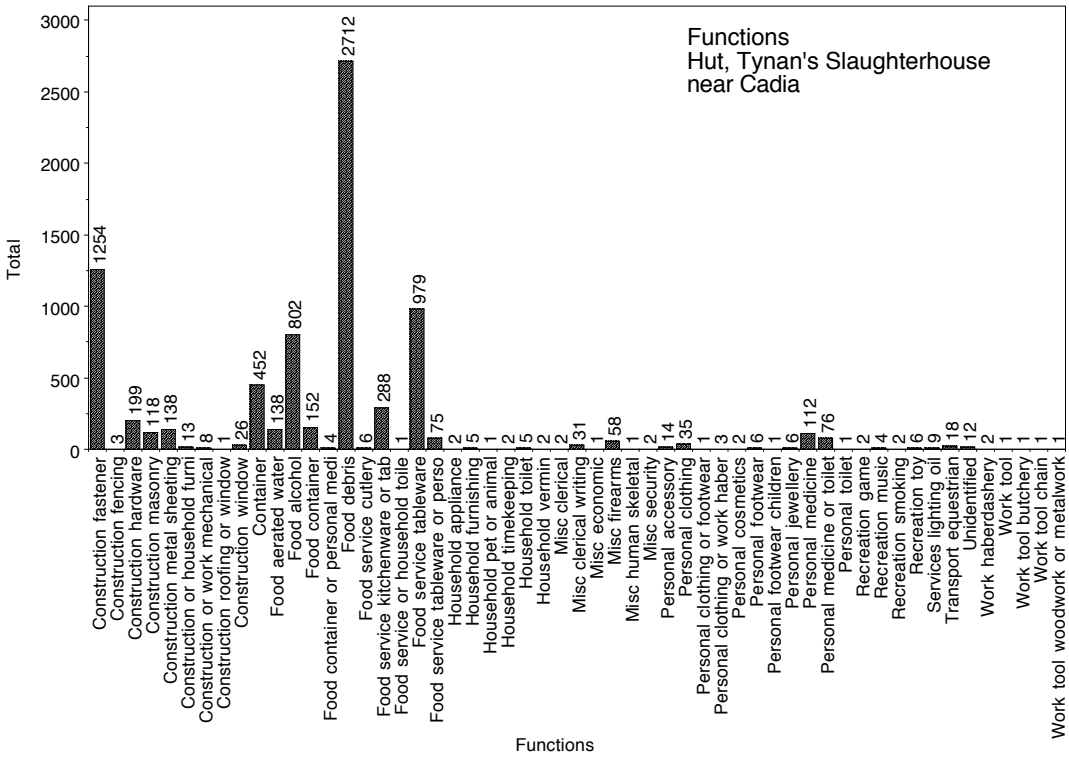
[18] Edward Higginbotham & Associates Pty Ltd. Report on the excavation of the Cadia Cemetery, Cadia Road, Cadia, NSW, 1997-1998. Volumes 1 to 5. Cadia Holdings Pty Limited. 2002.

[19] Edward Higginbotham & Associates Pty Ltd. Report on the archaeological excavation of Tynan's Slaughterhouse, Old Cadia Road, Cadia, NSW. Cadia Holdings Pty Limited. 2001.
Edward Higginbotham & Associates Pty Ltd. Report on the archaeological excavation of Waringa Hut, near Cadia, N.S.W. Cadia Holdings Pty Limited. 2003.

The following graphs represent the assemblages from Waringa Hut and the hut at Tynan's Slaughterhouse.





The above functional analysis from Waringa Hut and the hut at Tynan's Slaughterhouse can be compared with the functional categories used for the analysis of sites at Cadia Village.

Sites	**Construction**	**Container**	**Food**	**Household**	**Husbandry**	**Miscellaneous**	**Personal**	**Recreation**	**Services**	**Transport**	**Work.**	**Total functions**
S008	1	1	5	0	0	0	1	0	0	1	0	9
S004	3	1	5	0	0	0	1	0	0	2	0	12
S009	4	2	3	1	0	0	0	0	0	0	2	12
S011	10	1	7	0	0	2	1	2	0	5	4	32
Waringa	**8**	**2**	**10**	**1**	**0**	**2**	**4**	**2**	**1**	**1**	**3**	**34**
S002	9	2	9	3	0	2	9	2	3	1	6	46
Tynan's	**9**	**1**	**10**	**6**	**0**	**6**	**11**	**3**	**1**	**1**	**5**	**53**
W001	13	2	10	5	1	3	7	1	3	6	10	61
W002	13	2	11	6	1	5	13	2	4	8	13	78
S005	16	1	13	6	1	7	15	3	3	6	15	86
OVC	14	2	14	7	4	6	13	3	2	6	18	89

The above table is sorted according to the number of functions. The table reveals that all the Minor Habitation Sites (S002, S004, S008, S009, S011) for a group with less than 46 functions, while the Major Habitation Group (W001, W002, S005 and OVC) have more than 61 functions. The selectors huts near Cadia fall in the higher range of the Minor Habitation Group or between the Major and Minor Habitation Group.

The result is instructive in that it shows that the single (unmarried) miners lived very frugally (S004, S008 and S009), while other miners did somewhat better and were able to marry (S002 and S011). The selectors huts indicate a lifestyle that was equal in standard to that of the better off miners. It should also be noted that W002 may have been occupied by a miner and his family, yet this household was better off than even some in mine management (W001). Those in commercial occupations or hotelkeeping were the most wealthy members of the Cadia community, even better off than some of the local farming community.

Even though it samples a small number of sites, the above comparative analysis suggests that the better off miners would have had sufficient disposable income and access to income producing resources to themselves venture onto the land and become farmers. This is indeed what is found in the historical record. The saying, 'once a miner, always a miner' was certainly not true of the situation at the Cadia Mine, but may have been the case in other areas and at other less profitable mines.

7 CONCLUSIONS.

7.1 Cadia and its context.

M. I. A. Bulmer has described a number of characteristics of traditional mining communities, including the physical isolation and dispersed settlement pattern, together with the predominance of mining in the local economy.[20]

The isolation of Cadia was emphasised by a newspaper report in 1865:

> 'On either side of the stream, the huts of the miners are scattered about in all directions, now nestling down in the dip between two hills, now perched up on some bold rise, or again rising soberly from the level area. Stores and shops, in different lines of business, are ranged in something approaching to a row, whilst trades of various descriptions - the butcher, the baker, the shoemaker, the tailor - are carried on actively as if the work was not being done in a mountain fastness.'[21]

But geographical isolation was perhaps only the case in the early 1860s at Cadia. The successful petition for the Cadia Common in 1865 is witness to the need to stem the encroachment of pastoral and other farming interests on the mining company, which had unquenchable requirements for firewood. Surrounding land was in the process of being taken up by selectors as Conditional Purchases, a process which rapidly increased in pace in the 1870s. For the mine, the company and the mining village this had important consequences, especially when the mine was forced to close in 1867 to 1868.

While some left for work opportunities elsewhere, some families were able to stay on while their menfolk worked at other mines nearby. The surrounding rural community also provided opportunities for the miners to take up land. So Cadia is not simply a narrow community based on mine and mining village, but was able to achieve more stability by the opportunities provided by the land and neighbouring mines.

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[20] M I A Bulmer, 'Sociological Models of the Mining Community', *Sociological Review*, 23, 1, 1975, pp. 85-7.
[21] The Sydney Mail of Saturday, 16 September 1865.

The mining village of Cadia thus developed into a village supporting both the mine and rural community and so survived the downturn of the 1870s through to the 1890s. A second boom in mining occurred in the 1900s, lasting until the 1920s. After this the village community diminished, except for the war time effort in extracting iron ores. The village could no longer depend on the surrounding rural community in a post war society where the larger towns swamped the smaller villages in providing good and services as well as housing.

7.2 Cadia – a unique opportunity for a "Community Study".

The archaeological investigations of Cadia Village have provided a major impetus to the study of the history and archaeology of a whole community, including mine, village and surrounding rural settlement. Previous archaeological investigations have included the excavation and relocation of Cadia Cemetery, the excavation of the site of Copper Smelter No. 1 and the sites of two pioneer huts on Conditional Purchases, taken up by selectors in the late 1870s under the favourable terms of the Crown Land Alienation Act of 1861. Coupled with extensive historical research for both Cadia Cemetery and now for Cadia Village, the archaeological investigations must now be considered as an important 'Community Study'.

> "Community studies provide a methodological basis for understanding historical contexts in specific geographical locales. Community studies involve the description of the geography of the settlement, its subsistence basis, its material culture, the demography of its population, the social structures that it supported, and the relation of that place to the world around it".[22]

This approach facilitates the "study of a town or other small settlement at the household level, comparing numerous household sites, with information on the occupants compiled from documents and from excavation".[23]

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[22] Lawrence, S. Gender and community structure on Australian colonial goldfields", in A Bernard Knapp et alia (ed). 1998. Social approaches to an industrial past. The archaeology and anthropology of mining. p.40.

[23] Lawrence, S. Gender and community structure on Australian colonial goldfields", in A Bernard Knapp et alia (ed). 1998. Social approaches to an industrial past. The archaeology and anthropology of mining. p. 40-41 quoting Cusick, J G. The

There should be a clear distinction between the terms "settlement" and "community". Settlement is the physical layout of buildings and streets in a landscape. Community refers to group of people, who interact on a daily or regular basis.

> "Shared communal activities create the social centres of communities while their location indicates the physical centre of the community.....The nature of the central activities that give community life meaning provides clues to the identity and shared goals of the group, while it is the possession of shared goals that creates the community".[24]

> "During the rush phase of mining, individual and small scale enterprise is most apparent, and the impetus is to provide for immediate needs such as hotels and shops. During the latter phases of mining, community awareness of corporate needs is manifest in the building of public institutions such as schools, churches, meeting-halls and cemeteries".[25]

And so it is at Cadia that the huts, hotels and shops have been investigated, but also the structures valued by the community, the "schools, churches, meeting-halls and cemeteries". In addition to this, the places of work at the mine and settlement in the surrounding rural district have also been studied in related projects.

Some have remarked that rural huts are widespread throughout New South Wales and can therefore be of little significance, even stating that no current research questions apply to them.[26] But in the context of this unique and important opportunity to study a whole community – a "Community Study" – this view is short sighted. The huts of

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importance of the community study approach in historical archaeology, with an example from late colonial St. Augustine. Historical Archaeology, 1995, 29(4), p. 59.

[24] Lawrence, S. Gender and community structure on Australian colonial goldfields", in A Bernard Knapp et alia (ed). 1998. Social approaches to an industrial past. The archaeology and anthropology of mining. p. 41.

[25] Lawrence, S. Gender and community structure on Australian colonial goldfields", in A Bernard Knapp et alia (ed). 1998. Social approaches to an industrial past. The archaeology and anthropology of mining. p. 42.

[26] M Pearson "Ridgeway European Heritage Survey and Assessment" in Resource Strategies. 2000. Ridgeway Project – Environmental Impact Statement. Cadia Holdings Pty Limited. Volume 4. Appendix. N. Page10.

the pioneer farmers provide an essential element to understanding how Cadia, the mine and village, developed in the context of the surrounding rural settlement.

In Landscape Archaeology, the components of a historical landscape go to make up a significant whole. Some of the lesser elements of the landscape may indeed lack anything but minor significance, but to remove them will diminish the significance of the whole historical landscape. So, with a "community study', the failure to consider the seemingly insignificant elements of the rural landscape, which actually allowed Cadia to survive the lean times of the 1870s to 1890s, would distort and diminish the contribution of the whole study of the mine, the village and surrounding rural settlement. It is not just the history of the surrounding settlement that is required, but also the archaeology, as has been demonstrated by the comparison of the evidence form the village and rural holdings.

7.3 Principal contribution of the historical and investigation.

7.3.1 The historical development of the mine.

The archaeological investigation of Cadia Village has first of all enabled the historical development of the mine to be thoroughly researched, correcting some of the errors of previous work. While mining continued with little interruption from the 1860s through to the 1920s and then in the 1940s, there were two major boom periods, when the population of Cadia Village reached peaks of 600 and 250 respectively. These periods of prosperity coincided with the initial working of the mine in the 1860s and then the more sustained mining activity of the1900s to 1920s. The review of the historical documentation has shown that the copper smelters at Cadia all belong to these two boom periods. Previous research had suggested smelters erected in 1861, 1889 and 1912 at Cadia and 1908 at Little Cadia. Current research has revised the date of the second smelters to 1905, thus placing the major investment of capital into the second boom when investment was justified by a return on capital.

7.3.2 The geography of the mining village.

In terms of the village community, the main periods of development also occur in the two boom periods, the 1860s and then the 1900s to 1920s. The village of the 1860s was vastly different from the village in the 20th century.

The south-west part of the village was the centre of the first settlement, while the centre of the second settlement was to the north-east, higher up the hill and centred on Chilcott Street. The current excavation programme was located in the south-western part of the village, so this study has largely needed to concentrate on the period of first settlement in the 1860s. But the archaeological remains have shown continuity in the occupation of this area right through to the 1940s, so the accompanying historical research for this excavation has extended beyond the early village development into the 20th century.

In 1865, it was reported that:

> "A township has been laid out on the more level land to the north of the settlement, but as yet no allotments have been sold.' [27]

This is the first reference to the extension of the village towards the later centre of Chilcott Street. There is also some uncertainty as to the location of the stores and business that opened up in competition to the Cadiangullong Stores, but the question of the earliest dating of the Chilcott Street or later settlement is beyond the scope of this study and will have to await any future investigation of the latter area.

7.3.3 The role of Cornish and Welsh emigrants.

In addition to the review of the historical documentation of the mine (Chapter 2), the historical research undertaken specifically for the village excavation (Chapter 3) has highlighted the unusual characteristics of the early village, including the important role of Cornish immigrant miners and the close knit group of mine management and commercial interests responsible for the development of the village under the beneficence of the company.

One of the first things to note about the mining community at Cadia is that it seems not to have strictly relied on Welsh smeltermen. J. P. Christoe, the smelter manager, though born in Swansea, South Wales in 1830, was descended from Cornishmen, who had settled in South Wales to gain expertise in copper smelting. This certainly reflects a long held desire of the Cornish miners to gain for themselves expertise in smelting.

[27] The Sydney Mail of Saturday, 16 September 1865.

From the commencement of copper smelting on the banks of the River Tawe at Swansea, South Wales in the 1700s the proprietors of the smelting companies had mining interests in Cornwall. However it was not until c.1800 that the Associated Miners of Cornwall were instrumental in establishing smelting works in South Wales.

The Penclawdd Copper Works, south of the River Loughor on the Gower Peninsula, were commenced by John Vivian, originally from Truro in Cornwall in c. 1800. He represented the interests of the Associated Miners of Cornwall, who suspected that the true value of their ores was not paid to them by their Welsh smeltermen. Although the works did not answer the purpose of the Associated Miners of Cornwall, John Vivian saw that it was a profitable industry. He sent his second son, John Henry Vivian, to learn the trade from the Mining Schools of Germany. In 1810, Richard Hussey and John Henry Vivian bought a lease near Swansea and erected the Hafod Works on the River Tawe.[28] These works became the pre-eminent smelting works of the area with the Vivian family members, namely John Henry Vivian and H Hussey Vivian, considered the leading men of their day.[29]

Research undertaken for this study has revealed the ancestry of a number of the smelter men at Cadia. Lewis Lloyd was born in Wales in 1842. He came to Australia with four others for the Scottish Australian Mining Company, arriving in 1863. After spending some years at Cadia, he later became a significant entrepreneur in copper mining at Lloyd's Copper Mine, at Burraga, Cow Flat and Ophir and a Member of Parliament.[30]

Another smelter man was Thomas Hussey, who was at Cadia by October 1863, along with Morgan Hussey and William Hussey. On 26 July 1867, Thomas Hussey, "Chief Smelter to the Cadia Copper Mining Co" replaced J P Christoe on the school board.[31]

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[28] George Grant-Francis. On the Smelting of Copper in South Wales. Pritchett & Taylor, Printers, London. 1881: 125-127.

[29] George Grant-Francis. On the Smelting of Copper in South Wales. Pritchett & Taylor, Printers, London. 1881: 136-141.
For a brief description of the development of the Welsh copper smelting industry, see Edward Higginbotham & Associates Pty Ltd. Report on the archaeological excavation of Smelter No. 1, Old Cadia Road, Cadia, NSW. Volumes 1 and 2. Cadia Holdings Pty Limited. 2001.

[30] *SMH*, 14 Feb 1902, p 5

[31] Board of National Education, Correspondence, SRNSW 1/737, p 268

It would be interesting to know whether Thomas, Morgan or William Hussey were related to Richard Hussey or the Vivian family of South Wales, thereby hinting at further Cornish, rather than Welsh connections.[32] Other smelter men came from Wales, England and Ireland.

The miners themselves came from a variety of sources. Some came from other mines in the area, others had emigrated from Cornwall, settled at places like Byng (the Cornish Settlement), yet others had emigrated from Wales.

7.3.4 A close knit community - mine management and commercial interests.

Many had family relationships or kinship groups that helped the miners find employment, going from one mine to another. It is tempting to identify this as an example of 'a community without a locus'.[33] It typically comprised a group of people, which shared information on the location, viability and work opportunities available at geographically dispersed mining sites. A similar network undoubtedly helped many find work opportunities after the closure of Cadia in 1867 and 1868, but the conditions of copper mining in Australia generally allowed longer term residence in one area than was originally envisaged by this definition of community.

One of the most prominent of the close knit groups was based on kinship, good employment history and former connections with the copper mines in South Australia. The Scottish-Australian Mining Company had mining interests there, and it is interesting to note that the Bon Accord Hotel, run by Humphrey Hicks at Cadia shares the name of the company mine in South Australia. John P. Christoe, the smelter manager, had worked there and returned to Wales before coming back to NSW. Dr. Matthew Blood, Christoe's father-in-law, came to Cadia from South Australia for a number of years, leaving his son William Smyth Blood to enjoy closer connections with Cadia for the rest of his life, in 1870 becoming the son-in-law of

[32] The issue of the Cornish ancestry of the smelter men needs to be further researched, but if proven would illustrate the success of the Cornishmen

[33] Douglas, W. 1979. The mining camp: a unique social phenomenon. Unpublished paper presented at the Southeastern Anthropological Association meeting, Santa Barbara, California, p. 13, quoted by A B Knapp, "Social approaches to the archaeology and anthropology of mining", in A Bernard Knapp et alia (ed). 1998. Social approaches to an industrial past. The archaeology and anthropology of mining. p.5.

Josiah Holman, the mine captain. To add to this group, Stepney Alured Clarke, the storekeeper, probably had a close relationship with the Blood family, with both Clarke and W. S. Blood running the store and post office together.

While this close-knit group included those responsible for mine management and commercial enterprise, there is no evidence that they formed a closed brotherhood or ethnic divide in the village community. Instead there is every indication that the mine management, commercial interests and other persons formed a well integrated community, even though the mine management may have been housed on the edges of the village, rather than at its core.

7.3.5 The commercial centre of the village.

The village was originally known as Cadiangullong, but was soon abbreviated to Cadia. Clarke established the Cadiangullong Store in 1861 on a 1 acre lease from the company. The lease also housed the Post Office and the bakery, but it is the combination of both historical and archaeological evidence that has also identified a butcher and shoemaker.

The archaeology of the Old Village Centre (OVC) has revealed the identity of the Cadiangullong Store and the surrounding shops. There was a major frontage to Old Cadia Road, but several of the other shops were accessed by a passage, which led in a dog leg between the buildings to the Bakery. The physical layout and the recognition of paired structures for each shop confirms the truth of the historical description in 1865:

> 'Stores and shops, in different lines of business, are ranged in something approaching to a row, whilst trades of various descriptions - the butcher, the baker, the shoemaker, the tailor - are carried on actively as if the work was not being done in a mountain fastness.'[34]

[34] The Sydney Mail of Saturday, 16 September 1865.

7.3.6 The focus of community values – school and church.

For the Cadia community, the school, founded in 1865, became an important focus. All shared in wishing their children to have the best opportunities in life. The most prominent citizens became patrons of the school, revealing again the core group of mine management and commercial interests in the village. The changing nature of the school board in future years was a reflection of the growing importance of rural settlement for the survival of Cadia Village, especially after the closure of the mine in 1867 and 1868. Even with the closure some mining families stayed for the benefits of schooling for their children, while the menfolk worked at neighbouring mines.

The only structures named among the cluster of buildings at Cadia Village on the 1881 plan are the Chapel, the Chaplain's House, the School and the Mine Manager's House, perhaps indicating the importance placed upon these buildings in the village community, representing employment, education and religious beliefs.

After the closure of the mine in the 1868, there was a religious revival in Cadia Village. A Methodist Chapel opened at Cadia in the same year as mine closure, although Methodist religious services had been held at Cadia as early as 1861. "At the Icely and Cadia copper-mines glorious revivals of religion took place [in the 1870s] when over 100 conversions were recorded, including several Roman Catholics". One of the more notable lay preachers of the time was J. Trathen, who became a prominent citizen of Cadia Village and impetus behind the successful gold diggings in the 1870s onwards. It is perhaps significant to note that people turned to God in times of hardship after mine closure.

7.3.7 The miner as farmer.

The closure of the mines was the impetus for many to take up land.

> "The mine is looking very dull the people are gradually leaving most of them having selected or bought farms about the neighbourhood…"

(extract from a letter written by Emma Holman, wife of Josiah Holman, junior, to her father, James Burfitt on 29 December 1877).[35]

For many this was an opportunity to broaden their opportunities for income and employment. Bernard Knapp has stated that 'geographical mobility.....is common while social mobility is rare: the opportunity to rise to a higher occupational stratum was always extremely limited. Once a miner, always a miner.....'.[36] But the experience of Cadia proves that in certain circumstances, notably where fertile land in the neighbourhood could be taken up under very reasonable terms, the miner was not necessarily always a miner. The experience of the Cornish emigrants, in places like Byng and Cadia, indicated that moving onto the land was not only the realisation of a dream, but also a means of diversifying their employment and income opportunities.

7.4 The contribution of the archaeological investigation.

7.4.1 Summary of principal research themes.

Research priorities for the historical and archaeological investigation were established at the outset. They included:

1. Early stages of Village development.
2. Layers of use and change of use from early to late in Cadia Village.
3. Improvement in living standards and working conditions.
4. Evidence of ethnic groups, particularly Cornish and Welsh.
5. Historical biographies of Cornish and Welsh immigrants, and a selection of other individuals to provide representative sample and reveal social and economic networks.
6. Artifact and structural analysis. Lifestyles.
7. Structure of village, including housing for Cornish and Welsh immigrants, mine management and workers, company housing,
8. Comparative study of village layout and buildings with other examples in New South Wales.
9. Village infrastructure and community institutions.

[35] J Symonds, The Making of Cadia Mine, Smelter and Village, January 2004. Part 3, page 12.

[36] A B Knapp, "Social approaches to the archaeology and anthropology of mining", in A Bernard Knapp et alia (ed). 1998. Social approaches to an industrial past. The archaeology and anthropology of mining. p. 4.

These research priorities determined the selection of sites for archaeological investigation and the focus of historical research.

7.4.2 Priorities for archaeological investigation.

The following list indicates the priorities for archaeological investigation. Site numbers refer to those used in the archaeological assessment report for Cadia Village.[37]

Site	Location	Research priorities	Other comments
Core of early village, S015, S016, S017, S018, S019, also in other squares S011, S012, S020	Centred on Square 0209	1, 2, 3, 4, 6, 7, 8, 9	Village infrastructure
House sites, S005, S006, S007, S008, S009	Centred on Squares 0207 and 0307	1, 2, 3, 4, 6, 7, 8	Potential site of company housing and later development
Hut sites, S002, S004, but with more sites visible in historical photographs	Squares 0406 and 0407	2, 3, 6, 8	Potential site of housing for individuals of one gender, rather than families.
House and hut site	West bank of Cadiangullong Creek	1, 2, 3, 4, 6, 7, 8	Potential for early company housing and Cornish / Welsh sites.

[37] Edward Higginbotham & Associates Pty Ltd. Historical and archaeological assessment of Cadia Village in advance of the proposed mining of Cadia Quarry, Cadia, NSW. Cadia Holdings Pty Limited. 2000.

Site	Location	Research priorities	Other comments
Chaplain's House or Underground Manager's House	West bank of Cadiangullong Creek	1, 2, 3, 4, 6, 7, 8	Potential for early company housing, Cornish / Welsh sites, management and community infrastructure.

While historical documentation pointed to the location of the core of the early village, this hypothesis was only proven through archaeological investigation with important results.

Previous site survey had indicated that there were on occasion no surface traces of buildings where historical photographs show there to have been structures in the past. Thus site survey was potentially not revealing the full extent of village development.. Exploratory excavation therefore became a priority of the investigation, particularly on the level ground on the west side of Cadiangullong Creek.

7.4.3 Summary of archaeological evidence for buildings.

As a result of the archaeological investigation, a large number of structures were recorded and described in the report. These structures and their key characteristics can be summarised below.

Site sub-division	Name or function	Size (metric)	Size (imperial)	Area (square metres)	Construction technique
W001	Chaplain's house / Underground Manager's house	17.4 by 4.9	57 by 16	Total 127.82	Timber framing on piers. Timber floor ?
W001	Skillion	15.2 by 2.8	50 by 9'2"		
W001	Fireplace	2 by 1.05			
W010	Outdoor toilet	1.7 by 1.7	5 by 5		Post construction

Site sub-division	Name or function	Size (metric)	Size (imperial)	Area (square metres)	Construction technique
W011 outdoor toilet	Outdoor toilet	2.18 by 1.86	7’ 2” by 6’1”		Post construction
W012	Shed or shelter for stock	7.96 or more by 3.43	26 by 11’3”		Post construction
W008, W009, W013 and W014	Shed and stockyard	18 by 4.6	59 by 15		Post construction
W005	Shed. Industrial or agricultural usage.	6.62 by 5.04	21 8” by 16’6”	33.36	Post and timber framing
W006 (1)	Shed. Industrial or agricultural usage.	22.1 by 5.1	72’6” by 16’6“	112.71. (Total 235.8)	Post and timber framing
W006 (2)		23 by 3	75’6” by 10’	69	Post and timber framing
W006 (3)		4.6 by 3.7	15 by 12	17.02	Post construction
W006 (4)		5.8 by 6.4	19 by 21	37.12	Post and timber framing, Timber floor.
W002	Hut	6.68 by 3.72	23 by 12	24.84 (total wattle and daub building = 47.62)	Post and wattle and daub
W002	Fireplace	1.2 by 0.95			
W007	2 rooms	3.36 to 3.76 by 6.4	11 to 12’4” by 21’	22.78	Post and wattle and daub
W007	2 rooms	2.08 by 3.15 and 2.5 by 3.8	6’10” by 10’4” and 8’2” by 12’6”	16.05	Timber framing
W007	Fireplace	1.05 by 0.8			

Site sub-division	Name or function	Size (metric)	Size (imperial)	Area (square metres)	Construction technique
W003	Hut	7.1 by 3.7	23'3" by 12'	26.27	Post construction
W003	Fireplace	1.4 by 0.8			
W015	Hut	3.76 by 2.5	12'4" by 8'2"	9.4	Post and timber framing. Brick floor
S002	Hut	6.6 by 6 ?	21'6" by 19'8" ?	39.6 ?	Post and timber framing.
S002	Outdoor toilet	1.4 by 1.7	4'6" by 5'6"		Post construction
S002	Outdoor toilet	2.5 by 2.5	5'6" by 5'6"		Post construction
S004	Hut	5.5 by 5.5 ?	18 by 18 ?	30.25 ?	Timber framing on piers.
S005 (1)	Building	15.6 by 3.5 ?	51 by 11'6" ?	54.6 ?	Timber framing on stone rubble platform
S005 (2)	Building	-	-	-	Timber framing and possibly wattle and daub.
S005	Rubbish dump	24.5 by 9.5		232.75	
S005	Sheds and stockyards				Post and rail fencing and post and timber framing for outbuildings.
S006	Outdoor toilet	2.1 by 2.1	6'10" by 6'10"		Post construction
S007	Shed and stockyard				Post and rail fencing with palings and post construction for shed.
S008	Hut	7 by 3.2	23 by 10'6"	22.4	Post construction.

Site sub-division	Name or function	Size (metric)	Size (imperial)	Area (square metres)	Construction technique
S008	Rubbish dump	11 by 6		66	
S009	Hut	7 by 3.9	23 by 12'9"	27.3	Post and timber framing
S011	Building	8.55 by 6 ?	28 by 19'6" ?	51.3 ?	Post and timber framing
S015, S150	Stone metalling				
S016	Building	19.35 by 8.75	63'6" by 28'8"	169.31	Post and timber framing
S016 E	Fireplace	1.6 by 1.1			
S016 E	Skillion	11.2 by 2.8	36'9" by 9'	31.36	Post and timber framing
S016 W	Awning or loading bay	5 by 2.8	16 by 9	14	Post and timber framing
S017 (1)	Building	8.2 by 5.2 ?	26'10" by 17 ?	42.64 ?	Timber framing on stone rubble platform
S017 (2)	Building	6.5 by 4.6	21'4" by 15'	29.9	Post and timber framing. Later cement floor.
S017 (2)	Fireplace	2.7 by 0.8			
S017 (3)	Building	-	-	-	Post and timber framing
S017	Outdoor toilet	-	-	-	-
S018	Bakehouse	3.65 by 3.65	12 by 12	13.32	Post and timber framing
S018	Bakers oven	4.08 by 3.4	13'4" by 11'	13.87	Brick
S018	Rubbish dump	13.5 by 6.5		87.75	
S019	Yards and outbuilding	-	-	-	Post construction

Site sub-division	Name or function	Size (metric)	Size (imperial)	Area (square metres)	Construction technique
S020	Shelter shed	9 by 7.9	29'6" by 26'		Post and rail fencing and post construction
S149	Building	6.75 by 5.5	22 by 18	37.12	Post and timber framing
S149	Fireplace	2.85 by 1.3			
S152	Building	6.6 by 4.7	21'8" by 15'6"	31.02	Post and timber framing
S152	Rubbish dump	5 by 4.3		21.5	
S153	Enclosed yard				Post and rail fencing
S153	Outdoor toilet	1.8 by 1.8	6 by 6		Post construction.
S154	Building	-	-	-	-
S155 (1)	Building	7.7 by 7.1	25 by 23	54.67	Post and timber framing
S155 (1)	Fireplace	2.6 by 1.2			
S155 (2)	Building	9.7 by 7.05	32 by 23		Post and timber framing

7.4.4 Building techniques.

As a result of the description and recording of the numerous structures exposed by archaeological excavation, a range of building and construction techniques can be identified. They are listed below.

Type	Archaeological features	Construction techniques	Examples
1	Post-holes	Post construction	W003, W006 (3), W008, W009, W010, W011, W012, W013, W014, S006, S007, S008, S019, S020, S153
2	Post-holes and slots	Post and timber framing	W005, W006 (1, 2 and 4), W015, S002, S005, S009, S011, S016, S017 (2) S017 (3). S018, S149, S152, S155 (1 and 2)
3	Post-holes and slots with earth mounds	Post and wattle and daub construction	W002, W007
4	Widely spaced post-holes	Timber framing on piers	W001, S004
5	Wall lines marked by features other than post holes	Timber framing	W007, W015

Type	Archaeological features	Construction techniques	Examples
6	Stone rubble platform without post-holes	Timber framing on raised platform	S005 (1), S017 (1)
7	Post-holes	Fencing	S005
8	Post-holes and slots	Post and rail fencing	S005, S007, S020
9	Brick footings	Masonry	S018

While masonry was restricted to fireplaces and the bakers oven within the area of excavation, it is not the case that masonry was otherwise solely restricted to the Cornish Engine House. Several other buildings at least had stone or brick footings, while the assay or mine office was built of stone and slag.

Although one of the research priorities of the investigation was to compare the remains of Cadia Village with other examples throughout New South Wales, time and funding had meant that this aspect of the study has been curtailed.

7.4.5 Land use and improvements – historical periods.

The historical research included in Chapters 2 and 3 indicates that the sequence of development on the site can be divided into a number of periods:

	PERIOD	**Date range**
1	INITIAL PHASE OF COPPER MINING	**1858-1869**
1.1	Copper mining prior to the Scottish-Australian Mining Company.	1858-1861
1.2	The Scottish-Australian Mining Company.	1861-1864
1.3	Cadiangullong Consolidated Copper Mining Company.	1864-1868
1.4	No work	1868-1869
2	**The Scottish Australian Mining Company and its quest for payable gold.**	**1870-1891**
2.1	Small workforce up to 30 men	1870-1891
3	**The Scottish Australian Mining Company and litigation in the 1890s.**	**1890s**
3.1	No work of consequence.	1891-1897
3.2	Litigation – no work of consequence.	1897-1899

4	**The Scottish Australian Mining Company and its plans to exploit the Iron Duke.**	**1899-1928**
4.1	No work of consequence.	1899-1904
4.2	Cadia Copper Mining and Smelting Syndicate	1905-1908
4.3	Cadia Copper Mining and Smelting Company Limited.	1909-1917.
4.4	G & C Hoskins and the Iron Duke.	1919-1928
5.	**The final years of mining**	**1929-1945**
5.1	No work of consequence in the 1930s	1929-1940
5.2	The Iron Duke	1941-1945

7.4.6 Archaeological phases.

The artifacts derived from each of the buildings in the excavation area enabled the date range of each structure to be ascertained.

The historical periods are shown in the left hand column, while the dating from the artifacts is listed in the right hand columns.

Period	Phase	Phase name	Date from	Date to
1-5	000	Total Assemblage	(1750s) 1850s	1940s
1-5	W001	Chaplain's House	(1816) 1850s	1940s
1-2	W002		1860s	1870s (1930s)
1-2	W003		1860s	1870s (1920s)
	W004		-	-
2	W005		1870s	1840s
1-2	W006		1850s	1870s
1-3	W007		1860s	1890s (1920s)
1-2	W008		1860s	1880s
1-2	W008, W009, W013, W014		1860s	1880s
	W009		-	-
2	W010		1880s	-
	W011		-	-
	W012		-	-
	W013		-	-
	W014		-	-

Period	Phase	Phase name	Date from	Date to
1-2	W015		1860s	1880s (1940s)
	S001		-	-
1-4	S002		1860s	1920s
	S003		-	-
1-4	S004		1880s	1900s
1-5	S005		(1750s) 1850s	1930s
	S006		-	-
	S007		-	-
2	S008		1870s	1870s
2	S009		1870s	1870s
1-4	S011		1860s	1920s
	S012		-	-
1-5	S015-S020, S149-S155	Old Village Centre	1850s	1940s
	S015		-	-
2-4	S015, S151		1870s	1920s
1-5	S016		1860s	1930s
1-2	S017		1850s	1870s (1920s)
1-5	S018	Bakery	1860s	1930s
	S019		-	-
	S020		-	-
	S116		-	-
1-4	S149		1860s	1920s
2	S150		1870s	1880s
	S151		-	-
1-4	S152		1850s	1920s
1-5	S153		1860s	1940s
1-4	S154		1860s	1920s
	S155		-	-

7.4.7 The dating of the village community.

As a result of the distribution of artifacts and excavation methodology, the artifact assemblage at Cadia Village tended to be like unstratified deposits recovered from other sites. Unstratified artifacts tend to provide an overall date range for occupation of the site, in other words the whole date range for occupation, rather than the specific date range for an individual structure. For this reason, the artifact dating sometimes conflicted with the dating provided by historical photographs, but this factor is

unlikely to have had no effect on functional analysis since the assemblage for each site was not divided up into early or late stages.

At Cadia Village, there is a dramatic fall off in artifact deposition after the 1870s to 1880s, but a small increase in deposition in the 1910s to 1940s period. There is clear historical documentation of a decline in population after 1867 to 1868, only to be reversed in the 1900s to 1920s period. It is suggested that at Cadia Village the artifact deposition represents the level of the population in the Village. The artifact deposition shows the decline in population but also that the south-western part of the village remained occupied but did not receive the same boost to population as the Chilcott Street centre in the 1900s.

7.4.8 Functional analysis.

The results of functional analysis have provided some important insights into the nature of the Cadia Village Community. Coupled with the description of the archaeological remains of each building, the analysis has resulted in the recognition of what have been termed Major Habitation sites and Minor Habitation sites.

The following table gives the basic characteristics of each group, as identified in Cadia Village.

Major Habitation Sites	**Minor Habitation Sites**
Large artifact assemblages	Small artifact assemblages
Large buildings	Small buildings
Multiple structures	Single structures
Extensive development	Minimal development
Large number of functions	Small number of functions
More disposable income (Food, Household, Miscellaneous, Personal, Recreation, Services)	Less disposable income (Food, Household, Miscellaneous, Personal, Recreation, Services)
More access to income producing resources (Husbandry, Transport, Work).	Less access to income producing resources (Husbandry, Transport, Work).

The Minor Habitation sites include S002, S004, S008, S009 and S011.
The Major Habitation sites include W001, W002, S005 and the Old Village Centre (OVC).

Sites	**Construction**	**Container**	**Food**	**Household**	**Husbandry**	**Miscellaneous**	**Personal**	**Recreation**	**Services**	**Transport**	**Work.**	**Total functions**
S008	1	1	5	0	0	0	1	0	0	1	0	9
S004	3	1	5	0	0	0	1	0	0	2	0	12
S009	4	2	3	1	0	0	0	0	0	0	2	12
S011	10	1	7	0	0	2	1	2	0	5	4	32
Waringa	**8**	**2**	**10**	**1**	**0**	**2**	**4**	**2**	**1**	**1**	**3**	**34**
S002	9	2	9	3	0	2	9	2	3	1	6	46
Tynan's	**9**	**1**	**10**	**6**	**0**	**6**	**11**	**3**	**1**	**1**	**5**	**53**
W001	13	2	10	5	1	3	7	1	3	6	10	61
W002	13	2	11	6	1	5	13	2	4	8	13	78
S005	16	1	13	6	1	7	15	3	3	6	15	86
OVC	14	2	14	7	4	6	13	3	2	6	18	89

The table reveals that all the Minor Habitation Sites (S002, S004, S008, S009, S011) for a group with less than 46 functions, while the Major Habitation Group (W001, W002, S005 and OVC) have more than 61 functions.

The selectors huts (Waringa and Tynan's) near Cadia fall in the higher range of the Minor Habitation Group or between the Major and Minor Habitation Group.

Prior to archaeological investigation it was considered that S002 and S004 would provide good examples of single male accommodation. Artifact analysis has shown otherwise. S004, S008 and S009 appear to have been occupied by single men, while S002 and S011 were occupied by families.

The table above shows that the single (unmarried) miners lived very frugally (S004, S008 and S009), while other miners did somewhat better and were able to marry (S002 and S011). The selectors huts indicate a lifestyle that was equal in standard to that of the better off miners. W002 may have been occupied by a miner and his family, yet this household was better off than even some in mine management (W001). Those in commercial occupations or hotelkeeping were the most wealthy

members of the Cadia community, even better off than some of the local farming community.

Even though it samples a small number of sites, the above comparative analysis suggests that the better off miners would have had sufficient disposable income and access to income producing resources to venture onto the land and become farmers. The historical and archaeological evidence thus confirms that miners were able to move onto the land in many cases and that they were not restricted as much as previously thought from taking up opportunities as they presented themselves.

Another important finding is that evidence of literacy is restricted to the Major Habitation Group. There is no evidence of literacy among the occupants of the Minor Habitation Group, comprising single men and some miners with families.

There is also no evidence to suggest that the food or other goods available to the village inhabitants were less than those available to other rural inhabitants in the area, except in terms of variable levels of disposable income. The excavation has provided evidence of a varied diet.

While the historical research has indicated the diversification of employment opportunities among the miners and village inhabitants, the archaeology has shown that some households were able to supplement income through female employment in clothing related cottage industries.

7.4.9 The Bon Accord Hotel and the Old Village Centre.

The archaeological evidence (structural description and artifact analysis) has been used to make a strong case for the identification of the Bon Accord Hotel, as hinted by the historical evidence. Likewise the identification of the Old Village Centre has been a major contribution of this study.

In the case of the Old Village Centre, the archaeological evidence has provided a detailed understanding of the layout of the buildings and yards and has enabled the identification of two additional trades, namely butcher and shoemaker, over and above those already known from historical documentation.

The Old Village Centre included the site of the Cadiangullong Store, the Post Office, the Bakery, together with a butcher and shoemaker. The archaeological evidence reveals the location of the store and bakery, together with three sets of paired buildings (each containing a structure with one fireplace and another without a fireplace), which are likely to have housed the Post Office, butcher and shoemaker respectively.

7.4.10 Ethnicity in the archaeological record.

Although evidence of good quality stonework in association with the Cadia Engine House might be relatively easy to identify as Cornish workmanship, the attribution of other types of archaeological evidence to particular ethnic groups is not so easily undertaken.

Two instances of possible Cornish influence at Cadia have been noted. The simple porch on the front of Building (S005), which has been identified as the Bon Accord Hotel, is an unusual feature more common in the wet and windy climate of the South West of England (Plate 2.3). It is the only instance of a porch like feature identified at Cadia, where verandahs were almost ubiquitous.

The other example is found in the artifact assemblage. Long handled shovels with a curved blade are known in the South West of England as Cornish shovels, and elsewhere in Britain as south western shovels. Their association with labouring or mining in the South West of England is therefore well known. How far this regional identification can be assigned to Cornish immigrants and copper mining activities in Australia is open to further study, yet the regional origin of this tool should not be completely ignored. Three examples were found, one at S005, the other two in the Old Village Centre.

7.4.11 The nature of the archaeological remains at Cadia Village.

One of the unusual characteristics of the archaeology of Cadia Village was the distribution and also nature of the artifact assemblage. Most of the house sites, with few exceptions (W002 and associated structures), contained only a small number of artifacts. The majority of artifacts were located in associated features including fireplaces, cess-pits, rubbish pits and rubbish dumps.

The presence of large rubbish dumps, associated with a number of structures (S005, S008, S018), is an unusual feature of Cadia Village. These shallow spreads of humic soils present themselves as similar to underfloor deposits, frequently found on other sites within buildings. At Cadia it became clear that these deposits were located outside buildings and were rubbish dumps. This means that the rubbish dump previously excavated at the site of Tynan's Slaughterhouse, near Cadia, should be reinterpreted, since it can no longer be understood as an underfloor deposit beneath a house.[38]

The artifact assemblage from Cadia Village also contained a higher level of metalwork than found on most other sites. This was explained on the basis that the settlement was adjacent to a mine. As a consequence of this feature, the assemblage allowed a greater range of trades and occupations to be identified, more than is normally the case on an archaeological site.

A disappointing feature of the archaeological investigations of Cadia Village was the observation that many of the structures visible in historical photographs were not easily discernable as archaeological features. To a very limited extent this may have been due to the extreme drought conditions at the time of the excavation, but continued observation of the site over a period of weeks did not reveal any additional features through occasional moistening or weathering.[39]

The fact that a building with a timber frame of posts and horizontal plates (for example, S002) does not survive clearly in the archaeological record indicates that archaeological excavation may not be able to locate this type of building with any certainty in circumstances where there is no accompanying historical evidence (photographic, documentary or oral). Conversely the presence of an irregular group of pits, slots and post-holes might be more readily interpreted as slab buildings on other

[38] Edward Higginbotham & Associates Pty Ltd. 2001. Report on the archaeological excavation of Tynan's Slaughterhouse, Old Cadia Road, Cadia, NSW. Cadia Holdings Pty Limited.

[39] This was the first occasion in 25 years of excavation in Australia, where I have witnessed a soil profile of up to 300 mm depth to subsoil with no moisture present in the soil. This may have affected the recognition of features by soil discolouration, but even after occasional wetting, no additional features were located. Secondly, Cadia has been the only site where I have needed to determine wind direction prior to commencing machine operation, in order to avoid the covering of the excavated surface with a film of obscuring dust, again due to the drought conditions.

sites, even though no distinct pattern is present, based on the results of the Cadia Village excavations.

7.4.12 Sampling by test-excavation.

One of the research goals of the archaeological investigation was to locate buildings, which were not visible by site survey. Historical photographs reveal the presence of a number of structures, which have left no surface indications at the Cadia Village site and hence were not depicted in the Cadia Village Survey of 2000 and 2001.

Test-trenching with trenches 2 metres wide at 10 metre intervals (20 percent sample) was found to be a highly successful and efficient method of locating the remains of archaeological sites over a wide area within a short period of time and was used on the west side of Cadiangullong Creek on an area of river flats to reveal several structures for which there was no surface or historical evidence, as follows:

1. Structures W008, W009, W013 and W014, outbuildings for the Chaplain's House (W001) (see description above).
2. Structure (W005), an industrial or agricultural building.
3. Structure (W006), another industrial or agricultural building.